



# Limpopo Agro - Processing Strategy



**LIMPOPO**  
PROVINCIAL GOVERNMENT  
REPUBLIC OF SOUTH AFRICA

**2012**



**URBAN-ECON**  
Development Economists

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## Acronyms

AFASA	African Farmers Association of South Africa
AgriBEE	Agriculture Broad-Based Black Economic Empowerment
AgriSETA	Agriculture Sector Education and Training Authority
ARC	Agriculture Research Council
ASGISA	Accelerated and Shared Growth Initiative for South Africa
ATC	Agricultural Training Centres
BAP	Business Attraction Programme
BEE	Black Economic Empowerment
BLNS	Botswana, Lesotho, Namibia and Swaziland
BRAIN	Business Referral and Information Network
CBOs	Community Based Organisation
CGA	Citrus Growers Association SA
CIP	Critical Infrastructure Programme
CIPC	Companies and Intellectual Property Commission
CRDP	Comprehensive Rural Development Programme
CSIR	Council for Scientific and Industrial Research
DBSA	Development Bank of South Africa
DM	District Municipality
DRC	Democratic Republic of Congo
DRDLR	Department of Rural Development and Land Reform
Dti	Department of Trade and Industry
DWAF	Department of Water Affairs and Forestry
EMIA	Export Marketing and Investment Assistance
EU	European Union
FAO	Food and Agriculture Organisation
FCV	Flue Cured Virginia
FDI	Foreign Direct Investment
FET	Further Education and Training
FRAIN	Franchise Advice and Information Network
GDP	Gross Domestic Production
GTEDA	Greater Tzaneen Economic Development Agency

GVA	Gross Value Added
Ha	Hectares
HACCP	Hazard Analysis and Critical Control Points
ICT	Information and Communications Technology
IDC	Industrial Development Cooperation
IDP	Integrated Development Plan
IMQAS	International Meat Quality Assurance
IMS	Integrated Manufacturing Strategy
IPAP	Industrial Policy Action Plan
LADC	Limpopo Agribusiness Development Corporation
LATS	Limpopo Agro-food Technology Station
LCP	Letaba Citrus Processors
LDA	Limpopo Department Agriculture
LED	Local Economic Development
LEDET	Limpopo Economic Development, Environment and Tourism
LEGDP	Limpopo Employment, Growth and Development Plan
LGDS	Limpopo Growth and Development Strategy
LIBSA	Limpopo Business Support Agency
LimDev	Limpopo Economic Development Enterprise
LTP	Limpopo Tobacco Processors
MAFISA	Micro Agricultural Finance Institutions of South Africa
NERPO	National Emergent Red Meat Producers Organisation
NFPM	National Fresh Produce Markets
NGO	Non-Government Sector
NGP	New Growth Path
NIPF	National Industrial Policy Framework
NSDP	National Spatial Development Perspective
OFRP	Organic Farmer Retailer Programme
PPP	Private Public Partnership
RIDS	Regional Industrial Development Strategy
RPO	Red Meat Producers Organisation
SA	South Africa

SAAGA	South African Avocado Growers Association
SABITA	South African Business and Incubation Technology Association
SADC	South African Development Community
SAFA	South African Feedlot Association
SALGA	South African Local Government Association
SAMAC	Southern African Macadamia Growers' Association
SAMAF	South African Micro-Finance Apex Fund
SAMGA	SA Mango Growers Association
SAMIC	South African Meat Industry Company
SAMPA	South African Meat Processors Organisation
SAMPRO	South African Milk Processor's Organisation
SANRAL	South African National Road Agency Limited
SAPPO	South African Pork Producers Organisation
SARS	South African Revenue Services
SEDA	Small Enterprise Development Agency
SETA	Sector Education and Training Authority
SEZ	Special Economic Zones
SIC	Standard Industrial Classification
SIP	Strategic industrial programme
SME	Small Micro Enterprises
SMEDP	Small Medium Enterprise Development Programme
SMMEs	Small Medium and Micro Enterprises
SOE	State Owned Enterprises
SSP	Skills Support Programme
Subtrop	South African Subtropical Growers Association
TLU	Transvaalse Landbou Union
TIL	Trade and Invest Limpopo
TISA	Tobacco Institute of South Africa
TTN	Train The Nation

# Limpopo Agro - Processing Strategy



**LIMPOPO**  
PROVINCIAL GOVERNMENT  
REPUBLIC OF SOUTH AFRICA

## **Section 1: Introduction**



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## Section 1: Introduction

This section will give a brief introduction to the purpose of the agro-processing strategy, highlighting the study area, alignment with national legislation and background of the province.

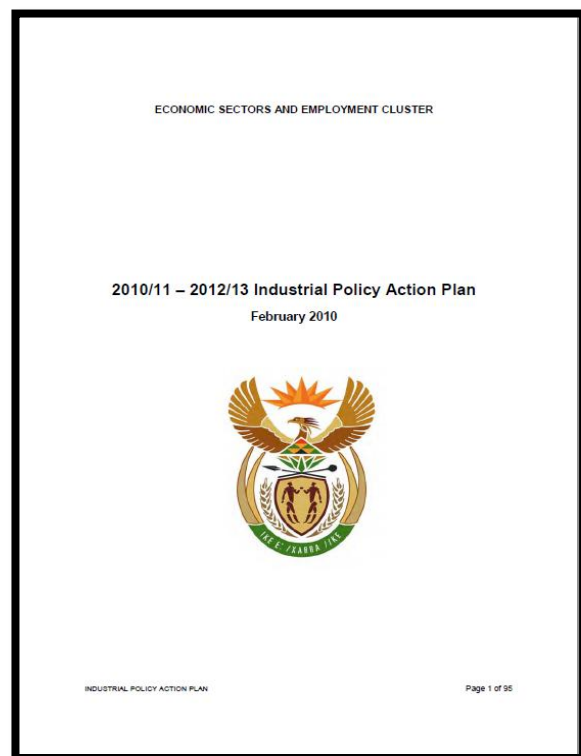
### 1. Purpose of the Project

Urban-Econ Development Economists was appointed by the Limpopo Department Agriculture to formulate the Limpopo Agro-Processing Strategy. Based on the Terms of Reference it is clear that the Agro-Processing Strategy should contribute to the development of the key sectors of the provincial economy by strengthening agriculture and agro industrial linkages, increased value-added activities and enhancing productivity.

Urban-Econ understands that it is imperative that the agro-processing plan will align with the New Growth Path, Industrial Policy Action Plan (IPAP2) and the Limpopo Employment, Growth and Development Plan (LEGDP).

The key sectors that the plan will focus on as identified by the New Growth Path and IPAP2 are infrastructure, **agricultural value chain**, green economy, manufacturing sectors, **food security**, tourism and certain high level services.

The purpose of the project is interpreted to undertake a detailed analysis of the agro-processing sector in the province and analyse and interpret the findings to formulate an agro-processing strategy **aimed at accelerated agro-industrial development and increased job creation in key sectors**. The aim of the process is to identify viable business opportunities based on an understanding of market forces related to the agro-processing industry. The market research





needs to take cognisance of the provincial and local market forces to ensure that the industry can be developed in a sustainable manner. This will allow for:

- › Determination of the development potential for incubator facilities
- › Identification of supply components such as resources and technology
- › Identification of market demand in the agro-processing sector
- › Identification of market gap which equate to development opportunities
- › Identification of linkages in terms of suppliers and buyers
- › Undertaking feasibility analysis to identify the viability of the project as a whole.

The **purpose of the agro-processing strategy** is to enhance agro-processing capabilities of the province in order to address economic development challenges. The strategy will create sustainable job opportunities in the medium to long-term periods by reaching the objectives as indicated by IPAP2 and the LEGDP.

The **key benefits** that will be obtained from the implementation of the agro-processing strategy will include:

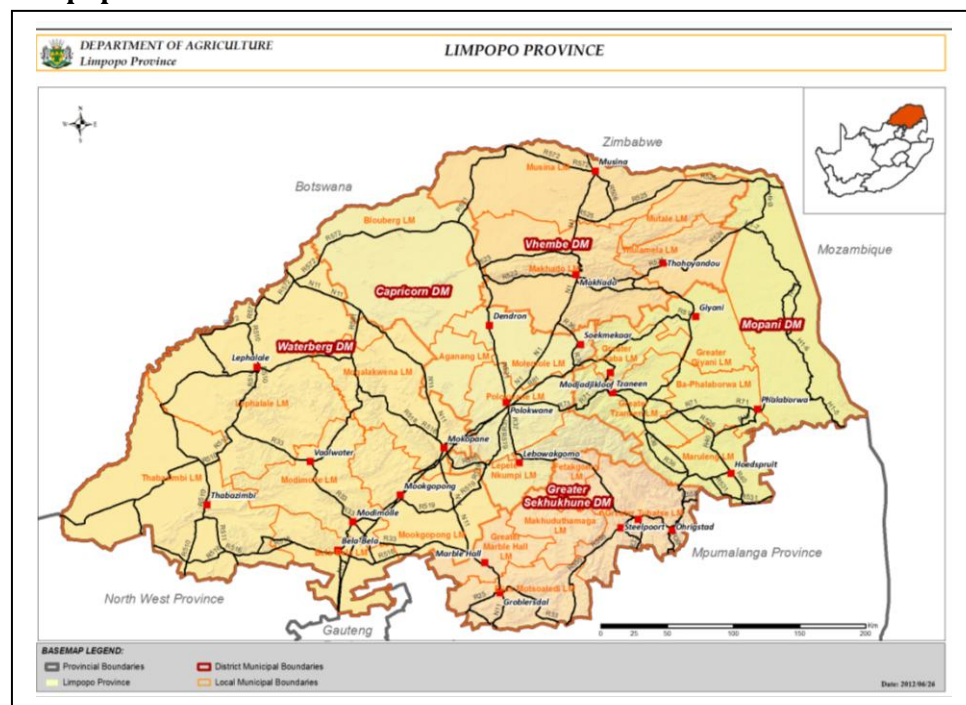
- › **Job opportunities** in the entire value chain of the agriculture sector
- › **Promotion and investment** in the agro-processing sector of the Limpopo province
- › **Rural development** through interventions in a range of sectors such as agro-processing, bio-fuels and forestry
- › **Improvement in competitiveness** of the local economies through using the local resource base and locational advantages
- › Stronger **integration between the different economic sectors** of the province
- › Enhancement of local **businesses/enterprises and skills development** for the agriculture industries
- › Promote **overall growth and development** of the agriculture industries

## 2. Study Area

The Limpopo Agro-Processing Strategy will focus primarily on the Limpopo province. The Limpopo province is situated in the northern part of South Africa and is one of nine provinces in South Africa. The unique characteristics and opportunities of each district municipality in the Limpopo province will be incorporated in the agro-processing strategy. Although the agro-processing strategy will be developed for the Limpopo province the influences and linkages with other neighbouring provinces (Gauteng, North West, and Mpumalanga) and countries (Zimbabwe, Botswana Mozambique) will not be excluded.

## 3. Background of Limpopo Province

Limpopo is the natural resource treasure chest of South Africa, if not the whole of southern Africa. It boasts some of the greatest reserves of agriculture, mineral and tourism resources many of which remain hugely under-exploited. The



province is also linked to the Maputo Development Corridor through Ba-Phalaborwa Spatial Development Initiative, a network of road and rail corridors connecting to the major seaports will open up Limpopo and surrounding regions for trade and investment. This is complimented by the presence of airports in major centres of the province including Ellisras, Makhado, Musina, Phalaborwa, Mokopane, Thabazimbi, Tzaneen, Thohoyandou and Bela-Bela as well as the Gateway International Airport in Polokwane.

There is a school of thought that the agriculture, mineral and tourism resources remain under-exploited in the Limpopo province. In terms of agriculture the province produces high volumes of

mangoes, citrus, bananas, litchis and avocados. The province also has the biggest producer of tomatoes, ZZ2, located in the province. Other products include tea, nuts, guavas, sisal, cotton and tobacco, timber, sunflower, maize, wheat cultivation as well as grape. Most of the northern parts are devoted to cattle and game ranching, earning a reputation for quality biltong, which is a popular South African delicacy of salted, dried meat.

Considerable investment opportunities exist in the areas of processing and the packaging of fruits and vegetables as well as opportunities for the export of beef, pork, chicken eggs, fruit and vegetables. There is also potential for the additional production of sunflowers, soya beans and maize under dry-land conditions. Soya beans represent a particularly profitable investment opportunity with substantial quantities currently being imported.

# Limpopo Agro - Processing Strategy



## **Section 2: Institutional and Policy Review**



## Section 2: Institutional and Policy Review

This section will review existing policies and strategies and illustrate their implications for the agro-processing industry in Limpopo. Agro-processing has been recognised as an industry with the potential to create numerous employment opportunities and several government interventions/investments are geared towards growing this industry, thus giving a solid foundation for the development of an agro-processing strategy.

### 2.1 National Policies Framework Review

1. New Growth Path (NGP)		
Description/Background	Status/Relevance	Implications
<p>The New Growth Plan (NGP) is government's action towards targeting mass unemployment, poverty and inequality. Firstly the plan identifies where employment creation is possible then policies and institutional frameworks required to take hold of opportunities are set in place. The plan employs the use of macro and micro economic policies to create enabling environment for mass job creation and employment.</p> <p>The short to medium term outcomes are to support labour absorbing activities especially in infrastructure, <b>agriculture values chain</b> and <b>light manufacturing services</b>. Whilst also promoting Small Micro Enterprises (SMMEs), Black Economic</p>	<p>The NGP is a national policy to work towards job creation. The plan sets out the new vision for development and growth in SA, with identified job drivers, including manufacturing and agricultural value chain.</p> <p>The <b>indicators of success</b> will be:</p> <ul style="list-style-type: none"> <li>Jobs (the number and quality of jobs created)</li> </ul>	<p>The agriculture value chain has <b>been identified as one of the key sectors for employment creation</b>, thus efforts to grow and develop agro processing will promote government action whilst contributing to the number and quality of jobs created. The agro processing strategy is adopting NGP key priority sectors through increasing the agriculture value chain in the province.</p>

<p>Empowerment (BEE), education and skills development.</p> <p>The NGP aims to create five million jobs by the year 2020 with contributions from various government sectors and private sectors. The identified job drivers will influence provinces and localities in a different manner due to local resources, therefore localities must adopt the broad drivers of the NGP to their circumstance and locality.</p>	<ul style="list-style-type: none"> <li>▸ Growth (the rate, labour intensity and composition of economic growth)</li> <li>▸ Equity (lower income inequality and poverty)</li> </ul>	
2. Industry Action Plan (IPAP)		
Description/Background	Status/Relevance	Implications
<p>IPAP is the Department of Trade and Industry (Dti) efforts to continuously build on industrial development and IPAP forms a central tool in the NGP job creation strategy. IPAP represented the consolidation and strengthening of plans and programmes outlined in the previous industrial policies. It's a qualitative step towards government's industrial turnaround.</p> <p><b>IPAP 2012/13 -14/15</b> represents the fourth annual iteration of the action plan, one of the key sector cluster for development is agro processing. The agro processing sector <b>has strong linkages with both up and down stream industries</b>; upstream linkages include a variety of agriculture farming models and products. Downstream sectors are products marketed to wholesale and</p>	<p>IPAP2 recognises agro-processing, food processing and organic food processing as having the <b>potential to create employment, thus key</b> intervention into developing these sectors must be promoted.</p> <p>It is estimated that IPAP 2 interventions will lead to 43 000 direct jobs and 86 000 indirect jobs, totalling 129 000 jobs. The <b>key sectors and clusters</b> with</p>	<p>The Limpopo province has a wealth of natural resources that can promote key intervention programmes of IPAP. Agro-processing has the potential to create employment along the entire value chain in the province. The Agro Processing Strategy will build on key action programmes identified in IPAP 2012/13-14/15.</p>



<p>retail chains.</p> <p>Key action programmes, identified in the IPAP 2012/13 – 14/15, to develop the agro processing sector include:</p> <ul style="list-style-type: none"> <li>› <b>Development of a Food Processing Strategy and Action Plan:</b> outcome of the programme being accelerated growth in the food processing sector.</li> <li>› <b>Development of a Soybean Strategy and Action Plan:</b> outcome of the programme is increased local farm production of soya beans as well as processed products.</li> <li>› <b>Development of the organic food sector:</b> outcome is a competitive organic sub-sector producing high quality products for both the local and export markets.</li> <li>› <b>Development of a small-scale milling industry:</b> the outcome is small-scale maize milling enterprises producing for local markets at competitive prices, thereby creating jobs and contributing to poverty alleviation and enterprise development.</li> <li>› <b>Enhancement of competition in the fruit and vegetable canning industry:</b> with the outcome of creating a sustainable platform for the long-term growth and competitiveness of the industry.</li> </ul>	<p>the potential to meet the foreseen job targets relevant to agro-processing are:</p> <ul style="list-style-type: none"> <li>› <b>Agro-processing, food processing and organic food processing</b></li> <li>› <b>Advance manufacturing</b></li> </ul>	
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<ul style="list-style-type: none"> <li>Promote exports of beneficiated Rooibos and Honeybush products and the development of a strategy and action plan for the beverage industry.</li> </ul>		
<b>3. Other relevant Industrial Policies:</b>		
<b>Description/Background</b>	<b>Status/Relevance</b>	<b>Implications</b>
<p><b>Regional Industrial Development Strategy (RIDS)</b> which calls on all regions to build their industrial economies based on local competitive advantage and opportunities. The focus is <b>fundamentally on addressing the key obstacles to the functioning of the economy</b>, primarily through infrastructural interventions which will better enable all regions to access markets and resources.</p> <p><b>Integrated Manufacturing Strategy (IMS)</b> aims to integrate interventions related to competitiveness. These interventions include market access, beneficiation and value addition. The objective of this IMS is to address key drivers in transforming the industrial sector's growth path.</p>	<p>Emphasis is placed on required infrastructure and services to improve sector growth, in this case agriculture.</p>	<p>Agro processing activities proposed in the strategy will promote industrial development in the province as the agro processing sector has strong backward and forward linkages with the industrial sector. <b>Agro - processing in the province will increase local competitiveness and infrastructural intervention</b> will enable all regions to access markets and resources.</p>

4. National Spatial Development Perspective (NSDP)		
Description/Background	Status/Relevance	Implications
<p>The NSDP is a set of principles and mechanism for guiding infrastructure investment and development decisions. The plan recognises that poverty, inequality and deprivation are manifested in space; interpreting the spatial realities and providing implication for government action. The <b>principles</b> of the NSDP are:</p> <ul style="list-style-type: none"> <li>› Government <b>spending should be on fixed investment</b>, focusing on localities of economic growth and economic potential.</li> <li>› <b>Focus should be on people</b> (human capital) rather than places.</li> <li>› Development opportunities should be channelled into <b>activity corridors and nodes</b> that are adjacent to or link main growth centres.</li> </ul>	<p>The NSDP promotes a rigorous analysis of space economy and areas to invest in; this must be emphasised in the agro processing strategy.</p>	<p>The agro processing strategy will identify local areas with comparative advantage in agriculture and identify processing opportunities.</p> <p>The strategy will also contribute to investment in human capital.</p>

### 5. Comprehensive Rural Development Programme (CRDP)

Description/Background	Status/Relevance	Implications
<p>The CRDP is a response to <i>poverty relief in rural areas</i> with the aim of alleviating poverty and food insecurity in rural areas by maximising productions and sustainability through strategic investment.</p> <p>The <b>strategic objective</b> of the programme is to integrate development and social cohesion through participatory approaches in partnership with all society. The programme is divided into three strategies, namely:</p> <ul style="list-style-type: none"> <li>▸ <b>Agrarian Transformation</b> where there is a complete transformation of agrarian activity for a better future.</li> <li>▸ <b>Rural Development</b> which deals with the optimal use and management of natural resources to combat rural poverty. This will include the <b>establishment of business initiative, agro-industries, and mitigation strategies against natural disaster, technology introduction and viable local markets.</b></li> <li>▸ <b>Land Reform</b> which will increase access to land by previously disadvantage people, through redistribution,</li> </ul>	<p>Agro-processing strategy has to indicate how rural development will be incorporated in agro processing activities.</p> <p>This initiative aims to ensure training on a local level equipping community members with appropriate skills for success and sustainability of projects.</p>	<p>Rural development is a national priority and the agro-processing strategy can present development opportunities for rural areas. Limpopo is predominately rural and micro technology, skills development and value chain development can assist in food security and generate revenue for local economies.</p>

tenure and restitution.		
<b>6. Strategic Plan for South African Agriculture</b>		
<b>Description/Background</b>	<b>Status/Relevance</b>	<b>Implications</b>
<p>The vision is “<i>an united and prosperous agriculture sector</i>”, designed to bridge dualism and maximise the contribution of the agriculture sector to economic growth and development.</p> <p>The core strategies to promote the vision are:</p> <ul style="list-style-type: none"> <li>▸ <b>Enhancing equitable access and participation to agriculture opportunities</b>, focusing on land reform, start up support packages for new entrants to farming, partnership and promotion of the sector.</li> <li>▸ <b>Global competitiveness</b> and profitability in the agriculture sector through input supply, primary production, agro-processing and Agri-tourism industries.</li> <li>▸ Sustainable resource management of natural resources</li> </ul>	<p>Agro-processing interventions need to focus on addressing historical challenges and improve the contribution of the agriculture sector to the economy of the province.</p>	<p>Interventions in the agro-processing strategy should focus on addressing historical challenges and improving the economic contribution of the agriculture sector. The agro-processing strategy will address global competitiveness as local businesses will be trained and assisted in compiling with international trade standards.</p>

### 7. Micro Agricultural Finance Institutions of South Africa (MAFISA)

Description/Background	Status/Relevance	Implications
MAFISA is a financial scheme aimed at addressing financial needs of smallholder farmers and agribusiness. The institution provides capital and loans to enhance agriculture activities. The loans vary from short to medium production, saving mobilisation and capacity building for member based financial institution. The purpose of the loan is to enhance agriculture activities, for example, purchasing of production inputs, small equipment and implements.	Access to financial support and services is emphasised, with the aim of enhancing human capacity and access to markets.	Interventions to promote development in the agricultural and agro-industrial sectors should focus on broadening access to financial services to emerging farmers and entrepreneurs.

### 8. Department of Agriculture Broad-Based Black Economic Empowerment Framework (AgriBEE)

Description/Background	Status/Relevance	Implications
<p><i>Vision "To pursue Broad-Based Black Economic Empowerment in support of a united and prosperous agricultural sector".</i></p> <p>The objective of the framework is to <b>diminish the racial discrimination</b> in the agricultural sector through implementing initiative that mainstream Black South African in all levels of agricultural activity. AgriBEE <b>applies to the entire value chain</b> in the agriculture sector including agriculture inputs, services, farming, processing, distribution, logistics and all activities that add value to agricultural products.</p>	Providing financial and technical assistance to local farmers is crucial for the success and increase of agricultural production.	The strategy has to incorporate and promote Broad Based Black Empowerment especially women and youth, in assisting them to take hold of economic opportunity in the agriculture sector. AgriBEE activities can be linked to secondary production to support the agro-processing industry.



## 9. The Framework for the Zero Hunger Programme, Department of Agriculture, Forestry and Fisheries

Description/Background	Status/Relevance	Implication
<p>Strategy is aimed at reducing incidences of food insecurity through improving the capabilities of all South Africans to access nutritious food.</p> <p>The strategic objectives of the Zero-Hunger framework are:</p> <ul style="list-style-type: none"> <li>▸ Improving food production capacity of households and poor resource farms.</li> <li>▸ Access to cheap finance by the emerging agricultural sector</li> <li>▸ Improve food access for the poor and vulnerable</li> <li>▸ Social protection programmes (food &amp; cash transfers)</li> <li>▸ Market channels development</li> <li>▸ Government bulk food purchase programme</li> </ul>	<p>The implementation of this programme will be the responsibility of the entire government at all levels and in all sectors, the private sector, civil society and all South Africans.</p>	<p>The agro-processing strategy can enhance implementation of the Zero Hunger Programme by integrating various role players in the provinces to implement processing activities, which in turn will enhance food security.</p>

## 10. Food Security Policy for the Republic of South Africa, Department of Agriculture, Forestry and Fisheries

Description/Background	Status/Relevance	Implication
<p>The objective of the policy is to improve South Africa's adequacy and stability of access to safe and nutritious food at both national and household level.</p> <p>The specific policy objectives are to:</p>	<p>The policy requires alignment from different departments and agro processing plays an important role in ensuring food storage through Agri</p>	<p>Food security is a national priority, which has to be promoted and emphasised by the strategy.</p>

<p><b>Harmonise agricultural development with land reform</b> and strengthen links among support services through a sustainable long term country agricultural production plan.</p> <p>Ensure access to support services (<b>cheaper credit and inputs, research information, technology and market information</b>) by poor farmers.</p> <p>Promotion of domestic trade through a sustainable food purchase programme linked to the emerging agriculture sector.</p> <p>Ensuring the existence of a <b>market environment</b> that will promote food security both at the national and the household level.</p>	<p>infrastructure and distribution networks for rural areas. Agro processing can further assist in food preservation and utilisation, processing techniques that can enhance nutritional values of food, the industry is coupled with long term agriculture production and research and development which can increase food security for the province.</p>	
<b>11. Medium-Term Strategic Framework: A Framework to Guide Governments Programme in the Electoral Mandate Period (2009 -2014)</b>		
Description/Background	Status/Relevance	Implications
<p>Medium-Term Strategic Framework is meant to guide planning and resource allocation across all the spheres of government. National, provincial and municipal entities need to adapt their development plans in line with the national medium term priorities.</p> <p>The strategic framework with relevance to agriculture, aims to</p>	<p>Priority number three of the framework recognises the need to stimulate agriculture production with a view to contribution to food security through a strong focus on institutional support</p>	<p>The agro-processing strategy has to promote measurable output for the agriculture industry and promote development plans of the framework.</p>

bring measurable increase in agricultural output, the framework stipulate that government will support the provision of agricultural implements and inputs to support emerging farmers and households, fencing off agricultural areas, making agricultural loans accessible, and ensuring agricultural extension services of a high quality.	that increases scale economies and access to business serves and markets.	
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## 2.2 Provincial Policies Framework Review

1.Limpopo Growth and Development Strategy		
Description/Background	Status/Relevance	Implications
<p>The Limpopo Growth and Development Strategy (LGDS) is a mechanism to raise international competitiveness and draw investment into the province by aligning and combining interventions from the various stakeholders. The <b>objectives</b> of the strategy are:</p> <ul style="list-style-type: none"> <li>▸ To improve the quality of life of the population of Limpopo</li> <li>▸ Grow the economy</li> <li>▸ Attain regional integration</li> <li>▸ Enhance innovation and competitiveness</li> <li>▸ To improve the institutional efficiency and effectiveness of government</li> </ul>	<p>The plan focuses on the economic development in the Limpopo province in terms of job creation and economic development.</p> <p>The strategy outlines efficient ways to take hold of economic opportunities in the province and how to attract investment to the province.</p>	<p>The agro-processing strategy should promote the objectives of the LGDS and align projects with the identified development clusters in the province building and enhancing existing activities.</p>

<p>One of the vehicles contributing to achieving the above objectives will be done through development clusters. The seven clusters selected were based on the basis that agriculture, mining, tourism and manufacturing are the main drivers of the province's economy. The <b>development clusters</b> relevant to agro processing are:</p> <ul style="list-style-type: none"> <li>▸ <b>Fruit and vegetable (horticulture) cluster</b> in the <b>Vhembe and Mopani districts</b></li> <li>▸ Logistics cluster in Polokwane (Capricorn district)</li> <li>▸ <b>Red and white meat cluster on all the corridors (all districts)</b></li> <li>▸ Forestry cluster in the Mopani and Vhembe districts</li> </ul>		
<b>2. Limpopo Employment, Growth and Development Plan (LEGDP) 2004 – 2014</b>		
Description/Background	Status/Relevance	Implications
<p>The Limpopo Employment, Growth and Development Plan is an action towards accelerating growth and development in the province.</p> <p>In essence the plan will assist the Limpopo province make to strategic choices with regard to prioritisation and high impact initiatives for job creation. The <b>key action programme</b> relevant to the agriculture development is the Agriculture and Rural</p>	<p>The plan draws on expertise from various stakeholders to create jobs in the province.</p> <p>The plan has a key action programme with identified challenges and interventions.</p>	<p>The agro-processing strategy can work towards addressing some of the key strategic challenges faced by the agriculture sector in the province, more so with regard to providing small to large scale farmers with extension services, access to markets and</p>

Development Programme.		infrastructure development.
<b>3. Limpopo Department of Agriculture Strategic Plan 2010/11 – 2014/15</b>		
<b>Description/Background</b>	<b>Status/Relevance</b>	<b>Implications</b>
<p>The Department of Agriculture in Limpopo, Strategic Plan assesses the achievements and challenges faced by the agriculture sector in 2008/09 and outlines strategies and quantifiable objectives for the years ahead. The strategic plan also works towards achieving the five government objects and the Province's Growth Development Strategy.</p> <p>The mission of the agriculture strategic plan is "To promote economic growth and food security through sustainable agricultural and entrepreneurship development"</p>	<p>The <b>strategic objectives</b> that the agro-processing strategy must promote are:</p> <ul style="list-style-type: none"> <li>▸ Farmer support and development.</li> <li>▸ Technology Research and Development Services.</li> <li>▸ Agricultural economics by coordinating value chain activities from the natural source to product development, as income and employment can be created along the chain.</li> </ul>	<p>The importance of the value chain is emphasised in the strategic plan, as employment can be created along the entire value chain. The agro-processing strategy will have to promote the objectives of the Department of Agriculture in Limpopo.</p> <p>All policies and strategies relating to agriculture development have to be aligned to the Department of Agriculture strategic plan.</p>
<b>4. Limpopo Rural Development Strategy</b>		
<b>Description/Background</b>	<b>Status/Relevance</b>	<b>Implication</b>
The Limpopo rural development strategy aims to provide the provincial leadership with a development roadmap that addresses	The strategy identifies trigger projects for the five districts	The strategy emphasises the coordinated approach to

<p>current challenges faced by rural communities in Limpopo, since there is a lack of a rural development specific statutory framework.</p> <p>The <b>key priority areas of the strategy</b> are:</p> <ul style="list-style-type: none"> <li>▸ Scaling up in size the existing rural development programmes aimed at expanding agricultural production by small-scale farmers.</li> <li>▸ Extend core infrastructure to rural areas</li> <li>▸ Increasing jobs and skills</li> <li>▸ Revitalising rural towns in order to make the economic hubs (including university towns) and develop sustainable rural settlements.</li> </ul>	<p>indicating the main and downstream enterprises with potential job creation along the value chain. These projects will be integrated into the agro - processing strategy as a coherent and coordinated approach is emphasised to avoid duplication.</p>	<p>developing the agro-processing industry through integrated planning to avoid wastage of resources and increase service delivery. The trigger projects give an indication of high level interventions for the agriculture and agro-processing sector in rural areas.</p>
<h2>5. The Limpopo IDC Nguni Cattle Development Programme</h2>		
Description/Background	Status/Relevance	Implication
<p>The aim of the Limpopo IDC Nguni Cattle Development Programme is to activate dormant cattle stock owned by rural communal farmers through the development of an integrated and differentiated provincial beef production industry in the Limpopo province and increase the agricultural industry's contribution to the provincial economy. Backward and forward integration</p>	<p>The core function of the programme is to increase production of beef through entrepreneurial development of the rural cattle farmers into beef producers across the whole beef</p>	<p>Agro-processing is a support industry that can promote the Nguni Development Programme. The agro-processing strategy can assist in integrating beef producers into the beef production</p>



models will also be developed in order to enhance competitiveness.	production value chain.	value chain.
Limpopo IDC Nguni Cattle Development Trust is the implementing body of the strategic initiative to institute a programme to upgrade cattle in the rural areas of the province by reintroduction of the indigenous Nguni bloodlines. The programme is a partnership between the Limpopo Department of Agriculture, IDC and University of Limpopo.		

## 2.3 Local Policy Framework Review

The province has five districts namely Capricorn DM, Mopani DM, Vhembe DM, Sekhukhune DM and the Waterberg DM. The district municipalities recognise agriculture value addition as key to creating employment as the province has an abundance of natural resources. This is recognised in their **Integrated Development Plans (IDP) and Local Economic Development Plans (LED)** as each district identifies agro-processing and agriculture value addition projects for their localities. The platform for agriculture development has been established with various strategies in place promoting agricultural activities; these include the Capricorn marketing strategy, food products and beverage manufacturing interventions. The Capricorn district has also identified investment opportunities in farming in oilseed and oil extraction, goat meat production, organic cotton farming, food processing clusters and processing of sorghum.

Feasibility studies have been conducted for the development of a district fresh produce market in Tzaneen, tunnel dried tomatoes and pre-feasibility for poultry agro-processing in Lepelle-Nkumpi and Lebowakgomo industrial areas. Other strategies include the Waterberg Municipality Agriculture Development Strategy, the Zebediala Juice processing plant feasibility study, and the Vhembe Fresh Produce Market, to list only a few.

District and local municipalities are promoting the agriculture sector by introducing development programmes that assist farmers increase the production volumes through offering agriculture infrastructure and technical support. The agro-processing strategy will enhance current agriculture activities and incorporate existing structures.

## 2.4 The Mandate of the Department of Trade and Industry towards the Agro-Processing Sector Development

**The mandate of the Department of Industry and Trade (Dti)** is industrial development of SA economic sectors through improving trade, export and investment in the country. The broadening of Broad-Based Black Economic Empowerment (BBBEE) is done through industrial policies and legislative frameworks. Agro-processing sectors falls under the Dti cluster one, with forestry, paper, pulp and furniture falling under cluster two. The purpose of the Dti towards the cluster is to promote economic empowerment, SMME development, industrial development, trade, export and offer financial assistance for development of the various industries.

The **Dti mandate in supporting the development of a strong and vibrant agriculture industry**, through IPAP2 – Business Plan Priorities include:

- Food Security with the expected out of increasing affordability, value for money and rural production
- Mature sectors such as fruit and vegetable canning, rooibos tea and food control. The aim is to stabilise the risk of the sector, improve competitiveness positioning through export market support and product development
- Nascent sectors this includes biofuels, organic produce and aquaculture. The expected impact is an accelerated policy and strategy development
- New sectors include the development of agro-processing development centre concept. The aim is an accelerated flow of new products and process innovations

The **Limpopo province has to promote and enhance the agro-processing sector** with the local resources available in the province. The various departments such as Limpopo Department of Agriculture, Limpopo Economic Development, Environment and Tourism and local economic development policies are required to allocate technical and financial resources to promote agro-processing sector development. The agriculture value chain cuts across multiple sectors, therefore various government departments are required to integrate and link their sector development plans to enhance the industry. It is important to note that sustainability of the agro-processing sector is dependent on strong primary agricultural production and availability of raw material supply versus manufacturing of commodities.

## 2.5 Summary of Important Implications

Following the review of relevant policy and strategic documents, important implications for the development of an agro-processing strategy for the Limpopo province can be summarised as follows:

- There is ample opportunity for **job creation** in the agriculture value chain and most policies recognise this as a potential to grow the agriculture and manufacturing industry which in turn will contribute to the province economic development.
- **Rural development** is a national priority with key interventions focusing on the spread of economic activities into rural areas.

- › **Fixed capital and infrastructure development** has to be channelled into nodes or activity corridors. Agglomeration of complimentary activities can further enhance maximum use of infrastructure.
- › The focus of interventions should be on **improving competitiveness** and addressing the key drivers in transforming the industrial sector's growth path, such as market access, beneficiation and value addition, equity and economic participation, knowledge intensity and service integration.
- › **The development of the local agro-processing sector could provide an off-set market for local farmers and encourage broad-based access to agriculture.**

# Limpopo Agro - Processing Strategy



## **Section 3: Sector Profile and Analysis**



## Section 3: Sector Profile and Analysis

The purpose of this step is to analyse the agro-processing sector taking cognisance of various commodity production areas, markets and current beneficiation in the Limpopo province. The first sub-section will discuss the economic overview evaluating the current economic situation in the province. The second sub-section will examine the production of agriculture commodity followed by relevant case studies in the agro-processing sector. The focus of this section is to compile a sector profile perspective with statistics and trends for the agro-processing sector.

### Section 3.1: Economic Overview

#### 3.1.1 Introduction

The purpose of this section is to provide an updated economic profile using the latest economic data available. This provides an overview of the current economic situation, in the Limpopo province. This overview incorporates sectoral performances and composition as well as overall growth performance in the economy.

During this chapter the economic performance of Limpopo will be evaluated by making use of secondary data obtained from the Quantec Resource Database and Statistics South Africa. In order to determine the value and performance of the various economic sectors, growth rates were calculated in terms of expansion or contraction of the economy in terms of Gross Value Added (GVA) values. In addition to this, other techniques were used to analyse the economy of Limpopo, the techniques will be explained in detail in the designated sections.

The economic performance of a region can be measured by GVA in terms of production activities. The GVA can be used to provide an oversight of the region's economy, in this case the economy of Limpopo. Additionally it can provide insight into the structural composition of the economy as well as the growth rate of production. This allows us to identify the comparative advantages for the given region, to determine the vulnerability (concentration) of the economy and the overall welfare of the community.

An economic overview of the current and past economic performance of Limpopo allows us to identify and determine economic trends. A sectoral (structural) performance analysis gives a clear

indication with regards to which sectors of the economy is flourishing, developing or experiencing a decline.

### 3.1.2 Economic Sectors

The salient features of the economic conditions in the various local areas are discussed in this section. In order to facilitate a situation whereby the individual economic activities throughout the district can be measured, a standardised classification is utilised. The following sub-section offers a delineation of the various economic sectors as per the Standard Industrial Classification (SIC).

#### Main Economic Sectors

The main categories of the South African Standard Classification of all Economic Activities (SIC) of 1993 (CSS, 1993) are utilised for this purpose. A total of nine sectors are distinguished and a frequently asked question for example is into which sector does tourism fall? The tourism industry generally spans across all the economic sectors, ranging from accommodation and catering (classified under SIC number: 6410 and SIC no: 6420), retail and wholesale (classified under SIC number: 61221 and SIC no: 6220), manufacturing (e.g. of arts and craft – classified under SIC number: 39299), business services and social services. Activities such as sport are included under the community service sector under SIC number: 9641. The nine economic sectors are defined as follows (CSS, 1993: 3).

**Table 3.1: The 9 Economic Sectors Definition**

Sector	Definition
<b>Agriculture</b>	The agriculture sector incorporates establishments and activities that are primarily engaged in farming activities, but also includes establishments focusing on commercial hunting and game propagation and forestry, logging and fishing.
<b>Mining</b>	This sector includes the extracting, beneficiating of minerals occurring naturally, including solids, liquids and crude petroleum and gases. It also includes underground and surface mines, quarries and the operation of oil and gas wells and all supplemental activities for dressing and beneficiating for ores and other crude materials.

<b>Manufacturing</b>	<p>This sector is broadly defined as the physical or chemical transformation of materials or compounds into new products and can be classified into ten sub-groups of which the most relevant are:</p> <ul style="list-style-type: none"> <li>• Fuel, petroleum, chemical and rubber products</li> <li>• Other non-metallic mineral products, e.g. glass</li> <li>• Metal products, machinery and household appliances</li> <li>• Electrical machinery and apparatus</li> </ul>
<b>Utilities (generally referred to as “electricity” and “water”)</b>	<p>This sector includes the supply of electricity, gas and hot water, the production, collection and distribution of electricity, the manufacturing of gas and the distribution of gaseous fuels through mains, supply of steam and hot water, and the collection, purification and distribution of water.</p>
<b>Construction</b>	<p>This sector includes the site preparation, building of complete constructions or parts thereof, civil engineering, building installation, building completion and the renting of construction or demolition equipment with operators.</p>
<b>Trade</b>	<p>The trade sector entails wholesale and commission trade; retail trade; repair of personal household goods; sale, maintenance and repair of motor vehicles and motor cycles; hotels, restaurants, bars, canteens, camping sites and other provision of short-stay accommodation.</p>
<b>Transport, storage and communication</b>	<p>Transport as an economic sector refers to activities concerned with land transport, railway transport, water transport, and transport via pipelines, air transport, activities of travel agencies, post and telecommunications, courier activities, as well as storage and warehousing activities.</p>
<b>Financial and business services</b>	<p>This sector includes inter alia financial intermediation; insurance and pension funding; real estate activities; renting</p>



	or transport equipment; computer and related activities; research and development; legal; accounting; bookkeeping and auditing activities; architectural, engineering and other technical activities; and business activities not classified elsewhere.
<b>Social, community and government services</b>	This sector includes public administration and defence activities, activities of government, government departments and agencies; education, public and private; health and social work; sewage and refuse disposal, sanitation and similar activities; activities of membership organisations; recreational, cultural and sporting activities; washing and dry-cleaning of textiles and fur products, hairdressing and other beauty treatment, funeral and related activities.

### 3.1.3 Production Structure and Growth Performance

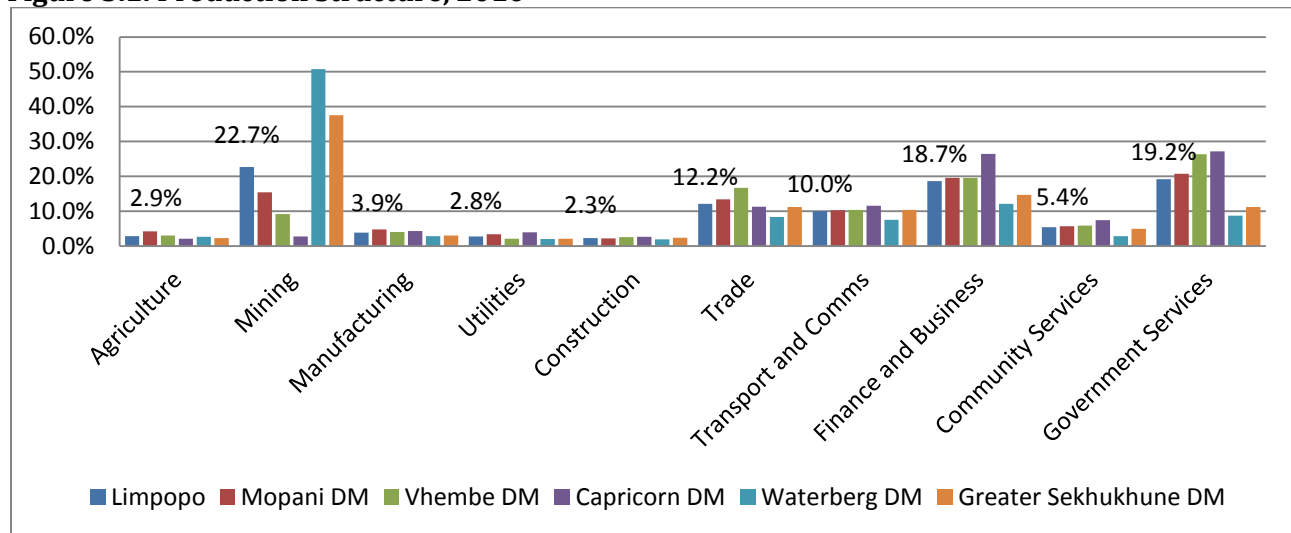
This section provides an overview of the production structure and growth performance in order to identify the most important economic sectors in Limpopo. The Gross Value Added (GVA) of Limpopo is utilised to provide an indication of the economic performance of the relevant study area.

**Value Added (GVA)** is defined as the total value of all the goods produced in a specific area during a specific period. In other words, total output for a specific period in Rand values is employed. The definition takes formal business' outputs as the primary indicator.

### 3.1.4 Production Structure

This section provides the baseline for the review and update of the economic profile. This section gives us an overview into the economic composition and the contributions that these various sectors make towards the local economy of Limpopo. It provides us with data on the regional – Gross Value Added (GVA), and national Gross Domestic Production (GDP) economic performance.

**Figure 3.1: Production Structure, 2010**



Source: Urban-Econ calculations based on Quantec Research Database and Statistics SA, 2011

Figure 3.1 indicates the production structure of the Limpopo province, as well as the five district municipalities in 2010. In Limpopo, the mining sector contributed 22.7% to the GVA in 2010. Another noticeable contribution to the GVA was the government services sector with a contribution of 19.2% to GVA.

The sectors that contributed the lowest to the GVA in Limpopo and all the district municipalities are utilities, construction and agriculture.

**Primary Sector** - The primary sector of the economy extracts or harvests products from the earth. The primary sector includes the production of raw material and basic foods. Activities associated with the primary sector include agriculture (both subsistence and commercial), mining, forestry, farming, grazing, hunting and gathering, fishing, and quarrying.

**Secondary Sector** - The secondary sector of the economy manufactures finished goods. All of manufacturing, processing, and construction lies within the secondary sector. Activities associated with the secondary sector include metal working and smelting, automobile production, textile production, chemical and engineering industries, aerospace manufacturing, energy utilities, engineering, breweries and bottlers, construction, and shipbuilding.

**Tertiary Sector** - The tertiary sector of the economy is the service industry. This sector provides services to the general population and to businesses. Activities associated with this sector include retail and wholesale sales, transportation and distribution, entertainment (movies, television, radio, music, theatre, etc.), restaurants, clerical services, media, tourism, insurance, banking, healthcare, and law.

**Table 3.2: Sectoral Production Structure (2000 – 2010) of Limpopo**

Sector	2000	2005	2010
<b>Primary Sectors</b>			
Agriculture	2.5%	2.9%	2.9%
Mining	25.4%	26.0%	22.7%
<b>Secondary Sectors</b>			
Manufacturing	4.1%	3.8%	3.9%
Utilities	2.8%	3.0%	2.8%
Construction	2.0%	1.8%	2.3%
<b>Tertiary Sectors</b>			
Trade Sector	13.0%	12.5%	12.2%
Transport and Communications	7.5%	9.4%	10.0%
Finance and Business Services	15.6%	16.7%	18.7%
Community Services	5.6%	5.3%	5.4%
Government Services	21.5%	18.7%	19.2%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

*Source: Urban-Econ calculations based on Quantec Research Database and Statistics SA, 2011*

Table 3.2 illustrates that the economy of Limpopo has not shown significant structural changes over the last decade. Most of the sector contributions have remained stable over the last decade. The activities in the secondary and tertiary sector are experiencing a gradual growth, particularly the manufacturing, transport & communications and finance & business services.

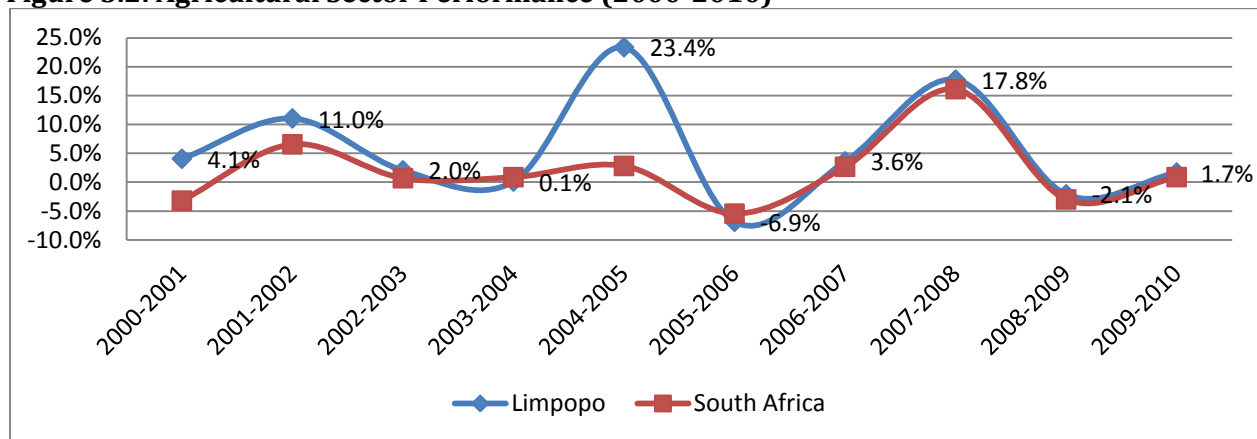
### 3.1.5 Sectoral Performance

In the following sections, the profile of each economic sector is discussed separately for the Limpopo province. The sectoral performance of Limpopo is measured against the sectoral performance of five district municipalities in the province to serve as a benchmark.

### a. Agriculture

This sector includes agriculture, hunting and related service activities. It comprises activities such as the growing of crops; market gardening and horticulture, mixed farming of animals, hunting, trapping and forestry and fishing and fish farms.

**Figure 3.2: Agricultural Sector Performance (2000-2010)**



Source: Urban-Econ calculations based on Quantec Research Database and Statistics SA, 2011

**Table 3.3: Agriculture Statistics and Trends in Limpopo**

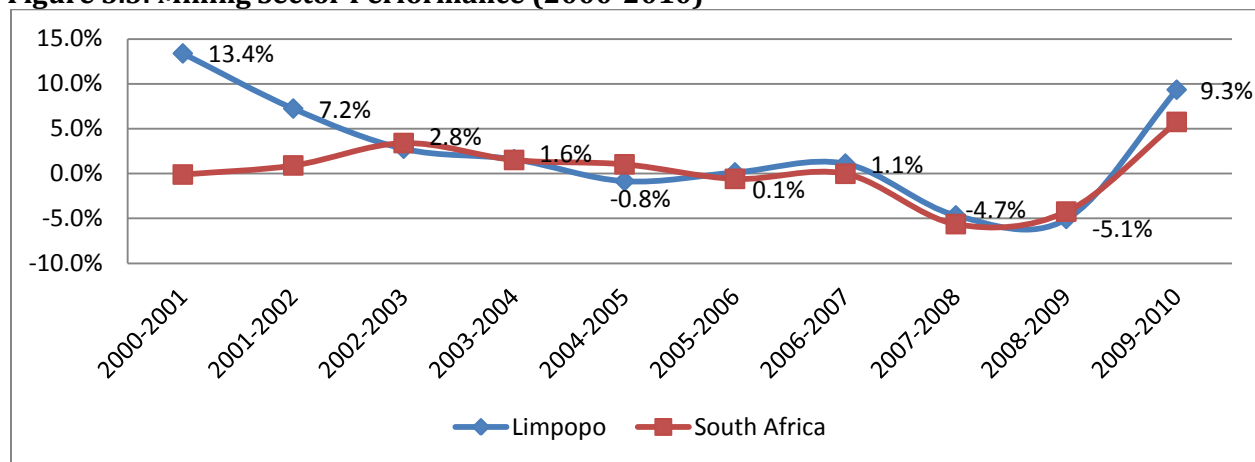
Variable	Value
Contribution to GVA: 2000	2.5%
Contribution to GVA: 2010	2.9%
Growth % (2000 – 2010)	5.1%
Growth % (2010)	1.7%

Source: Urban-Econ calculations based on Quantec Research Database and Statistics SA, 2011

### b. Mining

This sector includes the mining of minerals, quarrying of stone, the extraction of clay and sandpits, the extraction of fuels and gas, and service activities incidental to the mining of minerals.

**Figure 3.3: Mining Sector Performance (2000-2010)**



Source: Urban-Econ calculations based on Quantec Research Database and Statistics SA, 2011

**Table 3.4: Mining Statistics and Trends in Limpopo**

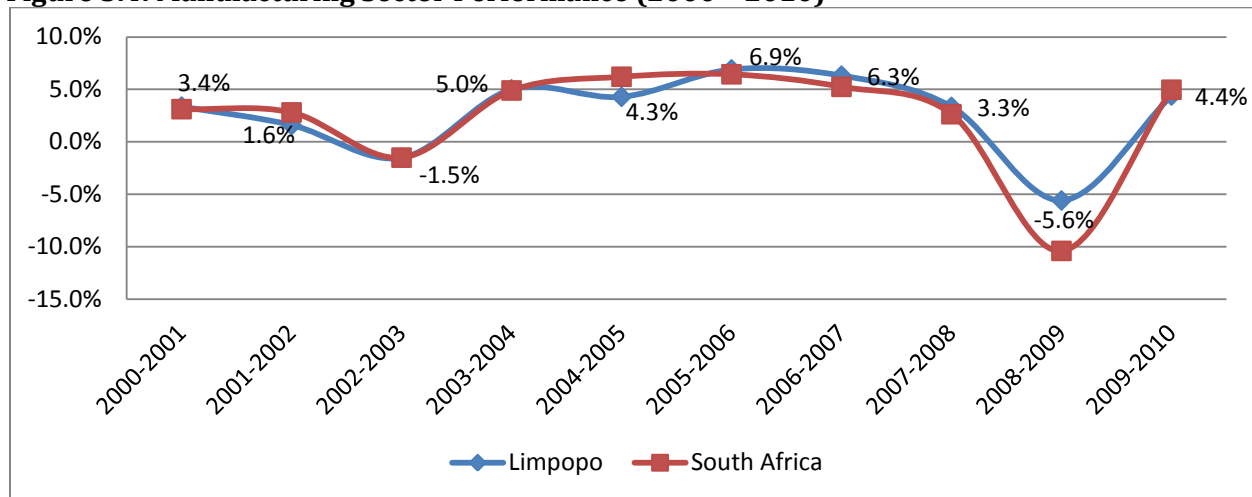
Variable	Value
Contribution to GVA: 2000	25.4%
Contribution to GVA: 2010	22.7%
Growth % (2000 – 2010)	2.3%
Growth % (2010)	9.3%

Source: Urban-Econ calculations based on Quantec Research Database and Statistics SA, 2011

## c. Manufacturing

This sector includes the manufacturing of goods, products and beverages. It also comprises the production, processing and preservation of meat, fish, fruit, vegetables, oils and dairy products; grain mill, starches and tobacco products; textile products; spinning, weaving; and petroleum products and nuclear fuel.

**Figure 3.4: Manufacturing Sector Performance (2000 – 2010)**



Source: Urban-Econ calculations based on Quantec Research Database and Statistics SA, 2011

**Table 3.5: Manufacturing Statistics and Trends in Limpopo**

Variable	Value
Contribution to GVA: 2000	4.1%
Contribution to GVA: 2010	3.9%
Growth % (2000 – 2010)	2.7%
Growth % (2010)	4.4%

Source: Urban-Econ calculations based on Quantec Research Database and Statistics SA, 2011

## Agro-Processing

There are ten sub-sectors of manufacturing, of which agro-processing is one, the rest are namely:

- **Food, beverages and tobacco**
- Textiles, clothing and leather goods
- **Wood, paper, publishing and printing**
- Petroleum products, chemicals, rubber and plastic
- Other non-metal mineral products
- Metals, metal products, machinery and equipment
- Electrical machinery and apparatus
- Radio, TV, instruments, watches and clocks
- Transport equipment
- Furniture and other manufacturing

The two sub-sectors that comprise the agro-processing industry are **food, beverages and tobacco** as well as **wood, paper, publishing and printing**.

The Limpopo province currently contributes only **1.5% of total manufacturing** in South Africa. In terms of **agro-processing** this contribution is **3.0% for the food, beverage and tobacco sector** and **1.1% for the wood, paper, publishing and printing sector**.

**Table 3.6: Limpopo's Contribution to Manufacturing and Agro-Processing in South Africa, 2010**

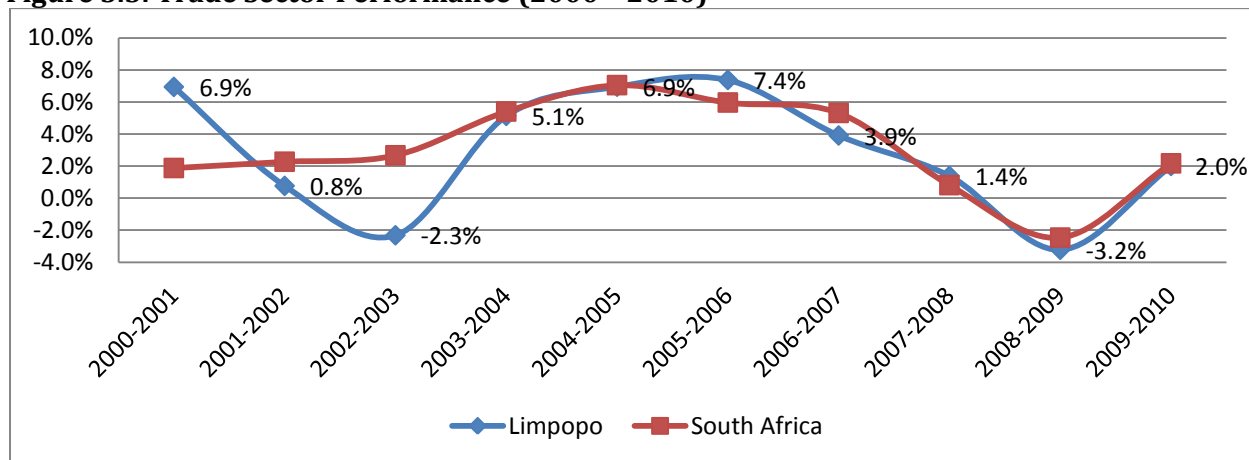
Limpopo	Percentage contribution in South Africa
Manufacturing (Total)	1.5%
Food, beverages and tobacco	3.0%
Wood, paper, publishing and Printing	1.1%

Source: Urban-Econ calculations based on Quantec Research Database and Statistics SA, 2011

## d. Trade and Accommodation

The trade sector entails wholesale and retail trade; personal and household goods; sale, maintenance and repair of motor vehicles; hotels and restaurants, and other provision of short-stay accommodation.

**Figure 3.5: Trade Sector Performance (2000 – 2010)**



Source: Urban-Econ calculations based on Quantec Research Database and Statistics SA, 2011

**Table 3.7: Trade Statistics and Trends in Limpopo**

Variable	Value
Contribution to GVA: 2000	13.0%
Contribution to GVA: 2010	12.2%
Growth % (2000 – 2010)	2.8%
Growth % (2010)	2.0%

Source: Urban-Econ calculations based on Quantec Research Database and Statistics SA, 2011

### 3.1.6 Sectoral Employment

The recent growth in the South African economy has direct implications for formal employment levels. While informal or second economy employment also plays an important role in providing access to household income, accurate data only exists for the trends in the formal employment levels.

**Table 3.8: Formal Employment Figures for Limpopo (2005, 2010)**

Sector	2005	2010
Agriculture	12.3%	5.9%
Mining	12.0%	18.2%
Manufacturing	7.0%	6.5%
Electricity & Water	0.6%	0.6%
Construction	2.6%	2.6%
Trade and Accommodation	15.1%	11.5%
Transport and Communication	2.3%	1.7%
Finance and Business	8.5%	10.1%
Community Services	17.9%	18.7%
Government Services	21.8%	24.3%
Totals	100%	100%

Source: Urban-Econ calculations based on Quantec Research Database and Statistics SA, 2011

Table 3.8 illustrates the formal employment as a percentage contribution by each sector. Employment in agriculture has declined significantly in the past five years, while a significant increase can be seen in the mining, finance and government services sector. The manufacturing and



trade and accommodation sector have seen a decrease in employment but their contribution to employment levels still remain high.

**Table 3.9: Limpopo employment contribution as a percentage of the South African total (2000 - 2010)**

Sector	2000	2005	2010
Agriculture	10.2%	7.3%	5.5%
Manufacturing	3.2%	3.0%	3.0%
Food, beverages and tobacco	6.9%	6.4%	6.0%
Wood, paper, publishing and Printing	3.4%	2.9%	2.6%

*Source: Urban-Econ calculations based on Quantec Research Database and Labour Force Survey, 2010*

Table 3.9 illustrates the employment contribution of Limpopo as a percentage contribution of the South African total.

### 3.1.7 Overview of the Agro Processing Sector

The following sub-sections will discuss definitions for agro processing, value addition as well an overview of the agro processing sector and relevant best practices in the processing industry.

#### 3.1.7.1 What is Agro-Processing?

A common and traditional definition of the **agro-processing industry** refers to the **subset of manufacturing that processes raw materials and intermediate products derived from the agricultural sector**. The agro-processing industry thus means transforming products originating from agriculture, forestry and fisheries.

Indeed, a very large part of agricultural production undergoes some degree of **transformation between harvesting and final use**. The industries that use agricultural, fishery and forest products as raw materials comprise of a very varied group. They range from simple preservation (such as sun drying) and operations closely related to harvesting to production, by modern, capital-intensive methods, of such articles as textiles, pulp and paper.

The food industries are much more homogeneous and are easier to classify than the non-food industries, since their products all have the same end-use. Most preservation techniques, for example, are basically similar over a whole range of perishable food products, whether they are fruit, vegetables, milk, meat or fish. In fact, the processing of the more perishable food products is to a large extent for the purpose of preservation.

Another useful classification of the agro-processing industry is in upstream and downstream industries. Upstream industries are engaged in the initial processing of agricultural commodities. Examples are rice and flour milling, leather tanning, cotton ginning, oil pressing, saw milling and fish canning. Downstream industries undertake further manufacturing operations on intermediate products made from agricultural materials. Examples are bread, biscuit and noodle making, textile spinning and weaving; paper production; clothing and footwear manufacturing; and rubber manufactures (FAO, 2012).

### 3.7.1.2 What is Value Addition?

**Value addition** is the process of increasing economic value to primary agriculture commodities, where production and marketing are under single ownership. The value addition process includes innovation, coordination and vertical integration.

**Innovation** focuses on improving existing procedures, products and services or creating new ones, successful value added ideas focus on narrow, highly technical, geographically large markets where competition is sparse. **Coordination** focuses on techniques of production, marketing or processing to meet specific end user needs. This can also involve consolidation among companies and individuals from the same food chain complementing each other's activities, since not all farmers have all the required resources thus a coordinated effort is needed to increase market efficiency and reduce cost. **Vertical integration** involves performing all activities of production and marketing under single ownership, eliminating the middle man and dealing directly with the market.

Different ways to add value to producer's raw materials include:

- › **Selling to direct market** for normal distribution channels for marketing and processing; these include roadside stands, hawkers, farmers markets etc. Conventional marketing is

selling to complimentary sectors such as grain producers selling their grains to feedlots, livestock producers and niche markets.

- › **Investing in a portfolio of food companies;** this involves the purchase of publicly traded stock in firms already purchasing, processing and marketing the producer's raw products. The advantages of investment in publicly traded companies it eliminates the costs associated with vertical integration.
- › **Using production and marketing contracts;** producers are able to add value to their production as purchases are guaranteed and producers are not faced with the inherent output price or risk of growing without contracts.
- › **Establish producer owned businesses:** farmers invest in value addition activities and are able to become more vertically integrated, providing consistent quality from the field to the shelf eliminating the middlemen and saving money for consumers. (Kansas State University Department of Agriculture Economics, 2012).

Table 3.10 indicates the difference between agro-processing and value addition activities.

**Table 3.10: Difference between Agro-Processing and Value Addition**

Difference between Agro-Processing and Value Addition	
Agro-Processing	Value Addition
<ul style="list-style-type: none"> <li>▸ <i>Primary processing operations</i> involve activities such as crop drying, shelling/threshing, cleaning, grading, and packaging.</li> <li>▸ These activities are mainly carried out at the farm and only transform the commodity into a slightly different form prior to storage, marketing or further processing.</li> <li>▸ <i>Secondary processing operations</i> entail increasing nutritional or market value of the commodity, e.g. milling grain into flour, grinding groundnuts into peanut butter, pressing oil out of vegetable seeds, pressing juice out of fruit, making cheese out of milk and manufacturing of mince.</li> <li>▸ Agro-processing industries integrate other sectors along the entire value chain, including pre and post-harvest activities.</li> </ul>	<ul style="list-style-type: none"> <li>▸ Innovation, coordination and vertical integration from the farm gate to reaching consumers.</li> <li>▸ Selling directly to market and niche markets.</li> <li>▸ Reducing transaction costs through joint ventures and cooperative farming.</li> <li>▸ Producing and marketing commodities that improve operation efficiency in the supply chain, e.g. wheat varieties that improve milling and baking efficiency for processors that are willing to pay a higher farm price.</li> <li>▸ Producers owning assets in the supply chain for further commodity processing.</li> </ul>

Source: A study on the status of the agro-processing industry in Zimbabwe and Kansas State University  
Department of Agriculture Economics

### 3.7.1.3 Agro-Processing Industry Overview

The sub-section will give an overview of the agro processing industry in SA, indicating the contribution of sectors to economic activities and the consumer profile. A brief overview of the Limpopo agro-processing sector will be discussed as further analysis of the industry will be unveiled in sections to come. The best practices for agro processing are also discussed to give an overview of successful implementation of agro processing activities locally and internationally.

## a. South African Agro-Processing Perspective

Agro-processing such as food, beverages and tobacco contributed R66, 6 billion in 2008, which is 17, 3% of the total amount generated by the manufacturing sector. The direct contribution of agro-processing to the GDP in 2008 was 3, 2%, **making it the third-largest contributor to GDP after chemicals and metals**. According to Statistics SA, around 207 000 people are employed in the agro-processing sector, which is 16% of the total employment number for the manufacturing sector and **2,5% of the total employment number for the economy**. Exports of processed products were valued at R24, 3 billion in 2008 and showed an increasing trend from the year 2000 to the year 2008(Dti: Trade, Export and Investments, 2011).

Provinces such as Eastern Cape, Limpopo, North West, Mpumalanga and the Northern Cape where agriculture is dominated, have the opportunity for secondary businesses to establish processing activities and create employment through the entire value chain. The agro-processing industry tends to have companies with large market share such as Tiger Brands giving them a monopoly or power of production, thus the importance of building local processing businesses through availing funding and creating an enabling environment plays a vital role.

The processing industry also requires the following to be successful:

- › A well-developed research and development sector,
- › Technology marketing,
- › Input supplies and production support associations
- › Government and private sector support
- › Multinationals companies
- › Adequate hard (roads, pipelines) and soft infrastructure (training and skills development)
- › Compliance with quality assurance and required production standards

The industry also has numerous associations offering support to farmers and processors of various commodities.

## **b. Consumer Profile for the Agro Processing Industry**

The consumer profile for agro-processing industry consists of local retailers, multinational companies and international/export markets.

### **▸ Local Retailers**

Local retailers and buying groups are often the best customers for small enterprises. Many of these offer support programmes for black suppliers or small start-ups through growing contracts and offering technical support (Cobweb Information SA, 2010). An increasing trend among retailers is the stocking of organic foods as well as foods aimed at certain niche markets and traceability of locally produced goods.

### **▸ Local multinational companies**

South Africa has numerous multinational companies which enterprises can supply with various goods. These companies include Unilever, Nestle, SAB Miller, McCain Foods, Tiger Brands, Premier Foods, Unifoods, AVI Ltd, Nabisco and many more. Some of the multinational companies also have supplier development programmes, many of which favour emerging enterprises (Cobweb Information SA, 2010).

### **▸ International markets**

Neighbouring countries belonging to the Southern African Customs Union (Botswana, SA, Swaziland, Lesotho and Namibia) have abolished internal tariff barriers, making it easy for South African companies to compete with those in neighbouring countries. The establishment of preferential trade agreements, such as the African Growth and Opportunity Act (AGOA) for the United States (US) market and a Free Trade Agreement (FTA) with the European Union (EU), present generous benefits for SA exports (Cobweb Information SA, 2010).

## **c. Limpopo Overview**

The Limpopo province has a wealth of agriculture resources which stimulate the development of agro processing for various products such as juice, concentrates, dried fruits, meat products etc. The Limpopo Growth and Development Strategy have recognised agro-processing as one of the two

highest potential industrial clusters in the province with the potential to create high employment. Substantial opportunity exists for further processing and packaging within the province's border which in turn could enhance agri-business activities.

Previous research conducted for the province regarding agro processing has indicated that the processing and marketing of bananas, mangoes, oranges and tomatoes are currently being dominated by commercial interests, with rural and emerging farmers confined largely to informal markets. These commercial farmers have access to market information which has enabled them to penetrate domestic and export markets. At the same time, commercial farmers, through their growers associations, have access to extension workers who provide valuable technical assistance. Rural and emerging farmers, on the other hand, do not have access to similar resources.

Numerous investment programmes are directed towards the development of the processing and manufacturing industry with Trade and Invest Limpopo (TIL), the official investment and trade facilitation agency of Limpopo Provincial Government, indicating that the Provincial Government is also facilitating development of new types of farming and further value-added processing of products.

### 3.1.8 Best Practices

#### **a) Department of Science and Technology in Agro Processing**

*SA Success Stories for Rural Development through Agro Processing*

#### **Project Background**

The Department of Science and Technology recognises the importance of integrating research and development into the processing industry, as it has potential to increase production volumes and build on human capital.

The aim of integrating science and technology into processing is:

- Address market failures, enhances quality of life, create jobs and wealth opportunities.
- Diversify and create an inclusive economy for all.
- Provide food security especially to rural areas.

- › Post-Harvest beneficiation, value addition and value-chain development of natural resources.
- › Increase the access of producers to Universities and Science Councils to enhance their production and keep abreast with current trends.
- › Wealth creation through SMME's and job creation.
- › Place economic infrastructure in proximity to communities, which can assist in wealth creation for SMMEs and job creation.

## **Ulwazi Botanical**

A successful project implementing the use of science and technology in farming activities is the Ulwazi Botanical, a brand that is being developed for the local and international sales and marketing of medicinal and aromatic products, which are cultivated and processed by SA communities. The project consists of different regions (Limpopo, Free State and Eastern Cape) growing and processing indigenous herbs into medicinal products. The focus will be on the **Hi Hanyile factory just outside Giyani, Limpopo.**

The factory was first established in the year 2000 as a essential oils project with the focus being on cultivating five hectares of lemon grass and rose geranium for the extraction of essential oil. Since then collaboration between the CSIR, SA Bureau of Standards and traditional healers managed to develop a higher mosquito repellent not found on the commercial market.

The factory is located in close proximity to the cultivated land and distillation factory, before installation of technical equipment and machinery; beneficiaries were trained in operation and safety of the machinery. The factory has the capacity to manufacture 400 000 candles a year, packaged into 250grams containers which burn up to 55 hours sold at a retail price of approximately R20. The repellent and oils are sold under the name Ulwazi Botanicals.

The project has been a success as it has employed 67 people of whom 70% are women from rural communities in Giyani, (Department of Science and Technology and CSIR, 2005).



## Outcomes

- › Community SMMEs have been established in niche market (candles and oils), coupled with skills development and training in specific sector
- › Partnerships for sales have been developed and products are doing well in the market
- › Technology transfer and skills development for local communities

## Lesson Learnt

- › The use of research and development to create sustainable jobs in the processing sector
- › Collaboration with universities and research institutions to develop quality products approved for local and international sales
- › Institutions involved in funding, research and development of products include:
  - The Department of Science and Technology
  - Council for Scientific and Industrial Research (CSIR)
  - The Agricultural Research Council (ARC)
  - The National Research Foundation (NRF)

## b) Uganda: United Nations Industrial Development Organisation (UNIDO) Food Processing Pilot Centres

UNIDO is a specialised agency aimed at promoting and accelerating sustainable industrial development in developing countries. The agency works towards improving living conditions of poverty stricken countries by utilising their global resources and expertise. One of these initiatives was the Food Processing Pilot Centres (FPPC) in developing countries. The central role of the FPPC is:

- › To manage the **link between agriculture activities and the market** through business culture networking
- › Market access improvement
- › **Technology upgrade**, therefore creating an enabling environment for business development



The approach of the FPPC centres is to **address the huge technology gap in rural areas ensuring technology transfer and dissemination** in Africa/developing states which will equate in increased revenue for beneficiaries.

The programme has established 27 FPPCs in Africa (various countries such as Morocco, Mali, Madagascar, Cameroon) with over 1,882 people trained , which resulted in an increased income of 5, 500 people, improving the lives of 35, 000 families. <sup>1</sup> The processing centres consist of food processing facilities managed by qualified people lined to a certain number of farmers and market outlets, **creating a micro food value chain**. The FPPC's assesses market needs, allocate products and produce according to demand. The centres also assist farmers in meeting specifications required.

Currently Uganda has 12 centres with each centre accommodating to the regions natural resources. Table 3.11 lists a few of these centres indicating the number of farmers involved in the centres, type of production and target market.

**Table 3.11: Uganda Food Processing Pilot Centres**

Food Processing Pilot Centres	Activities	Market Targeted	Farmers Involved
1. Masaka Organic Producers (MOP) established in 2000	Processing of organic dried fruits (pineapples, papaya, mangoes, jack fruit, banana) and vegetables (tomatoes, cabbages)	Domestic and Export: EU	175
	Training of processors and farmers		
2. Tropical Ecological Foods Uganda Limited (established 2000)	Processing of organic solar dried fruits (pineapples, papaya, mangoes, jack fruit, bananas)	Domestic and Export	84
3. KOKA Women Group (established 1992)	Processing of cassava products, sunflower oil	Domestic	1, 500
	Training of processors and farmers		
4. Hometech Food Processors (established 2000)	Processing of fruit juices, tomato ketchup, baking cakes	Domestic	3
	Training of processors		

<sup>1</sup> UNIDO Food Processing Pilot Centre's (FPPC): An approach to productive capacity building for trade and poverty alleviation in Africa 2007

Food Processing Pilot Centres	Activities	Market Targeted	Farmers Involved
5. Medi & Sons (established 1994)	Maize milling and rice milling Advising of processors	Domestic	22
7. Mubende Drying Centre (established 2003)	Processing organic solar dried fruits (pineapple, papaya, mangoes, bananas) and fruit juice	Domestic and Export	42

Source: UNIDO Food Processing Pilot Centre's (FPFC): An approach to productive capacity building for trade and poverty alleviation in Africa 2007

### Lessons Learnt

- Using **technology to create rural agriculture value addition** and transfer skills to local resident
- Provision of infrastructure on local level to create **micro food value chain** and create employment. Production is influenced and directed by market demand, targeting both domestic and export markets
- Importance of **training local farmers in processing quality standards** and being **market demand orientated**. Collective farming for increased volumes and taking advantage of communal infrastructure

## c) Latin America and South Africa Agro Based Clusters

### Agro Base Clusters

Agro based clusters are a concentration of producers, agribusinesses and institutions that are engaged in the same agriculture/ agro processing sub-sector. It is an interaction among stakeholders across the agriculture supply chain as well as forming relationships with supporting institutions such as the local government, research institutions and universities.

The aim is to build valuable networks to address common challenges and pursue common opportunities. Agro clusters have been identified as a crucial element for small-scale farmers as it enables them to engage in high productivity, market orientated and higher value added production.

The clusters that will be analysed are the fruit clusters in Latin America and the South African wine cluster.

## **Latin America: Fruit Clusters<sup>2</sup>**

The fruit cluster produces fresh and/or processed fruits for the domestic and export markets. Various approaches were taken to form the fruit cluster for example the mango and grape cluster in Petrolina Juazeiro, Brazil was a result of centralised government planning, as an opportunity for a cluster was identified. The apple cluster in Santa Catarina, Brazil was the result of collaboration between pioneer entrepreneurs and the public sector, while other clusters were formed by initiatives of large entrepreneurs alone, in the case of melon production in Rio Grande do Norte in Brazil.

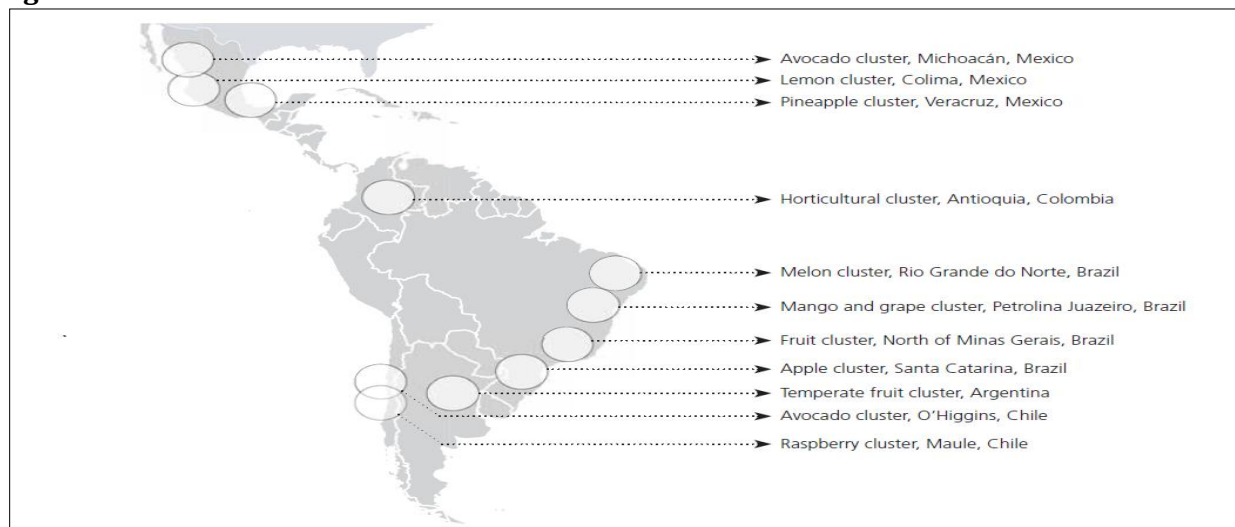
Large growers have a strong presence in the fruit clusters but medium and small producers have also managed to remain successful in business accounting for 30 to 60 percent of the total production.

Figure 3.6 is a map of Latin America indicating the geographic distribution of the various fruit clusters. The clusters accommodate to commodities being produced locally and ensure complimentary activities for value addition.

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<sup>2</sup>Agro-based clusters in developing countries: staying competitive in a globalized economy by Eva Galvez-Nogales 2010

**Figure 3.6: Fruit Cluster in Latin America**



Source: *Agro-based clusters in developing countries: staying competitive in a globalised economy* by Eva Galvez-Nogales 2010

The small and medium growers of the fruit clusters have adopted different ways to meet market requirements:

- Firstly some growers have engaged in contractual arrangements with grower-exporters or with dedicated wholesalers distributing to supermarkets, e.g. the raspberry cluster in Chile.
- Secondly, small and medium-scale producers have established direct sourcing arrangements with small supermarkets and established marketing networks.
- Thirdly producers have taken joint action to meet threats and challenges collectively.

## **Factors contributing to the success of Latin American Fruit Clusters:**

- **Collective actions:** collective actions from the various producers and institutions have contributed to the long term-sustainability of fruit clusters
- **Participation from the private sector:** assisted clusters to comply with quality standards and to achieve economies of scale in export logistics and in the purchase of inputs
- **Involvement of government departments:** the constant support and monitoring from public authorities also played a crucial role as well as the **provision of infrastructure**
- **Institutional support to fruit clusters:** access to credit, marketing, research and training

## South African Wine Cluster, Western Cape <sup>3</sup>

South Africa is the ninth largest wine producer in the world, having a production share of 9% and an export share of 13.7%. The main export markets are the United Kingdom and the Netherlands. The cluster based around the Western Cape produces mainly quality wines, with more than 4,340 farmers cultivation around 108,000ha of land under vines including a working force (farm workers, cooperative cellar staff with their dependants) of some 345,500 people.

Key actors in the industry have recognised that innovation at technical and organisational level is crucial. The support service institutions have focused their attention on **expanding the volume of export** wines in super premium segments and various forms of cooperation between producers and institutions have emerged to support marketing activities.

The wine **industry is backed by a state-funded research body located in the Western Cape**: the Nietvoorbij Institute for Viticulture and Oenology of the Agricultural Research Council, employing some 250 staff. The Nietvoorbij mandate is to conduct research, development and technology transfer on the breeding, cultivation and post-harvest technology of deciduous fruit, viticulture, alternative crops (e.g. berries and olives) and indigenous herbal teas.

### Factors contributing to the success of the wine cluster

- › **Collective actions:** producers have engaged in production innovation and knowledge sharing with various support bodies
- › **Government Support** through funding and institutional support
- › **Sector specific support technology** solely focused on the wine industry and support industries
- › **Supporting institutions** focusing on the production and monitoring of wine such as the Wine Industry Network for Expertise and Technology (network formed by industry, scientists and technicians) and Wines of South Africa (non-profit entity, responsible for the international promotion of South African wines).

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<sup>3</sup>Agro-based clusters in developing countries: staying competitive in a globalized economy by Eva Galvez-Nogales 2010

## **d) Other Relevant Case Studies: Northern Cape Grain Processing Food Plant**

The Northern Cape Department of Economic Development Tourism has developed two extruders in the Christiana area as phase one of the project. The two extruder plants process (wheat and maize) and are able to feed a total of 363 000 people; the plant can provide a fully balanced meal at R1.25, production capacity. Markets that they supply to are:

- › The Department of Education, 692 schools with approximately 243 802 pupils
- › The Department of Health facility based patients 173 facilities with 52 000 patients
- › Correctional Services with 50 640 offenders and social services with up to 80 soup kitchens

The first phase is processing food for feeding schemes and dog food with the second phase being planned for Modder River area. These extruders have high profit potential and are economically viable being able to create the necessary food security. The necessary linkages and support structures with various territories and institutions have been formed for further research and development.

## **Conclusion**

Agro-processing is a growing industry with huge potential to create employment, increase producers' incomes and alleviate poverty. An important element that will influence the agro-processing projects is the existing infrastructure and the availability of crops/vegetables, as these will motivate the opportunities.

The province has the ideal location with neighbouring countries such as Zimbabwe, Botswana and Mozambique, making it an ideal locality for agro industrial activities. Creating an enabling environment for competitive agro industries is crucial as agro processing projects must be able to compete with local and international markets.

## **Section 3.2: Limpopo Agriculture Commodity Production**

Section 3.2 will discuss the agriculture commodities produced in the Limpopo province and examine the high value crops such as horticulture crops and vegetables as they play an important role in the food chain. Field crops such as grains and protein seeds will also be discussed as well as industrial crops, livestock and forestry.

The Department of Agriculture in Limpopo has commissioned SIQ Pty (Ltd) to conduct an agricultural commodity production mapping in Limpopo Province. The project entailed the aerial survey of all agricultural commodity production areas and geo-referencing of infrastructure development. SIQ Pty (Ltd) analysed the production areas in hectares in all districts and municipal areas. As part of the agro-processing strategy, Urban Econ has utilised the information from the SIQ report to provide the actual agricultural production data and infrastructure distribution as part of situational analysis.

## **Limitations and Restrictions on Availability of Information**

Agriculture census and available data is out-dated as far back as 2007, trees planted and climatic conditions have changed over the years, influencing production volumes. Local municipalities' data are also out-dated and in some cases exact figures are not known for certain commodities.

The production volumes/tonnage is not recorded as per province but as a whole for the industry, giving industry statistics volumes per crop, not province. Association such as SA Potato organisation and SA Subtropical Growers' Association only collect figures from registered producers however not all producers are registered thus some hectares planted in the province will not reflect in their estimates.

SIQ Pty (Ltd) information is the latest and comprehensive mapping data available for local municipalities in the Limpopo province indicating statistical information at municipal level. The challenges faced by SIQ Pty (Ltd) are summarised as:

- Being extremely difficult to find data that can be used as benchmarking data, they were not able to find any data at Municipal level that could be used for benchmarking purposes
- There is some data available but it is out-dated
- A number of industry representatives and organisations have stopped collating industry information or have made a decision not to make the current data available

### **3.2.1 Limpopo Agriculture Characteristics**

Limpopo is known as the fruit basket of South Africa with climatic conditions providing for variety of fruits and vegetable. Agriculture is pivotal in the economic and social development of the province



as far as employment, food production and export is concerned. The province is stated to provide more than 45% of the R2 billion annual turnover of the Johannesburg Fresh Produce Market (Limpopo Horticulture Sector, 2009).

The province is a high producer of citrus having the highest area planted for citrus production and a suitable climate to accommodate a variety of product. The largest tomato producer ZZZ is based in the province producing high tones of various tomatoes for the fresh produce market and food processing industry. The province also has a high number of commercial farmers such as Maclands for macadamia nuts and Westfalia for avocado production. A high number of commercial farmers are located in the province, generating high revenue for the local economy. The province is well known for high production of mango, avocados, litchis and potatoes and has large processing companies such as Tigerbrands, Westfalia and Granor Passis situated in the province.

The commercial farms are dominated by white farmers who are able to feature prominently on the top supplier list. The majority of black farmers are still struggling to get their produce to competitive markets and gain high prices.

The **Limpopo Employment Growth and Development Plan (2009 – 2014)** understand the importance of agriculture in the Limpopo's economy and interventions to address some of the challenges include:

- › Agriculture and Rural Development Programme
- › **Extension service:** providing farmers with technical advice, assist them to plan, cooperate and gain access to the resources that they need
- › **Infrastructure:** infrastructure support will be in the form of off farm infrastructure, on farm infrastructure, capacity building infrastructure and input cost
- › **Use of limited resources:** encouraging farmers to use efficient irrigation systems
- › **Collapsing of land reform projects:** turn around strategies will be implemented to ensure optimal land use of these projects
- › **Access to national markets:** through Limpopo fresh produce market and value adding facilities ensuring that small-scale farming plays a significant role in food security and production.

**Land redistribution and restoration** play a major role in agriculture development as beneficiaries need to maintain and improve current production volumes to ensure sustained agriculture activities. Successful farms restored to communities in Limpopo in terms of the Land Restitution Act are called Restoration Projects. The role of Limpopo Department of Agriculture is to focus on support programmes for new farm owners. The number of households benefiting from these programmes is significant as sustainable livelihoods and jobs can be created from claimed land. Turn around strategies should be implemented to optimise resources and assist collapsed projects or projects where resources were not used optimally.

### 3.2.2 Agriculture Commodity Introduction

Under this section agriculture commodities in the province will be discussed, and a similar outline will be followed to indicate the status quo for the various commodities. The outline for each agriculture commodity will look at the following:

- › Industry Performance and Trend
- › SA Production Areas
- › Limpopo Producing Areas
- › Market Distribution
- › Exports and Export Destinations
- › Employment
- › Processors in the Province
- › Industry and Sector SWOT Analysis
- › Other related or supporting initiatives

Discussion of the fore mentioned will indicate the competitiveness of Limpopo's resources and led towards opportunity identification. The commodities analysed include:

- › Citrus
- › Subtropical Fruit
  - Avocadoes
  - Bananas
  - Litchi

- Mangoes
- Nuts
  - Macadamia Nuts
- Vegetables
  - Tomatoes
  - Potatoes
  - Onions
- Industrial Crops
  - Tea
  - Cotton
  - Tobacco
- Grains
  - Maize
  - Sorghum
  - Wheat
  - Canola
- Oil and Protein Seeds
  - Sunflower
  - Groundnuts
  - Dry Beans
  - Soybean
- Red Meat
  - Beef (Dairy)
  - Goat/Chevon
- White Meat
  - Poultry (Broiler and Egg Production)
  - Pork
- Forestry

## 3.3 Limpopo Agriculture Commodities

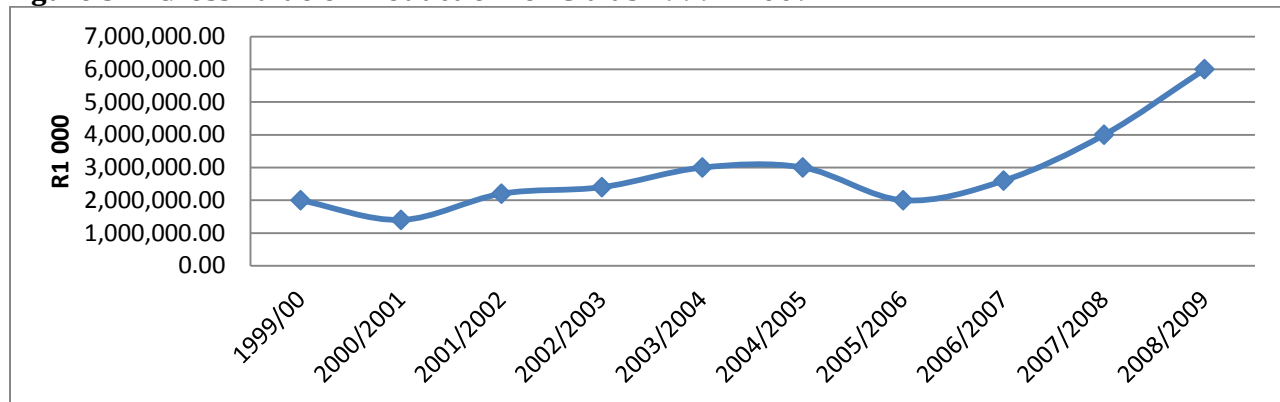
### 3.3.1 Citrus Commodity Profile

The citrus industry is made of oranges, grapefruit, navels, lemons and limes as well as soft fruit (naartjies). The industry is export orientated and requires well development infrastructure along the value chain. The highest revenue in the citrus industry is earned through exports and processing of fruits.

#### a) Industry Performance and Trend

Figure 3.7 indicates the gross value contribution of citrus fruit from 1999 -2009, and the increase in 2006-2009 can be accounted for increased exports and high production volumes. In 2008/09 the citrus industry contributed R5.8million to total gross value of SA agricultural production.

**Figure 3.7: Gross Value of Production for Citrus 1999 – 2009**



Source: DAFF - A Profile of the South African Citrus Market Value Chain 2010

#### b) Citrus Producing Areas in South Africa

In Table 3.12 below it is shown that the Limpopo province accounts for an area of 25, 674ha of citrus which is 42% of the total area producing citrus in SA, and with the Eastern Cape and Mpumalanga as the second largest producing areas.

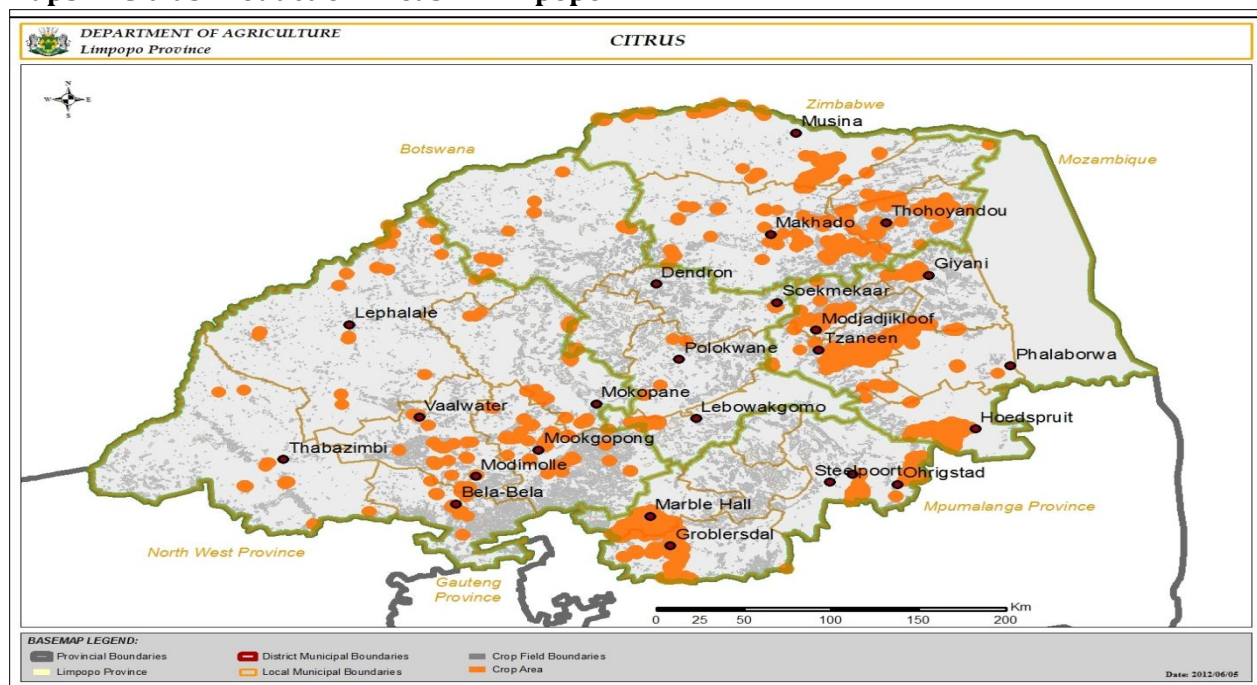
**Table 3.12: Citrus Producing Regions of South Africa**

Province	Area (ha)	Percentage
<b>Limpopo</b>	<b>25, 674</b>	<b>42%</b>
Eastern Cape	12, 508	21%
Western Cape	8, 961	15%
Mpumalanga	6, 817	11%
KwaZulu Natal	3, 405	6%
Northern Cape	1, 215	2%
Swaziland	1, 774	3%
Grand Total	60, 355	100%

Source: Citrus Growers Association of SA Stats Book 2012

### c) Citrus Producing Areas in Limpopo

Map3.1 illustrates the production areas in the province with hectares planted for citrus production indicated in Table 3.13 (Figures below differ from Citrus Growers Association of SA as SIQ accounts for all citrus production and not only registered citrus producers). The hectares planted for citrus production has increased by 83.67%, over the years from 2007 – 2012, indicating a significant growth in the province.

**Map3.1: Citrus Production Areas in Limpopo**


Source: Limpopo Department of Agriculture, 2012

**Table 3.13: Area Planted for Citrus in Limpopo**

Local Municipality	Hectares Planted
<b>Greater Tzaneen</b>	<b>8, 109</b>
Greater Marble Hall	5, 437
Maruleng	4, 308
Musina	4, 224
Ba-Phalaborwa	4, 105
Elias Motsoaledi	3, 204
<b>Total hectares planted for citrus in Limpopo</b>	<b>36, 079</b>
Total 2007	19, 643
<b>Change 2007 - 2012</b>	<b>83.67%</b>

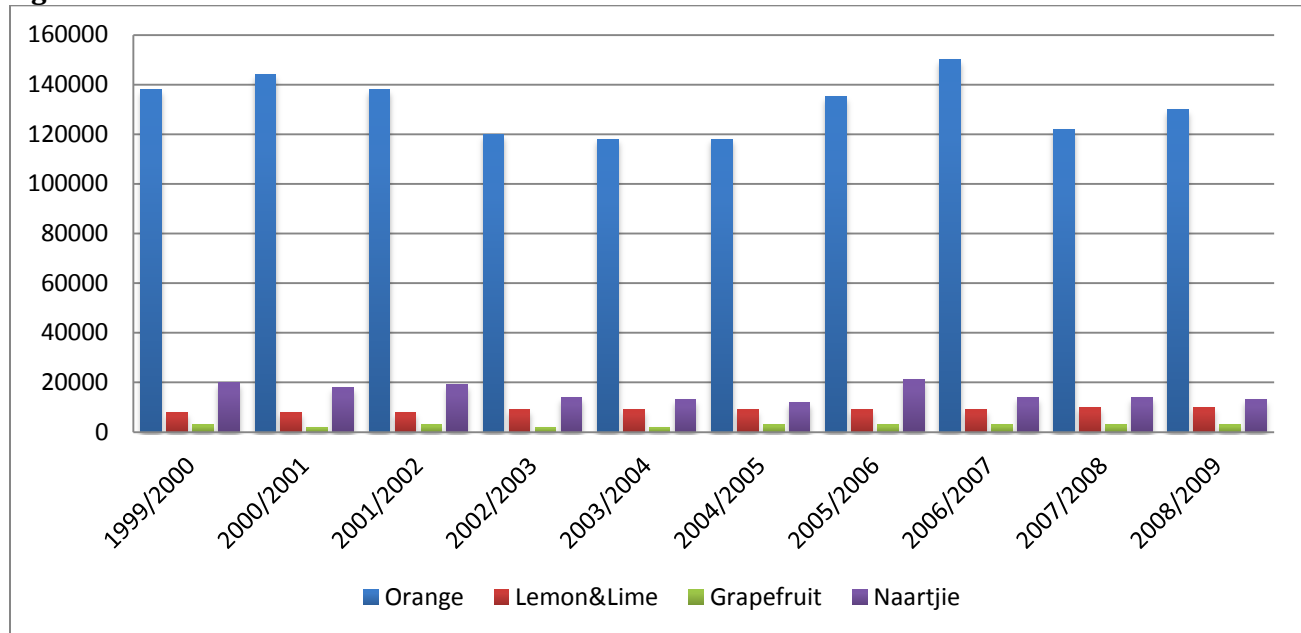
Source: SIQ Information 2012

#### **d) Market Distribution**

Citrus production in South Africa is mainly aimed at the export market. Locally, citrus produce is sold through different marketing channels such as National Fresh Produce Markets (NFPMS). The citrus volumes sold at NFPM are indicated in Figure 3.8 with oranges being the highest sold commodity followed by naartjies, lemons and limes.

The domestic market is also made up of informal markets (street hawkers), processors of juice and dried fruit production. The fruits are also sold directly to wholesalers and retailers through signed contracts. The implication for local citrus producers is that they need to target export markets and ensure quality of produce meet export requirements. The focus for local citrus producers should be on improving quality and quantity of fruits through technical assistance and training.

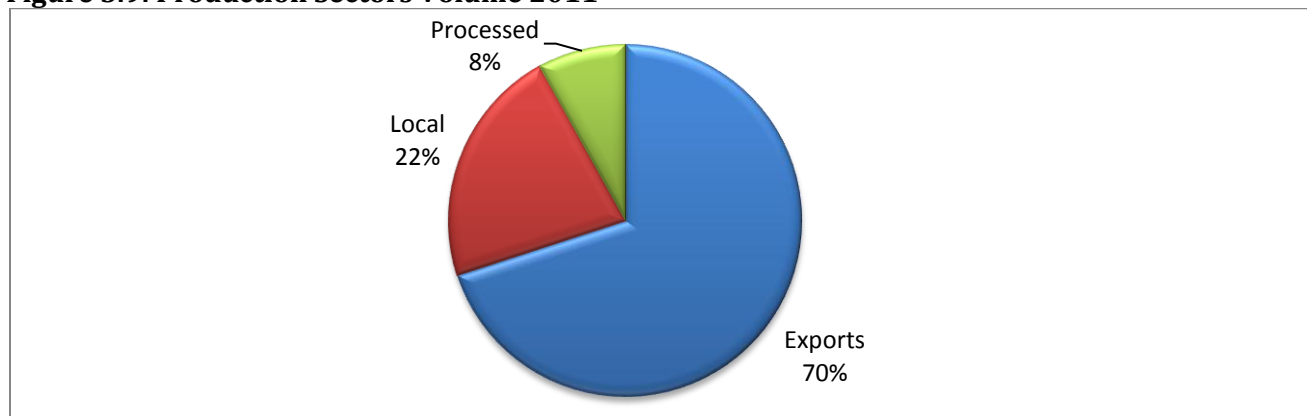
**Figure 3.8: SA Citrus volumes sold at the NFPM**



Source: DAFF - A Profile of the South African Citrus Market Value Chain 2010

Figure 3.9 indicates the production sector volumes for South Africa citrus distribution. The overview is that citrus production increased over the years which in turn increase the volumes/tons used in the various sectors. A notable increase in the export markets were 746,963 ton in 2005 to 1,045,254 tons in 2010. The majority of citrus fruit is exported (70% of citrus volumes), and 22% is used for the local market and 8% is processed.

**Figure 3.9: Production Sectors Volume 2011**



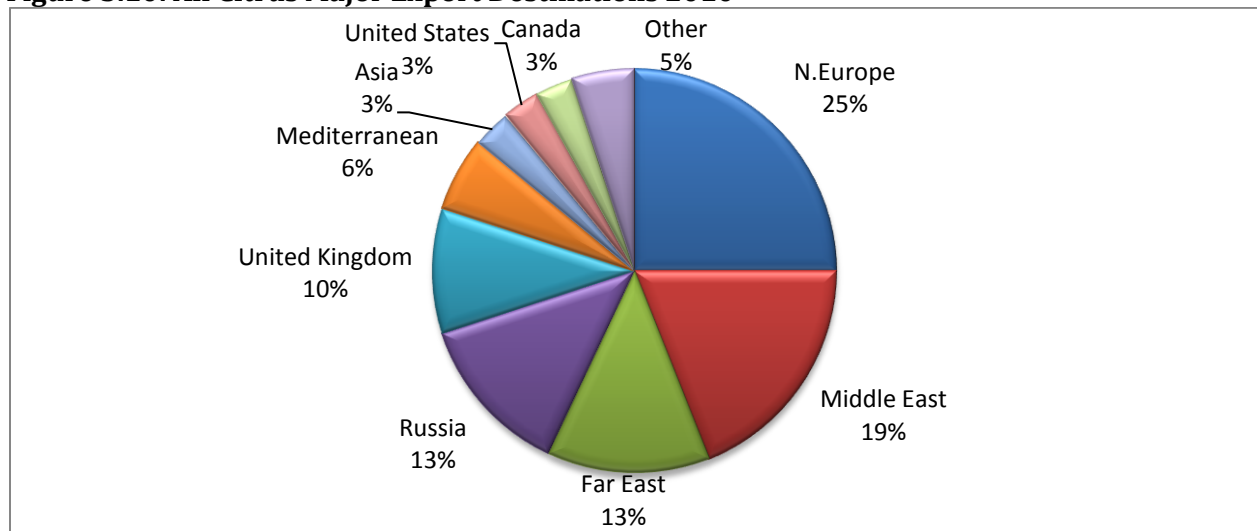
Source: Citrus Growers Association of SA Stats Book 2012

## e) Exports and Export Destination

### Export Destinations

In Figure 3.10 below one can see that the major export destination for all citrus fruit is Northern Europe with 27%, followed by the Middle East with 21% and Russia with 13%.

**Figure 3.10: All Citrus Major Export Destinations 2010**



Source: Citrus Growers Association of SA- Stats Book 2012

### Citrus Export by Province

The majority of exports where mainly from export provinces such as the Western Cape and Gauteng, despite the Limpopo, Eastern Cape and Mpumalanga provinces being the leading producers of citrus. This is due to the fact that the **Western Cape and Gauteng have registered exporters which are based in their separate provinces and they serve as exit points for citrus exports.** This highlights the importance of agro logistics and infrastructure as the Western Cape and Gauteng province are not citrus producing regions. The proximity of the Limpopo province to neighbouring countries and the South African Development Community (SADC) regions provides an opportunity to act as an exit point to export citrus. Export districts in Limpopo are the Mopani, Greater Sekhukhune and Vhembe district.



## **f) Employment**

Citrus is produced throughout various regions of South Africa; it provides employment opportunities in rural areas. It is estimated that **each hectare of citrus results in one on farm job** meaning that on farm employment in the citrus industry is 60 000 workers. It is estimated that a further 40 000 are employed in pack houses, processing plants, transport and other service sectors (Citrus Growers' Association Submission to Agricultural Job Creation Imbizo). Opportunity for growth in employment exists due to the increase of area planted for citrus production over the years. Citrus production also has **strong backward and forward linkages which local SMMES can take advantage of.**

## **g) Processing of Citrus**

Processing of citrus include juices, concentrate (which can be mixed with other fruits), marmalades, jams and essential oils obtained from the fruit peels used in the manufacturing of flavours and colours for usage in drinks, essential pharmaceutical oil and food products.

There are numerous pack houses with cold storage facilities in the province with a high number of pack houses in the Capricorn District Municipality. The majority of these pack houses belong to commercial farmers, thus they are able to partake in the vertical integration of produce from farm to market. A high number of pack houses are located in the Greater Letaba, Tzaneen, Marble Hall and Maruleng Local Municipality. The province has citrus processing factories such as Granor Passi, H.F.P, Letaba Citrus Processors located in areas producing high volumes of citrus. These factories combine other fruits (e.g. mango, peaches, guava etc.) in their manufacturing to ensure in and out of season production.

## **h) Industry and Sector SWOT Analysis**

Table 3.14 indicates the SWOT analysis for the SA citrus industry which also affects production areas in the Limpopo province.

Concerns and challenges raised by citrus **processing businesses in the Limpopo province** can be summarised as:

- › Increased cost of labour and cost of production (e.g. high cost of packing and cost of an export carton to Durban, long distance from ports)
- › Infrastructure collapse, e.g. power failures, roads, unreliable communication systems
- › Decreased volume of production due to land claims, some successful cases where there was a willing buyer and willing seller have benefited at least 30 000 beneficiaries but battling to farm profitable and have periodic cash flow constraints
- › Government's low priority towards commercial farming
- › Small-scale farmers lack access to markets and end up incurring post-harvest losses and there is no value addition by emerging farmers, who lack capacity to do so. There are unused structures (which were built by the homelands government) and these could be renovated and turned into processing plants (Agro Processing Research Study, 2007)

**Table 3.14: Citrus Industry SWOT Analysis**

Strengths	Weaknesses	Opportunities	Threats
<ul style="list-style-type: none"> <li>•Export operations and leading players are well established</li> <li>•High level investment in current technology within packhouses and cold chain facilities</li> <li>•There are growth opportunities for the grapefruit and orange sectors as little competition exist from the southern hemisphere countries, therefore sectors remain competitive</li> </ul>	<ul style="list-style-type: none"> <li>•Lengthy supply chain beyond the pack house</li> <li>•Poor skills and knowledge of new entrants</li> <li>•Growth in the citrus industry is restrained by factors that negatively impact on the industries competitiveness such as high increase in electricity, fuel, ports etc.</li> <li>•Present labour laws act as hindrance to employ as the require alot of administrative workload</li> </ul>	<ul style="list-style-type: none"> <li>•The Polokwane Inland Rail Hub Endorsement Project</li> <li>•A strong relationship between government and citrus industry can break down barriers to trade such as tariff, phytosanitary, sanitary, administrative</li> <li>•Market development in citrus exports to China, Eastern Europe and India can increase area planted for citrus production and increase on farm jobs</li> <li>•The Citrus Academy provides human capital development for the citrus industry and government should support and expand such initiatives</li> <li>•Opportunities exist in the processing sector of citrus fruit</li> </ul>	<ul style="list-style-type: none"> <li>•High number of season workers sourced from neighbouring countries especially from Zimbabwe and Mozambique</li> <li>•In some areas citrus packhouses are battling to source packers due to social grants as unemployed workers prefer collecting social grants than to work in packhouses</li> <li>•Land reform failures are resulting in job losses</li> </ul>

Source: Citrus Growers' Association Submission to Agricultural Job Creation Imbizo and DAFF - A Profile of the South African Citrus Market Value Chain 2010

### i) Other Related or Supporting Initiatives

#### Citrus Endorsement Programmes: Polokwane Inland Rail Hub Endorsement

Limpopo citrus production areas incur high transportation cost, which in turn influence citrus exports. Rail transportation is a strategic opportunity to stabilise transport cost in the province. The Polokwane inland fruit hub concept is fully endorsed by the Citrus Growers Association of SA (CGA) to reduce transportation costs and increase operational efficiency. The Polokwane Inland Rail Hub's aim is that the hub will act as a consolidation facility.

The benefit of consolidating a facility is that the citrus supplied from various production points in the Limpopo and Zimbabwe region from various export agents can be consolidated together at a **central point**, and greater economies of scale can thus be achieved.

Polokwane is considered best suited as it is centrally located to wider citrus production areas and is also located on a main corridor line, making the rail service more efficient and cost effective, (Polokwane Inland Fruit Container Rail Hub, CGA 2010).

### ***Implications for the agro-processing industry***

The Limpopo province is a high producer of citrus and contributes high percentage of employment in the agriculture sector. The value of citrus production is in the quality of fruit as large volumes are exported. On farm value addition and citrus processing facilities can reduce wastage faced by emerging farmers and contribute to income regeneration.

## **3.3.2 Sub-tropical Crop Commodity Profile**

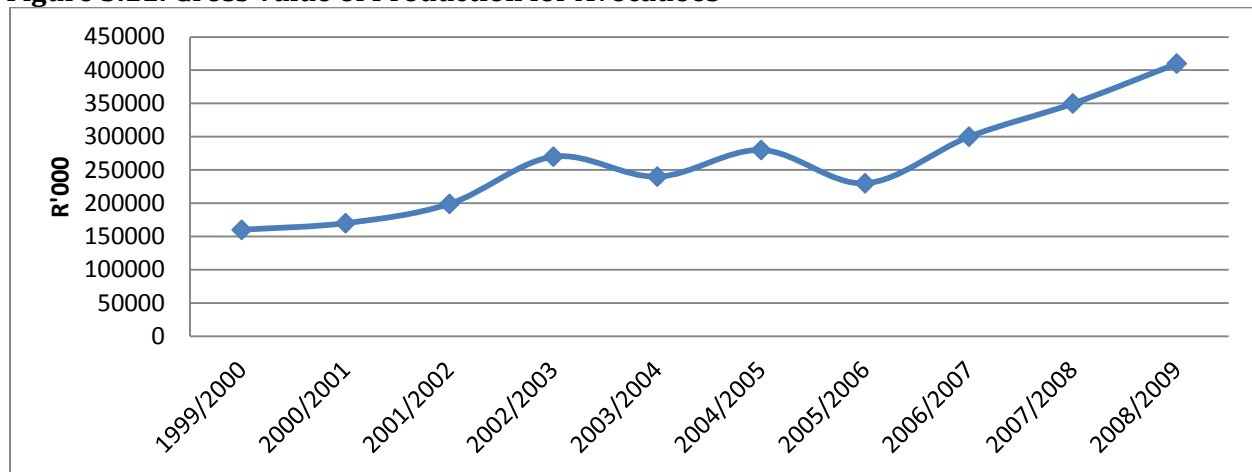
The sub-tropical sector includes avocados, bananas, litchis and mangoes.

### **3.3.2.1 Avocado Value Chain Profile**

#### **a) Industry Performance and Trend**

Avocado is an export orientated industry mainly aimed at European markets. The highest production areas are in the Limpopo and Mpumalanga province. Figure 3.11 indicates the gross value contribution of avocados to the agriculture sector. The contribution towards agriculture performance has been high over the years and can be due to high exports and a high demand in the domestic market.

**Figure 3.11: Gross Value of Production for Avocadoes**



Source: DAFF - A Profile of the South African Avocado Market Value Chain 2010

### b) Avocado Producing Areas in SA

Table 3.15 indicates avocado production areas in 2009. The **Limpopo province represents 52%** of the national avocado production, with the highest number of avocado trees planted in the province. Mpumalanga and KwaZulu Natal Provinces are the second and third biggest producers of avocadoes with 35% and 11% respectively.

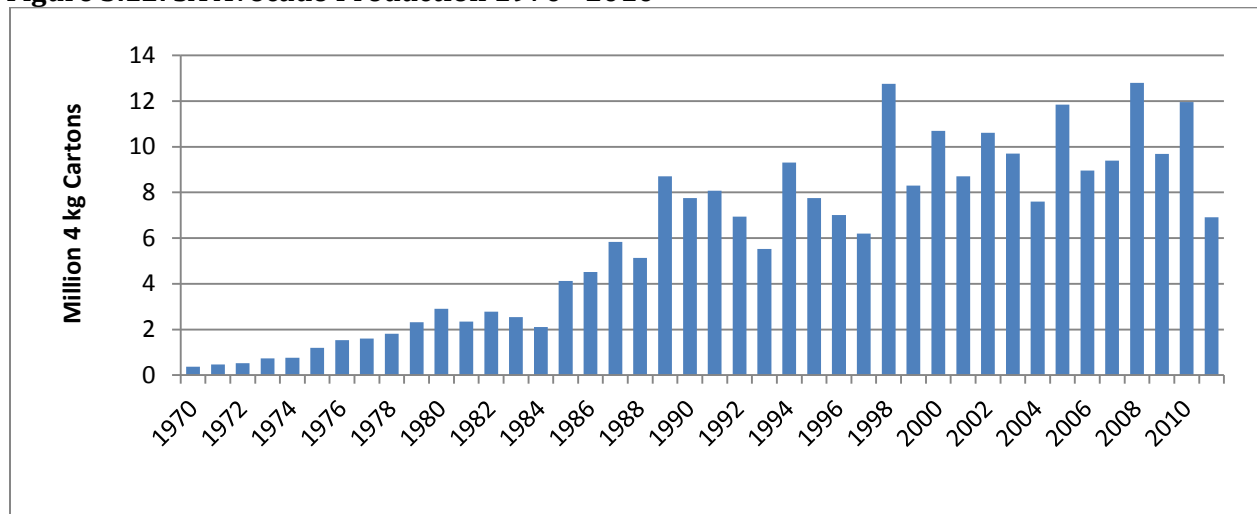
**Table 3.15: Area under avocado crops**

Province	Area planted (ha)	Number of Trees Planted	SA Avocado Production Areas in Percentage
<b>Limpopo</b>	<b>6, 818</b>	<b>1, 645, 905</b>	<b>52%</b>
Mpumalanga	4, 486	1, 100, 000	34%
KwaZulu Natal	1, 715	315, 020	13%
Eastern Cape	75	15, 000	0.5%
Other	125	25, 000	0.5%
Total	13, 219	3, 100, 925	100

Source: South African Subtropical Growers Association, October 2010

Figure 3.12 illustrates SA avocado production throughout the years, the commodity has experienced significant growth over the years due to increased avocado farmers and the popularity of the product.

**Figure 3.12: SA Avocado Production 1970 - 2010**

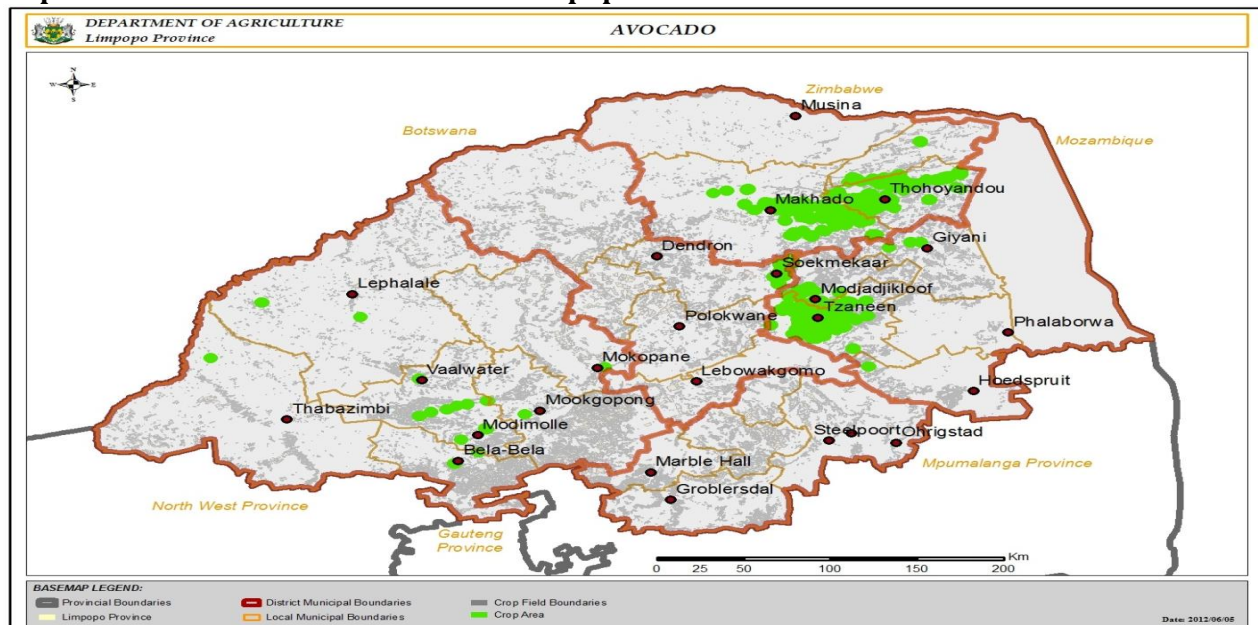


Source: South African Subtropical Growers' Association: Industry Statistics 2010

## c) Avocado Producing Areas in Limpopo

Map 3.2 illustrates the avocado production areas in the province. Table 3.16 indicates the hectares planted for avocado production, taking into consideration avocado producers in the province.

**Map 3.2: Avocado Production Areas in Limpopo**



Source: Limpopo Department of Agriculture, 2012

**Table 3.16: Area Planted for Avocado in Limpopo**

Local Municipality	Hectares Planted
1. Greater Tzaneen	5, 586
2. Makhado	3, 005
3. Thulamela	1, 141
4. Greater Letaba	493
5. Molemole	277
<b>Total of hectares planted for avocado in Limpopo</b>	<b>10, 811</b>

Source: SIQ Information 2012

Assumptions for **expected tonnage** in the province are based on:

- Total hectares planted for avocado production and the growth margin\*<sup>4</sup> (estimated yield) for avocado production in the province. The growth margin for avocado in the province can be described as:
- Tree in year 2 can produce 2.1 tons per hectare
- Tree in year 3 can produce 5.3 tons per hectare
- Tree in year 4 can produce 9.5 tons per hectare
- Tree in year 5 can produce 16 tons per hectare

Based on the above assumption, the expected tonnage for avocado production in the province can be between 122, 264 – 149, 434 tons for the province, on the hypothesis that:

- Two year old trees account for 10% of total hectares planted
- Three year old trees account for 10% of total hectares planted
- Four year old trees account for 15% and five year old trees and above accounting for 65% of total hectares planted

#### d) Avocado Market Distribution

Table 3.17 indicates how the production of avocado crop was distributed from 2005-2012, it is clear high volumes go towards exports, followed by domestic sales and low volumes towards avocado processing.

<sup>4</sup> \*Growth margins attained from Limpopo Department of Agriculture - AgriBusiness.

The decrease in tons used for processing can be contributed to low revenue for market development or low market demand. The trend in recent years has shifted towards a high demand for organic and traceable goods, presenting a window of opportunity for local avocado producers to target niche market. The South African Avocado Growers Association (SAAGA) has estimated revenue spending for processing, export and local market, which will result in increased support for local producers and access to wider markets.

**Table 3.17: SA Avocado Distribution 2006 -2012**

Year	Export (4kg cartons)	Fresh prod Markets (4kg cartons)	Direct to Retailer (4kg cartons)	Informal Direct (tons)	Processing: Oil (tons raw product)	Processing: Guacamole (tons raw product)
2005	11, 850, 000	5, 567, 400	195, 863	20, 000	8, 280	6, 833
2006	8, 957, 291	5, 122, 463	1, 306, 630	15, 000	7, 000	6, 500
2007	9, 400, 000	5, 053, 374	1, 678, 384	15, 000	3, 500	6, 500
2008	12, 800, 000	4, 847, 250	1, 599, 611	15, 000	7, 000	6, 500
2009	9, 687, 941	4, 786, 590	2, 082, 657	15, 000	3, 000	6, 000
2010	11, 952, 000	5, 655, 829	2, 500, 000	16, 000	7, 000	6, 000
2011	6, 908, 934	4, 58, 157	NFA	NFA	6, 100	4, 500

Source: South African Subtropical Growers' Association: Avocado Production, Updated 19/01/2012

NFA: No Figures Available

### e) Domestic Market

The domestic market is largely made up of sales to the National Fresh Produce Markets (NFPM), with significant increase of direct sales from pack houses. The domestic market is also made up of the informal sector (street hawkers), retailers and processors of guacamole and oil extraction.

### f) Exports and Export Destination

Exports are the main market for avocados as indicated in the beginning of the report. South Africa's avocado industry is export orientated. A Profile of the South African Avocado Market Value Chain state that approximately 64% of avocados produced in South Africa were exported destined for the European market. The major export destination for South African avocados is the European Union includes the Netherlands, United Kingdom and France.



## **g) Employment**

According to the Subtropical Growers' Association general industry statics for May 2012, there are 420 avocado growers in SA with approximately 4 400 employment for both seasonal and permanent basis. The employment is made up of on farm workers and fewer numbers in the avocado processing industry. Employment is also found along the value chain such as transport services, packhouses and local agents.

## **h) Processing of Avocado**

Even though volumes for processing have declined over the years, the processing industry takes up a significant share of avocados and this can be attributed to raising consumer demand for healthier alternatives in their food and cosmetic preference.

Avocados can be processed into:

- Guacamole
- Avocado puree
- Edible avocado oil
- Avocado oil for cosmetic use such as body lotion, bath oil, foam bath, shower gel, liquid hand wash, shampoo, conditioner and soap bar
- Medicinal uses

## **i) Industry and Sector SWOT Analysis**

The main challenges rose by Westfalia, a major avocado processor in Limpopo, is the issues of being cost competitive, their ability to keep up with current production costs and meet market needs as well as the state of infrastructure that collapsed in the province. Table 3.18 indicates the avocado industry SWOT analysis.

**Table 3.18: SA Avocado SWOT Analysis**

Strengths	Weaknesses	Opportunities	Threats
<ul style="list-style-type: none"> <li>•Promotion of S.A avocados has been successful especially in the UK</li> <li>•SA avocado industry has strong reputation in international markets</li> </ul>	<ul style="list-style-type: none"> <li>•Production is largely dependent on climatic conditions</li> <li>•Relatively high input and capital costs</li> </ul>	<ul style="list-style-type: none"> <li>•Increasing demand from avocado processing (oil and guacamole) present a potential for growth</li> </ul>	<ul style="list-style-type: none"> <li>•Port abilities and shipping cycles still pose a threat as delays and can easily reduce shelf life by five to ten days</li> </ul>

Source: DAFF - A Profile of the South African Avocado Market Value Chain 2010

### i) Other Related or Support Initiatives

The South African Avocado Growers' Association (SAAGA) aims to provide registered members with up-to-date information regarding the industry and improve avocado industry to world class status as suppliers of avocados in the export and domestic markets. This will be achieved through facilitation of communication between stakeholders and provision of pertinent information to the avocado industry. Some of SAAGA's objectives are to:

- To collect and distribute information concerning the production and marketing of avocados
- To coordinate research concerning the production and marketing of avocados and carry out extension to farmers
- To encourage the coordination of export and local marketing of avocados and to assist in the distribution of marketing information to role-players

### ***Implications for the agro-processing industry***

The province is a major contributor to overall SA avocado production. The province can enhance the primary production as exports generate high revenues in the avocado industry. The activities along the avocado value chain create further employment in the industry. The growing market for organic produce creates an opportunity for local producers to target. The processed goods of avocado are also beginning to gain momentum in the local market.

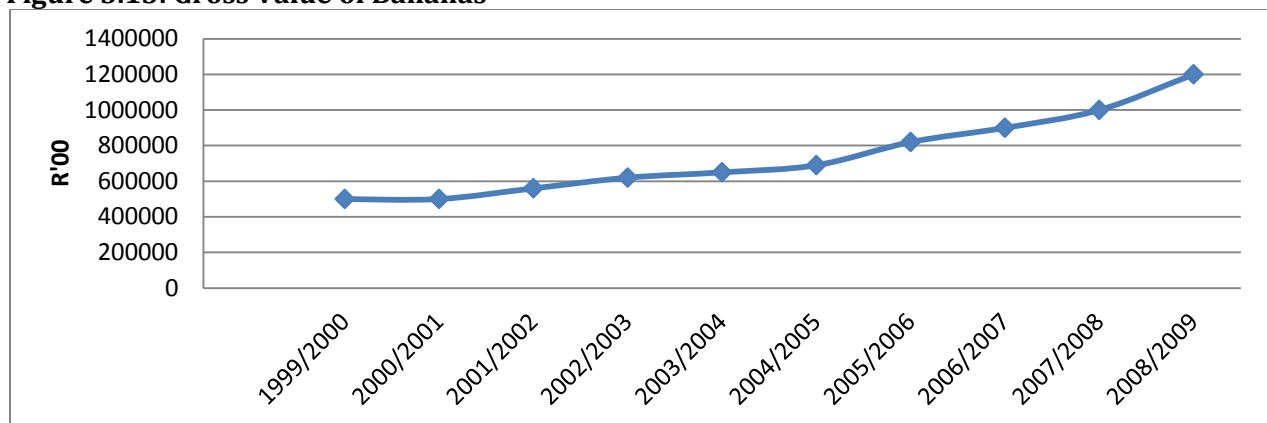
### 3.3.2.2 Banana Value Chain Profile

Bananas are a very popular fruit in SA mainly for human consumption and local markets, the availability of bananas throughout the year makes it more popular amongst the different provinces. The price of bananas like many other sub-tropical commodities is determined by market demand of produce. The commercial banana producers are able to produce higher volumes as the use technological inputs. The small-scale producers operate on a household level with limited access to markets and most importantly labour.

#### a) Industry Performance and Trend

Figure 3.13 indicates the gross value of bananas for a period of ten years, and the contribution of the bananas have been constant over the years with an increase in recent years. The banana industry has experienced significant contribution to the agriculture production of SA.

**Figure 3.13: Gross Value of Bananas**

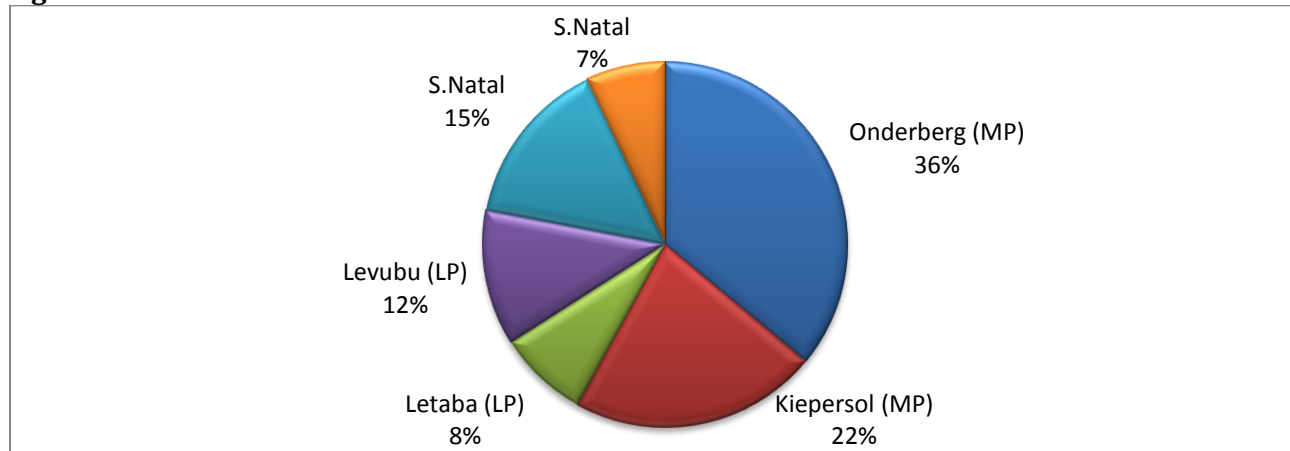


Source: DAFF -A Profile of the South African Banana Market Value Chain 2010

#### b) Banana Producing Areas in SA

Figure 3.14 illustrates the banana production areas of SA in 2009. Mpumalanga is the highest producer of bananas with the highest land area planted for bananas, than followed by the Limpopo and KwaZulu Natal province. The Mpumalanga banana productions make up 58% of all banana production. Levubu and Letaba are the main production areas in the Limpopo province as they account for 20% of banana production.

**Figure 3.14: SA Banana Production Area**

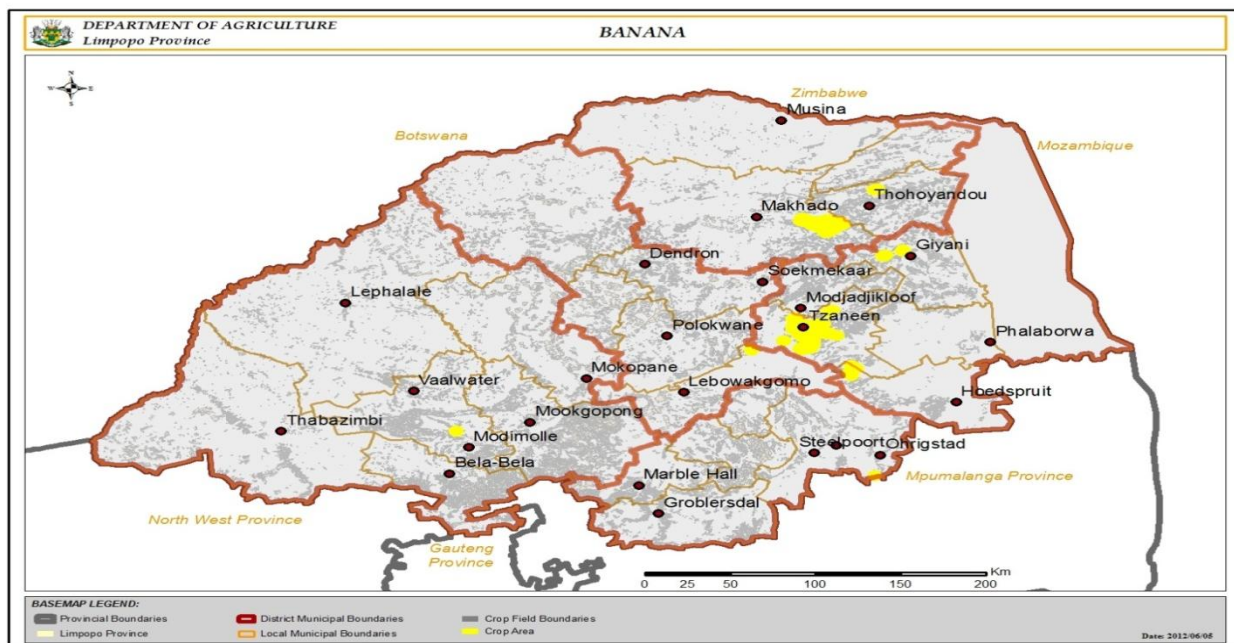


Source: DAFF - A Profile of the South African Banana Market Value Chain 2010

## c) Banana Producing Areas in Limpopo

Map 3.3 illustrates the production areas in the Limpopo province. Table 3.19 indicates the hectares planted for banana production, which have increased over the years. The agriculture census for 2007 recorded 1921 hectares planted for bananas in the province with a production metric of 44 015 tons.

**Map 3.3: Limpopo Banana Production Areas**



Source: Department of Agriculture 2012

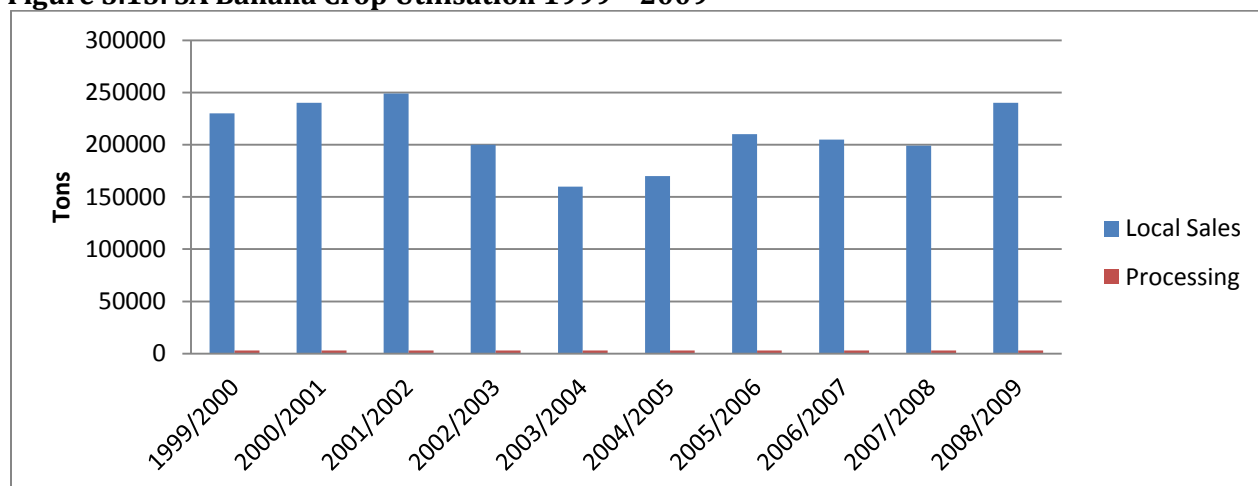
**Table 3.19: Areas Planted for Banana in Limpopo**

Local Municipality	Hectares Planted
Makhado	1, 849
Greater Tzaneen	1, 443
Greater Giyani	176
Thulamela	135
Maruleng	46
<b>Total hectares planted for banana in Limpopo</b>	<b>3, 710</b>
Total 2002	2, 199
Total 2007	1, 921
<b>Change 2007 – 2012</b>	<b>93.13%</b>

Source: SIQ Information 2012

#### d) Market Distribution

The majority of bananas are distributed on the local fresh produce market with exports and processing done on low volumes. The climate makes it difficult to compete against equatorial banana producing countries on world markets. Figure 3.15 illustrates the banana crop utilisation; the domestic market takes up the majority of banana production. From the figure below it is evident that high production volumes have been met throughout the years. The informal sector cannot be forgotten, especially since this sector contributes towards job creation among the largely unskilled segment of the labour market.

**Figure 3.15: SA Banana Crop Utilisation 1999 – 2009**


Source: A Profile of the South African Banana Market Value Chain 2010

### e) Exports and Export Destinations

South Africa is a relatively small banana grower in terms of global hectares. The main export markets for SA bananas are the SADC regions as well as Zimbabwe and Mozambique. The profile of the South African Banana Market Value Chain 2010 state that out of a total of 146 tons exported to Africa in 2009, almost 144 tons were absorbed by SADC member states. In 2009 the majority (89%) of banana exports that went into the SADC were absorbed by Zimbabwe.

### f) Processing of Banana

Low volumes of bananas are processed and when processing takes place it happens in the form of **banana puree, nectar, drying, powder base and flavourings**. The banana leave can also be used for animal feed and research over the years has used dried banana leaves to make baskets and mats. The banana puree is the major commodity used in baby food, baking products and dairy industries.

A few manufacturers in the province incorporate banana in their production, such as Valley farms and Levubu Dried Fruit. These manufacturers are based in the Levubu area as high bananas are produced in this area.

### g) Industry and Sector SWOT Analysis

Table 3.20 indicates the challenges and opportunities in the banana industry with main challenges relating to cost and inability for small-farmers to access technical infrastructure. The opportunities are mainly in the banana value chain.

**Table3.20: Challenges and Opportunities in the Banana Value Chain**

Challenges	Opportunities
<ul style="list-style-type: none"> <li>• Monopoly by large commercial companies, as they have ownership of specialised refrigerated shipping and ripening facilities</li> <li>• Ripening facilities are concentrated in large urban areas and it is difficult for smaller/rural municipalities to create such facilities</li> <li>• High costs of toll fees.</li> </ul>	<ul style="list-style-type: none"> <li>• Opportunities can be found in banana production, tissue culture, input supplies such as fertilizers, chemicals and irrigation equipment, refrigeration, transport and marketing agents</li> <li>• The craft and industry sector also present opportunities for dried banana leaves</li> </ul>

Source: DAFF - A Profile of the South African Banana Market Value Chain 2010

## h) Other Related or Supporting Initiatives

### SA Banana Growers Association

Stakeholder consultation with the Banana Growers Association indicated that the association is currently going through restructuring as lands claims and distribution programmes disrupted association activities, thus current figures and volumes are not updated or reliable. The association will be meeting the Johannesburg Fresh Produce Market to discuss markets and travelling to various provinces to get farmers on board and collect production volumes.

#### *Implications for the agro-processing industry*

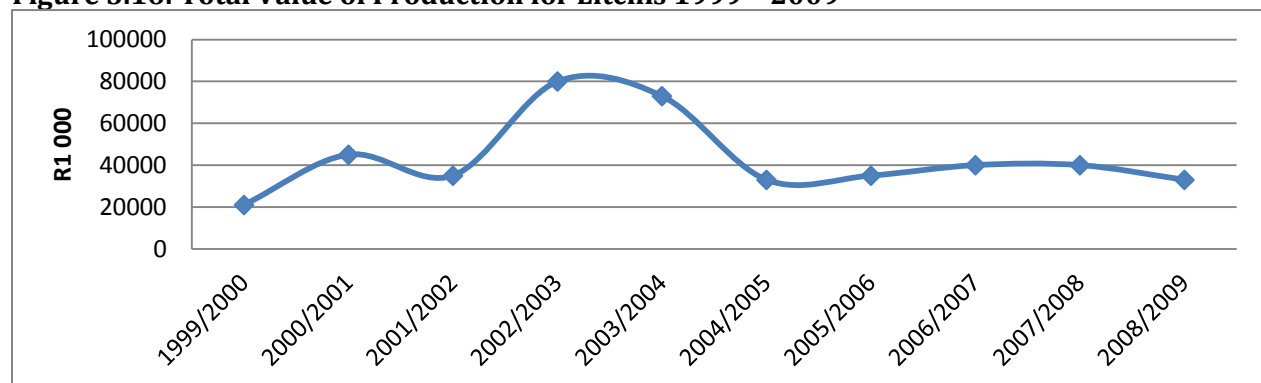
There is a need to incorporate technological inputs into banana production to increase production volumes especially for emerging producers. The processing of banana is not fully exploited in the province considering the growing organic market and various uses of banana by different industries.

### 3.3.2.3 Litchi Value Chain Profile

#### a) Industry Performance and Trends

Figure 3.16 below illustrates the total value of litchi production over the years; the production of litchi reached its highest contribution in 2002/03 with R81.6 million contributions to agriculture GVA. The industry has seen a decline from 2003 onwards; this can be attributed to low volumes produced and a reduction in the market.

**Figure 3.16: Total Value of Production for Litchis 1999 – 2009**



Source: DAFF - A Profile of the South African Litchi Market Value Chain 2010

### b) Litchi Producing Areas in SA

The Mpumalanga province is the area with the highest litchi production in SA, accounting for 69% of total production. The Limpopo province is the second highest area of production of litchis with 300 hectares under litchi cultivation, accounting for a 24% total litchi production. Table 3.21 indicates the area under litchi crops and number of litchi trees planted. The annual production for SA litchi in May 2012 was 7 000 tons with 200 litchi growers (Subtropical Growers' Association General Industry Statistics, 2012).

**Table 3.21: Area under litchi crops**

Province	Area planted (ha)	Number of Litchi Trees Planted	Litchi Production Areas Percentage
Mpumalanga	861	148, 953	69%
<b>Limpopo</b>	<b>300</b>	<b>38, 000</b>	<b>24%</b>
KwaZulu Natal	68	15, 000	5%
Eastern Cape	10	2, 500	1%
Other	10	2, 500	1%
Total	1, 249	206, 953	100%

Source: South African Subtropical Growers Association, October 2010

### c) Litchi Producing Areas in Limpopo

Map 3.4 illustrates the production areas in the province with hectares planted for litchi production indicated in Table 3.22, inclusive of all litchi producers, registered and non-registered SA Subtropical Association members. High litchi production takes place in the Tzaneen and Makhado Local Municipality.

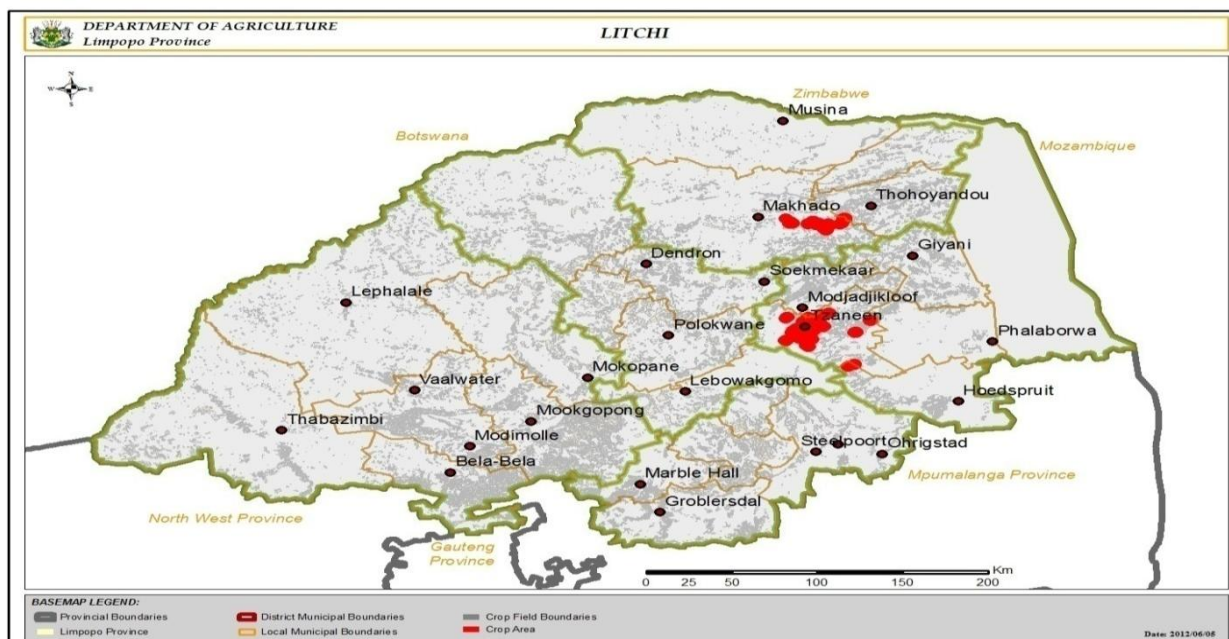
**Table 3.22: Area Planted for Litchi in Limpopo**

Local Municipality	Hectares Planted
Greater Tzaneen	319
Makhado	141
Maruleng	6
<b>Total hectares planted in Limpopo</b>	<b>466</b>

Source: SIQ Information 2012



**Map 3.4: Limpopo Litchi Production Areas**



Source: Limpopo Department of Agriculture 2012

#### d) Market Distribution

Table 3.23 indicates total litchi production and market distribution. The major market for SA litchi is exports followed by local market made of NFPM, informal traders, litchi processors, retailers, and wholesalers. In 2007/08 approximately 4 440 tons of litchis were exported and 2 520 tons were sold in the local markets. The volumes of litchi exported have decreased over the years but export percentage remains the highest market where litchi is distributed.

**Table 3.23: SA Total Litchi Production and Market Distribution**

Total Litchi Production							
Year	Juice		Municipal market		Export		Total
	Ton	%	Ton	%	Ton	%	Ton
2007/08	1,624	19	2,520	29	4,440	52	8,584
2008/09	251	10	1,067	43	1,158	47	2,477
2009/10	319	6	1,919	33	3,509	61	5,748
2010/11	637	12	1,972	38	2,606	50	5,215
2011/12	2,247	54	1,880	46	-	-	4,128

Source: South African Subtropical Association: Total Litchi Production, 2012

The factors that influence the demand for litchis on the local market include consumer incomes, health benefits and availability of fruit. Litchi juice processing has experienced significant growth over the years and increased opportunity for local processors to take advantage of growing national demand for juice products.

## **e) Exports and Export Destinations**

SA is a large exporter of litchis; the export markets for SA litchis are the Netherlands and United Kingdom. High volumes have been exported throughout the years, the exports of litchi is in its natural form with few volumes exported in the form of juices or litchi concentrate/pulp.

## **f) Employment**

According to the Subtropical Growers' Association General Industry Statistics for the litchi industry, there are 200 registered litchi growers with approximately 1 300 people employed in the litchi industry, both seasonal and permanent. The on farm employment is seasonal with further employment during harvest season.

## **g) Processing of Litchi**

Processing of litchi is mainly in the form of juice, fruit pulp/concentrate and drying. The fruit is usually processed and mixed with other fruits, making volumes of processing hard to obtain. High volumes of litchi are eaten in its natural form used in desserts, salads and main course therefore litchis require cold storage for preservation.

## **h) Industry and Sector SWOT Analysis**

As indicated above litchis are processed with other fruits such as oranges, mangoes, peaches etc. and processors will face common challenges faced by juice processors. Table 3.24 indicates the challenges and opportunities for the litchi industry.

**Table 3.24: SA Litchi SWOT analysis**

Strengths	Weaknesses	Opportunities	Threats
<ul style="list-style-type: none"> <li>• S.A litchis quality mark (South African Litchi Growers' Association-SALGA Quality Approved Litchis) has been successful</li> </ul>	<ul style="list-style-type: none"> <li>• Production is largely reliant on climatic condition</li> <li>• High input, labour and capital costs</li> </ul>	<ul style="list-style-type: none"> <li>• Increasing demand from the canning industry</li> <li>• Research of SALGA may lead to improved and better quality cultivar</li> </ul>	<ul style="list-style-type: none"> <li>• Intense competition from Madagascar, Mauritius and Reunion in the lucrative EU market</li> </ul>

Source: DAFF - A Profile of the South African litchi Market Value Chain 2010

### i) Other Related or Supporting Initiatives

The South African Litchi Growers Association (SALGA) provides technical, marketing studies and research to its members, and it continually improves technology transfer, support and communication among its members. The association's mission is to lead the development of a profitable and sustainable industry for its registered members.

#### *Implications for the agro-processing industry*

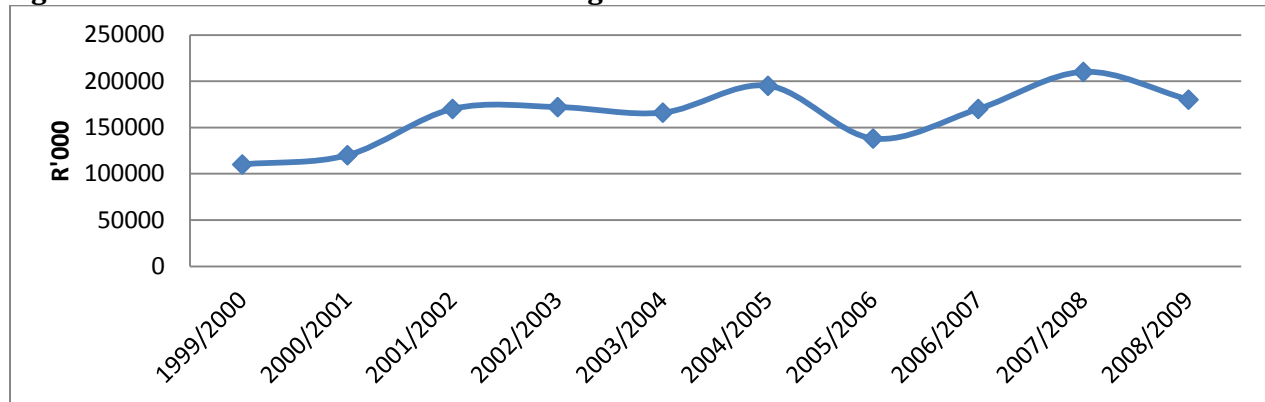
The highest value for litchi is obtained in exports, thus quality and production volumes have to be emphasised. The processing of litchi is reliant on high production and incorporation with other commodities.

### 3.3.2.4 Mango Value Chain Profile

#### a) Industry Performance and Trend Production Areas

Mango is an important sub-tropical fruit in SA with high volumes used by the food processing sector. Figure 3.17 indicates the gross value contribution of the mango sector. The contribution of mango to the overall agriculture production has increased over the years with a sharp decline in 2005/06 which can be accounted for low production levels.

**Figure 3.17: Gross Value Production of Mango 1999 – 2008**



Source: DAFF - A Profile of the South African Mango Market Value Chain 2010

### b) Mango Producing Areas in SA

The Limpopo province is the largest producer of mangoes as it accounts for 66% of the national mango production. Table 3.21 indicates the area under mango crops, as shown below Limpopo province has the highest number of trees and area planted for mango production. Other province producing high volumes of mango crop are the Mpumalanga and KwaZulu Natal province. The annual production for mangos, as of May 2012, was 85 000 – 100 000tons (Subtropical Growers Association General Industry Statistics, 2012).

**Table 3.24: Area under mango crops**

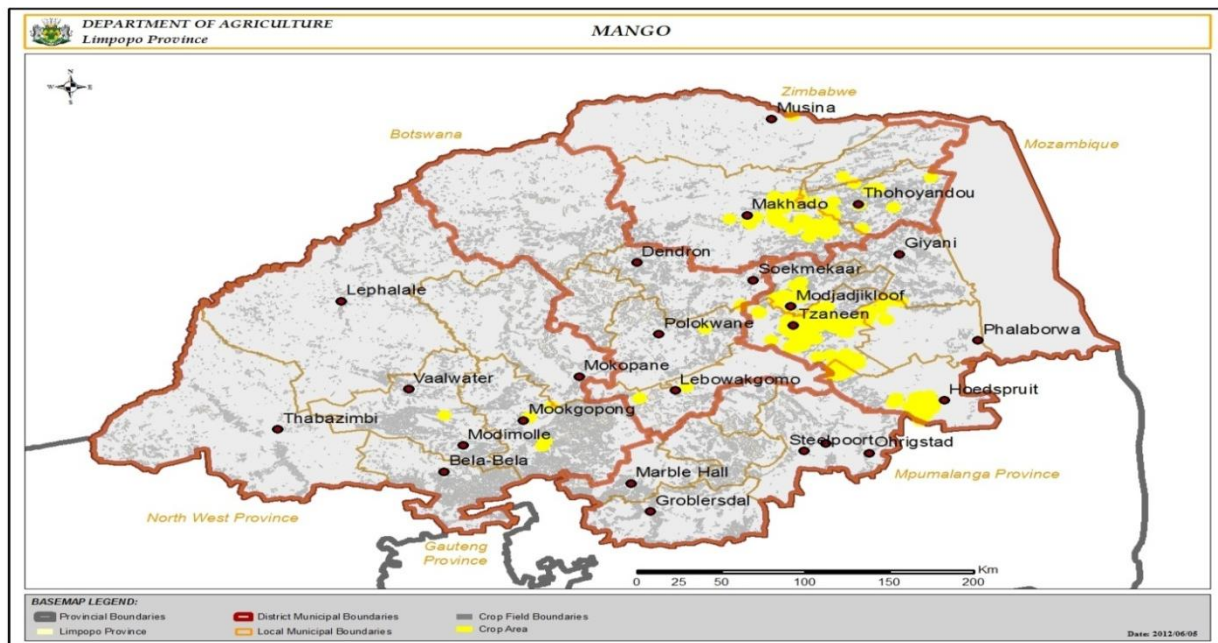
Province	Area planted (ha)	Number of Trees Planted	Percentage Production
<b>Limpopo</b>	<b>5,013</b>	<b>1,815,103</b>	<b>66%</b>
Mpumalanga	1,950	750,000	26%
KwaZulu Natal	464	155,500	6%
Eastern Cape	50	20,000	1%
Other	100	50,000	1%
<b>Total</b>	<b>7,577</b>	<b>2,790,603</b>	<b>100%</b>

Source: South African Subtropical Growers Association, October 2010

### c) Mango Producing Areas in Limpopo

Map 3.5 illustrates the mango production areas in the province; mango production is concentrated in the Mopani and Vhembe Districts. Table 3.25 indicates all the hectares planted for mango production in the Limpopo province, with highest planted area found in the Tzaneen Local Municipality.

**Map 3.5: Limpopo Mango Production Areas**



Source: Department of Agriculture 2012

**Table 3.25: Areas Planted for Mango in Limpopo**

Local Municipality	Hectares Planted
1. Greater Tzaneen	4,884
2. Maruleng	4,449
3. Makhado	641
4. Ba-Phalaborwa	425
5. Greater Letaba	218
<b>Total hectares planted for mango in Limpopo</b>	<b>10,813</b>

Source: SIQ Information 2012

#### d) Market Distribution

The market that takes up the highest volumes of mangoes is the food processing industry followed by the domestic markets than exports. The domestic market is made up of NFPMs, retailers, chain stores and the informal sector. SA is not a major exporter of mangoes as export volumes have decreased over the years.

Table 3.26 shows the tonnage used for mango processing, local sales and exports. The processing of mango juice and mango achar takes up the highest percentage of mango usage. The local market also absorbs a significant share of the mango produced in the various provinces. SA is not a huge exporter of raw mango and tonnage exported has decreased over the years.

**Table 3.26: SA Mango Production and Market Distribution**

Total Mango Production											
Year	Dried		Achar		Juice		Municipal Market		Export		Total
	Ton	%	Ton	%	Ton	%	Ton	%	Ton	%	Ton
2004/05	11,894	13	16,939	19	34,922	39	19,653	22	6,056	7	89,464
2005/06	11,606	20	12,456	21	16,174	28	16,133	27	2,355	4	58,724
2006/07	16,841	22	15,694	20	18,550	24	21,161	28	4,409	6	76,655
2007/08	17,017	21	11,758	14	32,473	39	18,654	23	2,759	3	82,661
2008/09	8,379	19	5,915	13	14,316	32	14,452	32	1,676	4	44,738
2009/10	9,747	19	7,850	15	17,390	34	15,099	29	1,616	3	51,702
2010/11	13,338	26	7,353	15	16,190	32	13,055	26	657	1	50,592

Source: South African Subtropical Growers Association: Total Mango Production 2011

#### e) Exports and Export Destinations

South African mango exports were destined for the European market including the Netherlands, the United Kingdom, Belgium, France and the Asian markets. Exports of mangoes to African countries have also been declining during the past three years, as low volumes are exported. The export and storage infrastructure also play an influential role in the export process.

#### f) Employment

The employment in the mango industry is estimated at 3 000 seasonal and permanent employment (Subtropical Growers Association General Industry Statistics, 2012). Further employment opportunities are found in fruit packing, mango processing, technical services such as irrigation system, diseases management and transportation. The Limpopo province is the highest producer of

SA mangoes, meaning high employment can further be created in the industry through value addition and agro-processing activities, this in turn will create employment in rural areas of the province.

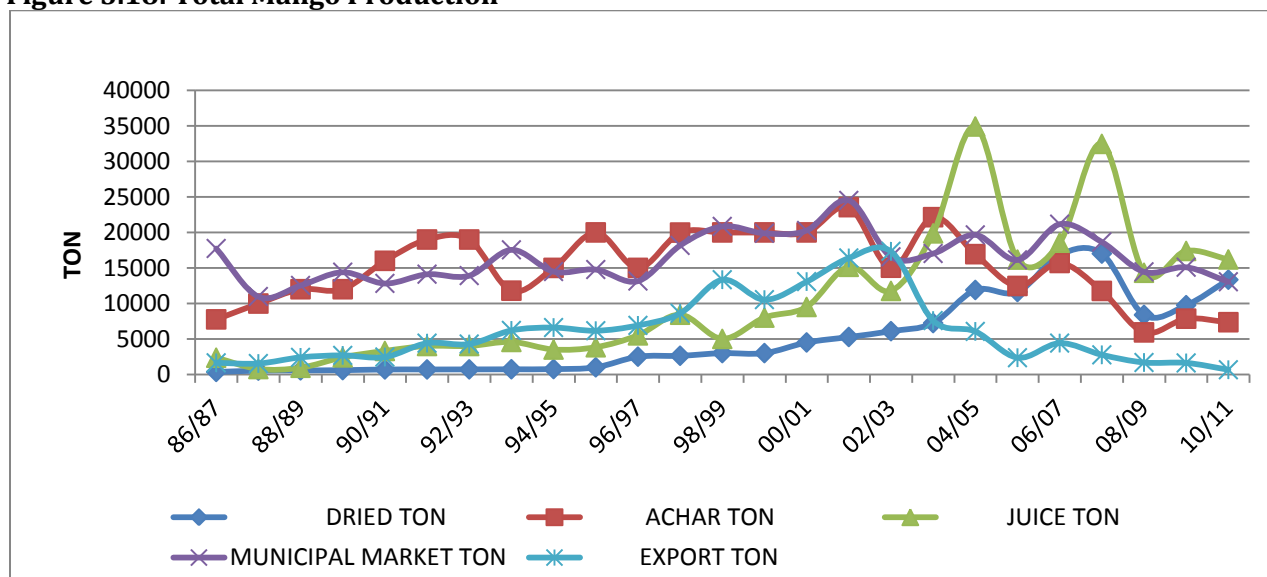
## g) Processing of Mango

Figure 3.18 indicates the trend for mango distribution over the past ten years. The top three products processed from the mango fruit are juice, achar and dried mango. The tonnage used for processing mango juice and achar have increased over the years. Health conscious markets are beginning to increase the demand for dried mango products.

The manufacturers of processed mango products range from commercial large scale producers to small-scale achar processes. These activities create a high number of employment and supplier chain opportunities for local mango producers. New development into processing mango slices for fresh salads and the use of mango in cosmetic products is beginning to increase. Other mango processed products include:

- Chutney, pickles
- Canned and frozen slices
- Puree, nectar, squash

**Figure 3.18: Total Mango Production**



Source: South African Subtropical Growers Association: Total Mango Production 2011



## **h) Industry and Sector SWOT Analysis**

Food processors drying mango fruit in the Limpopo province indicated high electricity cost and reduced mango volumes as major challenges. The reduction in mangoes produced is due to many previously disadvantaged groups who have occupied redistributed land but are not using it for commercial agricultural purposes. The other challenges faced by the mango processing businesses include transport costs and infrastructure decay.

The opportunities exist in increasing production volumes in the province and business processing opportunities for small to medium scale mango producers.

## **i) Other Related or Supporting Initiatives**

The South African Mango Growers Association (SAMGA) offer extension services and marketing services for mango producers in SA. The association also has research units offering communications to farmers to ensure better quality produce of mangoes. The registration of emerging mango farmers can further enhance their production and offer technical support.

### ***Implications for the agro-processing industry***

The province is a high producer of mangoes and the sector creates employment opportunities even for the rural remote areas. The processing of mango take up a large share of mangoes produced. The mango processing industry has room for growth particularly in the cosmetic industry and further processing can only be sustainable if there is a strong primary production.

## **3.3.2.5 Macadamia Nuts Value Chain Profile**

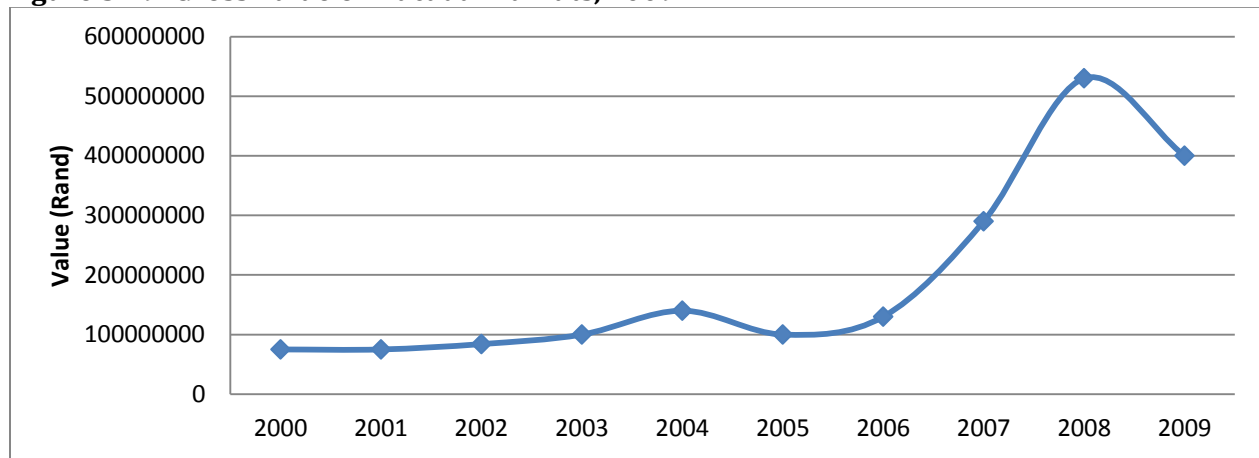
South Africa is the third largest macadamia nut producer in the world, after Australia and Hawaii. The nuts are a valuable food crop and generate high foreign revenue for SA. The trees require a warm subtropical climate with high humidity making KwaZulu-Natal, Mpumalanga and Limpopo ideal areas.



### a) Industry Performance and Trends

The contribution of macadamia nuts to gross value of agriculture production has increased over the years, and peaked in 2008 as illustrated in Figure 3.19. Macadamia nuts are quickly becoming an important crop in South Africa as the oil extracted from the kernel can be used in the food and cosmetics industry.

**Figure 3.19: Gross Value of Macadamia Nuts, 2009**

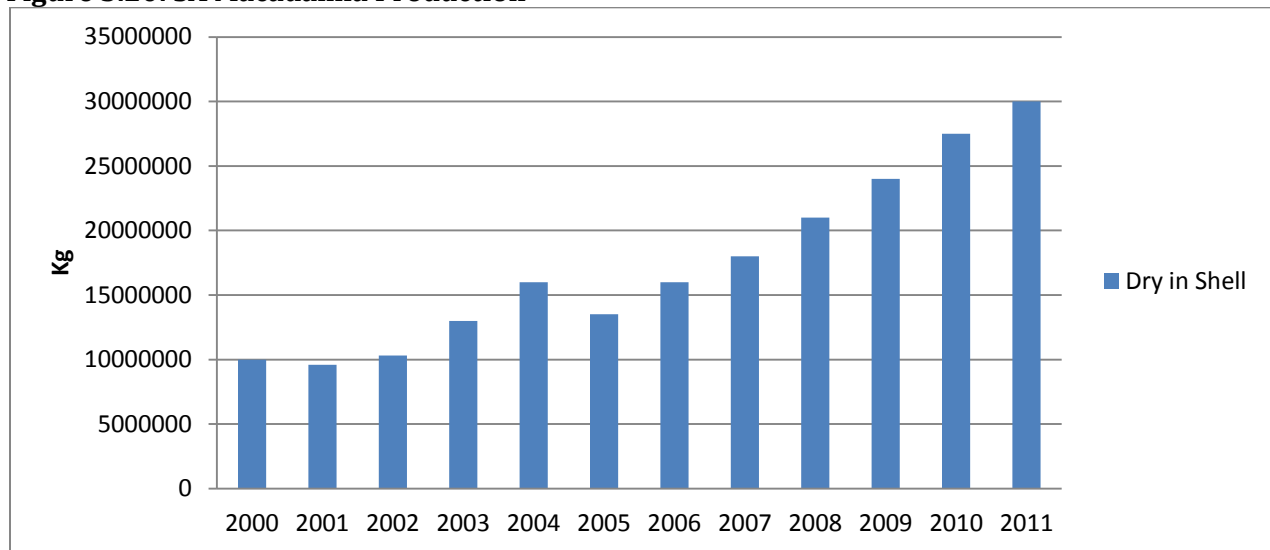


Source: DAFF - A Profile of the South African Macadamia Nut Market Value Chain 2010

### b) Macadamia Nut Producing Areas in SA

Figure 3.20 illustrates South African macadamia production in kilograms on a dry-in-shell basis (1, 5% moisture) from 2000 to 2011, indicating a positive growth rate for the macadamia industry over the years. The annual production for Macadamia nut in 2012 was  $\pm 30\,000$  Nut in Shell (1.5% moisture content). There are 450 growers of macadamia registered with Subtropical Growers' Association (Subtropical Growers' Association General Industry Statistics, 2012).

**Figure 3.20: SA Macadamia Production**



Source: South African Macadamia Marketing and Production Statistics 2011

Table 3.27 summarises the production areas planted for macadamia nuts, hectares cultivated for macadamia nuts, the trees planted as well as the production percentage. The Limpopo province is the second highest macadamia nut producing area with high production taking place in the Tzaneen and Levubu areas.

**Table 3.27: Top Three Macadamia Nut Production Areas**

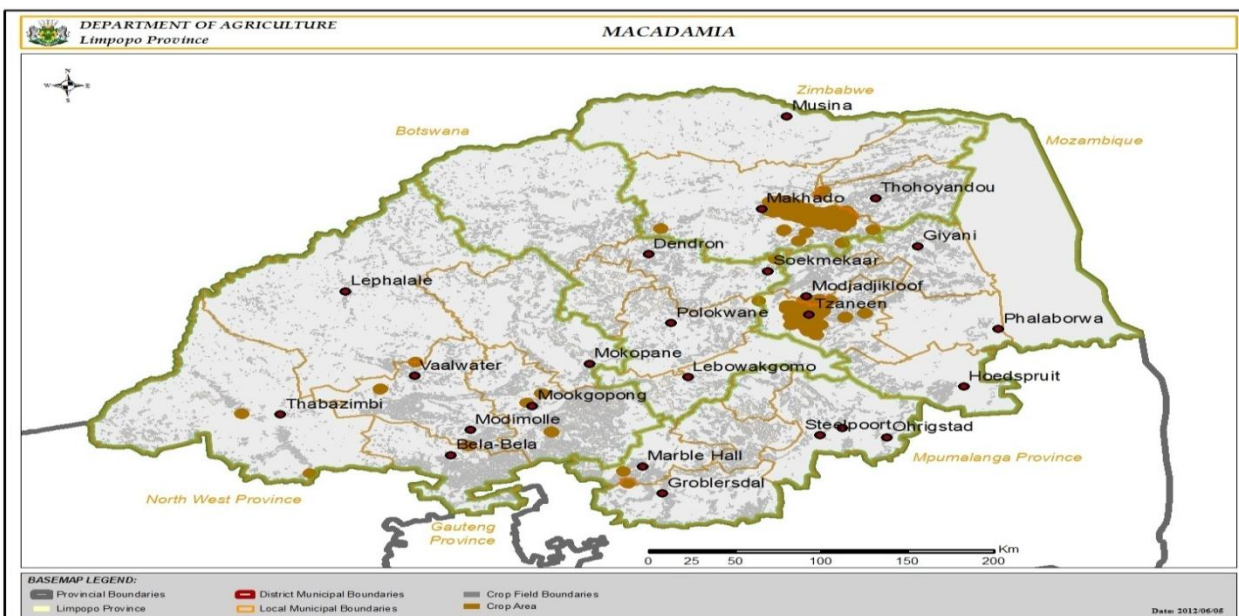
Province	Hectares cultivated for Macadamia	Tree Planted	Production Areas	Production Percentage
Mpumalanga	8, 820	2, 025, 794	Barberton, Nelspruit, Hazy view	51%
<b>Limpopo</b>	<b>5, 105</b>	<b>1, 550, 000</b>	<b>Tzaneen and Levubu</b>	<b>30%</b>
KwaZulu Natal	2, 859	694, 675	North and South coast	16%

Source: South African Subtropical Growers Association, October 2010

### c) Macadamia Producing Areas in Limpopo

Map 3.5 illustrates the production areas in the Limpopo province. Table 3.28 indicates the area planted for macadamia nut production in the province, as seen below a positive growth of 41% over the years has been experienced in the province macadamia industry.

**Map 3.5: Limpopo Macadamia Production Areas**



Source: Limpopo Department of Agriculture 2012

**Table 3.28: Areas Planted for Macadamia Nut in Limpopo**

Local Municipality	Hectares Planted
1. Makhado	5 661
2. Greater Tzaneen	885
3. Greater Letaba	278
4. Mookgopong	56
5. Modimolle	16
<b>Total area planted for macadamia in Limpopo</b>	<b>6 954</b>
Total 2002	4 864
Total 2007	4 932
<b>Change 2002 -2007</b>	<b>41%</b>

Source: SIQ Information 2012

Assumptions for **expected macadamia tonnage** in the province: the assumption for macadamia nut tonnage produced in the province is based on the hectares planted for macadamia nut production, commodity growth estimates and hypothesis that 80% of the trees are in their third year of growth, thus tonnage produced in the province can range from 7 000 to 7 788 tons.

#### d) Market Distribution

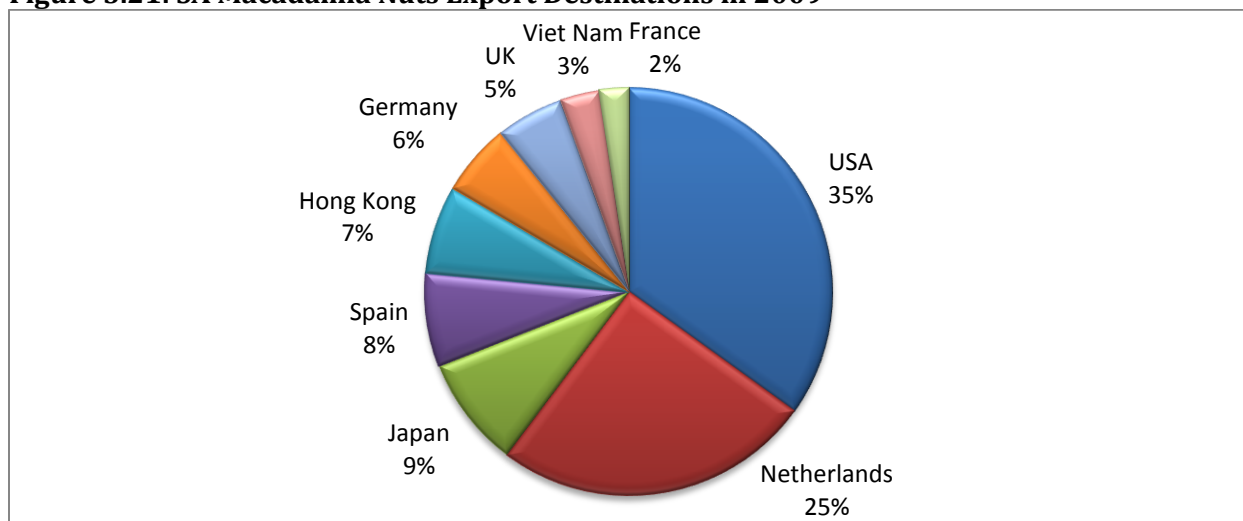
The macadamia nut is export, sold on NFPM, local sale and nut processors. Large commercial macadamia nut producers usually have their own dehusking facilities and produce by-products such

as oil and animal feed. High revenue is generated from sales of the kernel as it is a high vitamin source.

### e) Exports and Export Destinations

Figure 3.21 illustrates the export destinations for SA macadamia nuts for 2009. The export destinations for SA macadamia nuts were USA, Netherland, Japan and Spain, with USA taking up the largest export share of 35%.

**Figure 3.21: SA Macadamia Nuts Export Destinations in 2009**



Source: DAFF - A Profile of the South African Macadamia Nut Market Value Chain 2010, ITC Trade Map

### f) Employment

The employment estimates for the macadamia nut industry is 4 400 workers employed on seasonal and permanent basis. The industry is growing as macadamia are receiving high sales in the markets. The cracking facilities also accounts for a high number of employment in the macadamia industry.

### g) Processing of Macadamia

The kernel is the main product from the macadamia nut tree. Ice cream manufacturers and the baking industry also use macadamia kernels as an ingredient. The shell and husk are used as mulch or composted for fertilizer. Oil can be extracted from nuts and used in soaps, sunscreens and shampoos. The remaining press cake can also be used for animal feed.

## **h) Industry and Sector SWOT Analysis**

Challenges raised by business processing macadamia nut in the province include:

- Macadamia is a high value/niche product but small volumes are produced. There is a shortage of nuts, and need to focus on producing high volumes
- Increasing competition from European Union confectionary industries are threatening local processors industries
- High cost of running macadamia farms and processing facilities
- Fungus and diseases influencing quality and quantity of macadamia nuts
- Access to finance by small/emerging farmers as they do not have enough assets, this results in poor quality nuts due to a lack of technical equipment
- Small farmers usually work on 7 -10ha of land and it is not economically viable to buy or own equipment as they come at high prices.

## **i) Other Related or Supporting Initiatives**

The South African Macadamia Growers Associations (SAMAC) is an association of macadamia nut growers, macadamia processing businesses and marketers that represents the Southern African macadamia industry. The purpose of SAMAC is to provide information on production, processing as well as culinary and nutritional aspects of macadamia nuts. SAMAC acts as a mouthpiece of the industry on national and international forums. Emerging macadamia farmers should be encouraged to register with such association to benefit from technical and market advice.

### ***Implications for the agro-processing industry***

The producers of macadamia nuts require large hectares of land to be economically viable, thus ownership and cooperative partnership play an important role in macadamia production. The certification and accreditation of macadamia products are an important factor in accessing the market.

## 3.3 Vegetable Commodity Profile

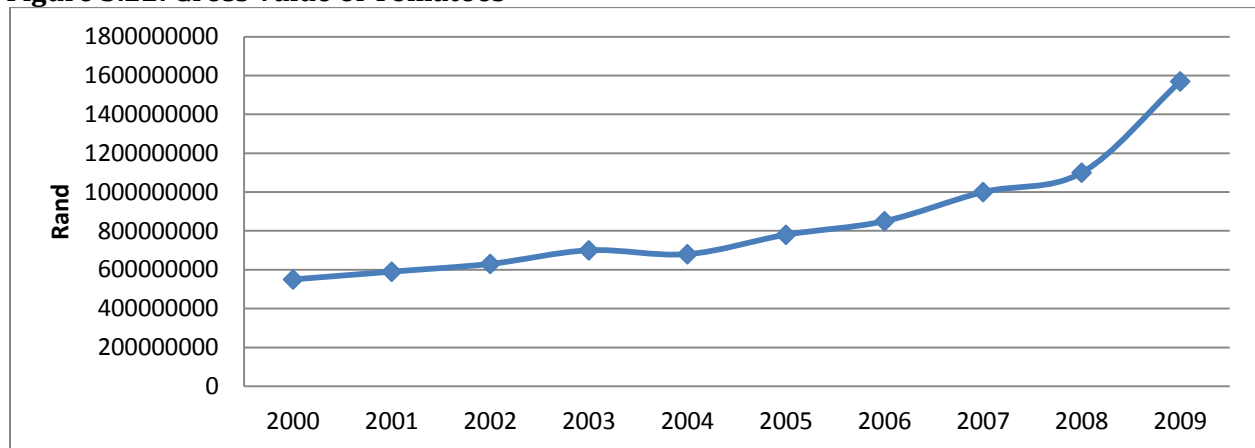
The document will focus on the selected high value vegetable commodities namely tomatoes, potatoes and onions.

### 3.3.1 Tomatoes

#### a) Industry Performance and Trends

Tomato is a popular crop in SA yielding high volumes in various provinces. Figure 3.22 illustrates the contribution of tomatoes to the overall gross value of agriculture production. The gross value of tomatoes has seen a significant increase over the years which can be contributed to production volumes and favourable prices.

**Figure 3.22: Gross Value of Tomatoes**



Source: DAFF - A Profile of the South African Tomato Market Value Chain 2010

#### b) Tomato Producing Areas in SA

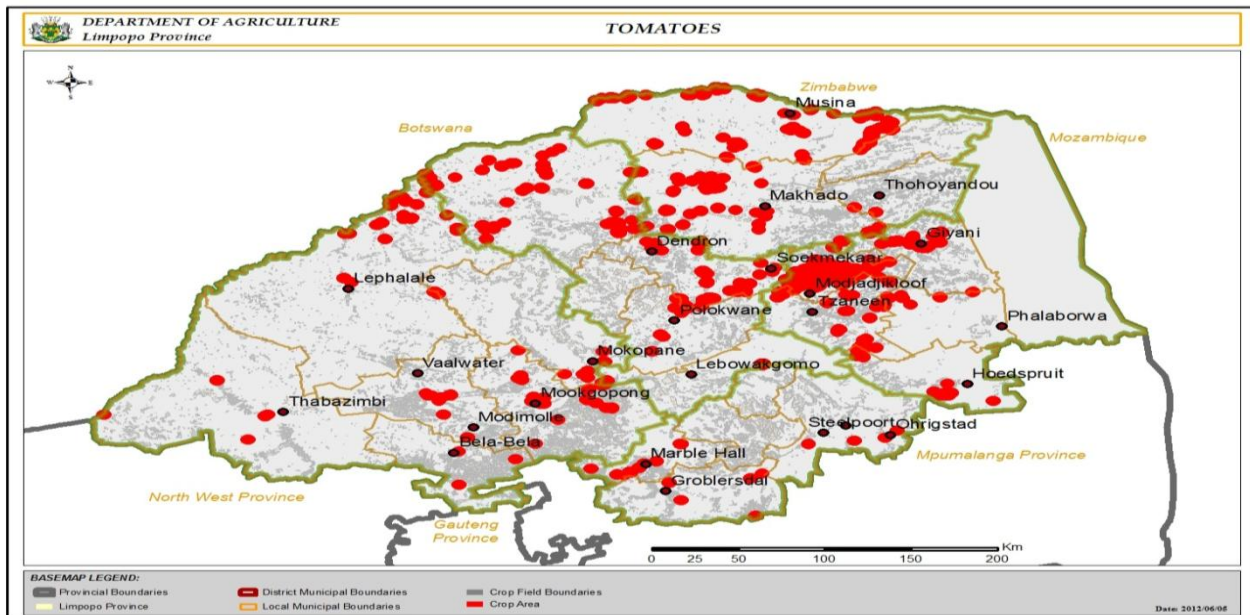
Tomato production takes place in majority of the provinces but high tomato production areas are the Limpopo, Mpumalanga and Eastern Cape provinces.

#### c) Tomato Producing Areas in Limpopo

Map 3.6 illustrates the tomato production areas in the Limpopo province. Table 3.29 indicates the hectares planted for tomato production. The hectares planted for tomato production have increased

significantly from 2007 at 4 711ha to 12 234 ha in 2012, positively influencing volumes produced by the province.

**Map 3.6: Limpopo Tomato Production Areas**



Source: Limpopo Department of Agriculture 2012

**Table 3.29: Area Planted for Tomato in Limpopo**

Local Municipality	Hectares Planted
1. Musina	2 88
2. Molemole	1, 335
3. Greater Letaba	4, 338
4. Makhado	947
5. Blouberg	798
<b>Total hectares planted for tomato</b>	<b>12, 243</b>
Total 2002	4, 970
Total 2007	4, 711
<b>Change 2007 -2012</b>	<b>159.89%</b>

Source: SIQ Information 2012

Assumptions for **expected tomato tonnage** in the province are based on: the total hectares planted and growth estimates<sup>5\*</sup> for tomato production in the province. Based on assumption that on average

<sup>5\*</sup> Growth margins attained from Limpopo Department of Agriculture - Agri Business.

- › 59% of tomato producers are producing 110tons
- › 25% of tomato producers are producing 100ton average and
- › 16% of tomato producers are producing 85tons or below

Based on the above assumption, the expected tonnage for tomato production in the province can range between 1 140 685 - 1 394 170 tons for the province.

## **d) Market Distribution**

The demand for tomatoes in SA is very high. The formal market is made up of NFPM, wholesale retails, distribution centres; chain retailers such Pick n Pay, Fruit & Veg and Spar. The informal market includes hawkers, street vendors and tuck shops. The other markets include exports and tomato processing manufacturers.

## **e) Exports and Export Destinations**

The value of tomatoes lies in processing and value addition as SA is not a major exporter of tomatoes. The competition from China offering lower prices for tomato base is beginning to present a threat to local processing plants which are already struggling with low production volumes.

The export destinations for tomatoes are mostly Southern African Development Community (SADC) countries with Mozambique being the largest export market of 56%. Other export destinations include Angola, Seychelles and Australia. A Profile of the South African Tomato Market Value Chain indicate that a high percentage of tomatoes (14.9%) falls under ship-store and bunkers which is where products without the necessary documents are held.

## **f) Employment**

The tomato Profile of the South African Tomato Market Value Chain state the tomato industry is estimated to employ approximately 22 500 people with at least 135 000 dependents. Employment is also created along the tomato supply chains as jobs can be created in the transport of tomatoes to the fresh produce markets, processing plants, packaging factories and importantly informal traders.



### g) Processing of Tomatoes

Processing of tomatoes consists of canning, freezing, dehydration and juice production. Tomatoes are processed into tomato and onion can mix, into pasta mixtures, tomato puree and pasta concentrates. Table 3.30 indicates the SA processed tomatoes in volumes and their rand value, it is evident that canning has seen a significant increase over the years with 135 782 tons canned in 2009. Juice and dehydration processing have decreased over the years which can be due to change in customer preference and market demand.

#### Big Brand Companies Involved in Tomato Processing include:

- Rhodes Fruit Farms, Western Cape
- Miami Cannery, Limpopo
- Giant Foods, Limpopo
- Montina, Limpopo
- Indemex, Limpopo
- Tigerbrands, Western Cape and Limpopo

**Table 3.30: Processed Tomato Volumes and Rand Value**

Year	Canning		Juices		Freezing		Dehydration		Total Processing	
	Tonnes	Rands	Tonnes	Rands	Tonnes	Rands	Tonnes	Rands	Tonnes	Rands
2000	103155	39,474,890	99	43,240	82	53,681	263	120,279	103,599	39,692,090
2003	123,539	67,124,388	1,880	1,052,495	0	0	73	53,791	125,492	68,230,675
2006	123,081	72,343,889	0	0	80	47,515	0	0	123,161	72,391,404
2009	135,782	150,828,518	0	0	110		0	0	135,892	151,241,064

Source: DAFF - A Profile of the South African Tomato Market Value Chain 2010

### h) Industry and Sector SWOT Analysis

The strength of tomatoes as a commodity is due to the fact that it is a household product used for everyday food preparation and demand for tomato produce is consistent throughout the entire year. The industry has opportunity to create job opportunities for local Agri businesses along the entire value chain from pre to post harvesting (transport, packaging, fertiliser inputs).

Capacitating local SMMEs to take advantage of value addition is important as currently many small-scale producers are not involved in value addition. The industry needs to first increase production

and ensure sustainable high production volumes to sustain current activities. The challenge for small-scale farmers is access to market and post-harvest losses which can be reduced by small scale processing facilities and value addition on farm value. The ability for small-scale tomato producers to enter niche markets such as organic farming can enhance value for local producers. Introducing new production technologies can also assist farmers create further employment.

Other challenges faced by the tomato processing sector include:

- Competition from China, selling products at much cheaper rates
- Competing against subsidised products from the developed countries
- Emerging farmers lack financial inputs

## **i) Other Related or Supporting Initiatives: Agro Processor of Limpopo – (APOL) Case Study**

APOL is a tomato process processing tomato paste, canned tomatoes, and tomato powder used to produce soup powder. The products are sold in bulk to well-known food distribution companies in the country including Unilever, Royco, Mars, Knorr, Patley's and Liberty foods. The factory is facing challenges of high prices for raw materials which influence production costs. The competition from international markets such as China has placed immense pressure on APOL as these countries are selling tomato based products at a lower price. The possibility to increase factory production is through product marketing, employing a team of tomato industry professionals in production, logistics, finance, food science, production and marketing.

### ***Implications for the agro-processing industry***

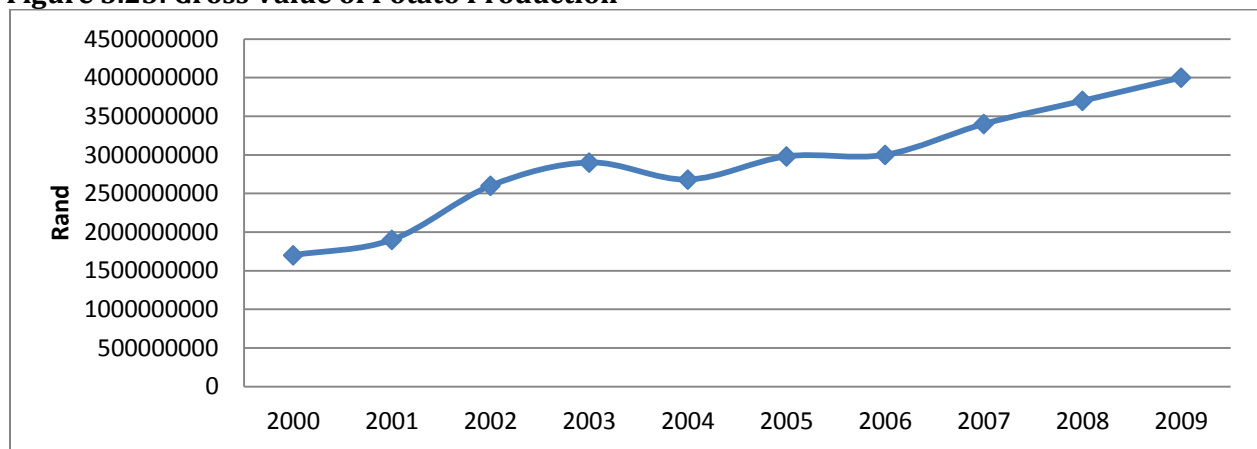
The tomato industry contributes to high employment in the Limpopo agriculture sector. The emerging sector and local SMME can enhance their production to meet local demand of both fresh product markets and tomato processing activities. There is a need to build and enhance the primary production of tomato in the province and introduce technological methods to combat natural elements e.g. hydroponics, greenhouse production, tunnels systems.

### 3.3.2 Potatoes

#### a) Industry Performance and Trends

Figure 3.23 indicates the gross value of potato production for the past decade, the contribution of potatoes to the agriculture gross value has remained high over the years with increased contribution for 2008 and 2009. Potatoes are the most suitable vegetable for the export market as they are easy to grade and pack under correct conditions and their shelf life is much longer than most vegetables.

**Figure 3.23: Gross Value of Potato Production**

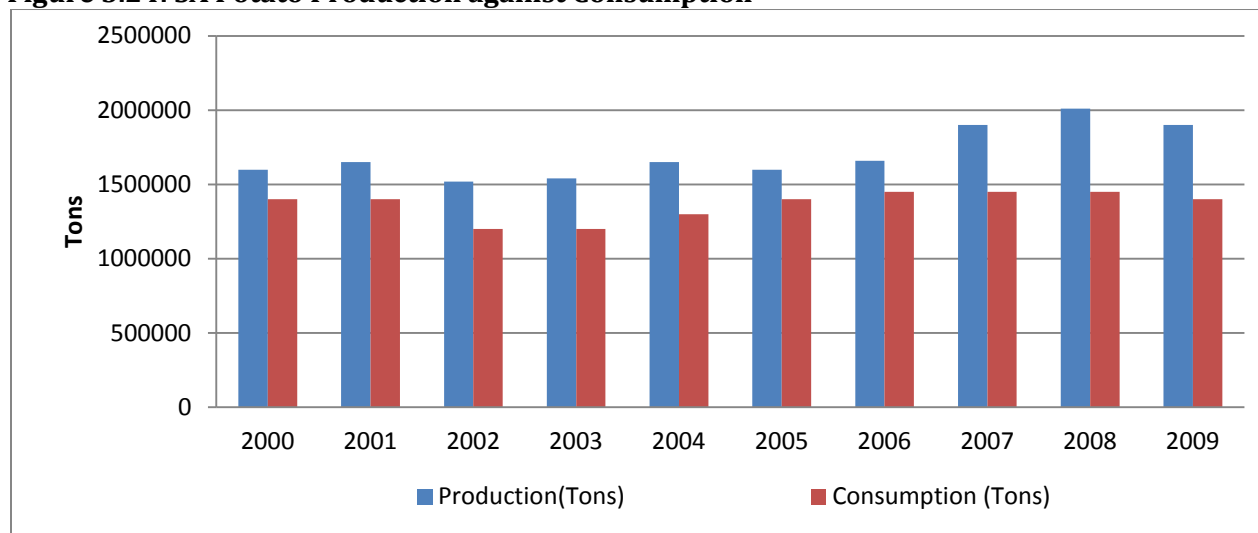


Source: DAFF - A profile of the South African Potato Market Value Chain 2010

#### SA Potato Production and Consumption

Figure 3.24 illustrate SA production versus consumption levels. The potato production is higher than consumption; the surplus is exported or processed. The average SA potato consumption is approximately 1 308 276 ton per annum. The potato production levels have remained relatively high over the years.

**Figure 3.24: SA Potato Production against Consumption**



Source: DAFF - A profile of the South African Potato Market Value Chain 2010

### b) Potato Producing Areas in SA

Table 3.31 indicates potato production in the 16 regions of SA, for the 2010 crop year. The table details hectares and percentages planted for potato production as well as the number of commercial producers. Limpopo has the largest area of hectare planted for potato production, 9197ha and produces high volumes of potatoes (measured in number of 10kg bags).

**Table 3.31: Top Five Potato Production Regions – 2010 crop year**

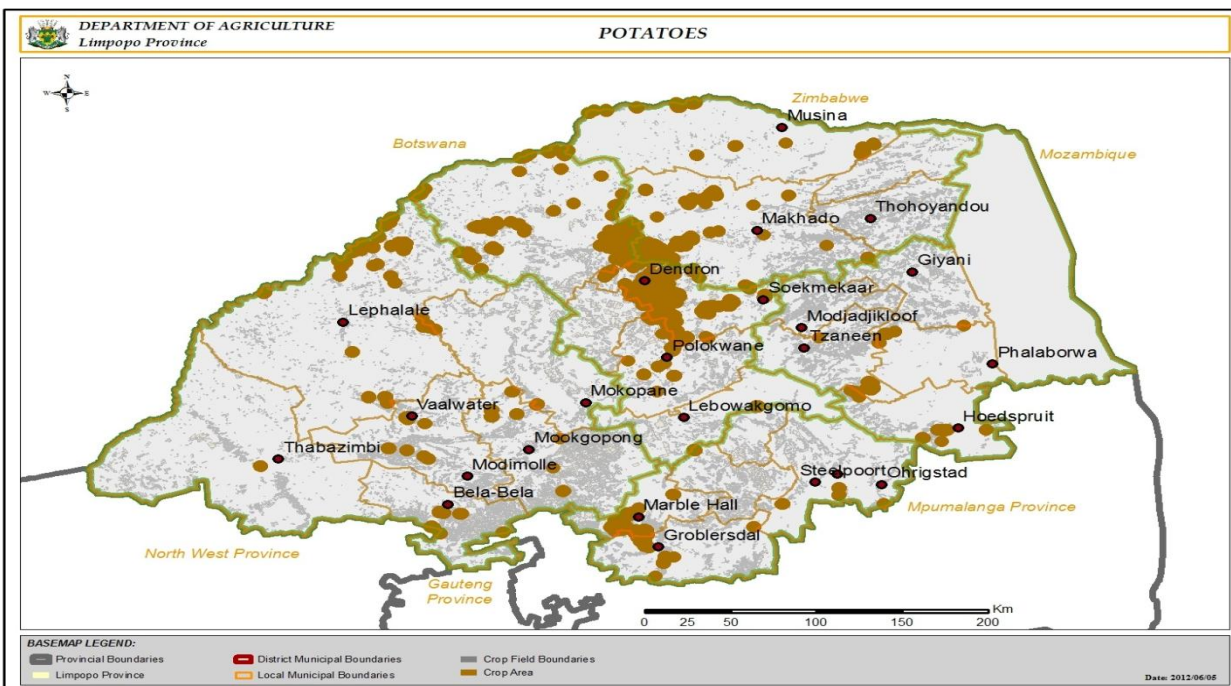
Region	Hectares	% of hectares	Number of 10kg bags produced	Number of Commercial Potato Producers per Farming Units 2010
<b>Limpopo</b>	<b>9,197</b>	<b>18%</b>	<b>39,806,114</b>	<b>106</b>
Eastern Free State	8,525	17%	25,646,652	97
Sandveld	7,104	14%	31,726,371	79
Western Free State	6,109	12%	30,141,752	75
KwaZulu Natal	4,063	8%	15,285,300	63

Source: Potato SA 2010

### c) Potato Producing Areas in Limpopo

Map 3.7 illustrates the production areas in the province with the hectares planted for potato production indicated in Table 3.32.

**Map 3.7: Limpopo Potato Production Areas**



Source: Limpopo Department of Agriculture 2012

**Table 3.32: Area Planted for Potato in Limpopo**

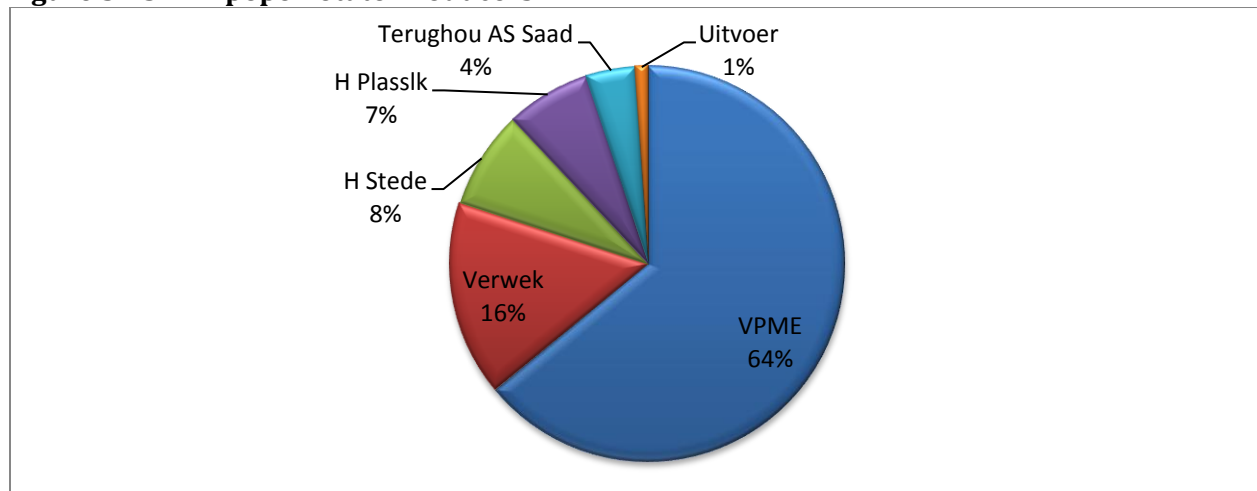
Local Municipality	Hectares Planted
1. Blouberg	3,757
2. Molemole	3,247
3. Makhado	1,442
4. Greater Marble Hall	1,389
5. Lephalale	1,216
<b>Total hectares planted for potato in Limpopo</b>	<b>14,197</b>
Total 2002	5,180
Total 2007	8,526
<b>Total 2007 -2010</b>	<b>66.52%</b>

Source: SIQ Information 2012

### Limpopo Potato Producers

Figure 3.25 illustrates the potato producers in the Limpopo province. The highest producer of potatoes in the Limpopo province is VPMe that is producing 64% of potatoes in the province followed by Processed (Ververk) with 16% of production. Commercial potato farmers in Limpopo play a crucial role in contributing to high volumes of potato produce in the province.

**Figure 3.25: Limpopo Potato Producers**

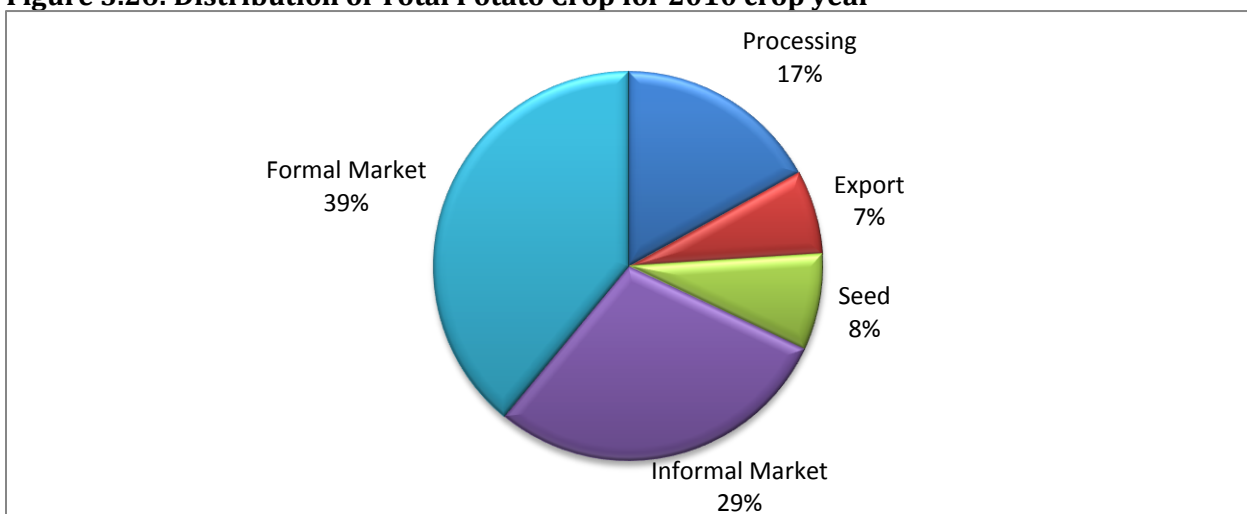


Source: Potato SA 2010

#### d) Market Distribution

Figure 3.26 illustrates how the potato crop for the year 2010 was distributed with the formal market that took up 39% of the crop followed by the informal market at 29%. The distribution to the informal market plays an important role as local vendors, hawkers and tuck shops use crop to generate an income and make produce reachable to the poorest of poor, thus enhancing food security. NFPMs still remain an important channel for the sale of fresh potatoes in South African.

**Figure 3.26: Distribution of Total Potato Crop for 2010 crop year**



Source: Potato SA 2011

### e) Export and Export Destinations

SA is not a major exporter of potatoes. The low volumes exported are due to large weights of potatoes and transport costs that make exports cost expensive. The primary export markets for SA potato crop are mainly surrounding SADC regions and Mozambique, Zimbabwe and Zambia as the in close proximity to the country. The Western Cape and KwaZulu Natal serve as exit points for potato exports through the Cape Town and Durban harbour.

### f) Processing of Potato

Potatoes are processed into frozen fries, dry crisp, fresh chips and mixed with other vegetables. The produce is also used in canning and for microwave convenience food.

### g) Industry and Sector SWOT Analysis

The informal industry plays an important role in the distribution of potatoes as the able to reach the rural and urban market. Potato farmers in the province have contracts with McCain, Simba and Willets, where farmers plant potatoes and harvesters inspect produce during various stages. Once the potatoes are approved there are delivered to factories for processing. The opportunities for local Agri businesses are in transport of potato crops, cold chain management, semi agro processing and packaging.

Table 3.33 indicates the challenges and opportunities in the potato industry. The major challenges potato producers face in the province is increasing production cost and new diseases affecting quality of produce.

**Table 3.33 Challenges and opportunities in the Potato Industry**

Challenges	Opportunities
<ul style="list-style-type: none"> <li>• Difficulty in maintaining the quality of produce for exports for final destination</li> <li>• High expenses in refrigerated transport over long distance</li> <li>• Lack of infrastructure in remote rural areas in accessing markets, especially for small-scale producers</li> </ul>	<ul style="list-style-type: none"> <li>• Increasing demand for agriculture produce due to population growth</li> <li>• South Africa has a Preferential Trading Agreement (PTA) with the EU and they apply zero tariffs to potatoes originating from South Africa</li> </ul>

Source: DAFF - A profile of the South African Potato Market Value Chain 2010

## **h) Other Related or Supporting Initiatives**

Potato SA is an association that protects and promotes the interests of the South African potato industry. The association offers its members industry information, production techniques and quality planting material. Research and development into promoting the consumption of potatoes in SA and abroad is also the responsibility of the association.

### ***Implications for the agro-processing industry***

The province is a high producer of potatoes and high volumes go towards sales on the formal market. The informal market also take ups significant share of potato production availing opportunities along the value chain and semi processing opportunities for local market.

## **3.3.3 Onions**

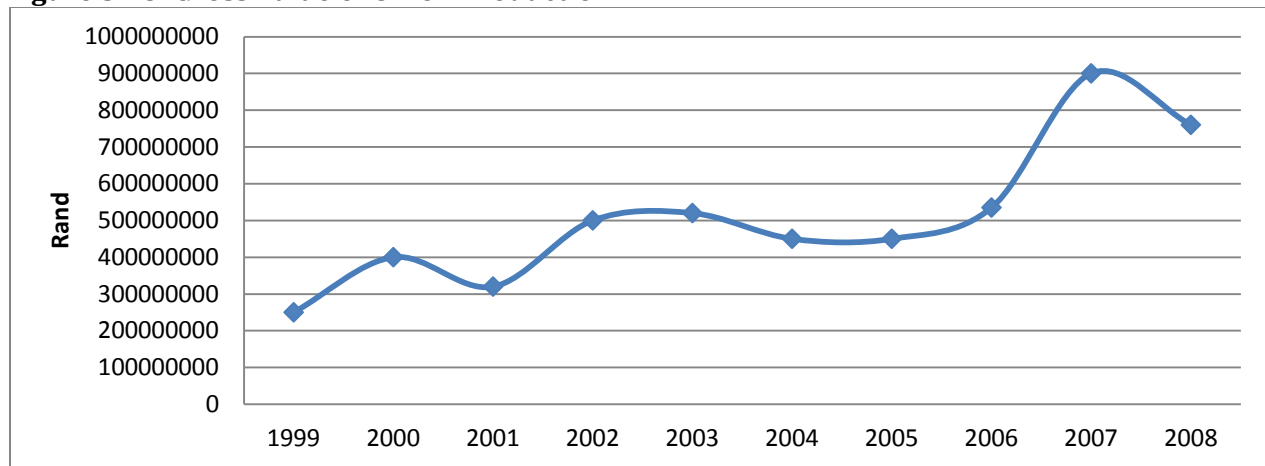
Onion is the third largest and popular vegetable after potatoes and tomatoes. The product is used in numerous households making it commercially viable with a high market. Fresh onions are available in throughout the year.

### **a) Industry Performance and Trends**

Figure 3.28 illustrates the contribution of the onion industry to the gross value of agricultural production over a period of 10 years. The onion industry experienced a slight increase in the years from 2006 to 2008, this can be due to high prices received by producers across the markets.



**Figure 3.28: Gross Value of Onion Production**

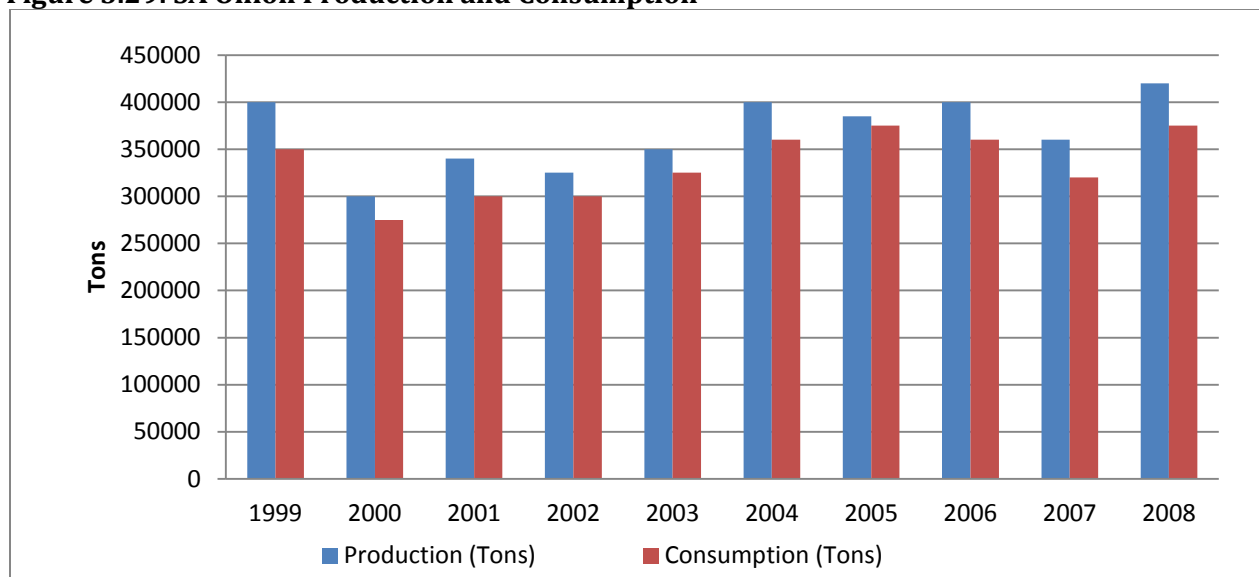


Source: DAFF - A Profile of the South African Onion Market Value Chain 2010

## Production and Consumption

Figure 3.29 illustrates the production and consumption volumes for onions in SA, the average onion consumption in SA is approximately 337 026 tons. The production volumes for onion have remained high over the years with sufficient supply for exports and food processing.

**Figure 3.29: SA Onion Production and Consumption**



Source: DAFF - A Profile of the South African onion Market Value Chain 2010

### b) Onion Producing Areas in SA

Onion production happens throughout the country with high concentration of onion production found in the Western Cape (Ceres area), Northern Cape, North West and Limpopo Province. According to the United Nations Food and Agriculture Organisation (UNFAO) leading onion producing countries are China, India, United States, Turkey and Pakistan.

### c) Onion Producing Areas in Limpopo

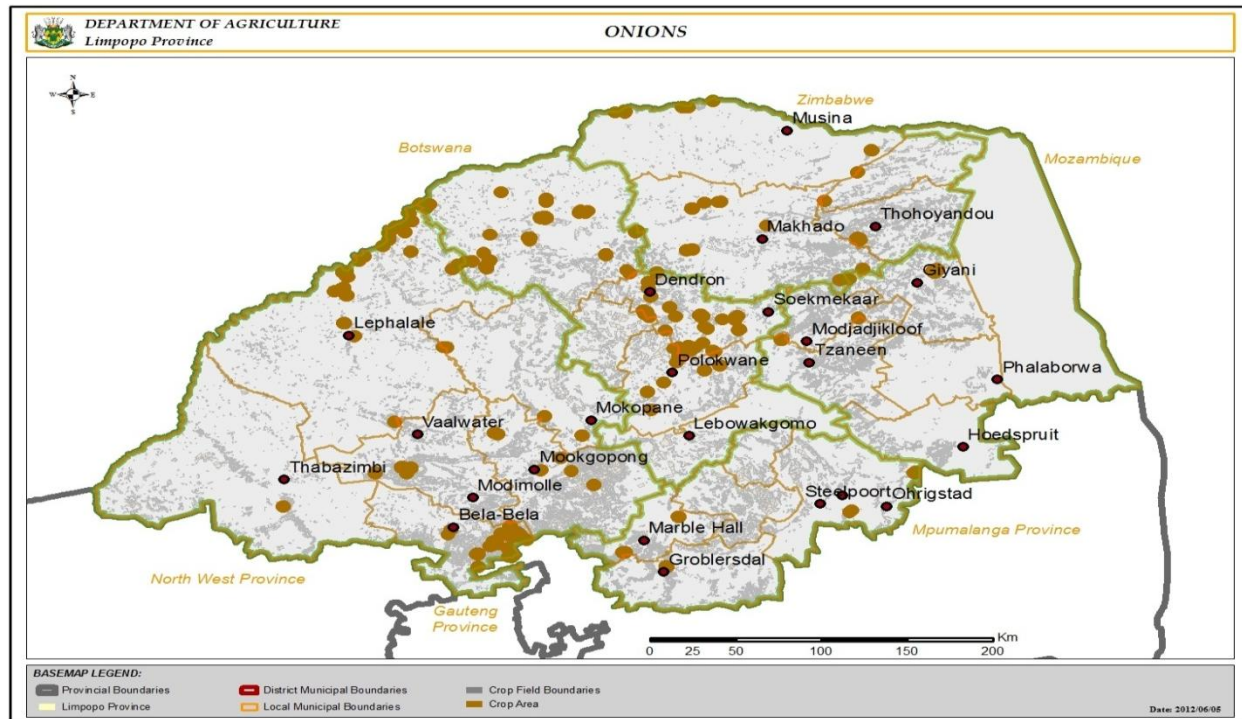
Map 3.8 illustrates the onion production areas in the Limpopo province. Table 3.34 indicates the hectares planted for onion production, as seen below hectares have increased over the years.

**Table 3.34: Onion - Area Planted**

Local Municipality	Hectares Planted
1. Molemole	987
2. Lephalale	811
3. Blouberg	588
4. Bela Bela	558
5. Makhado	230
<b>Total hectares for onion in Limpopo</b>	<b>4, 020</b>
Total 2002	1 ,807
Total 2007	2 ,163
Change 2007 – 2012	85.87%

Source: SIQ Information 2012

**Map 3.8: Limpopo Onion Production Areas**



Source: Limpopo Department of Agriculture 2012

#### d) Market Distribution

The domestic market is made up of fresh produce markets, informal market, food manufacturers and sales to wholesalers & retailers. The sales on the fresh produce market take up the largest tons of onion production and this is followed by the exports market. The processing of onion products takes up the smallest percentage of onions produced therefore sales on the domestic market are an important channel for SA onions.

Table 3.35 indicates the distribution of SA onion production. The highest volumes are distributed on the National fresh produce markets. A significant difference is noticeable in the tons exported for SA onion from 9 849 tons in 2000 to 31 382 tons in 2009.

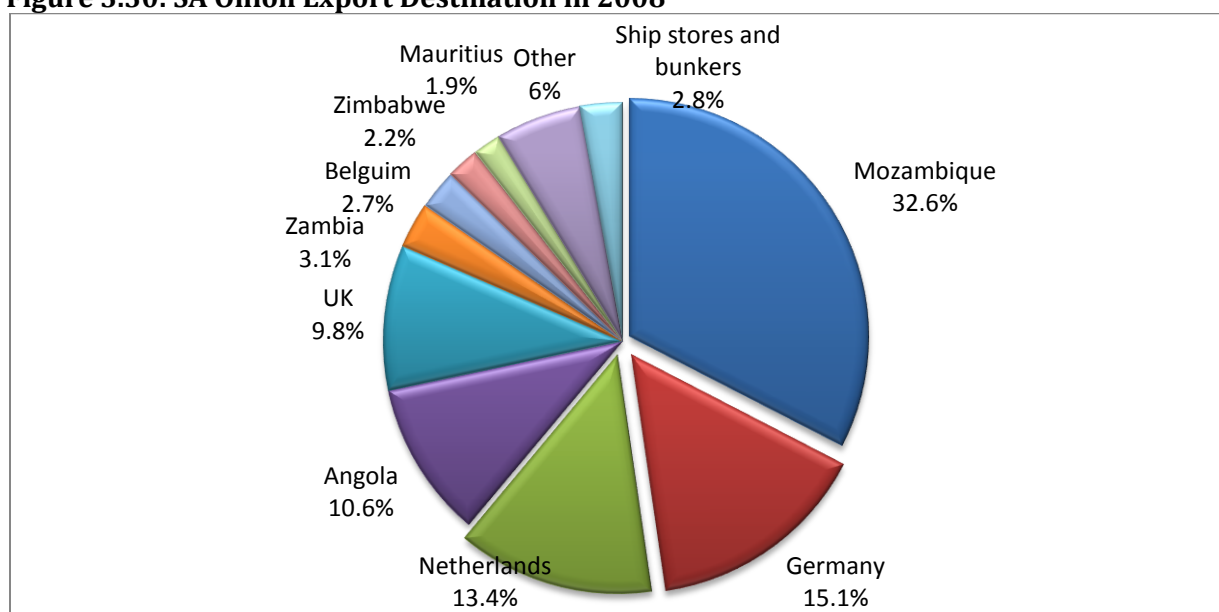
**Table 3.35: SA Distribution of Onion Volumes**

Years	National Fresh Produce Market (Tons)	Exports (Tons)	Total Processing (Tons)
2000	214,313	9,849	6,329
2004	282,718	34,736	4,400
2008	298,721	31,382	5,424

Source: DAFF - A Profile of the South African Onion Market Value Chain 2010, Agricultural Statistics

### e) Export and Export Destinations

Figure 3.30 illustrates the export destination of South African onion production. Forty nine percent of SA onions are exported to neighbouring African countries. The other destinations include Germany at 15.1% and the Netherlands commanding 13.4% of SA onions.

**Figure 3.30: SA Onion Export Destination in 2008**


Source: A Profile of the South African Onion Market Value Chain 2010

### f) Processing of onion

Onion is processed and mixed with other vegetables, such as tomatoes and frozen vegetables. Onion canning and dehydration obtains the highest value in rands. The extraction of oil from onions has reduced over the years due to technical difficulties and expensive equipment used for the complex system.

### g) Industry and Sector SWOT Analysis

The challenges and opportunities for the SA onion industry are indicated in Table 3.36.

**Table 3.36: Challenges and opportunities in the SA onion industry**

Challenges	Opportunities
<ul style="list-style-type: none"> <li>• A major challenge for onion industry is to keep competitive against the pressure of rising production cost</li> <li>• The industry is also subjected to intense international competition in the market place</li> <li>• Since storage onions represent a majority of the crop, prices tend to be lowest around the peak of harvest</li> </ul>	<ul style="list-style-type: none"> <li>• Certain medicinal and disease prevention qualities</li> <li>• Changing consumer trends are considered to be creating further opportunities for the onion industry</li> <li>• Producing sweet onion variety to target niche growing market</li> </ul>

Source: DAFF - A profile of the South African Onion Market Value Chain 2010

#### ***Implications for the agro-processing industry***

The highest revenue is obtained in sales of onions on the fresh produce market, thus efforts into increasing primary production should be emphasised.

### 3.4 Industrial Crops Commodity Profile

#### 3.4.1 Black Tea

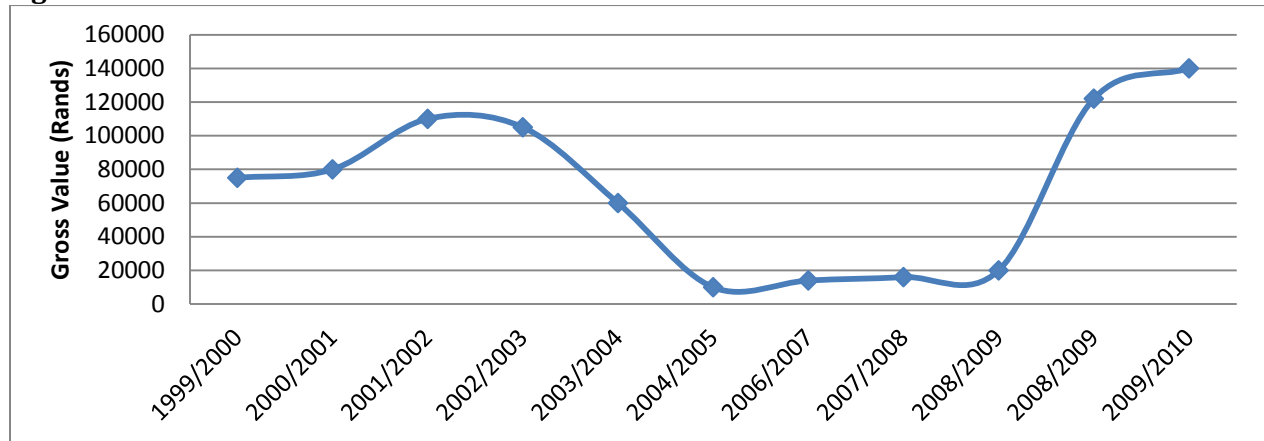
The SA tea industry has been declining over the years as most tea producers had to close their factories due to downturn and high operation costs. The majority of the tea producers currently operating in SA have to rely on state funding.

#### a) Industry Performance and Trends

Figure 3.31 indicates the gross value contribution of black tea to the agriculture sector. The black tea industry has experienced instability and great fluctuation over the past years. In 2004/2005 there was a major decline in tea production as tea producing farms stopped operation. A Profile of the South African Black Tea Market Value Chain state that the Sapekoe tea estate in Limpopo stopped

operations due to high minimum wages for farm workers, no protection against tea imports from SADC regions and land claims. The considerable increase in tea production for 2008 was due to government efforts and investment in reviving the tea industry.

**Figure 3.31: Gross Value Contribution of Black Tea**



Source: DAFF - A Profile of the South African Black Tea Market Value Chain 2010

## b) Tea Producing Areas in SA

Tea production in the province takes place in the Limpopo, KwaZulu Natal, Eastern Cape and Mpumalanga province. The majority of the tea estates are currently not producing due to capital constraints and low profit margins. The Limpopo province has the highest number of tea estates with three out of the five estates currently not operating. The profile of the South African Black Tea Market Value Chain 2010 state that on average approximately 7.4 million kilograms of tea is produced locally each year.

## c) Tea Producing Areas in Limpopo

The province has a number of tea estates that are currently not operating due to financial constraints. **The Mukumbani Tea Estate in the Thulamela Local Municipality** is currently in operation and is trading as Venteco Pty Ltd. The tea estate is made of two farms namely Tshivhase and Mukumbani tea estate. The total hectares for tea production are 1 077ha with Tshivhase estate made up of 577ha and Mukumbani estate has 500ha. **The tea estates together employ 2 400 employees** in the peak season, which last for nine months and employ 400 workers in the down season.

The tea leaves are **processed into black** tea at a factory plant at the Mukumbani tea estate. The black tea is packaged as the **Lidi Brand**. The Tshivhase tea estate packages for rooibos tea, where they buy tea from the Northern Cap and Balfour area and pack in the brand name of Lidi. The estate has recently begun to supply a no name brand of black tea for Pick n Pay stores.

**The branded tea is listed with five provinces** (Limpopo, North West, Gauteng, Mpumalanga and Free State). The tea estate has supplier contracts with Pick n pay and retailers in the region of Vhembe District. The tea estate has future plans of getting listed with coastal province however this intervention requires high capital.

The **challenges faced** by the tea estate is that the tea is packed and sold in bulk therefore factory is making a loss as compared to when tea is sold in mini packaging. The estate is still dependent on government grants and has not made a profit as yet. The brand name of the tea is still struggling in the market as it is not well known and high cost of marketing are required.

### **The Makgoba Tea Estate Revitalisation**

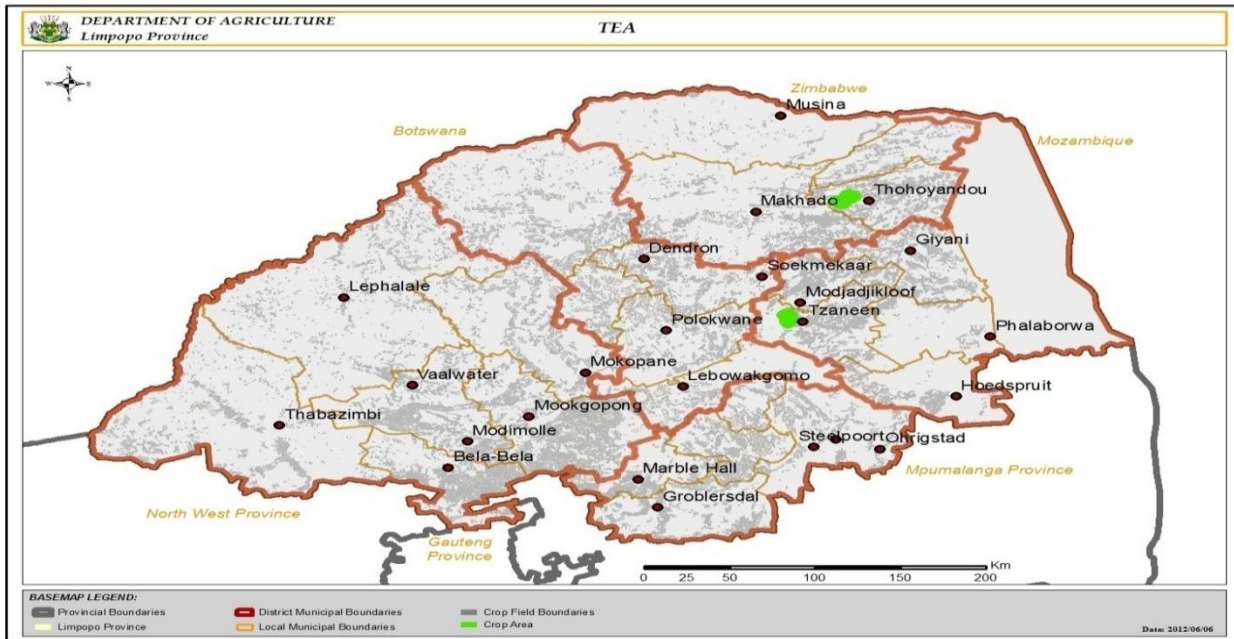
The Makgoba Tea Estate is located in the Magoebaskloof area of Limpopo. The tea estate closed down in 2004 and left 2 000 workers unemployed. The Limpopo Department of Agriculture has become the caretakers of the estate and has availed funding to regenerate the estate.

The Makgoba Community Trust claimed the restitution rights of the Middelkop and Grenshoek Estate. The Makgoba tea estate has 999.4 total hectares for tea production with the Middelkop estates accounting for 501.4 ha and Grenshoek estate is 498 ha. The Middelkop estate has been completely rehabilitated with tea fields back in production. The tea estate is **currently employing** 456 people and will employ a further 500 people for a period of one month to assist in plucking.

**The major challenge** for the tea estate is that it does not have a factory to process the tea leaves and there is no value addition taking place. A factory to process the tea leaves would generate an income for the tea estate and create job opportunities of close to 2000 people. The tea estate also faces uncertainty with regards to future development as there is no clear commitment from government or investors.

Map 3.9 illustrates the tea production areas in the province. Table 3.36 indicates the hectares planted for tea production which mainly take place in the Thulamela Local Municipality.

**Map 3.9: Tea Production areas in Limpopo**



Source: Limpopo Department of Agriculture 2012

**Table 3.36: Area Planted for Tea in Limpopo**

Local Municipality	Hectares Planted
<b>Thulamela</b>	<b>1,071</b>

Source: SIQ Information 2012

#### d) Market Distribution

The tea market value chain consists of tea producers, tea packer/blenders, tea traders, retailers and consumers. SA imports tea and the industry is not able to meet local demand, as a high number of tea estates have closed down.

#### e) Exports and Export Destinations

The export destinations for SA tea is mainly African regions such as SADC regions, Mauritius, Mozambique and Malawi (DAFF - A Profile of the South African Black Tea Market Value Chain, 2010).



The country is a high importer of tea and exports are down on a minimal level as local demand is not met by local production.

#### f) Employment

The employment in the tea industry has declined over the years as most producers have ceased operation. Table 3.37 indicates the employment potential if factories were to operate on full scale. The tea industry in the Limpopo province has the potential to employ 4 893 people, if factories were to operate on full potential.

**Table 3.37: Employment Potential of the various Tea Estates in SA**

Tea Estate	Employment Potential
<b>Tshivhase</b>	<b>1,489</b>
<b>Mukumbani</b>	<b>1,233</b>
<b>Grenshoek</b>	<b>1,013</b>
<b>Middelkop</b>	<b>1,158</b>
Outgrowers	230
Ngome Sapekoe	1,045
Richmond Sapekoe	1,137
Ntingwe	748
Magwa	4,103
Majola	886
Paddock	518
Senteeko	1,265
Gradely	173
<b>Total</b>	<b>14,949</b>

Source: DAFF - A Profile of the South African Black Tea Market Value Chain 2010

#### g) Processing of Tea

Processing of tea includes harvesting, fermenting and drying. The process requires accurate techniques and state of the art technology. Tea processors in Limpopo are trading as Ventoc traders. The Mukumbani tea estates processes leaves into black tea for both the Tshivahe tea estate and Mukumbani tea estate.

#### h) Industry and Sector SWOT Analysis

The tea industry has numerous innovative developments such as the development of low caffeine Green Tea (LCT) by using Japanese technology. The various flavours of tea on the market are

increasing as tea processors are beginning to explore and include local fruit fragrance/flavours in tea.

## **Key challenges in the Black Tea Industry**

The key challenges for the tea industry in the province are high labour cost, lack of capital to revive dormant tea estates, difficulty in marketing and becoming a household brand. The Makgoba tea estate does not have facilities to process the tea leaves produced. The industry also requires specialised skills and those skills are usually imported from outside of the province.

### **i) Other Related or Supporting Initiatives**

#### **Government Intervention in the Black Tea Industry**

- Tshivhase and Mukumbani tea estates in the Vhembe district are being given technical and financial support by the government to ensure community takeover and revitalisation of the local tea industry
- The Limpopo Department of Agriculture has reached a cooperative agreement with its Northern Cape counterpart to **develop market access relations** with Rooibos growers in Nieuwoudtville and Calvinia with the objective of blending and packaging a special Rooibos collateral brand along with Limpopo's black tea (DAFF - A Profile of the South African Black Tea Market Value Chain, 2010).

#### ***Implications for the agro-processing industry***

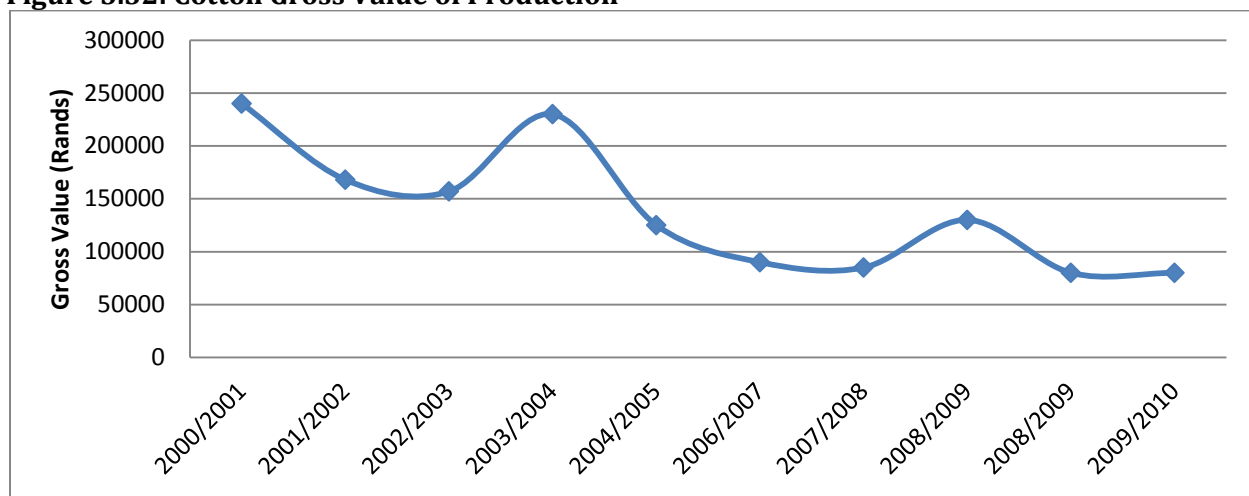
The province is a higher producer of tea and the industry has potential to generate high employment figures especially during the harvesting periods and in the tea processing factories. There is a need for tea estates to be self-sufficient and less dependent on state intervention.

### 3.4.2 Cotton

#### a) Industry Performance and Trends

Cotton is a versatile crop that provides that has experienced a decline in production over the years. The cotton industry cultivators have moved from field cultivation towards a more fabric industry. Figure 3.32 illustrates the cotton gross value of production. There is a significant decline in cotton production due to decrease in domestic production and cotton imports from SADC countries.

**Figure 3.32: Cotton Gross Value of Production**



Source: DAFF - A Profile of the South African Cotton Market Value Chain 2010

#### b) Cotton Producing Areas in SA

Cotton producing areas in SA are the Northern Cape, North West and Limpopo province. The Northern Cape cotton producing areas are:

- Vaaharts with 1 273 irrigated hectares
- Lower Orange River with 400ha and
- The rest of Northern Cape with 4344ha
- The North West province has 240ha planted in the Taung region (Cotton SA, 2011).

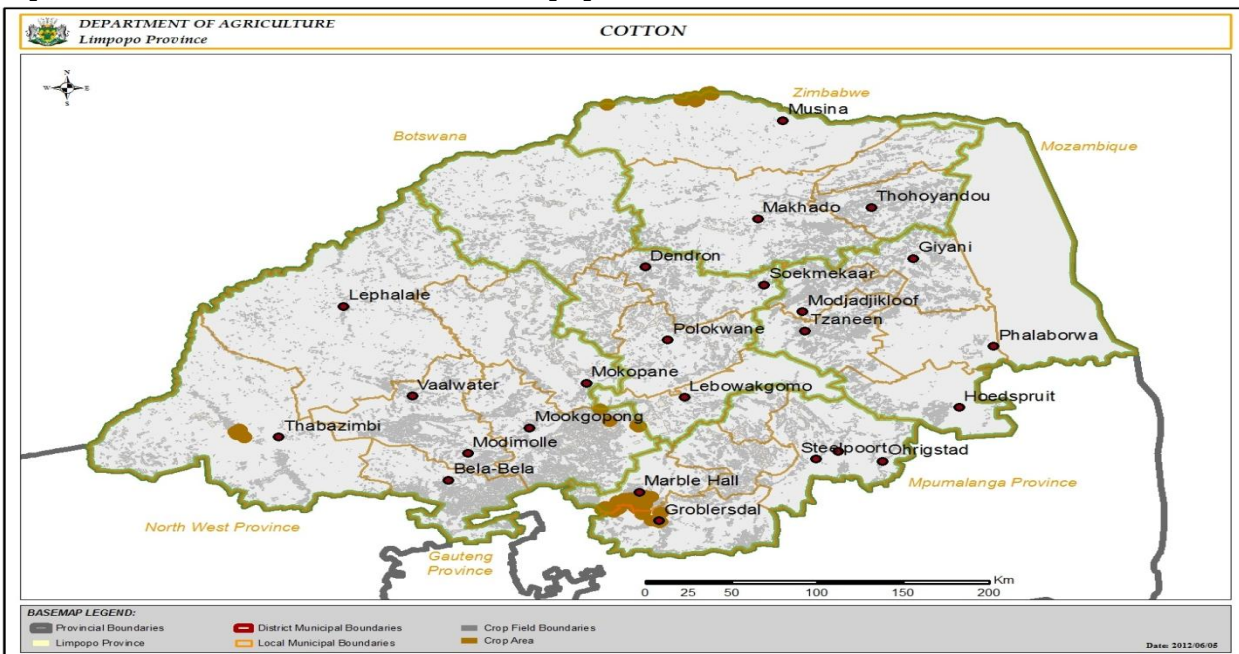
The decrease in cotton production over the recent years can mainly be attributed to the following factors:

- › Cotton prices have declined over the years, therefore many farmers have left the cotton industry
- › Other crops such as maize, offer higher prices and require less inputs, thus cotton producers have shifted to producing other grains
- › The cotton industry is sector specific and requires specialised skills and technical equipment that can be expensive for most farmers
- › There is fierce competition from surrounding SADC regions producing and selling cotton at lower prices

## c) Cotton Producing Areas in Limpopo

Map 3.10 illustrates the production areas in the Limpopo province. Table 3.38 indicates the hectares planted for cotton production. The hectares planted for cotton production have decreased significantly, with a change percentage of -48.7% over the years.

**Map 3.10: Cotton Production Areas in Limpopo**



Source: Limpopo Department of Agriculture 2012

**Table 3.38: Area Planted for cotton in Limpopo**

Local Municipality	Hectares Planted
1. Musina	947
2. Greater Marble Hall	775
3. Mookgopong	224
4. Elias Motsoaledi	126
5. Thabazimbi	118
<b>Total hectares for cotton in Limpopo</b>	<b>2,190</b>
Total 2002	10,481
Total 2007	4,267
<b>Change 2007 -2012</b>	<b>- 48.7%</b>

SIQ Information 2012

Table 3.39 indicates the cotton production areas in the Limpopo province. The Loskop and Musina regions have a lot of hectares planted for irrigated cotton thus the able to produce high volumes of cotton lint.

**Table 3.39: Limpopo Cotton Crop Report 2<sup>nd</sup> Estimate for 2011/2012 Production Year**

Production Region	Hectares Irrigation	Hectares Dry land	Yield Irrigation Kg seed Cotton/ha	Yield Dry land Kg seed Cotton/ha	Production 200 kg bales cotton lint	Crop % Hand picked
Loskop	1,203	0	4,131	0	8,697	10%
North & South Flats	52	196	3,800	900	655	10%
Dwaalboom/ Thabazimbi	150	0	4,150	0	1,089	10%
Weipe	873	0	4,000	0	6,460	0%

Source: Cotton SA 2012

#### d) Market Distribution

##### Cotton sales arrangements

The seed cotton is sold by the producer to a ginner who gins the cotton and sells the cotton lint to spinners. The cotton seed is also sold to animal feed processors and in some cases to oil extractors. The cotton is either sold directly from farmer to ginner or by making use of agents. Cotton farmers also have the option of spinning their own cotton, provided the necessary infrastructure is in place.

## **e) Employment**

The estimates for employment in the cotton industry is one worker per one hectare, for primary production, with further employment opportunities found in the processing factories of cotton. The employment over the years has reduced as production of cotton decreases.

## **f) Processing of Cotton**

There are nine ginneries in South Africa and two of them are in the Limpopo province, namely Weipe Cotton Gin in Musina and Loskop Cotton in Marble Hall. These ginneries process cotton fibre and cotton seed into animal feed for feedlots and dairy farms. Seed cotton is sold to ginneries that gin the cotton in preparation for selling it to spinners that produce cotton yarn. The processed cotton is eventually woven into cotton fabrics, clothing and towels.

Seeds extracted from the ginning process are sold to animal feed producers for production of oil cake or oil mills that produce the oil for soaps and explosives. Some seed is also reserved for future plantings.

## **g) Industry and Sector SWOT Analysis**

Constraints in the cotton industry

- The SA cotton industry is price driven and cotton prices have remained low for the past years
- There are high input costs required in the production of cotton making it a high risk industry
- Seed prices have increased over the years leading to a decline of cotton dry land farmers
- Cotton harvesting requires specialised machinery e.g. cotton pickers which come at a high cost and cannot be used in the harvesting of other grains
- Small scale cotton farmers are reliant on government grants for financial assistance as the industry requires high input cost and specialised technical equipment

## Opportunities

The SA cotton industry has experienced price increase in the last two years and this has attracted farmers back into cotton farming. The crop is very drought tolerant and can be planted in drought prone areas. Organic cotton farming also presents an opportunity for cotton farmers to supply textile industries. Large commercial retailers such as Woolworth stores have moved towards purchasing locally produced organic cotton. The irrigation regions in the province are also suitable for the production of cotton.

### *Implications for the agro-processing industry*

There are various opportunities that exist for cotton producers in the province. The emerging sector requires innovative intervention to increase primary production. The employment opportunities in the cotton industry will rise as hectares planted are increased.

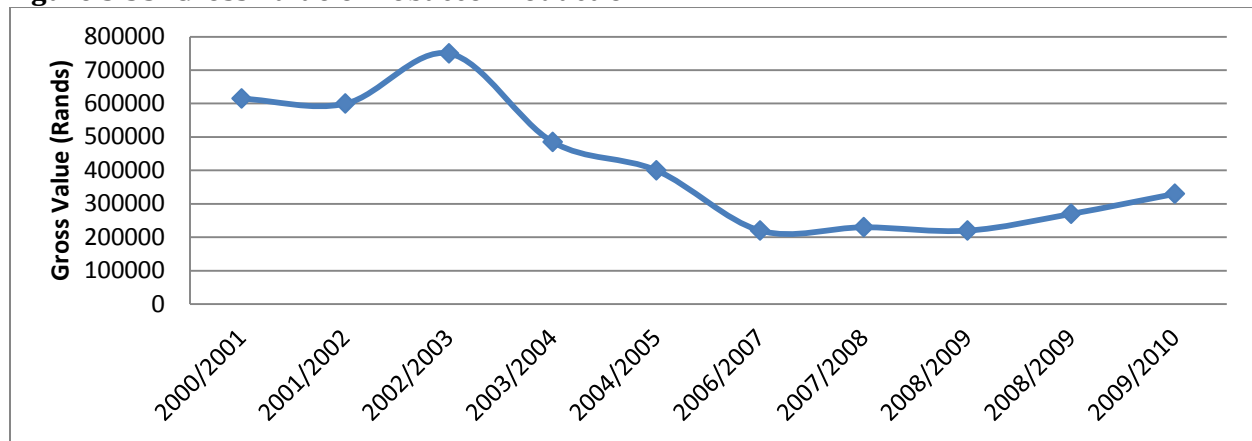
## 3.4.3 Tobacco

Two classes of tobacco are produced in South Africa; these are flue-cured and air-cured tobacco. Flue-cured tobacco is mainly used for cigarettes and air-cured tobacco is used as pipe tobacco, snuff and RYO (roll your own) cigarettes.

### a) Industry Performance and Trends

The gross value of tobacco has declined over the years, as indicated in Figure 3.33; this is due to the introduction and implementation of tobacco control regulations. The passing of tobacco bans and restrictions of smoking in public places and workplaces has impacted negatively on tobacco production.

**Figure 3.33: Gross Value of Tobacco Production**



Source: DAFF - A Profile of the South African Tobacco Market Value Chain 2010

### **b) Tobacco Producing Areas in SA**

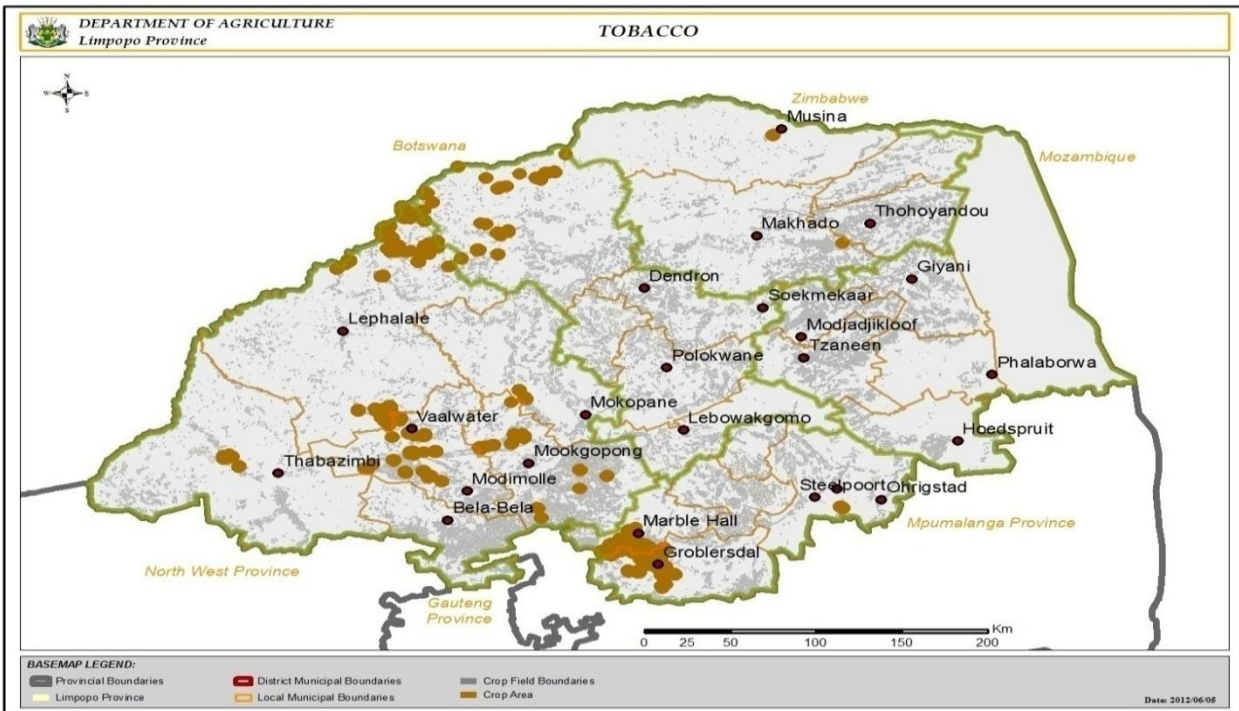
Tobacco in SA is grown mainly in the Limpopo, Mpumalanga, North West, Eastern Cape and Western Cape province. Flue cured tobacco is produced in Limpopo, Mpumalanga and North West. Air cured tobacco is produced in the Eastern and Western Cape.

### **c) Tobacco Producing Areas in Limpopo**

Map 3.11 illustrates the tobacco production areas in the province. Table 3.40 indicates the hectares planted for tobacco production.



**Map 3.11: Limpopo Tobacco Production Areas**



Source: Limpopo Department of Agriculture 2012

**Table 3.40: Tobacco – Areas Planted**

Local Municipality	Hectares Planted
1. Greater Marble Hall	1,372
2. Lephalale	1,087
3. Elias Motsoaledi	829
4. Modimolle	649
5. Blouberg	330
<b>Total tobacco production in Limpopo</b>	<b>4,777</b>
Total 2002	7,259
Total 2007	7,657
Change 2007 -2012	-37.61%

Source: SIQ Information, 2011

Consultation with the Limpopo Tobacco Processors (Pty) Ltd indicated the tobacco producers in Limpopo are as follows:

- There are 41 farmers for dark air cured tobacco with 803 ha planted. The dark air cured farmers are mainly in the Ellisras to Alldays area and a few in the Makoppa (Thabazimbi) area.
- There are 32 farmers for flue cured Virginia tobacco with 1 378 ha planted. The flue cured farmers are in the Waterberg area, Vaalwater to Sterkriver.
- There are 34 farmers for sun cured Virginia tobacco with 51 ha planted, these farmers are scattered around the province.

## **d) Market Distribution**

The profile of the South African Tobacco Market Value Chain 2010 state that there is approximately 40-45% of flue-cured tobacco and 60-70% of air-cured tobacco is used for local consumption. The domestic market makes up a majority of tobacco sales with finished tobacco products distributed through, retailers and small players in the informal market (street vendors, spaza shops, etc).

## **e) Exports Volumes**

According to the Tobacco Institute of Southern Africa the majority of locally produced tobacco leaf is used by manufacturers locally and most of the cigarettes produced in SA are locally consumed but there are also some exports to African and Middle East countries. The volumes for imported tobacco have increase over the years as manufacturers are importing finished tobacco products.

## **f) Employment**

The Tobacco Institute of SA indicates the tobacco primary industry employed 9 855 farm workers for the 2011/2012 production season. The leaf processing facilities employed approximately 600 people and the manufacturing industry employed between 2 500 and 3 000 people. Employment opportunities are also found along the tobacco value chain in the sales, transport of tobacco products and the informal market.

## **g) Processing of Tobacco**

The leave of tobacco is processed into nicotine for cigarettes, and used in some pesticide or medicinal uses. Tobacco is most commonly used or consumed in the form of smoking, chewing and snuffing. The products manufactured from tobacco include cigarettes, cigars, Roll-Your-Own, pipe smoking, snuff and tobacco pesticide used in domestic gardening. The manufacturing of products usually require large drying plants and intensive labour for production.

### **Limpopo Tobacco Processors (LTP) in Rustenburg North West**

- LTP is the only tobacco green leaf threshing facility in SA and is situated in Rustenburg, North West
- It is responsible for the processing of the total South Africa Flue Cured Virginia (FCV) tobacco crop and it contracts all the FCV tobacco farmers in SA
- LTP has depots in Nelspruit, **Groblersdal**, Vaalwater and Rustenburg where farmers can sell their products

## **h) Industry and Sector SWOT Analysis**

The challenges in the tobacco industry are:

- Tobacco production is highly influenced by quality of water and irrigation systems, therefore poor infrastructure in the province hinders tobacco production
- The developments of mining activities in the province will reduce tobacco production as land is becoming expensive and can be afforded by large multinational mining companies
- Consultation with tobacco processors indicated that there is limited assistance from the Department of Agriculture for both tobacco producers and processors
- The illegal sales of tobacco in SA is negatively influencing the tobacco industry
- Other challenging factors include high excise duties, strict bans and restrictions in consumer laws
- Drought and rough climatic conditions affect production volumes

The opportunities and strengths in the tobacco industry are:

- An opportunity exists to increase Sun Cured Virginia tobacco in the Limpopo province
- The manufacturing of smokeless tobacco (chewing tobacco, snuff, tobacco paste) present an opportunity for local producers
- Market expansion as China has indicated interest in SA tobacco

## **i) Support Organisation: The Tobacco Institute of South Africa (TISA)**

TISA is the industry body for the tobacco industry in SA. The mandate and reach extends into the different tobacco producing provinces. TISA represents tobacco growers, leaf merchants, leaf processors, manufacturers, importers and exporters of tobacco products in South Africa.

### ***Implications for the agro-processing industry***

The tobacco industry requires innovative investment as opportunities exist to increase current production and increase product development/manufacturing in the province.

## **3.5 Grains Commodity Profile**

Grains include maize, wheat, sorghum and canola seed.

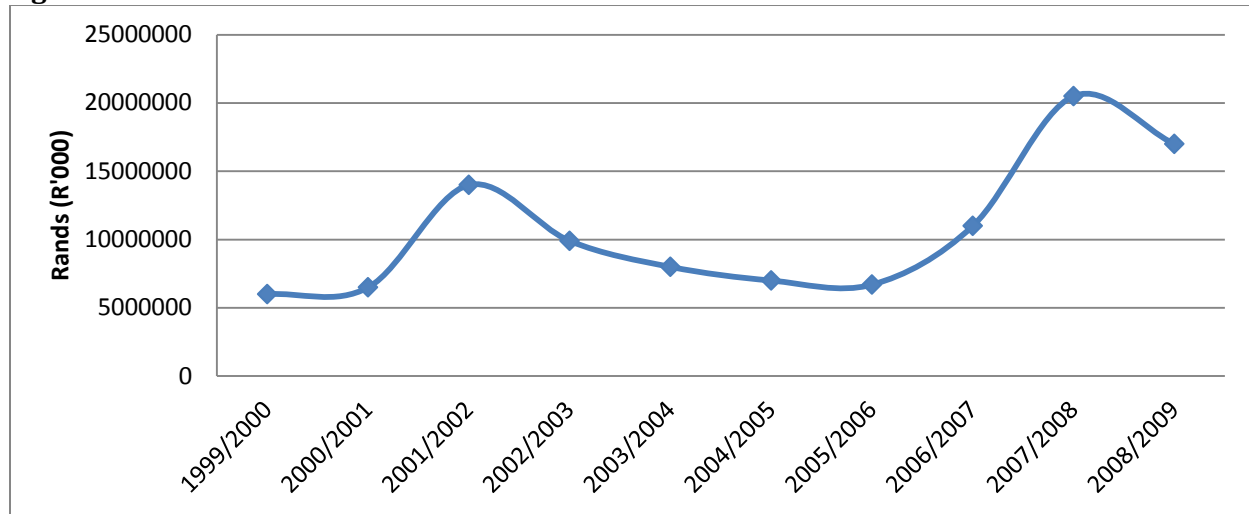
### **3.5.1 Maize**

Maize is an important crop for South Africa as it provides majority of household with stable food consumption and food security in rural areas. The maize industry is both an employer and earner of foreign currency because of its multiplier effects. The yellow maize is mostly used in animal feed and white maize for human consumption.

## **a) Industry Performance and Trends**

The gross value of maize is dependent on the quantity produced and prices received by producers. Figure 3.34 illustrate the contribution of maize over the years with high levels of contribution in 2007 and 2008. The increase to gross value of agriculture from the maize industry can be due to increased market demand and pricing of commodity during the production year.

**Figure 3.34: Gross Value of Maize Production**



Source: DAFF - A Profile of the South African Maize Market Value Chain 2010

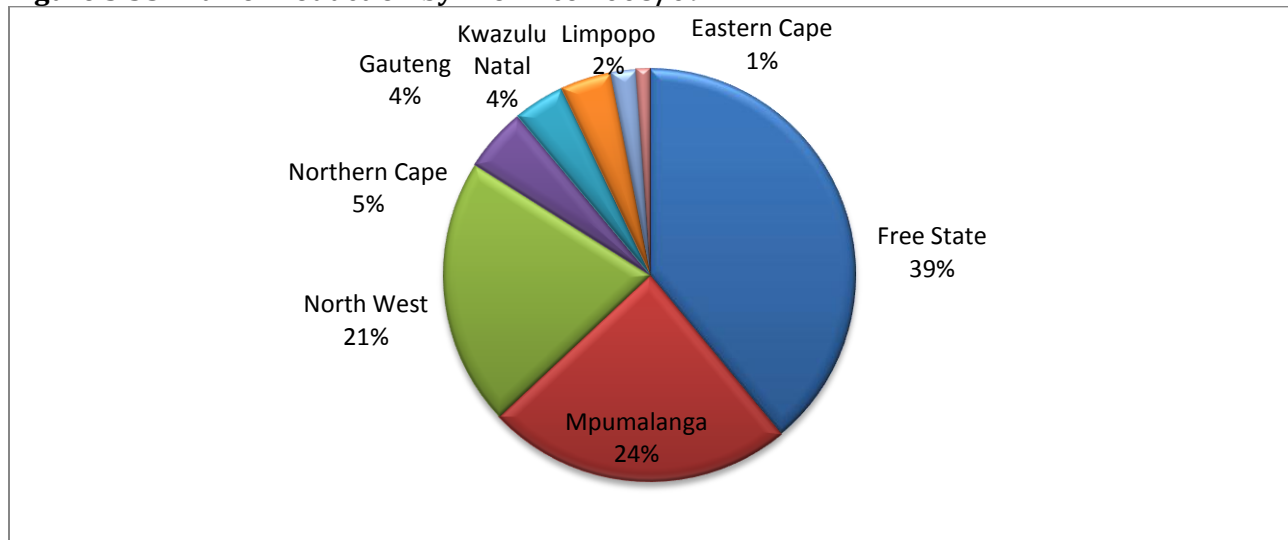
### Production versus Consumption

The production of maize exceeds the consumption levels therefore SA is able to export surplus. The production volumes have increased over the years, with consumption remaining relatively the same over the years. Factors such as increased prices, consumer preferences and substitutes have a direct impact on the demand of milled products.

### b) Maize Production Areas in SA

Figure 3.35 illustrates South Africa's maize production by province. The area producing high maize volumes are the Free State, followed by Mpumalanga and North West provinces. Limpopo province is a small producer of maize as it only contributes 2% to the total South African maize production.

**Figure 3.35: Maize Production by Province 2008/09**



Source: DAFF - A Profile of the South African Maize Market Value Chain 2010

### c) Maize Production Areas in Limpopo

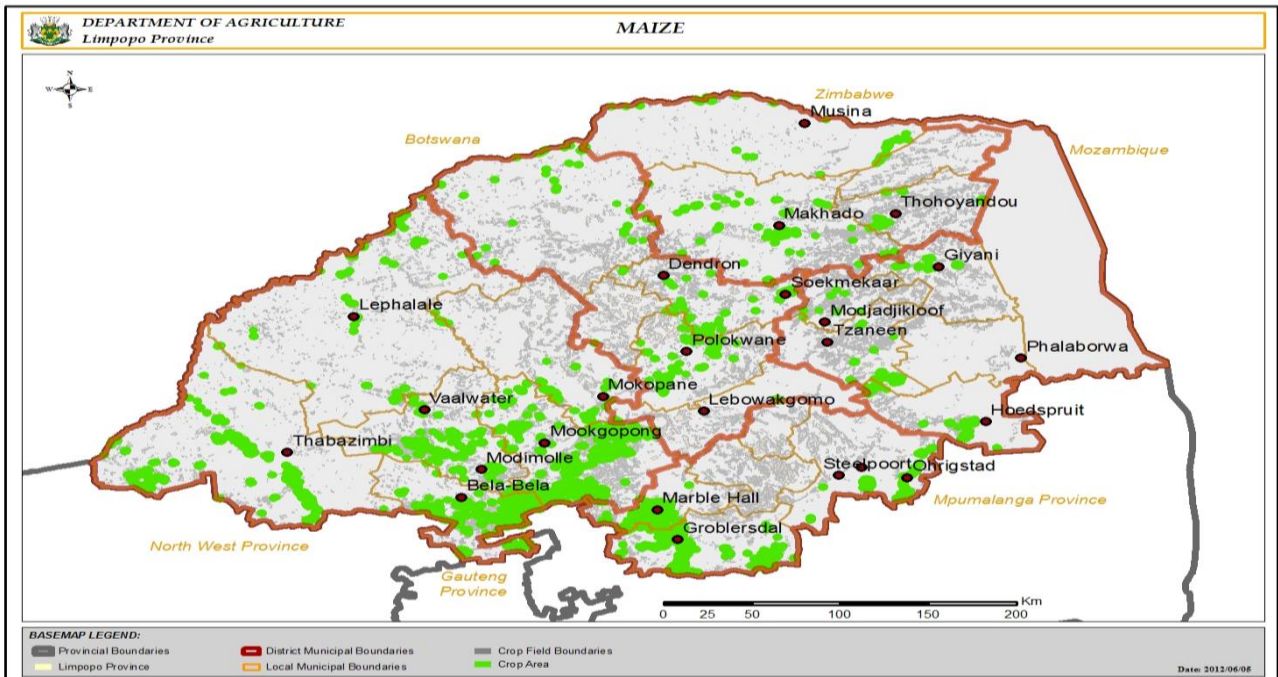
Map 3.12 illustrates the maize production areas in the province. Table 3.41 indicates the hectares planted for maize production. The hectares planted for maize production in the province has increased over the years. The **importance of maize production in rural areas has to be emphasised as it provides food security for numerous households in the province.**

**Table 3.41: Maize - Area Planted**

Local Municipality	Hectares Planted
1. Mookgopong	16,781
2. Thabazimbi	7,155
3. Elias Motsoaledi	8,674
4. Bela Bela	6,994
5. Greater Marble Hall	5,027
Total area planted for maize in Limpopo	<b>56,913</b>
Total 2002	37,836
Total 2007	36,431
Change 2002 - 2012	56.22%

Source: SIQ Information 2012

**Map 3.12: Maize Production Areas in Limpopo**



Source: Limpopo Department of Agriculture 2012

### Limpopo White and Yellow Maize Crop Estimates by the Crop Estimates Committee

The Crop Estimates Committee comprises of officials from the following institutions: Department of Agriculture, Forestry and Fisheries; Provincial Departments of Agriculture; various ARC-Institutes (Soil, Climate and Water; Small Grains Institute; and Grain Crops Institute) and Statistics SA.

Table 3.42 indicates estimates for the Limpopo maize crop for 2011 and 2012 production years. The final crop for white and yellow maize for 2011 was 173 000ton for the Limpopo province. The area planted has increased for both the yellow and white maize; this will increase production volumes for the production year of 2012. Increased volumes in maize production will further motivate the need for maize progressing and value addition activities in the province.

**Table 3.42: Maize Crop Estimates**

Province	Area Planted 2012			6 <sup>th</sup> Forecast (July) 2012		
Limpopo	White/Ha	Yellow/Ha	Total Ha	White Tons	Yellow Tons	Total Tons
	32, 000	18, 000	<b>50, 000</b>	150, 400	72, 000	<b>222, 400</b>
	Area Planted 2011			Final Crop 2011		
Limpopo	White/Ha	Yellow/Ha	Total Ha	White Tons	Yellow Tons	Total Tons
	25, 000	12, 000	<b>37, 000</b>	125, 000	48, 000	<b>173, 000</b>

Source: Crop Estimates Committee 2012

#### d) Domestic Market Distribution

The local market for maize consists of the animal feed industry, maize milling industry (retail and wholesale), wet milling and brewing industries. The formal retail market is relatively concentrated, with some national chain stores dominating the market. Maize is one of the most used commodities with a stable/consistent market.

The **primary sector** for the maize industry is made up of farmers both commercial and emerging farmers as well as silo owners. The silos are owned by agribusiness or cooperatives. The silos are able to provide storage facilities for grain producers. The maize **secondary industry** is made up of processors of maize including dry/wet industries and the animal feed industry.

#### e) Exports and Export Destinations

The South African maize industry exports maize (white and yellow) to Botswana, Lesotho, Mexico, Mozambique, Namibia and Swaziland. Zimbabwe also receives maize exports from South Africa as the country is experiencing political crises resulting in food shortages. The export volumes to Botswana, Lesotho, Namibia and Swaziland (BLNS) for the period of May 2012 to August 2012 are indicated in Table 3.43.



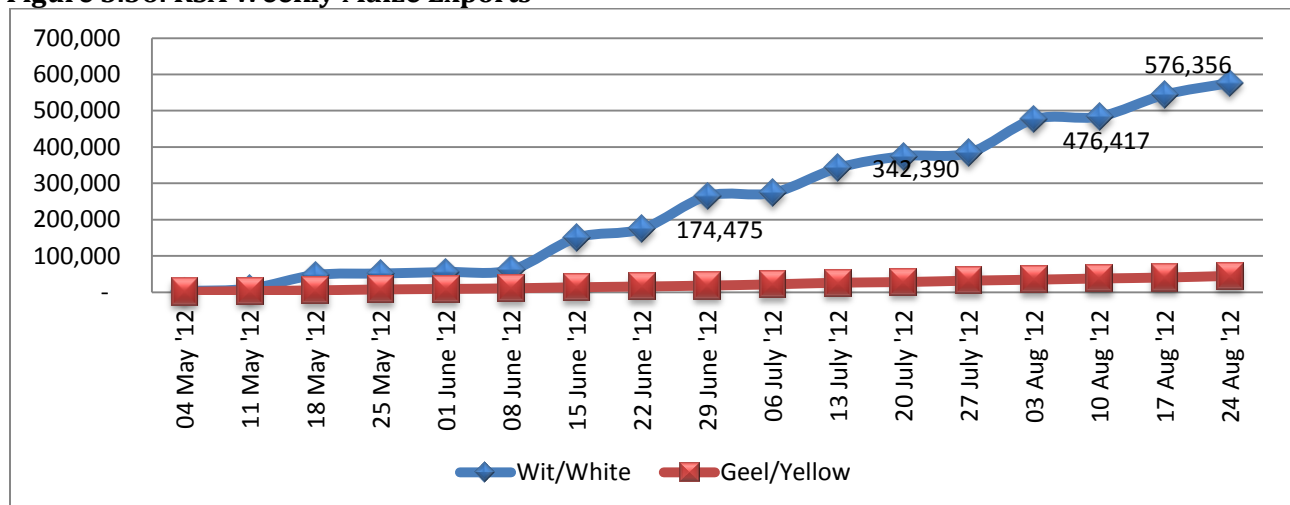
**Table 3.43: Export Exports to BLNS**

Country	White Maize	Yellow Maize	Total
Botswana	49,311	14,842	64,153
Lesotho	53,198	2,262	55,460
Namibia	1,683	7,390	9,073
Swaziland	2,136	15,489	17,625
<b>Total</b>	<b>106,328</b>	<b>39,983</b>	<b>146,311</b>

Source: Grain SA – 2012/13 Marketing Season

Exports of maize in the Limpopo province are mainly from the Mopani, Capricorn, Vhembe and Waterberg District as the able to produce high quantities of maize. The volumes of exports have increased over the years, with recent export trends, for May and August 2012, indicated in Figure 3.36.

**Figure 3.36: RSA Weekly Maize Exports**



Source: Grain SA – 2012/13 Marketing Season

## f) Employment

The commercial maize farmers are estimated at 9 000 and they cultivate nearly 3 million hectares of land and employ approximately 150 000 farm workers. Currently the maize milling industry employs approximately 5 300 workers, while the formal animal feed industry employs an estimated 2 500 employees (DAFF - A Profile of the South African Maize Market Value Chain, 2010).

### g) Processing of Maize

The maize kernel is processed by two industries namely the wet and dry milling industries. During the **dry milling process** the maize kernels are refined to maize meal. The products derived are samp, maize grits and maize rice, un-sifted, and coarse maize meal. **Wet milling** is a process carried out by putting maize grains in water to obtain pure starch.

The major players who have a large market share of white maize millers Premier Foods, Tiger Milling Company, Pioneer Foods (SASKO) and AFGRI. Silo owners such as NTK also play a major role within the maize industry.

### The Animal Feed Industry

The poultry, cattle and pig industry **consumes most of the yellow maize for animal feed**. The top animal feed manufacturers are AFGRI, Bokomo Voere, Epol, KK Animal Nutrition, Meadow Feeds, Noordwes Voere, and Senwesko Voere.

**Table 4.44: Products produced by Progress Milling– A major maize processor in the Limpopo province**

Maize Products	Sorghum Products	Wheaten Produced	Pre packed Products	Animal Feeds
<b>Super Maize Meal</b>	Mabel Thoro (Coarse and Fine)	Cake Flour (Sure bake)	Peanut Pod, Raw Peanuts	Yellow Maize, Maize Bran, Yellow Cruch
<b>Special Maize Meal, Sifted Maize Meal</b>	Malt (Mandla Malt)		Maize samp & Beans, Maize Rice, Maize seed	Chicken feed, mixed fowl food

## **h) Industry and Sector SWOT Analysis**

The promotion of vertical integration for maize farmers can increase value addition for if adequate support structures and technical infrastructure are in place. Vertical integration is where farming entrepreneurs have interests in more than one level of supply chain, for example, linking producers, silos, traders and millers to final consumers.

The maize industry provides for stable food for South African households and importance of the sector to overall agriculture production cannot be disputed. The rural households in the province rely heavily on the product for food security and to increase animal production. The provision of micro milling facilities that offer medium capacity maize milling can assist in value addition for local maize producers.

Maize receives high prices on the grain market and grain producers can easily switch to maize. There are ample opportunities along the maize value chain for local SMME and agribusinesses, e.g. transport, packaging, animal feed industry etc.

## **i) Other Related or Supporting Initiatives**

Grain South Africa has established a **Farmer Development Programme** which aims to empower developing grain producers to become sustainable and commercial farmers. The programme helps the grain producers to establish study groups, arranging coordinated training during farmer's days, training courses, and offer advice telephonically. The study groups are people with same interest to work together more effectively. Individual farmers are welcome to subscribe to Grain South Africa, or groups from 2 to 25 people may subscribe as group by registering their group with the organisation.

### ***Implications for the agro-processing industry***

Maize production provides food security for remote rural areas of the province. Maize processing facilities can assist in generating income for local maize producers. The development of the maize industry should be geared towards enhancing emerging farmers to produce on a commercial scale.

### 3.5.2 Wheat

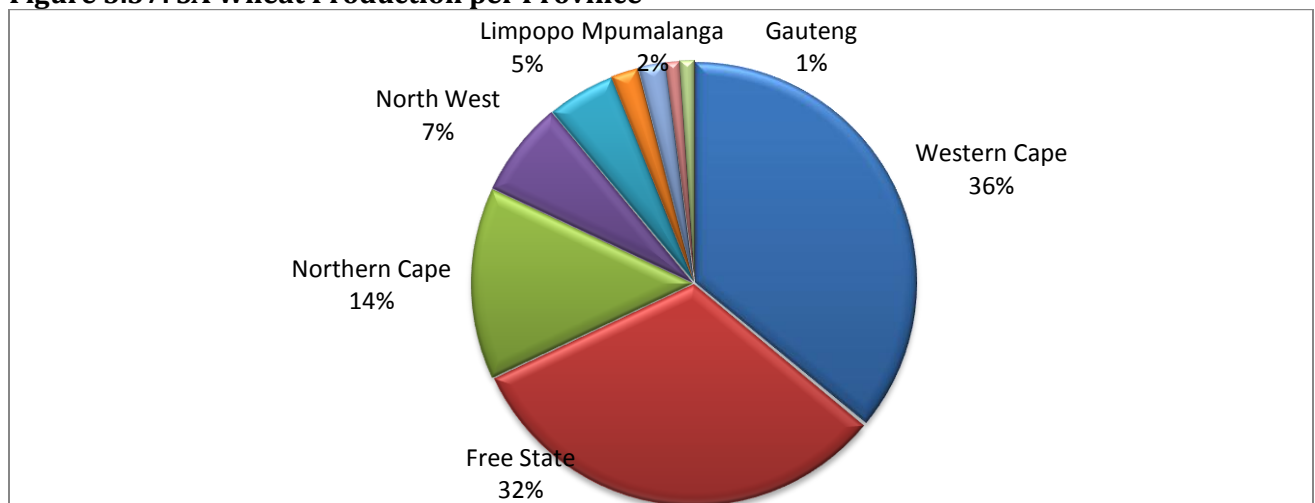
#### a) Industry Performance and Trends

Wheat is a cash crop and is mainly used for human consumption with surplus and the low quality wheat used for animal feed. Large quantities of wheat flour and meal are used for the production of bread. The wheat industry is vulnerable to climatic conditions which influence market price, crop yield and production. The Profile of the South African Wheat Market Value Chain state that contribution of the wheat industry to the gross value of agricultural production for the year of 2008 was R18 million.

#### b) Wheat Producing Areas in SA

Figure 3.37 indicates wheat production per province for the production year of 2009. The largest wheat producing area is the Western Cape at 36% overall production. This is followed by the Free State at 32% production capacity and thirdly Northern Cape at 14% production. Limpopo province accounts for only 5% of South African wheat production.

**Figure 3.37: SA Wheat Production per Province**

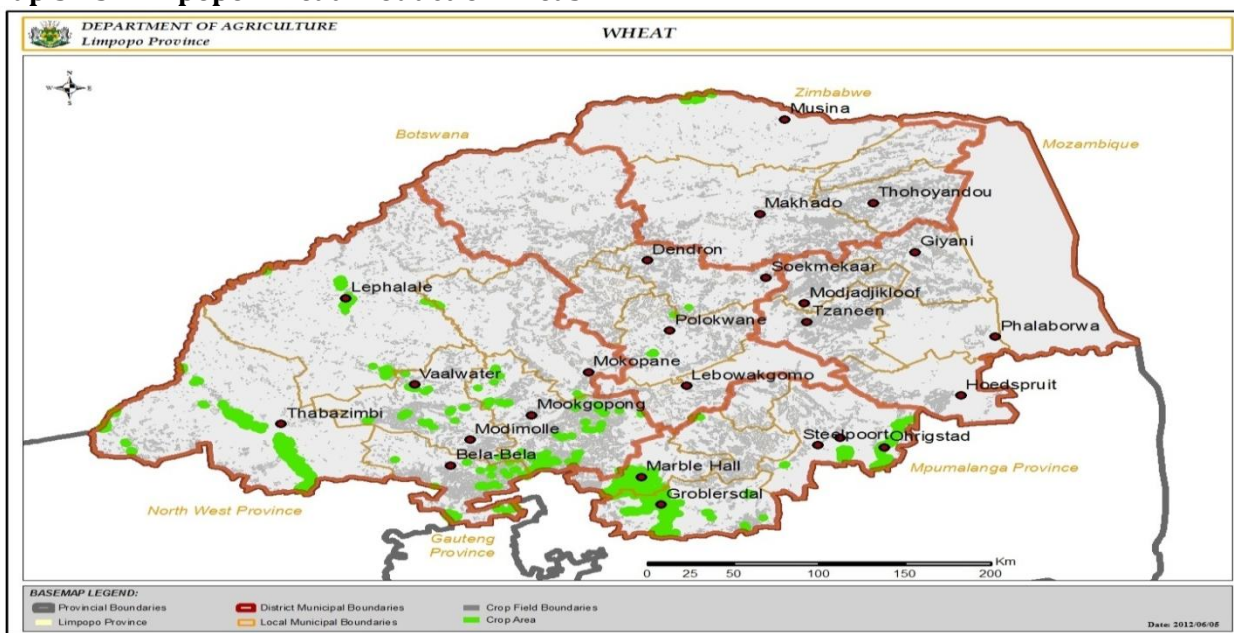


Source: DAFF - A Profile of the South African Wheat Market Value Chain 2010

## b) Wheat Producing Areas in Limpopo

Map 3.13 illustrates the wheat production areas in the province. Table 3.45 indicates the hectares planted for wheat production, the area planted for wheat production has increased over the years.

**Map 3.13: Limpopo Wheat Production Areas**



Source: Limpopo Department of Agriculture 2012

**Table 3.45: Wheat – Planted Areas**

Local Municipality	Hectares Planted
1. Thabazimbi	12,415
2. Greater Marble Hall	6,019
3. Elias Motsoaledi	5,388
4. Greater Tubatse	2,464
5. Bela Bela	2,069
<b>Total hectares planted for wheat in Limpopo</b>	<b>32,218</b>
Total 2002	11,240
Total 2007	12,985
<b>Change 2007 -2012</b>	<b>148.12%</b>

Source: SIQ Information 2012

### Limpopo Wheat Crop Estimates by the Crop Estimates Committee

Table 3.46 is the estimates for wheat production for the Limpopo province for the production year of 2011 and 2012. The final wheat crop for the production year of 2011 was 176 000 tons in the Limpopo province. The hectares planted for wheat production have declined in the province; this can be due to farmers changing to alternative crops and low profit margins.

**Table 3.46: Wheat Crop Estimates**

Province	Area Planted/ Ha 2012	Intentions/ Ha Mid April 2012*	Area Planted/ Ha 2011	Final Crop/ Tons 2011
Limpopo	29, 000	31, 000	31, 000	176, 000

Source: Crop Estimates Committee 2012

\* Intentions based on conditions at the middle of April 2012

### d) Market Distribution

#### Domestic market

Wheat crop is the second staple food after maize with high volumes used for baking in the bread. The crop provides food security in rural areas and plays a huge role in the national diet. The consumption levels have exceeded production levels over the years. The production level have remained relatively even over the years. South Africa is a net importer of wheat as production volumes are not able to meet local demand.

### e) Exports and Export Destination

The export destinations for South African wheat are Botswana, Lesotho, Mozambique, Swaziland, Zambia, Zimbabwe and Namibia. Table 3.47 indicates the wheat export destinations and volumes exported. The export volumes for SA wheat have increased significantly over the years to Lesotho, Zambia and Swaziland. The exports to Zimbabwe and Namibia have experienced a slight decline over the years. Wheat is exported in the form of dry grain or wheat flour.

**Table 3.47: SA Total Wheat Export**

Country	2008/2009 Volumes in Tons	2011/2012 Volumes in Tons
Botswana	89,627	90,100
Lesotho	40,773	66,960
Mozambique	994	2,964
Swaziland	10,582	18,745
Zambia	11,671	20,211
Zimbabwe	28,880	21,317
Namibia	19,227	15,954
<b>Total</b>	<b>201,754</b>	<b>236,251</b>

Source: Grain SA – Wheat Exports per Country 2012

#### f) Employment

Wheat farmers provide work opportunities to approximately 28 000 people. The total capital investment in the milling industry is approximately R3 billion and it is estimated to employ 3 800 people (DAFF - A Profile of the South African Wheat Market Value Chain, 2010). The **industry estimates employment to be one farm worker per 32 hectares.**

#### g) Processing of Wheat

Wheat is processing into a variety of products. The common processed wheat products include flour used in breads, pastas, cereals, beer, baking powder, ice creams, fillers in processed meat, poultry, baking mixes, sauces, soup powders and starch. The major market shareholders in the wheat industry include Albany, Blue Ribbon, Sasko, Sun bake and BB Cereals.

#### h) Industry and Sector SWOT Analysis

Wheat is a staple food for majority of South African households. The high value of wheat is obtained in processing the grain for further use in the food manufacturing industry. The milling of wheat into flour is opportunity wheat producers can take advantage of, as this can be done of various production scales, from small to large-scale. The baking of bread is a major income generator and high reliant on the quality and quantity of wheat produced.

The wheat industry is sensitive to commodity pricing and can be negatively affected by poor climate conditions. The local production of wheat is not able to meet local demand, thus to import

from different country have to be bought to subsidise local demand. The industry also requires adequate infrastructure for storage and transportation which is not always adequate in the province.

## *Implications for the agro-processing industry*

Wheat processing can increase on farm value addition and generate further income for wheat producers in the province. The commodity is a staple food and provides food security for people in rural areas.

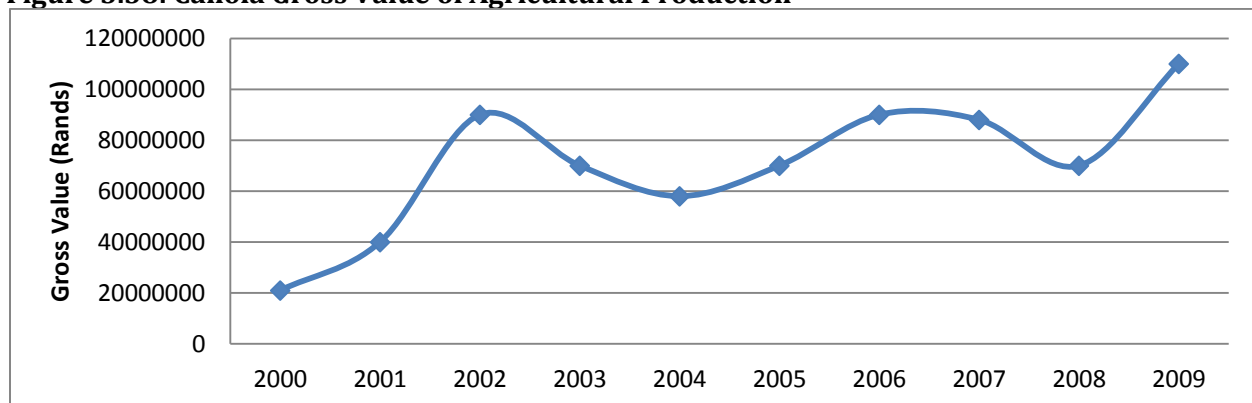
### 3.5.3 Canola/Rape Seed

Canola also known as Rape seed is commonly used for manufacturing of canola oil and oil cake. The seed is mainly grown in the Southern parts of the Western Cape but farmers are beginning to recognise the benefits and plantation are surfacing in the North West and Limpopo province.

#### a) Industry Performance and Trends

The contribution of canola to the agriculture industry has steadily increased of the years which can be attributed to increase in production areas. Figure 3.38 illustrates the contribution of canola production to the gross value of agriculture production. The contribution of canola to the agriculture gross value was over R6 000 000 for a period of 10 years with a high peak in the year of 2009.

**Figure 3.38: Canola Gross Value of Agricultural Production**



Source: DAFF - Canola/Rape Seed Market Value Chain Profile 2010 -2011



## b) Canola Seed Producing Areas in SA

The Canola/Rape Seed Market Value Chain Profile of 2010 indicates that the Western Cape Province accounts for more than 95% of South Africa total canola production while other provinces contribute less than 5% combined. The South-Western Cape is regarded as the commercial production area for canola seed crop because high capacities of canola supply are produced there. The farmers in the North West Province and Limpopo are also expanding their agricultural practices towards the planting of canola crop and production is still on a small scale

## c) Limpopo Canola Production Areas

Table 3.48 indicates the hectares planted for canola production in the Limpopo province. The province is not a large producer of canola seed as few hectares are planted for canola production. Map 3.14 illustrates the production areas in the Limpopo province.

**Map 3.14: Limpopo canola production areas**



Source: Limpopo Department of Agriculture 2012

**Table 3.48: Canola – Area Planted**

Local Municipality	Hectares Planted
1. Elias Motsoaledi	50
2. Ba Phalaborwa	40
3. Blouberg	21
4. Modimolle	13
<b>Total hectares planted for canola in Limpopo</b>	<b>124</b>

*Source: SIQ Information, 2011*

#### **d) Market Distribution**

##### **Domestic Market**

The domestic market for canola is in the production of canola oil (human consumption) and canola cake (animal feed). The rich oil properties of the seed are suitable for various uses therefore the market range from processors, to feedlots, retailers and biodiesel consumers.

#### **e) Exports and Export Destinations**

South Africa exports most of its canola to other SADC countries such as Mozambique, Zimbabwe, Zambia, DRC and Malawi. The close proximity to these countries allows SA to take advantage of the **SADC Free Trade Agreement**.

#### **f) Processing of Canola**

The canola seed is mainly processed into canola oil for human consumption. The oil can be blended in with various vegetable oils. The seed is also used in the production of canola oil cakes for the animal feed industry. The research and processing of canola seed into biodiesel is also beginning to gain popularity among the green environmental initiatives.

The handling of Canola after being harvested is labour intensive as the seed has small pips. Once the canola seeds are harvested, there are stored in silos for production and refining. The final product is bottled and branded for the shelves of a variety of retail outlets.

The processing of the canola seed undergoes several processes and these include seed cleaning, oil extraction, degumming, refining, bleaching and deodorisation. These are complex processes in most cases that require state of the art technology and a highly skilled labour force.

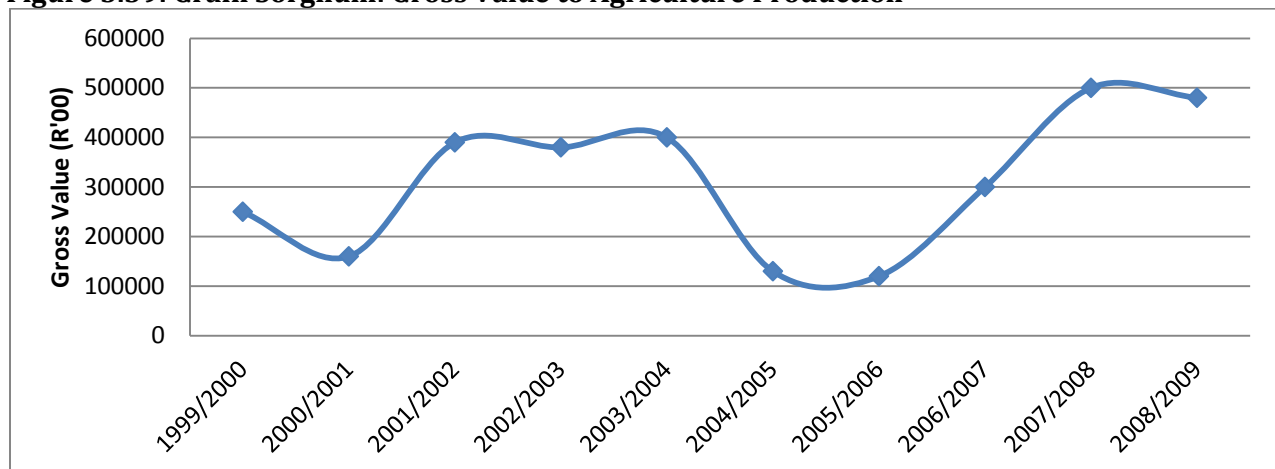
## 3.5.4 Sorghum

Sorghum is a cereal crop grown for both human and animal consumption. The animal feed industry is an important market for sorghum as it is used in the production of a variety of animal feeds. Sorghum is mainly used for human consumption as malt, sorghum meal and sorghum rice. Sorghum is also used as a substitute for maize as an energy source.

### a) Industry Performance and Trends

Figure 3.39 illustrates the sorghum gross value contribution to agriculture production. The increase in contribution for 2001 can be due to increased planting area. The sharp decline in 2005 can be contributed to the drop in area planted for sorghum production and lower prices received.

**Figure 3.39: Grain Sorghum: Gross Value to Agriculture Production**



Source: DAFF - Sorghum Seed Market Value Chain Profile 2010-2011

### b) Sorghum Producing Areas in SA

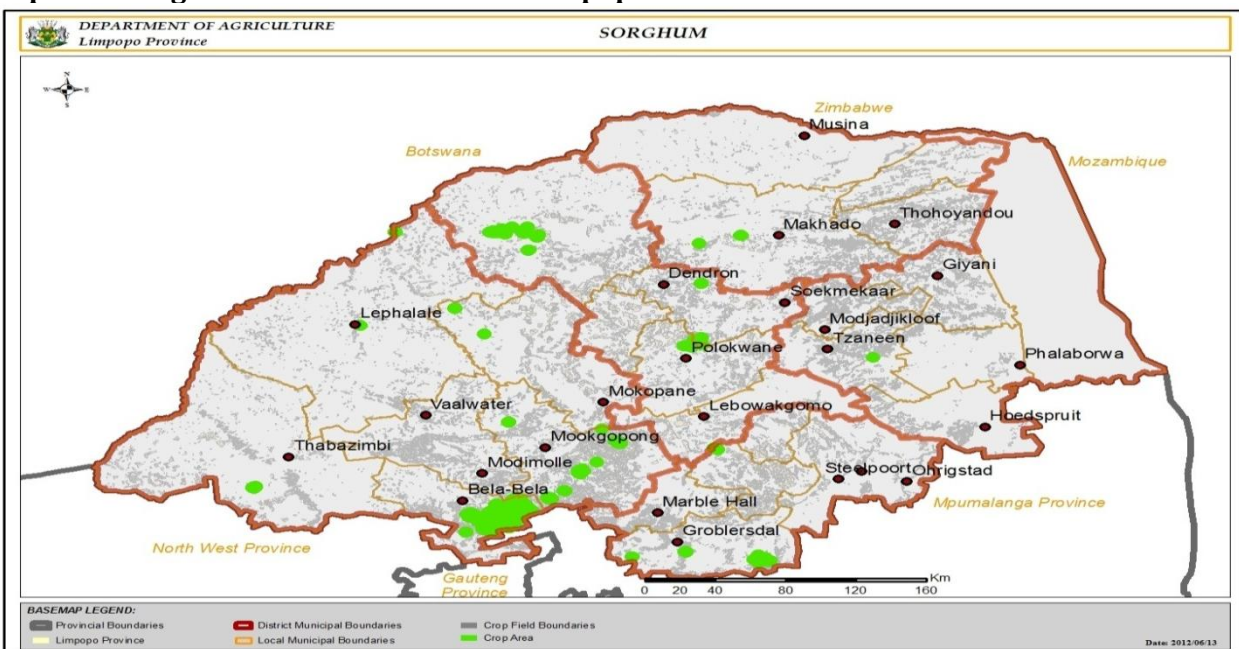
Sorghum is mainly produced in the Free State, Mpumalanga and Limpopo province, with high production levels taking place in the Free State province. The contribution of the Limpopo province

to the overall South African sorghum production is estimated to be at 8%, adopted from Sorghum Seed Market Value Chain Profile of 2010.

## c) Sorghum Producing Areas in Limpopo

Map 3.15 illustrates the production areas in the Limpopo province. The production areas for sorghum in the province are the namely Bela Bela, Mookgopong, Elias Motsoaledi, Blouberg and Thabazimbi Local Municipality.

**Map 3.15: Sorghum Production Areas in Limpopo**



Source: Limpopo Department of Agriculture 2012

## Limpopo Sorghum Crop Estimates by the Crop Estimates Committee

Table 3.49 indicates the crop estimates for sorghum in the Limpopo province. The final crop tonnage produced for sorghum in 2011 was 14 000tons. An increase in production volumes is expected for 2012 as area planted for sorghum has increased in the province.

**Table 3.49: Sorghum Crop Estimates**

Province	Area Planted/ Ha 2012	6 <sup>th</sup> forecast/ Tons 2012	Area Planted/ Ha 2011	Final Crop/ Tons 2011
Limpopo	10, 000	15, 000	8, 000	14, 000

*Source: Crop Estimates Committee 2012*

#### **d) Market Distribution**

Sorghum is distributed mainly for domestic market, sorghum processors, animal feed industry and exports. Sorghum grain prices are highly influenced by local consumption levels as well as production of other grains.

#### **e) Exports and Export Destinations**

The exports of sorghum are handled by means of contracts between buyers and sellers subject to the requirements of the Agricultural Product Standards Act. South Africa exports sorghum mainly to the SADC regions with minimal exports to other countries.

#### **d) Processing of Sorghum**

The processing of sorghum grain takes place in the form of commercial malt for home brewing, sorghum meal or mabele, sorghum rice, sorghum grits, sorghum cakes, baby food, energy foods and instant beer power.

#### **e) Industry and Sector SWOT Analysis**

##### **The Opportunities in the Sorghum Industry**

Sorghum storage facilities to previously disadvantaged individuals offer value addition on a local level and food security to many households. Cooperative ownership of silos can provide local producers with alternatives for storing other grains to use later for sales and processing.

Processing activities for sorghum will require constant supply; therefore introduction of technological use for seed production can increase yields. Sorghum can also be used as an alternative crop to reduce high irrigation costs.

### 3.6 Oil and Protein Seeds Crop Commodity Profile

The oil and protein seed crops include groundnuts, dry beans, soya beans and sunflower.

#### 3.6.1 Groundnuts

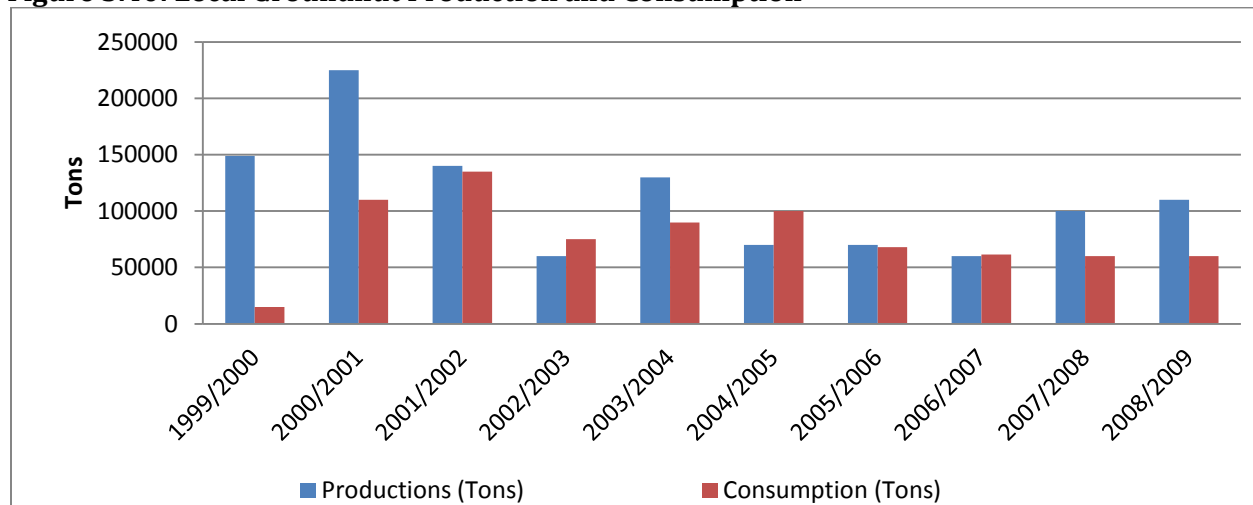
##### a) Industry Performance and Trends

Groundnuts are a high value crop that can be marketed with little processing, the crop is also extremely versatile and can be used in a wide range of products. The contribution of groundnuts to the overall agriculture industry has remained relatively constant as production area planted has stayed the same.

##### Production and Consumption

Figure 3.40 indicates the production and consumption levels of groundnuts. The production of groundnuts is higher than consumption levels thus making South Africa self-sufficient and able to export surplus of groundnuts. The production levels for groundnuts have declined over the years and the highest production levels were reached in the year 2000/01 as over 200000 tons were produced.

**Figure 3.40: Local Groundnut Production and Consumption**

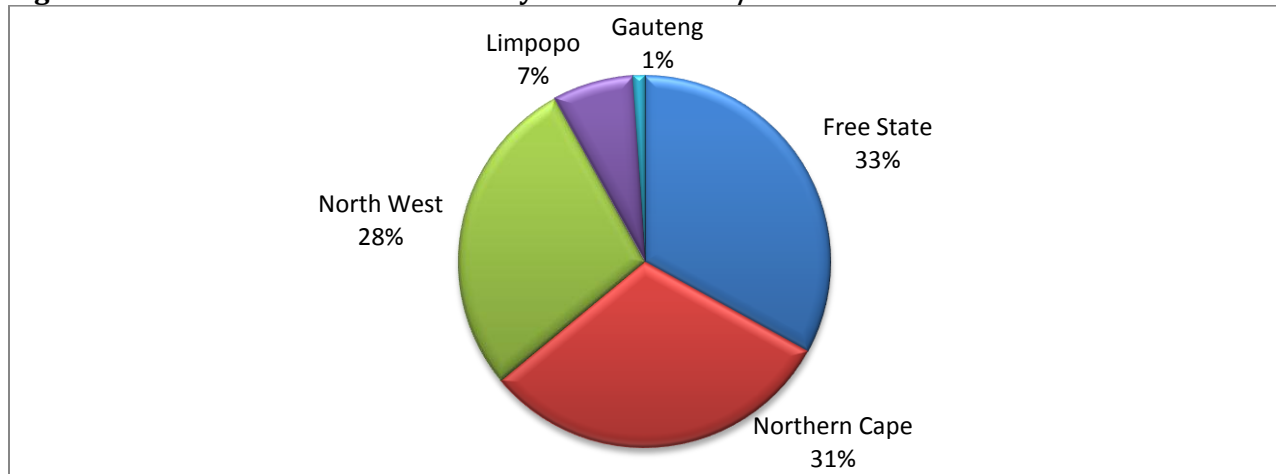


Source: DAFF - Groundnut Market Value Chain Profile 2010 -2011

### b) Groundnuts Producing Areas in SA

Figure 3.41 illustrates the SA groundnuts production per province for the year 2008/09. The Free State province accounts for 33% of SA groundnut production and the Northern Cape accounts for 31%. The Limpopo province contributed to 7% of overall SA ground nut production in the year 2008/09.

**Figure 3.41: Groundnuts Production by Province 2008/2009**



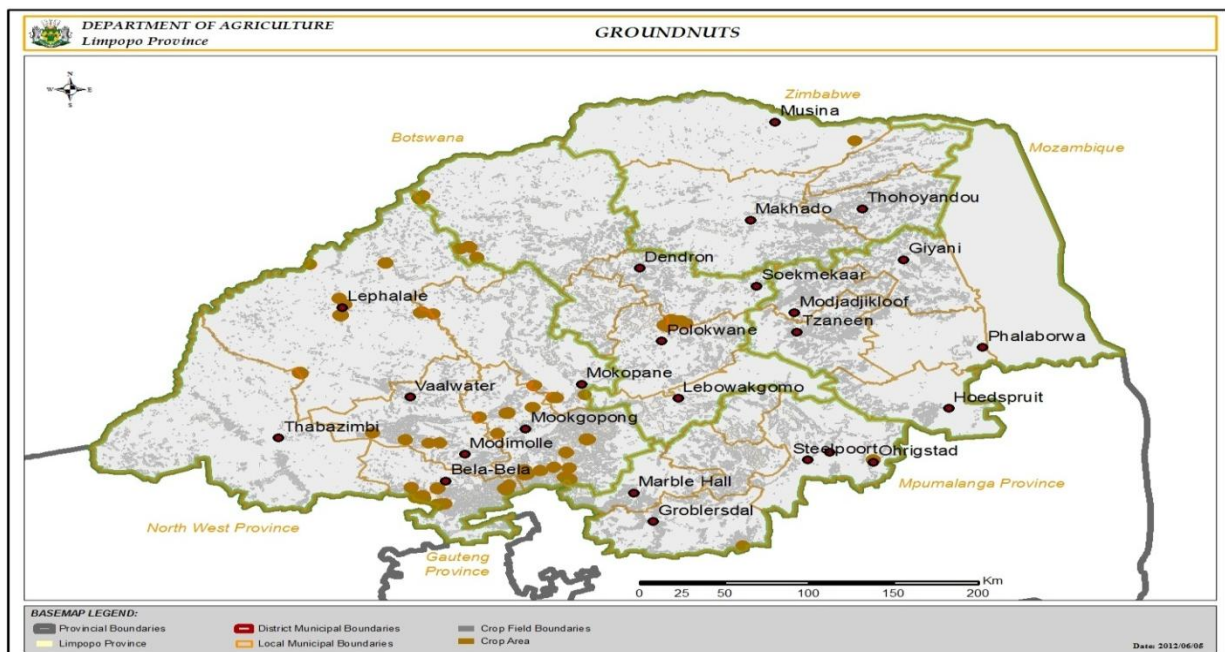
Source: DAFF - Groundnut Market Value Chain Profile 2010 -2011

### c) Groundnut Producing Areas in Limpopo

Map 3.16 illustrates groundnuts production areas in the Limpopo province. The Mookgopong, Lephalale, Bela Bela and Blouberg Local Municipalities have high areas planted for the production of groundnut.



**Map 3.16: Groundnut Production Areas in Limpopo**



Source: Limpopo Department of Agriculture 2012

### Limpopo Groundnut Crop Estimates by the Crop Estimates Committee

Table 3.50 indicates the crop estimates for groundnut in the Limpopo province for the year 2011 and 2012. The final groundnut crop produced for the year 2011 was 3 500 tons and volumes are estimated to increase as hectares planted for groundnut in the province have increased.

**Table 3.50: Groundnuts Crop Estimates**

Province	Area Planted/ Ha 2012	6 <sup>th</sup> Forecast/ Tons 2012	Area Planted/ Ha 2011	Final Crop/ Tons 2011
<b>Limpopo</b>	2, 800	3, 640	2, 500	3, 500

Source: Crop Estimates Committee 2012

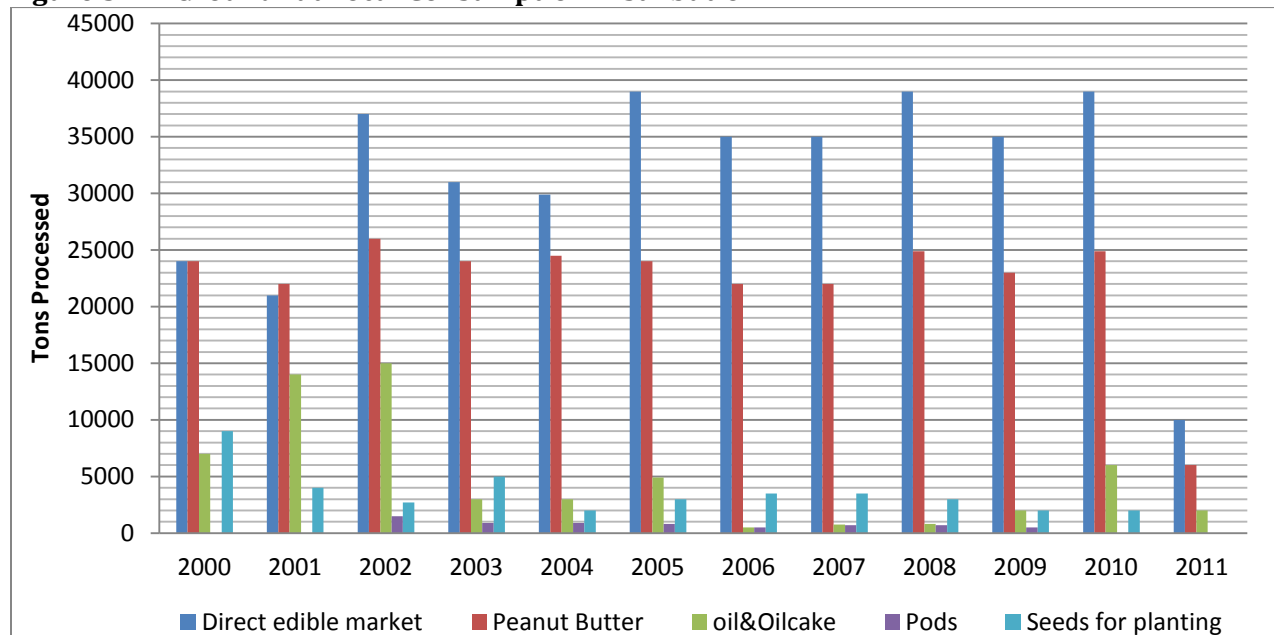
### d) Market Distribution

The domestic market for groundnuts consists of groundnut processors, informal traders (sell boiled or raw nuts), retailers and smaller quantities in fresh produce markets. The local processors of groundnuts use the nuts for the production of peanut butter, oil, oilcake and seeds.



The distribution is indicated in Figure 3.42 with high volumes used for the direct edible market; this market has increased over the years. The volumes used production the production of oil and oilcake has reduced over the years.

**Figure 3.42: Groundnut Local Consumption Distribution**



Source: Bureau for Food and Agricultural Policy, 2012

### e) Exports and Export Destinations

The major export destinations for South African groundnuts are the SADC regions other regions include Mozambique, Zimbabwe, Angola, and Zambia. The other export destinations for South African groundnuts are the EU, United States and Japan. The export market is largely influenced by the local demand of the various countries.

The Groundnut Market Value Chain Profile of South Africa for 2010 indicates that on average South Africa exports 35 736 tons of groundnuts per annum, this represents 26% of the groundnuts that are produced annually.

### f) Processing of Groundnuts

Groundnuts can be processed into peanut oil used for cooking and peanut flour while the nuts can also be roasted or boiled and used in various cuisines such as mixing nuts into spinach or stamps. The nut can be also be pressed for oil and shell used in fertilizer or for animal feed. The variety of uses present processing opportunities for SMMEs especially in the animal feed industry as abattoirs in the province can receive supplies locally. Processing of groundnuts like many other products requires skilled labourers and infrastructure. Table 3.51 indicates groundnut processor in the Limpopo province.

**Table 3.51: Groundnut Processor in Limpopo**

Company	Location	Processing	Scale
Thohoyandou Cooperative	Thohoyandou	Peanut butter processing	Small, SMME
Kodumela	Marble Hall	Peanut butter processing	Small, SMME

*Source: Limpopo Department of Agriculture*

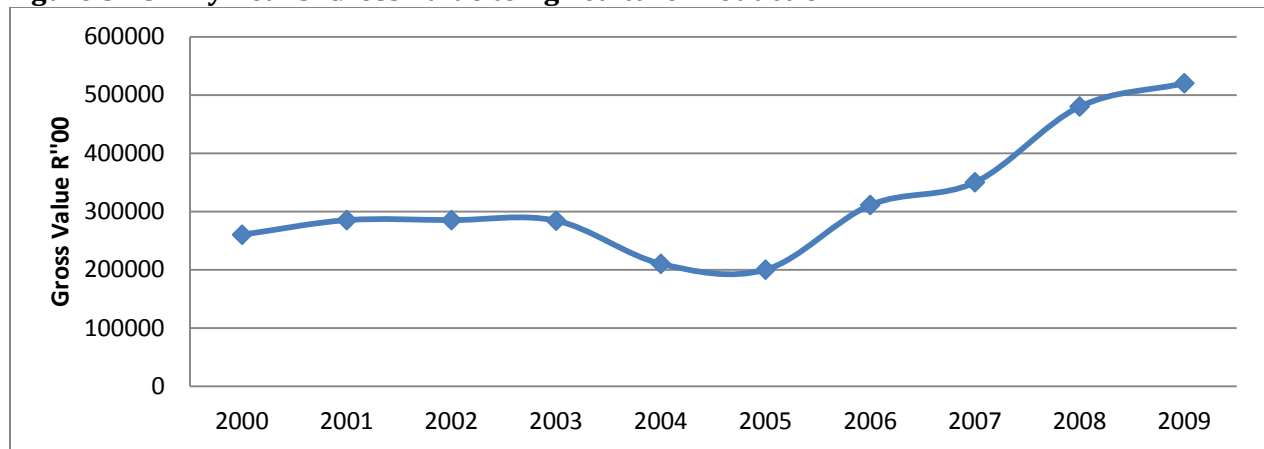
### 3.6.2 Dry Beans

Dry beans are a high source of protein for many and provide food security for those in rural areas. There are three types of beans mainly produced, namely Red Speckled beans, Small White canning beans and Large White Kidney beans. There is a growing market for the various dry beans as they can be used by the canning industry and sold as a raw product.

#### a) Industry Performance and Trends

Table 3.43 indicates the gross value contribution of dry beans to the agriculture production. The contribution of dry beans to agriculture production has experienced increase over the years, with high contributions in the production year of 2009. The growth can be attributed to increasing producer prices as well as improved local production volumes.

**Figure 3.43: Dry Beans: Gross Value to Agriculture Production**



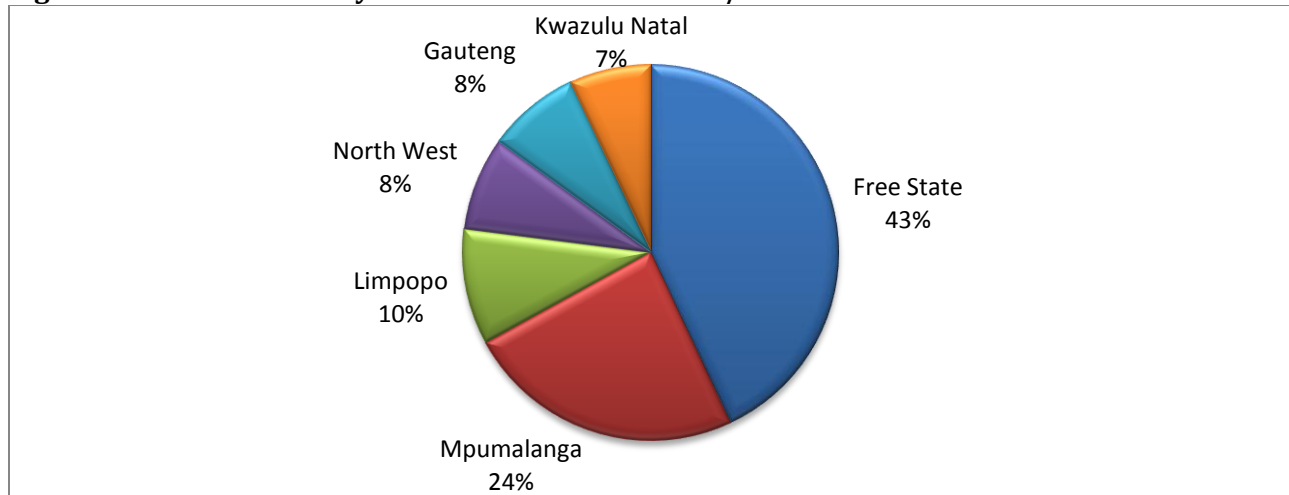
Source: DAFF - A Profile of the South African Dry Bean Market Value Chain 2010

The domestic consumption levels of dry beans in SA exceed the production. The consumption levels have increased over the years due to increase in population and consumer preference. The production levels of dry beans have declined over the years making South Africa a net importer of dry beans in order to meet domestic demand.

#### **b) Dry Beans Production in SA**

Figure 3.44 illustrates the dry bean production provinces. The Free State is the largest dry beans producing area as it accounts for 43% of South African dry beans production. This is followed by the Mpumalanga province at 24% contribution and the Limpopo province with 10% contribution to the South African dry bean production.

**Figure 3.44: Provincial Dry Beans Production in 2008/2009**



Source: DAFF - A Profile of the South African Dry Bean Market Value Chain 2010

Table 3.52 indicates the South African dry bean production volumes for the different province from the production year of 2004 to 2009. There is a notable increase in dry bean production in the Limpopo as dry bean production increased from 560 tons in 2004/05 to 6 750 tons in 2008/09.

**Table 3.52: SA Dry beans Production Volumes**

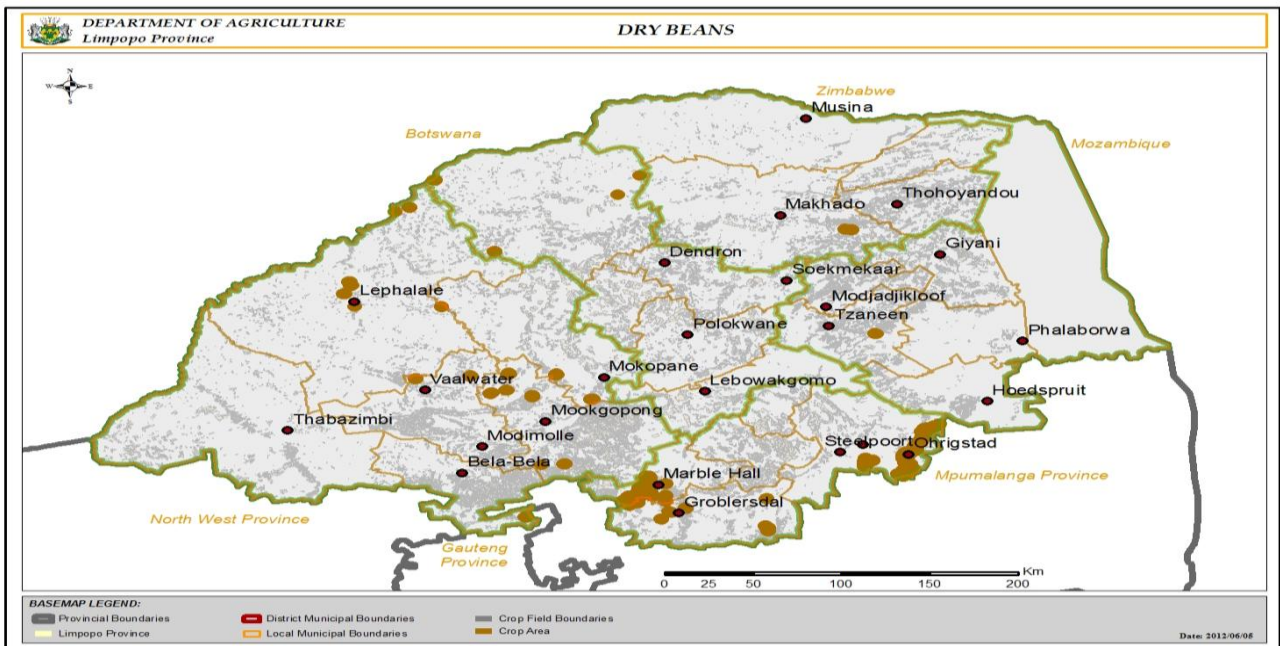
Province	Production (tons) 20004/05	Production (tons) 20005/06	Production (tons) 2006/07	Production (tons) 2007/08	Production (tons) 2008/09
Free State	19,600	19,800	12,380	21,450	28,800
Mpumalanga	33,600	27,500	13,300	15,00	15,750
<b>Limpopo</b>	<b>560</b> →	<b>600</b> →	<b>4,900</b> →	<b>6,800</b> →	<b>6,750</b>
North West	7,150	10,800	2,000	3,850	5,000
Gauteng	5,250	6,300	3,400	5,080	5,000
KwaZulu Natal	1,800	900	3,000	5,950	4,800

Source: DAFF - A Profile of the South African Dry Bean Market Value Chain 2010

## c) Dry Bean Production in Limpopo

Map 3.17 illustrates the dry bean production areas in the province with Sekhukhune and Waterberg District having high hectares planted for dry bean production.

**Map 3.17: Dry Beans Production Areas in Limpopo**



Source: Limpopo Department of Agriculture 2012

The dry beans producing areas in the province are mainly found in the Greater Tubatse, Greater Marble Hall, Mookgopong and Elias Motsoaledi Local Municipalities.

## Limpopo Dry Beans Crop Estimates

Table 3.53 indicates the crop estimates for dry beans in the Limpopo province. The volume of dry beans produced by the Limpopo Province was 9 360tons in 2011. The area planted for dry bean production in the province has decreased from 5 200 hectares in 2011 to 5000 hectares in 2012, this will have an influence in the production volumes.

**Table 3.53: Limpopo Dry Beans Crop Estimates**

Province	Area Planted/ Ha	6 <sup>th</sup> Forecast/ Tons	Area Planted/ Ha	Final Crop/ Tons
	2012	2012	2011	2011
Limpopo	5, 000	6, 250	5, 200	9, 360

*Source: Crop Estimates Committee 2012*

#### **d) Market Distribution**

##### **Domestic Market**

The domestic market for dry beans is made up of both the informal and formal markets. The informal markets include hawkers and spaza shops while the formal market is made up of various retail stores, grain buyers and dry bean processors. The export of dry beans is mainly to African countries more so in food aid schemes and niche markets exist for split beans.

#### **e) Exports and Export Destinations**

South Africa's dry beans exports are destined for neighbouring countries and SADC regions. The export destinations are countries such as Zimbabwe, Mozambique, and Zambia. South Africa is also an importer of dry beans as local production levels are not able to meet consumption levels.

#### **f) Processing of Dry Beans**

Dry beans are available to the consumer either as packed dry beans or as processed dry beans. Red speckled, Large White Kidney and Small White beans are canned in a saline solution and can also be canned in tomato sauce (baked beans).

The food canning industry require high volumes of dry beans and have to look outside of country for more volumes as local production levels are not able to meet local consumption. Split bean is also a growing niche market for export and it can be processed in the form of flour, bread and pasta.

## h) Industry and Sector SWOT Analysis

### Opportunities in the Dry bean industry

The opportunities in the dry bean industry are mainly in the packaging and processing of the commodity. High volumes are used in the canning industry and local producers can target this market. The health benefits of dry beans are starting to gain popularity as the beans are used for nutritional intake.

### Dry Bean Traders in Limpopo

Table 3.54 indicates dry bean traders in the Limpopo province, seen below are the large multinational companies which make up majority of dry bean traders.

**Table 3.54: Dry Bean Traders in Limpopo**

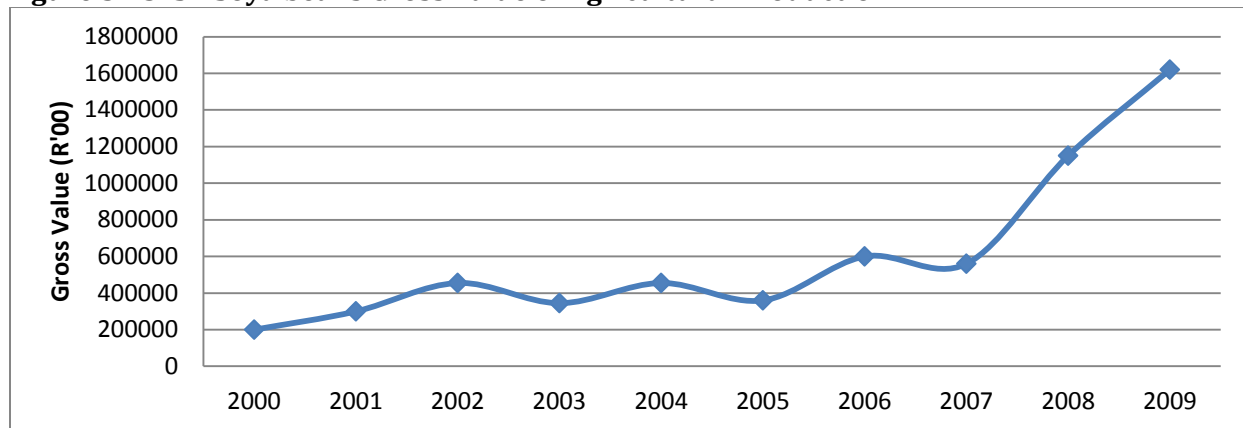
Company	Locality
Progress Milling	Polokwane
Giants Canning	Makhado
Tiger Food Brands	Marble Hall

## 3.6.3 Soya beans

### a) Industry Performance and Trend

Figure 3.45 indicates the gross value contribution of soya beans to agriculture production. The increase in production over the last ten years indicates a positive growth in the South African soya bean industry.

**Figure 3.45: SA Soya beans Gross Value of Agricultural Production**

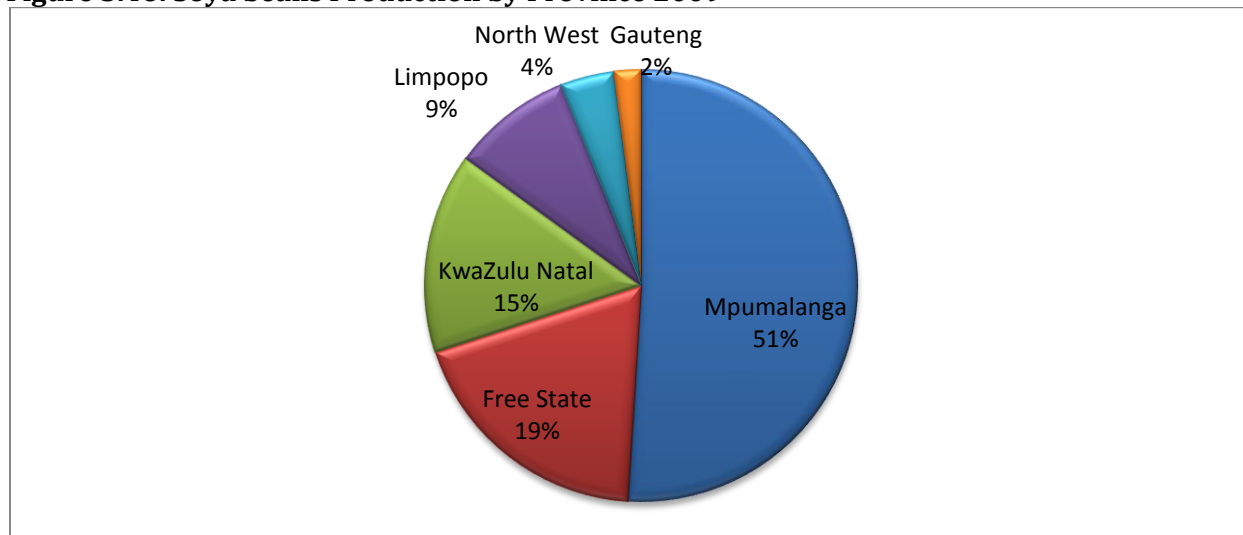


Source: DAFF - Soybean Market Value Chain Profile 2010 -2011

### b) Soya beans Producing Areas in SA

Figure 3.46 illustrates the soya beans production per province for 2009. The Mpumalanga province commanded the largest share of South Africa's soya bean production at 51%. The second largest soya bean production area is the Free State province with 19% followed by the Limpopo province at 9% production.

**Figure 3.46: Soya beans Production by Province 2009**



Source: DAFF - Soybean Market Value Chain Profile 2010 -2011



Table 3.55 indicates the production volumes of soya beans over the years in South Africa. The production volumes for the Limpopo province have increased over the years like many other provinces. Soya bean production for the Limpopo province in 2005 was 27360 tons and increased to 44 000 tons in 2009. The positive growth of soya beans production avails opportunities for value addition and processing of soya beans in the province.

**Table 3.55: Soya beans Production Volumes over the years**

Province	Production (tons) 2005	Production (tons) 2006	Production (tons) 2007	Production (tons) 2008	Production (tons) 2009
Mpumalanga	136,650	210,000	76,500	128,000	262,500
Free State	30,000	77,000	33,750	64,500	99,000
KwaZulu Natal	39,270	62,500	45,100	44, 000	75,600
<b>Limpopo</b>	<b>27,360</b>	<b>34,450</b>	<b>25,000</b>	<b>22,500</b>	<b>44,000</b>

Source: DAFF - Soybean Market Value Chain Profile 2010 -2011

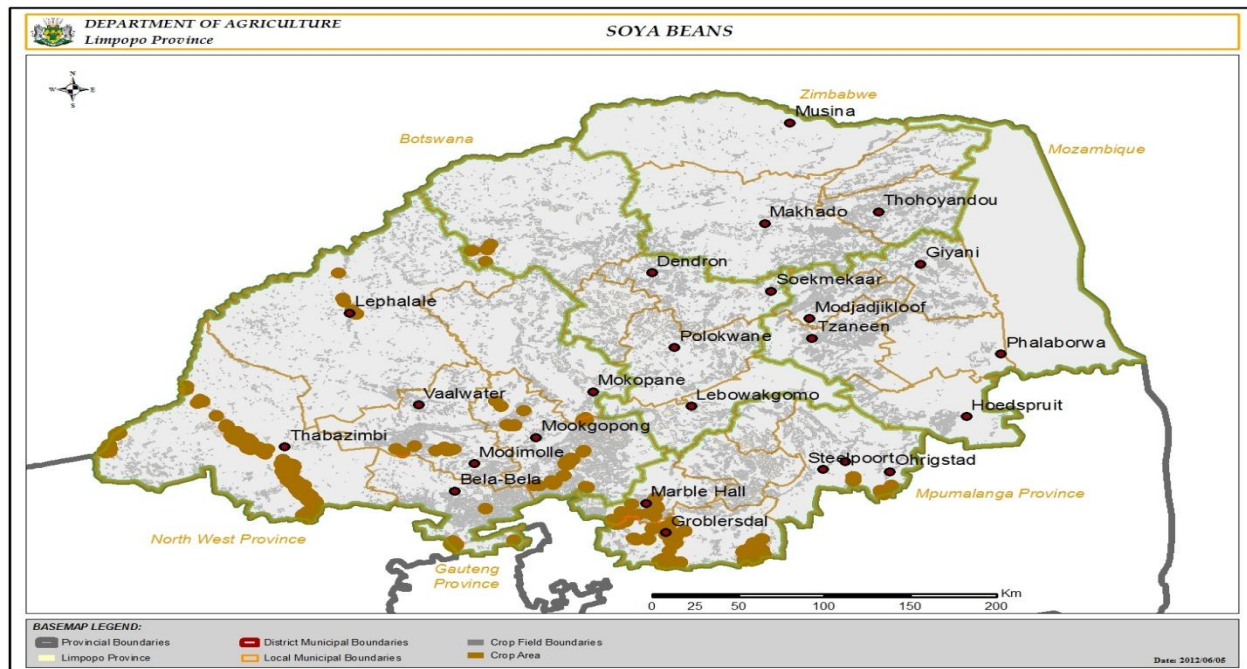
The **demand for soya beans is driven by** increase in household income, as more households can afford meat products, thus raising the local demand for livestock and poultry products. The South African Bureau for Food and Agricultural Policy (BFAP) states that South Africa consumes approximately 1.3 million tons of oilseed meal for animal feed purposes annually of which approximately 70% is soybean meal.

The increase in production and hectares planted for soya bean production in the **Limpopo province present an opportunity for local producers** to meet the growing gap for soya bean especially for animal industry, as local production levels are not able to meet local consumption.

## c) Soya beans Producing Areas in Limpopo

Map 3.18 illustrates the soya beans production areas in the Limpopo province. The high volume producing areas for soya beans are in the Elias Motsoaledi, Thabazimibi, Greater Marble Hall, Bela Bela and Mookgopong Local Municipalities.

**Map 3.18: Soya beans Production Areas in Limpopo**



Source: Limpopo Department to Agriculture 2012

### Limpopo Soya Beans Crop Estimates

Table 3.56 indicates soya beans crop estimates for the production year of 2011 and 2012.

The final crop production for soya bean in the province for 2011 was 58 800 tons and the forecast for 2012 is an estimated 50 600 tons. The decrease in final crop volumes is due to reduced hectares planted.

**Table 3.56: Soya beans Area Planted and Production Volumes**

Province	Area Planted/ Ha 2012	6 <sup>th</sup> Forecast/ Tons 2012	Area Planted/ Ha 2011	Final Crop/ Tons 2011
Limpopo	22, 000	50, 600	23, 500	58, 800

Source: Crop Estimates Committee 2012

## **e)Market Distribution**

### **Domestic Sales**

Soya beans are mainly sold to the food and animal processors who produce oil, oilcakes and animal feed, these processing sectors take up majority of the market. An important market for soya bean is the animal industry as increase in livestock production has direct influence on animal feed. The seed is also sold directly to the edible market and seeds are sold for the next planting season.

### **f) Exports and Imports**

SA is not competitive in exports of soya beans as production volumes are significantly lower than consumption levels. The soya bean industry has higher imports into the country to supplement domestic production.

### **g) Processing of Soya bean**

Soya bean can be processed into oil, oilcake, soy protein, soya milk, soy vegetable oil, flour and it also acts as a substitute for meat and dairy. Nedan Pty Ltd is a company that has **cotton, sunflower** and **soya bean** crushing and oil extraction plants in Mokopane (Limpopo province). Nedan Pty Ltd processes oil and other raw materials into edible oils, fats and high-protein textured vegetable products for the food processing and fast food industries. It is the **market leader in texturized soya protein for human consumption** and **oil cakes for the animal feed industry**. Nedan distributes to industrial food customers and retailers nationally.

### **h) Industry and Sector SWOT Analysis**

The local demand for soya bean is growing more so in the animal feed industry, this presents a window of opportunity for producer in the province to become suppliers. There are encouraging initiatives to promote soya bean farm production that local producers can take advantage of. This includes IPAP key action programme for the development of a soya bean strategy which aims to increase local farm production of soya beans as well as processed products. Soya bean also provide much needed nutrition and food security in rural areas.

## *Implications for the agro-processing industry*

IPAP 2 has a key action programmes aimed at supporting and developing the soya bean industry, by increasing local farm production and soya beans processed products. There is room to increase production and processing of soya bean in the Limpopo province.

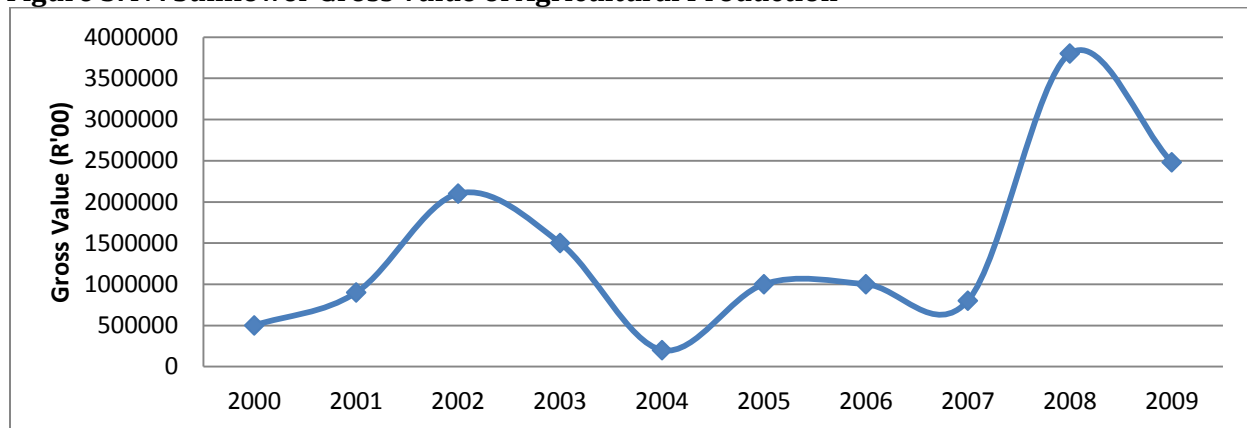
### 3.6.4 Sunflower

Sunflower seeds are primarily used for the manufacturing of sunflower oil and oilcake. South Africa is not a significant role player in the production and trade of oilseeds in the international market.

#### a) Industry Performance and Trends

Table 3.47 illustrates the sunflower gross value to agricultural production.

**Figure 3.47: Sunflower Gross Value of Agricultural Production**



Source: DAFF - Sunflower Seed Market Value Chain Profile 2010-2011

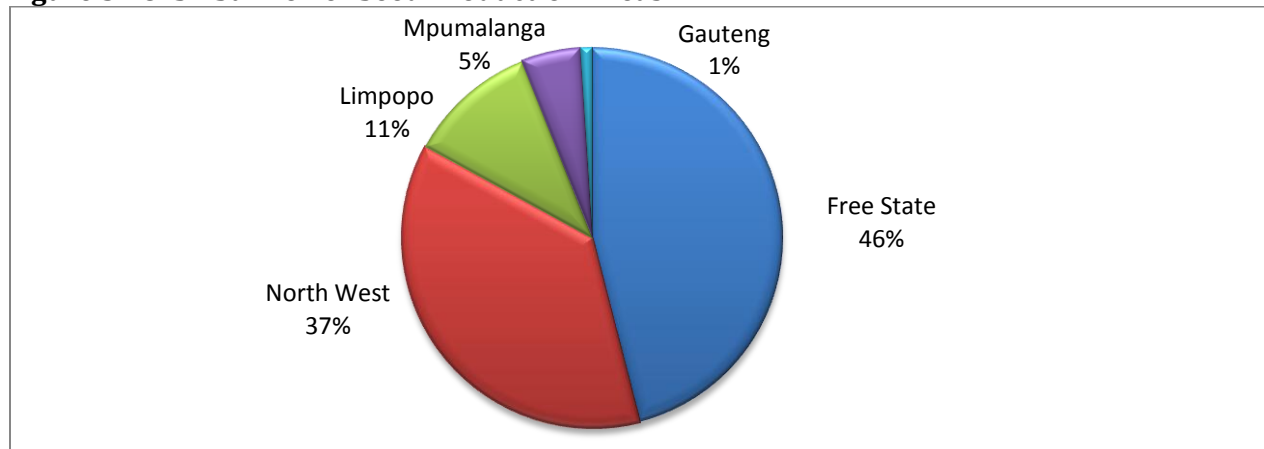
The sunflower industry has experienced instability through the years this can be attributed to producer prices received for sunflower seed and unfavourable production conditions.

#### b) Sunflower Producing Areas in SA

Figure 3.48 illustrates the sunflower seed production per province in South Africa. The Free State province has the largest production of sunflower, contributing 46% of South Africa's sunflower

production. This is followed by North West at 37% and Limpopo at 11% of total production of South African sunflower seed.

**Figure 3.48: SA Sunflower Seed Production Areas**



Source: DAFF - Sunflower Seed Market Value Chain Profile 2010-2011

**Table 3.57: Sunflower Seed Production (tons) 2005-2009**

Province	Production in 2005(tons)	Production in 2006(tons)	Production in 2007(tons)	Production in 2008(tons)	Production in 2009(tons)
Free State	260,000	204,000	155,000	459,000	363,000
North West	262,910	200,000	110,000	300,000	298,000
<b>Limpopo</b>	36,000 →	42,800 →	12,500 →	77,000 →	90,000
Mpumalanga	45,500	56,230	13,000	25,500	370,700
Gauteng	13,900	14,850	7,700	8,700	9,820

Source: DAFF - Sunflower Seed Market Value Chain Profile 2010-2011

Table 3.57 indicates the sunflower seed production for different provinces between 2005 and 2009. The Limpopo province has experienced a significant increase in production over the years. The sunflower production for Limpopo in 2005 was 36 000 tons and increased to 90 000 tons in 2009.

### c) Sunflower Producing Areas in Limpopo

Map 3.19 illustrates the sunflower production areas in the Limpopo province and Table 3.58 indicates the hectares planted for sunflower production in the province. Sunflower production mainly happens in the Mookgopong, Bela Bela and Thabazimbi Local Municipalities.

**Table 3.58: Area Planted for Sunflower in Limpopo**

Local Municipality	Hectares Planted
Mookgopong	47, 375
Bela Bela	28, 361
Thabazimbi	17, 547
Elias Motsoaledi	616
Modimolle	366
<b>Total hectares planted for sunflower in Limpopo</b>	<b>94, 476</b>
Total 2002	45, 279
Total 2007	38, 031
<b>Change 2007 -2012</b>	<b>148.48%</b>

Source: SIQ Information 2012

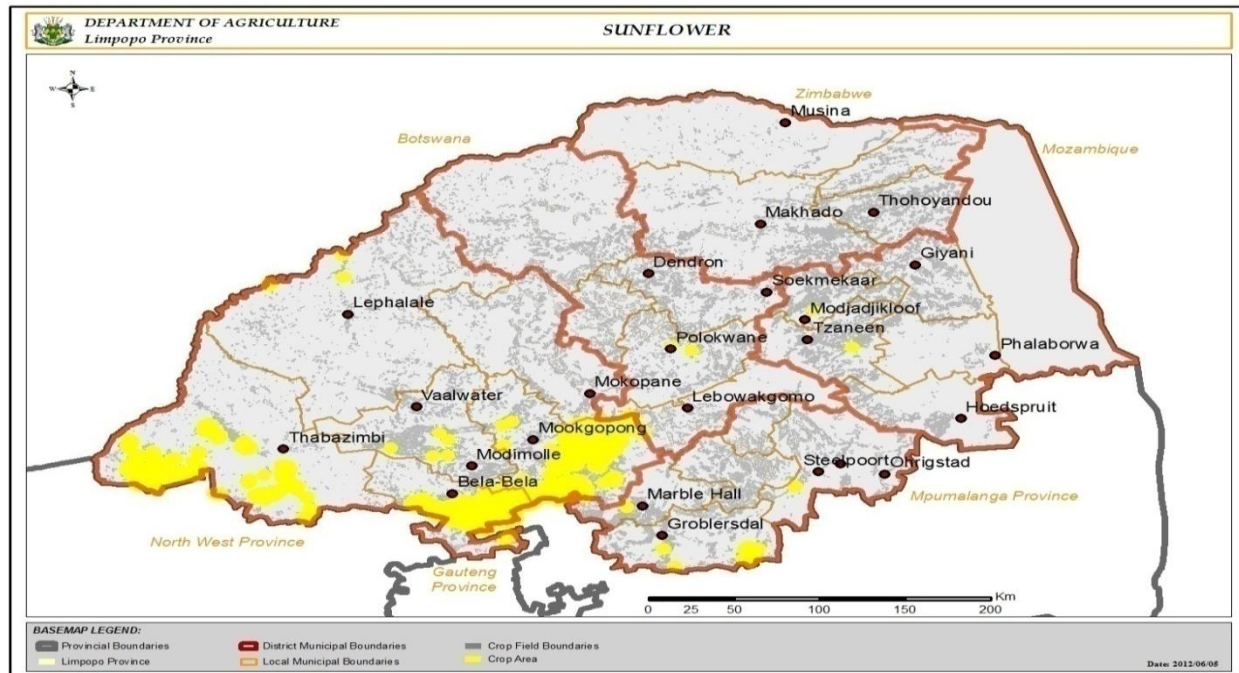
Table 3.59 indicates the sunflower crop estimates for the production year of 2011 and 2012. The final crop tonnage for sunflower production in the province for 2011 was 98 000 tons with 90 000 tons expected for production year of 2012. The increase in area planted for the production year of 2012 has been on a minimal scale and production volumes will not be heavily influenced.

**Table 3.59: Sunflower Area Planted and Production Volumes**

Province	Area Planted/ Ha 2012	6 <sup>th</sup> Forecast/ Tons 2012	Area Planted/ Ha 2011	Final Crop/ Tons 2011
Limpopo	100 000	90 000	98 000	98 000

Source: Crop Estimates Committee 2012

**Map 3.19: Sunflower Production in Limpopo**



Source: Limpopo Department of Agriculture 2012

#### **d) Market Distribution**

The domestic market for sunflower seed is mainly made up of oil processors and animal feed manufacturers. Sunflower seed is more popular for its use as a raw material for cooking oil production than any other uses. Large volumes of sunflower seeds are utilised for processing.

#### **e) Exports and Export Destination**

Sunflower seeds are mainly exported to SADC regions. The exports are in the form of seeds, oil and sunflower meal. SA is also a high importer of sunflower as local production is not able to meet local demand; imports are also expected to increase in the coming years.

#### **f) Processing of Sunflower**

Sunflower can be processed into oil, sunflower meal for the animal industry, especially for dairy and beef cattle. SA Sunflower seeds are more popular for its use as a raw material for cooking oil production than for animal feed. The main crushers of sunflower seed are Nola Industries, Epic and

Epko. The processing of sunflower seed is highly capital intensive and requires high technology coupled with specialised knowledge. The refining industries produce sunflower oil which is used mostly for cooking and most of the large refineries are situated in Gauteng and KwaZulu Natal.

## **g) Industry and Sector SWOT Analysis**

Sunflower oil is consumed in large volumes by local households as it is used for the preparation of everyday food. The crop is drought tolerant and can be integrated with other grains. The import levels indicate a gap for increased local production of sunflower, presenting an opportunity for local producers to increase production. Investment in oil processing facilities for local SMME can yield good results as local producers can target local markets and incorporate oil processing of other grains.

## **3.7 Red Meat Commodities Profiles**

The red meat commodities that will be discussed are beef and goat.

### **3.7.1 Beef**

The beef industry is one of the largest segments of SA agriculture sector, providing meat and milk to majority of households in SA. The commercial farmers have the required equipment/infrastructure to harness high production volumes and receive profitable margins. The emerging farmer is still struggling to increase cattle and in some cases lack the technical ability to maximise resources.

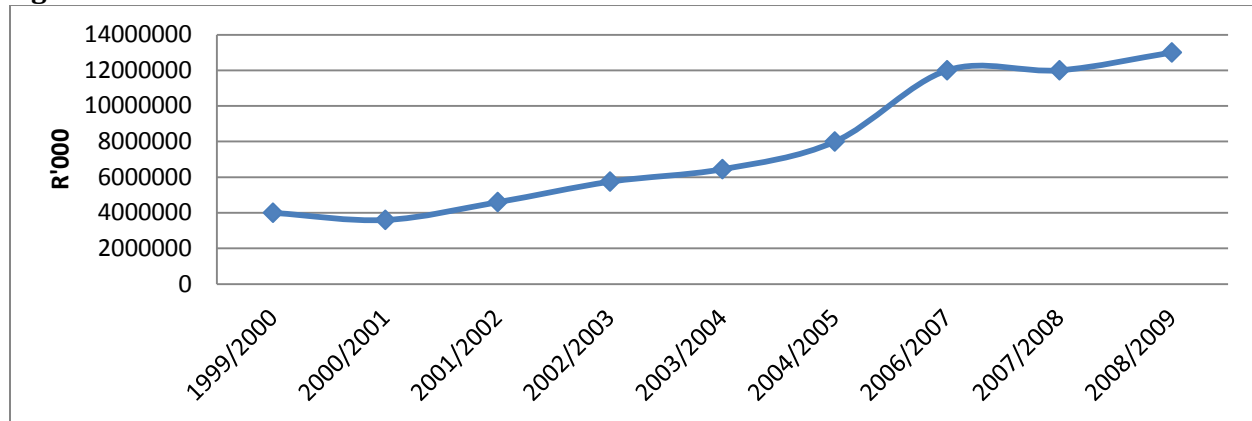
## **a) Industry Performance and Trends**

Figure 3.49 indicates the gross value of beef production to the agriculture sector. The contribution of beef to the agriculture sector indicated a positive growth pattern through the past production years. The importance of the beef sector cannot be disputed as beef productions continue to increase contribution to the gross value of agriculture.

SA does not produce enough beef to meet the domestic market. The number of cattle slaughtered has increased over the years due to development and accessibility to abattoirs but even with the increase in production, local demand is still not met.



**Figure 3.49: Gross Value of Beef Production**

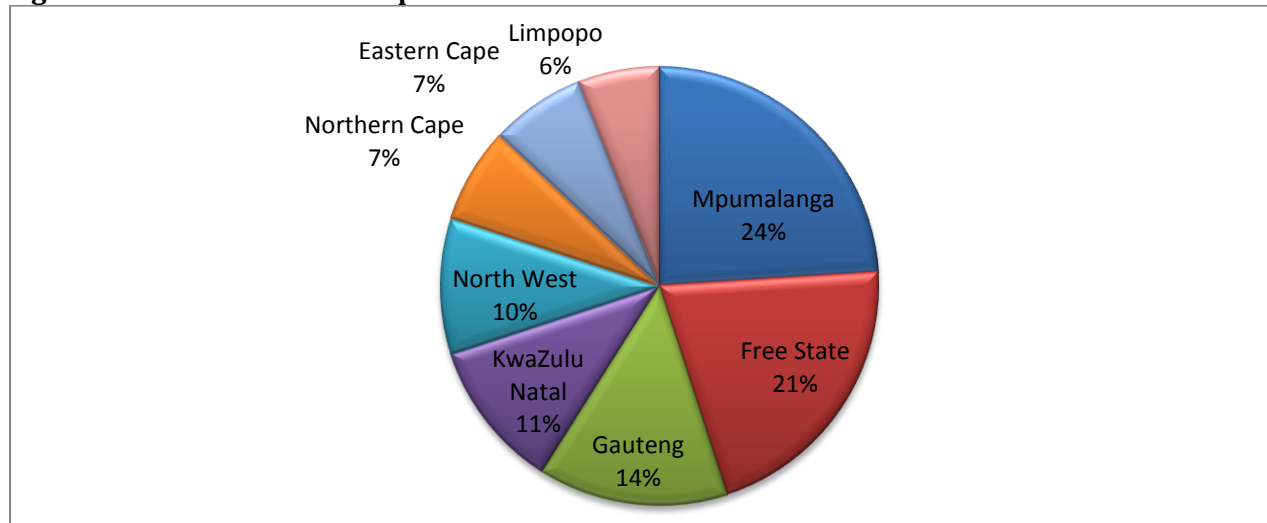


Source: DAFF -A Profile of the South African Beef Market Value Chain 2010

## b) Beef Producing Areas in SA

Beef is produced throughout SA with the amount of beef production volumes influenced by feedlots and abattoirs. Figure 3.50 indicates beef production per province for the production year of 2009. The Limpopo province only accounts for 6% beef production making it a low producer of beef compared to other provinces.

**Figure 3.50: Beef Production per Province 2009**

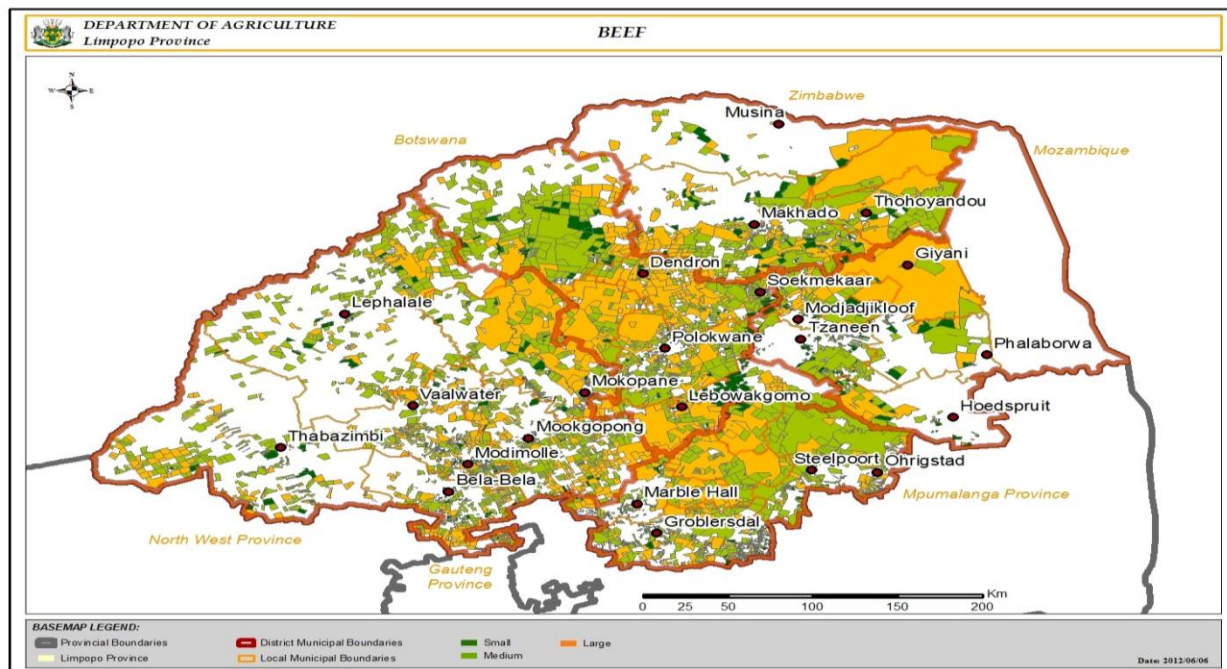


Source: DAFF -A Profile of the South African Beef Market Value Chain 2010

### c) Beef Producing Areas in Limpopo

Map 3.20 indicates the Limpopo beef production areas and large scale beef farming takes place in the Mopani and Vhembe district but both districts have high prevalence of foot and mouth diseases.

**Map 3.20: Limpopo Beef Production Areas**



Source: Limpopo Department of Agriculture 2012

A high number of livestock are also found in the Waterberg district.

### The Limpopo Beef Production Industry

The province has **favourable conditions for beef production**. The production of beef takes place throughout the province with communal households owning cattle and cattle commercial farming producing high volumes of livestock. The ZZ2 livestock division also operates in the province. The company operates an intensive weaner-calf production system producing quality animals for their own feedlot and other major feedlots in the SA beef industry. There is also a high number of livestock that are under the emerging sector.

The **feedlots and weaner farming** has high profit margins as well as the processing and value addition industry. The large scale feedlots account for 70% to 80% of cattle in the feedlot industry. The large scale feedlots are usually integrated and have incentive programmes such as paying transport cost for weaner producers and providing technical assistance to producer for quality livestock (IDC Nguni Massification Strategy). The integration of feedlot system requires a high capital investment, which large commercial feedlots are able to achieve. The small to medium scale feedlot enterprises find difficulty in entering or expanding in the feedlot industry as it requires high capital investment and large volumes of weaner calves are required to maintain profits.

The province has numerous red meat abattoirs in the province, however there are not able to operate at full capacity as there is a shortage of livestock. The major red meat abattoirs are indicated in Table 3.60.

**Table 3.60: Major Red Meat Abattoirs in Limpopo**

Abattoir name	Maximum daily slaughter	Municipality
Potgietersrus	99 (150)	Mogalakwena
Waterberg Regional	80 (120)	Modimole
Madikor 16	100	Makhado
Devenco 32 (Pty) Ltd (Gaza)	100	Capricorn
Thabazimbi	60	Thabazimbi

*Source: Limpopo Department of Agriculture*

The **challenges faced by red meat industry in the province** can be described as:

- The emerging sector not being fully exploited as they have a large number of livestock but do not make high profit margins due to lack of value addition infrastructure.
- The increasing price of agricultural land is impacting the quantities of cattle produced as grazing land is compromised.
- The ownership of land plays a huge hindering role in the livestock industry.
- There is inadequate infrastructure to enhance red meat production such as cold rooms and storerooms.

- The barriers to enter or grow in cattle production are mainly due to high capital cost of feedlots and the required capital for infrastructure.
- The province also has a shortage of weaner production impacting its ability to meet local red meat demand, thus the province is a net importer of red meat.

The **opportunities in the red meat industry** for emerging farmers are stud breeders and in farm value addition. The province can increase value addition facilities for the red meat industry to reduce red meat imports into the province.

## **Venison/Game**

The Limpopo province has a high number of game hunting farms. The local and international demand for game meat is increasing. Game activities in the province are found along the borders close to the national parks and towards the west of the Botswana border. The game includes kudus, impala, game birds and other species. The Thabazimbi area is game friendly and a high number of game species are found in the area.

The international demand for venison is in the region of 50 000 tons per year and South Africa only supplies close to 2 000 tons (Limpopo Business: Agriculture and Agri-Processing). This presents a opportunity for game producers to increase production and meet the growing market for game. The processing of game or venison usually takes place with eco-tourism activities and some game farms have abattoir facilities on site. The development of game abattoirs would be suitable in adequate producing areas such as Waterberg (Thabazimbi, Modimolle) and further coordination with tourism activities can enhance production of local game. The Limpopo Growth and Development Strategy states that the growing trend towards game farming in the province could lead to the lucrative venison market being incorporated into proposed meat clusters.

## **d) Market Distribution**

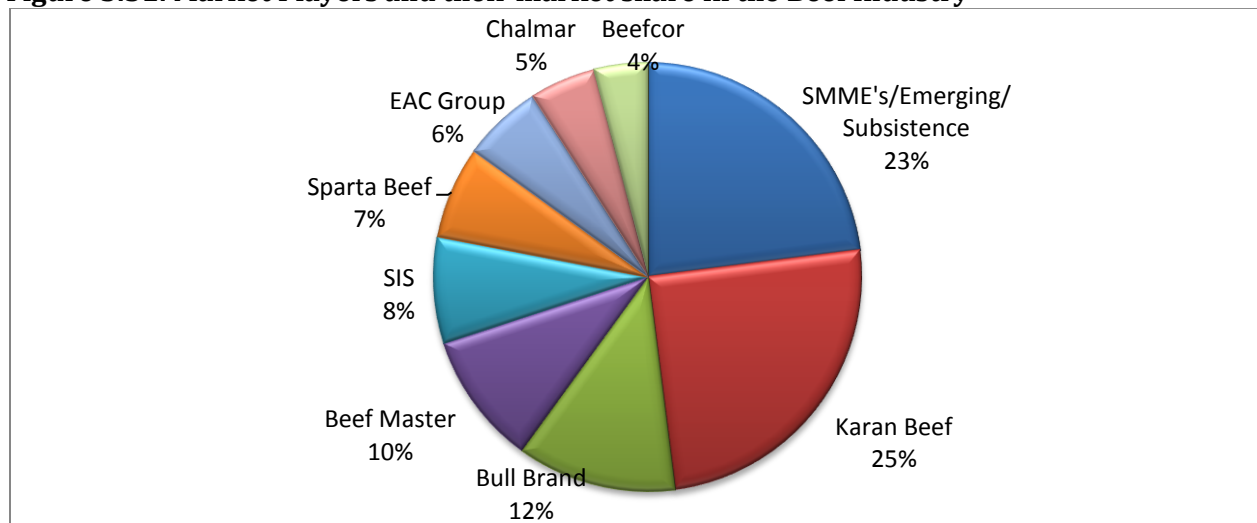
### **Domestic Market**

The local market for beef distribution includes butchers, auctions, festivities, meat processors/ abattoirs and feedlots. There are a number of market players in the beef industry who account for

high volumes of beef production. The market players usually have their own feedlots, abattoirs, meat processors and distributors therefore making them vertically integrated. Figure 3.51 indicates the market players and their market share in the beef industry. Improving the capacity of beef related SMMEs and emerging beef subsistence farmers can improve local livelihoods while contributing to local economic growth.

SA consumption levels are constantly increasing. The gap in the market place is sufficiently large and it provides opportunity for new entrants in the industry. Opportunities also exist to integrate suitable strategies to grow and coordinate activities in the beef industry. The feedlot industry is capital intensive and requires high beef production volumes coupled with specialised knowledge.

**Figure 3.51: Market Players and their market share in the Beef Industry**

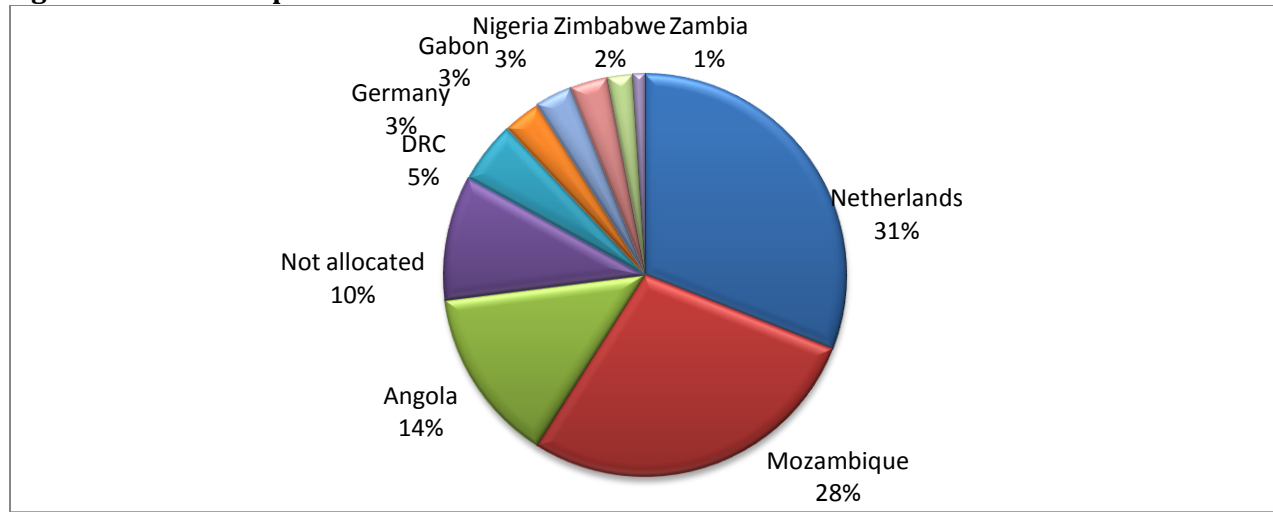


Source: DAFF - A Profile of the South African Beef Market Value Chain 2010

### e) Exports and Export Destinations

South Africa mainly exports beef and beef products to SADC regions and European is also a major export destination. Figure 3.52 indicate the export destination for SA beef exports. The major export destinations for frozen beef originating from South Africa during 2009 were the Netherlands which account for a market share of 31% followed by Mozambique with an export share of 28%.

**Figure 3.52: Beef Export Destination in 2009**



Source: DAFF - A Profile of the South African Beef Market Value Chain 2010

#### **f) Employment**

A Profile of the South African Beef Market Value Chain of 2010 state that the beef industry is a major employer with 500 000 people employed and 2 125 000 dependent on the livestock industry for their livelihood. The employment in the beef value chain such as emerging farmers, feedlot employees and abattoirs employees also contribute to employment in the beef industry.

#### **g) Processing of beef**

Beef can be processed into carcasses, hide, and skin and incorporated into the production of other products. The meat products produced from beef include minced meat, sausages, biltong, corned beef, steaks, ribs etc.

There are 460 registered red meat abattoirs in South Africa, according to the Red Meat Abattoir Association. The category for the abattoirs range from Grade A to E, the grade is determined by the number of cattle an abattoir can slaughter per day. The majority of large-scale commercial abattoirs have linkages with feedlots increasing vertically integrated business in the beef industry. In the feedlot industry large feedlots own their own abattoirs and sell directly to consumers through their retail outlets or wholesale level.

## **Beef Production/Processing in Limpopo**

The red meat abattoirs are scattered throughout the Limpopo province and a high concentration of red meat abattoirs are found in the Vhembe and Mopani District. The commercial farmers are able to reach high volumes due to adequate capacity and they have integrated vertical linkages. A comprehensive list of red meat abattoirs in the province can be found in *Annexure A*. The relevant infrastructure related to red meat processing is discussed later in the section under Agriculture infrastructure.

### **h) Other related or supporting initiatives**

#### **The Limpopo IDC Nguni Cattle Development Programme**

The support programmes to develop the red meat industry include the **Limpopo IDC Nguni Cattle Development Programme** with the aim of activating dormant cattle stock owned by rural communal farmers through the development of an integrated and differentiated provincial beef production industry.

The “massification project” has three main stages namely primary production stage, the back grounding stage and the feedlot and slaughtering stage. The pilot stage of the Limpopo IDC Nguni Cattle Development Programme consists of 24 herds adding to a total of 1 464 cattle.

The major challenges for cattle industry and constraints of the Limpopo IDC Nguni Cattle Development Programme are:

- The high costs of agricultural land and land tenure uncertainty minimises the opportunity for capital injection into the communal cattle farming operations
- High capital is also required for setting up fixed structures, installing requisite technology and also the financing of the first production and the initial stock of weaners
- Cattle communal farmers in Limpopo are largely excluded in the beef production industry due to below standard farming methods

The programme indicates that in view of the high cost of agricultural land, the “massification project” must include innovative ways in which communal land could be employed in enhancing entry of rural farmers into the beef industry. Agro-processing infrastructure such as feedlots, red meat abattoirs, red meat processors can offer support services extending the integration of beef producers in the beef production value chain.

### 3.7.2 Dairy Commodity Profile

Milk production has the potential to increase farm income but require highly skilled labour and state of the art technology. A vertical linkage exists between production and distribution. There are viable options in the production of short and long term dairy products. The collective **pooling between milk producers can assist in collective bargaining to gain higher prices**. Milk production is a sensitive commodity vulnerable to price shrinking due to long distribution channels and shelve space comes at a high cost making small scale farmers and processor price takers.

The **dairy processing opportunities** include fresh milk, condensed milk, powder, variety of cheeses and butter. Goat milk is beginning to gain popularity as it offers an alternative to cow milk and research indicates healthier properties.

The **milk industry is made up** of milk commercial producers and traditional small-scale subsistence farmers who produce for the informal markets. The commercial producers produce large scale industrialised processed products that are sold to wholesalers, hyper, cafes, confectionaries, government departments and institutions.

**SMMEs opportunities** in the dairy sector includes contracts of cold chain suppliers to deliver dairy products to various stores, small to medium scale processing, feed production and the manufacturing of packaging material.

The focus of the agro-processing strategy should be on the needs of local milk producers and consumers, introducing innovation methods to meet local demand and increase productivity. Building on vertical linkages can also create opportunities along the value chain. The large dairy processing plants dominating the dairy industry include Clover, Parmalat, Dairy Belle and Nestle.



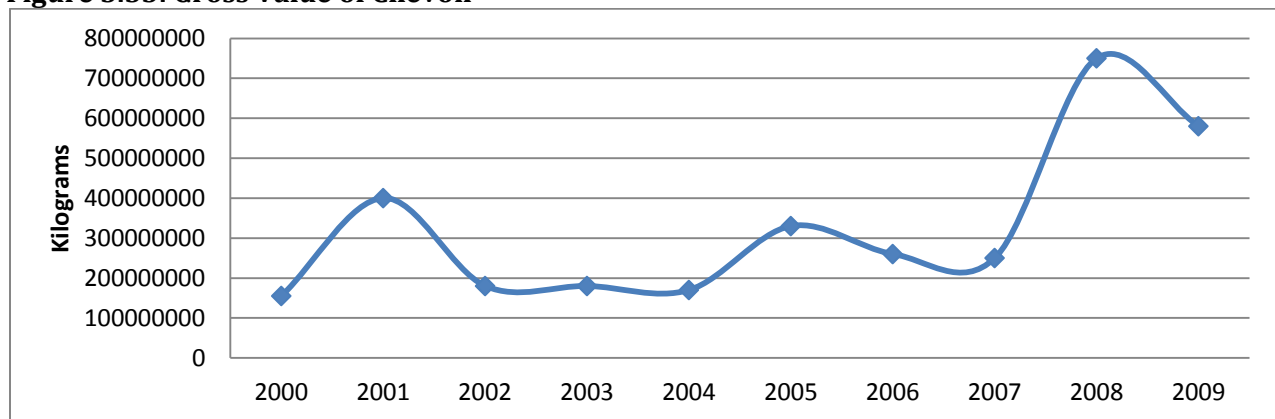
The major role players influencing dairy development in SA include Milk SA, Milk Producers Organisation of SA (MPOSA) and South African Milk Processor's Organisation (SAMPRO) which offers skills development to processors of milk and dairy training. The Limpopo Department of Agriculture also has programmes aimed at developing the dairy value chain from primary production to secondary value chain development.

## 3.7.3 Goat/ Chevon

### a) Industry Performance and Trends

The gross value of chevon is illustrated in Figure 3.53. The contribution of chevon to the agriculture sector has been uneven throughout the years. The highest contribution of chevon to SA agriculture production was experienced in 2008 and continues to grow as the meat is beginning to gain popularity in the meat market.

**Figure 3.53: Gross Value of Chevon**

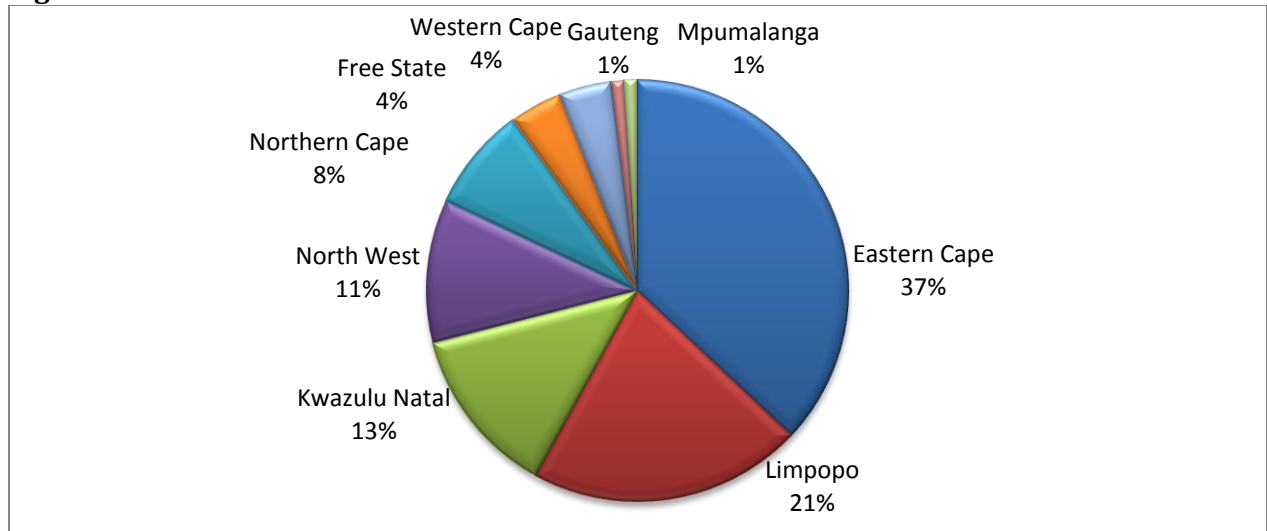


Source: DAFF - A Profile of the South African Goat Market Value Chain 2010

### b) Goat Producing Areas in SA

Figure 3.54 illustrates the provincial distribution of live goats for the production year of 2009. The Eastern Cape has the highest distribution of live goats contributing 37% to SA goat production. This province is followed by the Limpopo province accounting for 21% of SA live goats production.

**Figure 3.54: Provincial Distribution of live Goats in 2009**

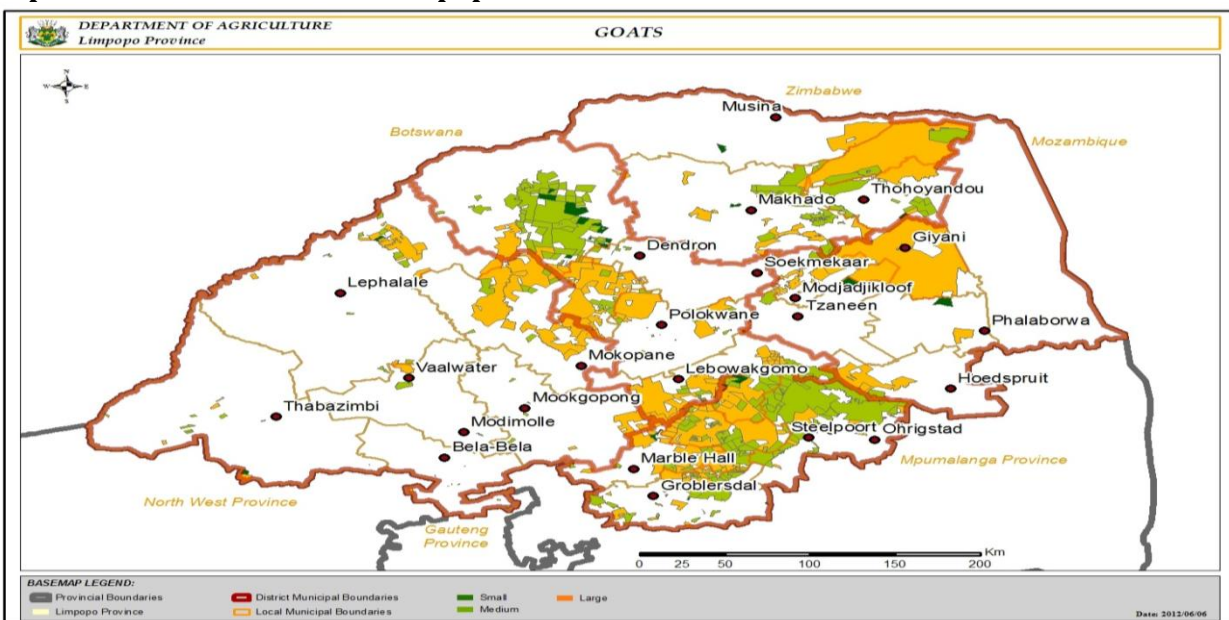


Source: DAFF - A Profile of the South African Goat Market Value Chain 2010

## c) Goat Producing Areas in Limpopo

Map 3.21 illustrates the goat production areas in the province ranging from small, medium and large scale producers.

**Map 3.21: Goat Production in Limpopo**



Source: Limpopo Department of Agriculture 2012

The large to medium scale goat farming occur in the Sekhukhune and Capricorn District. The Vhembe and Mopani district also have high volumes of large scale goat producers.

## d)Market Distribution

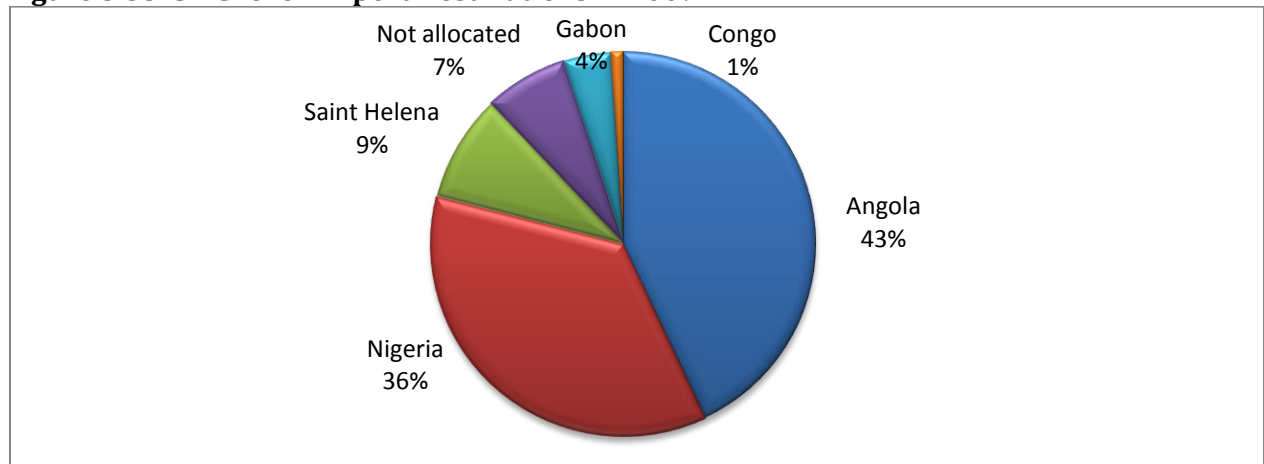
### Domestic Markets

The domestic market for goat is local communities using goat for cultural activities, auctions, abattoirs, retailers and meat processors. The informal trade on local markets is an important market which cannot be ignored as goat is used in a variety of traditional/cultural rituals by many local communities. Emerging goat farmers can be encouraged to produce goat for both the informal and formal market as goat meat is beginning to gain popularity.

### e) Export and Export Destinations

The export of chevon is very low only in the recent years 2008-2009 has export increased. Figure 3.55 illustrates the export destinations. The country receiving high volumes of SA chevon exports was Angola followed by Nigeria and Saint Helena.

**Figure 3.55: SA Chevon Export Destinations in 2009**



Source: DAFF - A Profile of the South African Goat Market Value Chain 2010

## **Imports**

The market for chevon is growing in the recent years, as imports of chevon are reducing. The production of goats on local markets can be increased as to reduce imports from other destinations, thus meeting the market gap.

## **f) Processing of Goat**

Goat processing has a variety of uses for its meat and milk. Goat milk can be processed into goat cheese and milk used as an alternative to cow milk. Goat is sometimes used to replace mutton or other meats in production of sausages and polonies when meat prices are too high.

## **g) Industry and Sector SWOT Analysis**

### **Market Opportunities for SA Goat/Chevon**

The emerging sector can be encouraged to produce goat for commercial use as communal household have high number of goats. The processing of goat and goat milk products can enhance incomes for local goat farmers and goat produce in the province can be branded to large retail stores. The demand for organic meat is increasing locally and internationally, this presents a target market.

The processing of goat hide at tanneries can also generate money for local farmers. The collaboration of goat farming cooperatives is required to ensure sustainability of processing facilities.

The challenge the goat industry faces is that the meat is not popular as compared to beef or chicken, thus branding and marketing initiatives are required to enhance the industry.

## **h) Other Related or Supporting Initiatives**

**An important processor of chevon is Kalahari Kid (Northern Cape) who process strictly halaal meat.** Their products are all natural, healthy and traceability is ensured from the registration of the farmers, tagging and monitoring of the animal from birth to the packaged product. The province can use such a success story to create own local brands and promote within the industry.

## **Empowerment projects for SA Goat production include:**

- › **The Umzimvubu Goats Production and Processing Facility, Eastern Cape**

The Goat production and processing facility entails the construction of infrastructure, training and organisation of goat owners/farmers in the Alfred Nzo District of the Eastern Cape Province.

- › **Kgalagadi Dipudi – Cross-border Project - Northern Cape/North West Province**

The Kgalagadi Dipudi Project involves the formation of goat interest groups, coupled with training and facilitation of these groups. There are currently 43 goat interest groups and they have successfully organised themselves into a cooperative known as the Kgalagadi Dipudi Enterprise.

- › **Boer Goat Farming in North West province**

The Ngaka Modiri Molema District Municipality in the Northwest Province of South Africa handed over 103 Boer Goats to beneficiaries of a land reform project near Sannieshof.

## **3.8 White Meat Commodities Profile**

The white meat commodities will discuss pork, poultry and the egg industry.

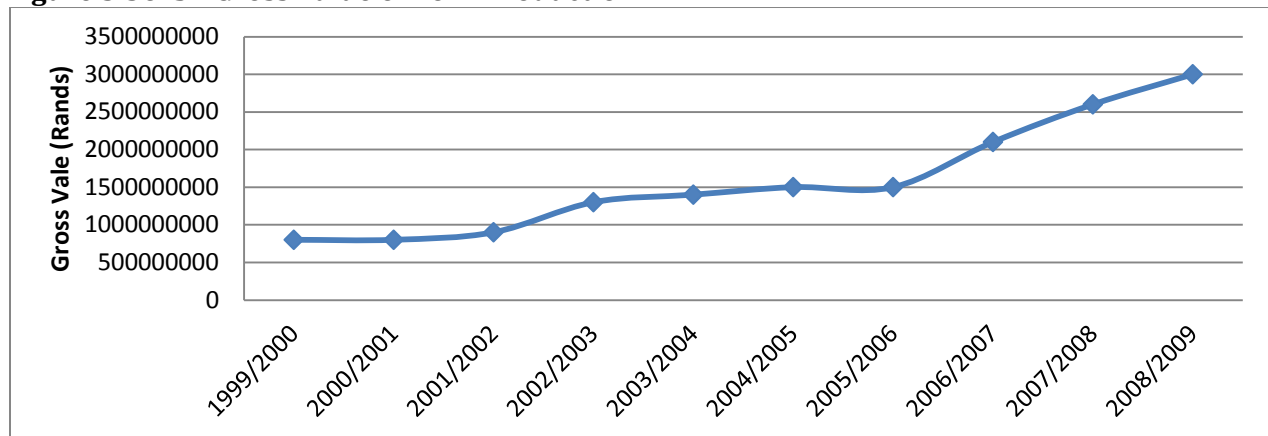
### **3.8.1 Pork**

#### **a) Industry Performance and Trend**

The contribution of pork production to the agriculture gross value is indicated in Figure 3.56. It is evident that pork production is beginning to make significant contributions with R3 000 000 000 in 2008/09.

There has been an increase in both the production and consumption of pork locally. The consumption levels are higher than production meaning SA is a net importer of pork.

**Figure 3.56: SA Gross Value of Pork Production**



Source: DAFF - A Profile of the South African Pork Market Value Chain 2010

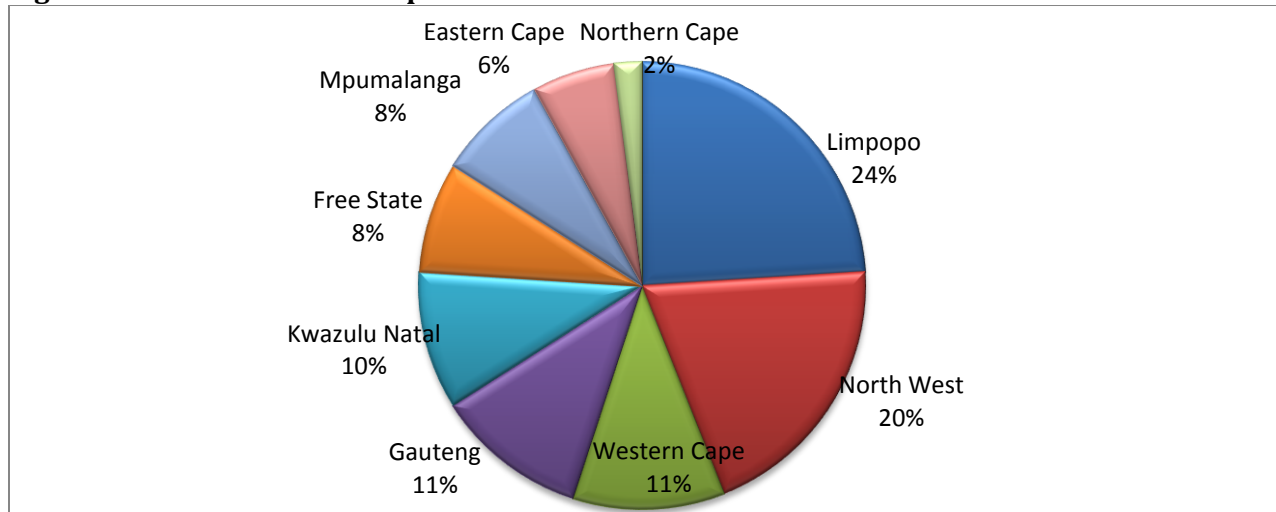
### b) Pork Producing Areas in SA

Pork is produced in high volumes throughout many provinces in South Africa as it can easily be domesticated. Figure 3.57 below indicates pork production per province for 2009 with Limpopo and North West province being the largest producers accounting for 44% of total SA pork production.

The culture dynamics such as religious and cultural issues in the Limpopo province (e.g. High number of population in the province belong to the Zion Christian Church religious forbidding consumption of pork) might have a slight influence on local consumption level of pork. However the general consumption level for pork in the country are high and have experienced an increase over the years as indicated in the figure above.

The province is a large producer of pork and can take advantage of increasing SA consumption levels over the years.

**Figure 3.57: Pork Production per Province 2009**



Source: DAFF - A Profile of the South African Pork Market Value Chain 2010

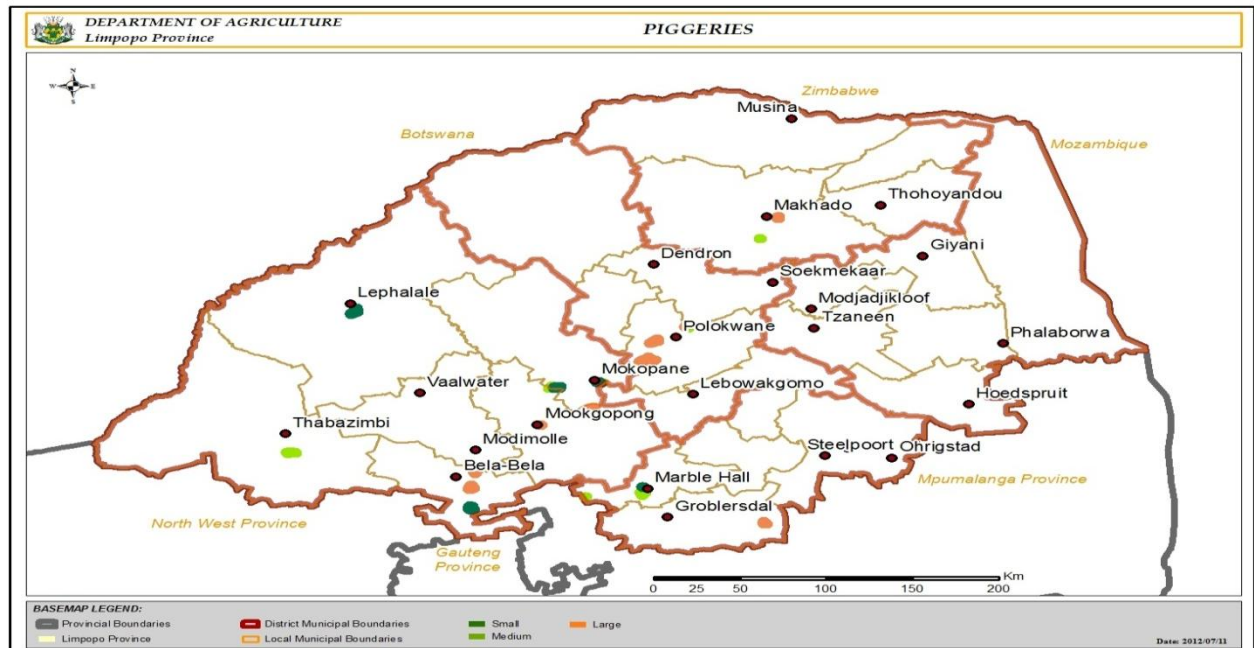
### c) Pork Producing Areas in Limpopo

The spatial distribution of livestock population indicates the Waterberg district has the highest number of pork producers followed by Capricorn district then Sekhukhune District. The final report for Red and White Meat Cluster 2009 identifies pork production clusters in the Waterberg district with 9 000 tons of production capacity and Capricorn district with 5 000 tons production capacity.

The Waterberg and Capricorn Districts are dominated by pigs from the commercial sector while Sekhukhune district is dominated by pigs from the communal areas.

Map 3.22 illustrates small, medium and large scale piggeries in the Limpopo province. The large-scale piggeries are found in the Capricorn District.

**Map 3.22: Pork Production in Limpopo**



Source: Limpopo Department of Agriculture 2012

#### d) Market Distribution

The meat processing market account for the majority of the pork produced as high volumes of pork are used in meat processing. The other domestic markets for pork include white meat abattoirs, retailers, butchers and wholesalers.

#### e) Exports and Imports

South Africa pork imports for 2011 was 32 094 ton of pork, the imports were received from Belgium, Canada, France, Germany, Hungary, Ireland, and Spain, according to South African Pork Producers' Organisation (SAPPO) imports for 2012. The import and export of pork is in the form of ribs, carcasses, hams/shoulders and other cuts.

#### f) Employment

The pork industry employ approximately 10 000 workers, comprising of about 4 000 farm workers and 6 000 workers in the processing and abattoir sectors (DAFF - A Profile of the South African Pork



Market Value Chain, 2010). An important and growing sector is the emerging pork sector which also contributes to employment even though it might be seasonal during festive seasons or periodic at times. The Limpopo province has 11 700 sows and 13 commercial farmers with numerous emerging farmers contributing high volumes to the pork industry.

## **g) Processing of Pork**

Pork is cut into carcasses, ribs, and other cuts. Pork is processed into a variety of easy convenient food such as bacon, hams, sausages and mixed in with a variety of other meat products. There are 46 registered pig abattoirs recorded by SAPPO using modern technology and are responsible for slaughter more than 2 million pigs annually.

## **h) Industry and Sector SWOT Analysis**

The majority of the challenges are related to diseases and export quality standards that make it difficult to enter the pork market. The pork industry requires high initial capital making it difficult for emerging farmers to enter. The industry also requires a high production of sow units as the necessary to ensure profit margins are met.

The opportunities lie in the fact that the province is a net import of processed pig product, meaning processing happens outside the province borders. The province is the second largest producer of pork therefore room exist for pig processing and value addition in the province. Marketing and research for the pork industry is done by SAPPO, pork producer in the province can join organisation to receive technical support.

## **i) Other Related or Supporting Initiatives**

### **Market Opportunity for Limpopo Emerging Pig Farmers**

There are two ways in which emerging farmers can be integrated into the pork supply chain:

- Emerging farmers can specialise in producing feed for pigs
- Local producers can enhance sow units by forming collective cooperatives
- Pork processing and value addition facilities

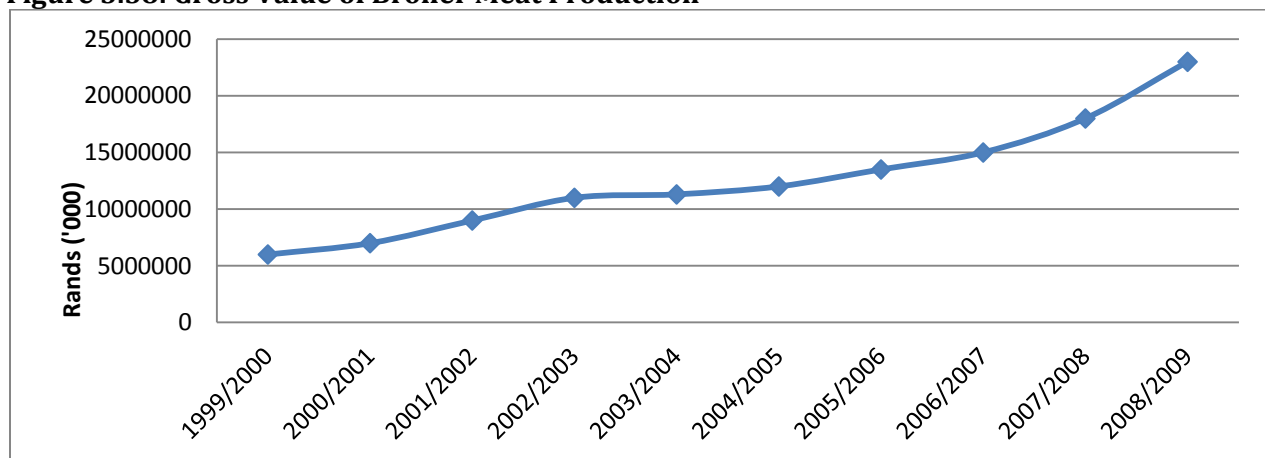
### 3.8.2 Poultry: Broiler Commodity Profile

Broilers are chickens raised specially for meat production with very fast growth rates. The broiler industry is one of the largest commodities in agriculture and acts as the main supplier of protein to many households.

#### a) Industry Performance and Trends

Figure 3.58 indicates the gross value of broiler meat production to the agriculture sector of SA. The contribution of broiler meat is increasing over the years with high contributions figure of over R20 000 000 in the 2008/09 production years. The importance of the sector cannot be underestimated as it provides food security and employment to many households.

**Figure 3.58: Gross Value of Broiler Meat Production**

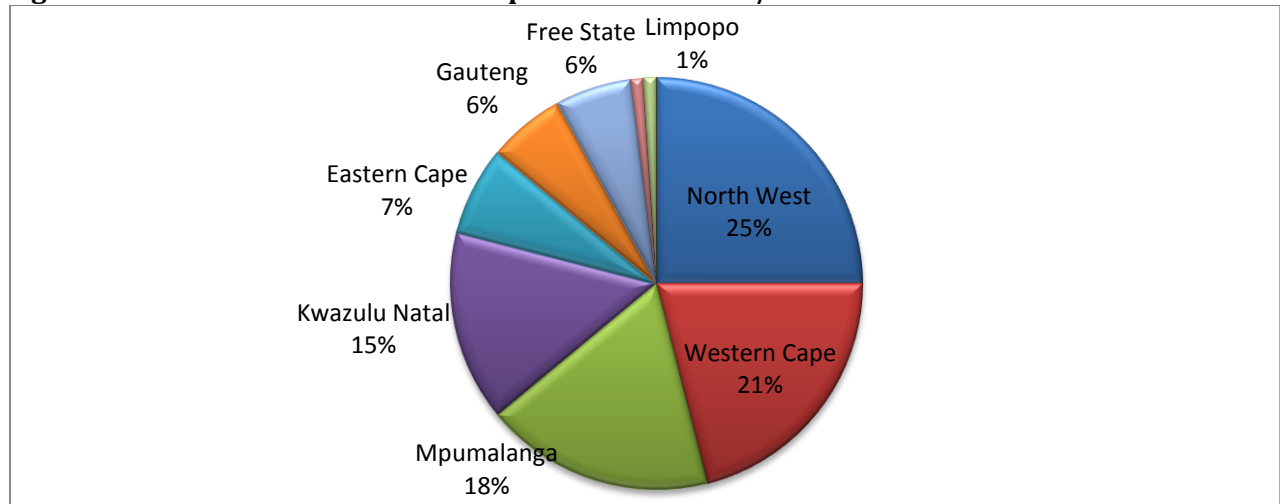


Source: DAFF – A Profile of the South African Broiler Market Value Chain 2010

#### b) Poultry Producing Areas in SA

Figure 3.59 indicates SA broiler meat production per province for the production years of 2008/09. The North West province accounts for 25% of SA broiler meat production. The Limpopo province is one of the lowest broiler production areas in SA, however the importance of the industry to the province economic contribution cannot be denied as numerous employment opportunities are created in this industry. The broiler industry in the Limpopo province also provides food security for people living in rural areas.

**Figure 3.59: Broiler Meat Production per Province 2008/09**

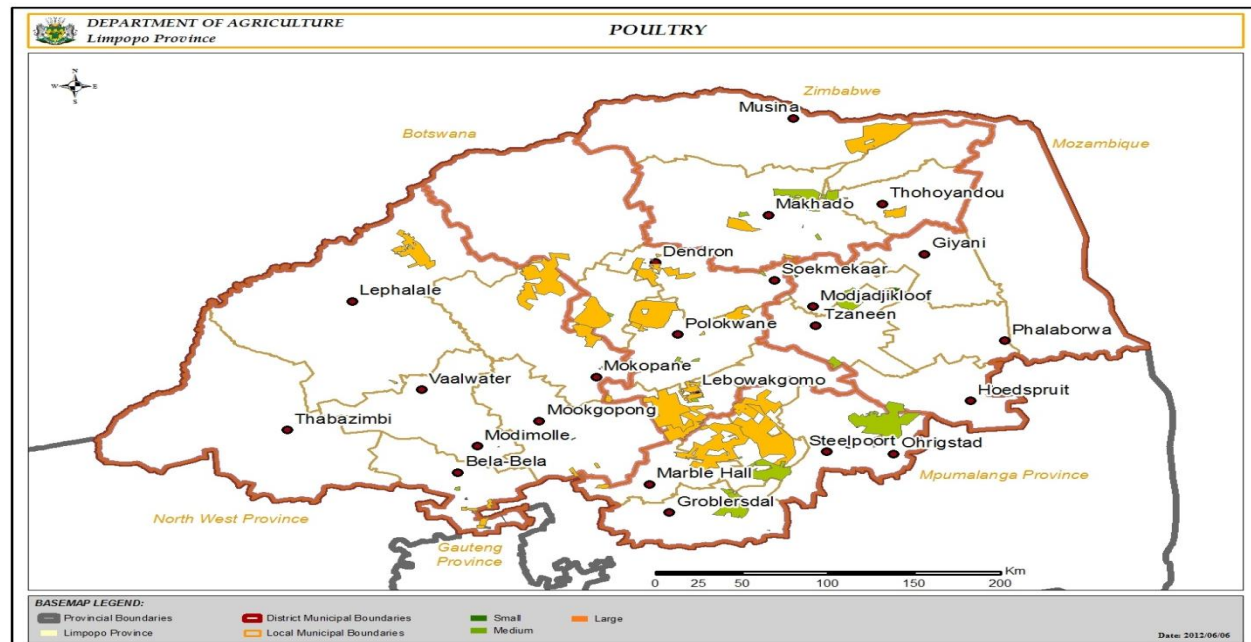


Source: DAFF - Profile of the South African Broiler Market Value Chain 2010

### c) Poultry Producing Areas in Limpopo

Map 3.22 indicates poultry production areas in the Limpopo province. The large scale poultry commercial producers are found in Capricorn district and large scale poultry production also takes place in the Sekhukhune and Waterberg district. The broiler producers in Limpopo province are small operators and serve the regional markets, the majority of the producers tend to do direct selling. Although the cluster is dominated by small-scale producers, their contribution is approximately 30% of the entire production in the province (South African Poultry Association, 2006).

**Map 3.22: Limpopo Poultry Production Areas**



Source: Limpopo Department of Agriculture 2012

### The Limpopo Broiler Industry

The capacities of the major abattoirs in the Limpopo province are indicated in Table 3.61. Rainbow and Mike's Chicken abattoirs have the highest slaughtering capacity of  $\pm 150\,000$  units per week. The abattoirs listed below account for 90% of processed chicken meat in the Limpopo province. The Northern Poultry Abattoirs in Lebowakgomo has been recently refurbished and expanded to cater for the market access challenges faced by farmers in Sekhukhune and Capricorn District. It is evident that the province is not producing enough broilers to meet local demand; therefore imports from outside the province are used to meet the market demand.

**Table 3.61: Major Abattoirs in the Limpopo Province**

Name	Slaughter units per week	Area
Bush Valley now operating as Rainbow	$\pm 150\,000$ units per week	Tzaneen
Mike's Chicken	$\pm 150\,000$ units per week	Polokwane
Spif	70 000 units per week	Naboomspruit
Northern Poultry	100 000 units per week	Lebowakgomo

Source: Limpopo Department of Agriculture, 2012

The production and sales of broilers in the **informal markets** contribute a significant amount to the broiler industry in the province. The informal market is made up of over the fence sales, backyard producers and small cooperatives funded by the Local Municipalities or development agencies. The constraints for the informal producers to enter the formal market are high production cost and low production capacity.

The informal markets are spread throughout the province and are able to reach low income households in rural areas. The medium sized and organised broiler producers are able to supply to abattoirs and have their products reach the informal market.

The **challenges broiler producers face in the province** is that broiler feed is expensive as producers have to source feed from distance areas, as far as 300km. The system of contract growers where farmers produce broilers to sell to commercial abattoirs is not viable because of high cost of day old chicks and feed prices. The current broiler producers in the province require assistance in broiler feed as this contributes to high production cost. Due to the high production cost chicken meat in the province is more expensive per kg as compared to other provinces.

A successful case of contract growers and abattoirs is Rainbow abattoirs. The abattoir established a scheme whereby emerging contract growers produce broilers to the abattoir. There are currently 11 black farmers operating in the scheme and each one operates a broiler house with 40 000 chickens. The abattoir prefers that contract farmers be in close proximity to the abattoir (Limpopo Agriculture District Infrastructure Information, 2011).

The **abattoirs in the province are not processing at their full capacity** as they are not receiving sufficient birds for processing. Abattoirs like hatcheries require a developed supply chain and a cheap product to compete against the outside companies. The lack of feed mills also places pressure on the local suppliers. Broiler growing is only successful when feed, chick and technical advice is supplied by the company or organisation that will ultimately process the broilers (Limpopo Department of Agriculture, 2012).

The **source of revenue in the broiler industry** is through the sales of eggs, live birds and processing which producers the highest revenue. Therefore a fully integrated poultry system is where the most profit is, as vertical integration of activities reduces transaction costs. The integrated

poultry operation incorporates the complete chicken production chain, where producers have their own feed mills, breeder farms, day old chick hatchery and certified processing facilities. An important factor to also consider is the network of cold storage as these are essential in the distribution of fresh and chilled poultry products.

The **option of reducing feed mill cost** is through broiler producers cultivating maize to produce their own feed. Feed mill infrastructure can assist poultry producers combat the high production cost and make them less dependent on distant markets. Feed mill operations have to be completed through agriculture cooperatives or joint ventures to be financial viable. The feed can also be sold commercially for other animal industries (own livestock, surrounding farms, wholesales, retails). There is a high need to increase broiler production so abattoirs can operate to full capacity and to invest in **poultry value addition**, as this generates the highest revenue.

## **d) Market Distribution**

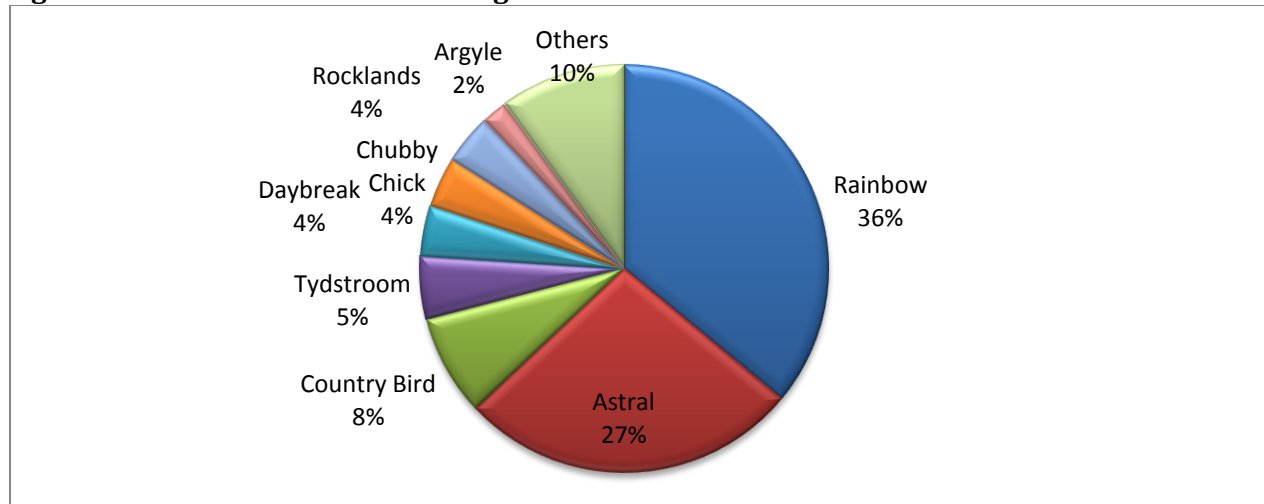
### **Domestic Market**

The largest distribution of broiler production is to the white meat processors and local retailers. SMMEs in the poultry industry further sell their products to local hawkers, businesses and the direct public for live sales.

### **Large Commercial Broiler Producers**

The market share of large commercial broiler producers is indicated in Figure 3.60. Rainbow takes up 36% of the market shares of large commercial broiler, followed by Astral at 27%. These two companies produce 63% of the total broiler meat production. The other 4 medium-sized producers (Tydstroom, Daybreak, Chubby Chick and Rocklands) contribute 15% of the poultry market share.

**Figure 3.60: SA Market Shares of Larger Commercial Broiler Producers**

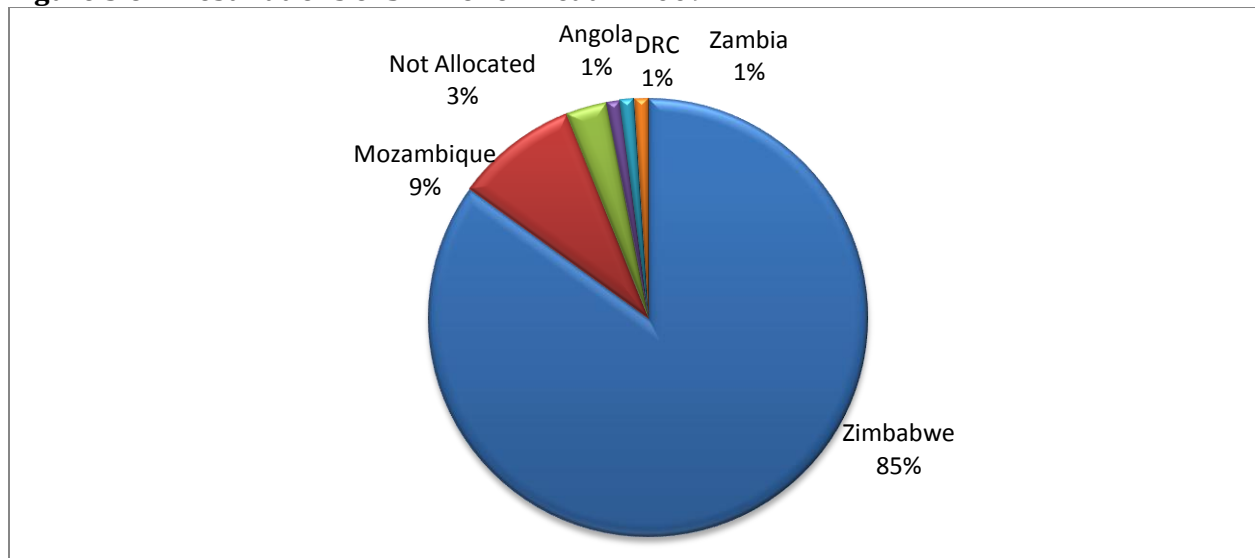


Source: DAFF - Profile of the South African Broiler Market Value Chain 2010

#### e) Export and Export Destinations

Figure 3.61 illustrates the export destination of SA broiler meat. SA broiler meat is exported mostly to SADC countries including Zimbabwe, Mozambique, Zambia, DCR and Angola. The export to SADC regions and Zimbabwe create an opportunity for Limpopo to act as an exit point for broiler exports. The Limpopo province can benefit immensely from huge market in neighbouring country. The South African Poultry Association indicates that large EU and USA markets (lucrative poultry markets) are hard access due to sanitary measures restraining exports.

**Figure 3.61: Destinations of SA Broiler Meat in 2009**



Source: DAFF - Profile of the South African Broiler Market Value Chain 2010

#### **f) Employment**

The employment figures in the broiler industry are difficult to obtain as broiler activities are scattered throughout the different regions and not all broiler producers are registered with relevant organisation or local municipality's database. The obtained figures from DAFF Profile of the South African Broiler Market Value Chain in 2010 indicates that the commercial broiler meat producers are estimated at 404 (199 producers and 205 contract growers). Smallholder farmers are estimated at around 1 554. These farmers produced 920.4 million chickens in 2009 and employ approximately 60 000 workers (The). The important sector which is not accounted for is the informal producers of broilers in the market; these role players contribute a significant amount to job creation in rural areas.

#### **g) Processing of Broilers**

Poultry meat is processed into variety of food products used for everyday household consumption such as chicken viennas, polony, chicken steaks and semi processing can be done at butchery level where pieces of chicken are sold spiced and seasoned.



## **h) Industry and Sector SWOT Analysis**

The lack of processing and value addition facilities close to broiler producers is a major challenge facing broiler producers in the province. The lack of feed mills and long distances travelled to obtain poultry feed increase input cost for local farmers, thus they not able to meet profit margins. There is a need for increased broilers in the province so that local abattoirs can reach maximum capacity levels.

The opportunity exists in the fact that provincial and national government are gearing investment towards enhancing and developing the Limpopo poultry industry. The informal market is growing and is able to provide food security to remote rural areas. The processing of broiler products is feasible since poultry products are exported from outside the province borders. The province has existing infrastructure such as old industrial sites which can be revived and used for poultry processing. A large market exists for poultry products as it is seen as a cheaper alternative to other meats.

## **i) Other Related or Supporting Initiatives**

### **The Limpopo Agribusiness Development Cooperation (LADC) Integrated Poultry Project**

The Limpopo Integrated Poultry Project is a successful poultry project located in the Lepelle-Nkumpi Local Municipality. The project is a partnership that was initiated by Lonmin Platinum, Mvelaphanda and Limpopo Agribusiness Development Corporation (LADC). The aim of the project was to build seven environmental broiler houses with a carrying capacity of thirty five thousand in each house. The project is managed through an operating company that comprises of strategic investors, breeder farmers, hatchery workers, broiler farmers and abattoir farmers whom are not only workers but are shareholders in the legal entity. Local communities are benefiting from the project as it is contributing towards building the local economy of Lepelle-Nkumpi Local Municipality.

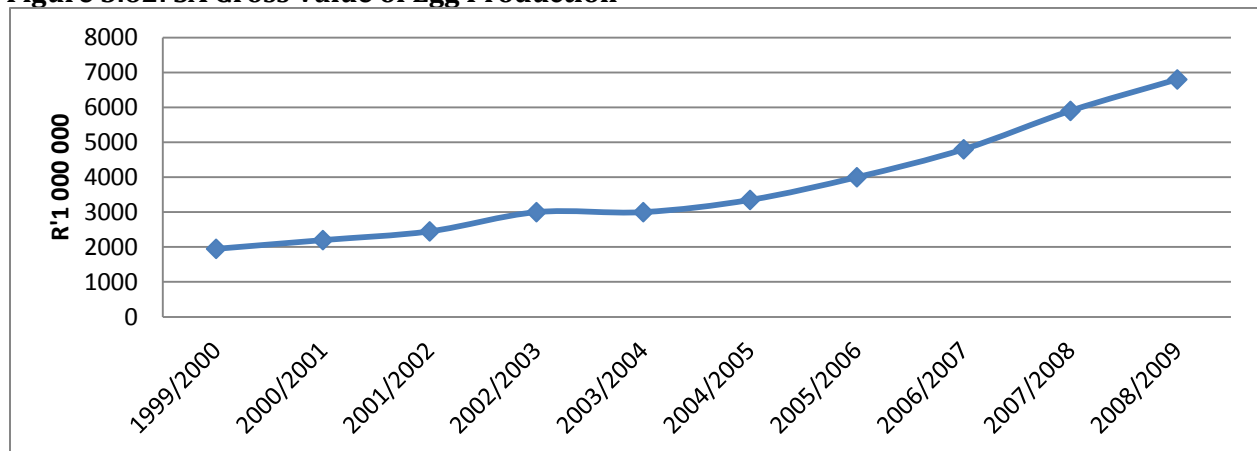
## 3.8.3 Egg Industry

The production eggs takes place throughout the country and the production levels are influence by the available infrastructure and chicken breed. There are few major players and a number of small and medium sized producers. The industry is able to provide food security for high populations living in rural areas as the can benefit both from the chicken egg and meat.

### a) Industry Performance and Trends

Figure 3.62 indicates the gross value of egg production to the agriculture sector. The industry has experienced increasing contribution to agriculture over the years.

**Figure 3.62: SA Gross Value of Egg Production**



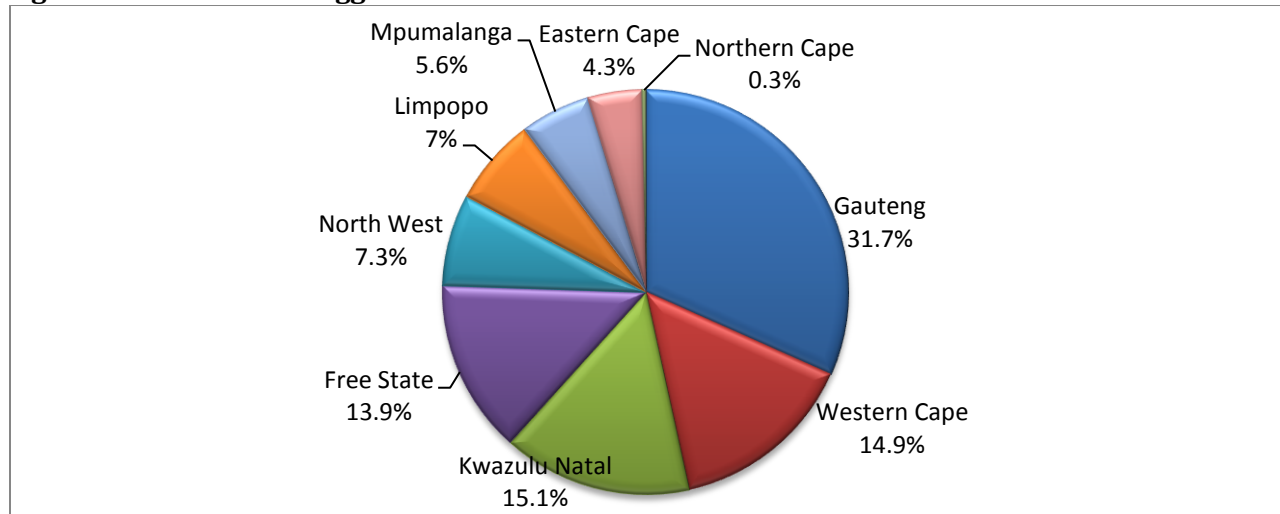
Source: DAFF - A Profile of the South African Egg Industry Market Value Chain 2010

### b) Egg Producing Areas in SA

Figure 3.63 illustrates the SA provincial egg production. The Gauteng province is the largest egg producer with a market share of 31.7% in the egg industry contribution. The egg production for the Limpopo province is 7% making the province the fifth largest egg production area.

The commercial egg production is dominated by three producers namely Eggbert, Nualaid and Highveld Cooperative. The importance of the SMMEs and informal producer contribute high amounts to total egg production and reach the poorest of the poor being able to provide food security.

**Figure 3.63: Provincial Egg Production**



Source: DAFF - A Profile of the South African Egg Industry Market Value Chain 2010

### c) Egg Producing Areas in Limpopo

The egg industry is a major consumer of animal feed in the Limpopo province as the egg industry relies heavily on the milling business for good quality produce. Egg production will follow the pattern of broiler activities in the province, therefore egg production will take place in the Mopani, Capricorn and Waterberg Districts.

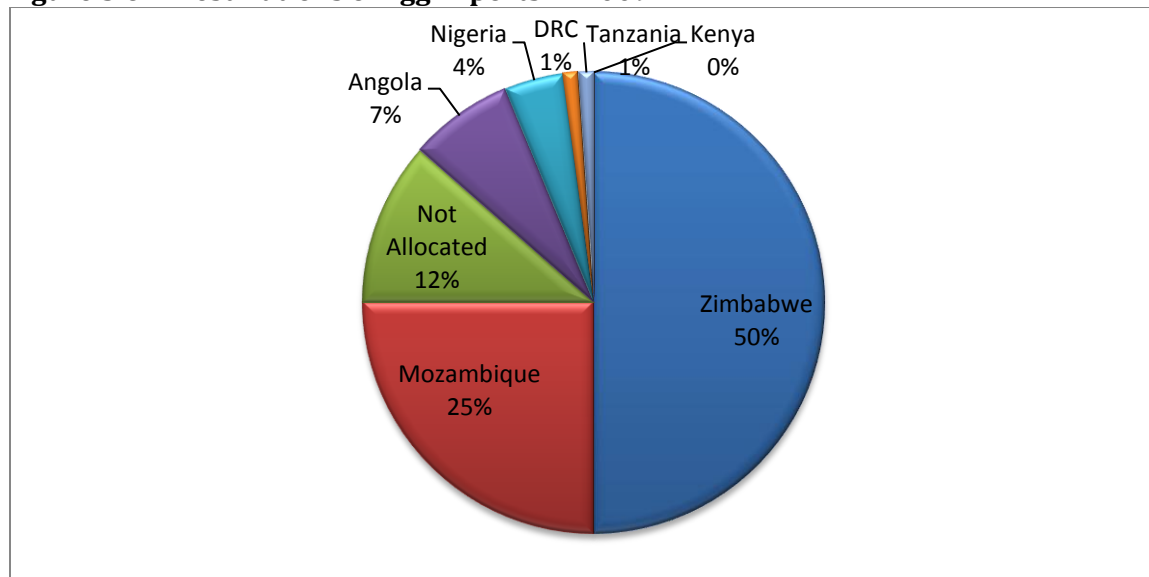
### d) Market Distribution

The local market for eggs is huge and the domestic market consists of wholesalers, food processing industry and retailer outlets. Restaurants and bakeries also make up a large share of the egg market. The informal sector also plays a huge role in the egg distribution market as hawkers and SMMEs traders sell eggs in their spaza shops either as raw or boiled eggs.

### e) Exports and Export Destinations

Figure 3.64 illustrates SA egg export destination. The majority of SA eggs are exported to Zimbabwe and Mozambique. Other countries receiving SA egg exports are Angola, Nigeria DRC and Tanzania, however export percentages are low to these countries.

**Figure 3.64: Destinations of Egg Exports in 2009**



Source: DAFF - A Profile of the South African Egg Industry Market Value Chain 2010

#### **f) Employment**

The egg industry has the capacity to create employment for both emerging and commercial farmers, with the role of SMME furthering employment in rural areas. The profile of the South African Egg Industry Market Value Chain 2010 states the egg farmers employs approximately 17 000 farm workers. The egg industry workers are estimate to be 10 000 workers. The egg industry generates further employment in the feed Sector.

#### **g) Processing of Egg**

The egg industry creates multiplier effects for various types of machinery and packaging material. The companies in the egg production and food processing industry are vertically integrated (e.g. broilers, chicken batteries, egg laying hens). The processing of egg products for the retail market is a complex process requiring technical infrastructure and a skilled labour force.

#### **Egg Grading**

Agriculture and Agri-Food regulations define three quality grades that apply to eggs for sale to customers. These are:

- Grade A eggs which are sold at retail markets for household use
- Grade B eggs which are used mostly in bakeries
- Grade C eggs which are sent to egg breakers for processing

## h) Industry and Sector SWOT Analysis

The emerging sector requires assistance in grading and coding their eggs as retail suppliers require eggs to be coded before sales. The access to finance is also a major challenge majority of egg producers come across as the industry is dominated by commercial producers and emerging farmer have difficulty in accessing market.

## 3.9 Forestry Commodity Profile

### a) Industry Performance and Trend

The forestry industry is an important agriculture sector to the national economy as it employs a large numbers of poor people living in remote rural areas. The forestry industry products contribute approximately 9% to the overall export of manufactured goods and earning net foreign exchange of approximately R8 8 billion in 2003 (SA Department of Agriculture, Fisheries and Forestry, 2011). Table 3.62 indicates the percentage forestry contributes to GDP per province and percentage of employment per province. Forestry in the Limpopo province is a minor contributor to the agriculture sector as the province is not a major forestry producer.

**Table 3.62: Plantation forestry GDP by Province, 2002/2003**

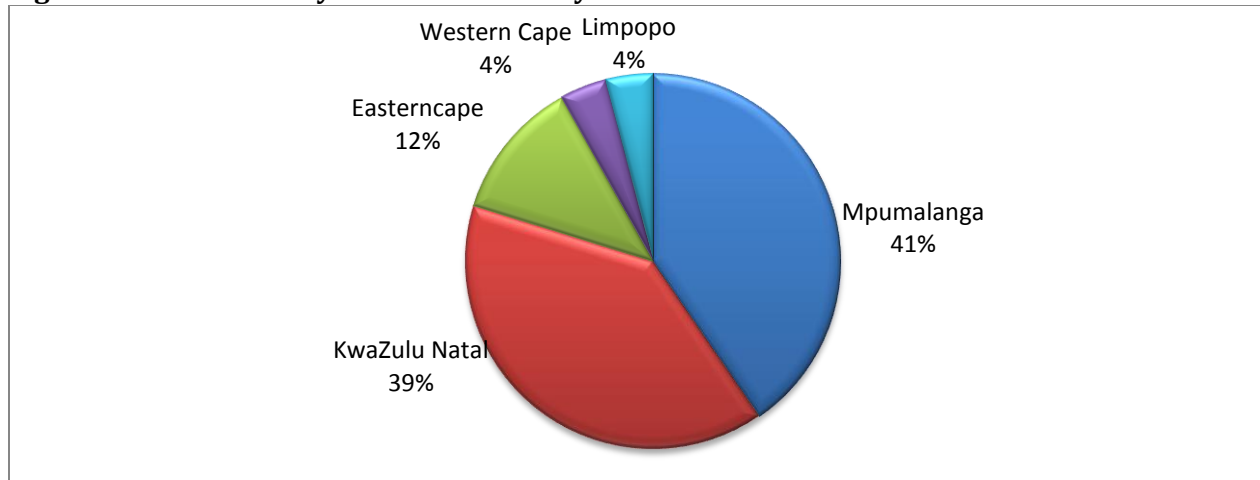
Province	Forestry as % of provincial GDP	Regional forestry GDP as % of total forestry GDP	Forestry employment as % of provincial employment
Mpumalanga	1,4	40	3,2
KwaZulu-Natal	0,5	37	1,4
Eastern Cape	0,3	9	0,5
<b>Limpopo</b>	<b>0,2</b>	<b>5</b>	<b>0,4</b>
Western Cape	0,1	6	0,1

*Source: The contribution, costs and development opportunities of the Forestry, Timber, Pulp and Paper industries in South Africa 2005*

## b) Forestry Producing Areas in SA

The Limpopo province is not a high producer of the forestry products. Figure 3.65 indicates the plantation area for forestry per province. The Mpumalanga province has the highest area planted for forestry production.

**Figure 3.65: SA Forestry Plantation Area by Provinces**



Source: DAFF - A Profile of the South African Forestry and Wood Products Market Value Chain 2010

## c) Forestry Producing Areas in Limpopo

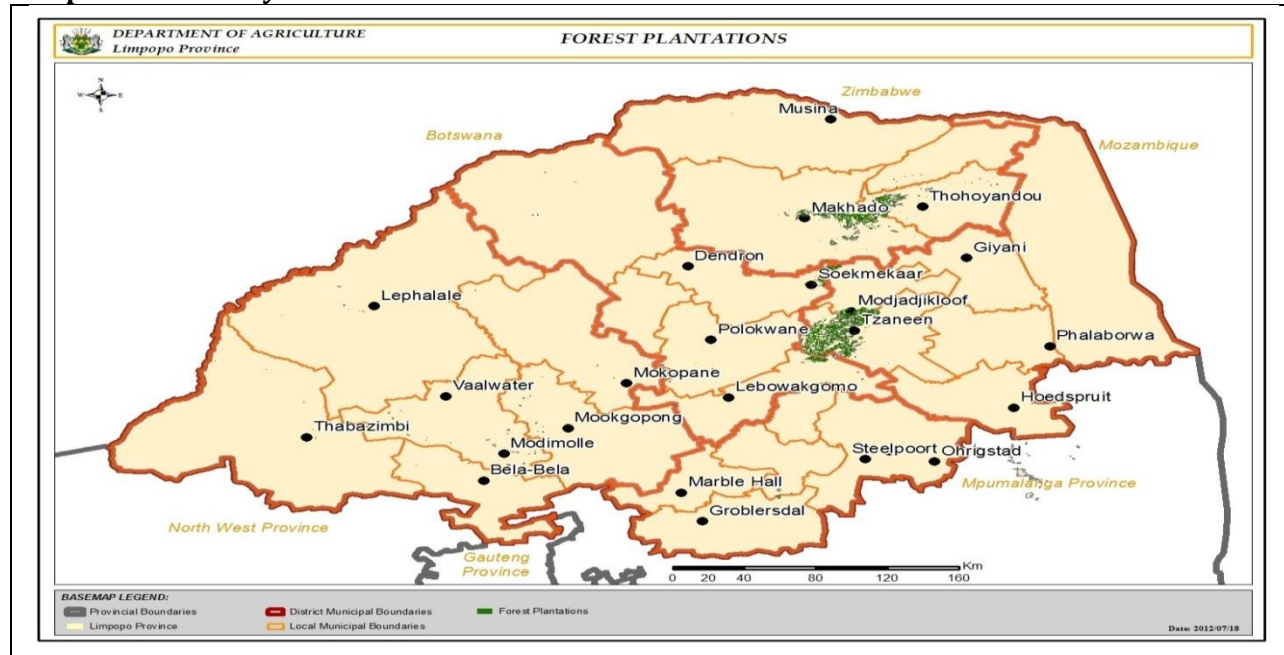
Map 3.23 illustrates the existence of forestry plantation at municipal level for the Limpopo province. There is a high concentration of forestry activities taking place in the Makhado, Tzaneen and Modjadjikloof Local Municipalities.

Forestry activities are found in Vhembe and Mopani district of the Limpopo province. Table 3.63 indicates the afforested area for the Limpopo province. The area under forestry production has remained relatively the same for the production year of 2007 and 2008.

**Table 3.63: Afforested Area**

Province	2007		2008	
	Afforested Area		Afforested Area	
Limpopo	48, 096	3.8%	47, 982	3.8%

Source: DAFF - A Profile of the South African Forestry and Wood Products Market Value Chain 2010

**Map 3.23: Forestry Plantation in the Province**


Source: Limpopo Department of Agriculture 2012

#### d) Market Distribution

The future for wood demand is on the increase as the global population grows. The domestic market that consumes high volumes of wood is the mining industry, sawmilling, timber and paper industry.

#### e) Export and Export Destinations

The export destinations include SADC regions, Asia, Europe and Oceania regions (DAFF - A Profile of the South African Forestry and Wood Products Market Value Chain, 2010). SA forestry exports are done in the form of newsprint paper, craft paper (uncoated), greaseproof paper, wood poles and wood charcoal.

## **f) Employment**

The Department of Agriculture, Fisheries and Forestry have 63 000 hectares of commercial forestry in Limpopo that provides 3000 jobs and more jobs are created in the forestry value chain. The overall employment by DAFF is 11 000 people in the sector (Limpopo Forestry Cluster Report, 2009). Direct and indirect jobs are also created in the pulp, paper, sawmilling, and mining timber. The industry also has a high number of dependents that benefit from employment in forestry.

## **g) Processing**

There is a large range of products that could be manufactured from forestry plantations to supply timber logs, processing timber, producing paper, wood chips, timber boards, mining timber, charcoal to designer furniture. The main challenge in forestry processing is the continued supply of timber from plantation forests.

**Primary forestry processing includes** sawmills, pulp and paper, treated and dried timber, chipboard manufacturing, floorboards and mouldings.

**Secondary forestry processing** includes furniture production and construction of products such as wooden doors and windows. Construction and manufacturing of wood products is an important market for local SMME as employment opportunities can be created in this sector.

### **Wood processing in the Limpopo province includes:**

- Komatiland Forests which is a wholly owned commercial unit of the national government. It runs the Timbadola Sawmill and three softwood sawlog plantations in the province namely Entabeni (which is 14 000ha), New Agatha (3 472ha) and Woodbush (3 606ha)
- Shefeera Timbers, which used to be part of the Mondi group, operates in Makhado and deals in sawn pine, treated poles, wooden pallets and retail
- The Industrial Development Corporation extended a debt facility in 2009 to a company in Tzaneen (Tzaneen Wood Plastic Composite) that aims to employ 250 people in the creation of fencing and decking material from wood plastic composites (Limpopo Business, 2011)



## **h) Industry and Sector SWOT Analysis**

### **Limpopo Forestry Opportunities**

The municipality of Letaba has identified an opportunity to establish a wood packaging enterprise to service ZZ2 and other tomato growers in an area. Department of Water Affairs and Forestry has strategies in place for the development of the forestry industry such as the Policy and Strategic Framework for Participatory Forest Management (PFM), which focuses on:

- Promotion of PFM planning at local government level within the framework of Integrated Development Plans (IDPs) and Local Economic Development (LED)
- Enhancement of the capacity of stakeholders through institutional strengthening, appropriate training and education that embraces traditional knowledge and skills

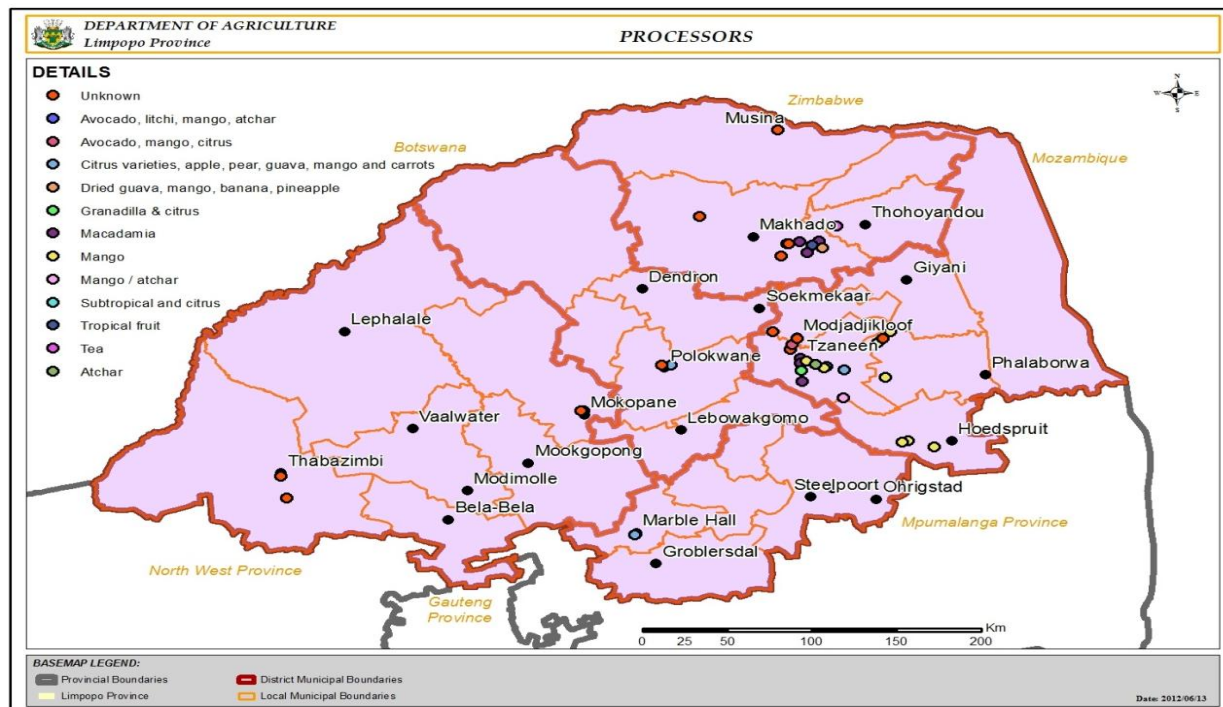
Other development strategies the province can take advantage of are the Forest Enterprise Development (FED) which is aimed at creating opportunities for people to utilise forests (indigenous forests, woodlands and plantations) and forest-based resources for economic growth. The Forestry BBBEE Charter has the main objective of promoting Broad-based Black Economic Empowerment the forestry Sector.

### **3.10 Limpopo Agri- Infrastructure**

This sub-section of the document will look at the existing agri-infrastructure in the Limpopo Local Municipalities that support agro processing activities. The top five local municipalities with the highest agri-infrastructure are discussed in the tables below and a comprehensive list of the province agri-infrastructure is available in *Annexure B*.

Map 3.24 illustrates the various agro processors in the province. The agro processors range from processors of subtropical fruit, citrus, macadamia and tea. The concentrations of agro-processing businesses are concentrated in the Tzaneen, Modjadikloof and Makhado areas, as these are high producing areas for horticulture commodities.

**Map 3.24: Agro Processing Activities for Fruit and Tea Products in the Limpopo Province**



Source: Limpopo Department of Agriculture 2012

Agro Processing Infrastructure such as millers, pack houses and processor are indicated in the Table 3.64. Polokwane Local Municipality has the highest number of millers, while Greater Tzaneen and Letaba Local Municipalities have the highest number of pack houses and processors, (only municipalities with high number of facilities are indicated, comprehensive/extensive list can be found in Annexure B).

**Table 3.64: Millers, Pack houses and Processors**

Millers		Pack houses		Processors	
Local Municipality	Number of facilities	Local Municipality	Number of facilities	Local Municipality	Number of facilities
Polokwane	6	Greater Letaba	15	Greater Tzaneen	12
Modimolle	5	Greater Tzaneen	10	Makhado	9
Thulamela	2	Maruleng	7	Maruleng	4
Makhado, Tzaneen, Bela Bela	2			Ba-Phalaborwa	4
<b>Total Millers in Province</b>	<b>24</b>	<b>Total Pack houses in province</b>	<b>36</b>	<b>Total Processors in Province</b>	<b>40</b>

Source: SIQ Information 2012

**Map 3.25: Miller in the Limpopo Province**



Source: SIQ Information 2012

Table 3.65 indicates the red and white meat abattoirs in the province with Makhado and Thulamela Local Municipalities containing a high number of red meat abattoirs. These abattoirs range from a daily maximum slaughter of 10 to 100 cattle, a comprehensive list detailing the name and the maximum daily slaughter of red and white abattoirs is in *Annexure A*.

**Table 3.65: Red and White Meat Abattoirs**

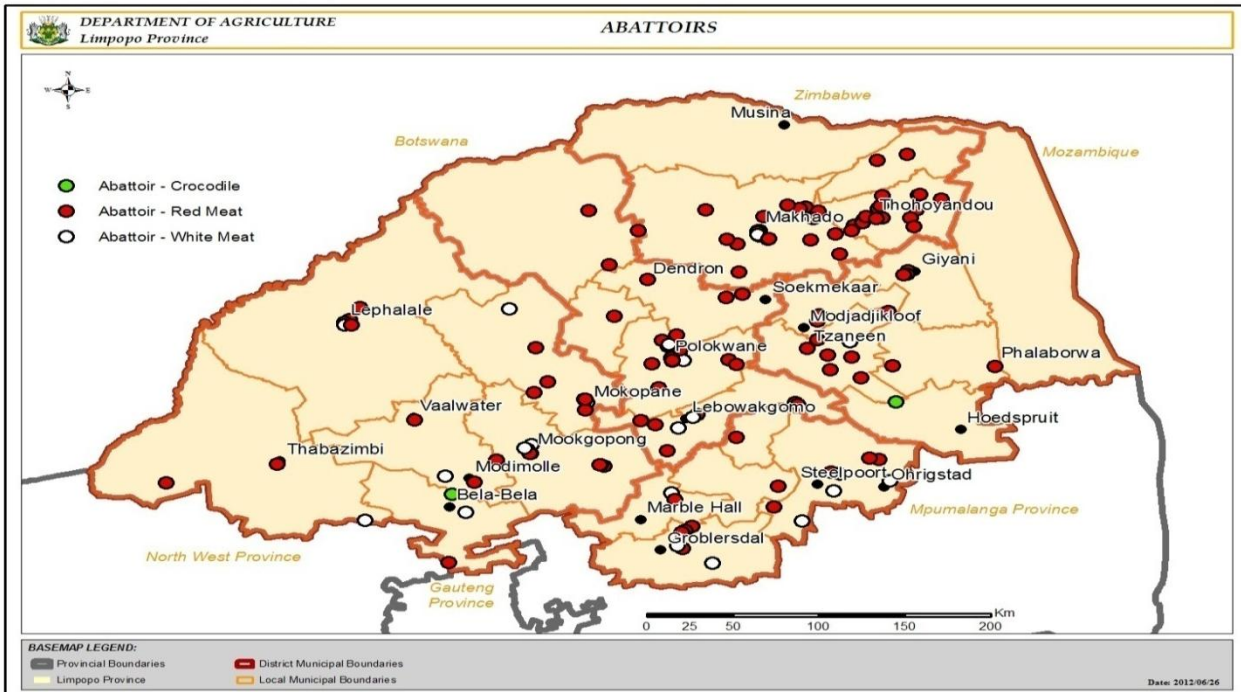
Red Meat		White Meat	
Local Municipality	Number of facilities	Local Municipality	Number of facilities
Makhado	23	Polokwane	5
Thulamela	22	Mookgopong	4
Polokwane	11	Greater Tzaneen	2
Greater Tzaneen	11		
<b>Total red meat abattoirs in province</b>	<b>123</b>	<b>Total white meat abattoirs in province</b>	<b>26</b>

Source: SIQ Information 2012

There is sufficient support for red and white meat abattoirs available on the national and local level. One of these associations is the SA Red Meat Abattoir Association which is a representative forum

for red abattoir owners in South Africa. The abattoir industry is responsible for the conversion of livestock to meat. This process remains critical to ensure safe meat products to consumers.

**Map 3.26: Red and White Meat Abattoirs in the Limpopo Province**



Source: SIQ Information 2012

Other support infrastructures for the meat industry are feedlots, indicated in Table 3.66. The beef industry in the province has access to 238 feedlots and two feedlots for the pig sector. These feedlots supply red and white meat abattoirs in the province.

**Table 3.66: Feedlots**

Beef		Pigs	
Local Municipality	Number of facilities	Local Municipality	Number of facilities
Molemole	61	Thabazimbi	1
Makhado	50	Modimolle	1
Polokwane	31		
<b>Total beef feedlots in province</b>	<b>238</b>	<b>Total pig feedlots in province</b>	<b>2</b>

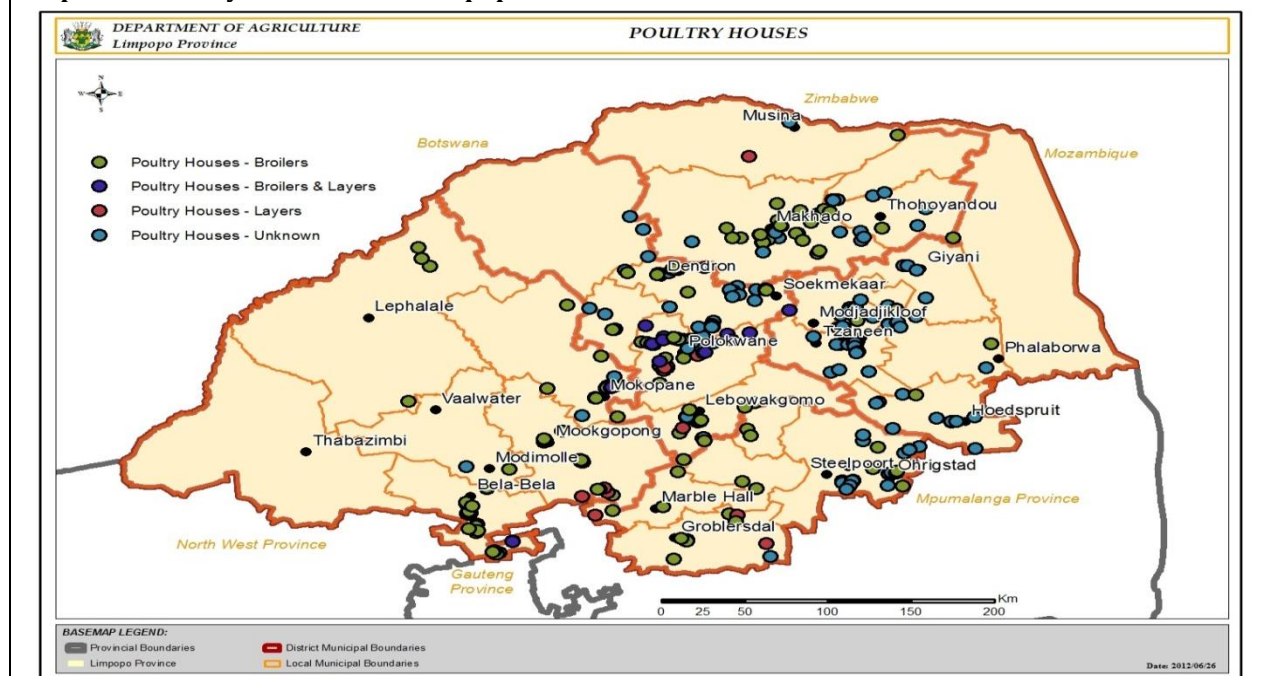
Source: SIQ Information 2012

Table 3.67 indicates broilers and layers infrastructure in the Limpopo province. The province has a total of 220 broilers in the province and 27 layers. The white meat industry in the province could use further marketing infrastructure and coordination of activities, to ensure existing activities are build on. The marketing and branding of the province's white meat can ensure market access by targeting the local market.

**Table 3.67: Poultry Houses**

Broilers		Layers		Broilers & Layers	
Local Municipality	Number of facilities	Local Municipality	Number of facilities	Local Municipality	Number of facilities
Molemole	32	Polokwane	18	Polokwane	21
Makhado	32	Mookgopong	3	Mogalakwena	21
Bela Bela	26	Elias Motsoaledi	2	Bela Bela	2
Mookgopong	25			Greater Letaba	2
<b>Total Broilers in province</b>	<b>220</b>	<b>Total layers in province</b>	<b>27</b>	<b>Total broilers and layers in province</b>	<b>46</b>

**Map 3.27: Poultry Houses in the Limpopo Province**



Source: SIQ Information 2012

Piggeries in the province are indicated in Table 3.68 with Bela Bela and Polokwane Local Municipality having the highest piggeries in their demarcated areas. Limpopo is the second largest producer of pork in SA and meat processing facilities can assist in value addition to take place within the province borders.



**Table 3.68: Piggeries**

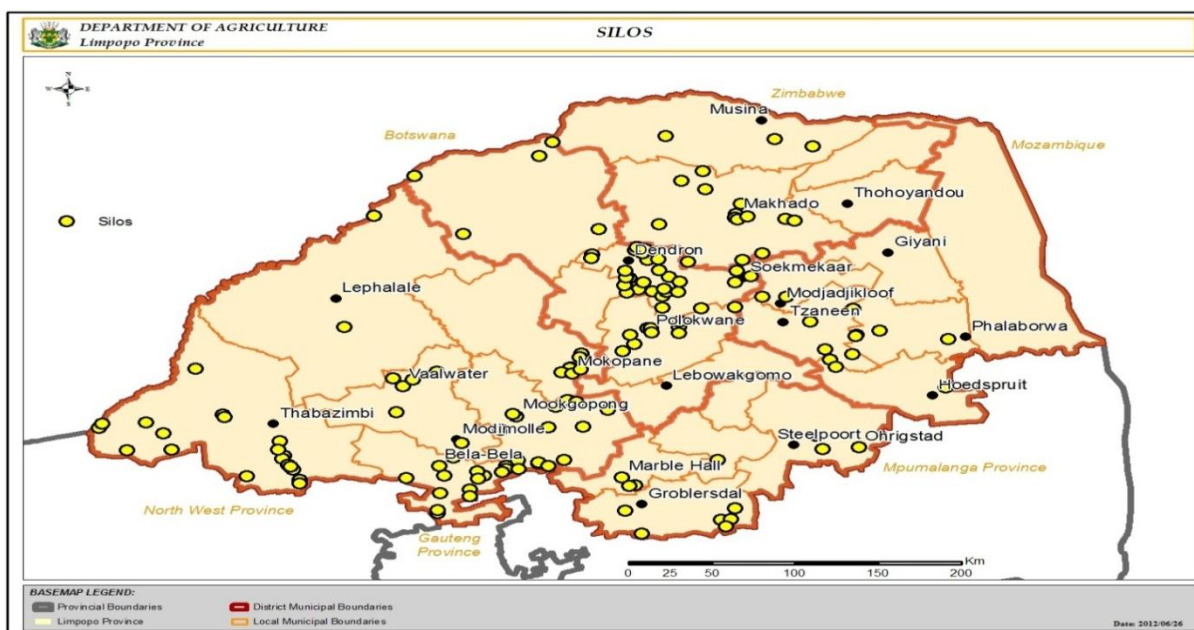
Local Municipality	Piggeries
Bela Bela	10
Polokwane	10
Mogalakwena	6
Mookgopong	5
<b>Total piggeries in province</b>	<b>42</b>

Source: SIQ Information 2012

Table 3.69 indicates silos in the province. A comprehensive list of silos; their names and products the process can be found in *Annexure C*.

**Table 3.69: Silos**

Silos	
Local Municipality	Number of facilities
Molemole	26
Thabazimbi	21
Mookgopong	15
Bela Bela	15
Makhado	14
<b>Total silos in province</b>	<b>154</b>

**Map 3.28: Silos in the Limpopo Province**


Source: SIQ Information 2012

Grain infrastructure prevents waste and ensures long term supply of important grains. Silos and grains storage infrastructure are essential for food security in the province. Access to grain storage and agro processing facilities for grain producers in rural areas can ensure local livelihoods and generate income for grain farmers.

**Infrastructure Implication for Agro Processing Industries:** advancing the agro-processing sector in the province can be done by upgrading and introducing the latest agro processing technology to both commercial and emerging farmers. Research and development support for the agro-processing industry is also vital to ensure long term sustainability of the industry.

As seen above there are a high number of subtropical and citrus processors in the Mopani and Vhembe district. Majority of the red and white meat abattoirs are located in the Capricorn and Waterberg districts. Coordinating and improving on existing infrastructure can allow for increased production volumes and ensure province is known not only for its natural resources but agro processed products as well. Agri-infrastructure can enhance the management and utilisation of food more so in rural areas. Agro-processing activities in the province can improve food production capacity of households and capacitate poor emerging farms with resources thus promoting food security and supporting the zero hunger programmes in the province.

# Limpopo Agro - Processing Strategy



**LIMPOPO**  
PROVINCIAL GOVERNMENT  
REPUBLIC OF SOUTH AFRICA

## **Section 4: Sector Opportunities and Value Chain Feasibility Analysis**



**URBAN-ECON**  
Development Economists



## Section 4: Sector Opportunities and Value Chain Feasibility Analysis

### 4.1 Introduction

Section 4 of the paper will analyse agro-processing opportunities in the various districts of Limpopo Province. The opportunity analysis criteria will consider the comparative advantage, export potential, existing processing activities and opportunities identified in the previous agro processing research done for the province. Understanding current activities in the agro processing industry will assist in optimal use of infrastructure and avoid duplication of activities. Consultation with various stakeholders also facilitated in identifying agro-processing opportunities.

### 4.2 Opportunity analysis criteria

The criteria adopted to identify agro-processing opportunities in the Limpopo province are:

**Competitive and Comparative Advantage:** a competitive advantage stems from the possession of a unique set of various assets (includes natural resources, human resources, locational advantages etc.) elements that give the area/region a competitive edge over other areas.

To have a comparative advantage simply means that a certain economy has the ability to render or produce a product or service more effectively and efficiently, than its counterparts. The main determinants of comparative advantage include:

- Hard infrastructure: roads, water systems, telecommunication and electricity
- Soft infrastructure: human capital, government development procedures and skill levels
- Spatial location: geographic location of the area relative to the markets and sources of inputs
- Resource base: available raw materials, quality of natural resources such as water, fertile soils, minerals, etc.

**Export Potential:** a high export rate is an indication of established market channels and the effective utilisation of markets external to the region or country. A sector that is export orientated also has a bigger potential market, and due to its greater market diversity, it is less vulnerable to

adverse conditions that may influence either the domestic or the international market at a certain point in time.

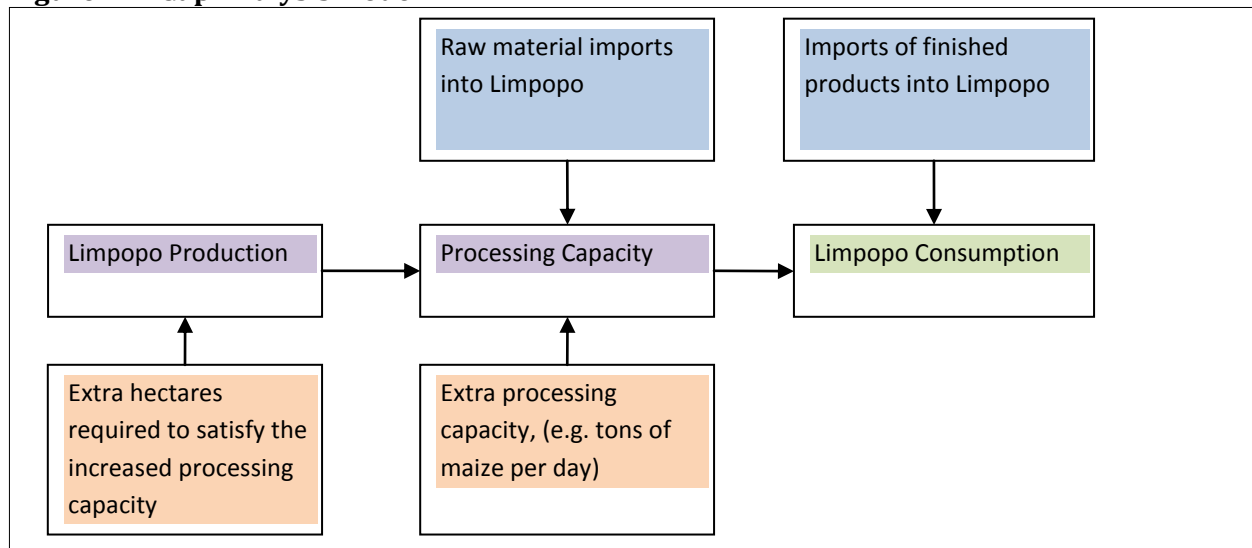
**Agro-processing opportunities identified in previous research projects:** previous research conducted for the Limpopo Department of Agriculture regarding agro-processing activities has to be considered and built upon, as some of the projects are incorporated into provincial strategies. The integration of proposed/existing projects will prevent duplication of activities and add to agglomeration of complementary industries.

**Gap Analysis:** investigates the existing activities and areas where the province is lacking in certain activities along the value chain. Imported products into the province from different domestic and international markets indicate that local production in the province is not able to meet local demand. The rates and goods imported indicate a gap for local commodity producers and agro-processing businesses to reduce import percentages into the province.

The imports of raw and finished products into the Limpopo province provide a guideline for gap analysis of various commodities. The province has high imports of miscellaneous food preparations, cereal, flours, starch, dairy and egg products, (this is discussed further under sub-section: Limpopo imports and exports).

Figure 4.1 indicates a gap analysis model used for examining opportunities in the agro-processing sector. The industry is heavily influenced by agriculture preproduction and volumes produced for certain commodities. It is essential for agro-processing activities to target niche markets and be market demand orientated.

**Figure 4.1: Gap Analysis Model**

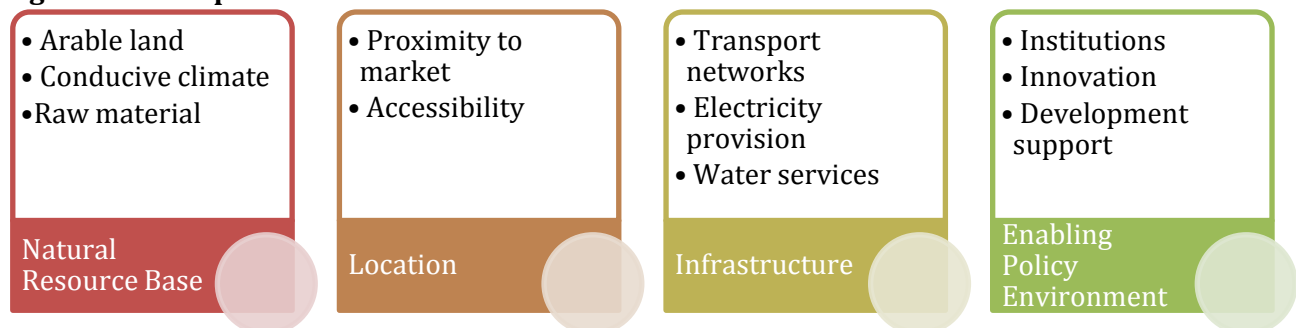


Source: Limpopo Department of Agriculture

## 4.2.1 Competitive and Comparative advantage

The productivity and capacity of a location determines its competitiveness potential. Figure 4.1 indicates the competitiveness criteria and its sub criteria used to analyse competitive and comparative advantage.

**Figure 4.1: Competitiveness Criteria**



### › Natural resource base

**Arable land:** Limpopo province has abundance of agriculture resources and the climate allows for production of a wide variety of agriculture produce. The Department of Agriculture state that 37.7% of soil in the Limpopo province is suitable for arable farming. This also presents an opportunity to

increase production volumes and further commercialisation of emerging farmers. The arable land in the province allows for tribal areas and land delivered through land reform programs to revitalise and expand agriculture production. The agro-processing industry will require increase in agriculture volumes to be sustainable in the long term.

The high competition for land in the province is contributing to increased pressure on agricultural land prices. The high cost of agriculture land also threatens the sustainability of agriculture as an industry. The Limpopo Department of Agriculture has embarked on an agro ecological zoning study resulting in a policy to protect and optimise the use of agricultural land so that prime agricultural land is used beneficially for food production.

The importance of land ownership for cattle farmers is illustrated in the Limpopo IDC Nguni Cattle programme where access to obtain a loan scheme requires proof of land ownership, thus innovative ways of communal land ownership need to be explored.

**Conducive climate:** even though the Limpopo province is one of the country's primary producers the farmers in the province are still influenced by floods, droughts and unstable climate conditions. Innovative systems have to be implemented to mitigate natural disaster and be continuously improved. The province's climate provides for a variety of commodities to be produced throughout the year such as the warm climate of the far north allows for production of vegetables throughout the year.

**Raw material:** the locations ability to produce certain commodities is a determinate of where agro-processing activities will be located. The agro-processing activities have to accommodate for commodities grown in the specific location. A need exist for localities to be able to expand hectares planted and increase commodity production.

## ▸ Location

**Proximity to markets:** Limpopo has various advantages with regards to proximity to markets as it is located close to South African Development Community (SADC) regions. The province is also in close proximity to large Gauteng markets, creating further opportunities for local producers.

**Accessibility:** accessibility is determined to a large degree by the transport networks, which is currently seen as poor/ inadequate in some rural areas of the Limpopo province.

## › **Infrastructure**

**Transport network:** the N1 and various corridors in the province provide for a linked road network system that is able to transport freight to various districts. Rail infrastructure exists in the Hoedspruit and Ba-Phalaborwa Local Municipality but systems have poor reliability and functionality. The increasing pressure on the road network will require constant monitoring and improvement of roads and rail networks in the province.

**Electricity provision:** concerns were highlighted regarding electricity availability and high costs of electricity in remote rural areas. The high cost of electricity presents an opportunity to explore green initiatives into providing alternative energy sources.

**Water services:** The availability of water and irrigation systems is vital to meet the production demand. Efficient irrigation infrastructure for the emerging sector and small scale farmers is required to ensure increase in production volumes. It is imperative to build on irrigation programmes in the province such as the Rehabilitation of Small holder Irrigation Schemes (RESIS) and Comprehensive Agricultural Support Programme (CASP) to enhance the development of small irrigation projects. Consultation with various commercial farmers indicated high electricity cost linked to irrigation systems as a factor escalating input costs.

## › **Enabling environment**

**Institutions:** the agro-processing industry is a national development priority which has to be supported by all government spheres. Institutional support for the agro-processing industry is important more especially on the local level where technical and infrastructure development are most required. Supporting policies framework and legislation for developing the agriculture sector can assist in creating an enabling environment for the agro-processing industry to thrive. Farmers also require assistance in keeping abreast with changing technologies in the agriculture sector and quality certification.

**Development support:** the majority of farmers find it difficult to obtain financial and technical support which in turn hinders production. There is sufficient development support on provincial level as agriculture and agro-processing are a provincial priority. The Limpopo province already has **combined budget support for rural development** that will be used to address and support the following:

- › Veterinary Services for the prevention and treatment of livestock diseases
- › Expansion of the Mokopane Veterinary Laboratory
- › Construction of 52 animal handling facilities
- › Implementation of four projects in the agricultural hubs
- › The grafting of 17 000 fruit trees under horticulture
- › The supply of inputs to 338 projects
- › The implementation of the Integrated Poultry Production Model
- › Continuous support for the IDC Nguni Cattle project
- › Implementation of phase one of the Moletjie commercial Dairy Project
- › Provide support to livestock farmers by providing abattoir cooperatives (Limpopo Department of Agriculture, 2011)

Agro-processing activities can contribute towards rural development, provided actions are integrated for utmost use of local resources. Farmer development programmes to improve skills, farm management and technical production need to be emphasised as there create a conducive environment for local production.

**Innovation:** The ability of a locality to absorb new knowledge and adapt imported technologies will influence the success of new projects introduced. Important relationships can exist between farmers and various educational institutions in the province, such as the Limpopo Agro-Food Technology Station.

## 4.3 Commodity Value Chains Analysis and Feasibility

This sub-section will examine the agro-processing potential in the Limpopo province. The value chain of each commodity will be discussed, outlining the current gaps and agro-processing opportunities in the province. The potential agro-processing opportunities, which can also be

considered as market gaps, are highlighted in green and the medium development opportunities are highlighted in red.

The **spatial location of agro-processing activities** was informed by the following factors:

- › Competitiveness Criteria (natural resources, location, infrastructure, enabling policy environment)
- › The commodity profile (status quo)
- › Agriculture development policies on national and provincial level
- › Hectares/ area planted per commodity to support agro-processing opportunities
- › The current and future planned LED/IDP projects

**Other components** taken into consideration are:

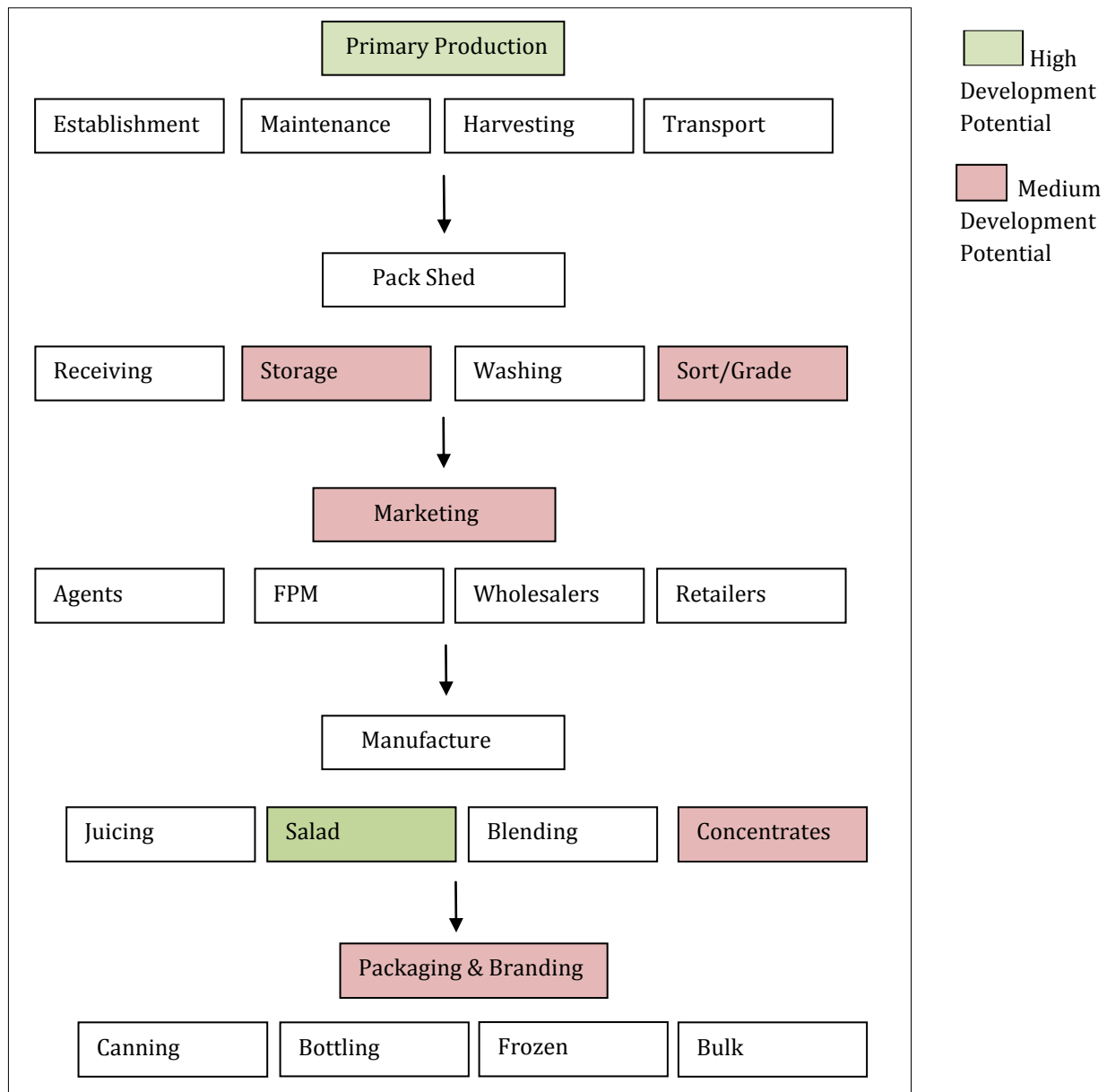
- |  |                            |
|--|----------------------------|
| › Technology and production processes            | › Employment opportunities |
| › Subcontracting potential                       | › SMME development         |
| › Local demand                                   | › Agglomeration advantages |
| › External factors and supporting infrastructure | › Sectoral innovation      |

The identification of spatial locations also considered existing agro-processing activities, market gap and agri-infrastructure in the province. The important factor considered in identifying locations for agro-processing activities was the **feasibility of a location to process and maintain agro processing activities**.

## 4.3.1 Citrus Value Chain

Citrus includes several species, mainly oranges, grapefruit and lemons.

### Citrus Value Chain



Source: Department of Agriculture, 2010



## a) Existing Processors of Citrus in the Limpopo province

Citrus processing in the province happens in the form of juices, fruit pulp, concentrates and blending it with other fruits. The final product is packaged and sold as juice products to retailers or sold as bulk concentrate for further processing to be done by big brand names such as Ceres, Parmalat, Coca-Cola and other South African juice packers. The province also manufactures packaging material for local juice processors and fertilizers for plant production.

Table 4.2 indicates the major citrus processors in the Limpopo province. The table indicates the products the business processes, capacity, employees and the market the sell products to. The majority of the juice processors incorporate other subtropical fruit in their processing to ensure production throughout the year.

The juice processors in the Limpopo province are able to compete nationally with other companies in the industry as the target big brand multinational companies such as Ceres, Clover and Coca Cola, who further process bought concentrate into juices and other products. High volumes in the form of concentrate are exported and processed further, in some cases imported back to SA as finished juice products.

The expansion and development of citrus processing facilities will mainly benefit emerging and small scale producers to prevent post-harvest loss and wastage. Produced products can be branded for local market making products within reach to local communities. Local markets include religious and community activities such as stockvels, weddings, NGO, home base care, government institutions (jails, clinics, hospitals, and schools), spaza shops, caterers and the informal market.

**Table 4.2: Limpopo Citrus Processors**

Company	Region/Locality	Product	Capacity/ Volumes	Employees	Market
Granor Passi	Letsitele, Tzaneen Mopani district	Bulk concentrate of citrus, mango, guava and prickly pear	220 000 tons of fruit per annum (from different factories)	30 Permanent	Export 60 -70% to Japan, Germany, EU (small amounts) and Dubai
	Polokwane, Capricorn district	Essential oils but done on a small scale 3litres per ton	Letsitele Factory Citrus 110 tons Mango 4000	Peak seasons 150	Sell concentrate to local markets such as Ceres,

Company	Region/Locality	Product	Capacity/ Volumes	Employees	Market
			tons Prickle Pear 1000 tons  Guava 5000 tons plus processed the branch in Polokwane		Paramalat, Clover which the process further into juice
Letaba Citrus Processors (LCP)	Letsitele, Tzaneen, Mopani district	Subtropical and Citrus concentrate pulp	60 000 tons a year of citrus  13 000 tons a year of subtropical fruit	146 Permanent both in processing and juice plant  60 Seasonal workers	Majority of the market is local (Coca-Cola, McDonalds, Ceres, Pacmar and Bromo), very little citrus is export (8% which is mainly grapefruit concentrate products, since local demand is low for grapefruit)
Limpopo Fruit processing, operating under Cape Fruit Processors	Hoedspruit, Mopani District	Citrus concentrate and Mango single trends (where juice is extracted from mangoes, with no further processing)	40 -45 000 ton for full operation	55 (In season)  5-10 (out of season)	Export 80%  20% Local market (Parmalat, Ceres etc)
H.F.P (previously Bonanza)	Hoedspruit	Orange Juice, Lemon Juice Mango Pulp, Guava Pulp, Paw Paw Pulp, Passion Fruit Pulp, & Mango Artchar	12,000 ton Fruit Per Annum	55 employees	South African Juice Packers

Some of the competitors in the juice manufacturing industry are indicated below, the strength of these competitors is that they are well established household brands and have high capital to inject

into branding and marketing. The juice processors in the province are able to accommodate for local, provincial and national retailers, thus making their market reach nationwide.

- |               |                  |                     |              |
|---------------|------------------|---------------------|--------------|
| › All Gold    | › Bibo           | › Dairy Belle       | › Hall's     |
| › Appletiser  | › Ceres          | › Fruitopia         | › Fruittree  |
| › Liquifruit  | › Just Juice     | › Minute Maid       | › Pure Joy   |
| › Clover      | › Bonnita Cabana | › Bonnita All Juice | › Campbell's |
| › Capri-Sonne | › Krush          | › Fortris           | › Genfen     |
| › Gibson's    | › Polar Ice      | › Sunblast          | › Vitingo    |

## b) Citrus Agro-Processing Opportunities

Commodity	Products
<b>Orange</b>	<ul style="list-style-type: none"> <li>› Salads</li> <li>› Juice</li> <li>› Orange Blossom Honey</li> <li>› Orange Blossom Water</li> <li>› Sweet Orange Oil</li> </ul>
<b>Lime and Lemons</b>	<ul style="list-style-type: none"> <li>› Dehydrated and powdered</li> <li>› Canned lemons and limes</li> </ul>
<b>Grapefruit</b>	<ul style="list-style-type: none"> <li>› Grapefruit seed oil</li> <li>› Grapefruit peel oil</li> </ul>

The citrus industry has sufficient employment opportunities for local SMME as the can produce fertilizer, packaging material and nurseries to provide the industry with seedlings. Expanding cultivation by assisting current farmers in producing quality fruits can assist them in market access and ensure processing facilities have sufficient supply.

## **Other opportunities in the citrus industry include:**

- › Further expansion of current emerging citrus farmers, through technical, research, marketing support offered by SA Citrus Growers Associations
- › Storage and packing facilities for emerging sector
- › Upscale current citrus processing through increased raw material
- › Processing opportunity for small scale farmers to produce own juice and brand it for local sales in local communities/areas
- › Opportunity for SMMEs to produce packaging and branding material

## **c) Suitable Spatial Locations for Expansion and Development**

**Areas suitable for citrus agro processing activities**, considering competitive advantage, current juice processing activities and hectares planted for citrus production include:

- › Greater Tzaneen Local Municipality
- › Greater Marble Hall Local Municipality
- › Ba-Phalaborwa Local Municipality
- › Maruleng Local Municipality
- › Musina Local Municipality

## **d) Technology**

The technology for citrus juice processing is widely available in SA, as the juice industry is well developed. The technology provides for juice processing to be conducted on a small to large-scale. The packaging material can be sourced locally from SMMEs, manufacturing businesses and other accredited packaging companies include Nampack.

Citrus processing technology required will include:

- › Washing, brushing, selection and grading machines
- › Juice and oil extraction machines
- › Juice refining and pasteurization machines

- › Concentration installations separating water and allowing for juice preservation as well as transportation
- › Laboratories for testing and sampling

**Other preservation technologies include:**

- › Thermal processing
- › Flexible foil/plastic pouches instead of tin cans
- › Aseptic processing
- › Steam boilers

**e) Gap Analysis**

Citrus farmers in rural or distant locations are still experiencing post-harvest wastage as fruit are not able to reach market on time in proper quality. The processing activities for citrus and other subtropical fruit would benefit local producers.

A citrus juice extraction feasibility study conducted in 2006 performed a survey on Ready to Drink (RTD) fruit juice consumption based on a sample of more than 650 000 people in the Limpopo Province. The survey revealed that approximately **40% of the Limpopo population consume fruit juice**, of which

- › 23% consume light amounts (1 to 2 drinks per week)
- › 10% consume medium amounts (3 to 4 drinks per week) and
- › 7% consume heavy amounts (more than 5 drinks per week).

This then amounts to an average monthly consumption of **5 drinks per person per month (or 1.25 litres of fruit juice per month per person)**, indicating a high market demand for juice products.

Juice processing activities would provide agriculture students an opportunity to practice and find employment within the agro-processing sector in the province. The majority of the processors in the province sell high volumes of citrus as a concentrate or pulp, and further processing into juice

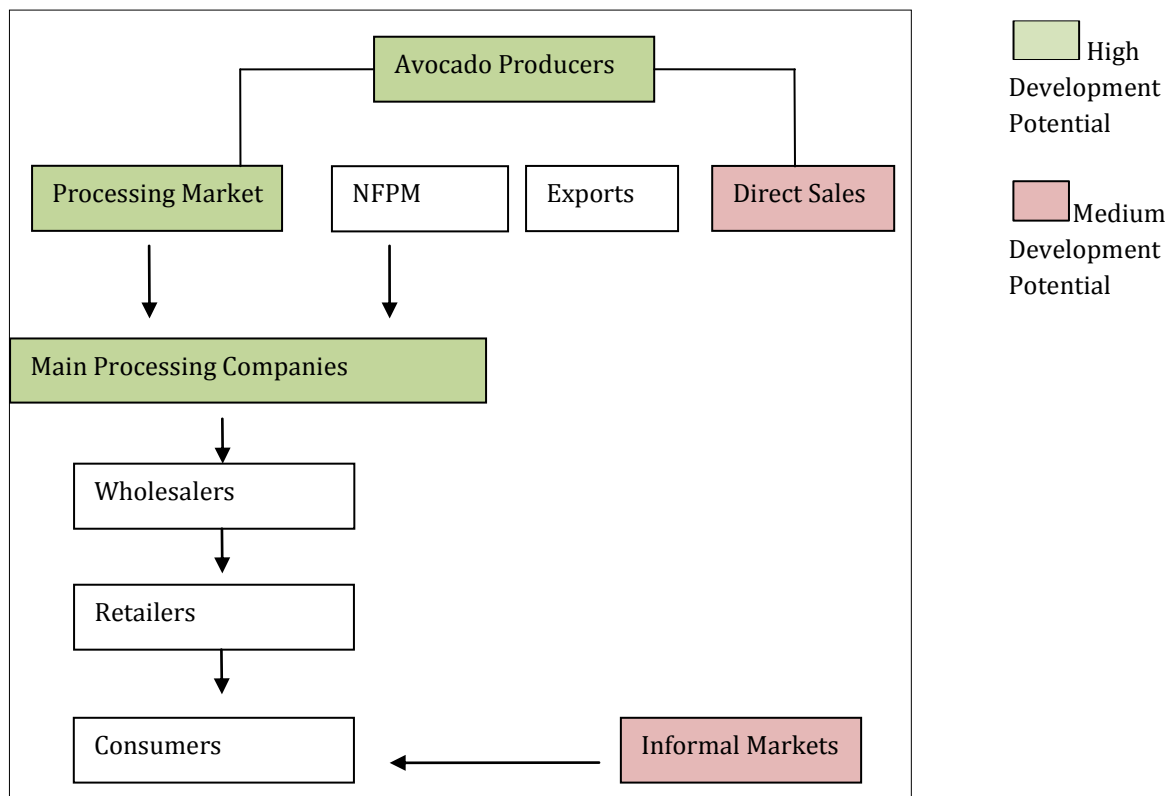
products is done outside the province border indicating an opportunity for further processing activities in the province.

The gap for production and testing of the final end product such as juices, fresh salads, and dehydrated powder can be implemented by local agri-businesses. Essential oil produced from citrus for pharmaceutical use or for use as a flavouring agent requires a niche market which is hard to enter and very few companies purchase high volumes. The market for essential oil has to be developed through partnership with various pharmaceutical companies before processing of essential oil is embarked upon.

## 4.3.2 Subtropical Value Chain

Subtropical fruits include avocado, bananas, litchi and mangoes.

### i. Avocado Value Chain



Source: Department of Agriculture, 2010

### a) Existing Processors of Avocado in Limpopo

Currently high volumes of avocado are being exported and sold on the local markets. The processing of avocado taking place in the province is in the form of avocado puree/guacamole, avocado oil which is edible or used in cosmetic production. Room for further processing of avocado products exists in the province, as there is a growing niche market for natural cosmetics and organic food products.

Avocado processors in the province are indicated in Table 4.3. Westfalia is the largest processor of avocado in Limpopo, with 2 000 tons of avocado oil and 3 000 tons of avocado puree. The market for the puree is local catering companies such as Wimpy, KFC and local retailers such as Woolworths; Pick n Pay, Checkers and puree exports to the USA and Europe. The avocado oil is sold to local retailers, Europe, USA and Israel market.

The medium scale processors of avocado market to local retailers such as spar for their edible avocado oil and local pharmacies for cosmetic products. Current avocado processors are able to meet demand of the local client base and are establishing their brands in local and national retail stores.

Processing volumes of avocado have increased over the years as indicated in earlier sections and further expansion into edible and cosmetic products can be investigated to target increasing national and international market demand. Research and development into new product development such as avocado vitamin pills and natural face cosmetic products can present an opportunity for capacitated SMMEs.

**Table 4.3: Avocado Processing Facilities in the Limpopo Province**

Processing Facilities in Limpopo	
Name	Products
Westfalia	Avocado oil, puree, guacamole, dried mango and juice
Del Avo	Edible avocado oil, body lotion, bath oil, foam bath, shower gel, liquid hand wash, shampoo, conditioner and soap bar.
Specialised Oil	Avocado oil

## **b) Avocado Agro-Processing Opportunities**

- Expanding existing avocado farming initiative
- Processing of avocado oil for both food and cosmetic purposes (development of new cosmetic products using avocado oil)
- Processing of avocado into guacamole

## **c) Suitable Spatial locations for expansion and development**

Areas suitable for avocado processing activities and further expansion of avocado farming are:

- Greater Tzaneen Local Municipality
- Makhado Local Municipality
- Thulamela Local Municipality

These Local Municipalities have adequate production capacity to support avocado processing activities and expand avocado production volumes. The agri-infrastructure in these Local Municipalities will be able to support agro-processing activities and areas are well located to access various markets.

## **d) Technology**

- Biodiesel processing equipment
- Cooking oil pressing machine for edible avocado oil
- Oil refinery
- Product development

These technologies are available in the country and are easy to operate, suitable for small to medium businesses. The machines can be used to process a wide variety of other oil and protein seeds creating multiple uses.

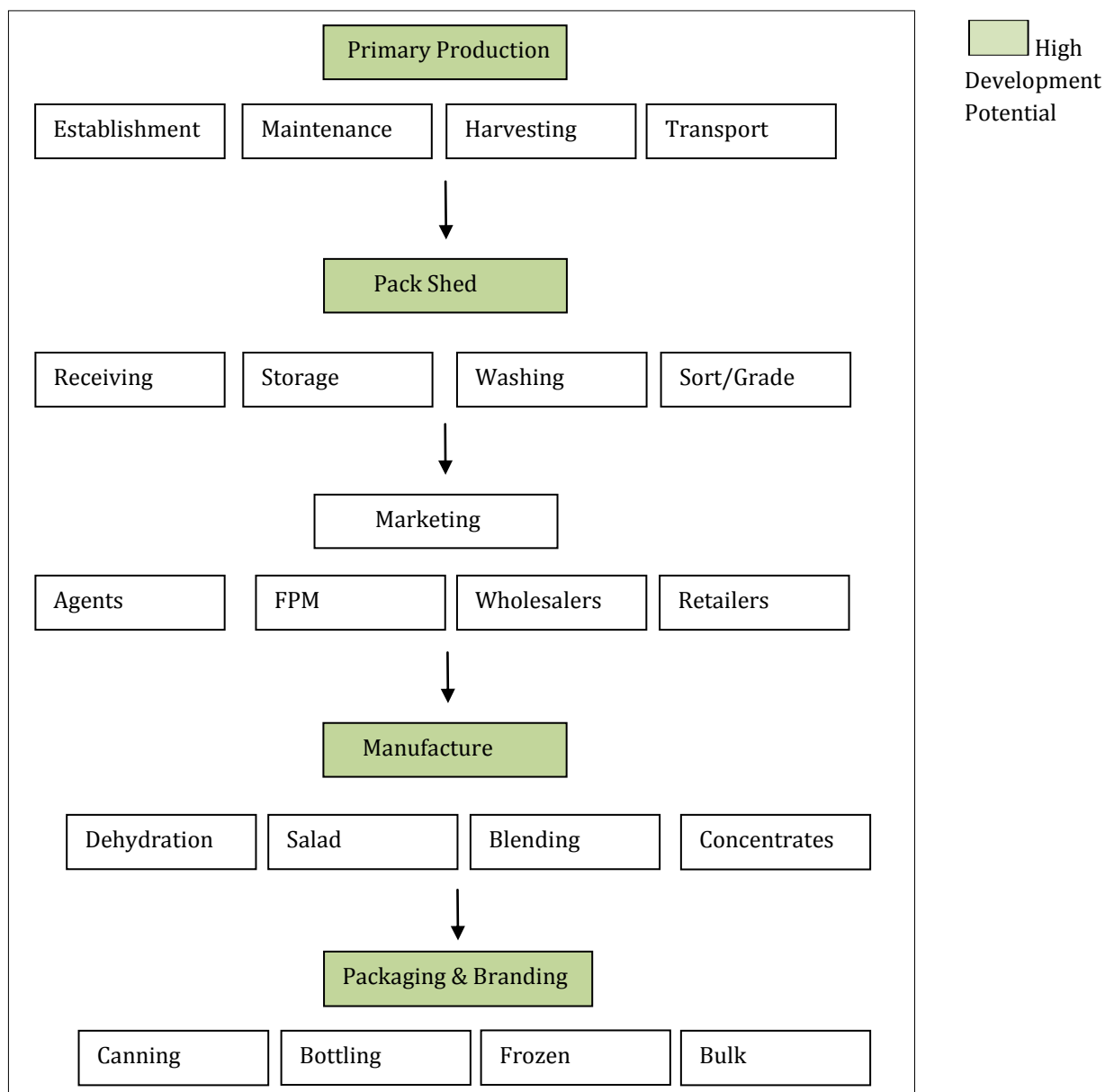


## **e) Gap Analysis**

Growing markets exist for avocado natural based cosmetic products and new innovative product development. Current processors such as Del Avo manufacture products locally but testing and quality assessment of products is done in the Mpumalanga province, where they have another branch. Expanding the current production and processing capabilities of emerging and medium scale avocado farmers can create bigger pool of avocado processors which in turn will result in erection of avocado processing infrastructure plants being feasible on a large scale.

As indicated earlier in the document volumes used for avocado processing have increased over the years as customers are beginning to use avocado in variety of products as it is not only seen as a commodity used for food consumption but also used in cosmetic products and medicinal purposes.

## ii. Banana Value Chain



Source: Department of Agriculture, 2010

## **a) Existing Processors of Banana in Limpopo**

Banana fruit in the province is mainly sold on the local market and to Nation Fresh Produce Markets. Processing of the banana fruit happens at a minimal level as the fruit is mainly dried with other fruits. A few manufacturers in the province incorporate banana in their production, such as Valley farms and Levubu Dried Fruit. Levubu Dried Fruit, located in the Vhembe district, specialises in drying fruit without colorants or preservatives. The company dries bananas mechanically to consistently supply the markets and the dried banana is packaged into 100g/500g and 1kg packs.

Further value addition that takes place in the province for the banana fruit include pack houses and storage facilities for the local market. Therefore room exist to grow banana processing in the province as ample banana volumes are produced in the province. Banana is also used to blend in with other food products and dried banana leaves can be used to weave baskets.

## **b) Banana Agro-Processing Opportunities**

- Banana puree
- Dried and dehydrated banana
- Fried green banana

The opportunities for banana fruit processing can also be found in banana production, tissue culture, input supplies such as fertilizers, chemicals and irrigation equipment, carton manufacturing, refrigeration, transport and marketing agents. The banana processing industry can only be successful if banana volumes in the province are increased and maintained.

The projects considered and incorporated from previous agro-processing research conducted by the Limpopo Department of Economic Development, Environmental and Tourism include:

- There is sisal production in the Letaba area which together with banana leaf fibre can generate another industry for rural people in the areas of Vhembe and Mopani Districts e.g. making of baskets woven from banana and twine/sisal

- › **An art and craft industry can be established using banana by-products such as the leaves**
- › Abandoned pack houses in the respective municipalities can be revived

## **c) Suitable Spatial locations for expansion and development**

Suitable locations for banana processing activities, as areas have high hectares planted for banana production, are:

- › Levubu/ Soutspansberg
- › Greater Tzaneen and Makhado Local Municipality
- › Greater Letaba Local Municipality
- › Possible expansion of banana farming can happen in the Ba-Phalaborwa, Greater Giyani and Thulamela Local Municipality

## **d) Technology**

- › Banana dryer
- › Banana slicers
- › Fruit pulp machines/extractors
- › **Fruit puree processors**
- › **Supporting infrastructure** can include ripening and fresh fruit cold rooms

Other technologies include:

- › High quality drying, a major alternative for SMMEs to add value to raw materials
- › Spray drying transforming liquid into dry free flowing powder
- › Microwave drying

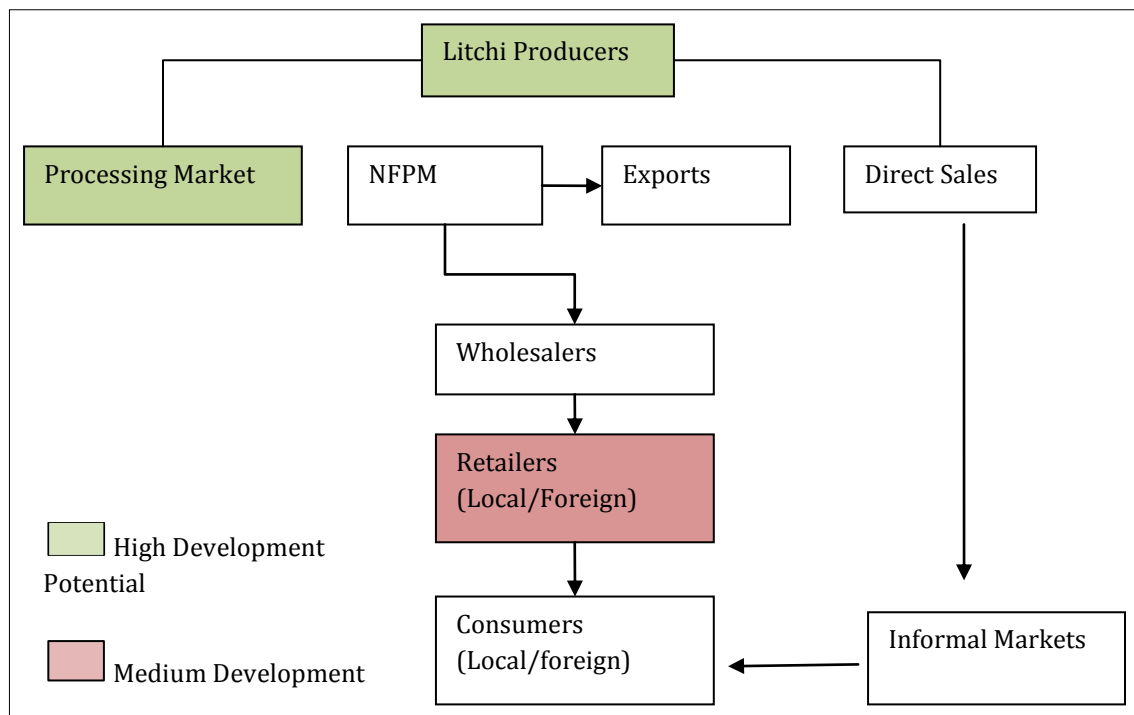
The technology and production processes are easily adoptable to local SMME and business enterprises.

### e) Gap Analysis

The processing of banana fruit happens on a very small scale in the province and room for value addition exists. There is currently a high market for banana puree especially in the baby food industry, hospitals and bakery industry. High volumes of dried banana fruits are eaten as snacks and put in breakfast cereal. The opportunity to use banana in the arts and craft industry is a significant gap which local producers can meet.

**A gap exist for establishing banana pack shed facilities** (receiving, washing, sorting and grading) more so for emerging banana farmers. The production of bananas can be increased as arable land is available, especially in Levubu, to meet the local consumption levels in the province and other national fresh produce markets.

### iii. Litchi Value Chain



Source: Department of Agriculture, 2010

### a) Existing Processors of Litchi in Limpopo

Litchi is processed and blended with other fruits. The majority of litchi processing in the province is done by juice processors that mix the fruit with other products such as mango and oranges. Therefore the bulk of litchi processing in the province is through juicing with very low volumes used for canning or drying.

### b) Litchi Processors in Limpopo

Table 4.4 indicates juice processors in the Limpopo province that integrate litchi with other fruits in their juice processing.

**Table 4.4: Litchi Process in Limpopo**

Litchi Processors in Limpopo	
Valley Farms	Levubu
Granor Passi	Polokwane

### c) Litchi Agro-Processing Opportunities

- Canned litchi
- Dried and dehydrated
- Litchi concentrate

### d) Suitable Spatial locations for expansion and development

- Great Tzaneen Local Municipality
- Makhado Local Municipality

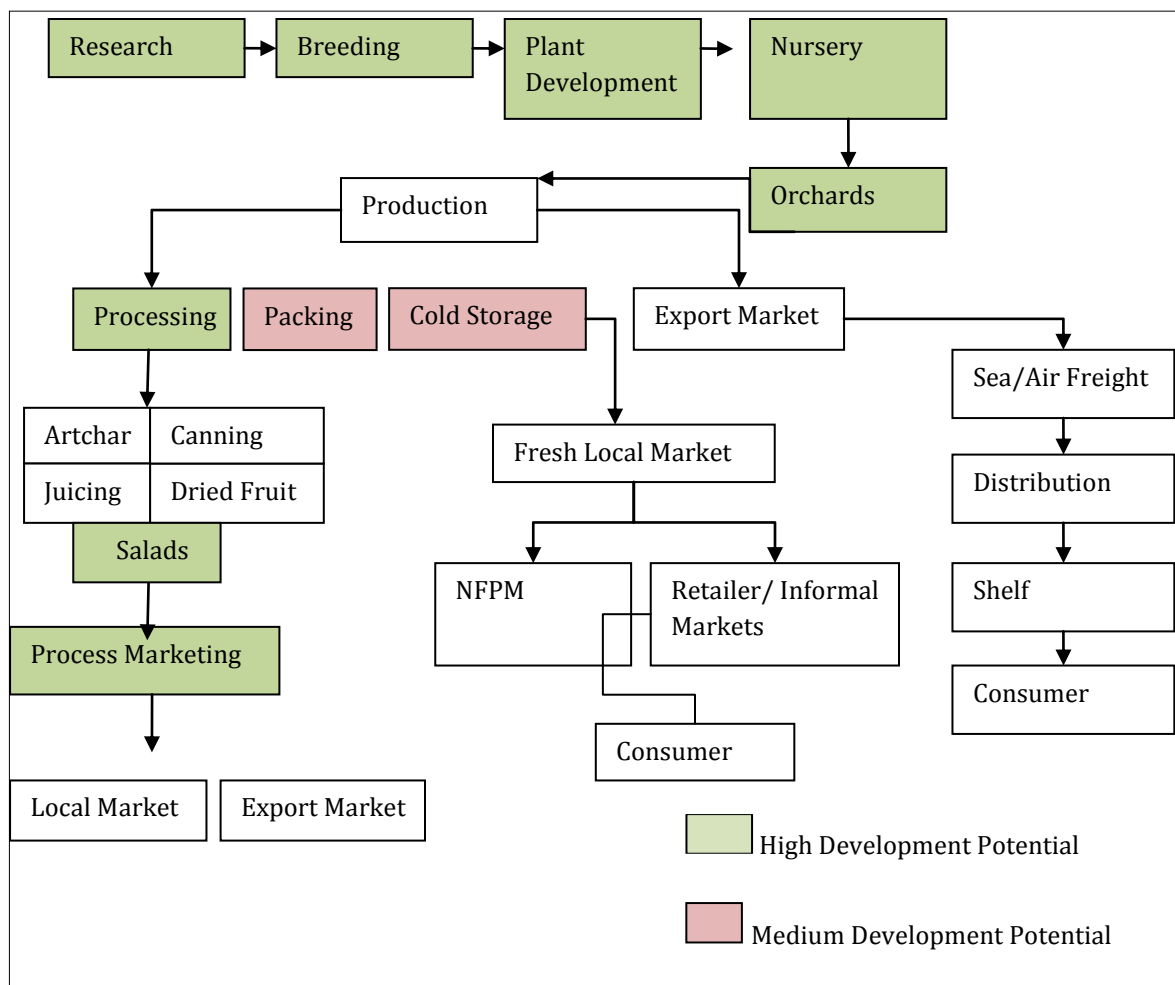
### e) Technology

- Tray drying and dehydration machinery powered by electricity
- Automatic can filling and seaming lines

## f) Gap Analysis

Litchi fruit is integrated with processing of other fruits for juices. The opportunity that exists for the litchi industry is to increase production for sales in the local and export markets. The earlier sections indicated that large percentages of litchis are used for the export market. The demand for litchi is the fruit in its natural form and juice, therefore canned and dehydrated litchi can be processed with other fruits instead of standalone activities.

### iv. Mango Value Chain



Source: Department of Agriculture, 2010

### a) Existing Processors of Mango in Limpopo

There are numerous mango processing facilities in the province producing mango juice, concentrate, dried mango and achar. These processing facilities range from medium to large scale, with some facilities processing up to 100 tons of mango pulp per annum. Table 4.5 indicates mango fruit processors in the Limpopo province.

**Table 4.5: Mango Processors in the Limpopo Province**

Mango Processors		
Name	Area/Locality	Product
African Realty Trust (LCP)	Tzaneen	Juice and juice concentrate
Bavaria Fruit Estate	Tzaneen	Mango products
Beerseun Boerdery	Tzaneen	Mango products
Big Six	Thohoyandou	Process green mangoes into achar
Netrac trading as Valley Drying	Levubu	Mango drying  Experimenting with other fruits such as avocado oil, banana drying
Dando	Tarentaal	Achar
Garoro	Letsitele	Mango products
Granor Passi	Polokwane	Mango products
Hoedspruit Fruit Processors	Hoedspruit	Juice concentrate
Westfalia Fruit Products	Tzaneen	Juice and dried fruit
Landman Droë Produkte	Letsitele	Dried fruit
Levubu Artchar Verwerkers	Levubu	Achar
Mango Magic Achar	Tzaneen	Achar
Matana Droë Produkte	Letsitele	Dried fruit
Mohlatsi Dried Fruit	Hoedspruit	Dried fruit
Morokalotsi Achar	Tzaneen	Achar
Limpopo Value Adding (M-Pak)	Musina	Mango products
Rabeja	Makhado	Mango products
Unifruit Blyderivier	Hoedspruit	Mango products
Valley Farms Processing	Levubu	Process litchi, mango, guava into juice concentrate and pulp
New Dawn Farming Enterprise	Hoedspruit	Mango products
Winlake	Hoedspruit	Mango products
B&S Dried Fruit	Tzaneen	Dried mango
MH Christie	Tzaneen	Mango products
Sadek	Hoedspruit	Mango products
Alliance Fruit	Hoedspruit	Mango products
Makhutshwe CPA	Maruleng	Mango achar



Mango Processors		
Name	Area/Locality	Product
Deer Park Estate	Deer Park, Tzaneen	Mango achar
Didubatse	Deer Park, Tzaneen	Mango achar
Bahlubruue	Tzaneen	Mango achar

The mango processors in the Limpopo province have a competitive advantage in that the province is a large producer of mango fruits and have ease of access to natural resources. The production of mango juice is incorporated with other fruit juice flavours and major competitors include Liquifruit, fruittree, minute maid, clover, no name retail brands and so forth. Potential exists in the province for small scale processors to target local markets.

#### b) Mango Agro-Processing Opportunities

- Canned mango
- Dried and dehydrated
- Mango skin cream
- Research and development into mango cosmetic products
- Expand existing mango juice production and mango pulp processing

Further opportunities in the mango industry include increasing current production levels by assisting farmers increase their production yields. This can be done through mango research, breeding and plant development more so for the mango emerging sector and land claim after care projects. Local SMME in the province can participate in the production of packing material, storage facilities and distribution technologies for the mango industry. The mango processing sector has the highest intake of mango distribution and further processing activities can be done by SMME provided adequate infrastructure is in place.

Past research conducted for the **agro-processing industry in the Limpopo province** recommend the following developments for the mango processing industry:

- Processing plants could be established in each of the mango growing areas of the Province: Letaba, Phalaborwa and Soutspansberg
- Small scale growers need assistance with marketing strategies/ access to markets. This could be addressed with the establishment of buying depots linked to processing plants

## **c) Suitable Spatial locations for expansion and development**

Localities where mango processing projects would be feasible as these areas have adequate production volumes, room to expand the area planted and a competitive advantage are:

- Greater Tzaneen Local Municipality
- Maruleng Local Municipality
- Makhado Local Municipality
- Letaba and Soutspansberg
- Ba-Phalaborwa Local Municipality

## **d) Technology**

The technology used for mango processing is available in the SA market and current mango processors in the province are using state of the art technology. The small scale mango processors can introduce some of these technologies to assist them in meeting quality standards and increase production.

### **Preservation Technologies include:**

- Commercial drying machines
- Solar drying methods
- Microwave (MW) heating: the heat penetrates within the food, heating the interior more rapidly
- Chilling and freezing: rapid lowering of the temperature of foods to less than 8°C

## **Packaging technologies include:**

- › Active packaging: designing packaging that can adapt to the environment and extend shelf life
- › Intelligent and smart packaging: packaging that can detect, record and provide information about the contents as well as traceability of a product
- › Modified atmosphere packaging (MAP): altering the gases surrounding a product or commodity to extend the storage life
- › New packaging materials: using packaging material that is biodegradable and environmentally friendly

## **Storage and distribution technologies**

- › Cold storage and transport
- › Robotics: the use of robots in the production and distribution processes
- › Quality control: application of non-destructive, non-invasive technologies for quality control

## **e) Gap Analysis**

Large volumes of mango are processed into juice, dried mango and achar, however very low volumes are used in the processing of mango cosmetic products. Product development into manufacturing mango cosmetic products can enhance the value obtained from mango fruit. The growing market for mango cosmetic exists in beauty spas, local pharmacies, exports, creams and medicinal uses. There is an increasing demand for dried mango due to movement towards health conscious and organic market.

**The increasing demand for mango processing in the province** is illustrated by Bavaria Fruit Estate (Pty) Ltd, in Tzaneen Limpopo. Bavaria Fruit Estate (Pty) Ltd has experienced increasing demand for dried mangoes due to consumer food preference for healthier organic food.

Bavaria started to produce oven-dried mangoes, originally destined for the export market. The first drying plant was financed by the IDC in 1999 and, over the years due to increased market demand, the plant has been extended four times. Reacting to continuing positive market forces, a further

expansion of the business is now planned, with financial support being provided under the Industrial Development Corporation (IDC) Pro-Orchard Scheme.

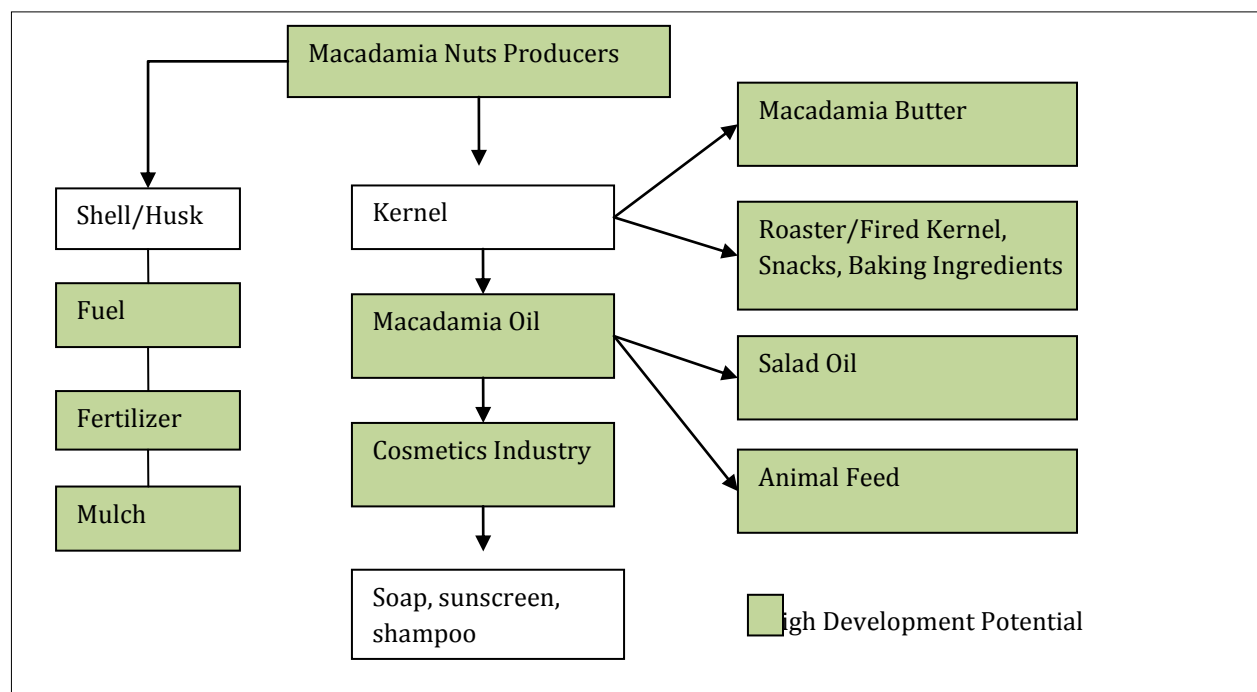
The expansion will comprise of the installation of additional cold rooms for the storage of raw mango, increasing capacity by a month during the three-month long picking season. It will also include the leasing and upgrading of an additional fruit drying unit. The latest oven-dried mango product to be launched from the plant is unique as it is unsweetened, therefore appealing to the health-conscious tastes of both local and European markets.

Bavaria's farm is Euro gap compliant and 20% is registered as organic. The drying facility and pack houses have Hazard Analysis Critical Control Points (HACCP) accreditation and are operated under strict environmental controls. The company currently employs 1002 people and the new facilities will create at least 220 additional jobs in the Limpopo province, targeting high unemployment levels (Industrial Development Corporation, 2011).

### **v. Macadamia**

South Africa is the third largest macadamia nut producer in the world. The nuts are a valuable food crop and generate high foreign revenue for SA.

### Macadamia Value Chain



Source: Department of Agriculture, 2010

#### a) Existing Processors of Macadamia Nut in Limpopo

Table 4.6 indicates the macadamia nut processing companies found in Limpopo province. The majority of the macadamia nut processors sort and pack nuts into bags that are sold as nut in shell, they also crack nuts and grade kernels. The low quality kernels are used for biodiesel or oil. Kernels are roasted packed in foliage material and sold in various quantities from 110grams to 150 grams. Macadamia nuts are a high value product and further processing, as highlighted above (Salad oil, cosmetics industry, baking ingredients, etc.), can only be successful if production volumes are increased.

**Table 4.6: Limpopo Macadamia Nut Processing**

Company**	Location	Products	Capacity/volumes	Market	Employees
Green Farms Nut Company	Levubu	Kernel  By products such as recovered oil is converted into macadamia oil	5000ton of nut in shell producing 1,300ton of kernel	99% of kernels are exported to EU, America, Far east	20 permanent  300 seasonal workers
Royal Macadamia	Levubu	Kernels  By products include macadamia oil, crude oil (which is sent for refining then exported to cosmetic market)	Nut in shell 2000 ton per annum with 500 ton kernel for exports	Mainly exports to USA, EU, UK, Japan, Taiwan, Canada  Local market is very small (road stores)	23 permanent staff  220 seasonal workers
Tzamac	Tzaneen	Process Macadamia nut for export	Approximately 1700ton	Export to Europe, USA, and China	5 Permanent  Approximately 80 seasonal
Zetmac	Levubu	Kernels only	3,5 million kg Dry in shell nuts produce 750 000kg kernels	North America, Europe, Far East  Local Markets are small volumes	15 permanent  350 employees during peak season
Other processors include:					
<ul style="list-style-type: none"> <li>▸ Macridge based in Makhado</li> <li>▸ Maclands Estate based in Makhado</li> </ul>					

\*\*SAMAC Affiliated Macadamia Marketing Companies

The competitors in the macadamia nut industry include:

- › Emvest Nuts in the Mpumalanga
- › Golden Macadamias in Mpumalanga
- › Ivory Macadamia in Mpumalanga
- › Mayo Mac Macadamias in Mpumalanga
- › Nutpro CC in Mpumalanga

These companies like most of the macadamia processors in the province are linked to the Southern African Macadamia Growers' Association (SAMAC) for technical and marketing support. The processors in the province are able to compete with surrounding province due to available natural resources and established markets. The emerging sector requires intervention to build them into competitive macadamia producers and processors as ample demand for macadamia nuts exists.

## **b) Macadamia Agro-Processing Opportunities**

- › Fried or roasted macadamia kernels
- › Macadamia oil processing for both food and cosmetic industry
- › Processing of the shell for organic fertilizer
- › Expand existing macadamia nut production in the province
- › Research and development into Macadamia vitamin supplements, as macadamia breaks down cholesterol
- › Developing macadamia oil cosmetic products, and selling oil to cosmetic industry

A growing niche market exists for organic cosmetic products and macadamia nut producers can take advantage of. Investment into research and product development is required to ensure macadamia nuts are used to their maximum potential and create a brand for the province in macadamia production. The fallen leaves from macadamia trees can also be used as compost.

A rental system for emerging macadamia farmers can assist in accessing equipment such as tractors, spraying and technical equipment. Central macadamia nut depot areas can offer drying facilities and de-husking plant with the capacity to handle half to four tons of macadamia nuts. Macadamia nut

farmers, more so emerging sector, will have to organise themselves into 10 to 15 cooperatives to ensure sustainable use of facilities.

## **c) Suitable Spatial locations for expansion and development**

Suitable areas for macadamia processing facilities are in the:

- › Makhado Local Municipality
- › Greater Tzaneen Local Municipality
- › Levubu
- › Greater Letaba Local Municipality
- › Mookgopong and Mokopane are areas with future development potential for macadamia nut production
- › The Zebediela area has more than 100 ha established for macadamia production

## **d) Technology**

These technologies are available in SA and will assist in macadamia nut processing which includes drying, cracking, grading, separation systems, kernel drying and final packaging.

- › Cracking and de-husking machinery
- › Cracker plant
- › Drying facilities
- › Packaging equipment
- › Silos and extensive infrastructure
- › *Elevator vertical conveyor* designed and installed to elevate whole nuts to fill a drying silo

## **e) Gap Analysis**

The market demand for macadamia nuts has increased internationally with new interest in from the European market. Locally there has been an increase in nationwide products that have expanded to include macadamia nuts as more retailers are including macadamia nut items in their product



offerings. It is important to provide local retail producers with the option of using locally grown macadamia nuts instead of imports.

A gap exists in the research and development of macadamia cosmetic, medicinal and pharmaceutical products within the province, further research into the development of macadamia nut is required. The increasing market for natural organic cosmetic and medicinal products exist both locally and internationally. Support services for the emerging macadamia farmer are required to ensure increased production of macadamia in the province. The by-products of macadamia nut that local producers can take advantage of are fertiliser and bio fuels, as these can further increase value of the nut.

## **Motivation for the Development of Agro-Processing Activities in the Limpopo Province**

There is ample motivation for development of the agro-processing industry as it is able to create employment and contribute to local revenue. The proposed agro-processing activities for the citrus and sub-tropical commodities are motivated by the key action programmes and outcomes identified in IPAP 2012 – 2015. The key action plans and programmes are:

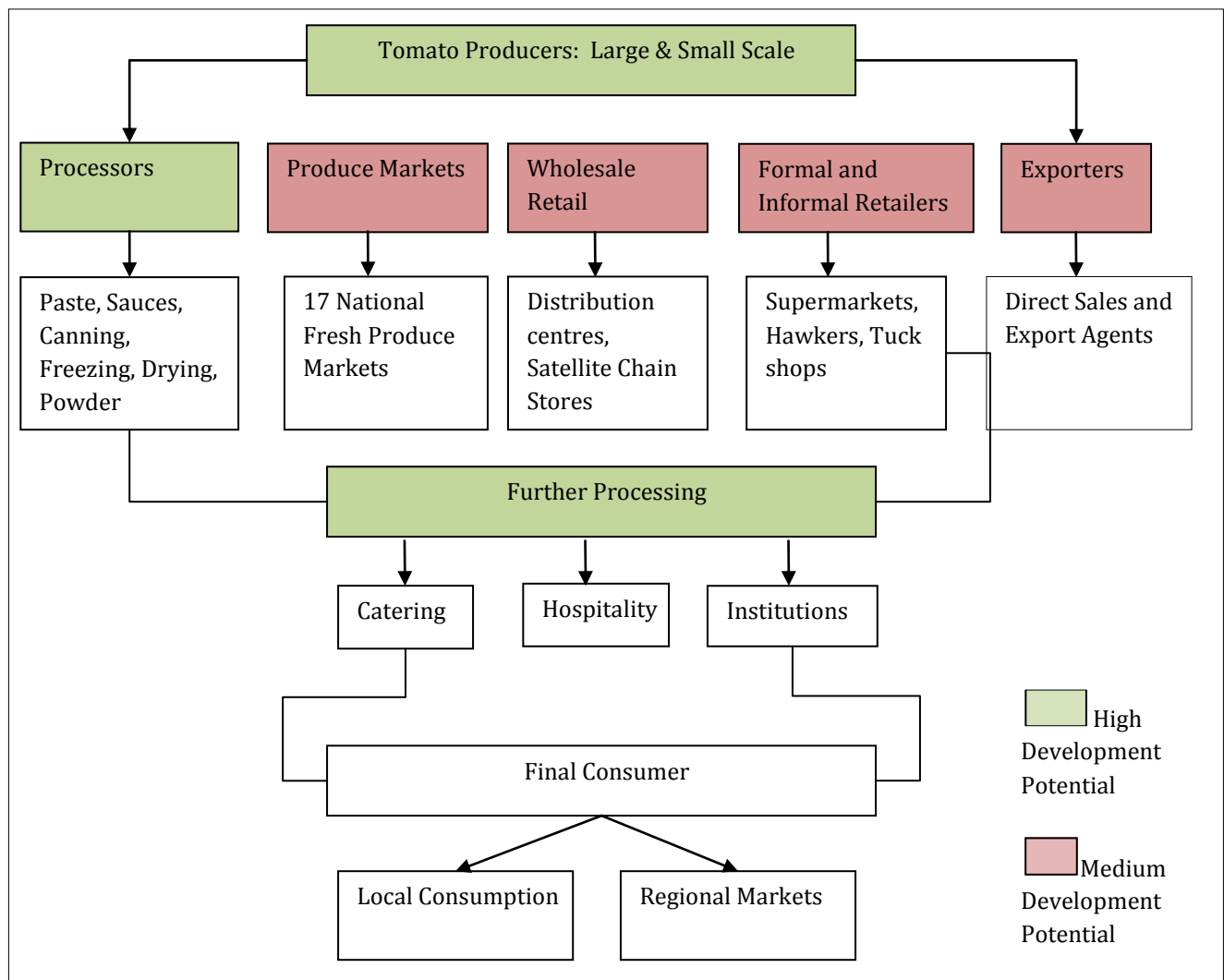
- **Development of a Food-Processing Strategy and Action Plan**, outcome of the programme is accelerated growth in the food processing sector
- **Enhancement of competition in the fruit and vegetable canning industry** with the outcome of creating sustainable platform for the long term growth and competitiveness of the industry

Further motivation for agro-processing industries is seen in the agriculture budget plan and sector development policies in the province. It is crucial to develop agro-processing activities and related industries to ensure job creation in the province.

### **4.3.3 Vegetables Value Chain**

The three major vegetables in production in Limpopo are tomato, potato and onions.

### i. Tomato Value Chain



Source: Department of Agriculture, 2010

#### a) Existing Processors of Tomato in Limpopo

A major role player in the tomato industry of the Limpopo province is ZZ2 who produces the largest volumes of tomatoes in the province. The tomato processing facilities in the province are facing major challenges with high labour costs and competition from china. China is able to produce tomato processed products at cheaper rates due to advanced technology and cheap labour. The catering, hospitality and institution industries absorb high volumes of tomatoes and local farmers can target these industries.

The majority of tomato processing in the province takes place in the form of tomato paste, powder, and very little canning or sauce production. Table 4.7 indicates the tomato processing activities in the province.

**Table 4.7: Limpopo Tomato Processing and Major Role players**

List of processors					
Name	Products	Location	Size/capacity	Employees	Market
APOL***	Tomato powder	Politsi	33 tons a month, 396 a year	110	Unilever (Major buyer) Nestle, Maggie
ZZ2	Mainly fresh produce	Mooketsi	150 000 tons/per annum	Vary from season to season	Johannesburg Fresh Produce Market
Other tomato processors include: Tiger Brands in Modjadjikloof and Musina area.					

The major competitors in the tomato processing industry include:

- › Rhodes Fruit Farms, Western Cape
- › Miami Cannery, Limpopo
- › Giant Foods, Limpopo
- › Montina, Limpopo
- › Indemex, Limpopo
- › Tigerbrands, Western Cape and Limpopo
- › Cape concentrate, Eastern Cape

The majority of these competitors are multinational companies and are able to source out contract growers to meet required volumes for processing. These companies incorporate other vegetables into their processing (e.g. onions, peas, corn etc.). The focus for the tomato farmers in the province should be on increasing production volumes and quality of crop as high revenue is obtained in the sale of fresh produce.

## **b) Tomato Agro-Processing Opportunities**

- › Build and improve existing tomato processing activities
- › Expand capacity of current tomato **farmers by assisting in quality production, financial support and technical requirements**
- › Sundried tomato
- › Tomato puree
- › Canned tomato (expansion of existing activities)
- › Powdered (for powdered soups, i.e. “cup a soup” )

## **c) Suitable Spatial locations for expansion and development**

- › Greater Letaba Local Municipality
- › Musina Local Municipality
- › Molemole Local Municipality

## **d) Technology**

- › Industrial solar dryer for drying tomato, onion and other vegetables
- › Sorting, washing and grading equipment
- › Tomato spray dryer
- › Tomato Dryer
- › Tomato paste/soup dryer and sterilizer with CE certificate

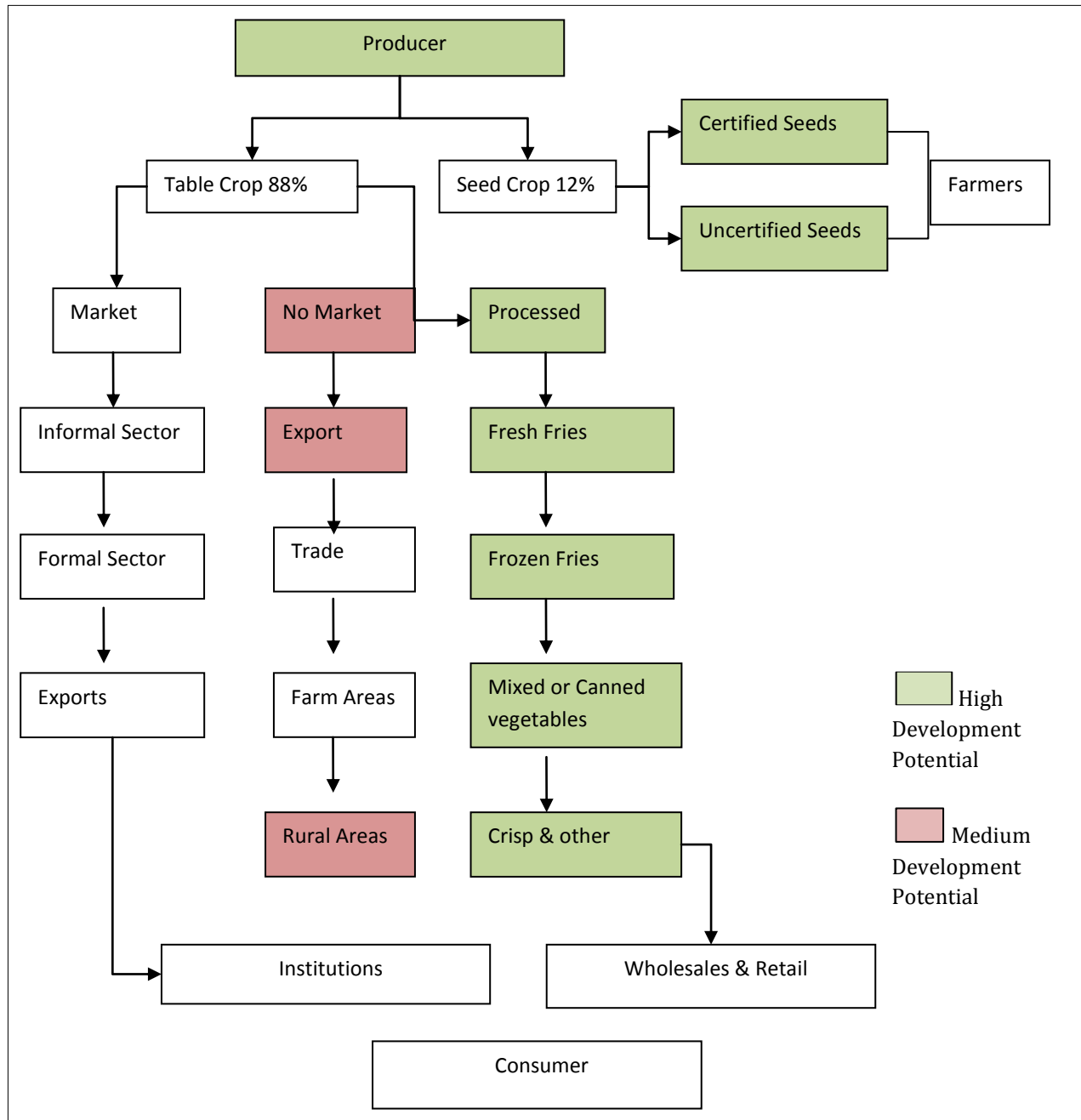
## **e) Gap Analysis**

The current tomato processors in the province such as APOL are facing challenges in being cost effective as they are receiving fierce competition from China. China is able to produce tomato powder and paste at cheaper rates and sell it for much less in South Africa.

The tomato industry in the province requires technical and financial support for tomato farmers to increase sales of their tomatoes to the local and national fresh produce markets. It is important to

build on current processing activities and increase tomato volumes produced in the province before embarking on new developments of tomato processing.

## ii. Potato Value Chain



Source: Department of Agriculture, 2010

## **a) Existing Processors of Potato in Limpopo**

The potato farmers in the province are facing increasing production costs as new diseases are threatening crops. The other factors influencing production costs are irrigation systems and transport expenses, especially for farmers in very remote areas.

The major potato processing companies include McCain, Simba and Willards. Currently potato farmers in the province have contracts with McCain, Simba and Willards, where farmers plant potatoes and harvesters inspect produce during various stages. Once the potatoes are approved they are harvested and delivered to companies for further processing. McCain and Tiger Brands are large consumers of potatoes grown in the province.

McCain foods limited purchases variety of vegetables locally to support local producers and share expertise with farmers. The local potato producers will compete in a different league to such multinational companies, as they have an advantage of being located closer to local communities/markets. Therefore their processing activities will target local markets which are in close proximity and provide markets with processed goods, reducing travel costs and reaching market directly.

## **b) Potato Agro-Processing Opportunities**

- Frozen (french fries, wedges, baby potatoes)
- Potato crisps (Simba, Willard's, etc.) and canned potato
- Mixed vegetable processing and packaging
- Expand current potato crops

## **c) Suitable Spatial locations for expansion and development**

- Blouberg Local Municipality
- Molemole Local Municipality
- Makhado Local Municipality

- Greater Marble Hall Local Municipality

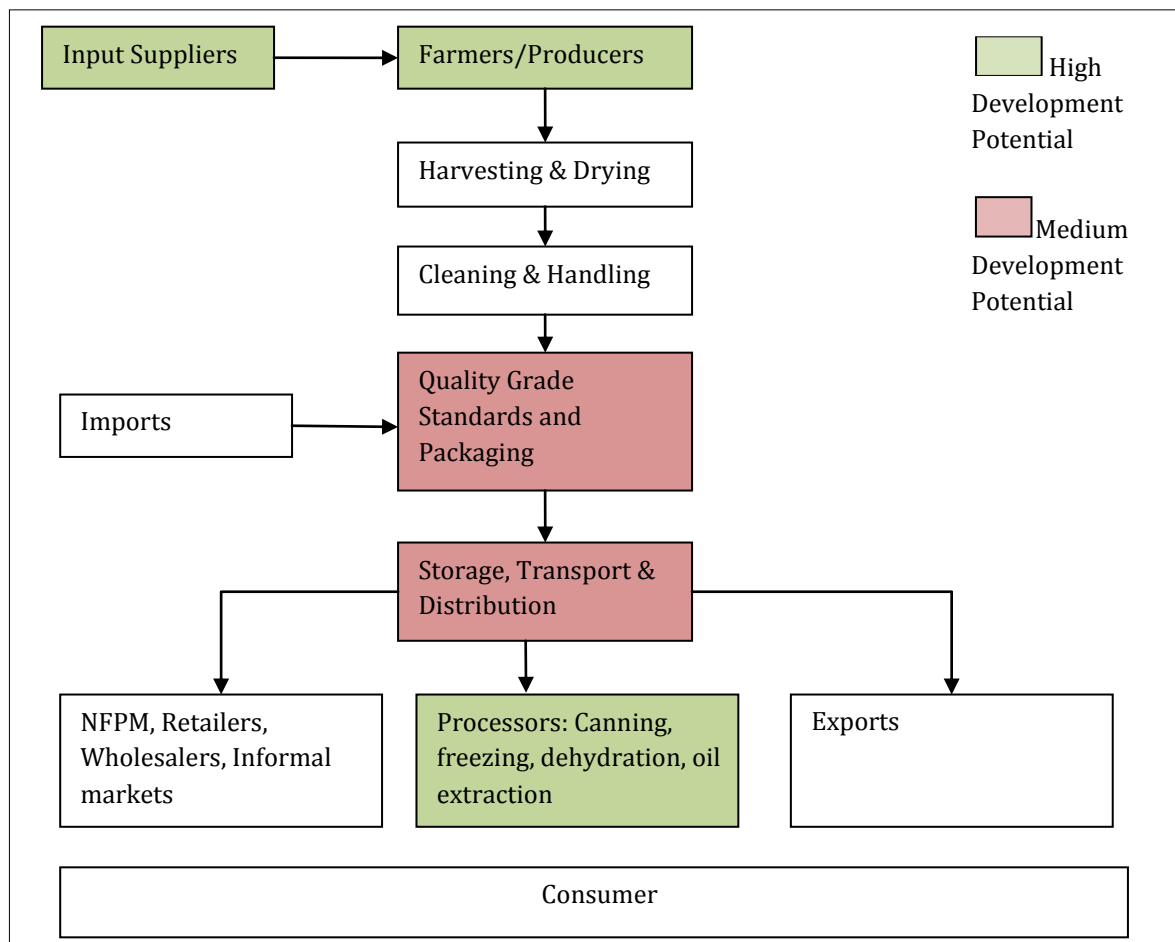
## **d) Technology**

- Automatic weighing machines
- Washing, soaking machines, cutter and waste pump
- Automatic /Continuous knife peeler
- Potato slicing, blanching and frying machines
- Cooling and packaging of french fries machines/stations

## **d) Gap Analysis**

The local market for potatoes is on the increase as it is a household commodity and used in local government institutions (schools, hospital) to create food security. Potato farmers have the opportunity to increase value of potatoes through semi processing which includes washing, packaging, peeling and cutting. The increasing market for convenience food can be exploited by potato farmers and create local brands with small-scale processing activities supplying to local market. The benefit of buying locally processed potatoes will be the reduction in travelling cost and this will create job opportunities in local communities.

### iii. Onion Value Chain



Source: Department of Agriculture, 2010

#### a) Current/Existing onion processing in Limpopo

Processing of onion in the province takes place on a minimal level, with large procurement companies such as McCain and Tiger Brands responsible for the majority of the processing. High volumes of onion produced in the province are sold on local and national fresh produce markets. The processing of onion can be feasible if processed with other vegetables in the province.



## **b) Agro-Processing Opportunities**

- › Powdered for the use in soups and flavouring
- › Canned onion
- › Canned onion and tomato mix
- › Frozen onion slices or onions mixed in with other frozen vegetables
- › Dehydration

## **c) Suitable Spatial locations for expansion and development**

Assisting onion farmers to increase production volumes through technical and financial assistance can generate higher revenue for local onion producers as they will be able to reach a wider market. Areas suitable for further expansion of onion farming are:

- › Molemole Local Municipality
- › Lephalale Local Municipality
- › Blouberg Local Municipality
- › Bela Bela Local Municipality

## **d) Technology**

The technologies required to process onion on a small to medium scale include:

- › Automatic onion peelers
- › Cutting machinery/equipment
- › Grading and transporting
- › Drying and canning facilities

These technologies can be used for secondary processing on small scale or for on-farm value addition. The target market for these processing facilities can be the local communities. The machines/technology for processing the various vegetables is available in South Africa.

### e) Gap Analysis

Onions are a household commodity with high sales volumes on the local and NPFM markets. The onion processing industry utilises only a small volume of the onions produced in South Africa. The processing of onions is integrated with other products such as tomato, frozen vegetable and soup powders. The processing of onion can be feasible if combined with other vegetables.

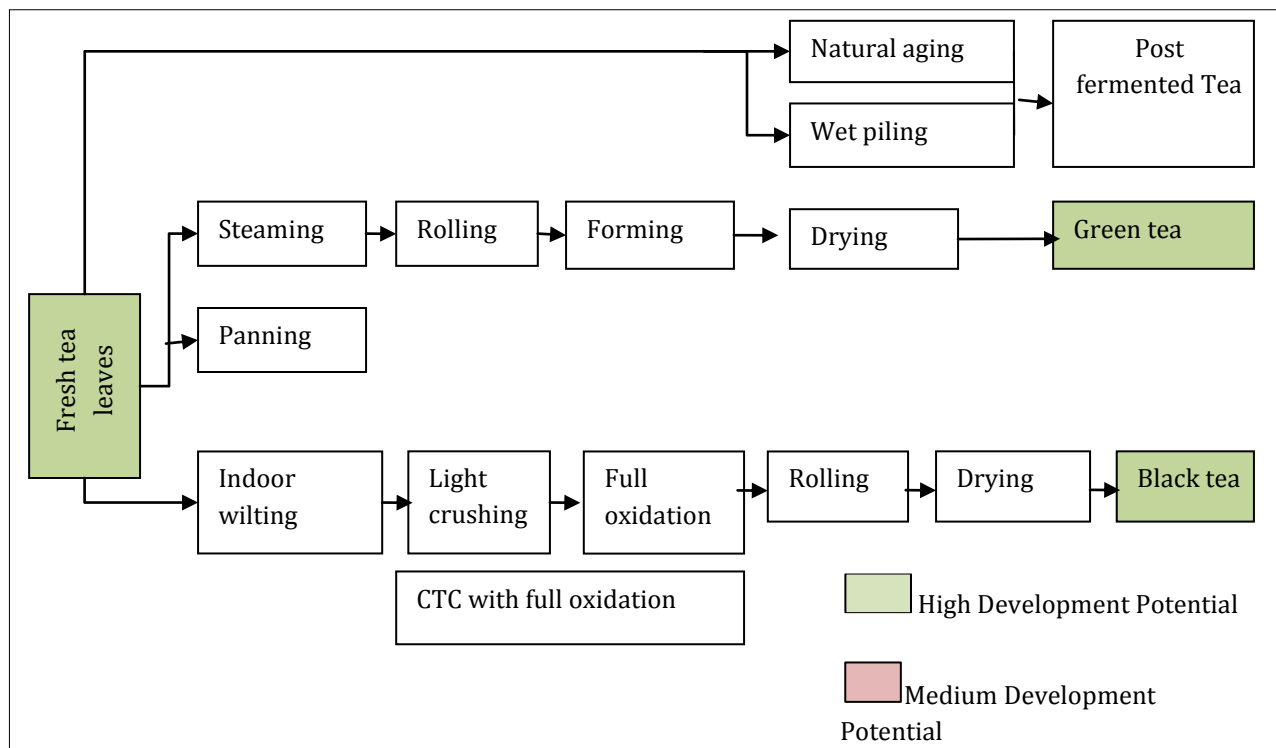
#### 4.3.4 Industrial Crops Value Chain

The main industrial crops in Limpopo are tea, cotton, cassava and tobacco.

#### a) Existing Processors of Tea in Limpopo

Tea estate currently operating in the Limpopo province is the Mukumbani tea estate which processes leaves into black tea.

##### i. Tea Value Chain



Source: Department of Agriculture, 2010

**One of IPAPs key action programmes** relevant to developing the tea industry in the province is the promotion of exports of beneficiated Rooibos and Honeybush products. IPAP also identifies the development of a strategy and action plan for the beverage industry. The strategy will promote research and development of new products in the in the beverage sector which will benefit the tea industry in the province.

## **Current challenges faced by Mukumbani Tea Estate**

- Tea is packed and sold in bulk therefore the tea estate works at a loss as compared to when tea is sold in mini packaging
- Brand name is not known to public due to high costs required for marketing and in store promotion present a problem
- Tea estate has not made a profit yet and is dependent on Department of Agriculture for financial grants

## **b) Tea Agro-Processing Opportunities**

- Expanding and reviving tea processing in the province
- Ice Tea
- Exploring possibilities of Green Tea

## **c) Suitable Spatial locations for expansion and development**

Tea production mainly happens in the Vhembe district of Limpopo.

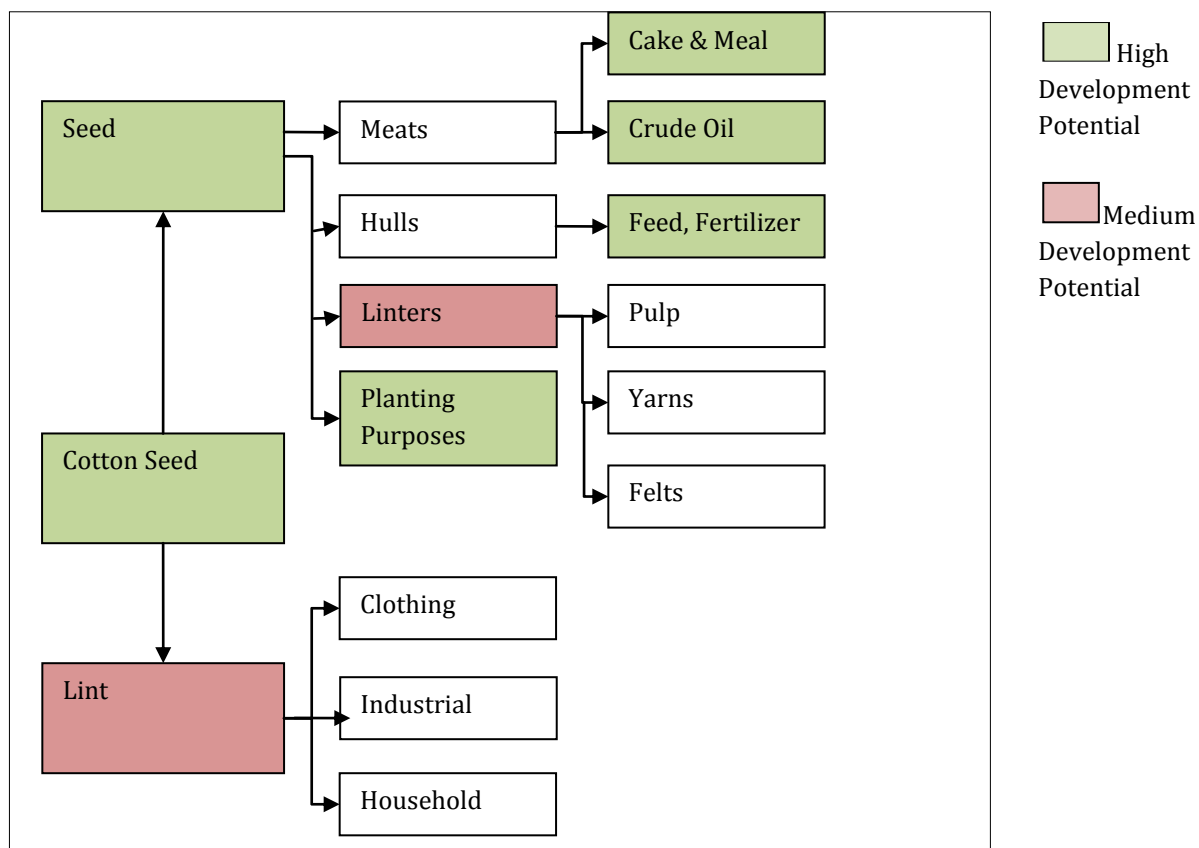
## **d) Technology Requirements**

The Mukumbani tea estate uses the state of the art technology for tea processing. The Limpopo Department of Agriculture hired an engineer from Kenya who is employed on contract to maintain machines and train local staff to be able to operate machines. The current focus is on skill transfer for local owners to be able to operate the machines.

### e) Gap Analysis

Limpopo tea industry is lacking in marketing and branding of the tea produced in the province, it is therefore important to make the local tea a household brand. This can be done by assisting the tea estate to get listed with coastal provinces as a supplier. The Lidi tea brand can make a profit with further value addition, for example mini packaging as tea is currently sold in bulk. The current tea development efforts should be directed into making the tea estate self-sustainable and reaching profit margins, once in place, estate can explore options of further expansion activities.

### ii. Cotton Value Chain



Source: Department of Agriculture, 2010

## **a) Existing processors of Cotton in Limpopo**

Current cotton processing in the province is in the form of cotton fibre sold to spinners. The cotton seed is sold to feedlots for the animal feed industry. The challenges preventing further cotton processing in the province is the lack of infrastructure/equipment and high transport costs involved in distributing and collecting raw material. There are two cotton processors in the province namely Musina (Weipe Cotton Gin) and Loskop Cotton, who process cotton fibre and cotton seed into animal feed for dairy farms and feedlots.

## **b) Cotton Agro-Processing Opportunities**

- Lint – clothing, lining for tyres, sheets, towels
- Seed (meat) – Cake and Meal (flour, feed, fertilizer)
- Seed (meat) – crude oil (refined oil, soap)
- Seed (hull) – Bran (livestock feed), synthetic rubber

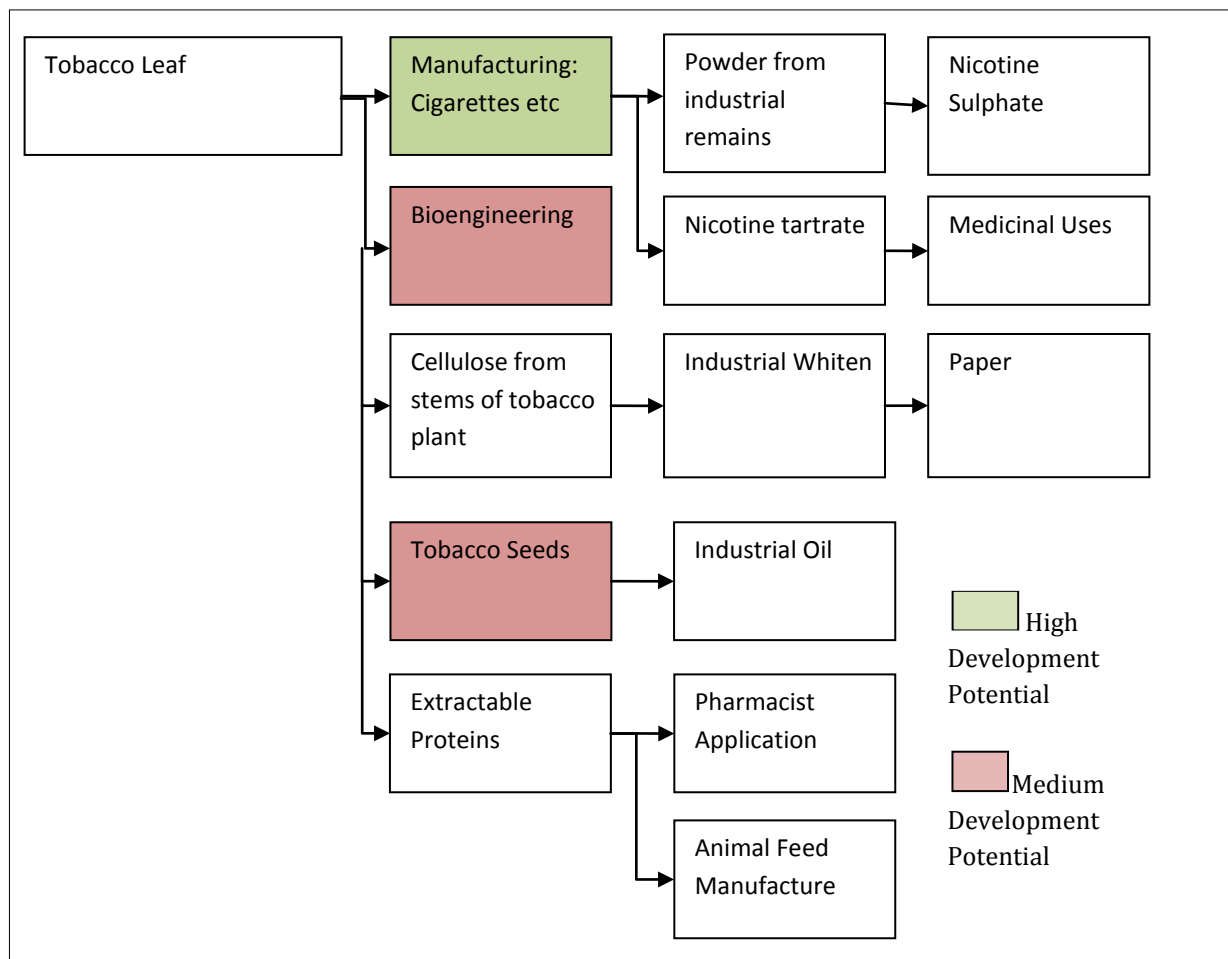
## **c) Suitable Spatial locations for expansion and development**

The areas suitable to expand cotton production and expand by-products activities are the Musina and Greater Marble Hall Local Municipality.

## **d) Gap Analysis**

Current processing activities for cotton in the province are sufficient as cotton production has declined over the years. The lint and animal feed industry is beginning to command a large share of cotton seed. The cotton pre and post production can provide employment opportunities for high number of people while operating on a small-scale. It is important to build on the current activities before exploring further agro-processing activities.

### iii. Tobacco Value Chain



Source: Department of Agriculture, 2010

#### a) Existing Processors of Tobacco in Limpopo

Majority of tobacco processing is done by Limpopo Tobacco Processors Pty Ltd, based in the Rustenburg North West province, but they have depots in Groblersdal where tobacco farmers can trade in their produce.

## **b) Tobacco Agro-Processing Opportunities**

- Extractable proteins – animal feed, crude
- Seeds – industrial oil
- Bioengineering – industrial solvents
- Cellulose from stems – industrial whiten (paper)

## **c) Suitable Spatial locations for expansion and development**

- Greater Marble Hall local municipality
- Lephalale local municipality
- Elias Motsoaledi local municipality
- Modimolle local municipality

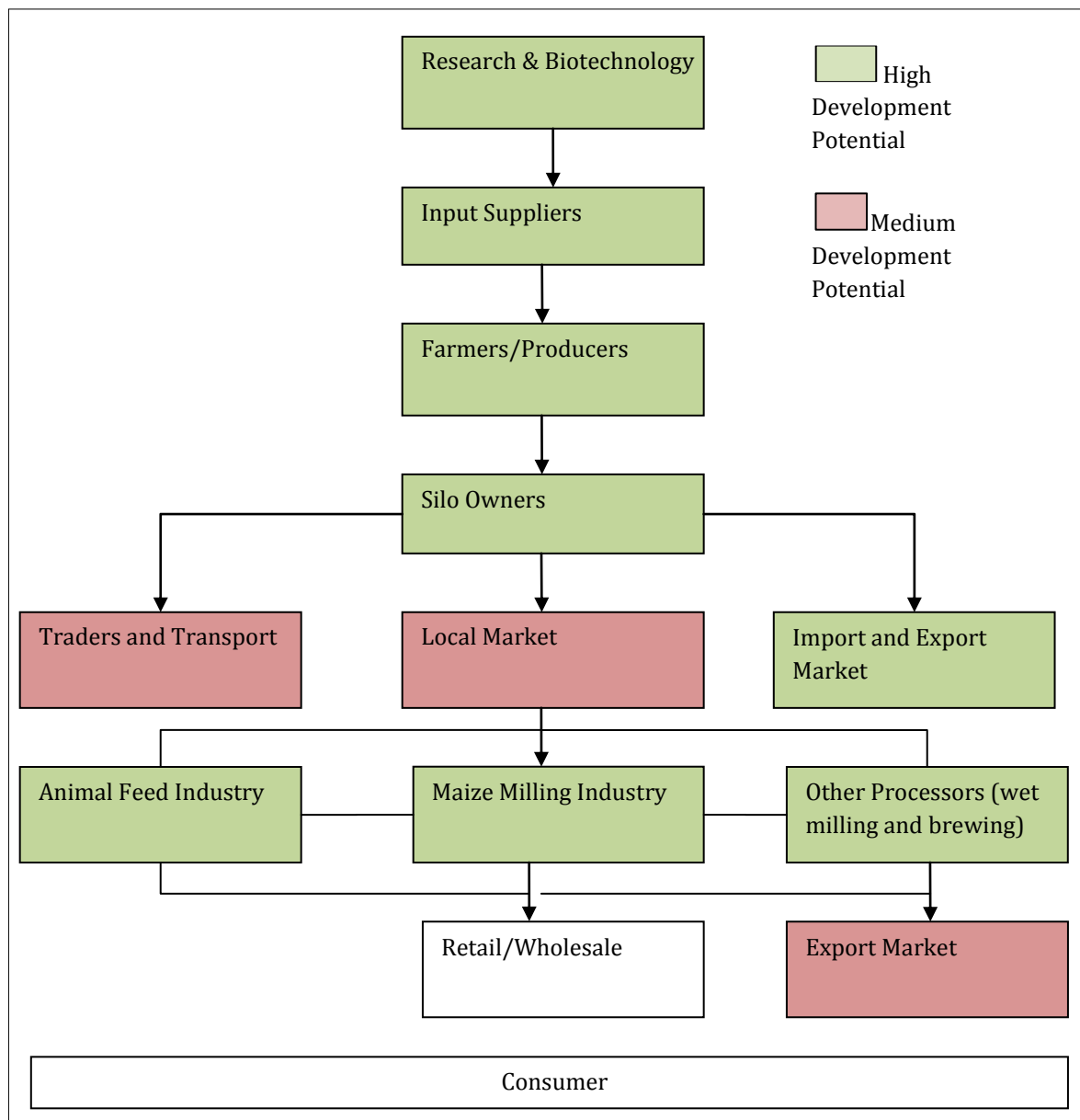
## **e) Gap Analysis**

An increasing gap exists for the production of sun cured virginia tobacco, therefore future development plans should be increasing production in the long term to make agro-processing opportunities feasible. The tobacco industry faces challenges of high excise duties, drought and illegal trade of tobacco. The extractable proteins for animal feed is feasible for local producers as the able to target the animal industry, other agro processing opportunities require high production and sophisticated technology which the province does not currently have.

### **4.3.5 Grains Value Chain**

Gains discussed include maize, sorghum, wheat and canola.

## i. Maize Value Chain



Source: Department of Agriculture, 2010

### a) Existing Processors of Maize in Limpopo

The animal feed, more so poultry industry takes up high volumes of yellow maize in the Limpopo province. Yellow maize also supports the pig, dairy cows, feedlot, cattle industry and these



industries are heavily reliant on commodity maize production. There are numerous silos distributed in the various districts of the province that provide storage facilities to local farmers. Maize production play an important role in the economy of rural areas and improving value addition facilities on farm level can enhance food security. The large milling companies such as Progress Milling and NTK Limpopo have depots in various locations of the province to provide easy access to their products.

## **b) Maize Agro-Processing Opportunities**

- Seed suppliers
- Milling – maize meal as well as animal feed production
- Wet milling
- Brewing (beer, etc.)

## **c) Suitable Spatial locations for expansion and development**

Importance of availing infrastructure to rural communities can assist value addition on a local level, reducing transport costs and generating income for local producers. High volumes of maize are being produced in the following areas, thus making these areas feasible for maize processing projects:

- Mookgopong local municipality
- Thabazimbi local municipality
- Elias Motsoaledi local municipality
- Bela Bela local municipality
- Greater Marble Hall local municipality

The **CRDP and Limpopo Rural Development Strategy** acknowledge developing rural economies as a way of combating high poverty levels in rural areas. Provision of infrastructure for value addition and processing in rural areas will enhance skills technology and transfer; promote rural development as individuals can increase their income from local resources. The

collective use of infrastructure can maintain volumes required for sustainable micro processing activities in the rural areas. Below is a case study, in the Northern Cape, that was provided with maize processing infrastructure and was able to process maize for local consumption and sales.

## Maize Machinery Project Case Studies

### 2. Maize Mill - 500kg/h - Community project

#### Description

This project was sponsored by the South African government for a small community in the Northern Cape province. The project was completed by utilising an existing building. The plant consists of storage, cleaning, conditioning, degermination, milling and fortification of the maize meal with added vitamins. The project is able to process 500kg of maize per hour.



Source: Roff Industries (Pty) Ltd

**IPAP key action programmes** for 2012-2015 include the **development of a small-scale milling industry**, the outcome is small-scale maize milling enterprises producing for local markets at competitive prices, thereby creating jobs and contributing to poverty alleviation and enterprise development. The Limpopo province has ample resources to promote the key action plan while also enhancing rural economies.

#### e) Technology

From the above case study maize milling infrastructure can benefit local communities, especially those in rural areas. Small-scale milling industries are a national priority as they generate local income and provide food security in both urban and rural areas. The technology required for maize

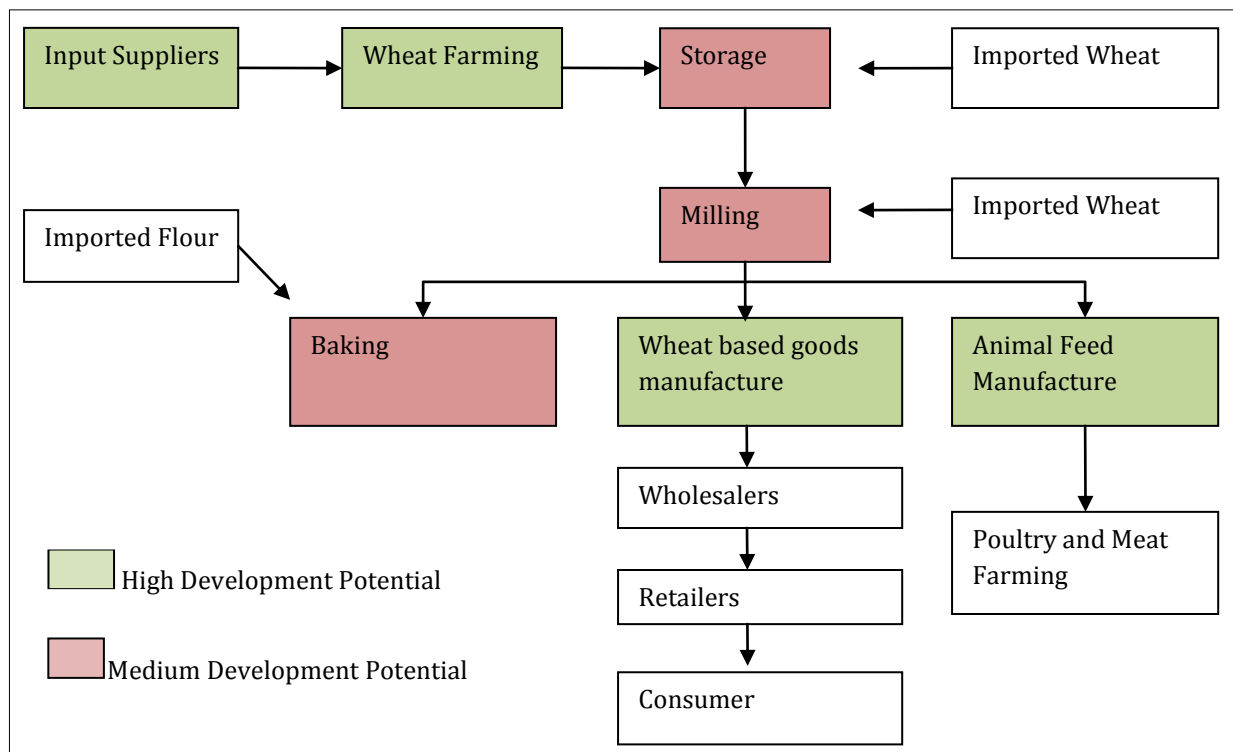
milling is available from suppliers in the country and can operate both on a small and large scale to accommodate production volumes.

- › Crushing and mixer combine machine
- › Grain cleaner
- › Maize roller mill
- › Maize crusher
- › Storage bin
- › Animal feed production at farm level

### **d) Gap Analysis**

A high demand for small-scale collective processing in rural and urban areas exists to ensure food security and access to stable food. The opportunity to grow and involve emerging sector in research & biotechnology, input suppliers, silo owners can increase production levels of emerging maize farmers in the province and reduce dependency of small scale farmers on commercial farmer's infrastructure. The market for maize demand can be considered as a stable market as it provides for both the export markets, human consumption (maize milling) and the animal feed industry.

## ii. Wheat Value Chain



Source: Department of Agriculture, 2010

### a) Existing Processors of Wheat in Limpopo

The Limpopo province has high imports of wheat due to low production levels. The province is not a high producer of wheat but the animal industry benefits immensely from the wheat produced locally. Wheat has a stable market particularly for bread and market growth for confectionery products. The major role players in silo and processing of wheat in the province are Progress Milling and NTK Limpopo.

### b) Wheat Agro-Processing Opportunities

- › Wheat Protein
- › **Wheat meal and bran for the production of animal feed**
- › **Wheat flour - bread**

- › Wheat starch – ethanol, adhesives and paint stripping manufacturing

## **c) Suitable Spatial locations for expansion and development**

- › Thabazimbi Local Municipality
- › Greater Marble Hall Local Municipality
- › Elias Motsoaledi Local Municipality
- › Greater Tubatse Local Municipality
- › Bela Bela Local Municipality

## **d) Technology**

- › Five ton wheat mill for small to medium farmers
- › Small scale wheat flour machine
- › Ten ton wheat flour mill, which can be used by various cooperative for processing of flour

When investing in millers, the following have to be considered to ensure successful and sustainable mills, (Determining the factors that limit Agro Processing Development in the Wheat Milling and Baking Industries in Rural Areas in South Africa)

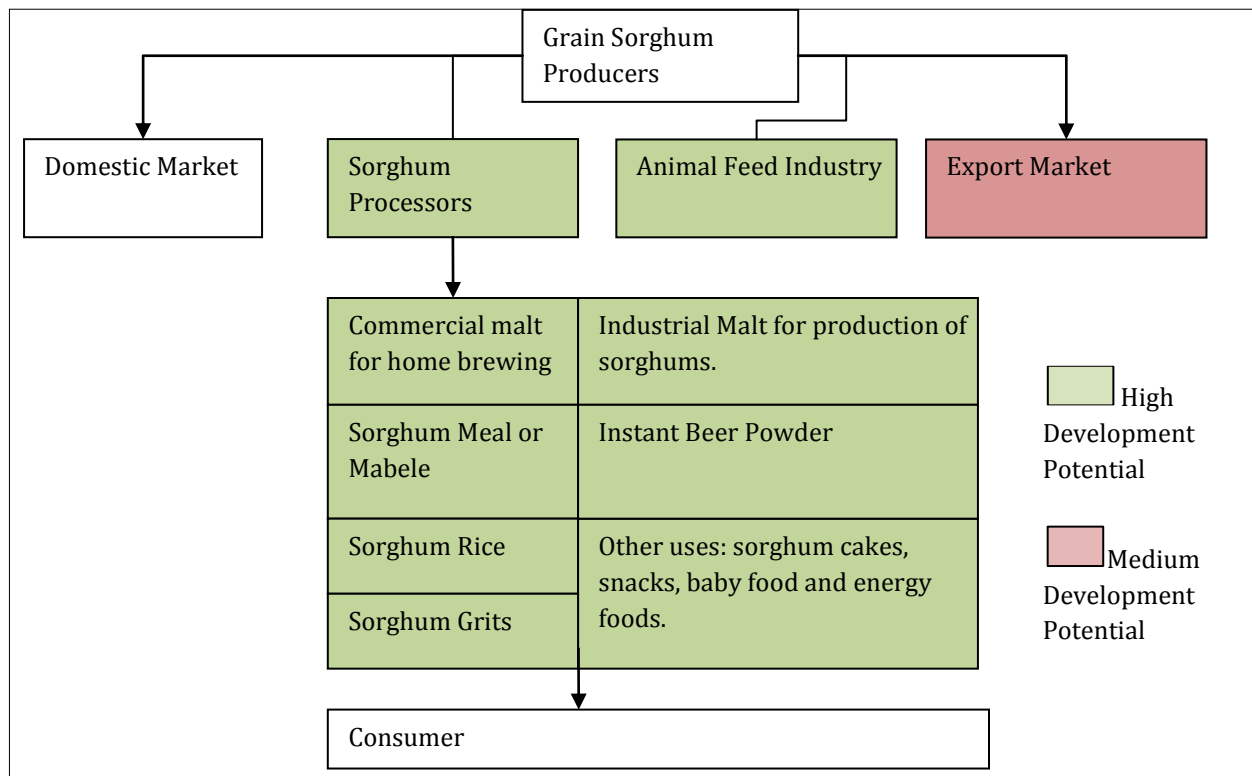
- › Cost of capital
- › Input costs
- › Water and land availability
- › Productivity costs and availability of labour
- › Infrastructure and operational infrastructure
- › Cost and agreement of traceability
- › Distance to the market

## **e) Gap Analysis**

The Limpopo province is not a high producer of wheat as cereal therefore flour and starch have to be imported from various provinces. Wheat is a winter crop mainly grown in the Waterberg district and

agro-processing opportunities are feasible if high volumes are combined through cooperative growing. Wheat meal, wheat flour and bran for the production of animal feed can enhance value for wheat farmers in the district. The processing activities (ranging from small, medium to large scale) can accommodate various rural areas through provision of infrastructure (storage, processing, baking).

### iii. Sorghum Value Chain



Source: Department of Agriculture, 2010

#### a) Existing Processors of Sorghum in Limpopo

The current sorghum processing happens in the form of mabel, traditional thoro (course and fine), beer powder, malt which are mainly used for household consumption. The animal industry also benefits from sorghum production as it is used for the production of poultry feed, which complements the meat industry.

## **b) Sorghum Agro-Processing Opportunities**

- › Instant Beer Powder
- › Sorghum Rice
- › **Sorghum meal**
- › Sorghum use for manufacturing of baby food and energy foods

## **c) Suitable Spatial locations for expansion and development**

- › Bela-Bela Local Municipality
- › Mookgopong Local Municipality
- › Elias Motsoaledi Local Municipality
- › Blouberg Local Municipality

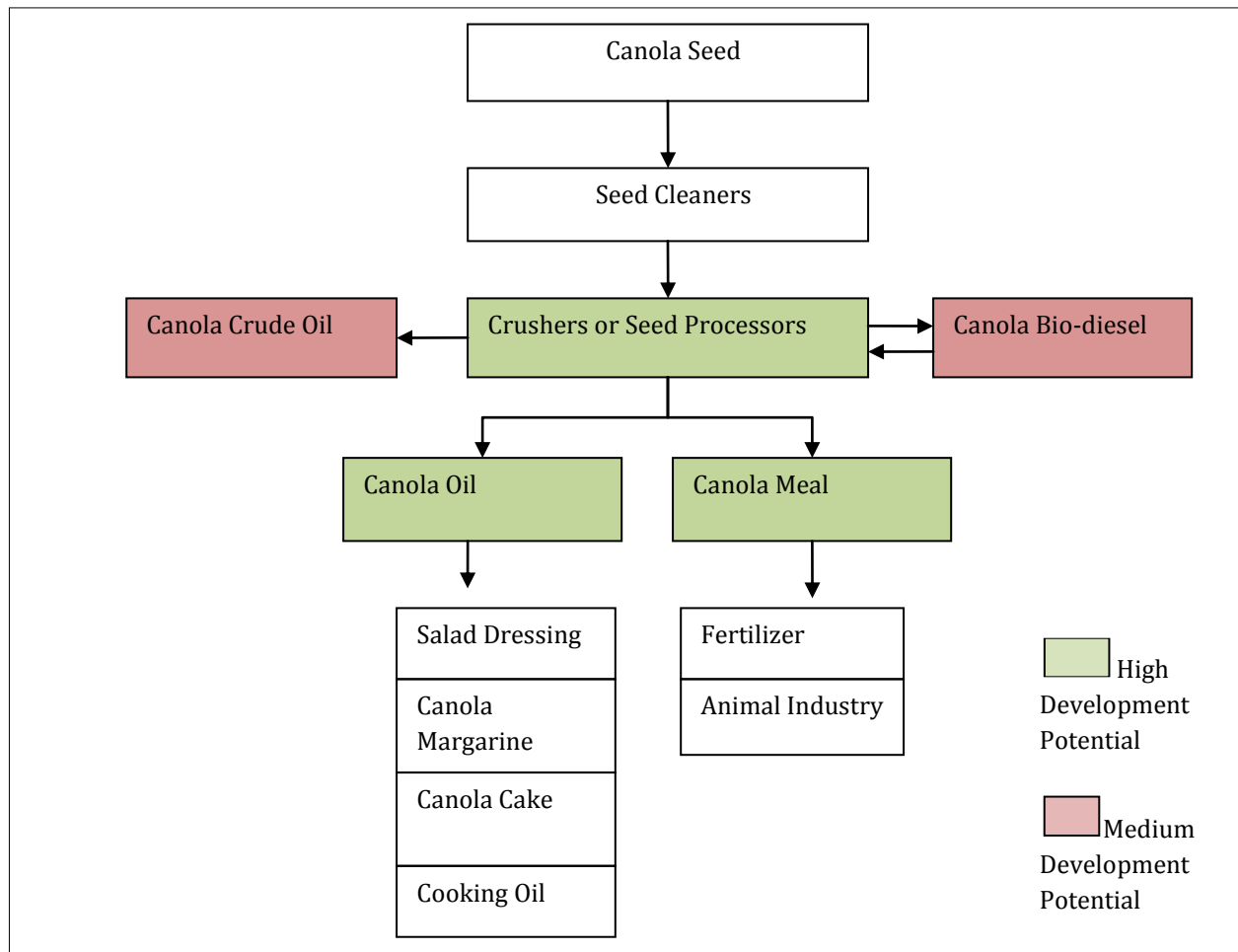
## **d) Technology**

- › Seed cleaner and separator
- › Grain sheller
- › Seed Processing machine

## **e) Gap analysis**

Processing opportunities exist for SMME to process sorghum for local consumption and the animal feed industry, as both industries require high volumes. Producers of sorghum can also be encouraged to produce sorghum to be used for manufacturing of baby food and energy foods.

#### iv. Canola Value Chain



Source: Department of Agriculture, 2010

#### a) Existing Processors of Canola in Limpopo

Canola processing requires state of the art technology and highly skilled labour; currently canola processing is done on a minimal level in the province and in some cases it is processed with other grain seeds. Limpopo is not a high producer of canola seeds and has few hectares planted, thus integrating canola processing with other grain/oil seed processing would be feasible.



## **b) Canola Agro-Processing Opportunities**

- Cooking oil and oil cake
- Canola margarine
- Salad dressing
- Canola meal – animal feed and fertilizer
- Crushers or seed processors – canola bio-diesel and crude oil

## **c) Suitable Spatial locations for expansion and development**

- Elias Motsoaledi local municipality
- Ba-Phalaborwa local municipality
- Blouberg local municipality

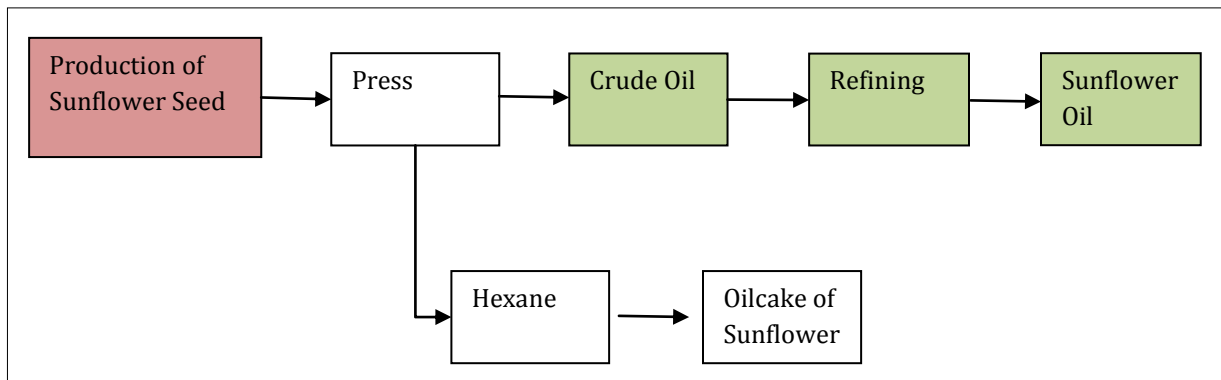
## **d) Gap analysis**

Oil production is an important value addition mechanism for canola seed as these can be sold in rural areas and local communities. Research into bio diesel and crude oil can enhance canola value but firstly production of high volumes is required.

### **4.3.6 Oil and Protein Seeds Value Chain**

The main oil and protein seed varieties in the Limpopo province are sunflower, groundnuts, dry beans and soya beans. The gap analysis for oil and protein seeds will be grouped together and discussed at the end of this sub section.

## i. Sunflower Seed Value Chain



Source: Department of Agriculture, 2010

High Development Potential

Medium Development Potential

### a) Existing Processors of Sunflower in Limpopo

Oil extraction plants in the province vary from small to medium size facilities. These factories extract oil from various seed and combine seeds to increase processing volumes. The majority of the large refineries are situated in Gauteng and KwaZulu Natal province.

### b) Sunflower seed Agro-Processing Opportunities

- Cooking oil
- Seeds – margarine and spreads
- Bio-fuel (supply dependant)

### c) Suitable Spatial locations for expansion and development

- Bela Bela Local Municipality
- Mookgopong Local Municipality
- Thabazimbi Local Municipality
- Various areas of potential in Sekhukhune District

### Previous research for Biodiesel Production in Sekhukhune District

There has been previous research conducted for the production of biodiesel in the Sekhukhune District. The aim of the research was the establishment of biodiesel processing facilities for sunflower and soya beans. The target market is the mining companies in the district. The incorporation of such projects into the agro-processing strategy will further enhance existing activities. The description of the project is discussed below.

Sekhukhune Biodiesel Production	
Concept	Data and commentary
<b>Description</b>	<ul style="list-style-type: none"> <li>Production of biodiesel from soy beans and sunflower that are supplied by emerging farmers. The mining companies in Sekhukhune, with their diesel-driven machinery, are the main target market.</li> <li>In parallel with the biodiesel production, there are several business opportunities along the value chain (e.g. production of oil cakes for fertilizers or glycerol to be used for perfumes). In the first phase, a pilot plant producing 260 tons per annum will be constructed in Tompi Seleka to prove the viability of the concept.</li> <li>Entrepreneurs are seeking a mixture of grant and private funding for the first state (R8 million). The second phase will ideally see a petrochemical company coming on board to scale up the project.</li> </ul>
<b>Economic Rationale</b>	<ul style="list-style-type: none"> <li>Soya beans and <b>sunflowers</b> have been identified as highly suitable crops for Sekhukhune. The demand for biofuels will increase with increasing fuel prices.</li> <li>Local mining companies have expressed strong interest in the project.</li> <li>Long term contracts offering the mining companies a discounted price for diesel would provide a secure income stream for the farmers.</li> </ul>
<b>Employment</b>	<ul style="list-style-type: none"> <li>When the large plant is fully operational, approximately 2000 jobs will be created including 1 300 farm workers, 60 workers at the plant (75% skilled workers) and several workers in supporting business, e.g. the transport sector.</li> </ul>
<b>Enabling Conditions</b>	<ul style="list-style-type: none"> <li>In order to secure land for <b>soya bean and sunflower</b> production, a costly process involving de bushing and fertilization has to be undertaken.</li> </ul>

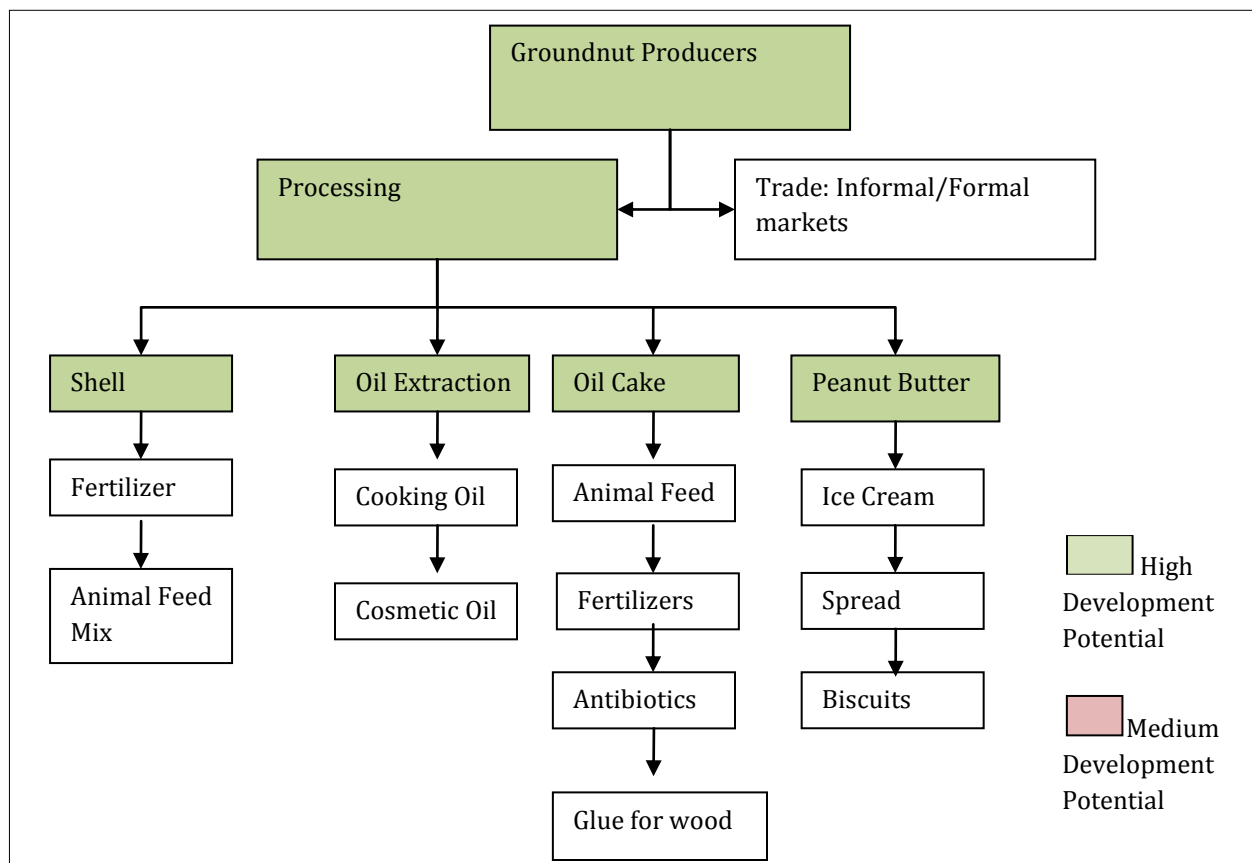
- In areas with little rainfall, irrigation systems are required.

Source: Nodal Economic Profiling Project Business Trust, Investment Atlas, 2007

## d) Technology

Typical process for extracting and refining sunflower oil requires a conveyor, shelter, cooker and oil expeller which can be sourced locally.

### ii. Groundnut Value Chain



Source: Department of Agriculture, 2010

## **a) Existing processors of Groundnut in Limpopo**

Processing of groundnuts in the province takes place on a small to medium scale with cooperatives processing nuts into peanut butter. Processing activities can be expanded as shell can be used for the animal sector and extracted oil can be utilised for cosmetics and food industry.

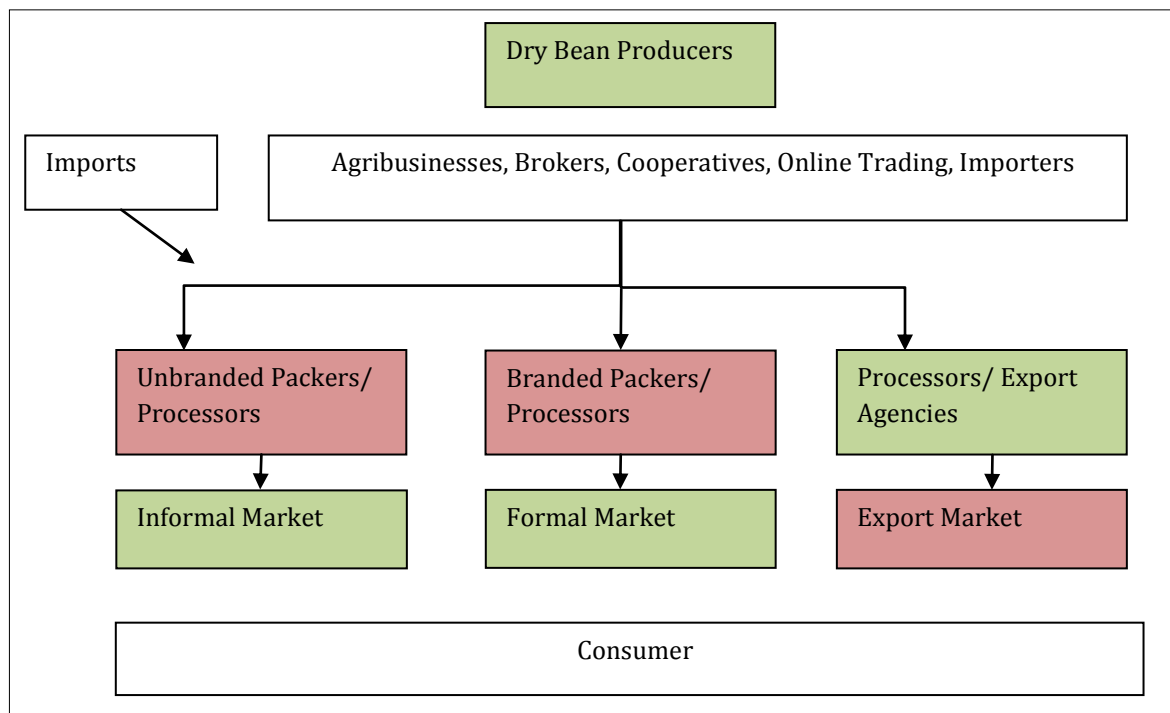
## **b) Groundnut Agro-Processing Opportunities**

- › Peanut butter – spread and ice cream
- › Oil Extraction – Groundnut oil (massage oil, cooking oil, petrol/diesel, soap)
- › Oil Cake – animal feed, fertilizer, glue for wood
- › Shells - fertilizer

## **c) Suitable Spatial locations for expansion and development**

- › Mookgopong Local Municipality
- › Lephalale Local Municipality
- › Bela Bela Local Municipality

### iii. Dry Bean Value Chain



Source: Department of Agriculture, 2010

High Development Potential
  Medium Development Potential

#### a) Existing Processor Dry beans in Limpopo

The majority of dry bean processing is done by large procurement companies such as Tiger Brands and Giants Canning as high volumes are required for canning. Packing branded and unbranded dry beans also takes place in the province done by small to medium scale businesses. Increasing the hectares planted can create further opportunities for the canning and packaging industries. The packaged products can be for both the local and export markets.

## **b) Dry Beans Agro-Processing Opportunities**

- Packed dry beans
- Canned dry beans in saline solution
- Expanding the existing dry bean production

## **c) Suitable Spatial locations for expansion and development**

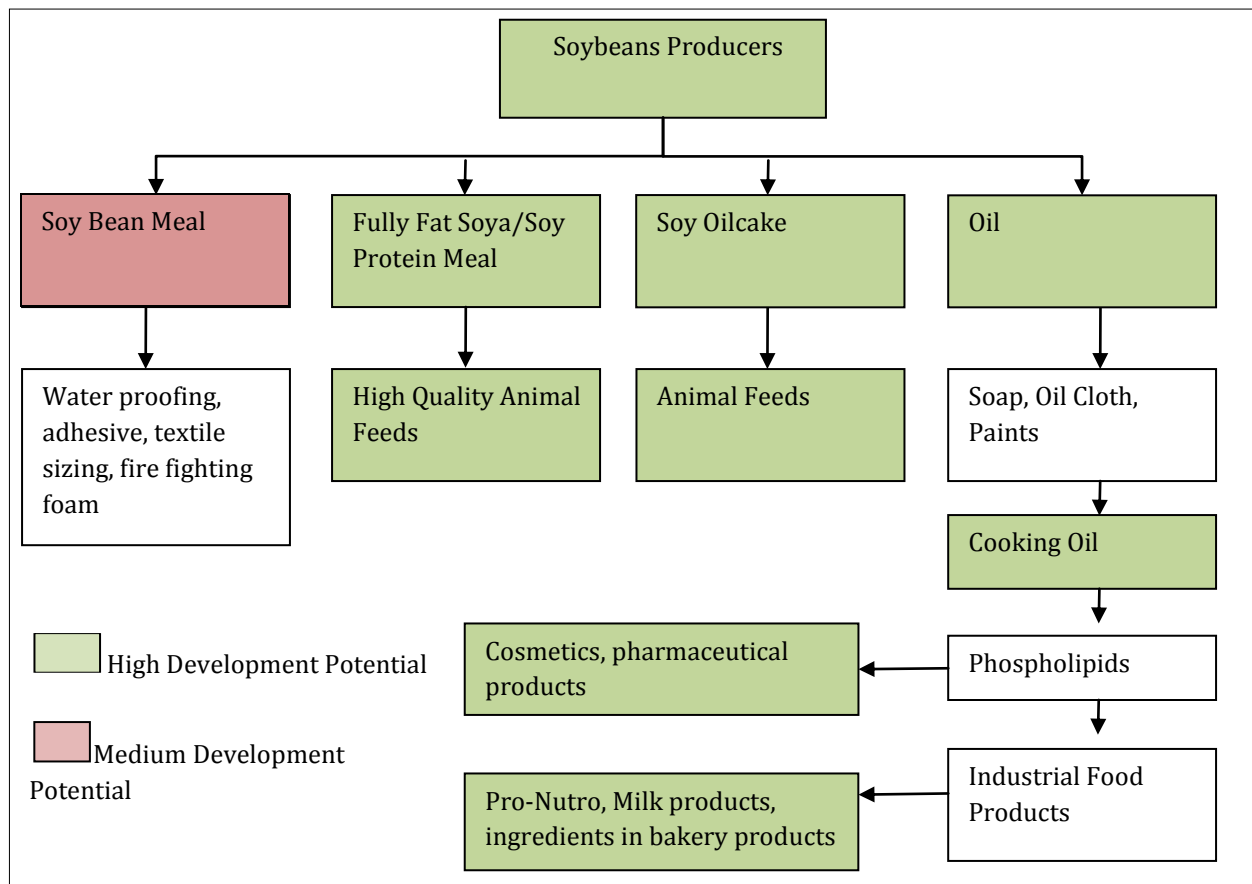
- Greater Tubatse Local Municipality
- Greater Marble Hall Local Municipality

## **d) Technology**

Incorporating dry bean processing with existing canning and packing activities can be beneficial and feasible, as dry beans cannot be sustained as a standalone processing activities. Packaging of dry beans can avail opportunity for local SMMEs to pack beans and sell to both informal and formal market. The required technology is packaging and canning machinery, supported by skills development in quality standard measures.

## **iv. Soya bean Value Chain**

As indicated earlier in the commodity profile soya bean is one of the commodities that have experienced increase in tonnage produced in the province. IPAP 2 recognises soya beans as a valuable grain that can generate income for local producers. One of the key action programmes of IPAP2 is to develop a soya bean strategy and action plan with the aim of increasing local farm production of soya bean as well as increasing soya bean processed products.



Source: Department of Agriculture, 2010

## a) Existing Processors of Soy bean in Limpopo

High volumes of soybean are used for the animal industry and soybean processing in the province is done together with protein and oil seeds.

## b) Soybean Agro-Processing Opportunities

- Oil – Cooking oil and industrial food products (pro-Nutro, soy mincemeat, ingredients for bread)
- Soy oilcake – animal feeds
- Full fat soya – high quality animal feeds



## **c) Suitable Spatial locations for expansion and development**

The local municipalities listed below have high hectares of land planted for soybean production, and would be able to sustain processing activities. Suitable locations for soybean processing are:

- Elias Motsoaledi Local Municipality
- Thabazimbi Local Municipality
- Greater Marble Hall Local Municipality

## **d) Technology**

Technology required for processing majority of oil and protein seed commodities is;

- Shelter
- Cleaning sieve
- Cooker
- Oil expeller
- Filter

Other oil seed processing technology involved include:

- Gravity Seed Separator
- Seed Weighing Machine
- Chain Roster Machinery
- Seed Grinder
- Seed Oil processing machine
- Biodiesel processing equipment
- Oil refineries

## **e) Gap Analysis for Oil and Protein Seeds**

The more oil is refined the more valuable it becomes as it can be used in variety of products. The market gap exists for refined, edible oils, fats and high protein for the food processing and fast food industries.

The shell for most protein and oil seeds can be used for animal feed and fertilizer, which can be sold to dairy, poultry and piggeries in the province. Edible oil can increase nutrients for food security purposes and oil can be produced on a small scale through various collective initiatives to sustain processing volumes. Research and development into increasing producer production and bio fuels production for local mining and biodiesel industry can benefit seed producers immensely.

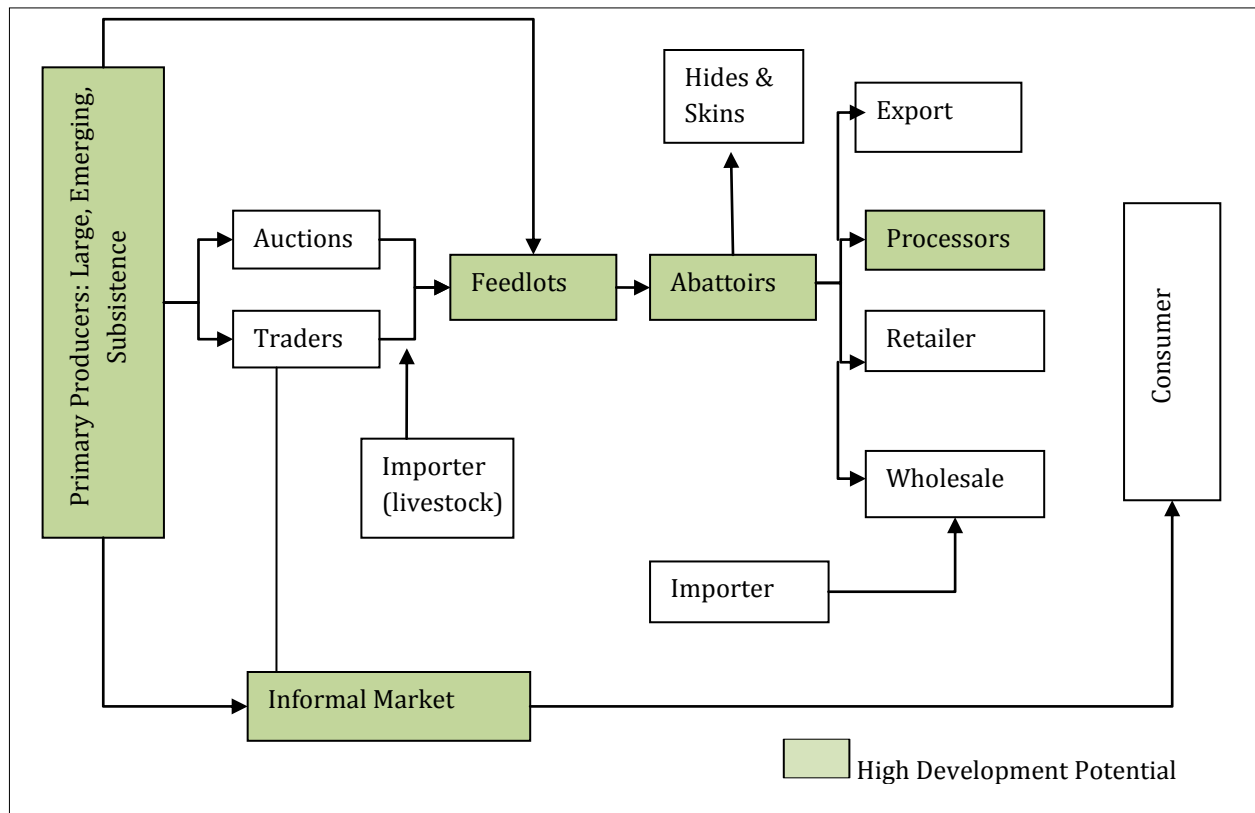
The technology to process oil and protein seed is available in the country and these technologies provide opportunities for farmers to add value to their farm production. The processing of these seeds can also be integrated to promote agglomeration of activities. This will ensure that infrastructure is used to its maximum potential and grain activities complement each other.

The demand for oil and protein seeds is also influenced by household incomes, growth in population, quality requirements, preferences, substitution and new processing of food (Bureau for Food and Agricultural Policy, 2012).

### **4.3.7 Red Meat Value Chain**

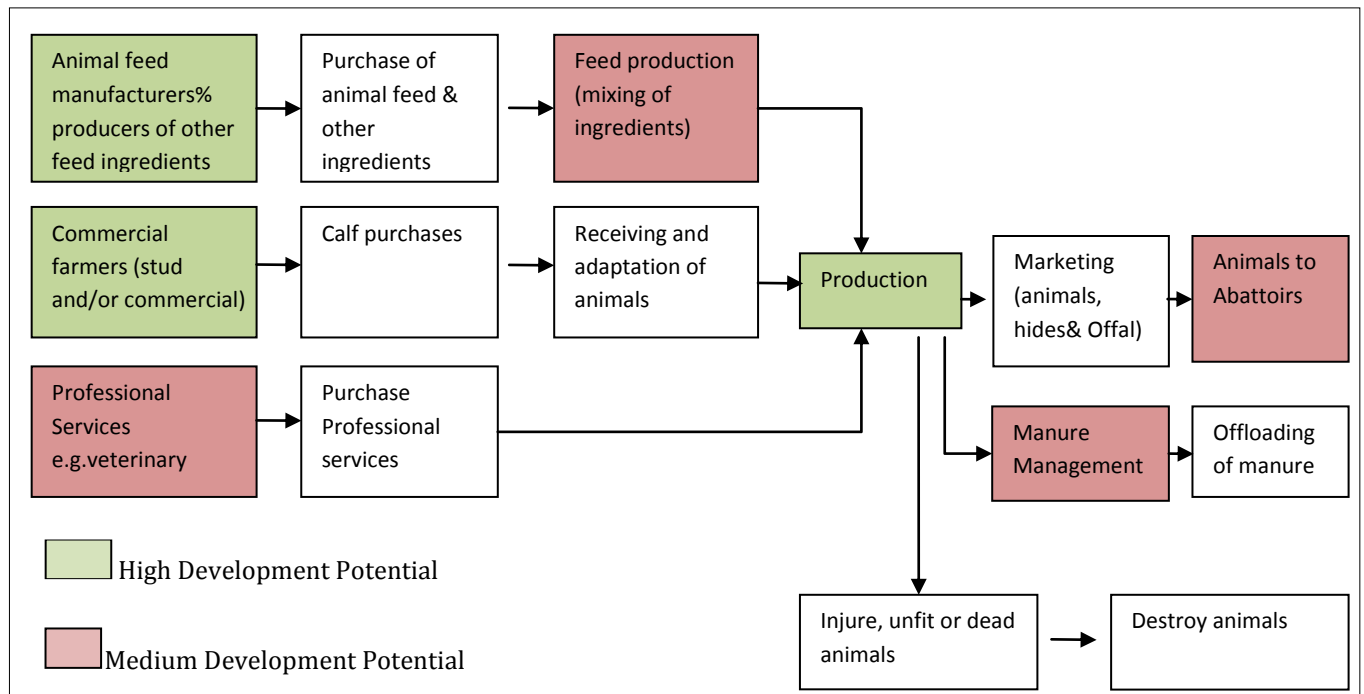
The main red meat production in the province is beef and goat. The beef, feedlot and dairy value chain will be discussed.

## a. Beef Value Chain



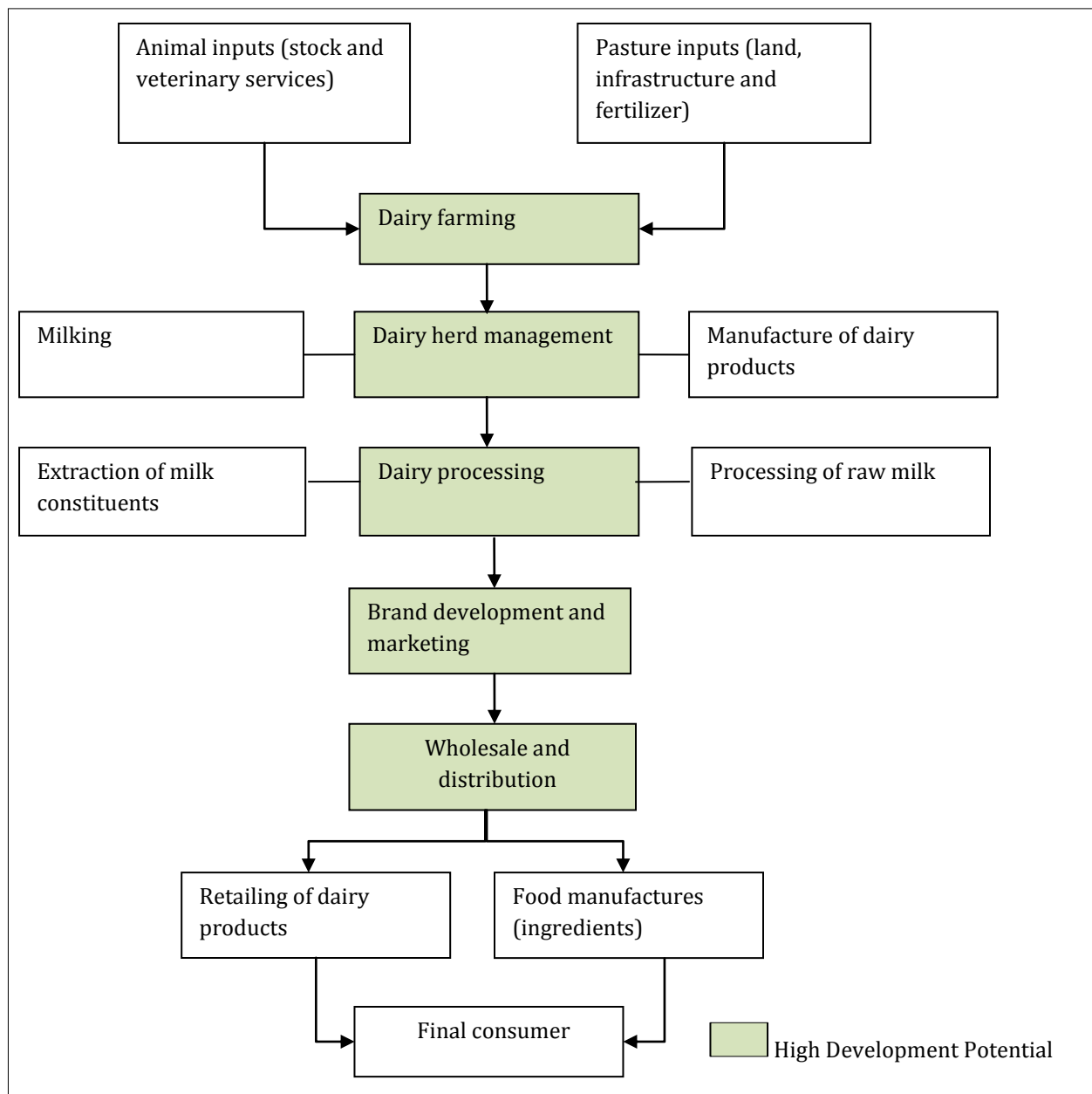
Source: Department of Agriculture, 2010

## Feedlot Value Chain



Source: Department of Agriculture, 2010

### Dairy Value Chain



Source: R. Le Heron, N. Lewis in *How does the Dairy Industry Operate in the Global Economy*

#### a) Existing Processors of Beef in Limpopo

There are numerous red meat abattoirs in the province with supporting infrastructure such as crushing pens and feedlots. The emerging and SMME sectors are only able to participate in the value

chain at a minimal level. The commercial/large scale companies dominate the sector, as they have available infrastructure, access to professional services and own feedlots.

Only a few percentage of abattoirs have the capacity to slaughter 100 cattle daily while majority of abattoirs capacity is between 10-50 cattle daily, presenting an opportunity to increase slaughtering capacity.

Value addition for red meat is done on a minimal level with meat exported outside province for further processing. The current primary production can accommodate for processing activities such as emulsified products (polony, viennas, russians), canned products (corned meats, meatballs, sausages), dried meat (biltong, dried sausage) and spreads/pates (liver spread and liver pate).

## **b) Beef Agro-Processing Opportunities**

- Expanding existing feedlots
- Animal Feed suppliers
- Optimizing existing abattoirs
- SMME opportunity in meat and hide processing (butcheries and leather tanneries)
- Dairy and milk processing

## **c) Spatial locations**

Waterberg and Capricorn district are suitable locations for red meat processing, as there is existing red meat infrastructure and districts are central being accessible to larger markets. These districts also have a large sector of emerging sector cattle farmers.

## **d) Gap Analysis**

A gap exists for further processing of beef products in the province as consumption levels locally and nationally are increasing due to rise in income and employment. As indicated earlier the shortage of supply of beef is estimated at 340 000 cattle per annum as there is a growing demand for the

consumption of beef in SA. The gap in the market place is sufficiently large and it provides opportunity to new entrants into the industry and employment prospects along the entire beef value chain.

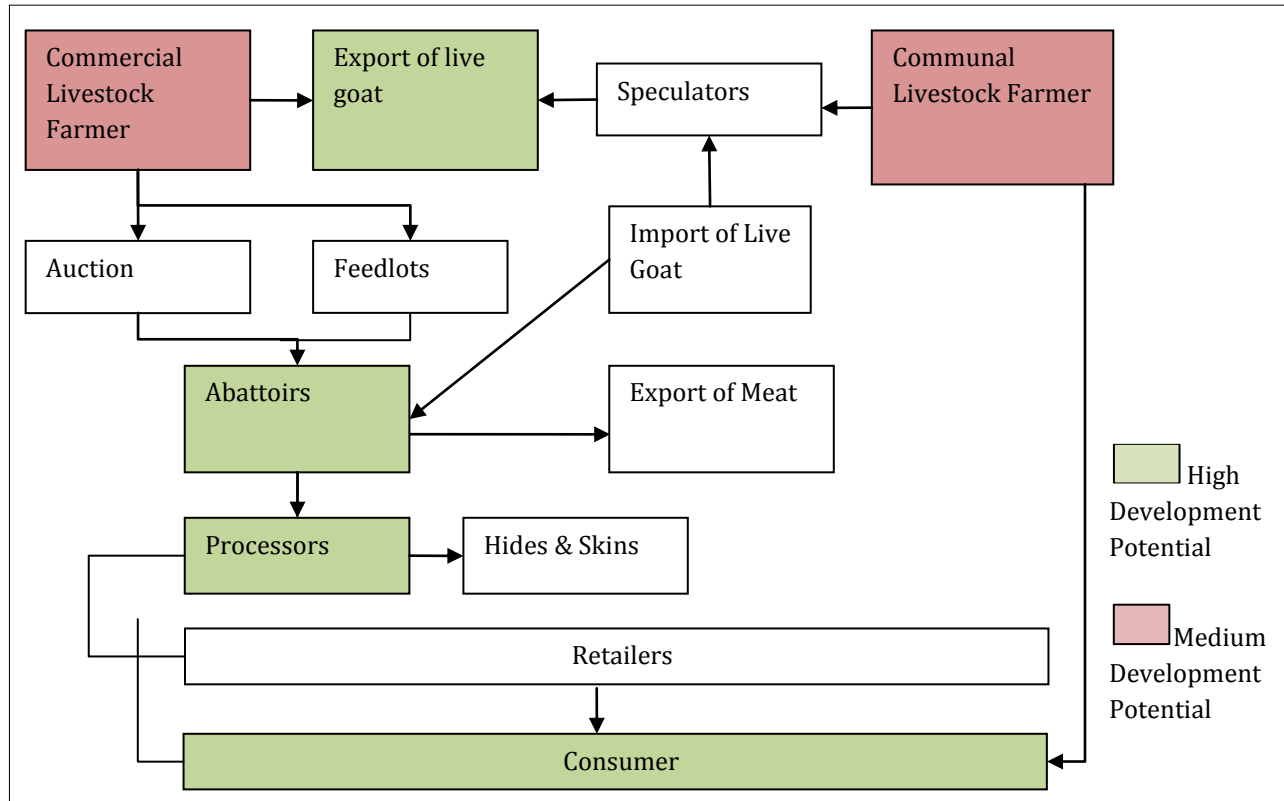
**Vertical integration** involves performing all activities of production and marketing under single ownership, cutting out the middle man and dealing directly with the market, thus saving cost both for producer and consumer. The majority of commercial beef producer usually have their own **feedlots, abattoirs, processors and distributors making them vertically integrated**, as compared to emerging farmers. Providing emerging farmers with infrastructure for vertical integration can enhance value addition and processing activities for local farmers. Pooling activities (grouping) can increase collective bargaining power of emerging small-scale farmers and ensure production volumes are sustained for meat processing activities.

A gap exists in the provision of stud breeders in the province, which medium and small-scale producers can meet. The province can increase value addition facilities for the red meat industry to reduce red meat imports into the province.

Red meat processing facilities can support and promote the Limpopo Nguni Development Programme. The agro-processing activities can assist in integrating beef producers into the beef production value chain. The aim of the Limpopo IDC Nguni Cattle Development Programme is to activate dormant cattle stock owned by rural communal farmers through an integrated beef production industry.

Interventions to develop the red meat industry in the province include money injection by provincial government to integrate meat production activities within the province. The Blouberg Integrated Livestock Enterprise Co-operative (Bilec) is another initiative to assist emerging farmers, by building a water reservoir, crush pens and grazing camps (Limpopo Business: Agriculture and Agri-Processing). The processing of venison can also generate income for game farmers in the province.

## ii. Goat Value Chain



Source: Department of Agriculture, 2010

### a) Existing Processors of Goat in Limpopo

#### Limpopo Dairy – Goat Dairy Herd

The Limpopo Milk Goat Dairy started producing goat milk due to high demand for goat milk. The factory products include fresh milk, cottage cheese, yoghurts, cream and various dairy products made from goat and cow milk. The goats are treated and produced at farm level with the factory using modern processing methods and state of the art technology. All dairy products produced in the factory undergo rigorous laboratory testing throughout the entire process. The products also reach Zimbabwe through its distribution channels.



## **b) Goat Agro-Processing Opportunities**

- Expanding goat production for export
- Optimising slaughtering of goats and meat processing
- SMME opportunity in meat and hide processing (butcheries and leather tanneries)

**c) Suitable location** for goat production increase and processing activities are the Capricorn and Sekhukhune District.

## **d) Gap Analysis**

Goat products have become popular over the years as they require low initial capital investment and are suitable for small-hold farm conditions. Cultural and traditional use of goat in the province creates a significant market where goat is traded informally. The demand for goat is strongly influenced by cultural dynamics such as Jewish, Muslims and Ethnic group requirements. The additional sources of demand are coming from the health food sector, restaurants industries and dairy goats are fast becoming a stable industry.

Prices for good quality Boer goat breeding stock in South Africa have shown significant growth in the years. The need for quality registered organic animals is on the increase. The South African Boer goat on the internationally market is performing very well that countries such as Tanzania, Canada, Norway, Ireland and Nigeria have expressed interest in upgrading indigenous goats (Boergoats SA, 2011). The countries also want to import genetic material or form joint venture projects in combination with South African producers.

The challenge for South African goat producers is to educate the market about the benefits of goat meat. The producers are also struggling in registering animals, which is important as registered goats perform better in the market. Auctioneers report that interest in a Boer goat auction in Modimolle (Nylstroom) is very good although this auction is largely for breeding stock.

From roughly October to mid-December each year, demand for goat increases, driven largely by the holiday season and year-end slaughter festivals among the Muslim community (Boergoats SA, 2011). The challenges faced by goat producers in the rural areas is transports cost inquired to auction areas and access to research and new development trends in the goat industry. The access to markets is also a hindering factor for both the commercial and emerging sector.

The United States is also a market experiencing demand in goat, which goat farmers in the Limpopo province can tap into. Most of the goat meat sold in US is imported from New Zealand or Australia, with 1.5 million pounds of goat meat imported weekly (Raising Meat Goats for Profit, 2011). The high import market presents an opportunity for goat producers to access.

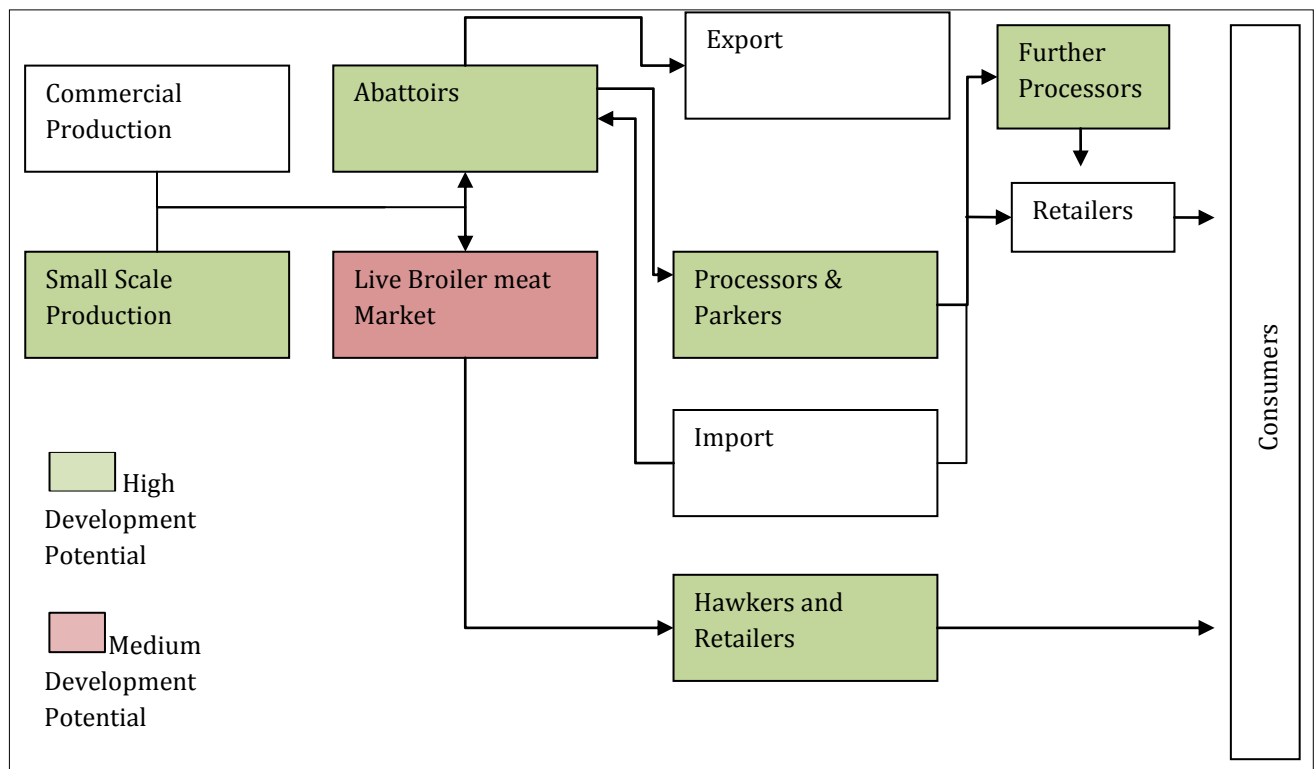
There are opportunities for establishing a brand for goat meat in the Limpopo province, which could be made attractive by means of organic production. The production of goats on local markets can be increased as to reduce export from other destinations, thus meeting the market gap.

Emerging farmers in the province can be encouraged to produce goat for both the informal and formal market as produce is beginning to gain popularity, this can be coupled with substantial marketing of goat produce.

### **4.3.8 White Meat Value Chain**

The two main white meat commodities are poultry and pork.

### i. Poultry Value Chain (Broiler)



Source: Department of Agriculture, 2010

### a) Existing Processors of Poultry in Limpopo

#### Broiler Processing in Limpopo

The broiler industry in the province plays a huge role in income generation and providing food security. The local supply is less than market demand in the province and processed chicken products are imported from outside the province. The processing of broilers is where large profit margins exist in the poultry industry, thus processing activities have to be established. The challenge of high input cost for feed mill increases cost of bird in the province and reduces profit for broiler producers. The access to market is also another challenge faced by broiler producers in the province.

## **b) Broiler Agro-Processing Opportunities**

- Expanding existing broiler production
- Inputs - Animal Feed suppliers
- Optimising existing abattoirs
- SMME opportunity in meat (butcheries)

## **c) Suitable Spatial locations for expansion and development**

**Spatial locations suitable** for poultry processing opportunities will be directed by broiler production areas, thus areas include: Capricorn district namely Lepelle-Nkumpi local Municipality and Polokwane local Municipality as well as Waterberg and Mopani districts.

**Poultry infrastructure** in rural areas will enhance poultry activities, as majority of rural areas are distant from major markets and have to travel long distances which compromises their final output. The market demand for poultry in rural areas is made up of local communities, various local businesses, schools, clinics and community activities (stockvel, funerals, weddings), thus micro poultry processing can be sustained in rural areas.

Poultry processing technology for micro or small-scale poultry processing include:

- › Laying hens cages
- › Nests
- › Chicken egg incubators
- › Poultry hatcheries
- › Abattoir equipment
- › Brooders
- › Feeders and drinkers
- › Stunner bleeder which are able to handle 800 birds per day and can
- › Scalding tank for poultry process
- › Tilting bowl feather pluck

- Drum feather pluck
- Cold storage/refrigeration

All technology and equipment can be purchased locally and majority of companies offer training and consultancy services. The technology is developed for a wide range of poultry processing suitable for rural enterprise schemes as well as commercial ventures.

Agro-processing infrastructure for poultry can range from small to medium scale in rural areas enabling individuals to partake in the entire value addition through growing their own chicks, eggs, slaughtering, storing and selling in local areas. Processing activities will enable rural communities to be self-sufficient (local butcheries, producing branded products) and contribute towards increasing economic activities in rural areas of the Limpopo province. Assisting emerging farmers to be vertically integrated through infrastructure provision (e.g. ownership in broiler production, chicken batteries, egg laying hens, abattoirs) can increase value addition ensuring maximum gains for poultry producers.

## **d) Gap Analysis**

White meat is considered to be a healthier and cheaper alternative to red meat explaining the rapid growth in white meat production over the past years. The white meat industry uses easier processing technologies as compared to other meats thus productivity is higher than other meats.

The challenge in the poultry industry is ‘dumping’ a product. The producer is looking to dispose of the product and recover input costs. Therefore, poultry products that are dumped into the South African poultry market can be sold at a much lower price than local products.

SA has already seen instances of chicken dumping from countries such as Brazil which resulted in the local government imposing a provisional payment to combat dumping of products by enforcing a section of the Customs and Excise Act of 1964. However, this only covered deboned breast meat and Mechanically Deboned Meat (MDM) and no other poultry products (Food Review, 2012).

The producers in the Limpopo province are challenged with accessing market for the broilers, thus dumping activities increases pressure for local producers. The input costs such as electricity, feed,

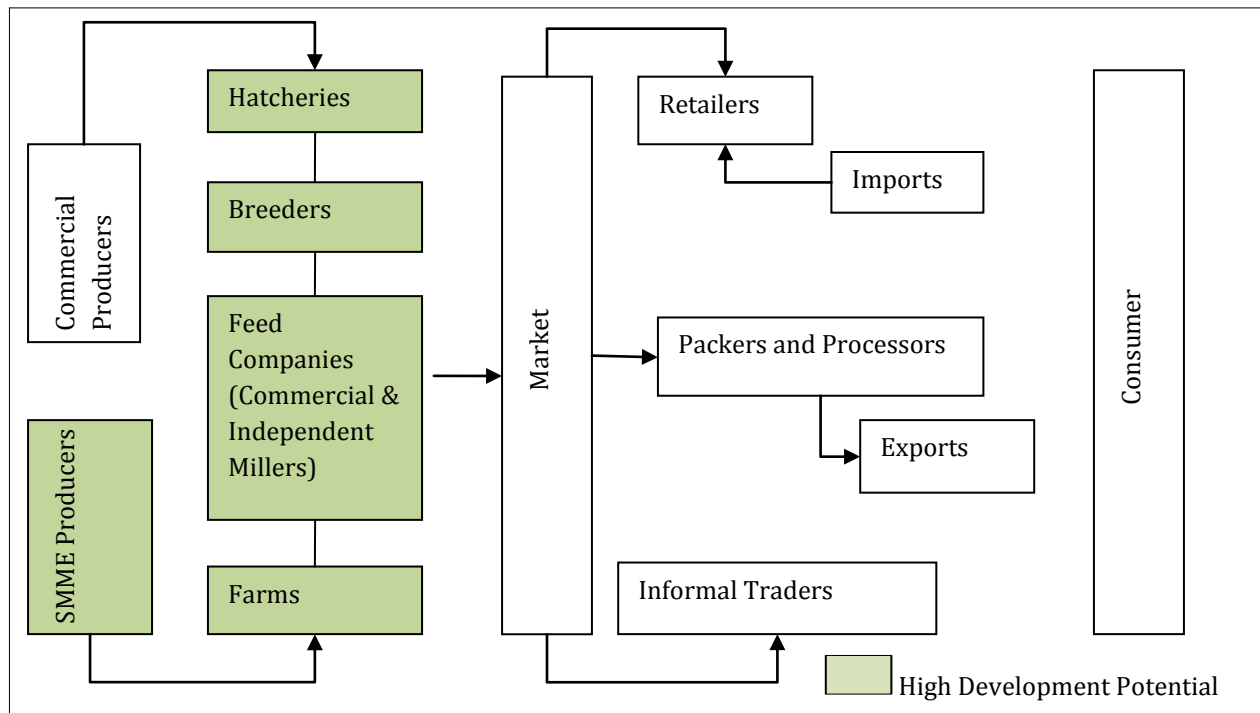
fuel and transport cost make it difficult to sale birds at a low price. Therefore local producers are not able to compete with cheaper import/dumped products.

The Brazilian government subsidises up to 90% of local producers' maize as part of an employment creation programme. This subsidy enables them to produce at much lower costs than SA producers (Food Review, 2012). The subsidising of maize, water, electricity, building structure and so forth can assist local producers reduce in input cost. The regulation of stricter laws for dumping/imports can also assist local producers against foreign competition.

The demand for poultry meat is still in demand as it is seen as a cheaper alternative to other meats and accessible to rural households. According to the Southern African Poultry Association, more chicken meat and eggs are consumed per capita than any other animal protein. The market for whole birds is considered to be saturated therefore market exists for value added products such as pre-packed, marinated portions, crumbed portion, and steaks, these products also receive a higher prices then frozen whole birds.

Distribution outlets for processed chicken in the province can directly to abattoirs, through independent wholesalers, contracts with government departments and mines, spaza shops and food services industry.

## ii. Poultry Value Chain (Egg Production)

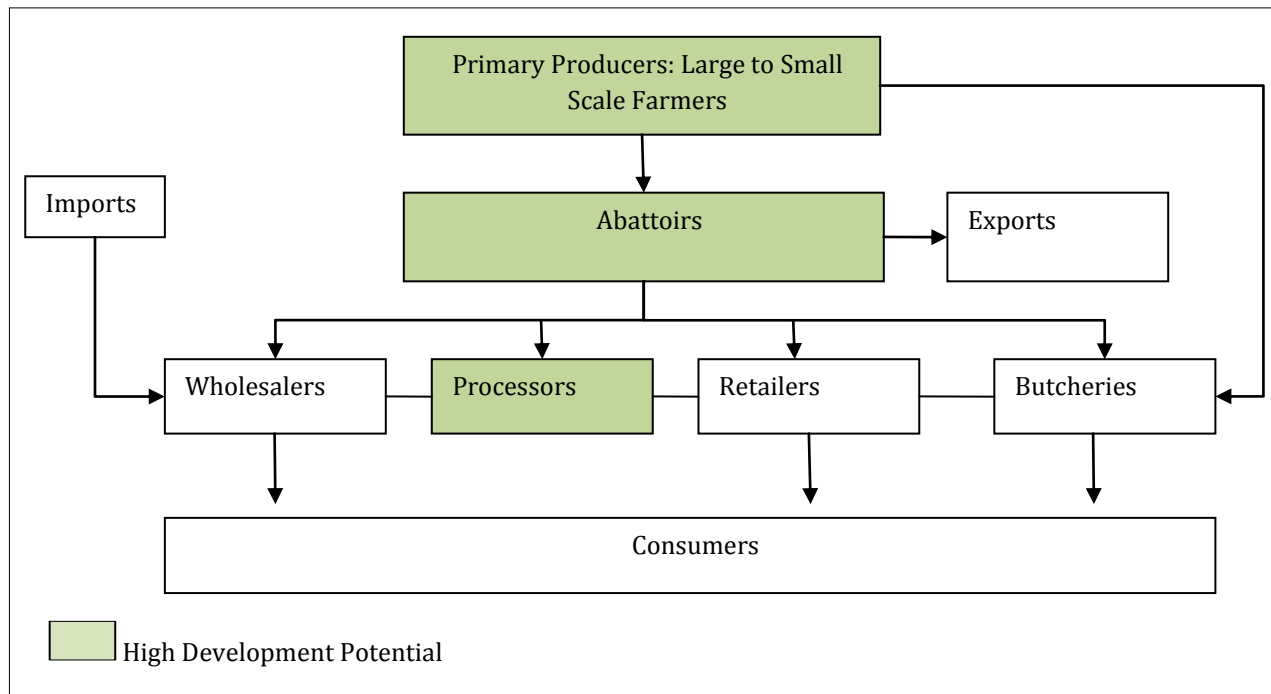


Source: Department of Agriculture, 2010

## Agro-Processing Opportunities

- Liquid or dried yolk
- Shells – dried and ground to use in animal feed and other products
- Raise rooster chicks and sell them as live chickens with the spent hens
- SMME opportunity selling eggs to wholesalers, hawkers and retail chains.

## iii. Pork Value Chain



Source: Department of Agriculture, 2010

### a) Existing Processor of Pork in Limpopo

The pork processing sector in Limpopo is dominated by commercial producers and multinational companies such as Eskort and Enterprise Foods. The pork infrastructure in the province includes pig feedlots and piggeries.

### b) Pork Agro-Processing Opportunities

- Expanding existing piggeries
- Meat – ham, sausages, bacon, etc.
- Inputs - Animal Feed suppliers
- Optimising existing abattoirs
- SMME opportunity in meat (butcheries)



## **c) Suitable Spatial locations for expansion and development**

Areas that have high pig livestock and existing piggeries are Bela Bela, Polokwane and Mogalakwena Local Municipalities, thus pig processing opportunities would be feasible in these areas. These Local Municipalities also have access to a large market and are well connected to suppliers. Pigs are sensitive to diseases and precaution has to be taken when expanding piggery activities.

## **d) Gap Analysis**

The local market for processed pig products is on the increase nationally. The demand for pork products is in the form of convenient food such as frozen sausages, hams, bacon and corned meat. Pork consumption is growing among other cultures as market research done on behalf of SAPPO for 2012 indicates that more black people are eating pork. Research done in 2005 indicated that only 50% of the black market consumed pork, the figure now is up to 70%, according to SAPPO's promotions coordinator.

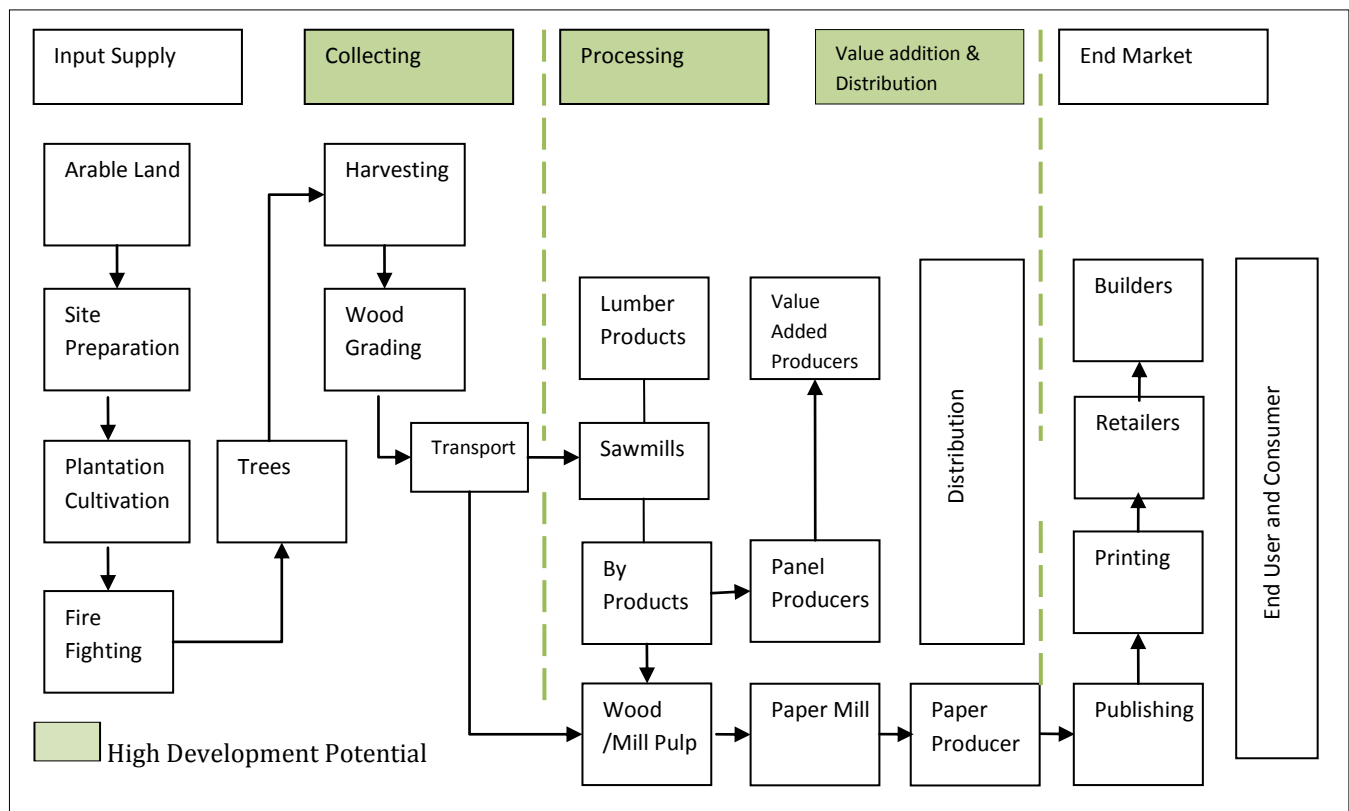
Total pork imports to SA for June 2012 was 16 424, 16 tons in the form of ribs, carcasses, ham's shoulders and other cuts. Highest imports were received from Hong Kong and Canada (SAPPO 2012). The increasing imports presents a window of opportunity for local pork producer and processors to provide for the SA market, support structures such as marketing and promoting local production of pork is required.

The pork industry is also experiencing growth in contract growing. The industry is also experiencing integration between feed companies, suppliers, pork processor to increase in profits in the supply chain.

### **4.3.9 Forestry Value Chain**

The two tree species in the majority of plantations are pine and eucalyptus.

## Forestry Value Chain



Source: Department of Agriculture, 2010

## Forestry Agro-Processing Opportunities

### • Primary Processing

- Saw-mills (optimisation)
- Treated and dried timber
- Chipboard and floorboards
- Mining Timber

### • Secondary Processing

- Furniture manufacturing (incubator)
- Charcoal and Construction products – doors, windows, etc.

Forestry mainly takes place in the Vhembe and Mopani district of Limpopo, even though the province is not a high producer to the forestry industry, local SMMEs can benefit from forestry value addition of primary and secondary processing meeting local and regional needs.

## **Current Projects in the Limpopo Province Relevant and Influential to Agro Processing Strategy**

### ▸ **Polokwane Fresh Produce Hub**

A feasibility studies has been conducted and indicated that the Polokwane Fresh Produce Hub is a feasible project. The Department of Agriculture in partnership with municipalities is working on the establishment of consolidation centres around the province which will take produce from emerging farmers and subsistence farmers and consolidate them for the market. This will provide local farmers with much needed access to local market, increase value for their produce and reducing post-harvest loss.

The rationale behind the erection of the Polokwane Fresh Produce Hub is to provide small emerging and established farmers an efficient market to provide fair prices for the producer and customer that cannot be provided by a wholesaler. The hub will also provide opportunity for downstream beneficiation and reduce logistic cost offering emerging farmers a platform to access the market and grow their businesses. Smaller farmers will benefit from support and knowledge of larger experience farmers and the availability of infrastructure (classification, logistics, cooling facilities).

### ▸ **Limpopo Rural Development Strategy**

The existing projects in the province are important to consider as agglomeration of similar activities can be done and ensure adequate use of limited resources. The previous projects relevant to agro processing are identified in Table 4.7 and 4.8.

The trigger projects identified in the **Limpopo Rural Development Strategy** are job creation projects that could serve as tangible starting point for the province; these projects are acknowledged and built in the agro processing strategy.

**Table 4.7: Limpopo Rural Development Strategy: Trigger Projects**

District	Project	Main Enterprises	Down Stream Enterprises
Mopani District	<b>Extraction Project</b>	Tea extract production Functional foods production	Out-growers, Marketing and Transportation
Sekhukhune District	<b>The Loskop Irrigation Scheme</b>	Citrus and grapes (50-100ha) Field crops (100ha each) Commercial vegetable	Agro processing Transportation Marketing
Vhembe District	<b>The Levhubu Restitution Projects</b>	Fruits, Macadamia Commercial Vegetables	Agro processing Transportation and Marketing
Capricorn	<b>Lets Open the Fields Campaign</b>	Ploughing of maize on dry land (100 farmers)	Milling co-ops and companies Transportation
Waterberg District	<b>The Lephalale Agriculture Corridor Project</b>	Maize production for food security and commercial production Commercial vegetables Livestock production (Red and White meat)	Agro Processing Transportation Construction & maintenance Marketing

Source: Limpopo Rural Development Strategy

► **Feasibility Study for Establishment of Two Fresh Produce Depot Facilities per Province in South Africa**

The purpose of the market depot is to bridge the gap between the small farmers and the large markets. The depot will coordinate the cultivation and production of producers in selected areas, whereby produce will be collected from the farms and transported to the market depot for processing. After processing in depot, products are delivered to various market channels. Due to large volumes, costs per unit will drop and this will make it financially viable for transportation to large markets.

The market depot will have all the necessary infrastructure and machinery to pack large volumes of different products. Table 4.8 indicates the selected fresh produce depots facilities in Limpopo, crops

that will be produced and potential market. Proposed agro processing project can be integrated with fresh depot facilities to ensure maximum production volumes and sustain processing activities.

**Table 4.8: Proposed Fresh Produce Depot Facilities (FPD) in Limpopo**

PROVINCE	DISTRICT MUNICIPALITY	PRIORITY LOCATION	TYPE OF WATER SOURCE
<b>Limpopo</b>	Vhembe	1 = Thulamela	Irrigation scheme
	Mopani	2 = Greater Tzaneen	Irrigation scheme
<b>Number of farmers</b>	The Thulamela Fresh Produce Depot will serve a total of 817 marginalised farmers, whereas the Greater Tzaneen depot will serve a total 736 farmers. Combined, the two facilities will serve a total of at least 1 553 farmers.		
<b>Crop produced</b>	In decreasing order, the following vegetable crops are currently produced: tomato, cabbage, and butternuts, green pepper; sweet corn, chillies, watermelons and baby vegetables; whereas the fruits include citrus, banana, avocado, mango, litchi, guava, macadamia and granadilla.		
<b>Market potential</b>	In both priority locations the current marketing arrangements comprise household, local, national and export markets.		

*Source: Feasibility Study for Establishment of Two Fresh Produce Depot Facilities per Province in South Africa 2008*

## › **Commonweal Local Government Forum Good Practice Scheme Project (CLGF)<sup>6</sup>**

Mopani District Municipality Council is currently participating in the Commonwealth Local Government Good Practice Scheme Project which is running in six countries namely, South Africa, India, Jamaica, Ghana, Pakistan, Sierra Leone and South Africa. In South Africa the project is being implemented jointly by Commonwealth Local Government Forum (CLGF) and South African Local Government Association (SALGA). Other municipalities participating in similar projects include Vhembe district with the programme called; Poverty Reduction and creation of jobs through the establishment of Cooperatives and development of Agricultural Markets.

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<sup>6</sup>South African LED Network: Common local government forum good practices scheme project.

## Purpose of CLGF

To increase and diversify commercial agricultural production, enhance partnerships and increase agricultural capacity of specifically designated groups in the district. The partnership is focusing on 4 pilot projects namely; Cattle farming, piggery; banana farming and water harvesting.

## Project Objectives

- To promote coordination of farmers to acquire knowledge on the use of improved production of cattle, pigs and banana products as a result of the use of alternative methods of production.
- To strengthen and enhance capacity of LED managers and government agricultural officials to be able to coordinate agricultural and LED initiatives for better access to well researched and reliable information that will assist emerging farmers to increase their capacity to produce high quality agricultural produce that will be acceptable to the formal markets.
- To enhance the capacity of Mopani district municipality technicians to plan for water harvesting and conservation as alternative methods to irrigation water conservation.

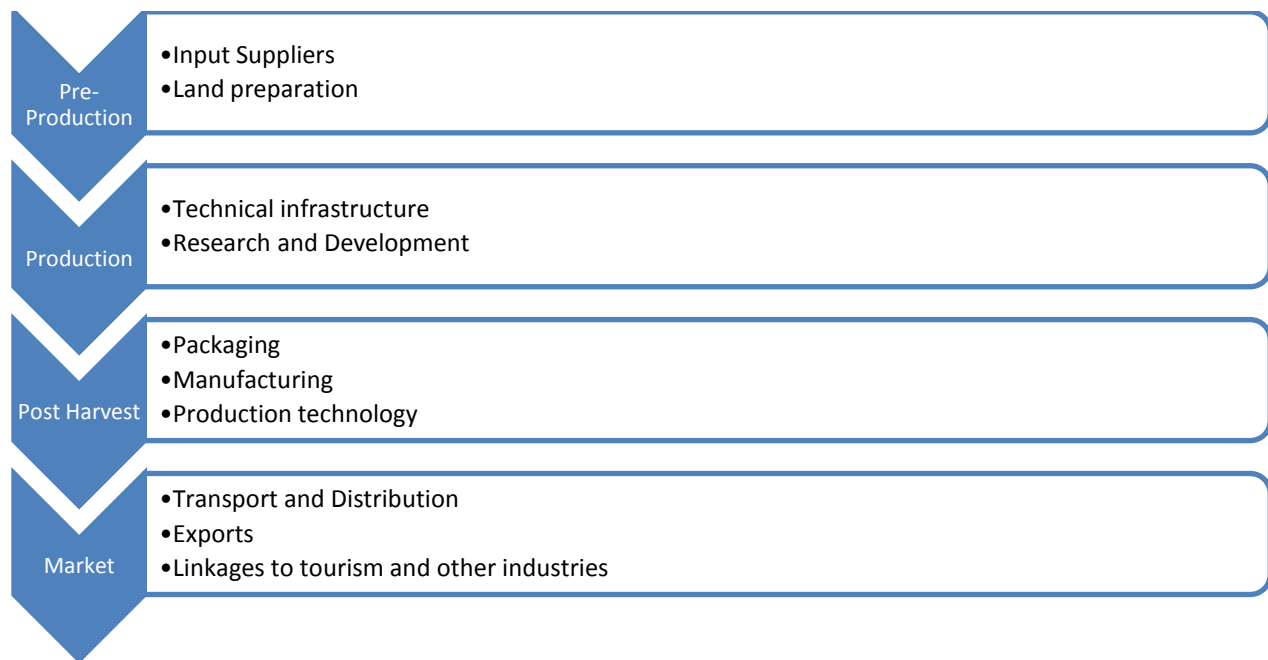
### *Implications for the Agro-Processing Strategy*

- The coordination of high infrastructure developments can be done, thus reducing wastage of limited resources
- Enhance and integrate with existing activities geared at developing the agriculture sector
- Proposed agro-processing project can be integrated with fresh depot facilities to ensure maximum production volumes and sustain processing activities
- Projects can work together to enhance capacity of local economic development

## 4.4 Backward and forward linkages

Figure 4.2 indicates an overview of agro process value chain mainly consisting of preproduction, production, post-harvest and marketing. At each of these stages there are required inputs which can be linked to various industries and **create opportunities for SMME.**

**Figure 4.2: Agro processing value chain with various linkages**



### Backward linkages

#### › Fertilizer

Mineral fertilizers and agriculture lime are essential inputs for the agriculture industry; the available minerals in Limpopo province are limestone, magnetite and phosphate. Phosphate rock enhances soil fertility and plant growth, it is found in the Phalaborwa area with most of it found along the Phalaborwa Igneous complex.

The increasing use of organic fertilizer provides opportunities for horticulture waste to be processed into agriculture manure and fertilizer. The waste produce such as banana peels, macadamia leaves/shell, mango, citrus waste can be used for fertilizer.

Processing and manufacturing of fertilizer is fairly a simple process and can be **accessible to well sourced SMME**, provided that they have required skills in place. The areas with high potential for fertilizer manufacturing, taking into account available horticulture waste, are the Tzaneen, Ba-Phalaborwa, Hoedspruit, Marble Hall and Groblersdal.

## › Crop chemicals

Crop chemicals manufacturing is dominated by multinational companies as the industry requires high technology and capital. The industry is capital intensive and requires high skill base and immense expenditure on research and development. The majority of these companies are based in Gauteng as the able to access required skills and research facilities, the relocation of such companies require adequate volumes to meet profit margins. The crop chemical companies in Limpopo include Agri Limpopo, Agriplas, Laeveld Agrochem, Novon Noordchem and Omnia Kunsmiss with distribution agents.

## › Livestock feed

Poultry and livestock feed can be processed from variety grains including maize, soya beans, cotton, sunflower and most protein & oil seeds. The processing of animal feed presents a high opportunity for SMMEs (that have the require infrastructure and skill base) as the red and white meat industries require high volumes of animal feed. The alternative use for cattle feed include bananas, mango seed, orange pulp and fruit waste, with added supplements such as protein, vitamins and minerals can be possible options for pig and beef cattle feed.

## › Input Suppliers

Table 4.9 indicates the input suppliers required for the meat and horticulture industries, the province has the potential to manufacture some of the inputs required for agro-processing. Local SMMEs can be input suppliers through subcontracting opportunities.

**Table 4.9: Input Suppliers**

Industry	Input Suppliers
Red and White Meat	<ul style="list-style-type: none"> <li>• Stud breeders for different breeds (e.g. piglet producers, chicken breeders)</li> <li>• Animal health companies</li> <li>• Feed mill companies</li> <li>• Poultry and livestock feeds</li> </ul>



Industry	Input Suppliers
Horticulture	<ul style="list-style-type: none"> <li>• Tree growers/nurseries</li> <li>• Seeds</li> <li>• Fertilizer</li> <li>• Chemical suppliers</li> <li>• Equipment suppliers</li> </ul>

#### › Recycling of farm waste

Natural organic farming is on the increase with regulatory and standardisation mechanism such as EuroGAP and HACCP regulating chemical applications system for international exports. The majority of pollution from agriculture is through underground water with farm chemicals in fertilizers and pesticides leaving persistent residues in the environment. Education and training on pollution and safe farming practices (pre and post-harvest) can ensure recycling of farm waste, incorporation organic fertilizers which are produced and sourced locally.

#### Forward linkages

#### › Packaging, handling and storage

The packaging materials for agro processing include glass and plastic bottles, jars, metal and plastic containers, corrugated paper cartons and pallets. The manufacturing of certain products such as glass bottles and pallets are capital intensive and require economies of scale, therefore strategic partnership and intensive technical training will be required.

Mondipak, a division of Mondi Limited which is a subsidiary of Anglo American, is manufacturing corrugated paper cartons at its factories in the Nkowankowa Industrial Park. The high volumes of horticulture products from this area give the company the requisite economies of scale. A number of manufactures of plastic packaging such as plastic bottles and pallets are operating with the province, further expansion and building on already existing pallet manufactures in various areas is essential. Location for SMMEs close to high production areas is critical to ensure a lucrative market.

## › **Manufacturing**

Manufacturing industry is linked to agro-processing and is a labour absorbent industry with the ability to create job employment in manufacturing of machinery, farming equipment and accessories, but requires high capital of investment and skills.

## › **Processing Zones**

Processing activities can only be successful if **high volumes are processed throughout the seasons**; therefore collaboration of farming cooperatives is required to maintain processing activities. Processing zones will be central depots with relevant processing facilities for the natural resource in the area to accommodate for local farmers. These activities will differ in size and can be distributed across the province where there is a concentration of farmers of the same commodity.

## › **Transport, logistics and distribution points**

Existing corridors in the province and nodes in the province include:

- › Dilokong corridor in Sekhukhune/Mokopane
- › East west corridor
- › Maputo Development Corridor, which pass through the Greater Tzaneen Municipality (GTM), with the completion of the corridor and subsequent Spatial Development Initiative (SDI) road projects in GTM the will increase in traffic flow from Zimbabwe, Northwest to Mozambique through GTM.

The above corridors and nodes in the province will enhance the procurement of inputs and the sale of various commodities from the province, also attracting investor and increasing flow of locally produced goods. Table 4.10 indicates the forward and backward linkages opportunities that SMMEs and agri-businesses can take advantage of.

The industrial sites in the various districts are:

- › Seshego Industrial Park in Capricorn DM
- › Lebowakgomo Industrial Park in Capricorn DM

- Thohoyandou industrial park in Vhembe DM
- Giyani industrial park in the Mopani DM
- Nkawkankowa industrial park in the Mopani DM

**Table 4.10: Forward and Backward linkages Opportunities**

<b>Opportunities</b>	<b>Potential locations</b>
<ul style="list-style-type: none"> <li>• <b>Water soluble fertilizers</b></li> <li>• <b>Agri Lime</b></li> <li>• <b>Stock feeds</b></li> <li>• <b>Organic fertilizers</b></li> </ul>	<p>Opportunities that require medium capital expenditure, which medium sized enterprises can handle</p> <p>Tzaneen, Ba-Phalaborwa, Hoedspruit, Marble Hall and Groblersdal</p>
<p><b>Input suppliers for red and white industries</b></p> <ul style="list-style-type: none"> <li>• <b>Animal breeds</b></li> <li>• <b>Animal feed</b></li> <li>• <b>Organic/ pesticides free animal feed</b></li> </ul>	<p>Waterberg district</p> <p>Capricorn district</p>
<p><b>Input suppliers for horticulture industries</b></p> <ul style="list-style-type: none"> <li>• <b>Trees/ nurseries</b></li> <li>• <b>Fertilizers</b></li> </ul>	<p>Mopani district (areas can include Ba-Phalaborwa, Hoedspruit, Tzaneen)</p>
<b>Package manufacturing</b>	All districts
<b>Green technology manufacturers</b>	Polokwane, Musina

#### 4.5 Export Potential and Logistics

The logistic cluster identified in the province are a truck stop in Musina, warehouses in Makhado, Tzaneen, Marble hall and supply parks in Lephalale Local Municipalities. The Tzaneen Local Municipality has been recognised as a well-established agricultural hub while greater Letaba can be

classified as an emerging hub, smaller warehouses for the packaging of commodities exist in the municipal area.

The fruit industry is focused on the export market using mainly road transport to move the products to the end user and to export through the Port of Maputo and the Port of Durban. The Port of Maputo is the closest port to Polokwane. Fruits are exported from Rubbervale, Gravelot and Tzaneen through Maputo, due to the short shelf life of fruit. The airport at Polokwane is ideally located for exports to penetrate international markets.<sup>7</sup>

Industrial Development Zones (IDZ) are targeted to serve perishable good markets, providing storage for citrus, fruit and vegetables and make available frozen food processing facilities.

Agriculture logistic hubs have been suggested for Marble Hall, Letaba-Tzaneen, Makhado Local Municipalities. Other export potential present in the province is the Dilokong Corridor and proximity to SADC regions: Botswana, Lesotho, Mozambique, Swaziland, and Zimbabwe.

## 4.5.1 Limpopo Imports and Exports

By analysing the current import and export statistics for Limpopo and the five districts it opens up the possibility to identify the current strengths and weaknesses related to agriculture and agro-processing in particular. This sub-section will examine the imports and export of Limpopo as well as the five district municipalities.

### **a. Imports**

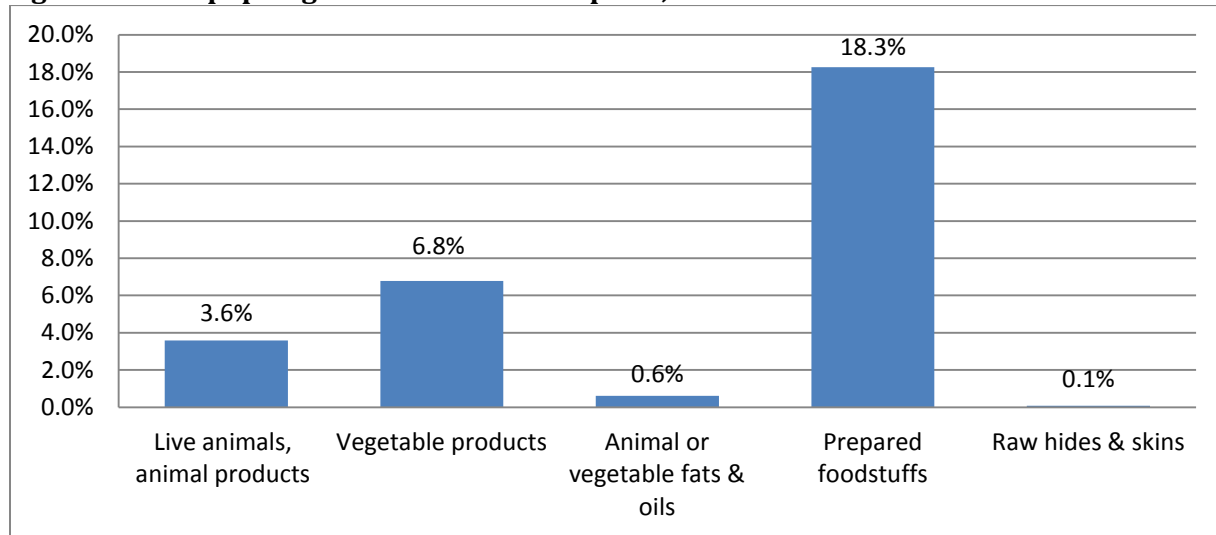
Limpopo currently imports goods to the value of R2.77 billion a year. Agriculture and agro-processing sector goods currently make up 29.3% (R820 million) of the total imports in the province. Figure 4.5 illustrates the breakdown of agriculture and agro-processing goods being imported by Limpopo. These are imports from other provinces and international markets.

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<sup>7</sup>Final Report on Logistic Cluster 2009

From Figure 4.5 it is clear that the largest percentage of imported goods in the sector is 'Prepared Foodstuffs', contributing approximately 18.3% of the 29.3% sector imports. The second largest industry imports are vegetable products at 6.8%.

**Figure 4.5: Limpopo Agriculture Related Imports, 2010**



*Source: Urban-Econ Calculations based on South African Trade Statistics, 2010*

The **top imports** for Limpopo are:

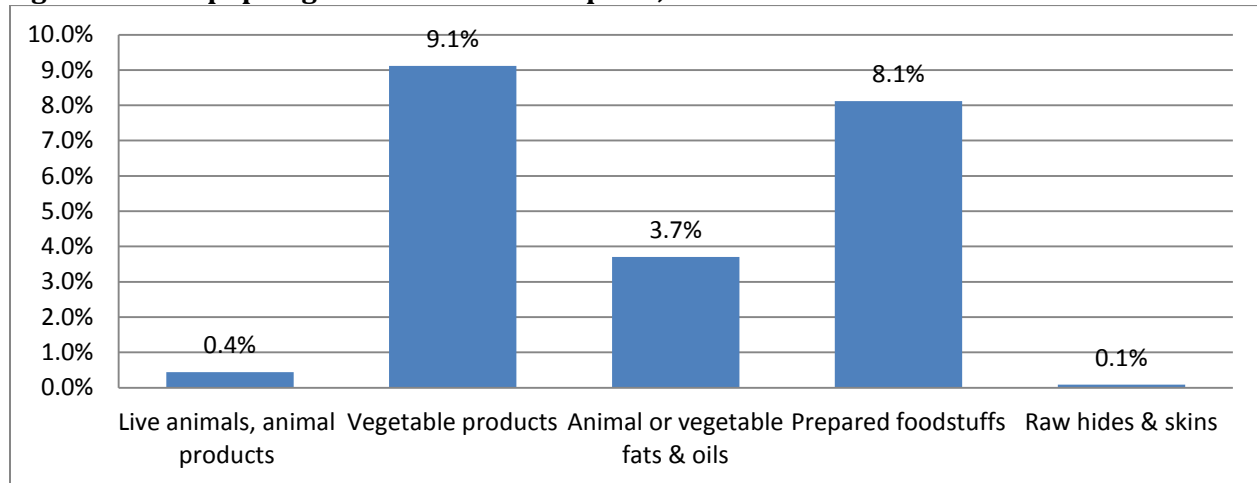
- Dairy Products and Eggs – 3.4%
- Coffee, Tea and Spices – 6.1%
- Sugars and Sugar Confectionary – 2.5%
- Cocoa and Cocoa Preparations – 4.2%
- Cereal, Flour and Starch – 3.3%
- Miscellaneous food preparations – 6.2%

## **b. Exports**

Limpopo currently exports goods to the value of R13.3 billion a year. Agriculture and agro-processing sector goods currently make up 21.5% (R2.86 billion) of the total exports in the province. Figure 4.6 illustrates the breakdown of agriculture and agro-processing goods being exported by Limpopo.

From Figure 4.6 it is clear that the largest percentage of imported goods in the sector is 'vegetable products', contributing approximately 9.1% of the 21.5% sector imports. The second largest industry imports are Prepared Foodstuffs at 8.1%.

**Figure 4.6: Limpopo Agriculture Related Exports, 2010**



Source: Urban-Econ Calculations based on South African Trade Statistics, 2010

The **top exports** for Limpopo are:

- Edible fruit, nuts, peel of citrus fruit, melons – 7.1%
- Milling products – 1.5%
- Animal, vegetable fats and oils – 3.7%
- Cocoa and cocoa preparations – 3.5%
- Vegetable, fruit, nut, etc. food preparations – 1.9%

## 4.5.2 Top District Municipalities Imports and Exports

The province has five district municipalities; Table 4.11 illustrates the top imports and exports for each district and expresses it as a percentage of the total district import and export.

**Table 4.11: District Imports and Exports, 2010**

District	Top Imports	Top Exports
Capricorn DM	<ul style="list-style-type: none"> <li>• Vegetable, fruit, nut, etc. food preparations (1.5%)</li> </ul>	<ul style="list-style-type: none"> <li>• Meat and edible meat offal (1.0%)</li> <li>• Milling products, malt, starches, inulin,</li> </ul>

District	Top Imports	Top Exports
	<ul style="list-style-type: none"> <li>Oil seed, oleagic fruits, grain, seed, fruit, etc., (11.0%)</li> </ul>	<ul style="list-style-type: none"> <li>wheat gluten (3.3%)</li> <li>Animal, vegetable fats and oils, cleavage products, etc (4.8%)</li> <li>Vegetable, fruit, nut, etc food preparations (7.3%)</li> </ul>
<b>Mopani DM</b>	<ul style="list-style-type: none"> <li>Edible fruit, nuts, peel of citrus fruit, melons (0.4%)</li> <li>Vegetable, fruit, nut, etc. food preparations (0.5%)</li> </ul>	<ul style="list-style-type: none"> <li>Edible fruit, nuts, peel of citrus fruit, melons (9.9%)</li> <li>Vegetable, fruit, nut, etc. food preparations (2.1%)</li> </ul>
<b>Sekhukhune DM</b>	<ul style="list-style-type: none"> <li>Beverages, spirits and vinegar (0.3%)</li> </ul>	<ul style="list-style-type: none"> <li>Edible fruit, nuts, peel of citrus fruit, melons (6.2%)</li> </ul>
<b>Vhembe DM</b>	<ul style="list-style-type: none"> <li>Articles of leather, animal gut, harness, travel goods (0.5%)</li> <li>Raw hides and skins (other than furskins) and leather (0.2%)</li> <li>Edible fruit, nuts, peel of citrus fruit, melons (0.2%)</li> </ul>	<ul style="list-style-type: none"> <li>Edible fruit, nuts, peel of citrus fruit, melons (5.0%)</li> <li>Milling products, malt, starches, inulin, wheat gluten (9.9%)</li> <li>Animal, vegetable fats and oils, cleavage products, etc. (28.2%)</li> <li>Miscellaneous edible preparations (3.6%)</li> <li>Beverages, spirits and vinegar (6.5%)</li> </ul>
<b>Waterberg DM</b>	<ul style="list-style-type: none"> <li>Dairy products, eggs, honey, edible animal product (9.4%)</li> <li>Coffee, tea, mate and spices (16.7%)</li> <li>Cocoa and cocoa preparations (11.5%)</li> <li>Cereal, flour, starch, milk preparations and products (9.0%)</li> <li>Miscellaneous edible preparations (17.1%)</li> </ul>	<ul style="list-style-type: none"> <li>Dairy products, eggs, honey, edible animal product (1.7%)</li> <li>Cocoa and cocoa preparations (48.8%)</li> <li>Miscellaneous edible preparations (5.8%)</li> </ul>

# Limpopo Agro - Processing Strategy



**LIMPOPO**  
PROVINCIAL GOVERNMENT  
REPUBLIC OF SOUTH AFRICA

## **Section 5: Stakeholder Engagement**



**URBAN-ECON**  
Development Economists



## Section 5: Stakeholder Engagement

### 5.1 Introduction

The purpose of stakeholder engagement is to get a comprehensive and detailed insight into the nature, extent and dynamic trends of the agro-processing sector. The current activities cannot be ignored as they will impact future development patterns. The producers of the various agriculture commodities were consulted. The purpose of consultation was to indicate current production volumes, challenges and constraints facing producers and agro-processors in the province.

The outcome or volumes processed is highly influenced by the amount of raw materials produced locally and intervention into improving production bottlenecks should play a key role in building agro-processing activities.

### 5.2 Stakeholder Feedback

Investigating current activities in the province indicated that numerous processing activities are taking place predominantly on a commercial scale with very little activity from the emerging sector. The issue of land claims affecting production volumes was constantly raised by stakeholders as it influences their production volumes. Adequate infrastructure, access to financing and market were also common challenges raised by farmers in the emerging sector.

The feedback from the various stakeholders has been incorporated throughout the strategy with the commodity profiling and sector opportunity indicating the production capacity, employment, products processed and challenges faced by businesses conducting agro-processing in the province. Stakeholder engagement also assisted in opportunity analysis and possible future expansion plans. A comprehensive list of stakeholders consulted and their input is attached in *Annexure D*. The possibility of developing relationships and mentorship programmes with established processing businesses can further enhance processing activities.

Table 5.1 provides a list of stakeholders interacted with, these stakeholders ranged from government officials, private sector, agriculture specialist, emerging farmers and agriculture association. LIBSA has an incubation programme for farming cooperatives in each of the districts. The cooperatives are listed in *Annexure E* indicating the name of cooperative, location, sector or farming activities, jobs

sustained and jobs created by the cooperative. Building and incorporating existing agriculture cooperatives, SMMEs and emerging farmers will enhance promotion of BEE business, and allow for value addition in local areas. The local communities can take ownership of processing projects and be in charge of developing their local economies, promoting the aims of the Comprehensive Rural Development Programme.

**Table 5.1: Stakeholders consulted**

<b>Commodity Producers</b>	
<ul style="list-style-type: none"> <li>› ZZ2</li> <li>› Potato SA</li> <li>› District commodity association (Banana, Litchis, Mango, Macadamia and Citrus)</li> </ul>	<ul style="list-style-type: none"> <li>› Commercial farmers</li> <li>› Emerging farming cooperatives</li> <li>› Farming</li> </ul>
<b>Processors</b>	
<ul style="list-style-type: none"> <li>› Letaba Citrus Processors (LCP)</li> <li>› H.F.P (previously Bonanza)</li> <li>› Limpopo Fruit processing, operating under Cape Fruit Processors</li> <li>› Granor Passi</li> <li>› Mango Magic Artchar</li> <li>› B &amp; S Dried Fruit</li> <li>› Green Farms Nut Company</li> <li>› Zetmac</li> </ul>	<ul style="list-style-type: none"> <li>› Westfalia</li> <li>› Del Avo</li> <li>› Apol</li> <li>› Mukumbani tea estate</li> <li>› Limpopo Tobacco Processors Pty Ltd</li> <li>› Loskop cotton</li> <li>› Tzamac</li> <li>› Royal Macadamia</li> <li>› APOL</li> </ul>
<b>Agriculture Associations</b>	
<ul style="list-style-type: none"> <li>› South African Subtropical Growers</li> <li>› SA Banana Growers Association</li> <li>› Citrus Growers Association</li> </ul>	<ul style="list-style-type: none"> <li>› Limpopo Tomato Growers Association</li> <li>› SA Mango Growers Association</li> <li>› Grain SA</li> </ul>
<b>Support Institutions</b>	
<ul style="list-style-type: none"> <li>› LIBSA</li> <li>› AGRI Limpopo</li> <li>› LDA Agribusiness managers</li> <li>› TLU/TAU</li> </ul>	<ul style="list-style-type: none"> <li>› Enterprise Development</li> <li>› Departmental specialists: Macadamia</li> <li>› AFASA</li> </ul>

# Limpopo Agro - Processing Strategy



## Section 6: Sector Development Plan



## Section 6: Sector Development Plan

The focus of this section is to formulate a strategic intervention framework and recommended interventions to be undertaken in support of agro-processing development. The sector development plan will emphasise the required development interventions and the intensification of the value chain within the identified clusters. The three components for strategic intervention discussed are:

- **Strategic Vision:** outlines the vision and mission for the agro-processing sector in the Limpopo province in line with broader national policies and action plans
- **Strategic Intervention plan:** describes the high level intervention to be undertaken by the different stakeholders to support the growth and development of the agro-processing sector
- **Talent Development:** will focus on the development, advancement and retention of skills in the agro-processing sector and the required human capital needed to take hold of agro-processing activities

### 6.1. Strategic Vision

The Limpopo Employment, Growth and Development Plan (LEGDP) recognises agro-processing as an industrial clusters in the province with potential to create sustainable economic development as sectoral SMME initiatives can be established in the industry. The province export high amounts of primary and secondary production while majority of consumption goods are sourced from outside the province, thus value addition and agro-processing can ensure income regeneration for the province.

The promotion and development of the agro-processing sector is informed and spring from national priority policies namely New Growth Path and Industrial Policy Action Plan (IPAP2) of job creation through local resources. Agro-processing will contribute to the development of the key sectors of the provincial economy by strengthening agriculture and agro industrial linkages through increased value added activities and enhanced productivity.

**Strategic Vision: To create an enabling environment for the development and advancement of agro-processing in the province. Enhancing value addition activities as to increase local revenue and create sustainable livelihoods in rural areas.**

The agro-processing strategy will contribute to the development of key sectors in the province, as the industry is integrated with other economic sectors. The **Industrial Master Plan** is a five year master plan aimed at accelerating industrial development and increased job creation in key sector with agro-processing being one of the key sectors. Agro-processing is not a standalone activity and will require interaction from the different role players in the province.

**Mission and objectives:** in order to achieve the expansion of the agro-processing sector in the Province, the objectives are to:

- **Facilitate institutional cooperation** and capability to support agro-processing development
- Provide a **supportive environment for agro-processing** development
- **Build local capacities** to engage in agro-processing activities
- Highlight sector potential and development opportunities

## 6.2. Strategic Intervention

The strategic intervention details the required intervention for developing the agro-processing industry in Limpopo. The interventions will address key challenges and constraining factors as well as outlining required interventions aimed at improving the investment environment. The concept of cluster development for various agriculture commodities will also be introduced. **The clusters development approach provides** an opportunity to coordinate and share activities in the same industry. The activities are clustered in order to increase productivity and improve product standards to make it accessible to wider markets.

The strategic interventions recommended for the development of the agro-processing sector in the Limpopo province are presented as eleven pillars, comprising:

1. Institutional Capacity Development
2. Government/Public Sector Intervention
3. Private Sector Intervention
4. Stakeholder Identification/relations
5. Management, Coordination and Implementation

6. Research, Development and Innovation
7. Expansion of Commodity Production
8. Talent Development
9. Finance and Other Support Mechanism
10. Investment Promotion
11. Identification of Project Investment Opportunities

## 6.2.1 Institutional Capacity Development

The institutional capacity development pillar focuses on the capacity of the province as a whole to implement the agro processing strategy. All government parastatals, NGOs, private and public sector play an integrated role in implementation of the strategy. The district and local municipalities with their IDP Units play a key role in provision of services in their localities to ensure social and economic development. The idea is not for municipalities to necessarily run programmes themselves but to focus on establishing forums to build partnerships and to network with a range of stakeholders. The municipalities need to play a connector role in respect whereby they draw on resources locked in a range of different government support instruments into their localities.

Limpopo Province has various government parastatals/State Owned Enterprises (SOE) that are government's arm of undertaking commercial activities and development in the province. These SOE play an important role in enhancing economic activities of the province therefore the presence is crucial in rendering support and implementation of the agro-processing strategy. The SOE are namely:

- › Limpopo Economic Development, Environment and Tourism (LEDET)
- › Trade and Invest Limpopo (TIL)
- › Limpopo Economic Development Enterprises (LIMDEV)
- › Limpopo Agriculture Business Development Cooperation (LADC)
- › Limpopo Business Support Agency (LIBSA)
- › Small Enterprise Development Agency (SEDA)

The government parastatals such as LEDET, LIBSA, SEDA and LIMDEV have offices in each district of the province. The mission and purpose of these agencies is enterprise development and job

creation in the province. These development bodies provide the province with economic development services, growth and investment promotion in all sectors ensuring a conducive environment for business development.

The different institutions in the province will all play a role in the implementation and facilitation of the agro-processing strategy, therefore, it will be necessary to improve skills and build capacity on all provincial and district levels. Enhancing the institutional capacity in the province will ensure effective implementation and endorsement for the agro-processing sector as well as the development of other industries.

The role of local municipalities is to mobilise producers and ensure proper institutional structures are in place as agro-processing opportunities will be identified at local level. The assistance and support from government commodity value chain specialists will ensure technical support for the local municipalities.

The challenge for both local and district municipality is that they do not possess the necessary technical capacity and resources to address the challenges associated with agricultural and agro-processing development within their areas of jurisdiction. Programmes to address the challenge are discussed below as an enabling environment is required to ensure success and sustainability of projects.

### *Proposed Intervention 1: Capacity Building in the Public Sector*

For long term success and advancement of agro-processing industry in the province staff training is required to be able to offer on-going support to both emerging and commercial farmers. Staff tasked with supporting agricultural activities particularly in the agri-business sectors often do not possess the economic knowledge or technical know-how and experience to effectively implement economic strategies or specific projects. It is, therefore, recommended that staff is appropriately trained to acquire the requisite skills in assisting and furthering processing industry. **Capacity building should not only be limited to local municipalities or LDA officials but also include government SOE and province public sector as a whole.**

## *Proposed Intervention 2: Resource Improvement*

The role of municipalities is to create a conducive environment for development is not only dependent on its human resource capacities, but also the financial and other resources available to it to fulfil its functions. In order to see the appropriate facilitation of agro-processing development in the province, it is essential that municipalities have sufficient budgets available to implement viable projects that are able to make a lasting difference in the local economy.

## *Strategic Intervention 3: Human Capital Development to enhance SMMEs and Local agri-businesses*

The availability of skills to implement and operate projects is essential, without the sufficient skills projects will not take off. The focus of skill development should be on enhancing the current workforce, so that there is a balance between the demand and supply of skills. Limpopo province has a small percentage of 'highly skilled' categories, therefore municipalities have to train current population or bring in skills from outside the municipality.

The key in attracting skills is to enhance benefits to professions and increase municipalities' competitiveness, promoting local companies and resources.

The Limpopo Department of Agriculture (LDA) is currently offering internship, bursaries, digital doorways, farmer basic ICT training, agriculture engineer and many more service to the wider farming population. LDA should ensure the department has specialist to assist processing entrepreneurs meet the required quality standards, technical operation and food audits. The employment of new technologies and product development will also require expert knowledge; the examples of some of these skills are listed in Table 6.1.



**Table 6.1: Example of Skills Requirements for various agro-processing projects and relevant stakeholders**

Projects	Skills required	SETA/Stakeholder
<b>Agriculture and Agro-processing</b>	<ul style="list-style-type: none"> <li>▸ Organic Farming Skills</li> <li>▸ Management training</li> <li>▸ Accreditation</li> <li>▸ Food technologists and quarantine technician</li> <li>▸ Cold room managers</li> <li>▸ Soil management and plant production</li> <li>▸ Irrigation techniques</li> <li>▸ Greenhouse production</li> <li>▸ Animal anatomy</li> <li>▸ Chemical Technicians</li> <li>▸ Horticulturists</li> <li>▸ Supply Chain management</li> <li>▸ Production Management and Quality Control</li> <li>▸ Financial Management Skills</li> <li>▸ Commercial and Marketing Manager</li> <li>▸ Innovations Managers</li> </ul>	<ul style="list-style-type: none"> <li>▸ Food and Beverages Manufacturing Industry Sector Education and Training Authority (FOODBEV)</li> <li>▸ South African National Halaal Authority</li> <li>▸ Agriculture Sector Education and Training Authority (AGRISETA)</li> <li>▸ Department of Agriculture</li> <li>▸ Agri-Skills Transfer Pty Ltd</li> <li>▸ Train The Nation (TTN)</li> <li>▸ South African Bureau of Standards</li> <li>▸ Agriculture Research Council (ARC)</li> <li>▸ Experienced farmers</li> <li>▸ IDC, Dti</li> <li>▸ FET Institutions</li> </ul>

The Table below sets out the Intervention Action Plan for Pillar 1.

**Table 6.2: Intervention Action Plan for Institutional Capacity Development**

Actions	Key Role-players	Timeframes
<b>Proposed Intervention 1: Staff Training</b>		
1. Undertake skills audit in all local government spheres and SOE's to determine skills requirement for business units dealing with economic development.  2. Develop and implement appropriate staff	<ul style="list-style-type: none"> <li>▸ Coordination by LEDET</li> <li>▸ District and Local Municipalities(Province to meet with municipalities to discuss ways in which</li> </ul>	Short term,  On-going

training programmes for various government public sector institutions.	<p>interventions can be undertaken)</p> <ul style="list-style-type: none"> <li>▸ Department of Cooperative Governance and Traditional Affairs (COGHTA)</li> <li>▸ LDA</li> </ul>	
<b>Proposed Intervention 2: Resource Improvement</b>		
<ol style="list-style-type: none"> <li>1. Allocate key projects to municipalities; involve all stakeholders at district level. These stakeholders should be from district LED units, agriculture and economic development departments.</li> <li>2. Evaluate resource requirements at municipal level.</li> <li>3. Allocate or facilitate budgets for project implementation especially on local level. Funding for agro-processing development should be prioritised at local level. This can be done through government providing conditional funding to Local Municipality to use exclusively for agro-processing industry development.</li> </ol>	<p>All relevant Provincial Departments to facilitate budget allocations</p> <ul style="list-style-type: none"> <li>▸ LEDET</li> <li>▸ LDA</li> <li>▸ COGHTA</li> </ul>	On-going
<b>Proposed Intervention 3: Human Capital Development in SMMEs and Local agri-businesses</b>		
<ol style="list-style-type: none"> <li>1. Enhancing the current workforce in the province to take advantage of agro-processing activities.</li> <li>2. Supply skills development to existing agri business to increase their revenue and expansion opportunities.</li> <li>3. Increase “highly” skilled labour force, to have a strong skill base in the province, especially for agro-processing.</li> </ol>	<ul style="list-style-type: none"> <li>▸ FOODBEV</li> <li>▸ AGRISETA</li> <li>▸ South African Bureau of Standards</li> <li>▸ IDC</li> <li>▸ Dti</li> <li>▸ FET Institutions</li> <li>▸ Agriculture Research Council</li> </ul>	On-going

## 6.2.2 Government/Public Sector Intervention

The table below indicates various roles the government can play in developing the province's agro-processing industry. The coordination and involvement from different government departments is required as agro-processing is multi facet industry.

Role of Government in the Development of the Agro Processing Industry	
1. Promote Strategic Vision	The Limpopo provincial government should work towards a common goal on all levels of government sphere to promote the agro-processing industry.
2. Render operational infrastructure services	Farmers and processing businesses in the province face infrastructure backlogs in electricity, rail capacity/ reliability and handling equipment. The provision of quality infrastructure is paramount to retaining, expanding and attracting businesses into the province.
3. Resources and project prioritisation	Government has limited resources thus agro-processing development opportunities should be channelled into activity corridors and nodes as to enhance and promote shared facilities. The NSDP emphasises that Government <b>spending should be on fixed investment</b> , focusing on localities of economic growth and economic potential.
4. Strengthening linkages	Promote collaboration and the exchange of knowledge among stakeholders, e.g. seminars, workshops, development platforms, financing partnerships. Important stakeholders for the agro-processing industry include: Producers, producer associations, research facilities, donors, local government, agricultural input providers, processors and buyers.
5. Delegation	Government is not solely responsible for the implementation of the agro-processing strategy, shared responsibilities and decision making needs to be shared amongst local government, investment agencies, private sector, NGOs and communities. A

	common understanding of shared responsibilities amongst stakeholders is required.
6. Impact Orientation	Development of projects should be implemented in the most effective and efficient way for greatest impact. The collaboration of the province high impact infrastructure and projects is required.
7. Priority Settings	A development agenda for the agro-processing industry has to be set in place with priority areas and priority funding.
8. Guide	Agro-processing is a complex industry involving numerous role players across the value chain thus government needs to foster guidelines for development, through incentives and innovative procedures.
9. Financial services specifically for the agro-processing industries in the province	Financial support and services are required to assist in research & development, production, standardisation, capital for new ventures and the expansion of existing agro-industries.
10. Promote and engage private sector in development	This can be done through partnerships, awareness raising, mandating and providing policy options to foster private sector involvement.
11. Initiator, moderator and facilitator	Initiate projects through stakeholder dialogues and introduce provincial incentives and make known available assistance from government.
12. Accountability	Government is required to have transparency of results and outcomes of implemented projects in the province, this will also assist in identifying project bottlenecks.
13. Provide an enabling environment for agro-industry competitiveness	This can be done through improving and building on land tenure and property rights in the province, infrastructure development and trade policies that enhance access to local and international markets.
14. Offer expertise and	Government can combine expertise and resources to ensure

provision of land where possible	speedy implementation of projects.
15. Ensure proper institutional arrangements are in place	Government can ensure the relevant stakeholders are mobilised to partake in agro-processing projects, e.g. mobilisation of community members, liaison with tribal authorities, ensure that Local Municipalities and all relevant stakeholder are on board.
<b>Other key responsibilities include:</b> <ul style="list-style-type: none"> <li>▸ Capacity building efforts with various companies in the province and involving them in policy setting procedures</li> <li>▸ Mobilising financial services</li> <li>▸ Performing impact assessment/feasibility studies to attract investment</li> <li>▸ Monitoring progress and implementation</li> <li>▸ Providing necessary information (baseline, up to date statics and figures relevant to province).</li> </ul>	

*Source: Adopted from the Role of Governments in Promoting Corporate Responsibility and Private Sector Engagement in Development, 2010*

## **Current government initiatives encouraging infrastructure development that the agro-processing sector can benefit from include:**

**The Limpopo rail and freight initiative** which is between various Limpopo Provincial government bodies namely Department of Agriculture, Road & Transport, TIL and Transnet freight. The aim of the initiative is to improve transport and rail infrastructure in the province.

The other initiatives that will benefit the agro-processing industry are the proposed fresh produce market and the Presidential Infrastructure Coordination Commission (PICC) strategic integrated projects. The availability of local airports provide for export opportunities for locally produced products/cargo.

## **PICC Strategic Integrated Projects (SIPs)**

The Presidential Infrastructure Coordinating Commission (PICC) is a body responsible for integrating and coordinating long-term infrastructure development. Seventeen Strategic Integrated Projects (SIPs) have been developed and approved to support economic development and address service delivery in the poorest provinces.

The strategic integrated projects relevant to the Limpopo agro-processing sector is project number eleven: **this focuses on the improvement in agricultural and rural infrastructure**. The project aims to expand production and employment in small-scale farming and promote rural development. The above objectives will be achieved by providing:

- Facilities for storage (silos, fresh-produce facilities, packing houses)
- Transport links to main networks (rural roads, branch train-line, ports)
- Fencing of farms, irrigation schemes to poor areas
- Improved research and development in rural issues (including expansion of agricultural colleges)
- Processing facilities (abattoirs, dairy infrastructure)

Other identified projects that will benefit the development of the agro-processing sector are the:

- Unlocking the Northern Mineral Belt with Waterberg as the Catalyst, this will increase the local demand for agriculture produce
- Electricity transmission and distribution for all, this will be beneficial more so in rural areas and further improve commercial activities in the province
- Electricity generation to support socio-economic development, electricity services will enhance production levels as electrical irrigation systems and new technology development can be implemented
- Expanding access to communication technology, this will benefit local farmers as they will be able to access agriculture marketing information and keep abreast with current technologies in the industry
- Regional integration for African cooperation and development, this will open wider markets for agriculture producers and agro-processing in the province

## *Proposed Intervention 1: Investment in Road and Transport Infrastructure*

The investment and promotion of existing or proposed projects such as citrus rail transportation solution, and the Limpopo rail freight initiative can speed up delivery of services. Transport infrastructure is also critical for input suppliers as agro-processing is dependent on numerous inputs. Proposed agro-processing facilities should try by all means to build and employ existing infrastructure as to reduce costs and share facilities. The packaging of ICT infrastructure and software is important as it provides information between the markets, farmers and consumers, training for small farmers to grade, store etc. Improvement of roads and farm linkages to main roads is also essential for local producers to reach markets.

The above intervention is promoted by national policies such as Regional Industrial Development Strategy (RIDS), Integrated Manufacturing Strategy (IMS) that call on regions to build their industrial economies focusing fundamentally on addressing key obstacles primarily infrastructure development.

## *Proposed Intervention 2: Rural Infrastructure Upgrade*

The dilemma for rural areas to reach markets can be addressed through improved road networks, and fresh produce depots as rural activities are dispersed. The backlogs in electricity, irrigation systems and preservation infrastructure were continuously raised through stakeholder consultation. Rural infrastructure can also assist in providing food security for local communities as farmers can target local markets in their areas.

The strategic intervention is based on the Comprehensive Rural Development Programme as it promotes all localities to alleviate poverty and provide food security in rural areas. The strategy can achieve this by providing rural infrastructure that will maximise productions volumes and focus on agriculture value addition.

## *Proposed Intervention 3: Market Infrastructure Development*

Agriculture marketing involves the activities from moving an agriculture product from farm to the consumer. This also involves role players found along the entire food value chain. Market infrastructure plays an essential role in distribution of agriculture produce. Efficient marketing

infrastructure such as wholesale, retail, storage and processing facilities are essential for cost effective marketing and reducing post-harvest losses.

**Agriculture extension services are required to advise farmers on markets, so that production is demand driven.** Support for agriculture marketing programs include grading, marketing agreements and contract orders, research and promotion programs.

The focus of market development should be on long term management of the agriculture market, identifying how the market will be managed, operated and maintained. Market infrastructure development especially for the emerging sector is important as reaching markets is one of the major challenges faced by this sector.

The existing policies and strategies promoting agriculture marketing infrastructure include the Agriculture Marketing Strategy for SA (discussed below) and the Zero Hunger Strategy that makes provision for producers to access markets.

## **Agriculture Marketing Strategy for RSA compiled by Department of Agriculture, Forestry and Fisheries**

The aim of the agriculture marketing strategy is to minimise constraints faced by agriculture producer in accessing the market. The strategy is targeted at role players in the food value chain, local and international markets, as it aims to lower transaction costs associated with accessing the agriculture market.

The tools employed by the strategy to assist in farming and agri-business development are:

- › Provision of agriculture marketing infrastructure such as agro-processing facilities, packing, grading and storage facilities
- › **Agro logistics** development of solutions to logistic challenges and constraints in the agriculture sector
- › **Agricultural marketing information** through cell phone technology, radio broadcasts, agricultural display technology systems and newspaper or print media. This will make agriculture information within reach to rural farmers.



The implementation of agriculture marketing strategy will involve various stakeholders both on national and provincial level, namely private sector agribusiness, Department of Transport, Statistics SA, Department of Trade and Industry and Finance Institutions.

The agro-processing sector in the province can take advantage of the support programmes offered by the marketing infrastructure. It is necessary for both the private and public sector to play a collaborative role in providing agriculture marketing infrastructure for the province. The role of government in with regards to providing agriculture marketing infrastructure can include:

- Allocated public investment and spending into marketing infrastructure
- Provision of value addition and agro-processing facilities
- Provision of agri-infrastructure (grading, packaging and storage facilities)
- Product quality certification such as factories compiling with export standards
- Provision of transport and logistics services for agriculture farmers (e.g. central collection for consolidation of products to make economic units for transportation).

These facilities can only be sustainable and efficient if used communally by farmers who have organised themselves into cooperatives. The **communal use of infrastructure will ensure sustained volumes and high productive levels.**

#### *Proposed Intervention 4: Enabling Policy Environment*

An enabling policy environment can ensure adequate use of resources while enhancing competitiveness of the province to conduct and attract businesses. Enabling policy environment should consider building and improving the following:

- **Land tenure, Property rights and Land ownership:** create powerful incentive for value addition, as ownership rights and enforcement mechanism has the ability to enhance land productivity
- **Trade policy:** the role of government is to create an enabling environment through policies that promote efficiency, investment and technology transfer. The use of policies can enhance domestic industries focusing on inward competition and creating stability among local enterprises that can easily adjust to international markets

- › **Export Legal Requirements:** agro-enterprises must keep abreast with changes in the various qualities and hygiene standard required such as Hazard Analysis and Critical Control Points (**HACCP**) and **EUROGAP standards**.
- › The role of government in this regard is providing producers and agriculture food chain stakeholders with financial and technical assistants to meet import standards
- › **Consumer health and safety requirements:** the Consumer Protection Act promotes fair business practices while protecting consumers against unfair, unreasonable, unjust or improper trade practices. This act will influence food processing in the province

Marketing infrastructure can also create an enabling environment as farmers can access markets. Encouraging famers to **join commodity groups/association** can help in creating market opportunities and assisting emerging farmers benefit from technical experts. Farmers can join farmer cooperative to form **agricultural marketing cooperatives** which can give them bargaining power and assist them in reaching alternative marketing channels. **Agricultural marketing skills** can be developed through specific tailored accredited agricultural marketing training and collaborating with industry organisations.

The Table below sets out the Intervention Action Plan for Pillar 2.

**Table 6.3: Intervention Action Plan for Government/Public Sector Intervention**

Actions	Key Role-players	Timeframes
<b>Proposed Intervention 1: Investment in Road and Transport Infrastructure</b>		
1. Undertake long term planning to meet future requirements.	› National Department of Transport	Short to long term, on-going
2. Support proposed transport initiatives and projects.	› National Department of Public Works	
3. Upgrade roads of strategic importance for economic development.	› Road Agency Limpopo	
4. Develop a comprehensive road maintenance plan.	› Department of Agriculture	
5. Facilitate improvements to rail services to enhance efficiency and reliability.	› South African National Road Agency LTD (SANRAL)	
	› Provincial Department of Transport, Roads and Public	

	<ul style="list-style-type: none"> <li>Works</li> <li>Transnet</li> </ul>	
<b>Proposed Intervention 2: Rural Infrastructure Upgrade</b>		
<ol style="list-style-type: none"> <li>Provision of collective infrastructure to benefit rural farmers.</li> <li>Improve accessibility through new and improved road infrastructure networks.</li> <li>Identify areas of current and potential economic activity and ensure delivery of electricity and telecommunications.</li> </ol>	<ul style="list-style-type: none"> <li>District and local municipalities</li> <li>Department of Rural development and Land Reform</li> <li>Road Agency Limpopo,</li> <li>Department of Agriculture,</li> <li>Provincial Department of Transport, Roads and Public Works</li> <li>Transnet</li> <li>Eskom</li> </ul>	Short term
<b>Proposed Intervention 3: Market Infrastructure Development</b>		
<ol style="list-style-type: none"> <li>Build on agriculture extension services to advise farmers on markets.</li> <li>Enhance market infrastructure along the entire agriculture value chain especially in rural areas.</li> <li>Provision of agri-infrastructure (grading, packaging and storage facilities)</li> <li>Provision of value addition and agro-processing facilities</li> <li>Market support facilities such grading, contract agreements should be facilitated.</li> <li>Provision of transport and logistics services for agriculture farmers</li> <li>Product quality certification</li> </ol>	<ul style="list-style-type: none"> <li>LDA district and local officials</li> <li>Department of Agriculture and Public works</li> <li>Local export agents</li> <li>Retail chain stores</li> <li>Farmers</li> <li>National Fresh Produce Markets</li> <li>Private sector agribusiness</li> <li>Department of Transport</li> <li>Statistics SA</li> <li>Department of Trade and Industry</li> <li>Finance Institutions</li> </ul>	Short to long term

Proposed Intervention 4: Enabling Policy Environment		
<ol style="list-style-type: none"> <li>1. Establish status of land claims beneficial and required intervention.</li> <li>2. Removal of strict red tape and avail incentives for businesses to conduct production in province.</li> <li>3. Support and give preferential treatment to local agri-businesses through government procurements procedures</li> <li>4. Improve relationships between government and private sector</li> <li>5. Promote exports and participate effectively in global market through assisting business offer competitive prices, skilled and trained productive labour, quality certified products</li> <li>6. Carry out market assessment prior to interventions and improve accountability of government agencies and service providers. Make use of mass media and build practical support for micro and small enterprises (Creating an enabling environment for private sector development in sub-Saharan Africa, 2008)</li> </ol>	<ul style="list-style-type: none"> <li>› SOEs such as TIL, LIBSA, SEDA</li> <li>› Department of Trade and Industry</li> <li>› Department of Rural Development and land Reform (DRDLR)</li> <li>› Limpopo Department of Agriculture</li> <li>› National Agricultural Marketing Council</li> <li>› Local and district municipalities</li> <li>› Educational and skills training colleges</li> <li>› Various experts from food science and exports sectors</li> </ul>	Long term

### 6.2.3 Private Sector Intervention

Private sectors in the agriculture production and agro-processing have a wealth of knowledge at their disposal as they use the latest technology, have established market, and know standard/regulations required for domestic and export markets. As seen earlier in the status quo various agro-processing activities are taking place in the province on a commercial level with the emerging sector struggling to enter. The role of the private sector is to take hold of presented opportunities in the agro-processing strategy and invest where possible.

**Investment of both capital and resource knowledge** from the private sector would be beneficial in ensuring implementation of agro-processing activities. Joint venture projects between government and private sector is important to ensure funds are obtained for projects. The specific joint venture projects are indicated in the implementation plan.

Building on **Mentorship programmes** between commercial and emerging agri-businesses can benefit both stakeholders as sub-contracting contracts can emerge and beneficial relationships can be formed.

**Coordination of existing processing activities** with proposed agro-processing projects can ensure local activities are not duplicated and the market saturated. The existing agri-businesses in the province can also act as **input suppliers** providing services, technical expertise and produce for proposed activities.

The private sector also plays a **crucial role in the provision of agro-processing infrastructure**; the sector has technical and operation capacity to handle agri-infrastructure. Forming partnerships in the building and operation of agro-processing projects can further enhance job creation in the province.

The private sector has a **social responsibility** of investing in the areas they operate in as well as investing in the people. The investment of the private sector is driven by business objects and returns/profits are a key priority. The private sector in the province should work towards **promoting government objective and policies** as it is believed that industrial development is a role of the private sector, with government ensuring that there is a conducive environment and available collaborations models, e.g. Private Public Partnership.

The Table below sets out the Intervention Action Plan for Pillar 3.

**Table 6.4: Intervention Action Plan for Private Sector Intervention**

Action	Key Role Players	Timeframes
<b>Proposed Intervention 1: Private Sector Intervention</b>		
<ol style="list-style-type: none"> <li>1. Mentorship programmes between commercial and emerging sector.</li> <li>2. Joint venture between private and public sector for funding and implementation of projects.</li> <li>3. Building and integrating existing agro-processing activities into new ventures/initiatives.</li> <li>4. Existing agri businesses to act as Input suppliers.</li> <li>5. Investment in manufacturing/agro-processing infrastructure development.</li> <li>6. Agro-processing marketing infrastructure can done by private sectors this can include small abattoirs, farm processing and maize milling facilities.</li> <li>7. Provide a platform for inclusive models where SMMEs are incorporated in the value chain of agro-processing.</li> <li>8. Advertising campaigns and commercial distribution of locally produced goods</li> <li>9. Build human capacity in their businesses e.g. offer training and skill development programmes to employees</li> <li>10. Sector collaboration between businesses with common interests.</li> </ol>	<ul style="list-style-type: none"> <li>▸ Commodity grower associations</li> <li>▸ Trade and Investment Limpopo</li> <li>▸ Development financiers</li> <li>▸ Private sector investor</li> <li>▸ Commercial farmers</li> <li>▸ Existing Agri-business and processing companies</li> <li>▸ SMMEs and local businesses in the agriculture sector</li> <li>▸ Manufacturing and transport businesses</li> </ul>	Short to Long term

#### 6.2.4 Stakeholder Identification/relations

Agro-processing involves various stakeholders along the entire value chain, and participation of all stakeholders is important to ensure long term running of projects. Before implementation of any project it is important to establish roles and responsibilities of various stakeholders. The successful case studies in the previous sections showed that coordinated actions between public and private can give a locality competitive advantage in markets. The agro-processing private sector and

commercial farmers have the capacity with regards to technical experience and development of new technologies, while the emerging sector lacks behind.

The development agencies such as Limpopo Economic Development Enterprise (Limdev), Limpopo Business Support Agency (LIBSA), Greater Tzaneen Economic Development Agency (GTEDA) can assist in stakeholder development. These agencies have established investor networks and build solid relationships with local businesses.

### *Proposed Intervention 1: Stakeholder Engagement/Identification*

It is necessary to have buy-in and support from the private sector. The stakeholders in the province should be encouraged to convey opinions and provide input that will be incorporated into the programmes undertaken towards the development of agro-processing. The responsibilities of the different project must be allocated to the different stakeholders and responsible parties must become pro-active in the implementation process.

A forum focusing on the agro-processing industry can be established. This can be made up of the various stakeholders to address key issues faced by the industry, represent the needs of all business and stakeholders in the industry. The forum can act as a point of contact between the industrial community and the Limpopo Government.

### *Proposed Intervention 2: Commercial and Emerging Sector Linkages*

The purpose of the proposed intervention is to make emerging farmers more competitive and enable them to take hold of agro-processing opportunities and local markets through providing them with necessary mentorship, infrastructure and adequate market knowledge.

The commercial sector has a wealth of knowledge and expertise (industry information, technical expertise) to offer to the growing emerging sector, relationship and networks between the two can be beneficial. To ensure long term success and sustainability of projects, the local municipality has to monitor and evaluate performance of projects, providing relevant support where necessary. The handover of projects to beneficiaries requires withdrawal of high level support thus increasing ownership and responsibility to project.

The Table below sets out the Intervention Action Plan for Pillar 4.

**Table 6.5: Intervention Action Plan for Stakeholder Relationship Development**

Actions	Key Role-players	Timeframes
<b>Proposed Intervention 1: Stakeholder Engagement/Identification</b>		
<ol style="list-style-type: none"> <li>1. Host a stakeholder seminar</li> <li>2. Project prioritisation</li> <li>3. Partnership identification and project matchmaking.</li> <li>4. Assign duties and responsibilities to relevant role-players.</li> <li>5. Facilitate the establishment of agro processing forum.</li> <li>6. Identify and secure commitments for public-private partnership opportunities.</li> </ol>	<ul style="list-style-type: none"> <li>▸ All relevant provincial departments</li> <li>▸ TIL</li> <li>▸ Development financiers</li> <li>▸ Local and District Municipalities</li> <li>▸ Commercial industrial sector</li> <li>▸ Emerging sector</li> <li>▸ Farming originations/representative body</li> <li>▸ Private agribusinesses</li> </ul>	Immediate and on-going
<b>Proposed Intervention 2: Commercial and Emerging Sector Linkages</b>		
<ol style="list-style-type: none"> <li>1. Address urgent needs identified by emerging sector.</li> <li>2. Assist emerging sector in sub-contracting for commercial industry.</li> <li>3. Link emerging sectors with relevant farming organisation and representative bodies.</li> <li>4. Facilitate commercial sector buy-in for emerging sector support.</li> <li>5. Encourage established businesses to integrate emerging sector support into business strategies and plans.</li> <li>6. Establish and roll-out support, mentoring and networking programmes.</li> <li>7. Make emerging farmers more competitive</li> </ol>	<ul style="list-style-type: none"> <li>▸ LDA</li> <li>▸ Local and District Municipalities</li> <li>▸ Commercial industrial sector</li> <li>▸ Emerging sector,</li> <li>▸ Farming originations/representative body</li> <li>▸ Commodity producer associations</li> </ul>	Short term



## 6.2.5 Management, Coordination and Implementation

**The agro processing strategy is a provincial strategy and will require input from all government departments and development agencies.** Agro-processing activities cuts through a dimension of different government departments, from road infrastructure, trade and tourism to manufacturing, therefore intergovernmental coordination and implementation is crucial.

**Integrating and liaising of prioritised** areas can ensure speedily increase of activities and infrastructure funds investment. Agro-processing activities are aligned with national, provincial and local development strategies thus coordinated implementation is required from all governmental levels. The hand over and management of projects is discussed further in implementation guidelines.

**A coherent and coordinated approach** to developing the agro-processing sector is required to ensure integrated planning, avoid repetition of programmes, wastage of resources and to increase the speed of service delivery. The Limpopo Rural Development Strategy advocates for inter sectoral planning and cross sectoral budgeting through a Rural Development Coordinating Unit/Secretariat which is currently been driven by the Premier's Offices while LDA is coordinating the Rural Development Forum. In order to achieve coordinated planning and implementation, the Limpopo government needs to define institutional arrangements for effective coordinated efforts.

### *Proposed Intervention 1: Incorporation and alignment in Government Departments*

The implementation and development of the agro-processing industry requires input from the various government departments as the strategy cannot be implemented by an individual department or agency. The departments and organisation involved in the implementation of the agro-processing strategy should incorporate their roles and activities in their annual plans, budgets and future sector development plans. The stakeholders should report on their implementation progress through an intergovernmental forum established to coordinate the agro-processing development.

The Table below sets out the Intervention Action Plan for Pillar 5.

**Table 6.6: Intervention Action Plan for Incorporation and Alignment in Government Departments**

Actions	Key Role-players	Timeframes
<b>Proposed Intervention 1: Incorporation and alignment in Government Departments</b>		
<ol style="list-style-type: none"> <li>1. Government departments involved in the implementation of the agro-processing strategy should incorporate their roles and activities in their annual plans.</li> <li>2. Clearly outline their action plans and responsibilities in implementation of the strategy.</li> <li>3. Report on the department's progress and bottlenecks in implementing the strategy.</li> <li>4. District and Local Municipalities should incorporate projects into their IDPs, LEDs and development plans.</li> </ol>	<ul style="list-style-type: none"> <li>› Office of the Premier (OTP)</li> <li>› Department of Agriculture (LDA)</li> <li>› Department of Education (LDE)</li> <li>› Department of Economic Development, Environment &amp; Tourism (LEDET)</li> <li>› Department of Health and Social Development (LDHSD)</li> <li>› Co-operative Governance, Human Settlement and Traditional Affairs(COGHSTA)</li> <li>› Department of Provincial Treasury (LDPT)</li> <li>› Department of Public Works (LDPW)</li> <li>› Department of Roads and Transport (LDRT)</li> <li>› TIL, LIMDEV, LIBSA, SEDA</li> <li>› District and Local Municipalities</li> </ul>	Short to long term

### 6.2.6 Research, Development and Innovation

The research and development sectors are critical to penetrate into new markets and keep abreast with cutting edge technology. The sector also assists the agriculture sector in meeting required quality standards. The province has various agriculture training facilities namely:

- › Madzivhandila Agricultural Training Centres (ATC) based in the Vhembe District Municipality

- › Tompi Seleka ATC based in the Sekhukhune District Municipality.

The two training centres provide appropriate farming training programmes to both prospective and practicing farmers. The training programmes are centred and driven by “needs” of farmers. These programmes are presented by extension officials and advisors, ensuring accessibility of training programmes to potential farmers as well. The ATC also offer training in food processing and have equipment at their disposal to train farmers interested in value addition on their farms.

## **Existing Incubators and Agro-food Technology Station in the Province**

- › **Limpopo Agro-food Technology Station (LATS) at the University of Limpopo.**

An important educational facilities offering agro processing assistance is **Limpopo Agro-food Technology Station (LATS) at the University of Limpopo**. LATS offers support in testing and analysis of processed and unprocessed foods, new products development, product process improvement, training SMMEs on food processing and SMMEs technology audit. The services of LATS can be extended to accommodate a larger population in the agro processing industry.

- › **SEDA Biodiesel Incubator called Mapfura Makhura Incubator (MMI)**

Limpopo province has a SEDA Biodiesel Incubator called Mapfura Makhura Incubator (MMI) focusing on bio fuelling SMMEs. The vision of MMI is to create a nationwide network of sustainable SMMEs actively participating in the commercial biodiesel production value chain. MMI is **currently incubating 150 agribusiness enterprises/emerging farmers farming on approximately 30 000 ha** which is at the moment grossly underutilised due to a number of challenges, all incubates form a primary base for the supply of feedstock (**sunflower and soya beans**) into the biodiesel plant and are also supported to do both rotational crop production and intercropping as a way of ensuring food security.

### **Operational areas of MMI are in:**

- Marble Hall Local Municipality
- Elias Motsoaledi Local Municipality
- Makhuduthamaga Local Municipality
- Tubatse Local Municipality

- Fetakgomo Local Municipality
- Molemole Local Municipality
- Bela-Bela Local Municipality
- Mookgopong Local Municipality

Building and expanding on existing incubators and food technology satiations in the province to accommodate more commodities and specialisation in food processing can give the province a competitive edge and help local SMMEs create own food brands for local markets.

Micro technology for agro-processing activities can be distributed on farm level to enhance value addition and secure food security more so in rural areas, for example poultry value addition, juice processing, maize milling can improve access to food for rural communities.

### *Proposed Intervention 1: Expanding on Research and Development in the Province*

There are numerous research institutions for the agriculture industry offering updated technical information and skills training. The partnering of farmers and agro-processing institutions can be of immense benefit. Research and development can offer improved farming techniques to combat bad weather conditions and increase production. These institutions include ARC and CSIR, which have various faculties offering agro-processing sector specific support. An example of such is the ARC Engineering Institution in Pretoria that offer agro processing technology for farmers. The CSIR and South African Bureau of Standards have an agreement to support national research & development, quality systems and standardisation skills especially among the historically disadvantaged persons.

### **Research and support organisation**

Forming partnerships and networking with farmers/producers organisation will create a support platform for the agro processing industry, such representative bodies include:

- › Citrus Growers Association SA (CGA)
- › SA Mango Growers Association
- › Southern African Macadamia Growers' Association (SAMAC)
- › South African Subtropical Growers Association (Subtrop)

- › South African Avocado Growers Associations' (SAAGA)
- › South African Pork Producers Organisation (SAPPO)
- › Grain SA etc.

These organisations also offer technical support and training to assist farmers improve their production volumes; linking emerging farmers with such organisations is crucial.

## *Proposed Intervention 2: Innovation Promotion*

Four types of innovation can be distinguished:

- **Product innovation:** improvements in existing products as well as the development of new products
- **Process innovation:** improvements in the technologies, techniques and methods of production. This can take the form of improvements in the quality of labour to enable greater productivity, as well as the discovery of new production techniques or the implementation of new technologies that enhance production efficiency
- **Marketing innovation:** innovations in marketing strategies to enhance product awareness and demand and to enlarge the strategic position of industries in the market
- **Organisational innovation:** improvements in the manner in which firms or collections of firms are structured. The concepts of clustering and business incubation are relevant, which offer opportunities for cost savings and information sharing

The Table below sets out the Intervention Action Plan for Pillar 6.

**Table 6.7: Intervention Action Plan for Research and Development**

Actions	Key Role-players	Timeframes
<b>Proposed Intervention 1: Expanding on Research and Development in the Province</b>		
1. Link farmers with appropriate commodity association.	› LDA	Medium term,
2. Expand on the LATS project to reach a wider population.	› National Department of Science and Technology	On-going
3. Identify research and development needs for the	› Department of Trade and Industry	

<p>agro-processing industry in the Province.</p> <ol style="list-style-type: none"> <li>Establish linkages with existing research institutions both provincial and national agencies.</li> <li>Facilitate access to funding for research and development by existing agri-businesses.</li> <li>Develop a research programme for on-going research requirements.</li> <li>Commission research for specialised projects e.g. Macadamia oil vitamin supplements, avocado seed oil etc.</li> </ol>	<ul style="list-style-type: none"> <li>Industrial Development Cooperation</li> <li>LATS, ATC, FET</li> <li>Research institutions</li> <li>Research service providers</li> <li>Commodity Association</li> <li>Local and District Municipalities</li> <li>Commercial industrial sector</li> <li>Emerging sector</li> </ul>	
<b>Proposed Intervention 2: Innovation Promotion</b>		
<ol style="list-style-type: none"> <li>Promote collaboration between tertiary education facilities and agro-processing industry.</li> <li>Involve emerging farmers in research and new product development.</li> <li>Conduct continuous research on consumer demand; new technologies and emerging trends.</li> <li>Communicate trends and opportunities to investors, established businesses and the emerging sector.</li> <li>Host international trade exhibitions.</li> </ol>	<ul style="list-style-type: none"> <li>LDA</li> <li>National Department of Science and Technology</li> <li>National Department of Trade and Investment</li> <li>SABS</li> <li>Product Development companies</li> <li>Local and District Municipalities</li> <li>Commercial industrial sector</li> <li>Emerging sector;</li> <li>Research institutions: CSIR, ARC</li> </ul>	<p>Medium term, On-going</p>

## 6.2.7 Expansion of Commodity Production

The development of the agro processing sector will require increase in agriculture production and currently farmers are not reaching their optimal production levels. The emerging farmers in the province play a key role as being supplies for agro-processing activities. Therefore support and development for the emerging sector should be emphasised at all levels of government.

**Challenges faced by majority of agriculture business** in the province are:

- › Inadequate access to inputs and finances
- › Business and marketing skills
- › Technical support
- › Access and ownership of land or equipment
- › Transport and logistics infrastructure

Emerging enterprises also find it difficult to access markets and to meet the quality standards or required codes imposed by legislation and other retail standards.

Increasing production to ensure sustainability of the agro-processing industry can be done through offering technical support to **restored land beneficiaries** to enhance their skills while maintaining production levels of farms.

Production can also be increased through **infrastructure development/support for emerging farmers** assisting them to reach commercial farm levels. Infrastructure and technical equipment play an important role in increasing local production levels as in most cases farmers cannot afford to buy necessary equipment, thus providing such facilities can ensure maximum productions.

Assisting in **facilitation of contract growers between farmers and retail stores** can assist farmers meet production volumes and required quality standards, as monitoring officers are sent to farms to ensure volumes and necessary quality steps are met for contracts.

**Cooperative farming using collect infrastructure** can enhance volumes to maintain volumes for agro processing activities especially in rural areas. Collective farming will also assist in sustaining micro processing activities and value addition on farm levels.

The focus of increasing commercial farmers in the province has to be a key intervention as increased volumes will generate higher revenue for the local farmers. The land capacities indicate favourable conditions for further cultivation of various commodities in the provinces districts.

Opportunity also exists in **backward and forward linkages of the agro-processing value chain** which capacitated local SMMEs can take advantage of. Training businesses in agro-processing sector specific industries can enhance their ability to take hold of agro processing activities (example; training SMMEs to conduct technology audits, food technicians, food testing and analysis, quality certification etc.).

### *Programme 1: SMME and Enterprise Development*

Numerous opportunities exist for medium to large enterprises along the value chain but many new entrants require business management skills to sustain a business and support should be provide in this regard. Technical experience may also be lacking and should be enhanced. Support towards improvements in the quality standards of products should be supported through quality assurance mechanisms and product enhancement programmes.

The Table below sets out the Intervention Action Plan for Pillar 7.

**Table 6.8: Intervention Action Plan for Promoting Entry of Emerging Sector**

Actions	Key Role-players	Timeframes
<b>Proposed Intervention 1: SMME and Enterprise Development</b>		
<ol style="list-style-type: none"> <li>1. Identify promising emerging Agro entrepreneurs, train and equip them. Avail finance for them to take a more prominent role in specific value chains.</li> <li>2. Provision of technical training to emerging agro SMMEs.</li> <li>3. Build on existing service providing enterprises with business support, marketing, accounting skills, business plans etc.</li> </ol>	<ul style="list-style-type: none"> <li>› National Department of Trade and Industry</li> <li>› Industrial Development Cooperation (IDC)</li> <li>› LDA</li> <li>› LEDET</li> <li>› TIL,</li> <li>› LimDev</li> <li>› SEDA</li> <li>› Local and District Municipalities</li> </ul>	Medium and on-going



<ol style="list-style-type: none"> <li>4. Create database to assist local enterprises advertise their services to agro processing/agriculture industry.</li> <li>5. Facilitate trading opportunities and supply linkages with state facilities (e.g. schools, prisons, etc.).</li> <li>6. Assist enterprises in retaining contracts to large retailers and export assistance to enlarge the consumer market.</li> <li>7. Facilitate access to improved infrastructure such as information, access to funding, access to inputs.</li> <li>8. Enhance quality standards and practices of emerging farmers to ensure quality produce that sell well in the market.</li> <li>9. Establish quality assurance mechanisms, address barriers to entry in conjunction with private sector partners.</li> </ol>	<ul style="list-style-type: none"> <li>▸ Agri-businesses, SMMEs and agro processors</li> <li>▸ Commercial industrial sector</li> <li>▸ Emerging sector</li> <li>▸ Research institutions</li> <li>▸ Farming cooperatives</li> </ul>	
<b>Proposed Intervention 2: Capacity Building for Land Reform farmers</b>		
<ol style="list-style-type: none"> <li>1. Building and enhancing technical/business and skill support to farm owners who have successfully claimed and received their land.</li> <li>2. Cooperative farming with common infrastructure support.</li> <li>3. Increase production through infrastructure development.</li> </ol>	<ul style="list-style-type: none"> <li>▸ Rural Development and land Reform (DRDLR)</li> <li>▸ LDA</li> <li>▸ SOEs such as SEDA, LIMDEV, LIBSA</li> <li>▸ Technical experts in the agriculture sector</li> <li>▸ Department of Public works</li> </ul>	Short to long term

## 6.2.8 Talent Development

The talent development programme will focus on the advancement and retention of locally competitive talent pool for the agro-processing sector. The talent development pillar is aimed at improving skills in the local agro-processing businesses, SMMEs, entrepreneurs and cooperatives. The programme will address skills needs of the agro-processing sector; as well intensify the local labour force to take hold of agro-processing opportunities.

### *Strategic Intervention 1: Agro Processing Incubator*

Business incubation offers local entrepreneurs training, business and technical support to help them overcome barriers to entry into specific industry and reduce the failure rate of businesses. Incubation is a one stop facility where businesses are able to:

- › Access to business advise
- › Offer advanced agriculture technology
- › Technical expertise on agro processing
- › Assistance in meeting required quality standards e.g. SABS mark to make products accessible to markets.
- › Certification and assessments
- › Product testing
- › Training
- › Shared use facilities with modern equipment
- › Accredited training programmes presented by qualified and experienced facilitators
- › Skills development in agro processing
- › Take advantage of innovative and current research, since incubators form partnership with universities and research institutions

### **Target and Assist**

The incubator will target the following:

- › Existing and emerging small and micro enterprises in the agro processing industry

- Individuals who are working in the agro-processing industry and want to start their own business
- The unemployed/retrained with a passion or interest in agro-processing and have some experience in running and managing a business

## Incubation Process

The incubation process will firstly attract candidates interested in agro-processing and conduct entrepreneurship awareness seminars to advertise possible ventures. The candidates will be selected according to their business plans and business skills training will be conducted. The incubator will offer onsite technical mentorship and facilitate on-going business wrap around services to ensure long term success for agro-processing entrepreneurs.

### *Strategic Intervention 1: Skills Development and Training for Local Agri-businesses*

Incorporating other government bodies to work towards enhancing skill base of the province is crucial as it is not solely the mandate of the Department of Agriculture. Sector specific skills are required to develop and maintain agro-processing industry.

Table 6.9 indicates investment in human capital essential to promote national objectives.

**Table 6.9: Intervention Action Plan for Human Capital Development**

Actions	Key Role-players	Timeframes
<b>Strategic Intervention 1: Skills development and training for Local Agri-businesses</b>		
<ol style="list-style-type: none"> <li>1. Develop skills development strategies based on agro-processing requirements (including internship, job shadowing, skills training workshops and on-the-job training initiatives).</li> <li>2. Implement skills development strategies</li> <li>3. Establish partnerships with existing training facilities to provide training and to include required training courses in their offering e.g. FET, LATs, agriculture colleges.</li> <li>4. Encourage established businesses to integrate skills development initiatives into business</li> </ol>	<ul style="list-style-type: none"> <li>▸ LDA</li> <li>▸ National Department of Education</li> <li>▸ Provincial Department of Education</li> <li>▸ Local and District Municipalities</li> <li>▸ Research and Training institutions</li> <li>▸ Agri-SETA</li> </ul>	Medium term

strategies and plans.	▸ Industry organisations	
5. Link skills development initiatives with mentoring programmes.		
6. Agro Processing Incubation for businesses		

## 6.2.9 Finance and Other Support Mechanism

Financing is a major challenge faced by majority of emerging farmers in the Limpopo province, during stakeholder consultation concerns over accessing adequate financing and the ability to give security of tenure were major issues raised. To ensure increase in agriculture production to sustain the agro-processing industry various funding models have to be explored for equity funding, where government contributes 10% with investors for start-up ventures or where individuals have shares in stock and receive ownership interest in the corporation.

Restituted land and restoration programmes in the province also face the challenge of accessing financing and sustaining or increasing current farm production. A model that has experienced success in skills transfer and assisting emerging farmers run successful enterprises is the Farm Equity Share Scheme in the Western Cape, discussed below.

### **Farm Equity Share Scheme: Western Cape, Lelienfontein Vine Growers Group and Adama Apollo Workers Trust**

The farm equity share scheme allows farmers the option of selling their land through a share ownership scheme which enables farm workers to buy a percentage of the farm using money allocated by national government for land reform. The scheme gives emerging farmers the support they need to make a success of their enterprises and gives new farmers a chance to benefit from improved access to capital, transfer of skills and knowledge between new and established farmers. This ensures increased agriculture production and offers more food security lessening the impact of food price increase on the poor.

The equity share scheme has been implemented on 90 farms in the Western cape with The Lelienfontein Vine Growers group and their partners, Adama Appollo Workers having the biggest

land reform transaction to take place so far in the Western Cape with a total of 430ha of prime vineyard land. The Adama Apollo Trust was established in 2008 with its workers becoming beneficiaries of the trust, receiving a 30% share in all the vineyards of Bosman Farming and in the Bosman Family Vineyards cellar. The emphasis of the scheme was on social upliftment and skills transfer benefiting approximately 250 stakeholders and their families in the Lelienfontein farming community and the greater Wellington area benefit directly from the Adama Appollo Workers Trust.

*Source: Statement by Wilmot James, Democratic Alliance Shadow Minister of Trade and Industry, on National Implementation of Equity Share Schemes (18/06/2012)*

Agro-processing is one of the sectors identified as vital to meeting the government's target to creating five million jobs by 2020, thus numerous investments are geared towards this industry. Both investors and entrepreneurs will require sound business plans ensuring proposed projects are feasible and can create jobs. The various institutions and type of support the offer is described below:

## **The Development Bank of South Africa: The Jobs Fund**

The jobs fund of the DBSA aims to help government create 150 000 jobs over the next three years, with the target being established companies with a good track record and that plan to expand existing programmes or pilot innovative approaches to employment creation, with a special focus on opportunities for young people. The allocated fund is nine (9) billion rand. Target funding areas are:

- › **Enterprise development:** investment in product development, local procurement, marketing support, equipment upgrading or enterprise franchising
- › **Local infrastructure development:** local infrastructure investment projects such as light manufacturing enterprise zones, local market and business hub facilities, critical transport and communication links and upgrading of infrastructure services
- › **Support for work seekers:** support programmes with a particular focus on unemployed young people such as job search projects, training activities and support for career guidance and placement services

- › **Institutional capacity building:** projects aimed at strengthening institutions through which jobs are created

Target beneficiaries are:

- › Public sector: Municipalities, government departments and public entities.
- › Private Sector: Business enterprises
- › Non-Government Sector: NGOs and CBOs

**Industrial Development Cooperation (IDC):** The Industrial Development Corporation (IDC) has already committed R800m in this financial year to more than 30 companies, creating 3700 new direct job opportunities in the agro-processing sector. The IDC offers specific funding for agro processing and has various programmes launched such as the:

Grow-E Scheme which funds businesses that operate within sectors supported by the IDC such as green industries, agriculture value chain, including agro processing, manufacturing and so forth. For the agro processing sector the cooperation will only finance processing infrastructure, meaning inputs such as livestock, fruits, grains and buildings have to be in place. The business plan should indicate projection of the business for five years as well as have contracts or letter of agreements with market the going to supply to.

The **criteria set out for financial assistance** includes:

- › Start-up businesses, including funding for buildings, machinery and working capital.
- › Existing businesses for expansionary purposes
- › Businesses that demonstrate economic merit and have prospects of acceptable profitability to be able to service their obligation
- › For the duration of the funding period, businesses whose maximum cost per job do not exceed R500 000 relative to the total funding required
- › Broad-based Black Economic Empowerment certification from an accredited verification agency, where applicable
- › Businesses operating or expanding in South Africa

Other funding schemes include:

- › Distress Fund
- › Forestry and Wood Products Sector Fund
- › Agro Industries
- › Green Industries

## **Department of Trade and Industry:**

Future development of **Special Economic Zones (SEZ)** will have immense benefits for the agro-processing industry. The SEZ will be set up in various locations with the intention of making the country a more attractive and competitive destination for foreign direct investment (FDI), especially of the labour-intensive manufacturing kind.

The department of Trade and Industry is also working with various provinces, including Limpopo, Free State and the North West. The potential SEZs had been identified in areas of light-manufacturing, **agro-processing** and platinum beneficiation. The SEZ will provide infrastructure, necessary skill training, tax incentives to attract business in the province driving regional industrialisation and increasing jobs.

## **Other Initiatives offered by Dti for Export and Investment in Agro Processing Industry**

- › **Organic Farmer/Retailer Programme (OFRP)**

First phase of the **Organic Farmer/Retailer Programme (OFRP)** is taking place with Pick n Pay. The programme is a joint venture amongst the dti, **Pick n Pay, Shoprite and Spar**. Pick n Pay is the first retailer to agree to provide **dedicated Organic produce shelf-space in 50 stores countrywide** as its contribution to facilitating the development of the Organic produce sector and emerging farmers.

› **Critical Infrastructure Programme (CIP)**

The CIP is a cash grant incentive for projects that are designed to improve critical infrastructure in South Africa. It supplements the infrastructure provided by existing public sector or private sector providers by funding a top-up grant of between 10% and 30% of actual costs.

› **Export Marketing and Investment Assistance (Emia)**

Emia is a Department of Trade and Industry (DTI) programme that aims to assist businesses to become export-ready. The scheme is administered by Trade and Investment South Africa (Tisa) and subsidises up to 90% of costs incurred in respect of activities directed at developing export markets for South African products, for instance by sponsoring trade missions and market.

Table 6.10 indicates various institutions that offer financial, technical and business support to the agriculture sector.

**Table 6.10: Other Support Service Institutions and Contact details**

Potential Funders	Type of Support
<ul style="list-style-type: none"> <li>› Agri-SETA</li> <li>› SEDA Skills and Technology Programmes</li> <li>› FET</li> <li>› Department of Labour skill development programmes</li> </ul>	<b>Skills Development</b>
<ul style="list-style-type: none"> <li>› IDC</li> <li>› South African Micro-Finance Apex Fund (SAMAF)</li> <li>› Dti programme such as: <ul style="list-style-type: none"> <li>- Ntsika</li> <li>- Khula</li> <li>- Business Referral and Information Network (BRAIN)</li> <li>- Franchise Advice and Information Network (FRAIN)</li> </ul> </li> <li>› Limpopo Business Support Agency (LIBSA)</li> <li>› LIMDEV</li> </ul>	<b>Financial and SMME Development and Support</b>
<ul style="list-style-type: none"> <li>› Land Bank</li> </ul>	<b>Agriculture Financial services (commercial, Agri business, new entrants)</b>



<ul style="list-style-type: none"> <li>› Limpopo Department of Agriculture</li> <li>› Khula Farmer Mentorship Programme</li> <li>› Khula Finance for Agriculture Business through Khula Akwandze fund, Land Reform Empowerment facilitation</li> <li>› Limpopo Rural Development Programme, provision of training and technical support</li> <li>› Land Bank provides financing, loans for commercial farmers.</li> </ul>	<b>Agriculture Development</b>
<ul style="list-style-type: none"> <li>› LimDev</li> <li>› GETDA</li> <li>› Trade and Investment Limpopo</li> <li>› LEDET</li> <li>› Limpopo Business Zone</li> <li>› LADC</li> </ul>	<b>Limpopo Development Agencies</b>
<ul style="list-style-type: none"> <li>› Council for Scientific and Industrial Research (CSIR)</li> <li>› Agriculture Research Council (ARC)</li> </ul>	<b>Research Support and Development</b>
<ul style="list-style-type: none"> <li>› South African Local Government Association(SALGA)</li> </ul>	<b>Municipal Capacity support and development</b>

## 6.2.9.1 Viable Funding Models

Public funding is available to SMME, black owned enterprises, businesses promoting women, youth and disable individuals as well as cooperatives. A cooperative is a group of people with similar needs who collectively own and operate an enterprise. Farming cooperative are best suited for agriculture funding as working collectively farmers can produce high volumes and shared usage of equipment and infrastructure.

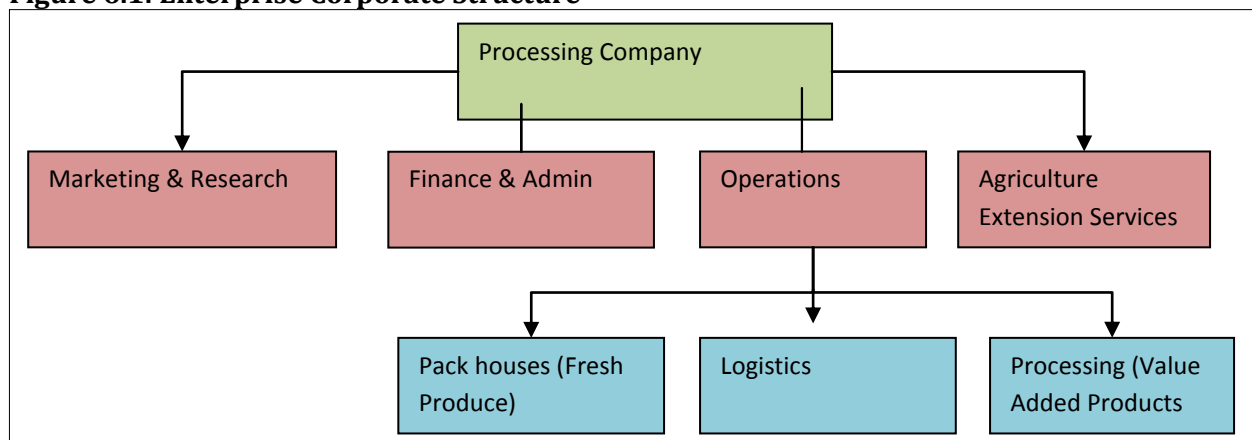
The proposed funding model is *adopted from past research done by the Limpopo Department of Economic Development and Tourism on Agro Processing*, where farmers' cooperatives are proposed to ensure that enterprises/processing businesses are supplied with commodities all year round.

## Proposed Farmer Cooperative Model<sup>8</sup>

The cooperatives in various locations will establish a company that will process, market the farmers' fresh produce and value added products. It is imperative that such a company be staffed with professionals who will manage the day to day affairs of the company. **Capacitating local farmers and agribusinesses becomes imperative so the able to take hold of processing activities:**

- › **Membership:** Only producers of commodities (e.g. citrus, mango, avocado, tomato, etc) or geographic grouping would be allowed to join the co-operative
- › **Governance:** Members shall choose a Board of Directors that is representative of the interests of all commodity producers
- › **Equity and Finance:** Members shall raise a portion of the cost of establishing the processing company through equity stock or options on sales of produce. Each share of stock will give a member the right and the **obligation** to market **a production unit** through the processing company for a defined period, such as one calendar year
- › **Enterprise Corporate Structure,** is illustrated below

**Figure 6.1: Enterprise Corporate Structure**



Source: Agro Processing Research Study, 2007

<sup>8</sup>Agro Processing Research Study 2007 by Limpopo Department of Economic Development and Tourism

Other funding mechanism can be through agriculture cooperatives, self-help groups and individuals. Municipalities can create municipal owned entities for agro-processing development in their local jurisdictions.

### Commodity Systems Assessment

Commodity system assessment methodology is an effective tool for achieving detailed analysis of various commodities. The methodology examines a variety of components influencing the food system such as multi-disciplinary nature of the food systems, interdependence of the components of a food system and participants in a commodity system. Since agro-processing is a diverse industry which requires a number of factors to be set in place before commencing on production, the commodity system assessment tool is effective for agro processing enterprises to employ.

To ensure that projects are feasible Table 6.10 indicates the different components of the commodity system assessment that agro processing projects have to consider before embarking on processing projects.

**Table 6.10: Commodity System Components**

1. Relative importance of crop	2. Production and marketing costs
3. Public sector policies	4. Crop harvest - Selection, Sizing and grading, Inspection
5. Relevant institutions	6. Postharvest chemical and physical treatments
7. Facilitating services	8. Packaging, Cooling, Storage
9. Farmer organisations	10. Transport, Delays or waiting and Other operations
11. Environmental requirements and constraints	12. Agro processing
13. Availability of seeds and planting materials	14. Marketing intermediaries and Market information
15. Farmers' cultural practices	16. Consumer demand
17. Pests and diseases	18. Exports

19. Pre harvest treatments	20. Postharvest and marketing costs
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*Source: A Commodity System Assessment Methodology for Problem and Project Identification by Jerry La Gra*

## 6.2.10 Investment Attraction

The Business Attraction Programme (BAP) is a pro-active approach to attracting new investors. It requires staff educated and experienced in investments promotion, marketing, and legal issues. The responsibilities of BAP include:

- **Facilitate new investments** in the local economy by providing professional services to potential investors aimed at overcoming local constraints.
- **Market the local economy** to targeted countries and investors and ensure that they are aware of the development opportunities in the area and incentives schemes.
- Lobby for any **actions** from local, provincial and national government and government organisations **that could potentially improve the attractiveness of the local economy** in the eyes of potential investors.

Business attraction and investment in Limpopo is done through TIL: **Trade and Investment Limpopo (TIL)** is the official investment and trade promotion facilitation agency of Limpopo Provincial Government aiming to expand operations locally and foreign markets. TIL packages investment opportunities Limpopo has to offer marketing them to investor and offering investors a one stop service to support and facilitate investment. The mission of TIL is “The promotion of Limpopo as the preferred trade and investment location through marketing of its competitive advantages.”

The strategic objectives of TIL seek to increase added value from existing and new projects, increase the Limpopo added value content of export products while increase knowledge management and sharing. The agency plays a critical role in facilitating new investments, marketing the local economy and providing access to world markets, thus the agency will play a vital role in promoting and implementing the agro processing strategy.

**Trade and Investment Limpopo (TIL)** has various incentives in place to enhance investment in the province, including:

- Export Marketing and Investment Assistance (EMIA)
- Small Medium Enterprise Development Programme (SMEDP)
- Strategic Industrial Programme (SIP)
- Skills Support Programme (SSP)

### *Proposed Intervention 1: Business Retention and Attraction*

Retention of existing agro processing business in the province is critical as current businesses are creating employment and have potential for future expansion. Maintenance of current infrastructure and building on an enabling business environment will ease the burden of doing business in the province. It is important that the business environment supports and encourages existing businesses not only remain in the area, but also to expand further.

The **main objectives of a business attraction** programme include:

- Promoting the Province as a favourable location for the targeted businesses
- Creating an enabling environment for business development
- Encouraging both local and foreign investment
- Creating an awareness of various development opportunities in the area
- Creating a fair, efficient, and competitive market place
- Diversifying the economy and improving its sustainability
- Fostering economic development and growth

### *Proposed Intervention 2: Marketing*

Limpopo province is already known as having high agriculture production and favourable climatic conditions for variety of fruits, but the value addition and processing of goods still requires further establishment. Collaborating marketing strategies between the various strategies (industrial and agro processing) can enhance the province's competitiveness and contribute to the development of the key sectors.

The Intervention Action Plan for Pillar 6 is provided in Table 6.10 below.

**Table 6.10 Intervention Action Plan for Investment Attraction**

Actions	Key Role-players	Timeframes
<b>Proposed Intervention 1: Business Retention and Attraction</b>		
<ol style="list-style-type: none"> <li>1. Develop a complete database of existing agro-processing businesses in the Province.</li> <li>2. Conduct regular business surveys to identify growth impediments, support needs and deficiencies in the operating environment. As well as conducting annual surveys for investor perceptions.</li> <li>3. Launch outreach activities to facilitate discussion forums.</li> <li>4. Develop an integrated action plan to address concerns.</li> <li>5. Conduct annual survey of investor perceptions.</li> <li>6. Improve infrastructure service provision.</li> <li>7. Undertake land audit to identify available industrial land.</li> <li>8. Participate in local, regional and foreign investment seminars, missions and exhibitions.</li> <li>9. Evaluate and develop incentive schemes.</li> </ol>	<ul style="list-style-type: none"> <li>▸ TIL</li> <li>▸ Trade and Invest SA (TISA)</li> <li>▸ Limpopo Business</li> <li>▸ LEDET</li> <li>▸ Limpopo Provincial Government</li> <li>▸ LDA</li> <li>▸ Productivity SA</li> <li>▸ SEDA Technology programme</li> <li>▸ Local and District Municipalities</li> <li>▸ Commercial industrial sector (business forums)</li> <li>▸ Emerging sector</li> <li>▸ Industry organisations</li> </ul>	Immediate and on-going
<b>Proposed Intervention 2: Marketing</b>		

<ol style="list-style-type: none"> <li>1. Market Limpopo as a preferred location for agro-processing development.</li> <li>2. Develop and update list of agro-processing opportunities.</li> <li>3. Promote priority project value propositions for matchmaking purposes.</li> <li>4. Develop value propositions for new priority opportunities as they become available.</li> </ol>	<ul style="list-style-type: none"> <li>▸ Department of Economic Development</li> <li>▸ TIL</li> <li>▸ Trade and Invest SA (TISA)</li> <li>▸ Limpopo Business</li> <li>▸ LEDET</li> <li>▸ Limpopo Provincial Government</li> <li>▸ LDA</li> <li>▸ Productivity SA</li> <li>▸ Local and District Municipalities</li> <li>▸ Commercial industrial sector (business forums)</li> <li>▸ Emerging sector</li> <li>▸ Industry organisations</li> </ul>	<p>Immediate and on-going</p>
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## 6.2.11 Identification of Project Investment Opportunities

**The clusters development approach provides** an opportunity to coordinate and share activities in the same industry. The activities are clustered in order to increase productivity and improve product standards to make it accessible to wider markets. The cluster concept also attracts new businesses and stimulates regional competitiveness. Clustering also assists in strengthening of value chain as activities influence each other.

### *Proposed Intervention 1: Cluster Development for High Impact Projects*

The concept of an industrial cluster incorporates the following elements:

**Core industries:** Core industries form the main focus of the industrial cluster. These industries should be targeted to either build on existing competitive advantages within the region or to develop niche capabilities in certain high-growth industries.

**Satellite industries:** Satellite industries link up with the core industries through either forward or backward linkages. These industries provide key inputs and services to the core industries and participate in the distribution and marketing of products.

**Enabling environment:** The enabling environment plays a vital role in the success of an industrial cluster. This includes the necessary infrastructure such as roads, electricity, water and waste removal, as well as ICTs and sufficient labour and skills. It also includes the local business environment and the ease with which investors can conduct business within the area.

To effectively implement clustering concept it is important to incorporate the above factors and apply them to the high potential and high impact opportunities namely:

- Subtropical Cluster
- White Meat Processing (poultry, pork)
- Red Meat Processing (beef, goat)
- Grain cluster
- Logistic cluster

#### 6.2.11.1 Cluster Development Concept: Subtropical

The cluster concept involves the establishment of processing facilities for value adding activities for subtropical commodities. There are numerous processing activities but at on a commercial level with emerging sector finding it difficult to enter. This presents an opportunity for emerging sector as well as medium businesses to get involved in processing at communal level with ownership for cooperatives and SMMEs. It is crucial to achieve necessary standards to enter the market.

The core industries to form part of this cluster include:

- Fruit juice processing (pulp, juice, concentrate)
- Fruit dehydration and powder
- Fruit puree
- Oil



The cluster will contain processing, freezing, producing in both in bulk and smaller packaging for local market such as communities and retailers. Activities cannot stand in isolation as the dependent on development of agriculture sector and require all elements of the entire value chain.

Satellite services include the manufacturing of packaging products such as bottling, plastic containers, graters, canning material etc. Input suppliers for the industries are made up of various industries including fertilizers, seedlings, pre and post-harvest equipment. Distribution and wholesale of produced products, downstream industries such as storage, sales, exports form part of the cluster.

An enabling environment will ensure continuous success of processing activities and use of existing facilities can reduce cost significantly. Existing industrial parks include Thohoyandou, Giyani, and Nkawkawa industrial parks. Human capital for technical operation, marketing, quality standards, administration and financial management is required for cluster activities. General factors such as appropriate and well maintained infrastructure, services and skills levels all contribute towards business development and attraction.

Supporting and expanding existing processing can further enhance job creation; the cluster is viable to the entire value chain and can only be successful if the horticulture emerging sector is sufficiently strengthened and enhanced to support beneficiation.

**Table 6.11: Subtropical Cluster Development Concept**

Core industries	Satellite industries	Enabling environment
Fruit juice processing (pulp, juice, concentrate) Fruit dehydration and powder Fruit puree Oil	Seedlings and nurseries Fertilizer manufacturing Irrigation systems Pre land preparation inputs (tractors, technical equipment) Fresh produce sales Processing Transport	<ul style="list-style-type: none"> <li>• Infrastructure:                             <ul style="list-style-type: none"> <li>○ Roads and transport infrastructure</li> <li>○ Irrigation systems</li> <li>○ Electricity provision</li> </ul> </li> <li>• Human resources - Training requirements                             <ul style="list-style-type: none"> <li>○ Agricultural</li> <li>○ Technical</li> <li>○ Entrepreneurship; Business skills</li> <li>○ Mentorship programmes</li> </ul> </li> </ul>

	Waste recycling Transport Logistics and distribution Wholesale and retail Hospitality industry Government institutions Waste processing	<ul style="list-style-type: none"> <li>• Local business environment: Ease of doing business, support institutions</li> <li>• Extension services</li> <li>• Standards and regulations: <ul style="list-style-type: none"> <li>○ Food hygiene and safety</li> <li>○ Certification of organic products</li> <li>○ Traceability</li> </ul> </li> </ul>
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A short value proposition for these core activities is discussed in Table 6.12, indicating the required initiatives for a subtropical cluster. The table indicates the opportunity for commodity, feasibility and competitive advantage, market demand, investment requirement, regulatory requirements, potential locations, employment creation and implementation timeframes.

**Table 6.12: Core activities involving the establishment of Subtropical processing facilities**  
**Subtropical Value Proposition**

<p><b>Opportunity identification</b></p> <p>Limpopo province is a high producer of various subtropical fruit and citrus, opportunity exist to expand the agro processing industry. The province has the potential to become a national producer and supplier of subtropical, not only in their natural form but with value addition.</p> <p>The project involves the core activities of fruit processing into juices, concentrate, pulp, puree, dehydration, canned, citrus extracts and oils (macadamia and avocado oil for cosmetic and edible oil).</p> <p><b>Feasibility and competitive advantage</b></p> <p>The competitive advantages offered by the Province in terms of horticulture processing include:</p> <ul style="list-style-type: none"> <li>• Conducive climate for subtropical fruit</li> <li>• Significant contribution of province to subtropical fruit, macadamia nuts and citrus</li> <li>• Well-established subtropical cluster, with numerous commercial activity taking place</li> </ul>
---

- Proximity and accessibility to huge market, SADC regions and surrounding provinces

The feasibility of the establishment of subtropical processing plants in the Province is based on the production levels and the limited number of processing activities currently taking place in the Province for the emerging sector.

## Market demand

Subtropical fruits form a huge part in consumers' daily diets, high amounts of juice, dried fruits, achar processed each year, with macadamia and avocado oil beginning to form part of niche market. **Growing Organic "Consciousness", niche market for organic juice, nuts, oils, purees and essential oils that can be used in cosmetics.**

High markets demand nationally and locally with community activities such as weddings, stockvel, festivals, and traditional events are beginning to form a huge market demand for juice.

## Investment requirements

Physical requirements

Investment requirements include capital expenditure on the following items:

- Site/land
- Building (buy, construction or rent)
- Equipment and furniture

Equipment and Technical Specification

- |  |  |
|--|--|
| ▸ Fruit Pulper                                   | ▸ Packing, vacuum packing; wrapping and boxing equipment                         |
| ▸ Inlet Feed Hopper                              | ▸ Fillers and stuffers   |
| ▸ Fruit Brush Finisher                           | ▸ Scales   |
| ▸ Quality control measure                        | ▸ Refrigeration, ventilation, evaporative cooling and air conditioning equipment |
| ▸ Packaging Machinery                            | ▸ Generators   |
| ▸ Labelling Machines and Technical Specification | ▸ Laboratory and office equipment  |
| ▸ Oil Pressing Machines                          | ▸ Site security and access control equipment                                     |
| ▸ Oil Seed Presser                               | ▸ Vehicles   |
| ▸ Drying facilities                              |  |
| ▸ Canteen equipment                              |  |

**Final costing should be calculated by business plans and feasibility of projects.**

#### **Regulatory requirements**

- › Food Health and Safety
- › South African Bureau of Standards (SABS)
- › HACCP
- › ISO 9001, 22000 quality management systems
- › BRC Global Standard – Food: requirement for exporters to UK retailers

#### **Potential locations**

Tzaneen area spread towards Politsi, Modjadjikloof, Letaba and Letsitele mainly in the Mopani and Vhembe districts.

Farmers have to form collective cooperatives to ensure sufficient volumes for different commodities are met to maintain processing activities of the clusters, the farmer cooperative model discussed earlier can be applied for the various subtropical clusters.

#### **Implementation timeframes**

The costing of projects can only be calculated once feasibility studies are conducted per project, this will be guided by a business plan.

The exact time frames for implementation can only be stipulated on the implementation plan informed by the role players.

### **Proposed Interventions Projects**

#### **Citrus processing facilities for emerging to medium-scale farmers**

- › These processing facilities will process juice, canned and powdered citrus products. The processing will also include citrus fruit salads and citrus cells. The production of essential oils (sweet orange oil and grapefruit seed oil) requires an established market before processing can commence.
- › Increase area planted for citrus production

## **Macadamia and Avocado processing facilities for collective farming cooperatives**

- › Avocado edible oil, guacamole/puree and avocado cosmetic products.
- › Macadamia oil, macadamia snacks and product development for macadamia use for pharmaceutical and cosmetic products.
- › Central macadamia nut depot areas offering drying facilities and de-husking plant with the capacity to handle half to four tons of macadamia nuts accommodating ten to fifteen cooperatives

## **Banana on farm value addition and processing**

- › Provision of pack houses and storage facilities for the local producers
- › Banana puree, dried and fried banana. Incorporation of dried banana leave to be used by arts and craft industry.

## **Mango processing and product development**

- › Increase area planted for mango production
- › Mango processing activities can offer facilities to process mango juice, pulp, canned mango and mango slices for salads. These processing facilities should offer product quality testing and inspection
- › Dried and dehydrated mango production should employ the use of solar
- › Mango cosmetic product development e.g. mango skin cream

## **Vegetable production and processing**

- › Introduce technologies such as hydroponics and greenhouse system in tomato production to increase volumes and quality of commodities
- › Increase organic vegetable production for tomatoes, potatoes and onions
- › Semi-processing and on farm value addition to target direct markets

## **Agro-processing Development Centre**

- › Centres of various sizes offering all-in-one agro-processing solutions, services and infrastructure
- › Agro-processing SMME Development
- › Train SMME in technology audits, food technicians, food testing and analysis, quality certification

## **Agro-Industrial Complex development for the Horticulture and Vegetable Commodities**

An Agro-Industrial Complex is an in multifaceted industry complex dealing with the supply, processing and distribution of locally produce farm products. These complexes house infrastructure and equipment necessary for agro-processing activities, as well as offering support industries, e.g. packaging material, lab testing and marketing. The complexes can target high value crops produced in the province such as horticulture fruits and vegetables. The size of the complex will be influenced by the number of producers, agribusiness, manufacturers, food processors and cooperatives in a certain locality.

## **Tea**

- › Investment and innovative advertising into marketing the Lidi tea brand
- › Development plan for the Makgoba tea estate and explore feasibility of erecting a processing factory on site. Revitalization of dormant tea estates in the province
- › Industry has the potential to create high number of employment, thus investment is high required
- › Exploring possibilities of green tea and ice tea (beverage) manufacturing

### **6.2.11.2 Cluster Development Concept: White Meat**

A growing trend seems to favour white meat value added products as their perceived to be a healthier alternative over red meat. Poultry industry is an important component of the food value chain. Current value addition in the province mainly consists of broiler and egg production as well as slaughtering and not so much processing into white meat products. Abattoirs slaughters broiler

meat and sell it as carcass to processors and packers, who in turn may export, sell to retailers or further processors, availing opportunity for processing in province.

Core industries for the poultry cluster are processing of poultry for meat products and packaging of specialised meat products. To sustain the core industries further production of broilers, increased hatching and out growing activities will be required to support cluster.

Satellite industries will be mainly made up of backward and forward activities in the poultry industries, including animal feed, broiler and layer farms, abattoirs, processors, food safety regulations, transport and distribution. These industries provide key inputs and linkages to the core industry. Further job creation can be derived from these satellite industries.

General infrastructure is required for the poultry industry to reach the market, majority of poultry farmers are faced with the challenge of having to travel long distance to abattoirs and slaughter houses, therefore live chickens are sold on local markets. Employment of micro technology can assist in on-farm value addition, increasing value of livestock.

Large companies dominate poultry industry, and are able to provide required infrastructure for poultry value addition while the emerging sector requires assistance in value addition. Assistance in the form of cooperatives or SMMEs for emerging sector can include supply chain functions, specifically feed production (soya bean and maize), hatcheries (day-old chicks), and abattoirs (slaughtering, dressing/packaging, wholesaling and retailing).

At the retailing level there is the potential to establish local brands which can be distributed to retail outlets in and outside of the province. The quality standards and bar coding are pre-requisites by most retail companies; this is an area that can be jointly addressed by government and the industry. This intervention could assist with the growth of the domestic supply and could ultimately reduce imports. Some farmers lack the knowledge/expertise on handling diseases on their farms. The specific initiatives relevant to the white meat processing cluster are listed in Table 6.13.

**Table 6.13: White Meat Cluster Development Concept**

Core industry	Satellite industries	Enabling environment
<ul style="list-style-type: none"> <li>• Poultry and pork meat processing</li> </ul>	<ul style="list-style-type: none"> <li>• Broiler farms</li> <li>• Layer farms</li> <li>• Pig sows</li> <li>• Pig farmers</li> <li>• Slaughtering/abattoirs</li> <li>• Transport</li> <li>• Logistics and distribution</li> <li>• Wholesale and retail marketing</li> <li>• Hospitality industry</li> <li>• Government institutions</li> <li>• Animal feed manufacturing</li> <li>• Eggs</li> <li>• Waste processing</li> <li>• Grading</li> <li>• Packing</li> <li>• Storage</li> </ul>	<ul style="list-style-type: none"> <li>• Infrastructure: <ul style="list-style-type: none"> <li>○ Disposal areas</li> <li>○ Source of water and electricity with alternative arrangement for power failure and water shortages.</li> <li>○ Roads and transport infrastructure, suitable access.</li> </ul> </li> <li>• Human resources - Training requirements <ul style="list-style-type: none"> <li>○ Agricultural</li> <li>○ Technical</li> <li>○ Entrepreneurship; Business skills</li> <li>○ Mentorship programmes</li> </ul> </li> <li>• Local business environment; Ease of doing business</li> <li>• Extension services</li> <li>• Standards and regulations: <ul style="list-style-type: none"> <li>○ Food hygiene and safety</li> <li>○ Certification of organic products</li> <li>○ Traceability</li> </ul> </li> </ul>

A short value proposition for these core activities is discussed in Table 6.14. The table indicates the opportunity for commodity, feasibility and competitive advantage, market demand, investment requirement, regulatory requirements, potential locations, employment creation and implementation timeframes.



**Table 6.14: Core activities involving the establishment of white meat processing facilities**

<b>Poultry Value Proposition</b>	
<b>Opportunity identification</b>	
<p>Chicken is purchased across all income categories and as a result high demands for poultry exist. Limpopo province might not be the highest producer of broilers/poultry but the province has numerous poultry activities which cannot be ignored and the opportunity for poultry value addition in the province can be of high benefit. Chicken is perceived to be a cheaper protein substitute than other kinds of meats, such as red meat, lamb and fish and factors such as branding and packaging do not influence the decision of the consumer.</p>	
<p>Pig production is increasing in the province and value addition/processing activities are required to benefit local farmers. Pigs are very susceptible to diseases increasing difficulty in transporting the animal, thus processing within the borders province will add value to local pig producers.</p>	
<p>The poultry processing plant processes will include stunning, slaughtering and bleeding; scalding and de-feathering; evisceration; cutting and deboning; further processing and cooking; weighing and grading; and the packaging of white meat.</p>	
<p>The range of <b>poultry products to be produced</b> could include:</p>	
<ul style="list-style-type: none"> <li>▸ Fresh meat (whole birds – skin on, bone in)</li> <li>▸ Packaged fresh meat portions (breast, wings, thighs, drumsticks )</li> <li>▸ Frozen whole birds and portions</li> <li>▸ De-boned meat</li> <li>▸ Marinated meat products</li> <li>▸ Kebabs</li> </ul>	<ul style="list-style-type: none"> <li>▸ Convenience meals</li> <li>▸ Chicken pies</li> <li>▸ Chicken Polony</li> <li>▸ Chicken Viennas</li> <li>▸ Chicken Crumbed Burgers</li> <li>▸ Chicken Steaklets</li> <li>▸ Chicken bites</li> </ul>
<p>Secondary products such as: Fertilizer and dog food for the Pet Food Industry which recycles by-products from food produced by human consumption.</p>	
<p>Pork is very susceptible to diseases and requires appropriate measures for both producing and</p>	

processing, pork products include:

- › Bacon, ham, sausages
- › Different cut carcasses
- › Substitute in other meat products
- › Ribs

## Feasibility and competitive advantage

Province competitive advantage in the white meat industry includes:

- › The concentration and increasing poultry activities in the province both in rural and urban areas.
- › Well established commercial poultry industry in the province and high demand.
- › Growing white meat preference as poultry is the fastest growing and most popular animal protein source for human consumption.
- › Poultry enjoys relative price competitiveness compared to other animal protein sources
- › Health trends favour poultry meat as animal protein in diets.
- › Growing pork demand and high consumption volumes

The feasibility of the establishment of a white meat processing plants in the province is based on the demonstrated gap between the poultry/pork production levels and the limited number of processing activities currently taking place in the Province.

## Market demand

The per capita consumption of poultry meat in kg terms was 32, 96 kg per person per annum and for eggs it was 8, 48 kg in 2010, a combined per capita consumption of 41, 44 **kg per person per annum**. In comparison with poultry:

- › The per capita consumption for beef was 17,77 kg
- › **Pork was 4,58 kg**
- › Mutton and goat was 3,16 kg (Source: South African Poultry Association, SAPA)

Approximately R 62,424,638 of the total annual household income in Lepelle-Nkumpi is spent on

chicken. Retail Outlets (Pick N Pay) requires that the abattoir passes South African Food Safety Inspection Services (SAFSIS) criteria with at least 80%, (Source: White Meat Cluster Pre-feasibility, 2008).

## Investment requirements

### Physical requirements

Investment requirements include capital expenditure on the following items:

- Site/land
- Building (buy, construction or rent)
- Equipment and furniture

The following facilities would have to be provided:

- |  |   |
|--|---|
| ▸ Holding and off-loading facilities for live birds                    | ▸ Freezing facilities                               |
| ▸ Slaughter hall: Stunning facilities and bleeding tunnels             | ▸ Portioning areas                                  |
| ▸ Scalding and de-feathering facilities                                | ▸ Packaging facilities                              |
| ▸ Various carcass washing facilities at different stages of processing | ▸ Ablutions, staff kitchen and canteen;             |
| ▸ Meat inspection areas  | ▸ Laboratories, offices and storage areas           |
| ▸ Evisceration lines   | ▸ Boiler house and by-products rendering facilities |
| ▸ Carcass recovery areas   | ▸ Processed product loading areas                   |
| ▸ Various carcass and portion chilling facilities                      | ▸ Crate and vehicle sanitation facilities           |

In order to establish a poultry processing plant, the following equipment will be required:

- |  |   |
|--|---|
| ▸ Bird shackles and rails                    | ▸ Bird scales   |
| ▸ Bird stunning apparatus/water bath stunner | ▸ Freezers  |
| ▸ Bleeding equipment                         | ▸ Cooking equipment   |
| ▸ Carcass scolders                           | ▸ Refrigeration, ventilation, evaporative cooling and air conditioning equipment; |
| ▸ Plucking equipment                         |   |

- › Meat inspection equipment
- › Evisceration vent cutter and troughs
- › Bird washers
- › Air or water chillers
- › Tumbling, massaging and marinating equipment
- › Portioning machines
- › Forming, crumbing and flash frying equipment
- › Effluent treatment plant
- › Generators
- › Laboratory and office equipment;
- › Site security and access control equipment
- › Canteen equipment
- › Vehicles

## Pork Requirements

- › Increase in sows and pig type weaners porkers or baconers
- › Housing and pens
- › Abattoirs
- › Meat processing facilities

**Final costing should be calculated by business plans and feasibility of projects.**

## Regulatory requirements

- › Poultry Final Regulation
- › Meat Safety Act (Act 40 of 2000), comply with the regulations of the local authority and all other relevant legislations
- › Essential National Standards
- › Business registration with Companies and Intellectual Property Commission (CIPC)
- › Registration for taxes with South African Revenue Services (SARS)
- › Trading license under Business Act 71 of 1991
- › Health Certification
- › Broiler processing regulations (Notice 153 of 24/02/2006) under the Meat Safety Act
- › Poultry Final Regulation
- › Essential National Standards for Abattoirs (as contained in the Meat Safety Act)
- › Abattoir Construction Guidelines (2004)

## Potential locations

Poultry processing clusters should be located in the major livestock production areas, where there is high concentration of broiler producers, namely the Capricorn Waterberg and Mopani district. Potential areas are:

- Lepelle-Nkumpi local municipality
- Polokwane local municipality
- Waterberg district
- Tzaneen local municipality
- Spread micro technology to rural area
- Increase of pork activities in the Capricorn and Waterberg district

## Implementation timeframes

The costing of projects can only be calculated once feasibility studies are conducted per project, this will be guided by a business plan.

The exact time frames for implementation can only be stipulated on the implementation plan informed by the role players.

## Proposed Interventions Projects

### Poultry

- Distribution of abattoirs in close proximity to poultry suppliers
- Poultry Processing Technology for Micro or Small-scale Poultry Processing
- Poultry processing facilities producing value added products such as pre-packed, marinated portions, crumbed portion, steaks
- Cooperative production of broiler feed. Broiler producers can cultivate maize to produce their own feed jointly using feed mill infrastructure
- Exploring and introducing commercial duck, geese, turkey and ostrich production into the province poultry industry

- › SMME opportunity in meat butcheries

## **Pork**

- › Increase of sows
- › Increase of commercial pig farmers

### **6.2.11.3 Cluster Development Concept: Red Meat**

The Limpopo province has numerous livestock held by small holder groups or communal ownership and most sales are of live animal and don't make it to commercial processing, therefore benefits of value addition are not felt by most farmers. There exists a great potential for greater involvement by emerging sector in slaughtering and processing of beef and goat especially since there are numbers red meat abattoirs in the province.

The core industries for the red meat cluster will include beef, dairy and goat processing; this will incorporate the slaughter of livestock and further processing into meat products. Included in the core activities will be the packaging of product and special cuts of meat as well as processing of dairy products (both cow and goat milk). Meeting the necessary quality standards is a requirement for the success of any processing facilities as unworthy produce do not reach the market.

The satellite industries are mainly to support the core industries and activities will include livestock farming, veterinary services and feedlots activities to act as suppliers for abattoirs and processing activities. The distribution and wholesale channels of produced products downstream will include industries such as storage, sales and exports.

An enabling environment to promote the red meat cluster requires cold storage, warehousing and distribution channels targeted at the emerging sector to reach wider market. The importance of improved hygiene and safety standards need to ensure traceability of products from producer to consumer. Adequate infrastructure can prevent various diseases and ensure proper quality standards are enforced. Land is required for feed yards, feed handling and storage facilities, animal handling yards, isolation pens, water storage and tanks, manure stockpiles, ponds, effluent and

manure utilisation areas, roadways, animal lanes and drains, carcass disposal areas and buffer zones. The specific initiatives relevant to the red meat processing cluster are listed in Table 6.15.

**Table 6.15: Red Meat Cluster Development Concept**

Core industry	Satellite industries	Enabling environment
Beef and goat meat processing	<ul style="list-style-type: none"> <li>• Livestock farming</li> <li>• Herd improvement</li> <li>• Auctions/sales yards</li> <li>• Finishing pens/feedlots</li> <li>• Slaughtering/abattoirs</li> <li>• Dairy</li> <li>• Veterinary and health services</li> <li>• Logistics and distribution</li> <li>• Wholesale and retail</li> <li>• Hospitality industry</li> <li>• Government institutions</li> <li>• Animal feed manufacturing</li> <li>• Leather processing/tannery</li> <li>• Milling</li> <li>• Waste processing</li> </ul>	<ul style="list-style-type: none"> <li>• Infrastructure: <ul style="list-style-type: none"> <li>○ Suitable access to land, zoned for special use</li> <li>○ Roads and transport infrastructure</li> <li>○ Electricity provision</li> </ul> </li> <li>• Human resources - Training requirements <ul style="list-style-type: none"> <li>○ Agricultural</li> <li>○ Technical</li> <li>○ Entrepreneurship; Business skills</li> <li>○ Mentorship programmes</li> </ul> </li> <li>• Local business environment: Ease of doing business</li> <li>• Extension services</li> <li>• Standards and regulations: <ul style="list-style-type: none"> <li>○ quality program, label and marketing/distribution framework,</li> <li>○ Food hygiene and safety</li> <li>○ Certification of organic products</li> <li>○ Traceability</li> </ul> </li> </ul>

A short value proposition for these core activities is discussed in Table 6.16, indicating the required initiatives for the red meat cluster. The table indicates the opportunity for commodity, feasibility and competitive advantage, market demand, investment requirement, regulatory requirements, potential locations, employment creation and implementation timeframes.

**Table 6.16: Core Activities Involving the Establishment of Red Meat Processing Facilities**  
**Red Meat Value Proposition**

### Opportunity identification

The province has limited capacities with regards to processing and packing of red meat products in the province. The lack of infrastructure limits the options of most producers to market and distribute their products independently. The opportunity exist in the province being able to offer livestock farmers greater slaughter capacity in combination with options for processing and packaging serves so producer can have flexibility for marketing their products profitably.

The range of products to be produced could include:

- Fresh meat (chilled half or quarter carcasses)
- Packaged fresh meat (prime and forequarter cuts )
- Bacon
- Ham
- Salami
- Kebabs
- Sausages
- Semi-cooked specialty products
- Roasted products (e.g. Roast beef/pork)
- Cold meats
- Offal's
- Canned meat products, etc.
- Dairy products (milk, cheese, yoghurts)

Processing of goat includes:

- Goat milk, cheese, yoghurt
- Meat is either combined with mutton products or other meat substance like sausages and polonies.
- Mohair (silk like fabric), cashmere (wool) from goats, hides and skins
- Goat meat in various cuts, strictly halaal

SA has a well development meat processing industry and goat production can grow if given the opportunity and availed infrastructure.

### Feasibility and competitive advantage

The province has a competitive advantage as there is numerous red meat abattoirs scattered in various district of the province and processing activities will complement existing activities.



The competitive advantages offered by the Province in terms of red meat processing include:

- Conducive climate for livestock production, particularly cattle and goats
- Existing red meat value addition activities such as abattoirs, feedlots and government livestock improvement programmes
- Increasing market locally and potential market from surrounding SADC regions

The viability of developing a red meat processing facility lies in the fact that a gap exists between the livestock production levels and the limited number of processing activities currently taking place in the Province.

## Market demand

Increase for organic meat

Addressing the low-profitability issue demands capturing a larger share of the retail price. This can be accomplished by diversifying, specialising, adding value at the farm and engaging in more direct marketing.

## Investment requirements

Investment requirements include capital expenditure on:

- Site/Land;
- Buildings (buy, construction or rent);
- Equipment; and
- Furniture.

The buildings to be bought, rented or constructed would have to provide for the following facilities:

- Livestock off-loading and raceway facilities
- Livestock reception and holding facilities
- Ante-mortem inspection facilities
- Abattoir with slaughter floor and offal collection and processing rooms
- De-boning, slicing and packing facilities
- Variety of carcass chillers and freezers at
- Brine injection/tumbling/massaging room
- Meat curing, fermenting, cooking and smoking areas
- Ablutions, staff kitchen and canteen
- Laboratories, offices and storage areas
- Boiler house and by-products

various points in the process

rendering facilities

- Product loading areas

The equipment required to operate a processing plant would include:

- |   |  |
|---|--|
| <ul style="list-style-type: none"> <li>▸ Livestock slaughtering equipment;</li> <li>▸ Chiller rails</li> <li>▸ Offal processing equipment</li> <li>▸ De-boning and grinding equipment</li> <li>▸ Cooking, brining, smoking and roasting equipment</li> <li>▸ Packing, vacuum packing; wrapping and cartoning equipment</li> <li>▸ Fillers and stuffers</li> <li>▸ Scales</li> </ul> | <ul style="list-style-type: none"> <li>▸ Refrigeration, ventilation, evaporative cooling and air conditioning equipment</li> <li>▸ Effluent treatment plant</li> <li>▸ Generators</li> <li>▸ Laboratory and office equipment</li> <li>▸ Site security and access control equipment</li> <li>▸ Canteen equipment</li> <li>▸ Vehicles</li> </ul> |
|---|--|

**Final costing should be calculated by business plans and feasibility of projects.**

## Regulatory requirements

There are a number of regulations related to the establishment of an enterprise, the operation of a business and the processing of food products that need to be adhered to. Some of the key regulatory requirements include, but are not limited to:

- Business registration with Companies and Intellectual Property Commission (CIPC)
- Registration for taxes with South African Revenue Services (SARS)
- Trading license under Business Act 71 of 1991
- Health Certification
- Essential National Standards for Abattoirs (as contained in the Meat Safety Act)
- Abattoir Construction Guidelines (2004)
- Land Use Change (if not in existing industrial area)
- Other legislation and factors to comply with:
 

<ul style="list-style-type: none"> <li>▸ Registration for Unemployment Insurance Fund and Workmen's Compensation</li> </ul>	<ul style="list-style-type: none"> <li>▸ The South African Abattoir Corporation Act</li> </ul>
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- › Basic Conditions of Employment Act
- › Department of Health Regulations
- › Foodstuffs, Cosmetics and Disinfectants Amendment Act 32 of 1981
- › Public Health Act
- › Agricultural Product Standards Act of 1990
- › Perishable Products Export Control Act, Act 9 of 1983
- › The Water Services Act
- › Quality Assurance Standards
- › Good Manufacturing practices
- › The Act on Marketing of Agricultural Products
- › Meat Commission's requirements

## Potential locations

Concentration of livestock and goat are found in the Waterberg and Capricorn district, making the two district potential location for red meat processing. The availability of infrastructure is critical factors for processing facilities as slaughter plants generate waste that can be difficult to deal and a reliable supply of potable water is essential.

## Implementation timeframes

The costing of projects can only be calculated once feasibility studies are conducted per project, this will be guided by a business plan.

The exact time frames for implementation can only be stipulated on the implementation plan informed by the role players.

## Alternative Arrangements

### Mobile Slaughter Units

Exploring the option of mobile slaughter units for small scale and emerging farmers to assist those especially in rural areas, providing inspected processing facilities within a practical distance. Each unit contains hot and cold water, electric hydraulic pump, air compressor, generator, inside rails and units but no refrigeration but this can be addressed through providing refrigerated storage areas.

The unit can be operated by one butcher at a low capacity of 10 beef per day and these can assist with critical replace of degradation of infrastructure of rural communities. These mobile units can enhance the local economy, increase self-sufficiency and produce higher quality making it widely available to local communities.

Farmers must form cooperatives to purchase and operate the units. And once the animal is slaughtered, the carcass still has to be brought to a packing house for cutting and wrapping before the meat can be sold. Packing houses can be located in central areas for SMMEs to access.

## **Mobile Slaughter Unit Case Study, San Juan County, Washington, USA**

**Problem:** Local farmers faced high number of closure of many small processing plants in the district and small farmers who wished to market their livestock directly to consumers, restaurants and local stores do not have inspected processing facilities available within a practical distance.

**Solution:** A group of farmers collectively purchased a mobile slaughter unit, containing all the physical requirements need for 'inspected' slaughtering.

### **Processing Capability**

Each unit has the capacity to slaughter 10 beef, 24 pigs, or 40 sheep per day with two butchers. The unit can be operated by one butcher at a lower capacity. The hanging cooler in the trailer can hold up 2720kg of carcasses so the unit can operate for two days before returning to its base to unload carcasses and re-supply.

### **Features**

The unit is equipped with a diesel generator, water system, hot water heater, acid wash system, cook & processing area, refrigeration and tools to allow for fully self-contained operation. Carcasses begin chilling immediately after processing and are down to temperature by the next morning.

### **Support institutions for Red Meat Industry**

- International Meat Quality Assurance (IMQAS)
- National Emergent Red Meat Producers Organisation (NERPO)
- National Federation of Meat Traders
- Red Meat Producers Organisation (RPO)
- S A Federation For Livestock Auctioneers and Meat Brokers
- S A Feedlot Association (SAFA)
- S A Meat Processors Organisation (SAMPa)
- South African Meat Industry Company (SAMIC)

A case study for establishing a goat processing plant is indicated in Table 6.17 providing a general overview and specific tailored analysis for the province will still be required. The processing plant is in the boarder of the Northern Cape/North West – John Taolo Gaetsewe district municipality formerly known as Kgalagadi District Municipality.

## Example of establishing a Goat Processing Plant requirement

Kgalagadi – Goat Processing Plant	
Concept	Data and Commentary
<b>Description</b>	<p>The Kgalagadi District Municipality, together with other stakeholder was instrumental in establish a goat farming project which involved setting up 43 Goat Interest Groups with membership ranging from ten to 40 famers.</p> <p>The farmers in the project wish to extract great profit by adding value to their output.</p> <p>An opportunity exists for the establishment of processing facility focusing on meat, leather, cashmere and dairy production.</p> <p>The business plan indicates an infrastructure-funding requirement for primary production of R6 million, as well as</p> <ul style="list-style-type: none"> <li>- R0.5 million for feedlot</li> <li>- R0.6 million for tannery and cashmere</li> <li>- R0.6 million for abattoir</li> <li>- R0.6 million for dairy</li> <li>- R0.4 million for equipment</li> </ul>
<b>Economic Rationale</b>	<ul style="list-style-type: none"> <li>- Provision of a production facility to support the existing goat farmers.</li> <li>- Ability to extract greater value by processing the goat meat and by products.</li> <li>- High demand for goat products.</li> </ul>
<b>Employment</b>	<ul style="list-style-type: none"> <li>- The project will support 464 farmers and each farmer could create two job opportunity, approximately 1 000 new jobs could be created.</li> </ul>

<b>Enabling Conditions</b>	<ul style="list-style-type: none"> <li>- A marketing study is required to confirm the level of market demand.</li> <li>- Financial projections must be prepared using the output of the market study to support key assumptions.</li> <li>- The availability of goats from farmers must be analysed to ensure the production capacity is utilised.</li> </ul>
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*Source: Nodal Economic Profiling Project Business Trust, Investment Atlas, 2007*

## Proposed Interventions Projects

### Beef, Goat and Game

- › Red meat processing plants producing emulsified products (polony, viennas, russians), canned products (corned meats, meatballs, sausages), dried meat (biltong, dried sausage) and spreads/pates (liver spread and liver pate).
- › Marketing strategy to brand the red meat industry and products produced in the province.
- › Production and processing of organic red meat to targeting niche markets
- › Beef processing mobile units for remote rural areas
- › Well network and connected cold chain storage facilities
- › Prioritise land ownership for beef producers
- › Increase weaner production
- › Milk and dairy processing units
- › Increase vertical integration for beef producers in the province (from farm directly to consumer)
- › Venison and game abattoirs and further processing for market distribution
- › SMME opportunity in meat and hide processing (butcheries and leather tanneries)
- › Expanding existing feedlots
- › Animal feed suppliers

#### 6.2.11.4 Cluster Development Concept: Grains

The grain industry is an important supplier to majority of household goods and provides food security to most rural households. The industry provides strong linkages for the animal feed industry and forms strong backward linkages to the industry. Green industries are beginning to shift

towards alternative resources for biodiesel and biofuels using grains and protein seeds, this presents an opportunity for further research and development in the grain industry.

The core industries are mainly made up of animal feed production, milling, processors of flour/maize and oil extraction. The strengthening of backward linkages and forward linkages for the grain industry are critical for farmers to experience maximum profits. Table 6.17 lists the cluster development concept for the grain industry and required environment to enhance the grain industry in the province.

**Table 6.17: Grain Industry Cluster Development Concept**

Strengthening backward linkages	Targeted industry	Strengthening forward linkages	Enabling environment
<b>Grain (Maize, Wheat); Protein &amp; Oilseeds</b>			
<ul style="list-style-type: none"> <li>• Facilitate supplier contracts between emerging farmers and <ul style="list-style-type: none"> <li>○ Commercial grain industry</li> <li>○ Commercial processors</li> </ul> </li> <li>• Infrastructure provision and maintenance: <ul style="list-style-type: none"> <li>○ Collection depots</li> </ul> </li> <li>• Mentorship of emerging producers</li> <li>• Implement quality assurance systems.</li> <li>• Integration of emerging producer co-operatives with commercial producer co-operatives.</li> <li>• Focused agricultural training programmes and extension services.</li> </ul>	<ul style="list-style-type: none"> <li>• Emerging sector milling operations.</li> <li>• Animal feed production</li> <li>• Oil extraction and processing</li> <li>• Packaging operations</li> </ul>	<ul style="list-style-type: none"> <li>• Facilitate waste processing</li> <li>• Logistics and distribution improvements</li> <li>• Secure supplier contracts: <ul style="list-style-type: none"> <li>○ Wholesalers and retailers</li> <li>○ Hospitality industry</li> <li>○ Government institutions</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Focused training programmes: <ul style="list-style-type: none"> <li>○ Technical</li> <li>○ Business skills and entrepreneurship</li> </ul> </li> <li>• Simplify and streamline regulatory environment</li> <li>• Infrastructure provision and maintenance: <ul style="list-style-type: none"> <li>○ Roads and transport</li> </ul> </li> </ul>

A short value proposition for these core activities are discussed in Table 6.18, indicating the required initiatives for the grain cluster. The table indicates the opportunity for commodity, feasibility and competitive advantage, market demand, investment requirement, regulatory requirements, potential locations, employment creation and implementation timeframes.

**Table 6.18: Core Activities Involving the Establishment of Grain Processing Facilities**

Grain Processing	
<b>Opportunity identification</b> <p>Opportunity for grain processing exists in numerous sectors as it provides staple goods for normal household consumption and it is strongly linked with the animal sector. The processing of grains can be done both on small and commercial scale presenting a window of opportunity for rural entrepreneurs to engage in grain value addition.</p>	
<b>Range of products</b> <ul style="list-style-type: none"> <li>▸ Maize meal</li> <li>▸ Different class of grains to produce: <ul style="list-style-type: none"> <li>○ corn flakes</li> <li>○ nicknaks, cheese curls and for local breweries</li> <li>○ “no name” breakfast cereals and breweries Wheat gluten</li> </ul> </li> <li>▸ Maize also produces flour which is consumed as porridge and used for soups, baking and spices.</li> <li>▸ Wheat starch</li> <li>▸ Animal feed/Organic feed</li> <li>▸ Wheat Protein</li> <li>▸ Wheat meal and bran for the production of animal feed</li> <li>▸ Wheat flour - bread</li> <li>▸ Oil</li> <li>▸ Biofuels</li> </ul>	
<b>Feasibility and competitive advantage</b> <p>The feasibility for the grain cluster exists in that local producers have limited options for value addition and further processing infrastructure. The province might not be the highest grain producer but significant volumes exist to create food security for majority of rural areas and benefit the expanding animal industry in the province.</p>	
<b>Market demand</b> <p>Maize and wheat are essential commodities for staple household goods such as bread, maize meal and source of vitamin. Popularity of various oil and protein seeds are growing as consumer are</p>	



beginning to look for healthier alternatives to meat.

### Investment requirements

Investment requirements include capital expenditure for the following:

- Site/Land
- Buildings (buy, construction or rent)
- Equipment
- Furniture

Require the following facilities:

- Crushing and mixer combine machine
- Maize Crusher
- Maize Roller Mill
- Grain Cleaner
- Storage Bin
- Seed Processing Machine
- Seed Weighing Machine
- Chain Roster Machinery
- Seed Grinder
- Seed Oil processing machine
- Biodiesel processing equipment
- Oil expeller
- Filters
- The need for 850kg/h processed maize was efficient for the time being and the client (who is a maize farmer) has used this project to market his own crop more profitably.
- Storage, cleaning, conditioning, de-germination, milling and fortification of the maize meal with added vitamins.
- Wheat Flour Mill
- Gravity Seed Separator
- Conveyer
- Shelter
- Cooker

### Potential locations

Limpopo is predominately rural and majority of farmers and households plant maize, therefore central processing facilities used by cooperatives and SMMEs can increase food security in rural areas as well as create income opportunities. Mopani, Vhembe and Sekhukhune district have high production of maize. The Waterberg and Sekhukhune district have high volumes of wheat production, making them suitable locations for grain processing activities.

### Employment creation

Direct opportunities:

15-20 jobs (dependent on size and scope)

### Implementation timeframes

The costing of projects can only be calculated once feasibility studies are conducted per project, this

will be guided by a business plan.

The exact time frames for implementation can only be stipulated on the implementation plan informed by the role players.

## **Proposed Interventions Projects**

### **Grains**

#### **Small-scale milling industries providing**

- Seed suppliers
- Milling maize, wheat, sorghum into maize meal, wheat flour, sorghum rice
- Cooking oil from the various oil seeds
- Oil cake and full fat soya for (animal feed, fertilizer)
- Biodiesel Production

#### **Agro-industrial Complex for grain drying and storing**

- This complex will provide supply of grains, storage and milling facilities for local markets. The complex can also offer manufacturing of grain mill products, starches/starch products and prepared animal feeds. Support facilities such as market information, research and development, sales of seeds, rental facilities can be provided by the complex. This will enhance food security and economic development in various localities of the province.

#### **6.2.11.5 Cluster Development Concept: Logistics**

The development concept for the logistic cluster is to take advantage of existing infrastructure and future logistics development projects, logistic clusters, in the Capricorn district. Musina is in close proximity to SADC regions for export of goods, thus opportunities can be exploited. The cluster will cater for numerous industries that complement each other such as agriculture, manufacturing and trade industries. The core industries for the logistic cluster include:

- Logistic companies and support facilities
- Sorting and grading
- Warehousing facilities
- Weigh bridges
- Cold storage, cranes and gantries
- Container storage
- Vendorised transport systems
- Product packaging
- Manufacturing of packaging

The **specialised/support facilities** that will offer support to the cluster include quality control lab centre with pilot centres, and research & development centres for the agriculture processing sector, exploring new product development and testing. The cluster concept requires involvement of various stakeholders and will provide a platform that will enhance ease of access to trade, access to state of the art technology and established infrastructure to assist producers in profiting from their resources.

## 6.12 SMME Opportunities and Rural Development Potential Areas

Ample opportunities exist for local SMMEs along the entire value chain and backward/forward linkages in the agro processing industry. The **IPAP and NGP** identifies agriculture value addition and agro processing industries with potential to create mass employment. The **CRDP** places emphasis on the introduction of technology, viable local markets and establishment of business initiatives to develop rural areas. Agro-processing presents ample opportunities for development of local agri-business as well as manufacturing, transport, research & development businesses. **MAFISA** and adequate funding play an important role with regards to building capacity of emerging farmers and ensuring adequate infrastructure is in place to enhance agriculture activities.

SMME opportunities from the various clusters are listed in the Table 6.19 below:

**Table 6.19: Cluster Development SMME Opportunities**

Clusters	Potential SMMEs opportunities and Rural Development initiatives
<b>Subtropical Cluster</b>	<ul style="list-style-type: none"> <li>- Registering existing farmers with grower associations to increase production volumes, e.g. Citrus SA, SA Macadamias Growers Association, SA Mango Growers Association, Subtrop etc.</li> <li>- Equipment/infrastructure support through cooperative rental systems</li> <li>- Access to production loans (fertilizers, seed, labour) and finances coupled with continuous monitoring and evaluation to ensure progress on farm, innovative funding mechanism to meet both needs of farmers and borrower.</li> <li>- Agri SMME, farming cooperatives to partake in seedlings and tree production nurseries.</li> <li>- Fertilizer manufacturing from citrus and mango peels, pips, macadamia shells.</li> <li>- Provision of small to medium scale agro processing plants for juicing, drying, pulp, puree for farm cooperative models to target local/surrounding markets. Processing has to be collective to ensure volumes are sustained.</li> <li>- Local branding of locally processed products from the clusters through local development agencies such as GTEDA, LIBSA.</li> <li>- Transport and distribution, improve capacity of local SMME logistic companies to reach wider market and be more efficient.</li> <li>- Linking Agri SMME to research and development institutions (ARC, CSIR, South African Bureau of Standards, GLOBALGAP) for certification, qualification and new product development e.g. producing macadamia oil vitamin supplements and mango cosmetics.</li> <li>- Improvement in quality of produce and targeting niche markets, such as producing organic fruits and vegetables which can be traced back to farmer.</li> <li>- Provision of efficient marketing infrastructure such as grading, storage, marketing agreements and contract orders to assist emerging small</li> </ul>

	producers/farm cooperatives reach wider market.
<b>Poultry Cluster</b>	<ul style="list-style-type: none"> <li>- Increasing capacity of small abattoirs in province through infrastructure provision and creating collective pickup points of broilers in distant areas, access to reach abattoirs.</li> <li>- Assisting emerging poultry farmers to be vertically integrated through infrastructure provision (e.g. ownership in broiler production, chicken batteries, egg laying hens, abattoirs) to increase value.</li> <li>- White meat processing where processing plants for white meat are located at local level to accommodate poultry concentrated areas, these processing plants will pre-packed, marinate portions, crumbed portion, frozen pieces, steaks etc and sale to local market.</li> <li>- There is also potential to establish local brands at the retailing level and reduce cost for both producer and consumer.</li> <li>- Market opportunity/strategic partnerships with wholesale and retail, Hospitality industry, Government institutions exist for the poultry industry.</li> <li>- SMME have the opportunity to produce animal feed for the white meat industry. Partnerships with local producers of maize to support the poultry industry.</li> <li>- Transport, logistics and distribution of broilers, eggs and processed goods to various markets.</li> <li>- Egg production and egg grading present an opportunity for further value addition.</li> <li>- Marketing infrastructure such as grading, packing, storage and market for rural poultry producers.</li> <li>- Registration and affiliation with white meat industry associations such as South Africa Poultry Association, South African Pork Producers Organisation.</li> </ul>
<b>Red Meat</b>	<ul style="list-style-type: none"> <li>- Livestock farming and herd improvement through various LDA and Nguni</li> </ul>

<b>Processing</b>	<p>strategy interventions.</p> <ul style="list-style-type: none"> <li>- Assisting emerging farmers in obtaining land ownership for agriculture purpose.</li> <li>- Red meat processing plants for concentrated areas that produce beef and goat in high quantities accommodate for collective usage.</li> <li>- Registration with relevant red meat industry producers such as the Association of Meat Importers and Exporters, Red Meat Abattoir Association, Red Meat Producers Organisation, South African Meat Processors Association etc.</li> <li>- Assist cattle producers to become vertically integrated(own feedlots, abattoirs, processors and distributors making them vertically integrated) through provision of infrastructure.</li> <li>- Exploring innovative grazing/feed alternatives such as veld feedlot which combines grain feed with grazing, not suitable for large scale operation but have positive financial advantages to the small scale farmer. The advantages of veldlot are the reduction of capital requirements and cost of feed.</li> <li>- Opportunity for SMME butcher opportunities, own local brands and distribution.</li> <li>- Commercialisation of chevon and local brands, encourage farmers to produce chevon for formal market.</li> <li>- Dairy processing for capacitated agri-businesses with support of established commercial sector.</li> <li>- Collective operation of feedlots, pack houses and abattoirs by emerging sector. Especially for areas with food and mouth disease that cannot transport cattle to wider markets.</li> <li>- Opportunities for businesses in transport to collect and distribution live cattle and final by products.</li> <li>- Animal feed manufacturing and milling for red meat industry</li> <li>- Leather processing/tannery and waste processing</li> </ul>
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<b>Grain Industry (inclusive of grains, oil and protein seeds)</b>	<ul style="list-style-type: none"> <li>- Grain processing and milling for emerging maize, wheat and grain producers. The facilities have to employ the farmer cooperative model to ensure processing of sustainable volumes.</li> <li>- Grain and protein, oil seeds Micro Technology for on farm value addition and cooperative farming to maintain activities</li> <li>- Grains producers can become suppliers and producers to the animal feed industry in the province.</li> <li>- Oil extraction and processing into refined oil which can be used for edible and cosmetic industry.</li> <li>- Improved and environmental friendly farming techniques to improve quality and quantity of grains, so emerging farmers are able to increase supplies to local markets.</li> <li>- Packaging and distribution grain seeds present opportunities in the transport and logistics industry.</li> <li>- Grain producers can secure supplier contracts with wholesales, hospitality industries, government institutions especially maize, wheat, soybeans, dry beans and groundnuts producers.</li> <li>- Linking producers with research and development institution to keep abreast with current technologies and get involved in biofuels production for local mines and petrochemical companies.</li> <li>- Cooperative market infrastructure for the emerging grain producer industry.</li> </ul>
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# Limpopo Agro - Processing Strategy



## **Section 7: Implementation Guidelines**





## Section 7: Implementation Guidelines

### 7.1 Introduction

This section will focus on providing guideline to assist in implementation of the Limpopo Agro-Processing Strategy. These steps will be identified and discussed in order to easily enable the implementation of the Agro-Processing Strategy.

### 7.2 Project Categorisations

This section aims to categorise the different projects into Private, Public or Private Public Partnership (PPP). The type of category the project falls under will influence the intervention and requirements from government. The public projects require the support of the local and provincial government entirely, while private sector projects the responsibilities and contributions will be shared among stakeholders.

The categories are explained as:

- **Private sector projects** – private sector projects refer to those projects that are largely reliant on the private sector for implementation. However, the local municipality would need to play a role in these projects by conducting activities that will enable the implementation of the identified projects. These could include compiling a feasibility study, hosting awareness campaigns and so forth.
- **Public sector project** - public sector projects can be defined as those projects that are implementable by the various spheres of government particularly at Local and District levels. Public sector projects should yield little or no profits as the municipalities are by law not able to run businesses, these projects should be accessible and/or benefit a number of persons rather just an individual person and the projects should create a conducive environment and enable economic activity.
- **Public Private Partnerships** – these projects refer to opportunities in which government and the private sector each contribute towards the implementation and operation of the project. Table 7.1 indicates the projects and category they fall under.

**Table 7.1: Project Categorisation**

Project	Category	Time Frame
<b>1: Development of the Subtropical Industry</b>		
Expanding cultivation by assisting current farmers in producing quality fruits and high volumes, through ownership of land, production loans and registering grower associations to increase production volumes, e.g. Citrus SA, SA Macadamias Growers Association, SA Mango Growers Association, Subtrop etc.	Private	Short
Marketing and branding of subtropical processing activities in the province. Branding of locally processed products from the clusters through local development agencies such as GTEDA, LIBSA. Enhance and expand the existing commercial sector.	PPP	Short
Small to medium scale central processing facilities/zones for drying, juicing and canning of subtropical and vegetable commodities in high producing areas. These processing facilities are to provide value addition for local farmers and fully equip quality testing laboratories coupled with farmer/producer skill development and training.	PPP	Medium
Macadamia central depots that offer a rental system for emerging macadamia farmers can assist in accessing equipment such as tractors, spraying and technical equipment. Central Depot Areas/Facilities can offer drying facilities and de husking plant that can accommodate 10 to 15 cooperative with the capacity to handle half to four tons of macadamia nuts.	PPP	Medium
Satellite depot facilities offering rental of equipment and technical infrastructure for emerging farmers for both subtropical fruit and vegetables, especially in distant rural areas.	PPP	Short
Provision of marketing infrastructure for emerging farmers such as grading, storage, marketing agreements and contract orders to assist emerging small producers/farmer cooperatives reach wider market.	PPP	Short-Medium
Fertiliser manufacturing plants and composting facilities of waste such as citrus peels, mango pips, banana leaves.	Private	Short
Manufacturers of packaging materials (boxes, cartons, juice bottles, cans etc).	Private	Short-Medium
Research and development (improving existing farming techniques and products), linking Agri SMME to research and development institutions such as ARC, CSIR, South African Bureau of Standards, GLOBALGAP for certification, qualification and new product development e.g. producing macadamia oil vitamin supplements and mango cosmetics.	PPP	Short
<b>2: White Meat Cluster</b>		
Expanding existing broiler production and white meat abattoir through infrastructure provision.	Private	Short
Poultry processing and value addition facilities, processing plants will pre-packed, marinate portions, crumbed portion, frozen pieces, steaks etc and sale to market.	PPP	Medium

Poultry downstream beneficiation (breeding, hatcheries, layers)	PPP	Medium
Expand pig production sows and piggeries in the province to make pig processing in the province feasible.	Private	Short
SMME opportunity in meat butcheries, potential exists to create own local brands at the retailing level.	Private	Long
Investing in small to medium pork processing/ value addition facilities for pork producers in the province.	Private	Medium
Accreditation of abattoirs to provide both certified as Halaal and Retailers.	Public	Medium
Poultry manure (by-products) and local SMME have the opportunity to produce animal feed for the white meat industry. Partnerships with local producers of maize to support the poultry industry.	Private	Short
Broiler franchising and egg production projects	Private	Medium
Egg depots and grading	Private	Long
Future expansion pork abattoirs once volumes have increased	Private	Long
<b>3: Red Meat Cluster</b>		
Development and mentorship for emerging livestock producers and in cooperation into IDC Nguni development strategy and other development programmes.	PPP	Short-Medium
Meat processing facilities, products can include corned meats, meatballs, sausages, marinated and packed products.	Private	Medium
Optimising existing abattoirs through increased intake of goat and meat	Private	Short
Expanding goat production for export, especially the Boer goat and investment in marketing product.	Private	Short-Medium
Expanding existing feedlots to support the red meat industry	Private	Long
Central Dairy processing plants producing fresh milk, cheese, butter, yoghurt, UHT milk processing (milk in cartons), condensed milk	Private	Medium – Long
Distribution of formal and informal training where processing activities are taking place.	PPP	Medium
SMME butcheries opportunities	Private	Medium
Appropriate organisation structure for emerging dairy producers	Private	Short
Manufacturing of packaging material for red meat and dairy products plastic containers and foil/paper wrap.	Private	Medium
Animal feed manufacturing and milling for red meat industry	Private	Short
Leather processing/tannery and waste processing	Private	Medium
<b>4: Development of the Grain Industry</b>		
Processing of grain facilities such as milling, crushers, seed processors in grain producing areas, varying from small, medium and large scale, to accommodate both rural and urban areas.	Private	Long
Storage facilities and grain infrastructure especially for emerging grain producers and SMMEs.	Private	Medium
Marketing and expanding the grain market in the province, persuade/attract local suppliers to purchase locally produced grains.	Private	Medium

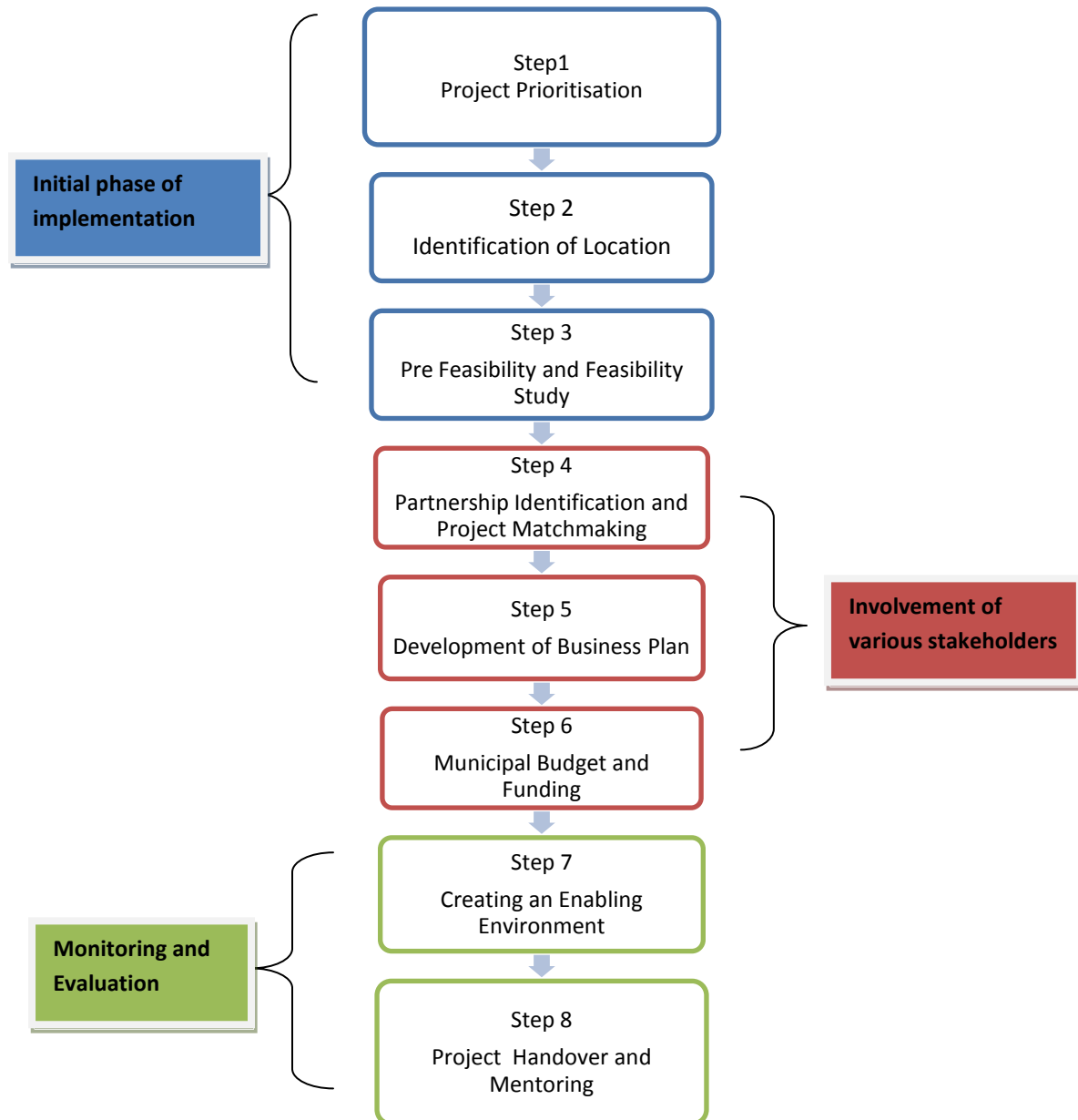
Training and mentorship for grain producers in the province, to enhance production levels and capacity.	PPP	Short
Biodiesel and Bio fuels research and development can be integrated with existing incubators and colleges and local university. Engagement with various grain research and development support bodies is essential.	PPP	Medium
Transport and grain trading to involve local SMMEs and emerging local grain producers in new technologies.	Private	Medium
Seed suppliers for different type of grains, to supply local producers.	Private	Medium
Bakeries and franchising opportunities for local businesses.	Private	Medium
<b>5: Agriculture Logistics Hub</b>		
Logistic companies and support facilities for local Agri businesses.	Private	Medium
Warehousing facilities (Warehouses, Cold Storage, cranes, containers) for various commodities, in access to local producers. Integration with existing projects such as Fresh Produce Market, Agriculture Depots is important to avoid over supply and duplication of infrastructure.	Private	Medium
Build on export markets (Export agents, market identification) especially in areas which have close proximity to SADC regions (Musina, Ba-Phalaborwa, Blouberg etc)	PPP	Medium
Sorting, product packaging and grading facilities for various producers, in high volume agriculture areas.	Private	Medium
Manufacturing of packaging products close to processing facilities and in existing industrial areas.	Private	Medium
Weigh bridges and support facilities for logistics sector and ease of commodity movement in the province.	Public	Long
<b>6: Human Resource Development</b>		
Agro-Processing Incubation (advanced agriculture technology, expertise, certification and assessments, product testing, facility usage) this can be integrated with existing incubators and educational facilities in the province.	PPP	Short-Medium
Skills development in agro processing (Accredited training programmes, short courses, mentorships).	PPP	Short-Medium
Assistance in meeting required quality standards e.g. SABS mark to make products accessible to markets and international standards such as Euro gap, Global Gap and HACCP.	PPP	Medium
Access to business advice through existing development agencies and offer tailored made specific advice for agriculture sector.	PPP	Short
Partner with research institutions and commodity grower/ processing associations (University of Limpopo, ARC, CSIR, Subtrop, SAPPO, CGA, etc).	PPP	Medium
<b>7: Enabling Environment</b>		
Improving on land tenure/ownership and property rights, through adopting successful and speedily land tenure models, e.g. Equity share model.	Public	Long Term
Ease of doing business and business development (Reducing red	Public	Short-

tape)and attracting Agri businesses/companies through tax incentives.		Medium
Support beneficiaries of restoration projects through financial, technical and production support.	Public	Short-Medium
Financial and technical assistances to meet export/processing standards and regulations, ensuring local producers get the required certification and quality standards required by various export markets.	Public	Short-Medium
Trade policies that ensure efficiency, investment and technology transfer.	Public	Medium
Research and development in agro processing technologies and product development, through involving pharmaceutical companies, local institutions, product development experts and commodity associations (Subtrop, CGA etc).	PPP	Medium
Physical Infrastructure (Roads, Water, Electricity, Sanitation, etc), upgrading of decayed roads, linkage to rural networks and increase ICT infrastructure for agriculture sector.	Public	Medium

### 7.3 General Guidelines

The general guidelines indicate main steps needed to implement the Agro-Processing Strategy. Figure 7.1 outlining the step to be taken for each proposed projects.

**Figure 7.1: Implementation Guidelines**



Source: Urban-Econ, 2012

### 7.3.1 Project Prioritisation and IDP Integration

Prioritisation of projects is important since the government cannot implement all projects at the same time. The projects with the greatest employment, returns and impact should be prioritised. Project prioritisation will ensure funding is allocated from the budget for agro-processing projects

and align projects with wider spectrum of development in the different levels of government. See *Annexure F* for a complete list of prioritised projects.

## 7.3.2 Identification of Location

The importance of location should be emphasised as this plays a determining role of whether projects will be successful and sustainable with future development. Limpopo is predominately rural; therefore economic linkages and transport networks will have to be carefully considered. The location of a project has to be integrated with the Limpopo and local SDFs, as this is the development map for future development in the province. Issues such as land claims, tribal conflicts need to be considered with identifying project location as these tend to hinder development.

The following factors need to be considered when identifying the location for the projects:

- the **cost** of land
- location of the **target market**
- sources of **raw material** and **other inputs**
- **available resources** for production such as utilities and labour
- **availability of transport** for workers, raw materials and final produce
- **marketability, networking** and **accessibility**
- **existing activities** in that area and **agglomeration advantages**
- possibility of **aligning or complementing already-existing programmes**

## 7.3.3 Pre-Feasibility and Feasibility Study

### *Pre-feasibility*

A pre-feasibility study is the forerunner to a feasibility and design study. Its main purpose is to ensure there is a solid basis for undertaking a feasibility and design study.

There are two main ways of using a prefeasibility study. Its most common use is as the first step in activity preparation, after activity identification is complete – that is, after a decision has been made to take a selected option (or options) forward into preparation of a design for implementation.

However, a prefeasibility study can also be used as part of activity identification. This would typically occur when enough is already known about the development situation to enable an identification mission to carry its analysis and reporting through to the standard prefeasibility study level. In this case the prefeasibility study:

- undertake the basic analysis and option development work of an activity identification mission; and
- for a number of selected options, take information gathering, design analysis and activity description to the prefeasibility stage.

The tasks and terms of reference will vary somewhat between these two cases, with the prefeasibility study during identification usually needing to start from an earlier stage of analysis and to spend more time on basic definition and assessment of the initial activity options.

## ***Feasibility***

After the pre-feasibility study, a feasibility study is conducted to analyse the viability of an idea or project.

Feasibility assessments essentially comprise of:

1. a location analysis;
2. an initial environmental assessment;
3. market research (which is a demand and supply analysis);
4. identification and quantification of income streams; and
5. identification of potential funding sources.

### **7.3.4 Partnership Identification and Project Matchmaking**

As some of the projects are PPP they will require buy in from the different stakeholders. Informing and educating the public about available opportunities will promote good governance and increase local resident participation in economic development. The key element of this step is to ensure all stakeholders are informed of available opportunities and partnerships are formed to implement projects.



Partnerships can be explored beyond local boundaries by involving district, province and taking advantage of investors on national level. The general approach to identify partners and match projects to investors can be done through investment catalogues, awareness campaign and project specific workshops.

### 7.3.5 Development of a Business Plan

Comprehensive Business Plans are needed to guide development of business and ensure businesses are operated in a sustainable manner.

**Figure 7.2: Business Plan Elements**



Many financial institutions require a detailed business plan to give funding, grants or loans, thus making to an important tool for external funding. Projects vary as will the business plan but the general guidelines adopted from IDC, one of the biggest funders of development projects, are indicated in Figure 7.2.

### 7.3.6 Municipal/Departmental Budget and Funding

The Department of Agriculture has to identify funding sources for projects to ensure projects are implemented and not just written in paper. These interventions should be seen as an investment opportunity that has the potential to provide high rates of return into the province. A good relationship between government and funding institutions is essential to be informed with current and new funding opportunities.

### 7.3.7 Creating an Enabling Environment

Business and farming activities require key infrastructure to run effectively and it's the responsibility of the local government and the province to provide necessary infrastructure. Key factors that affect business are:

- **Electricity:** There is a raising concern amongst business stakeholders about the rising demand for electricity that municipalities are not able to meet. The local authorities provide urban areas with electricity while Eskom target rural areas.
- **Water:** Water is a key input in agriculture and agro-processing, without the necessary water infrastructure many of the projects will not succeed.
- **Waste Management:** Increasing waste in rural and urban areas need innovative plans to deal with waste management.
- **Roads:** Efforts to improve and maintain roads in the province will enhance the economic conditions. Roads that lead to agro-processing interventions, especially in rural areas are of critical importance.
- **Farming Infrastructure:** Fencing, equipment, buildings, etc. These are some of the elements required by emerging farmers and agro-processing SMMEs.

- **Maintenance and provision of Infrastructure:** This is an important element as maintenance of existing infrastructure can assist businesses and farming operations in expanding their current activities and attract new investors.

### 7.3.8 Project handover and Mentoring

To ensure long term success and sustainability of projects, the province has to monitor and evaluate performance of projects, providing relevant support where necessary. The handover of projects to beneficiaries requires withdrawal of high level support thus increasing ownership and responsibility to project.

**Project Privatisation**– The idea is that after a year or so, the project should be run independently by the private sector, with continued public sector support where necessary and/or applicable. Therefore, project leaders and the project team should be encouraged to register the project as a business venture. This means that the role of the province and local government will gradually become a supportive and mentorship role.

**Mentorship** can also be provided by the support structures discussed in the previous sub-sections. Established businesses in the private sector can also provide mentorship. The province as well as local and district municipalities, should continue to ensure that they continue to improve the enabling environment to retain existing businesses and to attract investors.

### 7.4 Application Guidelines

The aim of this section is to specify which of the eight general guidelines are applicable to which project. This is provided so that specific guidelines for implementation are provided for each of the identified opportunities. A project group matrix is utilised to illustrate the variations in implementation steps required for the successful implementation of projects per project group.

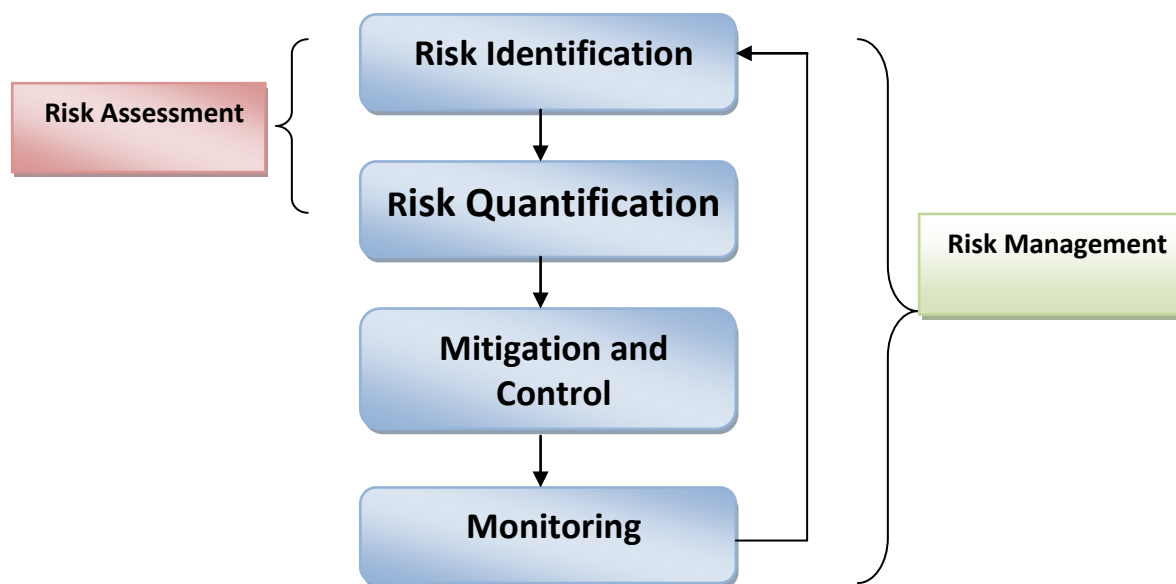
**Table 7:2: Project Matrix Grouping**

Project Group	Prioritisation	Location identification	Pre- Feasibility	Feasibili ty	Partnership identification	Project matchmaki ng	Develop business plan	Allocate municipal funding	Handover and mentoring
Agriculture	X	X		X	X	X	X	X	X
Agro-Processing Clusters	X	X	X	X	X	X	X	X	X
Construction	X	X	X	X	X	X	X	X	X
Utilities	X	X		X	X		X	X	
Transport	X	X	X	X	X	X	X	X	X

## 7.5 Risk Analysis and Assessments

There are four processes involved in risk assessment and management; risk identification, risk quantification, mitigation and control and monitoring.

**Figure 7.5: Risk Assessment and Risk Management**



*Source: Development Bank of Southern Africa, 2004*

### **a. Risk Identification**

Risk identification is arguably the most important step in the process as a risk cannot be managed if it is not identified. There are two approach method is used; macro and micro approach.

- Macro-identification concern the identification of major risk sources, the consequences of which may have a very significant negative financial impact on the project, and
- Micro-identification aims to identify sub-risks within the major risk class, such activity being pivotal to physical risk management or risk control objectives.

## ***b. Risk Quantification***

When quantifying risk one needs to consider the likelihood of an event occurring within a certain timeframe. There is no single best method to quantify risk. Much depends on the type of business, process or project being considered. Also consideration needs to be given to the availability of data. There are both quantitative and qualitative techniques to quantify risk. A combination of the two methods could also be considered.

### *Qualitative Techniques:*

- A risk self-assessment process which captures participants views on the potential likelihood and impact of future events using either descriptive or numerical scales
- Use of interviews or workshop to quantify risk exposures

### *Quantitative Techniques:*

- Benchmarking – a collaborative process among a group of entities, benchmarking focuses on specific events or processes, compares measures and results using common metrics
- Probabilistic Models – associate a range of events and the resulting impact with the likelihood of those events based on certain assumptions
- Non-Probabilistic Models – use subjective assumptions in estimating the impact of events without quantifying an associated likelihood.

## ***c. Mitigation and Control Measures***

In general there are four generic risk responses. These are:

- Terminate – Avoidance, action is taken to exit the activities giving rise to risk. Risk avoidance may involve exiting a project
- Treat Reduction – Action is taken to reduce the risk likelihood or impact or both
- Transfer – Sharing, action is taken to reduce risk likelihood or impact by transferring or otherwise sharing a portion of risk
- Tolerate – Acceptance, no action is taken to affect likelihood or impact

Risk categories which need to be considered under the generic heading of market risk include:

- Market Risk
- Interest Rate Risk
- Currency Risk
- Equity Risk
- Commodity Price Risk
- Credit or Counterparty Risk
- Liquidity Risk
- Operational Risk

#### ***d. Risk Monitoring***

Risk monitoring forms the last element of the risk management process. Risk monitoring can be divided into two sub-processes.

1. Monitoring risk exposure of the organisation that were previously identified
2. Monitoring the environment for changing circumstances and new risk exposures

Some of the elements to monitor include:

- Economic indicators and trends
- Political and regulatory environment
- Social aspects
- Competitor activities
- Human resource issues
- Financials
- Technology matters

Monitoring the environment might result in province having to repeat the risk identification exercise earlier rather than later.

## 7.5.1 Economic Risks

The risks discussed in this section are those which could have an impact on the performance and viability of the LED projects. It should be noted that the social and environmental risks have indirect effects on the performance of the LED projects and their implementation.

### *a. Market Risk*

The market risks include; competition, economic decline, market demand and funding. These aspects are crucial to monitor and adapt when implementing the projects as well as during the operational phase of the projects. Without proper funding a project is doomed to failure. There are a number of economic risks that could influence the success of LED projects.

- **Market demand:** There should be a market for the project to succeed. The analysis in this document has proven that the projects identified are necessary and have enough market demand to succeed.
- **Economic Climate:** The economy is consistently changing and needs to be analysed on a regular basis. The economy is cyclic and thus goes through growth periods as well as periods of decline. Timing is thus very important when introducing a new project.
- **Funding:** As mentioned, proper funding is key to the success of projects. Funding sources like the IDC and the DBSA should be contacted for financial support. Partnerships with the private sector are another option proving to work when implementing developmental projects.

### *b. Ineffective Management leading to Poor Performance*

Effective management may be difficult due to the competitive nature of the market relationships of which the projects will form part off.

## 7.5.2 Environmental Risks

Large infrastructure intensive projects like a transportation hub and manufacturing activities could harm the natural environment. It is therefore important to minimise the negative impact on the environment by being environmentally sensitive in the approaches followed.



## a. Possible Improvement Strategies

- Providing extensive guidance to workers on appropriate behaviour when in contact with the natural environment
- Making all facilities as eco-friendly as possible
- Seeking advice from NGOs which focus on environmental conservation
- Careful planning of the activities and procedures
- Make sure that facilities, projects and buildings are as energy efficient as possible

## 7.6 Monitoring and Evaluation

To achieve desired goals and objectives a framework to monitor and evaluate the impact of project is needed. The monitoring and evaluation will assist the province with:

- Determine the extent to which the Agro-Processing Strategy is able meet its goals and objectives,
- Assist the province and municipalities in its decision making process,
- Enable the province and municipalities to take corrective action should the monitoring and evaluation indicate that the intended outcomes are not achieved
- Assist the province and municipalities creating a database of successful and unsuccessful initiatives
- Improve future planning, and
- Increase accountability.

There are two possible approaches to monitor and evaluate the impact of the Agro-Processing Strategy namely, the direct and indirect impact of the Agro-Processing Strategy. The direct impact approach would need to put measures in place to determine the impact of each project. However, this approach is too costly and time-consuming and therefore the indirect approach is recommended.

## Monitoring and evaluation indicators

The fundamental step to monitoring and evaluation is employing a system able to measure outcomes and deliverables of projects. Development indexes will be employed to monitor and evaluate development as the indicators were selected on the basis that they would be reflective of the objective that they were designed to measure. They were also designed to be able to be measured on an annual basis, and be based on reliable data. Under the index are various proxies which may be referred to as indirect measurements of the impact of the various projects.

### 7.6.1 Development Indices

- **Agriculture Development Index**

The purpose of this index is to measure the growth in the agricultural sector within the province. Increases in employment within the agricultural sector as well as real increases in the Gross Value Added for the agricultural sector are some of the key tools that will assist in illustrating if the thrust has been achieved. Furthermore, changes in the volume/real value of the exports from the province are also key information that could assist in determining if agricultural development is achieved.

As such the following **proxies have been identified** in order to monitor and evaluate agricultural development within the province:

- ✓ Number of persons **employed** in the agricultural sector
- ✓ Value of **GVA** in the agricultural sector
- ✓ Value of agricultural **exports** from the province

- **Agro-Processing Development Index**

The purpose of this index is to measure the growth and performance of the agro-processing sector within the province. Increases in employment within the agro-processing sector (Manufacturing subsector) as well as real increases in the Gross Value Added for the agro-processing sector are some of the key tools that will assist in illustrating if the thrust has been achieved. Furthermore,

changes in the volume/real value of the exports (value added products) from the province are also key information that could assist in determining if agricultural development is achieved.

As such the following **proxies have been identified** in order to monitor and evaluate agricultural development within the province:

- ✓ Number of persons **employed** in the agro-processing sector
- ✓ Value of **GVA** in the agro-processing sector
- ✓ Value of agro-processed (value added agriculture products) **exports** from the province
- ✓ Number of **new agro-processors**

### 7.6.2 Monitoring and Evaluation Matrix

In order to monitor and evaluate the effective implementation of the Agro-Processing Strategy, a Monitoring and Evaluation Matrix has been developed setting out the different indices discussed above. The following are important aspects that need to be considered in populating the matrix:

- The matrix should be ‘populated’ with real values, so that inflation is unaccounted for
- The baseline data is for 2011
- The 2010/2011 financial year is the first year to be ‘populated’ in the model

**Table 7.3: Monitoring and Evaluation Matrix**

INDEX	PROXY INDICATORS	BASELINE (2011)	2010/2011	2011/2012
<b>Agriculture Index</b>	Agriculture sector GVA			
	Agriculture sector employment			
	Number of new products introduced			
	Number of agric. product exporters			
<b>Agro-Processing Index</b>	Agro-Processing GVA			
	Agro-Processing employment			
	Agro-Processed product exports			
	New Agro-processors			

It is recommended that the Limpopo government must develop an implementation plan for the agro-processing strategy. This can be done through intergovernmental forum formed by LDA, LEDET (and all its relevant agencies), Office of The Premier, District ED units and Transport departments. The implementation plan of the agro-processing strategy with milestones and timeframes should be development by government role player departments.

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