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UNLEASHING THE POTENTIAL OF THE AGRICULTURAL SECTOR IN NAMIBIA

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List of Acronyms

AALS	Affirmative Action Loan Scheme
AGOA	Africa Growth and Opportunity Act
AGRIBANK	Agricultural Bank of Namibia
ATF	Agricultural Trade Forum
EU	European Union
EURO	Euro Currency
FELDA	Federal Land Development Authority
GDP	Gross Domestic Product
KLCE	Kuala Lumpur Commodity Exchange
MAWF	Ministry of Agriculture Water and Forestry
NAB	Namibian Agronomic Board
NASSP	National Agricultural Support Services Programme
NAU	Namibia Agricultural Union
NCA	Northern Communal Areas
NCRs	North Central Regions
NGO	Non - Governmental Organisation
NHDI	National Horticultural Development Initiative
NNFU	Namibia National Farmers Union
N$	Namibia Dollar
N-SIS	North – South Incentive Scheme
MEATCO	Meat Corporation of Namibia
POUND	Pound Sterling
PORLA	Palm Oil Registration and Licensing Authority
RSA	Republic of South Africa
SACU	Southern African Customs Union
SSA	Sub-Saharan Africa
TFP	Total Factor Productivity
USA	United States of America
VAT	Value Added Tax
VCF	Veterinary Cordon Fence

Executive Summary

The objectives of this study are to look into the factors which have been causing the decline in the agricultural growth with a view to identify products which have the potential of increasing the output of the sector. Moreover, the study is intended to investigate the level of investments required in the sector. To achieve these objectives, a desk research, augmented by field surveys was undertaken. The main purpose of the field surveys was to assess the main constraints which prevented the sector from reaching its full production potential, identifying existing opportunities, as well as the levels of investments required in order to increase the output of this sector. The surveys were administered to 14 key bodies and institutions which represent the interests of farmers in the country. The sampling criterion was more judgmental and was based on the fact that the selected institutions were in a better position to recognise the existing constraints and opportunities in the sector given their close contact with the farming community.

In addition to the field surveys, this study used case studies to learn from the experiences of Malaysia, Kenya and Zambia with regard to the policies they had embarked upon, in their quest of unleashing the potential of their respective agricultural sectors. The selection of these countries was underpinned by the fact that, similar to Namibia, Zambia and Kenya had dualistic agricultural structures at independence and had to institute policy interventions to achieve growth and equity objectives in their respective agricultural sectors. As for Malaysia, the fact that it is a major producer of bio diesel was taken into account. This tied in well with the ambition of Namibia to produce bio diesel.

From the study it became evident that Namibia is characterised by a dualistic agricultural sector, where a strong commercial sector exists along with a sector of households in freehold and non-freehold areas. This dualistic character of the sector had been inherited from the apartheid regime. Of concern to policymakers is the fact that the share of the agricultural sector to GDP (11.7 percent during the period 1990 to 1997) in Namibia is not only lower than the average for the Sub-Saharan Africa (30.0 percent on average during the corresponding period), but had also deteriorated from 6.9 percent in 1999 to 5.4 in 2003. Moreover, the share of agriculture in the labour force has been sliding from 49.0 percent in 1990, to 29.3 percent in 2000. Furthermore, its performance has been sluggish, registering declining and negative growth rates. This took place in spite of a number of policy interventions which were implemented in the sector.

Despite the observed sluggish performance, the study observed that the agricultural sector remain one of the key pillars of the Namibian economy, given the fact that, it has been a provider of food, employment, incomes and foreign exchange in the economy. It creates demand for capital investments and increases the productivity of workers. The agricultural sector also supports other sectors such as transport, manufacturing, plastic packaging and etc. The agricultural sector sustains about 70 percent of the Namibian population, either directly or indirectly. In 2004, the agricultural sector accounted for 11.5 percent of the total foreign exchange earnings of the country; about 39 percent and 19 percent to the total maize and wheat consumption requirements of Namibia respectively. Moreover, it supplied about 100 percent of the total beef, mutton and pearl millet consumption; as well as contributing 2 percent to the total manufacturing output of

Namibia. Based on this back ground, the importance of the agricultural sector within the Namibian economy cannot therefore, be overemphasised.

The study found that, the agricultural sector is constrained by factors such as the lower availability of marketable animals, the lack of markets for some products, lack of economies of scale, high input and transport costs, lack of finance, climatic and suitable weather conditions, competition, exchange rate volatility, unavailability of farm lands, lack of skills and fresh produce markets, dispersal of producers and unsynchronised transport system.

The study further found that, beef, sheep, goat, poultry, mahangu, grapes, jatropha curcas, hoodia, cactus pear, avocados, bananas, beans, beetroot, broccoli, butternuts, cabbage, carrots, chilli, cucumbers, dates, lemons, lettuce, mangoes, naartjies, onions, oranges, pears, pineapples and potatoes, have the potential for growth in the agricultural sector. The investment required in the sector is estimated at about N$885.9 million in 2006 alone. It has been found that Namibia enjoys a comparative advantage in the production of the products identified and should therefore increase their production.

The study has drawn the following lessons from different case studies: In the countries of Malaysia, Kenya and Zambia, respective Governments intervened in the agricultural sector through various policies such as giving support to the small holder farmers, broadening access to finance, providing infrastructure and investing in research. Moreover, in Kenya the Government instituted a land distribution programme. In Malaysia the success of palm oil was also due to the comparative advantage of the country.

Despite these interventions, output in Kenya and Zambia increased initially but later started to decline. In the case of Zambia the decline in output was brought about by a host of factors such as the drought, privatisation, cattle diseases and the removal of subsidies on maize and fertilisers. It should however, be pointed out that recently, the growth in the agricultural sector has started to pick up in Zambia. This is on account of continued government focus on food security, diversification and the development of new agricultural productions areas. In Kenya, the decline in the growth of the agricultural sector could be attributed to inefficiencies in marketing, limited land expansion of small holder farming, limited development and use of new technologies, deteriorating infrastructure, low investment, and bad weather.

Not withstanding the decline in the growth rates, the agricultural sector remains imperative as a creator of employment, an earner of foreign exchange and a contributor to the GDP in these countries, as well as in Namibia.

In order to unleash the potential in the agricultural sector, the study recommends the following:

- Concerted efforts should focus on increasing the production of beef, Karakul and horticultural products in the communal areas.
- Marketing as well as the promotion of products such as grapes, processed goat meat, bone in beef and dairy products which are in dire need of new markets, should be strongly emphasised.
- Modernization of the rural areas by putting in place proper infrastructures in the form of roads, electricity, marketing facilities and feedlots is strongly encouraged.

- The current efforts by the green scheme to increase production of agricultural products through irrigation methods are commendable. It is however, recommended that emphasis should rather be placed on the production of crops in which Namibia has a comparative advantage, more particularly horticultural crops.

- The recent regulation by the Namibian Agronomic Board, to compel retailers to source 15 percent of their supply of horticultural as an import substitution strategy is commendable. If supply warrants, it is recommended that the domestic outsourcing requirements could be increased in the future. Moreover, efforts to encourage the local consumption of Namibian products such as that of Team Namibia are greatly encouraged.

- Within the commercial areas it is recommended that deforestation should be intensified to increase the carrying capacity of the land.

- With regard to the State Land acquisition policy of The Ministry of Lands and the Affirmative Action Loan Scheme of the AGRIBANK, the two institutions should reconsider the issue of farm land evaluation to avoid unnecessary competing demands for land. A mechanism for proper coordination between the two institutions in this aspect should be adopted.

- The land policy must be implemented in such a way that it dispels uncertainties' to farmers. Areas earmarked for resettlement must be defined clearly, and resettled farmers should be grouped into clusters. These areas should be established within the proximity of markets and be equipped with the necessary infrastructure to enhance productivity.

- Investments in projects such as Karakul sheep farming, grapes, hoodia, jatropha, and the processing of grape products should be intensified.

- Research in agriculture is strongly encouraged. In addition to research, there is a need to enhance the productivity of agricultural workers by introducing tailor made agricultural training in the rural areas.

Chapter 1 Introduction

The majority of the people in Africa at large and Namibia in particular acquire their livelihood directly or indirectly from agriculture. Agriculture accounted for about 30 percent on average of the gross domestic product (GDP) for Africa as a whole during 1990 to 1997 (Odada, et al 2002). This share is even larger in more than two-thirds of the low-income countries of Africa. In contrast however, the industrial sector, which is the only realistic alternative source of tradable output accounts for a modest share of GDP in almost all low-income countries, except in a few mineral-resource-rich countries. As the dominant production sector, agriculture not only remains important for national economic growth but also for job creation and poverty reduction.

Despite the fact that most African governments have affirmed agriculture as the basic engine to foster economic growth, it is unfortunate that those pronouncements often lack clear economic policy support or guidance. A review of the agricultural sector during the last decade revealed that the region has been facing perpetual staple food deficit, and that most African states are net staple food importers. This affects the trade balance and the overall balance of payments in most African states adversely. It also deprives most of the states the scarce foreign exchange which could be better spent on the provision of essential services such as health and education. These problems which are experienced by most African states are also pertinent to Namibia.

Namibia is characterised by a dualistic agricultural sector, where a strong commercial sector exists along with a sector comprised of households in freehold[1] or non-freehold areas, (Pholoolo 2001). This dualistic character of the sector has been inherited from the apartheid regime, where the minority of the population obtained most of the land, and with the assistance of the state, turned it into viable commercial land (Moorsom, 1985; Elkan et al, 1992; Kirsten and Van Zyl, 1998; Pholoolo, 2001). The minority farmers were then given subsidies for settlement, wells, dams, breeding stock and loans. Extensive stock farming has been the most dominant activity, and beef production, the major product in the North. Karakul sheep farming was the second most important agricultural product and the major activity in the South. The Karakul is well known for its world class pelts, and is marketed in industrialised countries, while beef is primarily marketed in South Africa and the European Union. It should also be pointed out that almost two-thirds of the agricultural output is accounted for by commercial agriculture, which is overwhelmingly cattle farming.

Of great concern however, is the fact that the share of the agricultural sector to GDP in Namibia has averaged at 11.7 percent for the period 1990 to 1997. This is lower than the average for the Sub-Saharan Africa (SSA), which stood at an average of 30.0 percent during the corresponding period (Odada et al 2002). Moreover, the share of the agricultural sector in Namibia has deteriorated from 6.9 percent in 1999 to 5.4 percent in 2003. According to Odada, 2002, the deteriorating share of the agricultural sector could be ascribed to the expansion of other sectors such as mining, and services, while the low share of agriculture as a percentage of GDP could be explained by climatic and soil conditions, which are less suitable for agricultural production.

[1] Freehold refer to holding of a title deed on a property.

Similarly, the share of agriculture in the labour force has been sliding down from 49.0 percent in 1990, to 29.3 percent in 2000. Since the share of agriculture in GDP has declined more rapidly than its share in the labour force, the productivity increment must have been lower in the agricultural sector than in the non-agricultural sectors (Odada, et al 2002).

The agricultural sector further recorded decreasing and sometimes negative growth rates from 1995 to 2004. The sector also registered a declining real growth rate of 15.2 percent, 11.1 percent, 4.6 percent and 1.5 percent during the periods 1996, 1999, 2000 and 2004 respectively. During the periods of 1995, 1997, 1998 and 2001, the sector experienced negative growth rates, ranging between -1.8 percent and -14.9 percent. The negative growth in the agricultural output could be ascribed to many factors such as the appreciation of the domestic currency, drought, decline in product prices, higher interest rates and decline in demand due to competition in international markets. The sector is also confronted by the lack of agricultural financing, growing population, insufficient usage of technology, low investments in the sector, and bush encroachment.

At Independence, the Namibian Government accorded special attention to the development of the agricultural sector. In this regard a number of policy interventions and programmes were embarked upon in order to enhance the output of the sector. These initiatives include the Affirmative Action Loan Scheme (AALS), the National Agricultural Credit Programme (NACP), the Green Scheme, and a ban on export of live animals to South Africa.

All these initiatives were underpinned by the understanding that the recovery in the performance of the agricultural sector is a precondition for economic development. This is based on the fact that improvement in the rural purchasing power would result in a higher effective demand for industrial goods and thus lead to the overall growth of the economy.

Notwithstanding a number of policy interventions in the agricultural sector, its performance has been sluggish, registering declining and sometimes negative growth rates. Its share in GDP as well as its contribution to employment has also been declining in recent years. In spite of the observed trends, the agricultural sector still remains one of the most vital sectors within the Namibian economy; given the fact that about 70 percent of Namibia's population depend on agriculture either directly or indirectly.

The agricultural sector sustains about 70 percent of the Namibian population. The sector is also a major earner of foreign exchange for the economy. Accordingly, the agricultural sector accounted for 11.5 percent of the country's total foreign exchange earnings during 2004. Furthermore, the agricultural sector contributed 39 percent to the country's total maize requirements, 12 percent to the domestic consumption of wheat and 100 percent of total consumption of beef, mutton and millet in 2004. Agriculture continues to supports other sectors such as transport, manufacturing, plastic packaging. For example in 2004, agriculture contributed about 2 percent to the total manufacturing output of Namibia. Against this back ground, the importance of the agricultural sector within the Namibian economy, cannot therefore, be overemphasised. The agricultural sector remains critical to the overall objectives of increasing the output of the economy as well as the alleviation of poverty.

Given the above background, the objectives of this paper are to:

- Identify the factors which have been causing the decline in the growth of the agricultural sector.
- Suggest measures to overcome the identified constraints, to enhance agricultural production.
- Identify products which have the potential of increasing the value addition within the agricultural sector, as well as the related investment requirements.

The remainder of the study is therefore structured as follows: Chapter 2 reviews literature, Chapter 3 outlines the agriculture sector in Namibia. Chapter 4 contains data analysis, and Chapter 5 summarises the experience of Malaysia, Kenya and Zambia with regard to measures implemented to increase the growth of their respective agricultural sectors. Chapter 6 presents the conclusions and policy issues.

Chapter 2 Literature review

2.1 Theoretical literature

The role of agriculture in economic development of a country changes as the transformation proceeds. In the early stages, agricultural growth, particularly led by food staples and small farms, is a major engine of national economic growth and can play a most significant role in reducing poverty (Skoet at al 2004). As the country develops however, the agricultural sector begins to take a secondary role as an engine of growth, and the composition of its output and farm size structure changes. The key questions are whether this is true for Namibia today, and if not, what need to be done to enhance the production of agriculture in its primary growth role in the early stages of economic development.

Johnson et al (1961) offer five ways in which the agricultural sector contributes to the overall economic growth: Meeting the food demands of a wealthy and growing urban population; increased agriculture exports as a means of earning foreign exchange; providing labour for the expanding sectors of the economy; providing capital for investment in the growing industrial sectors of the economy, and increased cash incomes in the rural sector which serves to increase demand for the products of the industrial sector.

Hazell et al (1983), argue that with the dynamism of the "green revolution", agriculture came to be seen as a growth sector which could among other things, generate more food and raw materials at lower prices, release foreign exchange for the importation of strategic industrial and capital goods. Agriculture can also reduce poverty by increasing labour productivity and employment in rural areas and lowering food prices for all.

Johnson and Kirby, (1975), Mellor, (1976), and Mellor and Johnson, (1984) suggested that a growing agricultural sector demands non-farm production inputs and supplies raw materials to transport, processing, and marketing firms. Likewise, increase in farm income leads to greater demand for consumer goods and services. Besides stimulating national economic growth, these production and consumption linkages affect poverty, particularly when agricultural growth is concentrated on small and medium size farms.

Despite the overwhelming supporting evidence that the contribution of agriculture is vital to the overall growth of the economy, a paper by Harley and Crafts (2000) raises doubts about the contribution of agriculture. They argued that England imported a wide range of manufactured goods because agriculture was unable to provide enough food. In spite of a relatively good performance in terms of total factor productivity (TFP) growth, production growth was in fact hampered by diminishing returns to labour and capital.

2.2 Empirical literature

A number of researchers have investigated the relationship between the agricultural sector and the economy. Miller et al (1999), in their study on the contribution of agriculture to the Arkansas economy found that the agricultural sector had in 1996 accounted for 24 percent of the employment of the state, 41 percent of the manufacturing gross state product and 10 percent of value added in the economy of the Arkansas state.

Gardner (2003) investigated the relationship between growth in agricultural value added per worker and GDP per capita for 52 developing countries. He provided evidence of a

positive relationship between these growth rates and poses the question: “What is the direction of causality?” Limited information was provided concerning the methods used to answer this question. It was however, concluded that agriculture did not lead growth. Tiffin (2004), however, used the Granger Causality test in the panel data analysed by Gardner for 85 countries. He found overwhelming evidence which supported the conclusion that agriculture value added causes growth in both developed and developing countries.

In Namibia Odada and Godana, (2002) asserted that the agricultural sector is the largest employer supporting approximately 70 percent of the population.

In summary, evidence from both the theoretical and empirical literature supports the hypothesis that indeed growth of the agricultural sector might have a significant role to play in the economy. This may be in the form of providing food, employment, income, foreign exchange, and creating demand for capital investments and increasing productivity of workers. Agriculture also supports other sectors such as transport, manufacturing, plastic packaging. Based on this background, the importance of the agricultural sector within the Namibian economy cannot therefore be overemphasised.

Chapter 3 Overview of the Namibian Agricultural Sector

The agricultural sector in Namibia can be categorised into two main areas namely, livestock farming and crop farming. Livestock farming constitutes a significant portion of the Namibian agricultural output. It contributed about 70 percent of the total output of the sector in 1995 before easing to only 59 percent in 2004, (table 3.1). Crop farming which accounted for only 8 percent of the total output of the sector in 1995, more than doubled, reaching 17 percent in 2004. Despite, the observed significant growth of crop farming, livestock farming continues to dominate the total agricultural output.

3.1 Livestock farming

Livestock farming in Namibia comprises cattle, sheep, goats and pigs. In terms of output, beef production is the major livestock farming activity in Namibia followed by mutton/ lamb, goat and pork. Beef is predominantly produced in central regions of Otjozondjupa, Omaheke, and Kunene, while mutton and lamb is produced in the arid regions of Hardap, Karas and Erongo.

Table 3.1 Agricultural output at current prices in N$ Million

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Total Output	1,240	1,381.30	1,398.40	1.532.10	1,676.50	1,880.10	1,719.60	2,372.90	2,184.40	2,007.90
Commercial sector	849.2	1,020.2	917.0	1,192	1,166.7	1,074.3	1,333.0	1,823.6	1,654.5	1,369.0
Livestock	803.2	963.6	826.6	1,106.0	1,046.4	977.9	1,187.5	1,675.8	1,467.8	1,180.4
Cattle	436.6	543.7	395.4	659.8	485.7	361.1	698.5	731.3	933.5	637.1
Sheep/goats	168.1	140.9	178.0	205.8	341.9	335.0	252.8	620.4	384.5	285.1
Pigs	6.1	5.5	2.7	1.8	2.9	2.9	0.7	(1.4)	4.8	10.4
Karakul Wool/ Pelts	8.0	9.2	6.7	15.2	12.7	14.8	19.5	17.9	20.2	11.0
Dairy (Milk)	20.0	25.0	28.9	30.1	30.7	34.4	41.4	50.1	52.1	58.1
Hides and Skins	96.6	109.7	93.3	108.4	125.0	138.0	77.0	160.0	30.0	98.0
Other Animals Products	67.8	129.6	121.5	84.8	47.5	91.7	97.7	72.2	42.7	80.7
Crops	**46.0**	**56.5**	**90.4**	**86.5**	**120.3**	**96.4**	**145.5**	**147.9**	**186.7**	**188.6**
Maize	12.9	14.5	34.6	14.9	15.8	26.4	37.1	35.8	56.3	73.8
Wheat	5.3	2.8	4.2	5.6	3.1	4.3	9.4	13.5	19.0	15.2
Grapes	21.8	30.0	39.6	51.8	80.9	44.4	74.7	84.2	92.8	86.2
Other	5.9	9.2	12.0	14.1	20.5	21.4	24.3	14.4	18.6	13.5
Communal Sector	**344.8**	**361.2**	**391.0**	**253.5**	**389.5**	**709.4**	**241.1**	**401.4**	**343.2**	**450.3**
Livestock	143.7	102.4	90.1	25.8	148.4	395.1	(68.4)	87.6	(41.5)	5.8
Crops	52.5	97.8	125.0	42.9	44.5	103.1	91.3	42.8	106.3	154.5
Others	148.7	161.0	175.9	184.8	196.7	211.2	218.1	270.9	278.4	290.0

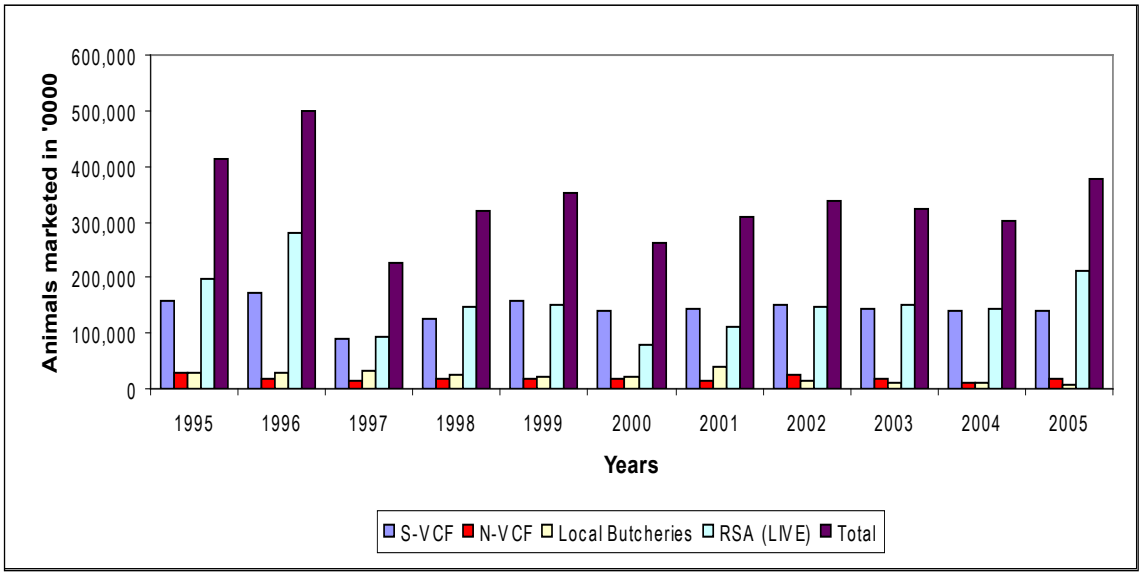
Source: Agricultural Statistics Bulletin

3.1.1 Beef

As mentioned earlier, the major beef producing areas in Namibia lie in the north and east central regions. Beef is produced both in the commercial and communal areas. Within the communal areas however, production remains constrained by the lack of land tenure which has resulted to over-grazing. This situation has been aggravated by the tendency of large farmers fencing off significant portions of land thus leaving small farmers with little grazing land. The commercial sector on the other hand is highly capital intensive and

has a high usage of fattening products. Accordingly, the total number of cattle marketed declined from 414,489 in 1995 to 377, 072 or 9 percent in 2005 (chart 3.1).

Chart 3.1 Cattle Marketed

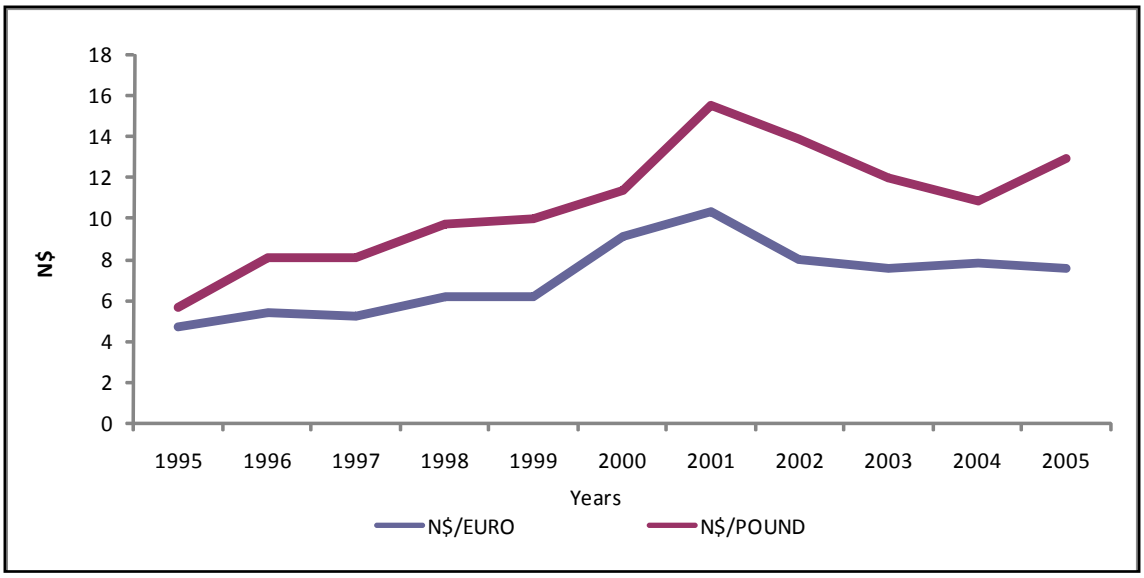


Source: Meat Board

The observed fluctuations in the total cattle marketed could be attributed to climatic conditions. For instance, the decline in cattle marketed in 2004, could be ascribed to the good rainfall received, which resulted in farmers holding their cattle for restocking. Some of the most common problems hampering cattle farming are: Bush encroachment, poor selection of breeds, the low bull to cow ratio, foot and mouth disease and uncertainties emanating from the land reform process. Other constraints include the inactive involvement of the Ministry of Agriculture, Water and Forestry in extension work, the exchange rate volatility, and availability of slaughter able cattle, meat quality and marketing channels.

Chart 3.2 for example shows that, the domestic currency has been depreciating both against the Euro and Pound from 1995 to 2001 implying that domestic farmers realised high export revenue in those periods. From 2002 to 2005 however, the domestic currency has been consistently appreciating against the same currencies. The appreciation of the domestic currency has adverse effects in terms of reducing the revenue of farmers. Moreover, there is a requirement that for cattle from the northern communal areas (NCA) to enter the South African market, they must be kept in quarantine farms for 21 days. A problem associated with this arrangement is that these cattle often lose weight in these camps as a result of insufficient feeding lots, thus leading to low prices obtained on these animals and subsequently discouraging farmers from marketing more of their cattle.

Chart 3.2 N$ per foreign currency



Source: Bank of Namibia

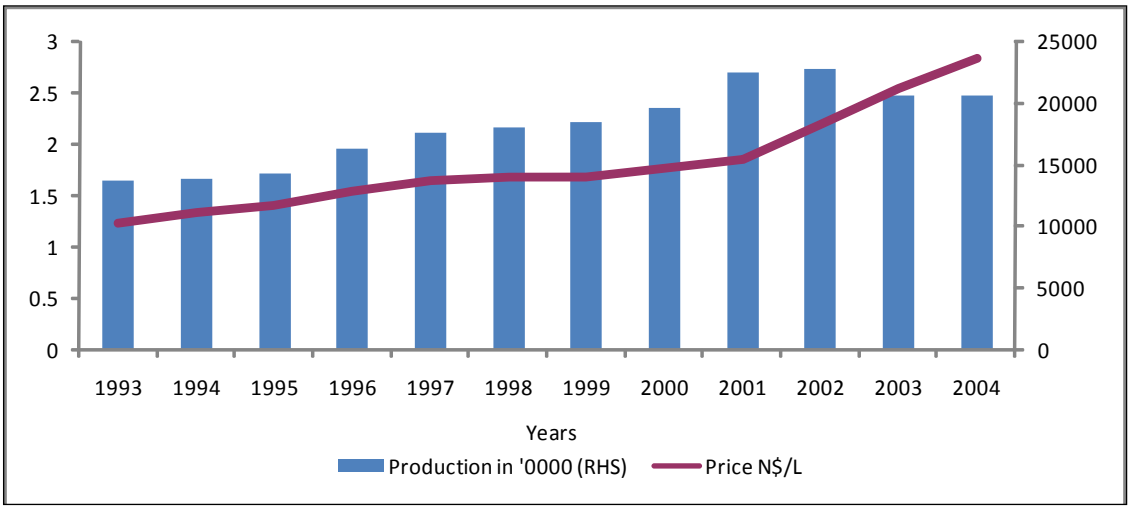
Namibia's beef is exported primarily into the European Union (EU) as carcass, de-boned beef and on hoof to South Africa. The main marketing channels for beef include auctions, Meatco and local abattoirs. Marketing within the communal areas varies, with the South having better access due to accessibility to better infrastructure and communication. In 1992, the Government approved the Affirmative Action Loan Scheme (AALS). Under this scheme, the Agricultural Bank of Namibia (AGRIBANK) is entitled to provide loans for a 25 year period at subsidised interest rates, to formerly disadvantaged Namibians to acquire agricultural land. As a result of this scheme a total number of 3.47 million hectares of farm land has been distributed, benefiting 625 beneficiaries and costing the government about N$160.6 million in subsidies from 1992 to October 2004 (Ministry of Lands and Resettlement, 2005).

This programme was complemented by the North-South Incentive Scheme (N-SIS). The N-SIS allows communal farmers to sell of their livestock North of the veterinary cordon fence (VCF) and purchase disease-free cattle South of the VCF on a newly acquired farm in order to create space for small-scale communal farmers. Furthermore, the scheme supplement the farmers with an amount equal to 50 percent of the total amount raised from the sale of their rural livestock. These programmes are affected by among other things, higher purchase prices of land, bush encroachment, location of farmlands, and small herds, in relation to the carrying capacity of the farms purchased. Consequently, farmers find it difficult to repay back the loans. Moreover the requirements for qualification to the latter's loans are very high. For example the minimum animal requirements for the N-SIS are 150 large scale units or 800 small scale units.

3.1.2 Dairy

The dairy sector, particularly the production of long life milk increased substantially by 43.6 percent from 14,289 litres of milk in 1995 to 20,530 litres of milk in 2004, (Chart 3.3).

Chart 3.3 Milk Production



Source: Agricultural Statistics bulletin

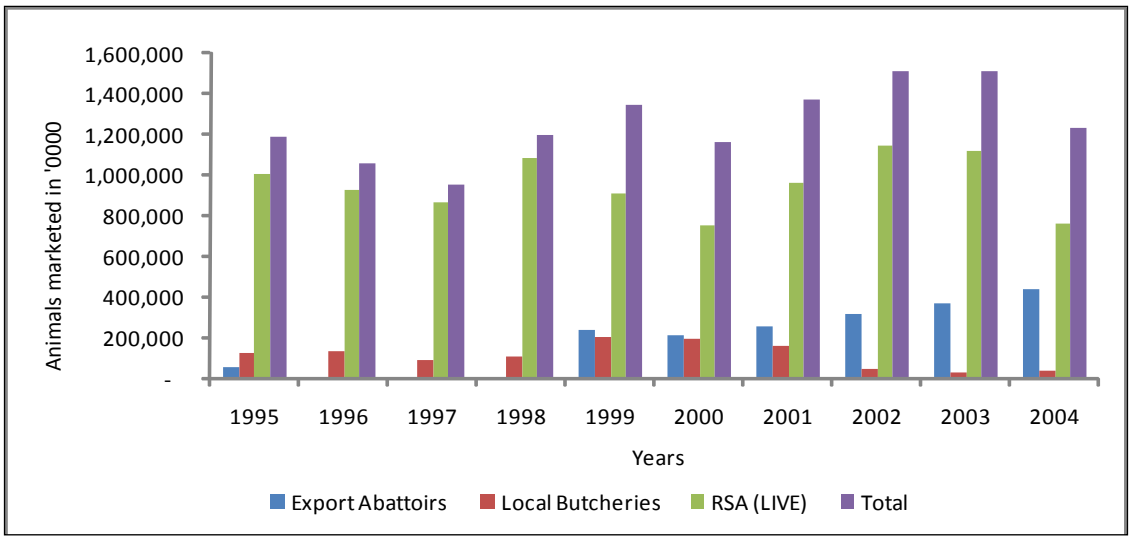
Long life milk enjoys infant industry status which is expected to end in 2008. Despite the observed significant increase in the production of milk, Namibia does not seem to have a comparative advantage in milk production and it is reported that the industry is on the verge of collapse. This could be attributed to the fact that, the production of milk requires a lot of fodder, which is very expensive to purchase.

Moreover, stiff competition from South Africa and the high tariff requirements for entering new markets particularly Botswana and Angola precludes the development of the dairy sector. Other constraining factors in the dairy sector are lack of economies of scale, and lack of finance to purchase technologies which would increase the shelf life of long life milk to a minimum of six months. It should be noted that the industry has applied for the extension of the infant status on long life milk beyond 2008. Moreover, some of the measures which could save the industry from collapsing would be the exemption from the payment of Value Added Tax (VAT).

3.1.3 Small stock (sheep and goats)

Small stock production is the key agricultural activity in the arid southern parts of Namibia. According to the Agricultural census of 2004, sheep accounted for about 57 percent of the total production of small stock in Namibia, while goats accounted for the remaining 43 percent, (appendix 5). When disaggregated according to breed types, the Dorper sheep is the principal breed which accounted for about 36 percent of the total production of the small stock, followed by the Boar goat with 21 percent. The Karakul sheep, accounted for only 4.4 percent, while the remaining 38.6 percent was accounted for by other sheep and goats. The Dorper is well known for the production of meat while the Karakul sheep is bred primarily for pelts. The Marketing of small stock registered a decrease of 11.2 percent from 1,183,398 in 1995, to 1,050, 297 in 2005, (Chart 3.4).

Chart 3.4 Marketing of Small Stocks



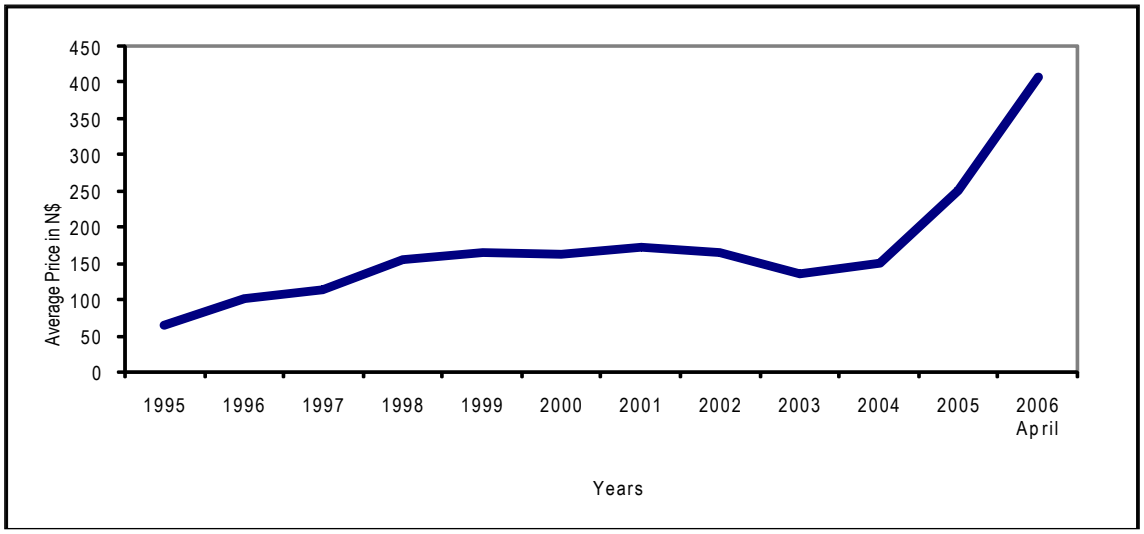
Source: Meat Board

A closer analysis of chart 3.4 reveals that there was a decrease of 25 percent in the number of small stock marketed on hoof to South Africa between 1995 and 2004. Small stocks declined further to 59.6 percent during the period between 1995 and 2005. The observed trend and the subsequent increase in the number of animals marketed to Meatco could be ascribed to the Small Stock Marketing Scheme which was introduced in April 2004 (Meat Board 2004). The scheme prescribes that for every 1[2] animal exported, 2 animals must be slaughtered locally in order to increase value addition and increase employment in the domestic economy. The only exceptions to this ban are the weaners which may be exported to South Africa on hoof.

The Karakul sheep is the most common pelt producing sheep in Namibia. In 2006, subsequent to the recovery of the world price for Karakul pelts, the Namibian Government proclaimed the Karakul industry as a strategic industry for the social economic development of the locals. This can be substantiated by the average prices of the pelts which increased by 540 percent from N$63.67 per pelt in 1995 to N$408.05 per pelt in April 2006 (chart 3.5). As a result, there are efforts to increase the production of Karakul in the rural areas. The government is however, yet to develop a strategy with key stakeholders on how to revive the production of Karakul.

[2] With effect from the 1 September 2006, this ratio will change from 1 is to 6.

Chart 3.5 Average price of Karakul Pelts



Source: Karakul Board

Namibia enjoys a comparative advantage in terms of supplying short haired and lightweight Karakul pelts in the world. Similar to beef, sheep farming, more particularly the Karakul is constrained by low supply. This situation is aggravated by the lack of resources to purchase breeding stock as well as the land reform uncertainties. In this regard, the Karakul Board, in association with Agra, the society of the Karakul breeders and the Ministry of Agriculture, Water and Forestry has considered a number of key projects to increase the production of Karakul. These include among others the ram project, the Kunene South project and training.

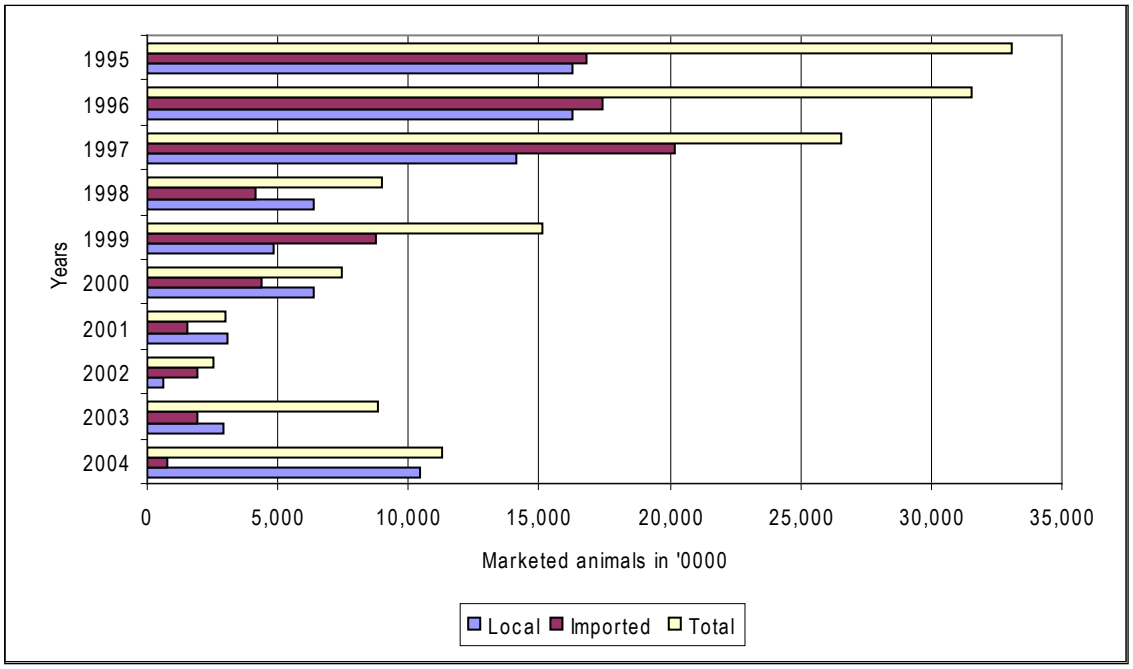
The ram project is aimed at reviving the breeding of Karakul sheep in the communal areas. Under this scheme, the Karakul Board subsidises farmers with N$100 for each ram purchased or N$45O in the case of a ewe. The Kunene South project envisages the re-introduction of the Karakul sheep in the Kunene South area. The project subsidizes about 33 percent of the total cost of the sheep purchased. This project however, requires extra funding to give farmers increased subsidies. The training project is intended to provide training workshops on breeding of the Karakul in communal areas or at the Gellap Ost research station in Keetmanshoop. Training courses offered, include pelt sorting, the art of wool shearing, weaving.

On the part of goats, available statistics show that a significant number of goats are produced in rural Namibia, which accounted for about 73 percent of the total production of goats in 2004. One of the problems cited which affects the marketing of goats, is the non existence of a market for goat meat cuts. Accordingly, about 90 percent of goats are often sold on hoof to South Africa. A potential market for goat meat has recently opened in the USA. Namibia should therefore strategise to enter this market.

3.1.4 Pork

The total number of pigs marketed, decreased significantly by 66 percent from 33,111 in 1995 to 11,253 in 2004, (chart 3.6). Namibia relies heavily on the importation of pork for local consumption and the production of processed meat products. A significant decline in the local production of pigs was observed in 2002. This was ascribed to structural changes resulting from farmers disinvesting from pig production due to stiff competition from South Africa which affected the pig industry (MAWF, 2005). Furthermore pigs are prone to the African swain fever. This observed negative development seems to have been reversed in 2003 and 2004, when pig farms resumed operations in Namibia. Consequently, the proportion of imported pigs was reduced to only 10 percent of the total slaughtered in 2004, from 51 percent in 1995.

Chart 3.6 Pigs marketed including live imports from RSA

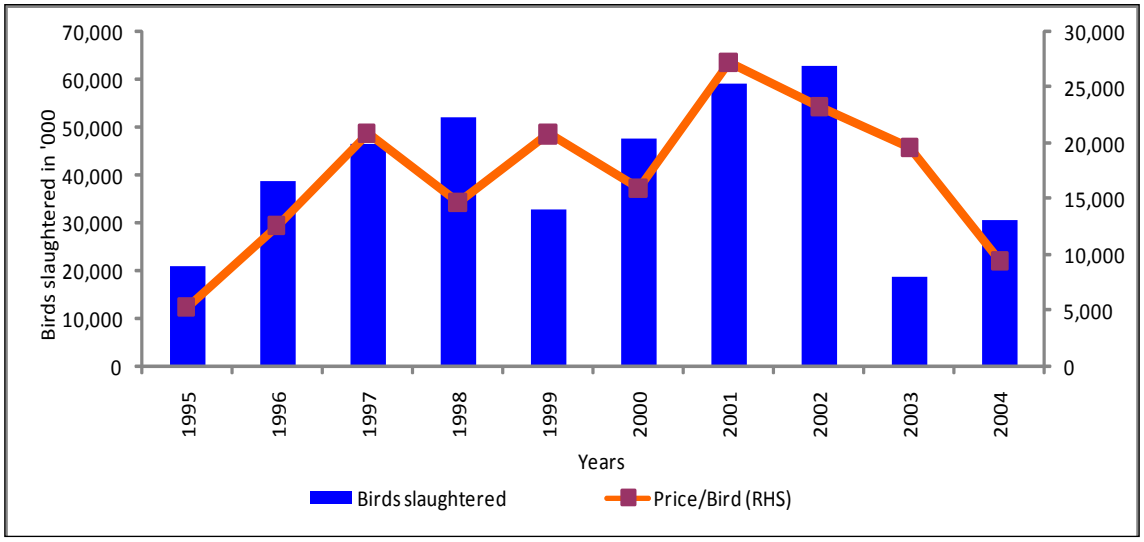


Source: Meat Board

3.1.5 Ostrich

The total number of ostriches slaughtered has increased from a total of 21,241 birds in 1995 to a total of 30,762 birds in 2004, (chart 3.7). When compared with the past three years, however, it could be observed that the total number of these birds slaughtered had declined from the highest record of 62,976 birds which were slaughtered in 2002. In 2003, ostrich birds slaughtered, hit the lowest level for the entire period to only 18,930 birds. On the other hand, the price of slaughtered birds had increased from N$5,333 per bird to a high level of N$27,343 per bird in 2001, before declining to N$9,512 in 2004. Ostrich meat is often marketed to countries such as South Africa, Switzerland, Belgium, and Germany. Its skin and feathers are however, sold to South Africa.

Chart 3.7 Ostrich production



Source: Namibia Agricultural Union

3.2 Crop farming

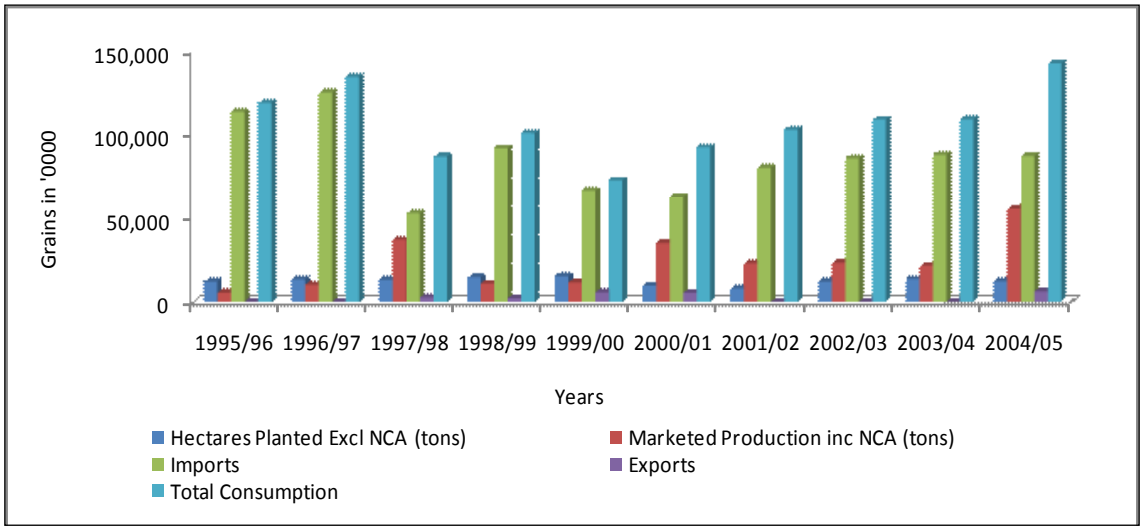
Pearl Millet, commonly known as “Mahangu”, is the major crop cultivated in Namibia, followed by white maize and wheat. To substantiate this point, about 96, 370 tons of Mahangu were produced in 2004 compared with only 55,597 tons of maize in the same year. Other crops cultivated in Namibia include grapes, dates and horticultural crops.

3.2.1 White maize

White maize is the major commercial crop produced in Namibia and its harvesting fluctuates with the rainfall conditions. Maize is planted either under dry land, irrigation based methods or both. Dry-land white maize is mainly produced in the maize triangle situated between Grootfontein, Otavi and Tsumeb, in the Summersdown, Omaheke, and the Caprivi Region. Irrigation based maize production on the other hand is cultivated at the Hardap irrigation scheme, the Naute Project, Etunda, the Katima Farm, Musese, Shitemo, Shadikongolo and Mashare. An increasing amount of white maize under irrigation is also produced at Stampriet, Tsumeb, Grootfontein, Kombat and Otavi areas. Accordingly, marketed maize increased by 937 percent from 5,361 tonnes in 1995/96 to 55,597 tonnes in 2004/5 (chart 3.8).

Namibia depends on the import of maize particularly from South Africa for consumption purposes. For example in 2004, maize imports accounted for 61 percent of the total consumption of white maize in Namibia, compared with 95 percent in 1995. The importation of maize is controlled by the Namibian Agronomic Board, through import permits.

Chart 3.8 White maize marketed productions, imports and exports



Source: Namibian Agronomic Board

The milling of maize is performed by 26 millers, of which 55 percent of the maize milling capacity is owned by Namib Mills[3], while a further 20 percent is held by Bokomo, a South African company. The remaining 25 percent is shared by small millers in the country.

3.2.2 Wheat

Wheat is planted under irrigation in winter (June/July) for harvesting during November/ early December of each year. Similar to white maize, wheat is produced at the Naute project, the Hardap irrigation project, the Shadikongolo and in small quantities in the Otavi and Kombat areas. Wheat marketed in Namibia increased significantly by 89 percent from 6,000 tonnes in 1994/95 to 11,340 tonnes in 2004/05, (chart 3.9). Namibia is far from self sufficient in terms of wheat production and depends heavily on imports to meet its consumption demand. For instance, in 2004 imports accounted for 88 percent of the total consumption of wheat, compared to 89 percent in 1995.

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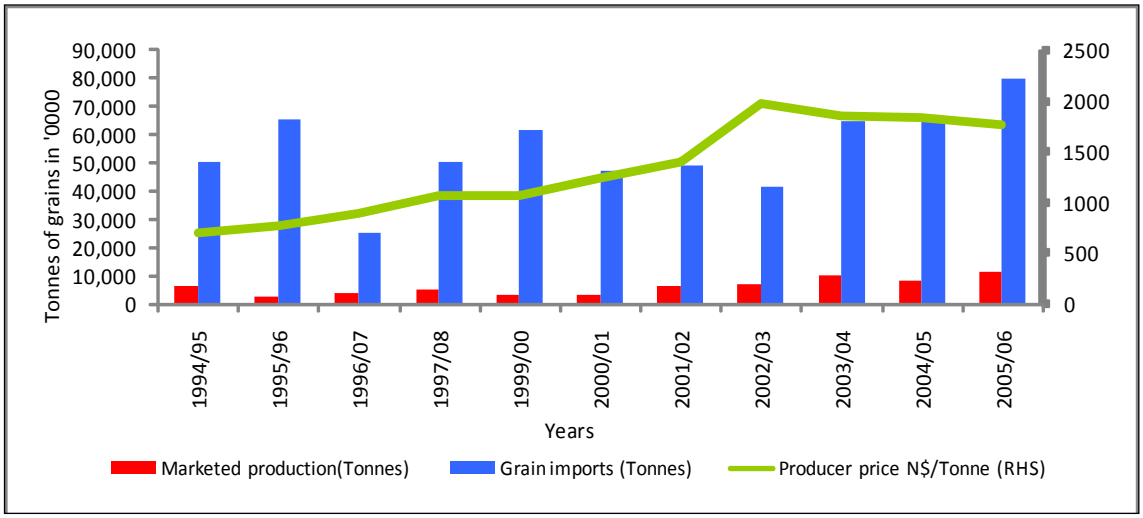
[3] Namib Mills has three milling facilities which are based in Windhoek, Otavi and Katima Mulilo. Its products include flour, maize products, pasta, milled millet, rice, sugar and animal feeds.

Chart 3.9 Wheat production and marketing



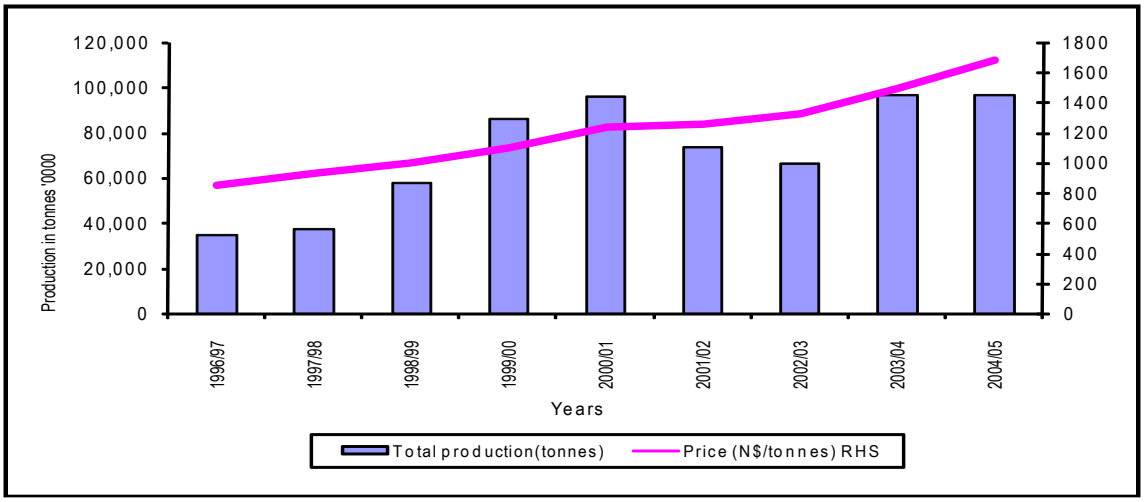
Source: Namibian Agronomic Board.

The importation of wheat as well as of maize is controlled by the NAB through permits. Only raw wheat may be imported as the importation of wheat flour is prohibited by SACU. Wheat is milled by two companies, in particular Namib Mills which holds 85 percent of the wheat milling market and Bokomo Namibia which accounts for the remaining 15 percent.

3.2.3 Mahangu

Mahangu is cultivated primarily in the North Central Regions (NCRs), Kavango and Caprivi and it is the leading crop grown in Namibia. The total production of Mahangu increased drastically by 64 percent from 34,629 tonnes in 1996 to 96,370 tonnes in 2004, (chart 3.10). Contrary to wheat and maize, Mahangu is mostly utilized for domestic consumption only. Traditionally, Mahangu has been viewed as a crop utilised mainly as household food, in addition to supporting needy neighbours or friends.

Chart 3.10 Mahangu grain production and prices



Source: Namibian Agronomic Board

The processing of Mahangu in Namibia is undertaken by various processing plants (millers), such as Kamalanga Mills, ABC Mills and Okavu Mills. In the Northern regions, the lack of infrastructure and the existence of long distances between towns and millers were identified as problems affecting the trade of Mahangu.

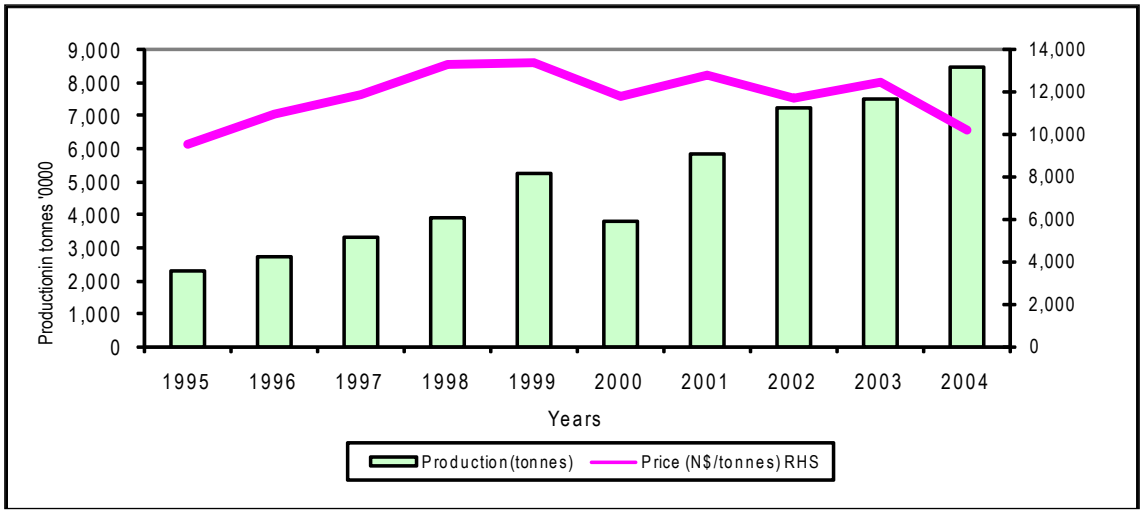
These problems were further exacerbated by the lack of technical and maintenance skills of millers as well as the lack of storage facilities. Available information indicates that the Government has envisaged setting up a Mahangu storage facility in the northern communal areas beginning with a pilot project in the Caprivi. Unlike wheat and maize, Mahangu grains have not been imported from other countries. A possible source of imports in times of drought and scarcity of Mahangu is Angola. The constraint is however, the 25 percent import duty requirement[4]. This import duty makes the imports rather expensive and thus stifles trade.

3.2.4 Grapes

Grapes are farmed at Noordoewer/ Aussenkehr on the Orange River. Namibia harvest high quality seedless table grapes for export to Europe, China and the Middle East. Namibian table grapes had been the first to reach the European market, while competitors could only reach the market a month later. This advantage was mainly due to climatic conditions which enabled the Namibian grown grapes to ripe earlier. Consequently, the production of grapes increased by 260 percent from 2,298 tonnes in 1995 to 8,473 tonnes in 2004, (chart 3.11).

[4] Since Namibia is a member of the customs unions (SACU), mahangu imports from Angola are levied an import duty of this magnitude.

Chart 3.11 Production and prices of Grapes



Source: Agricultural Statistics Bulletin

This advantage seems however, to have been eroded by the competition from Latin America, more specifically Chile and Peru. The latter can be attested by a consistent decrease in the prices of grapes since 1999, from N$13,300 per tonne to N$10,168 per tonne in 2004 (chart 3.11).

3.2.5 Other horticultural crops

Other horticultural crops which are cultivated in Namibia include sunflowers, cotton, ground nuts, dates and lucerne. Communal farmer groups with the assistance of NGOs are also producing fruits and vegetables such as cabbages, carrots, green mealies and pumpkins along the Okavango and Zambezi rivers. Along the Olushandja Dam and at the Etunda Project, fruits and vegetables such as tomatoes, cabbages, watermelons[5], sweet-melons, onions and butternuts are being produced. Furthermore, in the areas of Tsumeb, Otavi and Kombat a number of farmers are said to successful with horticulture production. The Okahandja and Hochfeld areas also produce large volumes of potatoes and onions, most of which are being exported to South Africa.

Namibians consume an estimated 90 thousand tons (N$200 million) of fresh produce per year, of which 80 percent is imported from South Africa. It is estimated that local Namibian producers supply only 20 percent, (Namibian Agronomic Board, 2004). Local producers find it difficult to penetrate the local market and as a result are constrained from increasing their market share. This is due to inadequate local marketing infrastructure and marketing strategies. The Namibian fresh produce cannot provide consistent supply to the market for the whole year, thus wholesalers prefer to source their supplies from South Africa. Consequently, some producers have to send their produce to the Cape Town fresh produce market. This practice is common with onion and potato producers in Hochfeld area and tomato producers along the Orange River, (Namibian Agronomic Board, 2004). The latter find their way back to Namibia through the wholesalers. Furthermore, the producers of fresh produce in Namibia are far from each other as well as from the main markets. Moreover, transport is not synchronized and is thus expensive.

[5] Watermelons, sweet-melons, onions and butternuts are being exported to South Africa.

The Government established the Green Scheme to incorporate disadvantaged Namibians into commercial operations in 2003. The scheme is aimed at developing an irrigation-based agronomic production system with a view of increasing the contribution of the sector to GDP. The projects in this scheme will include the development of some 27,000 hectares of irrigated land along five perennial rivers of Namibia: the Kunene, Kavango, Kwando, Zambezi and the Orange River, over a period of 15 years. The Green Scheme Agency has been established to spearhead this scheme.

The strategy of the Green Scheme is to attract and enable large-scale commercial farming enterprises to establish commercially viable entities in remote and undeveloped rural areas, by acting as service providers. These service providers therefore, ensure the provision of effective production on a cost recovery basis and facilitate the transfer of skills to small farmers. The role of the Government in this regard, is to provide financing of predevelopment studies, contribution towards the financing of off-land bulk water and electricity supply, providing water and interest rate incentives[6].

The Green Scheme is being implemented together with the National Horticultural Development Initiative (NHDI). The intention of the Horticultural Development Initiative is to increase the local production and facilitation of the marketing of fruits, vegetables, livestock fodder and other horticultural products, which will promote import substitution. The expected output is based on a portfolio of 20 horticultural products, maize, wheat, millet, sorghum and cotton, in order to focus on national food self sufficiency. In terms of marketing, it is envisaged to establish three central fresh produce markets in the country, one each in Windhoek, Oshakati and Rundu. Furthermore, the collection and distribution points are planned in the main production areas such as Uutapi, Katima Mulilo, Tsumeb, Mariental, Noordower/ Aussenkehr as soon as a critical mass of production is achieved. The NHDI is being spearheaded by the Namibian Agronomic Board.

[6] The interest incentive is split into development capital (studies, infrastructure, processing equipment, machinery, irrigation equipment, long-term and medium term loans) and working capital (short – term loans): Accordingly, it is envisaged that government will account for 100 percent of interest paid on development capital in the first 3 years and about 20 percent of the interest on working capital. Later, interest on the development capital is planned to be reduced to 70, 50 and 20 percent in the subsequent three years, while on working capital interest is expected to decline to 10 and 5 percent in the following years respectively.

Chapter 4 Survey Analysis

This chapter presents the results of field surveys which were undertaken in June 2006. The main purpose of the field surveys was to assess the main constraints preventing the sector from reaching its full production potential, identifying existing opportunities, as well as the levels of investments required in order to increase the output of this sector.

4.1 Sampling

About 14 key bodies and institutions which represent the interests of farmers in the country were selected, these institutions include the following: The Namibia Agronomic Board, the Agricultural Bank of Namibia, Agricultural Trade Forum (ATF), the Meat Board, Meatco, the Namibia Agricultural Union (NAU), Namibia National Farmers Union (NNFU), The Green Scheme Agency, The Ministry of Agriculture, Water and Forestry, Namibia Diaries, Namib Mills, Karakul Board, Namibian Orange River Grape Growers Association and the Farmers Meat Market. The sampling criterion was more judgmental and based on the fact that these institutions are in better position to identify the existing constraints and opportunities in the sector given their close contact with the farmers.

4.2 Data collection

In order to assist in analysis, this study administered a questionnaire which was sent out and later followed up with personal visits to collect the required data and information. As explained earlier, the objectives the questionnaire were, to obtain information on what was causing the decline in the sector's output, to suggest measures to overcome the problems identified, and to identify products which have the potential of adding more value in the sector. Furthermore, the questionnaire attempted to collect information on the level of investments required in the sector.

4.3 Constraints to growth in the Agricultural Sector

4.3.1. Inadequacy of marketable animals.

These problems are pertinent to cattle and karakul farming. Namibia has a duty free quota to export 13 000 tonnes of meat to the European Union under the Cotonou agreement. Since the inception of this agreement however, Namibia has not managed to fill this quota, because of inadequate supply of marketable animals. This could partly be attributed to bush encroachment and its resultant reduction in the carrying capacity of land, especially in the commercial areas. This problem also has been compounded by the tendency of many commercial farmers switching from cattle to game farming, as well as the uncertainties emanating from the land reforms. The latter stems from the fact that farmers are uncertain regarding which farms are targeted by the land reform process and as a result have been discouraged from investing more into farming. Within the communal areas production is hampered by the poor selection of breeds, the low bull to cow ratio, foot and mouse disease and the low extension worker/farmer ratio. Water and inadequate grazing are also constraints in areas such as Ohangwena, Oshikoto, Kavango and Kunene, respectively.

4.3.2. Limited markets for some products

Markets seem to be a problem especially in the case of goat meat, bone in beef, dairy and grapes. About 90 percent of goats are often sold on hoof to South Africa. A new market for goat meat has recently opened in the USA, and Namibia should thus strive to get into this market. Similarly, the bone in beef does not quality for export to the European Union as a result of health concerns. Namibia beef exports therefore have to be deboned to qualify as exports to the EU. As a result, these beef exports end up collecting lower prices than would have been possible as a result of the weight lost during the deboning process. With regard to the dairy industry, the high customs tariffs to potential markets such as Angola and Botswana hampers exports to these countries and thus prevents the expansion of the market.

4.3.3. Lack of economies of scale, fresh market produce, and high costs

Most of the inputs into the production process in Namibia are often imported from South Africa. Transportation charges have moreover, to be added to the cost of the inputs, thereby increasing the overall production costs. This scenario is prevalent in the dairy sector, grapes and other horticultural crops. In addition, Namibia does not have economies of scale in the production of milk, which also requires a lot of fodder. The lack of organised fresh markets, distances between the production units and the unsynchronized transport system is another serious impediment to the growth of the horticultural products.

4.3.4. Limited financial resources

The availability of financial resources seems to be a limiting factor in the entire agricultural sector. For instance, the dairy sector has cited the lack of financial resources needed to purchase advanced production technologies. Similarly, extending the production of the Karakul sheep in the rural areas, requires, increasing subsidies to communal farmers for the purchase of breeding stock. Financial resources are moreover, required in the production of other animal and crop species such as beef, grapes, poultry, jatropha curcas, hoodia and horticulture.

4.3.5. Climatic and weather conditions

Erratic weather and climatic conditions were cited as having adverse effects on the production of maize and wheat as well as grapes. Due to the poor soil texture, a vast part of Namibia is not suited for the rain fed cultivation of maize and wheat crops.

4.3.6. Competition

Competition in the local and international markets is a serious constraining factor for both to dairy and grape producers. In addition, the UHT or long life milk in South Africa is exempted from VAT in that country, and subsidised. This and the existence of economies of scale in South Africa have resulted in stiffer competition to the locally produced long life milk within the Namibian market. In the case of grapes the competition has been caused by Latin American countries. As a result this has eroded the early supply advantage which Namibian grapes have enjoyed in the past.

4.3.7. Exchange rate volatility

The volatility of the exchange rate in the past few years, has also contributed negatively to the performance of export driven sectors such as beef and grapes. These exchange rate disadvantages were due to the appreciation of the domestic currency which had the effect of reducing the income received in the local currency, thereby affecting the profit margins negatively.

4.3.8. Unavailability of farm land and lack of skills

These constraints are specific to the Green Scheme especially in the Caprivi and Kavango regions. This problem might also be compounded by the lack of good roads, electricity in the rural areas as well as production skills. Skills in this regard refer to the knowledge required to be able to grow horticultural crops and tropical fruits. Skills for the breeding of the Karakul also seem to have declined in tandem with the decline in the prices of these breeds.

To summarise, the factors constraining the growth of the agricultural sector are as follows: Limited availability of marketable animals, unavailability of markets for some products, lack of economies of scale, high input and transport cost, lack of finance, climatic and weather conditions, competition, exchange rate volatility, unavailability of farm land, lack of skills and fresh produce markets, dispersion of producers and unsynchronised transport system.

4.4 Potential products and the required level of investments

4.4.1 Beef and Karakul

The potential for further expansion in the beef, and Karakul would be possible if production were to be increased in the communal areas. Going by the census statistics for example, the communal areas accounted for about 63.3 percent of the total production of cattle, thus implying that the potential for increased production in these areas still exists. In the case of beef, this potential could be unlocked if the veterinary fence could be extended northwards by creating extra disease free clusters. Disease free beef from the NCA would then qualify for export into the EU and USA markets and subsequently increase the output in the agricultural sector. Similarly, the production of the Karakul sheep and pelts in the communal areas should be intensified by increasing subsidies given to communal farmers. In terms of investments needs, an amount of N$1.5 million is required for feasibility studies and additional N$5 million[7] per year is needed to increase the budgetary allocation of the Ministry of Agriculture, Water and Forestry, to enable it to deliver the planned extension services.

4.4.2 Goat meat

Goats also show a great potential for growth and value addition within the economy. This stems from the fact that this animal species grows better in Namibia as indicated by the

7. This figure need to be treated with caution as it is an estimate of one of the people interviewed and not necessarily the official position of the Ministry of Agriculture, Water and Forestry.

production statistics, (Appendix 5). Accordingly, goats are the third largest animal species produced in Namibia after sheep and cattle. To unleash the potential of goats, concerted efforts must be directed to the processing of goat meat and finding new markets. In this vein, great emphasis must be placed on the accessing of the newly opened market for goat meat in the USA.

4.4.3 Poultry

Poultry farming is another potential product for growth in Namibia. In addition to the production of eggs, it is envisaged to set up a broiler in Namibia, in order to reduce the dependence on chicken imports. This project entails all stages from the raising of chickens to the marketing of chicken cuts. It is estimated that this project will cost about N$300 million.

4.4.4 Mahangu

Mahangu is well suited to the Namibian climate. Mahangu was declared a controlled product in 2006 and this is expected to increase its marketing and production, given its adaptability to the climate. To enhance the potential of Mahangu, efforts must be placed on the processing of Mahangu into flour and other products.

4.4.5 Grapes

The potential to increase the output for the grapes depends on the establishment of new markets, and the processing of raw grapes into brandy and grape juice. Potential markets for grapes include the USA, the Middle East and the Eastern block. It has to be noted that considerable progress has been achieved in attempt to export grapes to the USA under AGOA. Should matters go as planned, the Namibian grapes could qualify for export to the USA either during the last six months of the year 2006 or by early 2007. A distillery which processes grape into brandy is being envisaged. This plant is expected to cost about N$400 thousands to be fully operational. The processing of grapes into juice could also be considered in the medium to long term.

4.4.6 Jatropha Curcas

Jatropha plant has also been identified as having the potential to increase the value of the Agricultural sector in Namibia. Jatropha Curcas is a drought resistant plant which can be cultivated in arid and semi arid soil. Jatropha Curcas produces plum-size fruits with two or three oleiferous seeds. It requires and thrives on about 500 mm of rainfall per year. This plant grows well within the Otavi, Tsumeb, Grootfontein triangle, Kavango and Caprivi regions. Jatropha leaves and oil seeds can be used as human and animal medicine, disinfectant, purgative, the treatment of rheumatism, insecticide and molluscicide, soap production, fertilizer and energy production. Jatropha oil can also be used as lubricant and biodiesel for motor vehicles. Given the high fuel prices, the importance of this plant can not be over-emphasized.

In addition to the revenue generated from the sale of jatropha products, respective farmers and more particularly, those in the rural areas, qualify for carbon credit, as a compensation for the prevention of pollution immediately after the planting of Jatropha.

Such a credit can be traded on the London Stock Exchange. The Namibian Agronomic Board recently completed a feasibility study to determine the viability of planting Jatropha in Namibia. Assuming that the total area of about 63,000 hectares of Jatropha is planted, it is estimated that this could contribute about N$189 million to the GDP, N$124 million to state revenue fund and about N$4.5 million in carbon credit revenue. Planting Jatropha is estimated to require about N$450 million[8].

4.4.7 Succulents

Other plants with potential to increase the output in the sector are succulents. A succulent is a plant of which one or more of its organs- leaves, stem or roots has developed the capability to store water (Succulent Society of South Africa, 2004 and NASSP, 2004). This allows them to survive in harsh dry environments. An example of such crop species in Namibia are the Hoodia and the Cactus pear. Hoodia is a drought resistant natural plant which grows easily in the southern parts of Namibia. This plant is known to have appetite suppressant properties and as such could be used as a natural treatment for obesity, (NASSP, 2004). The Cactus pear is a family of succulent plants which is extremely well adapted to Namibian conditions. Though highly drought resistant and use water very efficiently, the plant respond better to controlled irrigation. Cactus pear is found on approximately 90 percent of commercial farms in Namibia, varying from a few plants to about plantations of approximately 5 hectares The plant have a number of uses ranging from eating the fruit, jam making, alcohol, face and body lotions, hair gels and shampoos.

4.4.8 Other Horticultural Crops

Horticultural crops have a major potential for further growth in Namibia. This is due to the climatic conditions which enable Namibia's horticultural products to ripen earlier than those of competitors. Some of the crops cited as having potential for growth and value addition in the sector, include avocados, bananas, beans, beetroots, broccoli, butternuts, cabbages, carrots, chilli, cucumbers, dates, grapes, lemons, lettuces, mangoes, naartjies, onions, oranges, pears, pineapples and potatoes. According to the Namibian Agronomic Board, Namibia is self sufficient in the production of the following crops. These are onions, cabbages, tomatoes, potatoes, watermelons, green mealies, oranges, carrots, butternuts, pumpkins, sweet corn, mangoes, lettuces, sweet potatoes, beetroots, gem squashes, cauliflowers, peppers, paprika and naartjies. The capital requirements for horticultural crops are estimated at N$72 million for the erection of a horticultural market in Windhoek and N$37 million for building the Oshakati market. These investments will be funded by the Government under the horticulture marketing scheme project.

In summary, products with potential for growth in the agricultural sector include beef, sheep, goat, poultry, mahangu, grapes, jatropha curcas, hoodia, cactus pears, avocados, bananas, beans, beetroots, broccoli, butternuts, cabbages, carrots, chillis, cucumbers, dates, lemons, lettuces, mangoes, naartjies, onions, oranges, pears, pineapples and potatoes. The amount of investments required in the sector is estimated at about

[8] This figure does not reflect the costs required to plant the 63,000 hectares above, because these figures were obtained from two different sources.

N$885.9[9] million, as at the end of September 2006. This figure is the sum of N$6.5 million (beef research and extension services), N$20 million (dairy products), N$400 thousand (brandy processing plant), N$450 million (jatropha plantation), N$300 million (broiler), N$109 million (Green Scheme infrastructure).

9. This figure is should be read with caution because its is not inclusive of the total investment requirements in the sector given the fact that it is based on a small sample of respondents.

Chapter 5 Lessons from Malaysia, Kenya and Zambia.

In addition to the field surveys this study used case studies to learn from the experience of other countries on the policies they have embarked upon in their quest of unleashing the potential of their respective agricultural sectors. The selection of these countries was underpinned by the fact that, similar to Namibia, Zambia and Kenya had dualistic agricultural structures at Independence and had to institute policy interventions to turn the sectors. For Malaysia it was more of the need to learn how other developing countries had undertaken the same objectives, and given the fact that Malaysia is a major producer of palm oil. Among other things, palm oil is used for the production of bio diesel. This therefore tied in well with the ambition of Namibia to produce bio diesel. A brief account of the lessons which could be drawn from the various policy interventions in the three countries can be summarised as follows:

❖ Small holder farmer's schemes.

In both Malaysia and Zambia smallholder farmers were organised in group settlement schemes. In Malaysia, the federal government paid the cost of establishing the scheme and was in turn repaid by the settlers over a fifteen–year period. After the settlers had paid for the scheme they received shares in the cooperative, rather than obtaining individual freehold titles. These programmes were similar to the envisaged small holder farmers under the Green Scheme. Such small holder farmers could be allowed to access loans as groups or to form co-operatives.

❖ Broadening access to credit

Financial access in the form of subsidies to farmers was increased in Malaysia, Kenya and Zambia. In Kenya, commercial banks were required to allocate a proportion of their reserves to agricultural lending. In Namibia financial access to the agricultural sector is given by AGRIBANK, the Government and commercial banks. It is recommended that these institutions increase their funding to the sector. Institutional investors with access savings are also encouraged to invest in the agricultural sector.

❖ Provision of infrastructure

In Malaysia, the Government intervened through the establishment of the Palm Oil Registration and Licensing Authority, the Kuala Lumpur Commodity Exchange. In the case of Kenya and Zambia, this was done by setting up marketing boards and various statutory bodies. Such marketing boards were later extended to the rural areas in Zambia. The Namibian Agronomic Board was established by the Agronomic Industry Act (Act 20 of 1992, to facilitate the production, processing, storage and marketing of controlled agronomic products in Namibia. In addition, the Meat Board and the Karakul Board were established to promote the interests of the meat and Karakul respectively. It was envisaged to build horticultural markets in Windhoek, Oshakati and Rundu as well as collection and distribution points in the main production points of Uutapi, Katima Mulilo, Tsumeb, Mariental and Noordower. As was the case in Zambia, marketing boards could be extended to the rural areas as well.

❖ **Intensification of research**

In Malaysia a levy based on the sale of palm oil to support the Palm Oil Research Institute was enacted, while in Kenya, the government devoted about 10 percent of its annual budget to agricultural research in the early years after independence. There are a number of agricultural research stations in Namibia such as Gelap Oost, Kalahari, Sandveld, Sonop, Uitkoms, Omajene, Neudamm, Mashari, Ogongo, Tsumis and Hardap, which are administered by the Ministry of Agriculture, Water and Forestry. These stations are also affected by the unavailability of funding.

❖ **Resource endowment factor**

The profitability of Palm oil in Malaysia is equally attributed to the resource endowment of a country which is well suited to this plant species. Thus, as a lesson Namibia should concentrate on products with which the country is well endowed, such as cattle, sheep, grapes, water melons.

❖ **Land reform**

A major land reform was undertaken in Kenya immediately after Independence when the Government distributed a considerable amount of the former white settlers' farmlands to small scale farmers. In Namibia the land reform is being administered under the auspices of the State acquisition of the Ministry of Lands and Resettlement and the Affirmative Action Loan Scheme. As alluded to earlier, these programmes are constrained by a host of factors, more particularly the overpricing of land, bush encroachment, location of farmlands, limited supply of farmland in relation to demand and small herds in relation to the carrying capacity of the farms purchased, resulting in difficulties for farmers to pay back their loans.

Commercial farmers are also uncertain about which farms will be expropriated, as this has been stated as the last option available to the government in cases where no land or farms are forthcoming under the two land distribution programmes which have been cited. The land policy must be properly implemented to dispel uncertainties' to farmers, areas earmarked for resettlement must be defined clearly, and resettled farmers should be grouped into clusters. These areas should be within the vicinity of markets and be equipped with the necessary infrastructure to enhance productivity.

❖ **Besides for Malaysia the output of the agricultural sector declined.**

As a result of these policy interventions, Malaysia accounted for 61.7 percent of the world production of palm oil and 70.2 percent of the world exports and currently is the world's leading producer of palm oil. In Kenya the agricultural sector growth declined from an average of 6.4 percent per year between 1963 and 1972 to only 0.3 percent during 2000 to 2003. The decline in the growth of the agricultural sector in Kenya is attributed to inefficiencies in marketing, limited land expansion of small holder farming, limited use of new technologies, deteriorating infrastructure, low investments, and bad weather.

In Zambia, small and medium scale farmers grew from 23 percent to 36 percent of the population between 1969 and 1980. The overall growth rate of marketed crops fell from 9.9 percent in the 1970s to 2.1 percent in the 1980s on average. The decline in output was attributed to a host of factors such as drought, privatisation, cattle diseases and the removal of subsidies on maize and fertilisers. It should however be pointed out that

of recent agricultural growth had started to pick up in Zambia. This is on account of the continued government focus on food security, diversification and the development of new agricultural production areas. Since the year 2000, there had been some tentative growth in the sector, posting a 5.0 percent growth rate and another 4.3 percent in 2003 and 2004.

In summary it is evident that in all three countries, Government had intervened in the agricultural sector through various policy measures such as providing support to the small holder farmer's, broadening access to finance, provision of infrastructure and investment in research. In Kenya, the Government had instituted a land distribution programme.

In Malaysia the success of palm oil was also due to the country's comparative advantage and its contribution to the world palm oil is more than 70 percent. Despite these interventions, the output in Kenya and Zambia increased initially but later started to decline. In Zambia it has however started to pick up again in recent years. The observed trends are similar to the case for Namibia where the share of agriculture in the labour force has been sliding from 49.0 percent in 1990, to 29.3 percent in 2000, while its performance has been sluggish, registering declining and negative growth rates sometimes.

Not withstanding the decline in the agricultural sector growth, particularly in Kenya, and Zambia, the agricultural sector is still vital to these economies. In Kenya, agriculture contributes about 30 percent to GDP, 80 percent to national employment and more than 60 percent to the country's total export earnings. (www.pwc.com/extweb/industry.nsf). In Zambia agriculture now contributes about 20 percent to the country's GDP and 85 percent to total employment, (http://en.wikipedia.org/wiki/economy of Zambia). In Namibia, the agricultural sector employs about 70 percent of the Namibian population. The sector is a major earner of foreign exchange for the economy. In 2004, the agricultural sector accounted for 11.5 percent of the country's total foreign exchange earnings. The agricultural sector also contributed 39 percent of the country's total maize requirements, 12 percent to the domestic consumption of wheat and 100 percent of total beef, mutton and pearl millet consumption in 2004. Agriculture further supports other sectors such as transport, manufacturing, and plastic packaging. From the above background, it is clear that the agricultural sector therefore, remains imperative as an employment creator, an earner of foreign exchange and a contributor to GDP in the countries studied as well as in Namibia.

Chapter 6 Conclusions and Policy Recommendations

The objectives of this study were to look into the factors which have been causing the decline in the agricultural growth and identify products which have the potential of increasing the output of the sector. The study was also intended to investigate the level of investments required in the sector.

The study found that, the agricultural sector is constrained by a lower availability of marketable animals, lack of markets for some products, lack of economies of scale, high input and transport cost, lack of finance, erratic climatic and weather conditions, competition, exchange rate volatility, unavailability of farm land, lack of skills and fresh produce markets, dispersion of producers and unsynchronised transport systems.

Products with potential for growth in the agricultural sector include the following: Beef, Sheep, Goats, Poultry, Mahangu, Grapes, Jatropha Curcas, Hoodia, Cactus Pears and horticultural crops such as water melons, onions, bananas, lemons, lettuces, pears and pineapples. The investment required in the sector is estimated at about N$885.9 million. Namibia enjoys a comparative advantage in the production of these products which have been identified. Namibia should furthermore, concentrate on import substitution of fresh produce as a production strategy.

In addition, marketing as well as the promotion of products in new markets might also play a significant role in terms of increasing the output of the sector. This refers for instance, to products such as grapes, processed goat meat, bone in beef and dairy products which are in dire need of new markets. Since the potential for growth in the sector lies much in the rural areas, modernization of the rural areas might aid to the growth of the sector. This could be achieved by putting in place proper infrastructures, marketing facilities and incentives. In addition, increasing research and extension services might unlock the hidden potential of the sector.

The study estimates the investments required in the sector at about N$885.9 million. This figure is the sum of N$6.5 million (beef research and extension services), N$20 million (dairy products), N$ 400 thousand (brandy processing plant), N$450 million (Jatropha plantation), N$300 million (chicken broiler), and N$109 million (Green Scheme infrastructure).

The lessons drawn from the case studies are as follows: In all the countries of Malaysia, Kenya and Zambia, their respective Governments have intervened in the agricultural sector through various policies such as giving support to the small holder farmers, broadening access to finance, provision of infrastructure and investing in research. In Kenya the Government instituted a land distribution programme. In Malaysia the success of palm oil was also due to the country's comparative advantage. Despite these interventions, the agricultural output in Kenya and Zambia increased initially but later started to decline. In Zambia however, it has started to pick up in recent years. Not withstanding the decline in the growth rates, the agricultural sector remains imperative as a creator employment, an earner of foreign exchange and contributor to GDP in these countries.

In order to unleash the potential in the Agricultural sector, the study recommends the following:

- Concerted efforts should focus on the expansion of beef production, Karakul and horticultural products in the communal areas. More specifically, the extension of the red line should be introduced by creating disease free clusters north of the red line, while the usage of feed lots in the communal areas should be used intensively. In the Karakul sector emphasis should be placed on increasing subsidies to communal farmers. In this regard Government is therefore encouraged to workout modalities on how the Karakul industry including small farmers may be supported as pledged.

- The current efforts of the Green Scheme to increase the production of agricultural products though irrigation based methods is commendable. It is however, recommended that the emphasis should rather be on the production of crops particularly horticultural crops in which Namibia has a comparative advantage. The Government should ensure that good infrastructure in the form of roads; electricity and markets are put in place to connect the production in the rural areas to the urban centres.

- Within the commercial areas it is recommended to intensify the de-bushing to increase the carrying capacity of the land.

- The study recommends that the Ministry of Lands and the AGRIBANK should review the issue of farm land evaluation, to avoid unnecessary competing demand for land. A mechanism of proper coordination between the two institutions in this particular aspect should be adopted.

- Farmers under the Government scheme who fail to produce should be substituted with production oriented farmers. Efforts to find new markets for grapes and goat meat should be intensified.

- The land policy must be implemented in such a way that it dispels uncertainties of farmers, i.e. areas earmarked for resettlement must be defined clearly. Resettled farmers should be grouped into clusters in well identified areas, as was the case in Malaysia. These areas should be in the vicinity of markets and be well equipped with the necessary infrastructure in order to enhance productivity. Investments in projects such as Karakul sheep farming, grapes, hoodia, Jatropha, the processing of grape products and irrigation based horticultural products, and the de-bushing process.

- Research in agriculture is also strongly encouraged. In addition to research, there is a need to enhance the productivity of agricultural workers by introducing tailor made agricultural training institutions in the rural areas. These institutions would support the agricultural colleges in the country by providing practical training to agricultural employees in all aspects of agricultural production. Moreover, small holder farmers should be trained in budgeting and breed selection. The usage of veterinary technicians in rural areas should be intensified.

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Appendix 1 Case study of Malaysia: Palm oil[10]

The cultivation of palm oil in Malaysia dates back to 1875, but it was first planted for commercial purposes in 1917. Keen to diversify the economy in order to lesson its dependence on tin and rubber, the government adopted several measures to promote oil palm cultivation. These measures included, allowing rubber replanting grants to be used for planting oil palms, charging lower export duties for palm oil than rubber, and investing in a massive programme of smallholder resettlement on schemes often devoted to oil cultivation. Under this programme, smallholders were organised by public authorities in group settlement schemes, such as those of the Federal Land Development Authority (Felda). The federal government pays the cost of establishing the scheme, and is in turn repaid by the settlers over a fifteen- year period. After the loans have been repaid the settlers receive shares in a cooperative, rather than an individual freehold title, in order to maintain the coherence of the scheme as an estate.

In 1977, the Palm Oil Registration and the Licensing Authority (PORLA) were established. PORLA was assigned with the responsibility of finding new markets. In addition, the Government established the Kuala Lumpur Commodity Exchange (KLCE) to facilitate the trade of palm oil in 1980. The KLCE benefited the industry by providing hedging facilities, expanding the market, setting prices as a basis for trade contracts, and attracting international traders, thus linking Malaysian palm oil markets to overseas markets. Subsidies were also given to planters to replant rubber stands with oil palms.

The Government furthermore levied export duties on palm oil products. The amount of duty was based on a sliding scale which varied with the price fetched by the palm oil and the extent to which the palm oil was processed. In addition to these levies, a cess is levied to support the Palm Oil Research Institute. As a result of these policy interventions, the area under oil palm grew at an average rate of 18.9 percent between 1961 and 1983. By 1982, Malaysia accounted for 61.7 percent of the world production and 70.2 percent of the world exports of palm oil. Currently it is the world's leading producer of palm oil. In addition to policy the profitability and growth of palm oil in Malaysia could be ascribed to resource endowment which is well suited for palm oil production.

The industry has hardly been free of government intervention, and it is now comprehensively regulated. These regulatory powers have not interfered with the most important determinant of profit and loss, the price system, but rather to promote the interest of the industry as a whole, defining quality standards, providing statistical data on production and trade, provision of infrastructure, and promoting the expansion of processing facilities.

[10] Based on the study by James Pletcher titled public interventions in agricultural markets in Malaysia: rice and palm oil.

Appendix 2 Case study of Zambia[11]

Zambia like Namibia inherited a highly dualistic agricultural structure at Independence in 1964. Potential arable land encompassed about 42.5 million hectares of which only about 2.5 million were being used in the 1990s. The concern of policy makers then was to increase food production to ensure self-sufficiency for a rapidly growing population. As a result the state intervened in the sector by expanding the agricultural extension service and the crop-marketing depots to cover the whole country. It also introduced uniform crop prices, and provided the tractor ploughing services, credit and fertilizers at highly subsidised rates.

From 1964 to 1982, the Government encouraged the formation of co-operatives, state farms and parastatals. At the same time, large scale commercial farmers and individual small-scale producers with customary tenure or in settlement schemes were supported primarily by producer and input price policies. These policies were therefore, targeted to increase crop production and to encourage the progression of subsistence farmers towards market-oriented production. In addition they were intended to spread market agriculture into areas where subsistence farming dominated before Independence.

Donor-financed projects were also set up in a number of rural areas to assist farmers in commercial their agriculture. The broadening of access to credit and mechanisation was also made a priority. The pricing policy was also amended to enhance social and equity objectives with the introduction of uniform pricing in the 1974-75. This enabled farmers to receive the same price for their produce despite their location relative to the market. Subsidies on fertilizers increased during the 1960s and early 1970s, resulting in increased production of maize.

These measures were successful in meeting the equity objectives and increasing the participation of rural households in production for the market. For example, between 1969 and 1980 small and medium-scale farmers grew from 23 percent to 36 percent of the rural population, while subsistence households declined from 75 percent to 62 percent. The large-scale commercial farming sector also declined from 1.7 percent of farming population to 1.2 percent (Wood, 1990, Jansen et al, 1992).

The participation of the former subsistence farmers in market-oriented agriculture declined from 52 percent in 1969 to 35 percent of the rural population. Overall, the growth rate of marketed crop production was 9.9 percent in the 1970s; before falling to 2.1 percent in the 1980s. During the 1990s the agricultural sector grew at an average annual rate of 4.5 percent. Growth in these years was stifled by drought and Government withdrawal of support from agricultural producers as well as the privatisation of state-owned companies. Since the year 2000, there has been a tentative growth in the sector. In 2003 agricultural production which is predominantly rain-fed[12] posted a 5 percent growth rate and another 4.3 percent in 2004, (www.statehouse.gov.zm). Today, the country's agricultural production is still dominated by small-scale farms, cultivating

[11] This part borrows heavily from Doris J.Jansen and Andrew Rukovo 1992.

[12] The average annual rainfall is 1000 mm with the Northern parts of the country experiencing the highest rainfall averaging more than 1400 mm annually.

landholdings of one to five hectares and the production of cotton[13], millet and sorghum as well as a large proportion of maize, groundnuts and sunflowers. The recent increase in the performance of the sector can be attributed to government's agricultural policies such as the 50 percent input subsidy on fertilizer, early delivery of agricultural inputs to farmers throughout the country, encouragement of irrigation farming, crop diversification and development of new agricultural production areas.

[13] The main food crops are maize, sorghum, cassava and millet. Cash crops include cotton, tobacco and vegetables.

Appendix 3 Case study of Kenya[14]

In Kenya, agriculture has remained the mainstay of the economy since Independence in 1963. Its contribution to GDP has however, decreased from 35 percent in 1963 to 30 percent in 2004. Total employment is about 75 percent of the labour force and it provides most of the food[15] requirements for the nation and earns about 60 percent of the country's foreign exchange (Kenya, 1997, Nyangito et al 1998).

A number of policies were used to foster the growth of the agricultural sector in Kenya. The first policies were instituted during the period from 1964 to 1980 and emphasized by Government intervention in nearly all aspects of agricultural production and marketing (Smith, 1976, Nyangito et al 1998). These interventions could be summarised as follows.

The reform process began with the land reform which took place soon after Independence. Under this programme, the Government distributed considerable numbers of the former white settler farms to small-scale farmers. This resulted in a monetised small-holder sector that contributed greatly to the growth in the sector. The government also devoted about 10 percent of its annual budget to agricultural research. The use of purchased inputs was also promoted through the licensing of distributors and input price subsidization. The Government extended subsidized credit to farmers through the statutory Agricultural Finance Cooperation, while commercial banks were required to allocate a proportion of their reserves to agricultural lending.

Another important policy during this era was the marketing of agricultural produce and controlled pricing. Most of the commodities were marketed through a number of statutory marketing boards. The prices were set by the Ministry of Agriculture but were implemented by the marketing boards.

From 1980, there was a shift in economic policy towards a liberal state, emphasising the reduction of state intervention in the economy. This was partly in response to the high costs associated with socialist development strategies which became clear as a result of the failure of most publicly-owned enterprises. These reform programmes could be divided into two phases: 1980 to 1992, and 1993 to 1997. The initial policy reforms emphasized the liberalisation of the grain market and the removal of price controls for all agricultural commodities. This phase was followed with decontrol and the relaxation of fertiliser import licensing systems. Also price decontrol and removal of obstacles in the marketing and distribution system, as well as the removal of government support (subsidies) on most investments and services were instituted.

The policy interventions were successful in the first decade after Independence.

For example, by 1980 small-holders contributed about 50 percent of the total production from 37 percent in 1964. The agricultural sector grew by 6.4 percent per annum between 1963 and 1972. Between mid-1970 to 1980, the growth of the sector was reduced to only 3 percent and further to a negative figure in early 1990. The decline in the growth of the agricultural sector is attributed to inefficiencies in marketing, limited land expansion

[14] Extracted from the study titled, Kenya's Agricultural Policy and Sector Performance: 1964 to 1996 by Hezron Nyangito and Julius Okello, October 1998.

[15] Tea is the dominant sector, other emerging sector are coffee and sugar.

of small holder farming, limited development and use of new technologies, deteriorating infrastructure, low investments, the oil shock of the 1970s and bad weather. Between 1994 and 1999 with the return of good weather conditions the agricultural sector registered a positive growth rate of 2.6 on average. The growth however deteriorated further from 2000 to 2003, registering an average growth rate of about 0.3 percent. The unsatisfactory performance in the sector in the 2000s is attributed to low yields, lack of high quality seeds and other inputs, poor infrastructure, poor and inefficient technologies, coupled with low extension services and low investments.

Appendix 4: Agricultural Census 2004

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Cattle	2,031,353	1,989,947	2,055,416	2,192,359	2,278,569	2,504,948	2,508,570	2,329,553	2,336,094	2,309,390
Commercial	887,224	743,057	790,699	824,207	830,043	845,656	908,262	858,391	943,210	887,667
Communal	1,144,129	1,246,890	1,264,717	1,368,152	1,448,526	1,659,292	1,600,308	1,471,162	1,392,884	1,462,033
Sheep	2,409,699	2,198,436	2,429,328	2,086,434	2,160,651	2,446,146	2,233,578	2,764,253	2,955,454	2,619,363
Karakul	275,705	217, 759	206,596	185,170	193,748	204,712	206,727	236,771	222,832	202,542
Dorper	1,581,367	1,412,571	1,655,826	1,344,091	1,417,512	1,598,664	1,539,827	1,836,731	1,931,566	1,675,788
Other Sheep	552,627	568,106	566,906	557,173	549,391	642,770	487,024	690,751	801,056	741,033
Commercial	2,064,291	1,878,840	2,112,789	1,727,210	1,865,770	2,086,867	2,011,478	2,389,401	2,565,243	2,272,715
Communal	345,408	319,596	316,539	359,224	294,881	359,279	222,100	374,852	390,211	346,648
Goats	1,616,090	1,786,150	1,821,009	1,710,190	1,689,770	1,849,569	1,769,055	2,110,092	2,086,812	1,997,172
Angora	9,780	6,211	5,411	4,286	4,505	5,941	4,689	4,291	4,544	3,683
Boerbok	948,500	893,904	975,826	884,885	820,236	973,464	1,047,942	1,096,781	961,251	956,801
Other Goats	657,810	886,035	839,772	821,019	865,029	870,164	716,424	1,009,020	1,121,017	1,036,688
Commercial	575,707	544,942	547,205	479,930	461,675	491,511	536,847	608,313	555,192	529,131
Communal	1,040,383	1,241,208	1,273,804	1,230,260	1,228,095	1,358,058	1,232,208	1,501,779	1,531,620	1,468,041
Pigs	19,979	18,923	16,884	14,706	18,731	23,148	21,854	47,805	46,805	46,932
Commercial	13,193	12,493	10,559	9,035	8,880	12,807	12,284	6,825	12,336	15,700
Communal	6,786	6,430	6,325	5,671	9,851	10,341	9,570	40,980	34,596	36,924
Ostriches	21,241	38,891	46,725	52,393	33,116	47,823	59,309	62,976	18,930	30,762
Commercial	20,811	38,416	46,160	51,464	27,666	41,783	55,280	58,550	18,831	30,733
Communal	430	475	565	929	5,450	6,040	4,029	4,426	99	29
Poultry	487,031	458,158	522,618	403,937	450,513	476,331	502,356	883,950	894,027	957,966

Appendix 5 List of people interviewed

Name of person	Position	Institution
1. Mr. O. Apisay	Financial Officer	The Green Scheme Agency
2. Mr. A. Botes	Agricultural Economist	The Green Scheme Agency
3. Mr. C. Brock	C.E.O	Namibian Agronomic Board
4. Mr. E.Gernot	Farmer	-
5. Mr. J. Hoffman	Trade Advisor	Agricultural Trade Forum
6. Dr. O. Huebschle	Chief Veterinary Officer	Ministry of Agriculture Water and Forestry
7. Mr. L. Hugo	Agricultural Engineer	The Green Scheme Agency
8. Amb. L. Iipumbu	C.E.O	Agricultural Bank of Namibia
9. Mr. N.Kalili	Horticulture Officer	Namibian Agronomic Board
10. Mr. L.Norbert	Treasurer	Namibian Orange River Grape Growers Association
11. Mr.B. Rothkegel	Director: Planning	Ministry of Agriculture Water and Forestry
12. Mr. W. Schulz	Manager	Meat Board of Namibia
13. Mr. P. Strydom	General Manager	Meat Board of Namibia
14. V.Tjimune	-	Namibia National Farmers Union
15. Mr. K. van Graan	Managing Director	Namib Mills
16. Mr. D. van Jaarsveld	Managing Director	Namibia Diaries
17. Mr. W. Visser	Manager	Karakul Board of Namibia

Appendix 6 Questionnaire

PART I. EXISTING PRODUCTS

A. In your own views are there any factors that are hindering the performance of the agricultural sector from reaching its full potential? If yes what are these factors?

……
……
……
……

B. What problem/s are affecting the production of the following specific agricultural products and why?

Product	Problem	Cause
1. Beef		
2. Lamb/ Mutton		
3. Maize		
4. Grapes		
5. Wheat		
6. Mahangu		
7. Pork		
8. Ostrich		

C. What could be done to solve the problem/s identified in B above?

……

……

……

D. List agricultural products or activity that you think has potential for further production and why do you think so? Hint: comparative/competitive advantages, etc.

……

……

……

E. At what levels/stages in the production process (production chain) of product/ products identified in D, is there room for further value addition?

……

……

……

……

F. What is the level of investment needed in Namibia Dollar terms to accomplish the investment required in D above?

……

……

……

G. Where could the product /s listed in D and E be marketed?

……

……

……

PART II Potential Products

A. What other (new) agricultural products do you think have the potential for growth in Namibia and why do you think so?

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……

……

B. Where could the product or service identified in A be grown/ cultivated and why?

……

……

C. Where could the products identified in A be marketed and why?

……

……

……

……

D. What is the level of investment in Namibia Dollar terms is required for this project identified in A to C?

……

……

……

PART III SPECIAL SCHEMES (AALS, N-SIS, NACP, GREEN SCHEME, ETC)

A. List a number of strength and weaknesses that are inherent in the existing Government schemes aimed at increasing agricultural output in the country?

…….....

…….....……

…….....……

B. What could be done to enhance the schemes cited in A above?

……....

……

……

C. In your own view what interventions are required to unleash the potential of the agricultural sector?

…….....……

…….....……

D. What roles could the different market players; Government, Banks and Private Sector do to achieve the objective cited in C above?

……

……

……

THANK YOU!