

The South African Ostrich Value Chain; Opportunities for Black Participation and Development of a Programme to Link Farmers to Markets

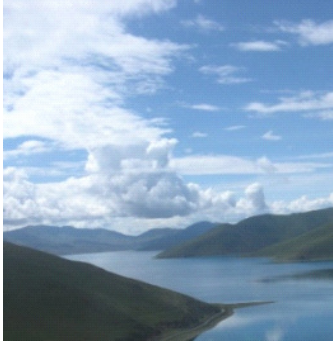


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Published by NAMC, Private bag X935, PRETORIA, 0001, Tel: (012) 341 1115



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Submitted to:

National Agricultural Marketing Council

by

ECIAfrica (Pty) Ltd.



June 2010

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List of Acronyms

AI	Avian Influenza
BEE	Black Economic Empowerment
BSE	Bovine spongiform encephalopathy (mad cow disease)
DAFF	Department of Agriculture, Forestry and Fisheries
ECI	ECI <i>Africa</i> Consulting (Pty) Ltd
EU	European Union
FAO	Food and Agriculture Organisation
GM	Genetically Modified
IMPEC	Integrated Meat Processors of the Eastern Cape
KKI	Klein Karoo International
KKABC	Klein Karoo Agri Business Centre
KSSSOFPI	Khula Sizwe Small Scale Ostrich Farmers Participation Incentive
NAMC	National Agricultural Marketing Council
SAOBC	South African Ostrich Business Chamber
SCOT	Southern Cape Ostrich Tannery

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1. Executive summary

The South African ostrich industry is characterised by three product phases where the main source of income was feathers during the early part of the 1900's, leather during the second half of the twentieth century and meat and leather since 1990. The industry also had three phases of regulation, starting with a free market system during the feather phase, regulation of the industry during the second half of the twentieth century, followed by deregulation of the industry during 1993.

The ostrich industry is predominantly situated in the Western Cape Province in the Klein Karoo and southern cape regions. Approximately 90% of the industry primary production and ostrich product output emanates from this area. The volume throughput of the industry is dominated by Klein Karoo International with headquarters at Oudtshoorn and Mosstrich at Mossel Bay.

The industry can be regarded as a mature industry from the perspective of growth potential. The maturity is brought about by the industry production volume targets of approximately 250 000 birds slaughtered annually in order to limit the supply to markets and thus maintain the exclusivity of the products.

The future direction of the industry to maintain the exclusivity of the products is disputed by some local industry advisors and specifically international industry participants, claiming that the ostrich should be slaughtered at the optimum feed conversion stage at eight to nine months old rather than the current slaughter age of eleven months. Proponents of this approach argue that meat should be the main targeted source of income as the market for ostrich meat is under supplied and can absorb four to five times the current volumes. This will, however, damage the exclusivity of the market for ostrich leather.

The industry is based almost entirely on export income with meat sold in euro and leather sold in US dollar. Fluctuations in the exchange rates impact on rand income and the recent economic recession with a strengthening of the rand against the euro as well as possible long term impact on demand in European countries bodes ill for the profitability of the industry.

Primary production is based in the Klein Karoo for historic reasons and the industry was accorded public sector support and protection during the period of regulation. This led to the establishment of primary production on sub-optimal resources with the processing capacity placed to serve the established primary production. A surplus slaughtering capacity resulted from the boom in meat sales during the early 1990's and the slaughter facilities are not placed at areas with higher primary production potential. Research into primary production technology only started during the 1970's and improvements in genetic selection can yield vast gains in profitability.

With the lack of volume growth in production, black economic empowerment in the ostrich industry can only take place through replacement of current primary producers and new processing facilities will create further surplus capacity in the industry.

Any linkage programme for the support of new entrant black farmers should be designed in co-operation with the industry and ideally be implemented by the existing industry participants.

2. Introduction

ECIAfrica (Pty) Ltd. (ECI) was contracted by the National Agricultural Marketing Council (NAMC) to conduct a sub-sector analysis of the ostrich industry in South Africa, identify opportunities for black economic empowerment in the sub-sector and propose support systems for black participants entering the sub-sector.

The study was done through interviews with a wide range of participants in the ostrich value chain covering:

- Established commercial farmers active in various stages of primary production
- New entrant black farmers in the raising of chicks to juveniles
- Abattoir and tannery operators
- Technical industry consultants
- Export agents
- Industry organisations

The published annual reports of processors, newspaper and radio reports of industry participants and the internet sites of processors, feed manufacturers and international organisations active in the ostrich industry was used as further sources of information.

3. The South African Ostrich sub-sector

3.1 HISTORICAL SUB-SECTOR OVERVIEW

The ostrich (*struthio camelius*) is a member of the ratite family of flightless birds. Other members of the family are the Emu, Rhea, Cassowary and the Kiwi. The ostrich is indigenous to Africa and records of the use of ostrich products (feathers) can be traced back to the Roman Empire and the Pharaohs of Egypt. Ostriches are also depicted in South African San rock art, indicating the occurrence of ostriches in Southern Africa for many centuries. From the rock art it is inferred that the San also hunted ostrich.

The commercialisation of ostrich as a farm animal can be ascribed to the popularity of the ostrich feather as decorative fashion item favoured by prominent personalities such as Queen Elizabeth I of England and Queen Marie-Antoinette of France. The fashion lasted throughout the 19th century and the demand grew to the extent that commercial ostrich farming was initiated during the 1860's in South Africa. Competition from ostrich ventures in other parts of the world, notable in California, led to South African producers seeking genetic material with a higher quality feather to obtain leadership in the market. They succeeded in obtaining wild ostriches from northern Africa. This resulted during the latter part of the 19th century and early 20th century in breeding a bird, the South African Black ostrich, which is now a local industry standard.

The market for ostrich feathers boomed during from 1900 to 1914 to the extent that the export of ostrich feathers ranked as the fourth largest South African export. At that stage the feather price per kilogram exceeded the gold price and South Africa exported more than 110 000 kg of feathers at a value of £3 million. The relics of this period of prosperity are still visible in the Oudtshoorn district through the stately farm mansions that were built during the feather boom.

The high income derived from ostrich farming allowed intensive farming with large scale cultivation of lucerne as ostrich feed and the fencing of veld into camps. The impact of the large scale growing of lucerne is still visible in that the Klein Karoo Korporasie is still the dominant source of lucerne seed in South Africa.

After World War I, the market for feathers collapsed with devastating impact on the ostrich industry and the economy of the Klein Karoo. The collapse is ascribed to logistical difficulty with sea freight during and after the war years but most importantly to a change in fashion demand inter alia through the introduction of the motor vehicle (open cabin) which wreaked havoc with ladies' hats adorned with ostrich feathers. The growth and demise of the market for ostrich feathers during the early 20th century is a worth while case study on the risk of selling products into fickle markets such as markets driven by fashion preferences. A residual market for feathers remained after the early 20th century boom, albeit at a much lower level. The industry relied on feathers as the primary product until the last quarter of the 20th century when ostrich leather took over as the primary product.

The first tannery for ostrich leather was built in 1970 and leather remained the prime source of income for ostrich farmers until the early 1990's when ostrich meat was entered into the international markets as a speciality meat product. During the first ten years of ostrich leather production, the predominant off-take was for handbags in Japan. This market was subsequently influenced by the sustained downturn of the Japanese economy (late 1980's) and the entrance of Korea in ostrich leather handbag manufacture of lesser quality than the Japanese product. Currently the ostrich leather off-take is predominantly for the manufacture of boots for markets in Texas and New Mexico. The world-wide recession triggered by the sub-prime crisis in the USA had a large negative impact on the demand for ostrich leather and the contribution of leather to

the total income from a slaughter ostrich dipped below that of meat during 2008/9 whilst the meat price was not exorbitant as in the early 1990's. Besides the scarcity value of ostrich leather, it is regarded as one of the most durable leathers available which is a selling point besides the fashion preferences of various leather goods markets from time to time.

During 1993 the first ostrich meat abattoir for export to Europe was built. This ushered in a new era in ostrich production as the abattoirs had to comply with the phyto-sanitary requirements for export of meat. The market for ostrich meat is currently predominantly (approximately 90%) in the European Union and Switzerland and compliance with their phyto-sanitary requirements and traceability of the meat to source is a requirement. During the early 2000's the incidence of BSE (mad cow disease) in Britain resulted in a sky-rocketing demand for ostrich meat. The price of ostrich meat increased by 40%, which, combined with a relatively weak rand resulted in a high income per ostrich to the extent that many new ostrich farming ventures were initiated also in the summer rainfall areas of South Africa. After the BSE scare subsided, the ostrich meat price dropped by 30% which resulted in most new ventures in the summer rainfall regions being bankrupted. As example, during this meat boom period, Rustenburg district had more than 30 registered ostrich farms, none of which is currently in production. The ostrich industry in South Africa is thus characterised by three distinct product phases namely the feather, leather and leather/meat phases.

The South African ostrich industry also had three phases of regulation. During the feather phase the industry was not regulated and operated on a free market system until 1959 when Klein Karoo Korporasie obtained single channel marketing rights for ostrich feathers under the Co-operatives Act. In the report on an investigation into the effect of deregulation in the ostrich industry (April 2003) by the Committee established by the NAMC under section 7 of the Marketing of Agricultural Products Act (1969), it is stated that "The motivation used for the granting of sole marketing rights to the KKK was that farmers around Oudtshoorn needed to be protected because there was no other manner in which they could earn a satisfactory income". The protection was thus obtained for socio-political reasons to protect a group of ostrich farmers and not necessarily in the best interests of the industry. The single channel marketing through KKK was broadened to include all ostrich products in 1981 and also breeding material in 1988. This absolute control of the industry by KKK was maintained until November 1993 when the Minister of Agriculture deregulated the ostrich industry which resulted in a free market system for the ostrich industry. Before 1993, there was only one ostrich abattoir owned by KKK.

The deregulation allowed new participants the freedom to start their own value-adding ventures. Concurrently the BSE induced ostrich meat boom drew many new investors into the ostrich industry. A further nine ostrich abattoirs approved for exports to the EU were built and new tanneries and feather factories were opened. After the ostrich meat boom, not only did many new entrants (mostly in the summer rainfall area) face bankruptcy, but the industry as a whole was left with a large surplus slaughter capacity.

The ostrich industry has experienced many boom and bust cycles triggered by the volatility of product prices. The industry is furthermore dependant of export earnings for more than 90% of its income which makes it vulnerable to the value of the rand-US dollar (R/\$) and rand-euro (R/€) exchange rates. Ostrich leather is sold in US dollar and ostrich meat is predominantly sold in euro. The medium term depreciation (1990's onwards) of the rand against major currencies resulted in higher rand income from exports that buffered the industry for the cost squeeze on input costs. In nominal terms the income per ostrich remained within the same order of magnitude but in real terms the income per ostrich declined over this period.

3.2 THE VALUE CHAIN IN SOUTH AFRICA

3.2.1 SPATIAL DISTRIBUTION OF PRIMARY PRODUCTION AND SLAUGHTERING

Since the inception of the ostrich industry in South Africa with the advent of the feather boom, ostrich farming and is predominantly based in the Klein Karoo and the Southern Cape and EU approved abattoirs were established in the primary production areas. Figure 1 indicates the spatial distribution of ostrich abattoirs throughout South Africa.

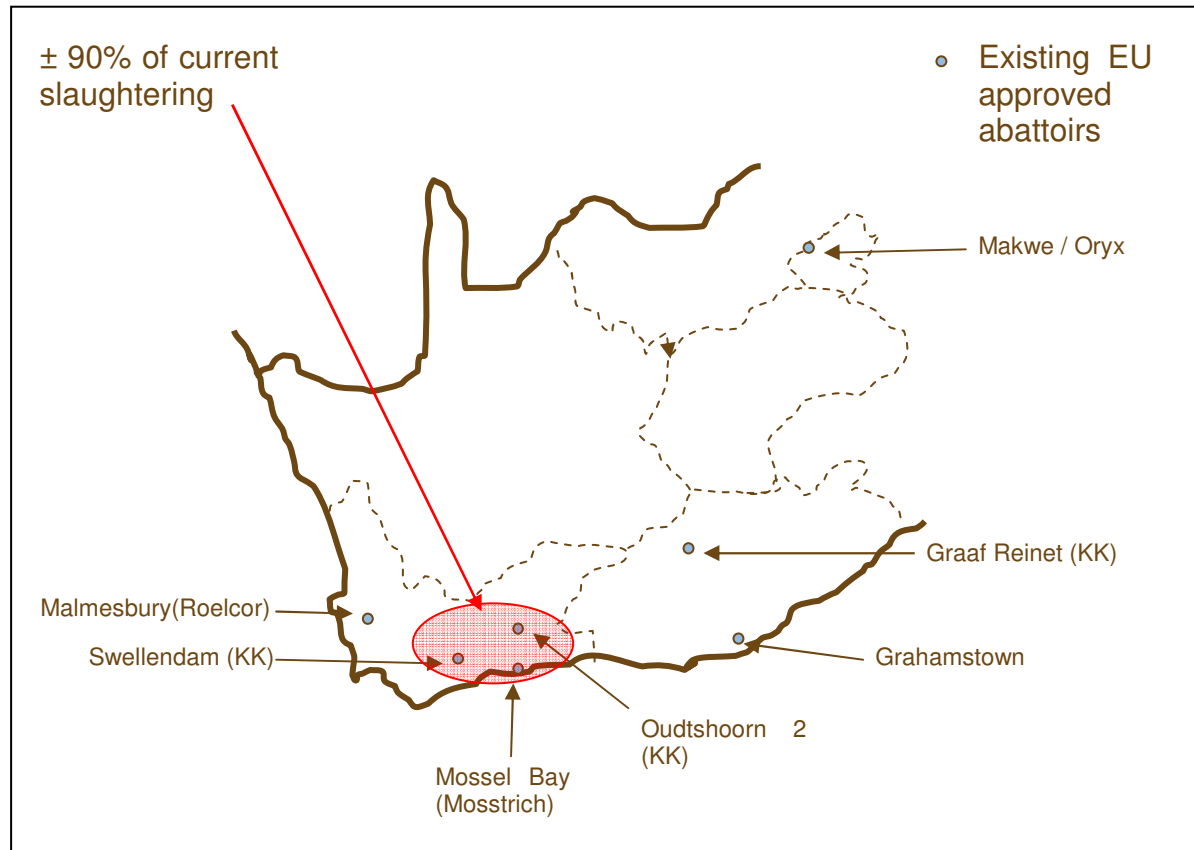


Figure 1: Spatial distribution of ostrich slaughtering

It is generally accepted that ostriches require dry climates, specifically for breeding. In this regard, ostrich farming seems to be more suitable in the western drier parts of South Africa or in winter rainfall regions where the dry summer season coincides with the breeding season. The Klein Karoo is the traditional home of the ostrich industry and Oudtshoorn is rightfully called the ostrich capital of the world based on the number of ostriches slaughtered and the value add products emanating from the Oudtshoorn district.

South Africa has seven abattoirs currently approved by the EU for the export of ostrich meat. The dominant player in value adding is Klein Karoo International (KK) with two abattoirs at Oudtshoorn, one at Swellendam and one (Camdeboo) at Graaf Reinet. The smaller of the two abattoirs at Oudtshoorn is currently mothballed. The Klein Karoo Group members are slaughtering ostriches at the larger abattoir in Oudtshoorn and at Swellendam. The abattoir at Graaf Reinet is currently mostly used for slaughtering of game. The current throughput of KK is estimated at 140 000 birds per year. KK has an estimated slaughter capacity of 200 000.

The second largest abattoir is operated by Mosstrich at Mossel Bay. Mosstrich has a slaughter capacity of 70 000 birds per year. Mosstrich was established after deregulation of the ostrich industry in 1993, by approximately 70 ostrich farmers in the Southern Cape.

As indicated in figure 1, approximately 90% of the ostriches slaughtered in South Africa are slaughtered at the KK abattoirs at Oudtshoorn and Swellendam and at Mosstrich at Mossel Bay. The abattoirs in South Africa other than those owned by KK or Mosstrich are at Malmesbury (owned by Roelcor); at Grahamstown (owned by Phillipe and IMPEC) and Mankwe near Magaliesburg in Gauteng Province (owned by a local farmer). The capacities of these other abattoirs range between 10 000 and 20 000 birds per year.

3.2.2 STEPS AND PRODUCTS IN THE VALUE CHAIN

The steps in ostrich farming and value-adding are depicted in figure 2 as input and output values per slaughter ostrich raised.

VALUE ADDING TO PRIMARY PRODUCT				
Export meat	16	kg	}	Pack Portion Debone
Other meat	15.5	kg		
Fat / bones	11.5	kg		
Skin	15	dm ²		
Feathers	1.36	kg		
kg dry-weight carcass	43	kg		Slaughter
kg slaughter mass live	95	kg		
PRIMARY PRODUCTION				
Slaughter age (11 months)	1		}	Bird rearing
Juvenile (3 months)	1.08			
Day-old chicks	1.44		}	Chick raising
Eggs	2.88			
Breeding females	0.058		}	Breeding & Hatching
Breeding males	0.029			
kg feed	580			
ha lucerne	0.014			
ha maize	0.017			
kg oilseeds	58			

Figure 2: Input and output per slaughtered ostrich

The values in Figure 2 are indicative only and are based on a feedlotting system with zero grazing. The values used and alternative systems are explained in the following paragraphs for each step in the value chain.

3.2.3 FEED AND FODDER PRODUCTION

The feeding cost to produce a slaughter ready ostrich is the biggest input cost in the primary production process and is generally stated to be approximately 70% of the primary production variable costs. The cost of feeding an ostrich is dependant on the system used to rear the birds and is also highly dependant on the natural resource base of the area where the primary production takes place. The costs vary significantly between production systems and farming regions.

Production of slaughter birds in the Klein Karoo is mostly based on a feedlot system. Ostriches are kept in small camps and the ostriches are fed in the camps. Specific rations for the various stages of growth are used and formulations and concentrate mixes are readily available from feed manufacturers. As a general yardstick, ostrich feed is made up of 60% lucerne, 30% grain and 10% oilseed products. The Klein Karoo is also well known for its lucerne production and younger birds are often grazed on lucerne. Larger birds (after 4 months) are preferably not placed in lucerne camps for extended periods as the birds can trample the lucerne with their claws. Birds can also cause damage to veld and extensive grazing for the production of slaughter birds are not generally done in the Klein Karoo. Damage to the unique fynbos flora in the Klein Karoo is a concern that has been raised by environmentalists and the ostrich industry, through the South African Ostrich Business Chamber (SAOBC) is working in close co-operation with environmentalists to instil practices that will protect the ecology. The Klein Karoo furthermore has a low carrying capacity recommended at 5 hectare per ostrich for extensive raising of slaughter birds. These factors led to the Klein Karoo essentially raising the juvenile birds to slaughter age through a feedlot system.

The feed requirements is mostly obtained through own production of lucerne under irrigation and the purchase of the grain and oilseed components. The grain and oilseed components are generally brought in from other production areas as the Klein Karoo is not a grain or oilseed producing area. This implies that 40% of the requirement is sourced from outside the Klein Karoo, a factor that carries a high energy cost for transport.

A further factor impacting negatively on the feed cost in the Klein Karoo is the periodic droughts which causes the Kamanassie dam to have inadequate water for irrigation. In such drought periods, lucerne has to be bought from lucerne producing areas, mostly from the Orange River irrigation areas. The grain component is mostly maize and barley. The sources of maize are in the summer rainfall regions in South Africa whilst barley can be sourced from the southern Cape. The oilseed components are sourced from summer rainfall areas (sunflower and sunflower oil cake) or imported from outside South Africa (soya bean oil cake).

Carbon footprint

It is expected that sophisticated markets in future will require suppliers to state the carbon footprint of their agricultural produce. The FAO has already published studies on the carbon footprint of livestock and dairy animals.

For South African ostrich meat, the carbon footprint of fresh meat sold in Europe can be expected to be higher than frozen meat due to the higher carbon emissions per unit on air transport.

The carbon footprint will also vary between production regions within South Africa as a function of the production system and the proximity to the feed source.

The southern Cape is suitable for the production of grain and the pastures has a higher carrying capacity than the Klein Karoo. Besides the cost saving in feed transport cost when using a feedlot system, ostriches can also be raised through a grazing system. It is estimated that an

ostrich can be raised to slaughter age in the southern Cape at 70% of the feed cost of the Klein Karoo.

In areas where maize can be produced profitably, maize silage can be used as substitute for the lucerne component. This provides the opportunity for significant lower feeding costs. It is estimated that in areas where maize silage can be produced, the feed cost can be as low as 60% of the feed cost of the Klein Karoo.

The conditions in the Eastern Cape for the production of feed and the carrying capacity of veldt yields a feed cost more expensive than the southern Cape. Some areas in the Eastern Cape are capable of growing maize and this will allow a lower feed cost as described above.

In **Error! Reference source not found.**, the 580 kg of feed needed to raise an ostrich to slaughter ready (11 months) in a feedlot system (zero grazing) includes the feed of the ostrich raised as well as the allocated feed per chick required by the breeding flock. The feed consumption per slaughter ostrich also accounts for mortalities from day-old to 11 months. Assuming lucerne production at 25 tons/ha-yr and maize under irrigation at 10 tons/ha-yr, 0,014 ha irrigated lucerne and 0,017 ha irrigated maize is required per slaughter ostrich produced. The oilseed requirement, if sourced from sunflower translates to the production on 0,015 ha of rain-fed cropping. Each slaughter ostrich thus requires the equivalent of 0,031 ha of irrigated cropping and 0,015 ha of dryland cropping.

3.2.4 OSTRICH BREEDING AND HATCHING

The genetics of breeding of ostriches has only received attention since the 1990's. The Department of Agriculture (DoA) research station at Oudtshoorn is conducting research on cross breeding and also supports individual farmers with genetic selection for improved yield of day-olds. The research station also has an annual sale of breeding stock where the sale is not conducted on sight of the bird but on performance records. The spokesperson for the research station indicated that the transfer of the genetic technology to the commercial farming fraternity is not proceeding at a satisfactory rate.

Breeding is predominantly done in large flocks which hampers the ability to do genetic selection as an egg can not be traced to the parents. An alternative method promoted by the DoA is breeding with tomes where a tome usually has one male and two female breeding birds. The benefit of the latter system is that genetic selection can be applied through record keeping as the eggs can be linked to the parents.

The commercial rationale for genetic selection has been illustrated by a farmer at Stilbaai in the southern Cape through record keeping with a tome breeding system. Over a ten year period (1999 to 2009) through genetic selection, the breeding yield was increased from the industry average of 25 day-olds/female-year to 43 day-olds/female-year. This is an improvement in breeding yield of approximately 75% which potentially places the industry on a totally different profitability base if the impact of the improved breeding yield is projected through the value chain.

Besides the improved yield in number of day-old chicks, the genetic selection also yields improved quality chicks which has a lower mortality rate than the industry average. On average a first grade day-old chick has a mass of 750 grams. Genetic selection has resulted in chicks with a mass of 1 kilogram, yielding a stronger chick that is less disease prone.

Most hatching operations are done through the collection of eggs from the nests of breeding birds and the eggs are then hatched in incubators. Hatching by the parents in the nest is a rare practice. The hatching of eggs for the production of day-old chicks is well researched and the operations are generally at a high technological level. This can be traced back to the inception of

the industry in the 19th century which gained momentum through the invention of an incubator for the hatching of ostrich eggs.

3.2.5 CHICK REARING

The rearing of day-old chicks to juveniles of 3 to 4 months age is regarded as the high risk phase of primary production. This is due to the high mortality rate of up to 30% during this phase of growth. Through high care, mortality rates of 15% have already been achieved by individual farmers. The high mortality rates are ascribed to the fact that ostriches are born without an immune system and are highly prone to airway infections during their infancy.

There is, however, a lack of consensus on the reasons for success or failure. Housing that provides shelter from the heat and turbulent weather and is well ventilated to provide a surface where the urine does not build up to release ammonia is mentioned as important factors. Care with the preparation of feed as regards composition and hygiene is also mentioned as contributing factors to attain a low mortality rate.

3.2.6 BIRD GROW-OUT AND FINISHING

The next phase in the primary production is the grow-out phase where juvenile birds (3 to 4 months old) are grown to slaughter ready age. In the Input-Output analysis in **Error! Reference source not found.** a slaughter age of 11 months is used. This is currently commonly regarded as the age at which a bird should be slaughtered. The target age for slaughter is an highly contentious subject with some animal nutritionists propagating an earlier slaughter age at 8 to 9 months. During the 1990's, the slaughter age of birds were between 12 and 14 months but has since dropped to 11 months on average. This change can partly be ascribed to the declining leather price and increased market for meat. With high leather prices, it can still be profitable to feed a bird for an additional two to three months even though the feed conversion rate declines over the longer feeding period.

Figure 3 illustrates a typical growth curve for the ostrich. It can be seen from the graph that the rate of weight gain flattens out after 8 to 9 months. If the ostrich was to be farmed exclusively for efficient meat production, the slaughter age would be at 8 to 9 months. This approach whereby the slaughter age of the animal is determined by the feed conversion ratio is well illustrated by the broiler and cattle feedlot industry. Feeding beyond this point sacrifices the efficient conversion of feed to body mass and the production cost per kilogram soars.

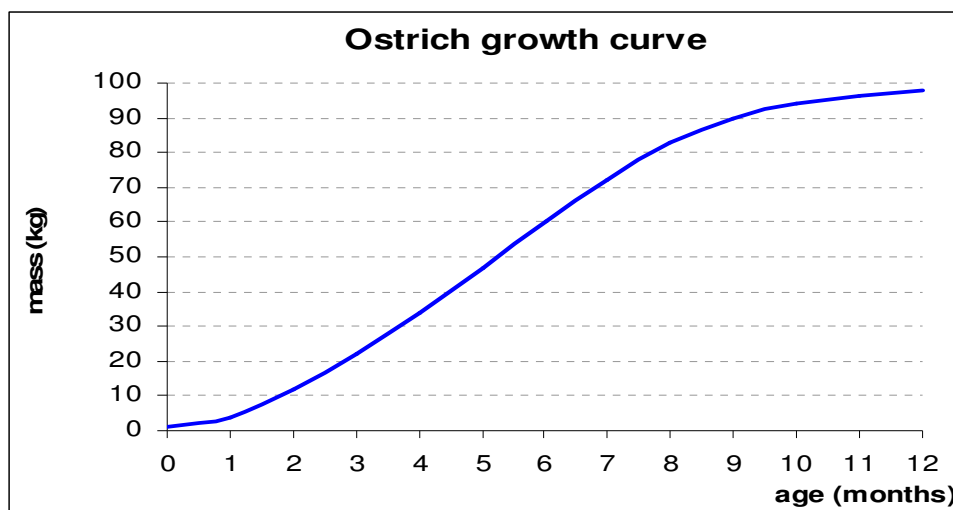


Figure 3: Ostrich growth curve

The case for slaughtering after 8 or 9 months lies in the production of leather as the prime source of income rather than from meat. This approach was fully valid prior to the development of a market for ostrich meat when the sole consideration was the type of leather that was required by the market.

Role players in the industry are not in agreement on the future of the industry as regards the targeted primary product. One school of thought is that leather will remain the primary product despite the current slack demand and proponents of this view support a strategy to limit total output, thus attempting to control the exclusivity of ostrich leather. An opposed school of thought is that the ostrich, as a result of being an animal with a high feed conversion efficiency should be grown as a meat animal in the first instance. The latter argues that the meat income is less volatile than leather income and that the meat market is (intentionally) undersupplied in order to retain the exclusivity of the leather.

Currently the major market for leather is for the manufacture of boots for mostly the Texan and New Mexico markets in the U.S.A. and to a lesser extent for handbags. The nodes of the quill need to be prominent in the leather required by these markets, requiring the longer growing period to obtain a node of sufficient prominence. Table 1 indicates the yield of meat, skins and feathers during the growth of the ostrich. The slaughter age is currently regarded as that age where the bird has a live mass of between 90 and 110 kg yielding a dry carcass mass excluding flaps and fat of 43 kg and a skin with surface area of 130 dm².

Table 1: Product yield at various ages

AGE	FEED	MEAT			SKIN			FEATHERS
months	kg / bird - day	Slaughter mass kg	Carcass mass kg	kg high value	Skin size dm ²	Nodule size mm	Grade 1 - 5	kg yield
8	2.2	65	31	14.2	127	3.03	1.68	1.12
9	2.9	72	34	15.2	130	3.10	1.81	1.20
10	2.9	79	37	16.2	134	3.17	1.94	1.28
11	2.9	86	39	17.2	138	3.24	2.07	1.36
12	2.9	94	42	18.2	141	3.31	2.20	1.44
13	2.9	101	45	19.2	146	3.38	2.33	1.52
14	2.9	107	47	20.1	149	3.45	2.46	1.60
15	2.8	115	50	21.1	153	3.52	2.59	1.68
16	2.7	122	52	22.1	157	3.59	2.72	1.76

Source: Volstruishandleiding

The market for leather is highly susceptible to oversupply as witnessed during the period of high production when the total world volume slaughtered exceeded 500 000 per year of which South Africa slaughtered 350 000. The price of leather plummeted from a high of US \$ 42 per square foot in October 1993 to US \$ 10 per square foot during October 2003.

3.2.7 VALUE ADDING

The value adding to the ostrich is well developed to the extent that almost no waste is generated. Besides the meat and leather as main products and feathers as secondary product, the industry yields by-products through value adding to infertile eggs and waste from the carcass.

Meat

Currently meat constitutes the major source of income from the ostrich. A slaughter ostrich yields a carcass with cold mass of approximately 43 kg. From the carcass, approximately 16 kg of export meat and 15,5 kg other meat is obtained. The non-export meat is used to manufacture ostrich meat products such as sausages, patties and mince.

Leather

Ostrich leather is made from the skin of the carcass as well as the leg skins. The high value leather is obtained from the back of the ostrich. Leather from older birds (thicker with pronounced nodules) are used for boots and upholstery whilst younger leather (thinner with less pronounced nodules) are more suitable for garments. The leg skins which has a scaled appearance such as crocodile or snake skin are used for the manufacture of shoes and accessories

Feathers

Feather income is obtained from the slaughter birds as well as the breeding birds. The feather yield is approximately 1,36 kg per bird. After plucking, the feathers are sorted and sold mostly as decorative items. Feathers that can not be sold for decoration are used to manufacture feather dusters.

Eggs

A female breeding bird lays on average 65 eggs per season of which approximately half is infertile. The infertile eggs are sold in the tourism market as whole shell eggs, decoupage eggs and egg shells carved in patterns as ornaments or for novel uses such as lamp shades.

Pet food

The offal from the ostrich carcass (intestines and tendons) is used for the manufacture of pet food. The tendons are used to manufacture dog chews, a popular product in Britain since the incidence of BSE.

Fat

The ostrich fat is used to extract oil, a sought after product for the cosmetic industry.

Show farms

The ostrich show farms in the Oudtshoorn district are well established tourism destinations. Oudtshoorn ranks in the top five tourism destinations in South Africa and tours to Oudtshoorn includes a visit to ostrich show farms.

3.2.8 MEAT QUALITY STANDARDS

The export of ostrich meat is predominantly to Europe which requires that the industry must comply with the phyto-sanitary requirements of the EU. (Although Switzerland is not part of the EU, they are applying the same phyto-sanitary standards).

The EU requirements are:

- Abattoirs and de-boning and packaging plants must be approved by the EU for the export of ostrich meat to the EU.
- The State as the recognised competent authority must provide meat inspection services at abattoirs approved for export of meat to the EU and must certify the meat prior to export.
- Residue testing of the meat must be done by the competent authority.
- Prior to slaughter, ostriches must be placed in quarantine for at least 14 days. The quarantine camps must be tick free, have no vegetation and must have a 3 metre cleaned area around the camp. Birds must be inspected and treated for tick infection when entering the quarantine camp. A record of the tick control measures must accompany the bird when presented for slaughter. The tick control is required to avoid the possible transmission of Congo fever.
- No growth stimulants or hormonal treatment is allowed.
- Inoculation against Newcastle disease is compulsory. An abattoir is also closed for export to the EU if an outbreak of Newcastle disease occurs within 10 kilometres of the abattoir. A bird that is presented for slaughter must be accompanied by a Newcastle inoculation certificate.
- No sand, hay or other organic material are allowed on vehicles used for transporting birds to the abattoir and the vehicles must be disinfected before leaving the abattoir site.
- The Avian Influenza (AI) status of the farm of origin must be indicated when birds are presented for slaughter. The incidence of AI in South Africa during 2007 has caused the closure of the EU for the import of ostrich meat from South Africa. The EU applies strict control measures in this regard.
- All ostriches must have an identification tag that allows the meat to be traced to the farm of origin. Slaughter ostriches must originate from a registered farm and must have been on a registered farm for at least 3 months prior to slaughter. A farm must be registered for at least 6 months before birds can be presented for slaughter.

The requirements as listed above demand a high level of managerial skill to run an ostrich farm registered for the export of ostrich meat to the EU. In this regard the SAOBC performs an invaluable role through managing an administrative and recording system that assists the farmer to comply with the requirements.

Besides the assistance with compliance to the EU requirements, the SAOBC in co-operation with KKI, Mosstrich, the National Society for the Prevention of Cruelty to Animals (NSPCA) and the Department of Agriculture, Western Cape compiled and endorsed a “Code of Conduct for the commercial production of ostriches”. A revised and updated edition was released in October 2009. The code of conduct is a comprehensive checklist of practices to be followed in all the production and value adding steps in the ostrich value chain. This is a plausible initiative that will

assist in keeping the ostrich industry “one step ahead” in the acceptance of South African ostrich products in discerning markets.

Primary production systems can be structured to allow compliance with the regulations, e.g., through registered farms outsourcing chick rearing and early grow-out to unregistered farms, with the birds being kept on the registered farm for the 3 month compliance period. This allows participation in ostrich production by individuals not yet at a level of managerial experience required for a registered farm or where a farm has not yet qualified for registration.

Compliance with the phyto-sanitary requirements of the EU is possibly the major risk factor facing the ostrich industry. The weakness in the monitoring system is the capacity of the Veterinary Division of the Department of Agriculture, Forestry and Fisheries (DAFF) to provide the services required for meat inspection and residue testing. The EU has in the past indicated its concern with the apparent inability of the DAFF to fill vacant veterinarian posts. Should the problems with staffing and the ability to act as competent authority be compromised, South Africa could lose its status as EU approved exporter of ostrich meat.

Organic ostrich meat

The production of organic ostrich meat is raised as a possible differentiation to serve a niche market. To demand for and consumption of organically produced food is a fast growing sector in Europe. The EU has developed regulations for the control of organic certification and has a logo that can be used to signify compliance with the EU organic production regulations.

The EU regulations requires *inter alia* that:

- Organic livestock must be born and raised on organic certified farms.
- To obtain EU organic certification for livestock, the animal must be raised with feed that is certified organic and which originates on the same farm where the animal is raised or from proximate organic farms in the same region.
- The feed may also not include any Genetic Modified (GM) plant ingredients.
- The approved socalled “third countries” from which organic produce can be marketed in the EU are Argentina, Australia, Costa Rica, India, Israel and New Zealand. A stringent process of approval must be followed for any other country prior to allowing the marketing of organic certified food in EU countries.

The production of EU certified organic ostrich meat in compliance with these regulations is unlikely in any large degree given the technology predominantly used for ostrich production in South Africa. Individual farms can target organic certification. This will require self-sufficiency in feed production and building up a flock of organic breeding birds. It is unlikely that feeds bought on the open market, specifically maize, will pass the GM test.

3.3 SUB-SECTOR PARTICIPANTS

3.3.1 SUB-SECTOR MAP

Figure 4 illustrates the level of integration of business entities in the ostrich value chain.

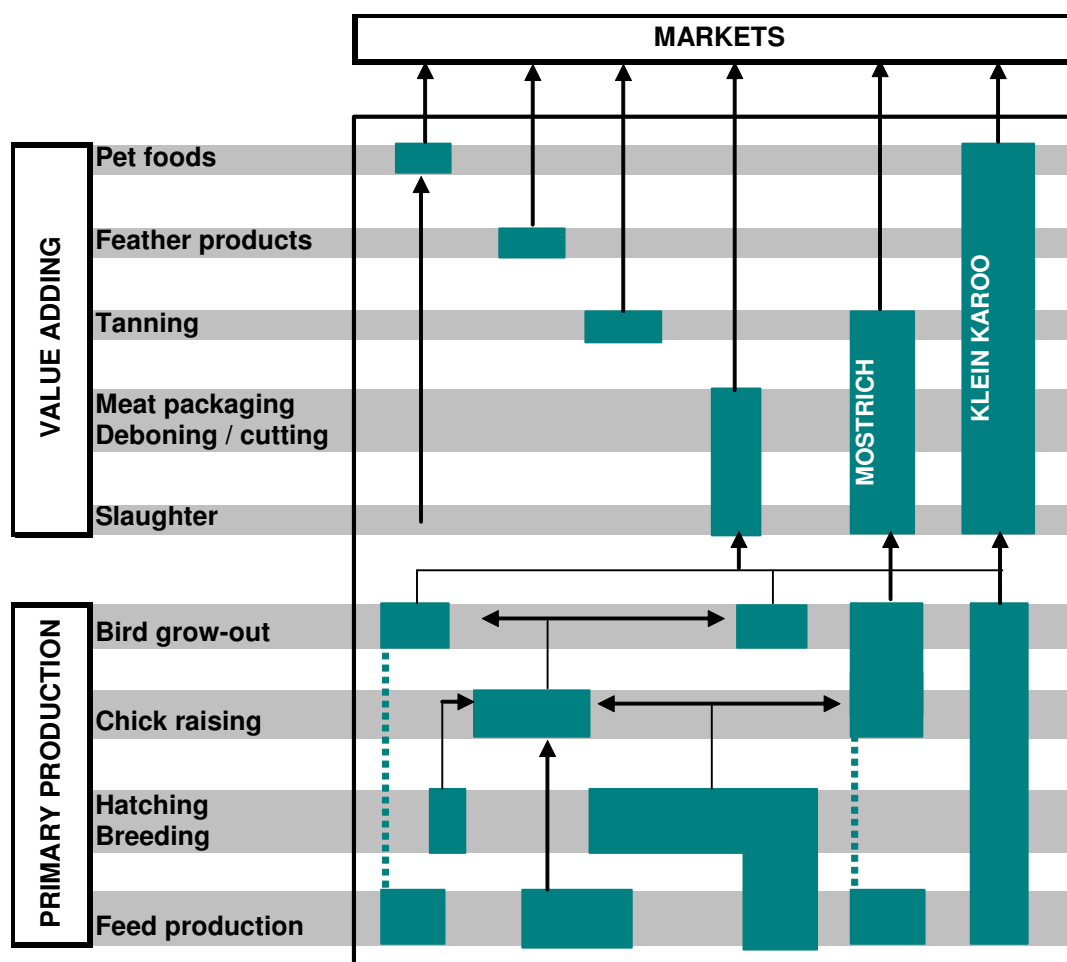


Figure 4: Business entities in the ostrich value chain

3.3.2 VALUE ADDING

The South African ostrich industry is characterised by the integrated value-adding activities by the two dominant businesses, namely KK and Mosstrich. Approximately 90% of the slaughter ostriches for export meat are handled by KK and Mosstrich.

Table 2 shows the abattoirs in South Africa approved for the export of ostrich meat to the EU, their estimated planned operating capacity and the estimated 2009 throughput.

Table 2: Abattoirs approved for EU export

PLACE	OWNER	ESTIMATED CAPACITY birds / hour	ESTIMATED 2009 VOLUME
Oudtshoorn 1	KKI	800	120 000
Oudtshoorn 2	KKI	300	0 (mothballed)
Swellendam	KKI	200	10 000
Graaf Reinet	KKI	200	10 000
Mossel Bay	Mosstrich	400	40 000
Malmesbury	Roelcor	150	6 000
Grahamstown	Phillipe/IMPEC	200	4 000
Magaliesburg	Mankwe	90	3 000

KK owns two abattoirs in Oudtshoorn, one in Swellendam and one in Graaf Reinet. The smaller abattoir in Oudtshoorn is currently not operational due to the depressed throughput volumes relative to peak volumes experienced during the late 1990's. KK runs a totally integrated business covering all the steps in value adding with abattoirs, de-boning and meat packaging plants, tanneries, meat processing and feather handling. KK was formed in the 1940's as Klein Karoo Co-operative, primarily to support the cultivation of lucerne. The Klein Karoo Group (KKG) expanded into the ostrich industry and through governmental regulation obtain single channel market rights for ostriches and ostrich products. During 2009, KKG was unbundled with KK now handling all the ostrich interests.

Mosstrich Ltd. was established after the 1993 deregulation of the industry by approximately 70 farmers in the southern Cape to obtain secure slaughtering facilities. The throughput through KKG abattoirs was running at capacity resulting in preference for slaughter of birds to KKG members. Farmers not members of KKG had to await availability of slaughter space after members could be accommodated. Mosstrich has an abattoir, de-boning and meat packaging plant and a tannery.

The ten per cent balance of slaughtering and further value adding is done by smaller business participants that are not integrated through all steps in the value-adding processes. At the time of writing, the IMPEC de-boning and meat packaging plant at Grahamstown was awaiting EU approval and the carcasses from their abattoir were transported to Mosstrich for de-boning and meat packaging.

3.3.3 PRIMARY PRODUCTION

The primary production of ostriches has a large number of participants with varied levels of integration of the primary production steps. There are approximately 450 farms registered for the production of slaughter ostriches for the EU market for ostrich meat. However, not all registered farmers run integrated businesses from breeding and hatching through chick raising to grow-out

of slaughter ready birds. The primary production phase is characterised by a large number of participants with varying levels of integration with the exception of the production of day-old chicks. The latter is dominated by a small number of producers.

It is estimated that five breeder/hatchers are producing 90% of the day-old chicks. This concentration of supply of day-old chicks is not necessarily conducive to an efficient market where the risk of each production step is reflected in the selling price of products of the production step.

3.3.4 BUSINESS MODELS IN LIVESTOCK SECTORS

Figure 5 illustrates the typical level of integration in the value chains for the production of ostrich products, beef and broilers. The illustration is not comprehensive to the extent that it covers all participants in the industry but illustrates the structure of the dominant participants.

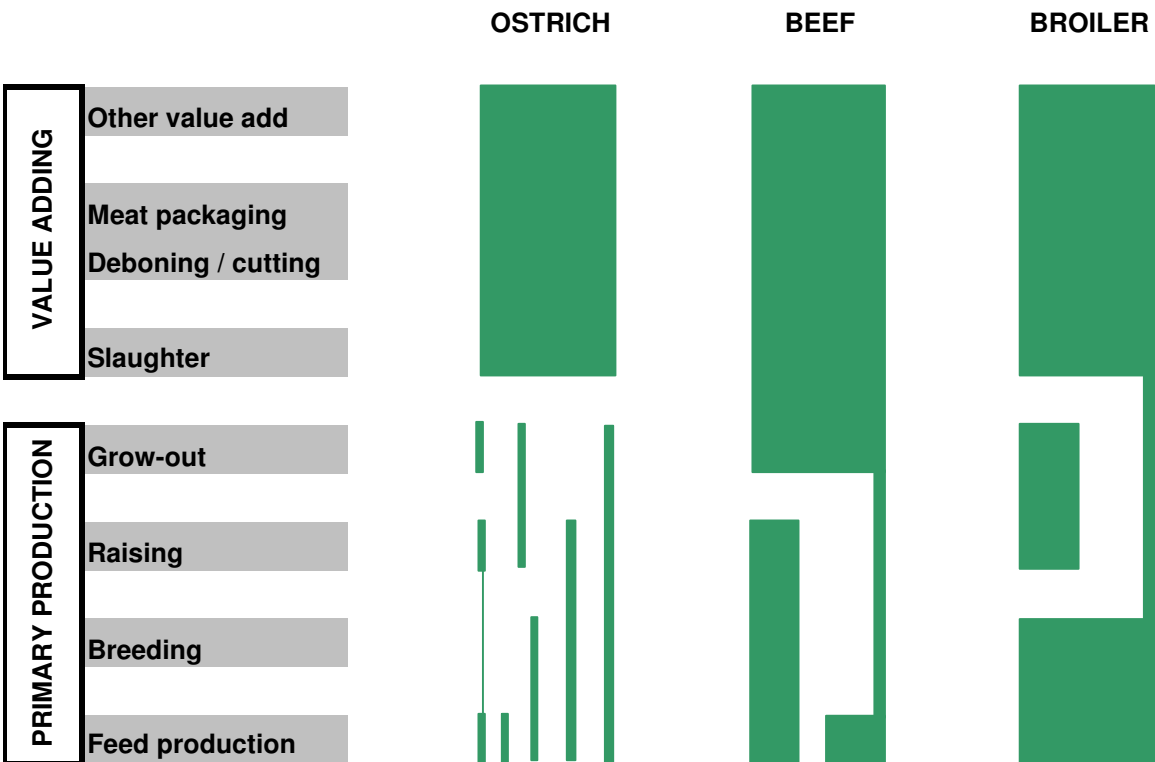


Figure 5: Typical integration in meat value chains

The beef value chain is characterised by a large number of farmers active in breeding and raising calves up to weaner stage, where after, a smaller number of businesses grow the calves in feedlots from weaner stage to slaughter ready. It is estimated that the five largest feedlots provide 70% of the throughput of cattle for fresh meat supply in South Africa. The owners of the large feedlots are fully integrated further up the chain with own abattoirs, be-boning and meat packaging plants and distribution networks to the wholesale trade.

The broiler industry is dominated by a small number of suppliers of meat to the wholesale and retail trade such as Rainbow Chickens and Early Bird. These companies operate through an integration of feed production, breeding and hatching of day-old chicks slaughter and portioning and distribution of products. The grow-out from day-old to slaughter ready is done through contracts with out-growers.

In comparison with the beef and broiler sectors, the ostrich industry is characterised by the disjuncture of integrated operations across the primary production / value adding divide. In primary production individual farmers are active in the various stages of primary production at various levels of integration of the production steps. However, value-adding is highly integrated.

The difference in structure with respect to integration between primary production and value-adding can be related to the ownership of the value-adding businesses. In the beef value chain, the dominant participants are competitors that integrated upwards in the value chain as individual businesses. In the broiler industry, the dominant participants control the value chain from feed production to final product. The broiler out-growers (contractee) are contracted to grow day-olds supplied by the contractor, using feed supplied by the contractor and to the specifications of the contractor.

In the ostrich value chain, the value adding businesses are farmer owned businesses that started out as farmer co-operatives, currently operated as companies with farmer members as the majority shareholders. This type of structure is advantageous to the interests of the farmer but has business disadvantages. Advantages to the farmer comes through the price paid for live birds which can be maintained at levels where primary production remains profitable, even if there is pressure on the market price of value-add products. This is the type of structure favoured by farmers as they are effectively in control of the pricing structure for the live birds and can operate the value adding to make profits at the farm level rather than at the value adding entity. Under such dispensation, the value adding business is in essence a service provider at cost rather than a business entity that strive to maximise return on investment.

The disadvantages from a business perspective are related to the regional focus which often hampers the utilisation of business opportunities to the detriment of growth of the business.

The issue of pricing was addressed in the 2009 annual report of KKI Ltd. through stating:

“The basis of KKI’s strategy is to maintain a balance between producer welfare and shareholder prosperity. KKI is inseparably part of producers’ businesses and the company cannot survive in the long term if it maximises return on investment for shareholders to the detriment of producers. Similarly, producers cannot survive in the long term if KKI’s own balance sheet is under pressure to maximise producer profits at the cost of sound company earnings and reserves”.

This statement places the relationship between the farmer as supplier and the shareholders of the value-add business in the correct perspective. KKI Ltd. are also promoting the trade in their shares and will, if successful, increase the number of non-producer shareholders. The correct balance in pricing of birds will then be imperative to ensure profitability of the primary production phase as well as generating an acceptable return to non-producer shareholders.

3.4 SUB-SECTOR PROFITABILITY

3.4.1 MARKETS

Figure 6 illustrates the volume throughput of the ostrich industry from 2000 to 2009.

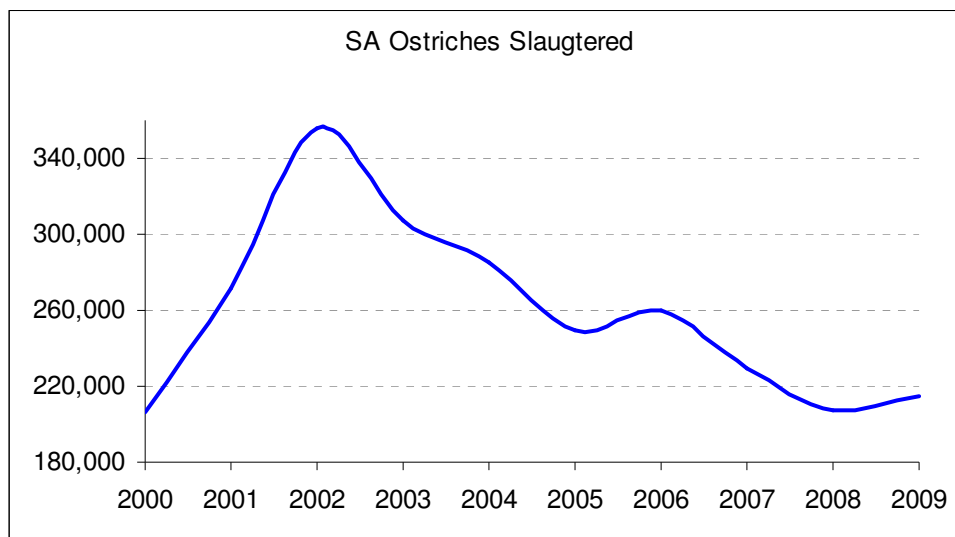


Figure 6: South African Ostrich Slaughtering

The peak exports of 2002 were attained during the boom in meat demand coinciding with the occurrence of BSE in Britain. This was accompanied by a drop in the leather price as indicated under paragraph 3.2.6. In 2002, South Africa produced 350 000 slaughter birds out of a world total of 500 000 slaughter birds. The volumes dropped to the current levels of 300 000 total world output with South African contribution at 200 000.

The South African industry as represented by the SAOBC favours the approach to target a total world production of approximately 350 000 birds with South African contribution at 250 000 birds per year. At these levels it is perceived that ostrich leather will retain its exclusivity.

Meat

It is recognised by South African industry participants that the market for ostrich meat in Europe is undersupplied at the current levels of production. This was stated by the chief executive of KK in a radio interview (RSG, October 2009). Advocates of the optimal feed conversion production system (slaughter at 8 to 9 months) targets a much higher off-take of meat by the European market. The World Ostrich Association estimates that the European market can absorb the meat from more than 1 million ostriches per year. These numbers are scoffed at if ostrich meat is regarded as an exotic meat selling into niche markets. However, analysis of the ruling price of ostrich meat and beef in Britain indicates that ostrich meat sells at prices comparable to high value beef cuts. Ostrich meat must rather be viewed as a product competing with other large volume meats such as beef and thus not as price sensitive on supply-demand as exotic niche market products such as ostrich leather.

Table 3 gives the retail prices of various beef and ostrich meat cuts as advertised by Tesco (one of the leading retail supermarket chains in Britain) during March 2010.

Table 3: Tesco prices, March 2010

Product	Price in £ / kg	Price in R/kg at R11/£
BEEF		
Sirloin	15.47	170.17
Fillet	22.98	252.78
Rump	11.48	126.28
OSTRICH		
Fillet	25.28	278.07
Rump	20.88	229.71

Source: www.tesco.co.uk

In comparison, the retail prices in South Africa are R120.00/kg for beef fillet and R180.00/kg for ostrich fillet. The price of ostrich fillet in South Africa equates to the export parity wholesale price (the \pm R100/kg difference accounting for the air transport and retail margin). In South Africa, ostrich fillet retails at a margin of approximately 50% above beef fillet, creating the perception that ostrich meat is a niche product justifying a premium price whereas in the EU it retails at a level comparable to beef fillet.

The often lauded health benefits of ostrich meat are illustrated by the comparative nutritional information in Table 4.

Table 4: Comparative nutritional values of meat

Nutritional information per 100g raw, extra-trim meat			
Type of meat	Energy value (kJ)	Protein (g)	Fat (g)
Ostrich fillet	392	21.3	0.80
Beef fillet	543	19.0	5.95
Pork fillet	498	19.5	4.50
Chicken breast	458	21.5	2.50
Lamb stir-fry	619	19.0	8.00

Source: SAOBC

Ostrich meat is a low fat product that has demand in the market due to its nutritional properties. This is a good selling point for the product and on this strength it can be expected to command a

price premium to alternative products. The retail prices as reflected in Table 3 are thus somewhat surprising. The ostrich meat cuts for export obtained from a carcass and the wholesale selling prices are indicated in Table 5.

Table 5: Yield and value of export ostrich meat

Meat cut	Yield / bird (kg)	Price of fresh meat (40% of exports)		Price of frozen meat (60% of exports)		Income from meat exports	
		€ / kg	R / kg	€ / kg	R / kg	€ / bird	R / bird
Fan fillet	3.0	14.20	142	12.90	129	40.3	403
Fillet	3.4	11.60	116	10.30	103	36.8	368
Steak	9.6	9.90	99	8.70	87	88.1	881
Goulash	1.5	-	-	4.00	40	6	60
TOTAL						171.2	1712

Source: Karoo Farming Group

The export of ostrich meat to Europe is done by air transport for fresh meat and by sea for frozen meat. On average approximately 40-50% of the meat is exported fresh with the balance exported as frozen meat. In **Error! Reference source not found.**, an analysis of the export meat income for a 40% - 60% split in fresh – frozen exports is illustrated at an exchange rate of ten rand per euro. Under this scenario, approximately R1 700 per bird is earned from export meat. Approximately R300 per bird can be earned from local sales of meat yielding a total gross meat income of approximately R2 000 per bird.

The euro price of export meat remained stable after the BSE induced peak. The rand-euro exchange rate had a more dominant impact on the rand value of meat income than fluctuations in the euro price for meat. At the time of writing, the euro weakened against other currencies due to the residual impact of the 2008/9 recession. This trend might be maintained for the immediate future due to the monetary problems faced by EU members (notably Greece, Spain Italy and Portugal). The economic difficulties might impact on meat income to South African producers, both as a result of diminished demand and as a result of lower rand income due to the relative weakness of the Euro.

Leather

The market for ostrich leather was first influenced by the decreasing demand for leather for handbags mostly from Japan as a result in their economic downturn in the early 1990's and the simultaneous entry to the handbag market by Korea which supplied a lower quality product. The latter further depressed the Japanese market for handbags through the negative impact on the exclusivity of the product. The lower demand and thus lower price for ostrich leather was to some extent buffered by a weakening rand against the dollar during the late 1990's and early 2000's. The low dollar prices were maintained through early 2000's until present whilst the strengthening rand depressed the rand income.

The price of a tanned ostrich skin is determined by the grade of the skin, the follicle size and the size of the skin. Prices are usually stated in US dollar (\$) per square foot (ft²). Table 6 shows

the weighted average income per skin assuming a skin size of 15 ft² and a 70% / 30% occurrence of big / small follicles for each grade.

Table 6: Average income per tanned ostrich skin

Grade	Grade incidence	Big follicle price \$/ft ²	Small follicle price \$/ft ²	Average price \$/ft ²	Average income \$ / skin
Premium	3%	14	13	13.70	6.17
1 st grade	11%	13	11	12.40	20.46
2 nd grade	19%	12	10	11.40	32.49
3 rd grade	30%	11	9	10.40	46.80
4 th grade	21%	10	8	9.40	29.61
5 th grade	16%	8	6	7.40	17.76
Weighted average per skin					153.29

Source: Karoo Farming Group

At a rand – US dollar exchange rate of R7.50/\$, the average income under the assumptions in Table 6 is R1 150 per tanned ostrich skin. A further R50 per ostrich is earned as income for the leg skins. The price to the primary producer using the same grade incidence and big/small follicle split as in Table 6 for skins of 130 square decimeter (dm²) is reflected in Table 7. (130 dm² is equivalent to 14 ft² and the skin size increases from 14 ft² to 15 ft² from the raw to the finished state).

Table 7: Ostrich skin income to the primary producer

Grade	Grade incidence	Big follicle price R/dm ²	Small follicle price R/dm ²	Average price R/dm ²	Average income R / skin
Premium	3%	12.31	7.38	10.83	42.24
1 st grade	11%	9.42	4.71	8.01	114.50
2 nd grade	19%	8.20	4.51	7.09	175.20
3 rd grade	30%	7.12	4.27	6.27	244.34
4 th grade	21%	5.79	3.48	5.10	139.15
5 th grade	16%	2.01	0.91	1.68	34.94
Weighted average per skin					750.37

Source: Karoo Farming Group

Further differentiation of product is possible and there is a claimed relationship between feed composition and the size of the quill. IMPEC producers state that a high protein diet leads to larger quill formation and that the leather type being produced can be influenced through feed formulation. As a general rule, the target market for ostrich leather is determined by the quill size with large quill leather being used for boots, medium quill size leather for handbags and small quill size for garments.

By-products

The income from meat and leather constitutes more than 90% of the income from a slaughtered ostrich. The balance of ten per cent is obtained from the feathers and the balance of the carcass after the skin and export and other meat for local sales has been removed. The prices of these products and thus the income per slaughter bird have remained relatively stable in rand terms. The income from feathers is approximately R100 per bird and the income from the balance of the carcass is approximately R70 per bird.

3.4.2 PRIMARY PRODUCTION

To quantify the income to the primary producer for an average industry case is fraught with pitfalls due to the different production practices and the quality of the data on ruling prices of live birds at various stages in the life cycle. The questionability of the data integrity is verified by the current unavailability of published data on live ostrich sales and prices. Up to the middle of 2009, Agricultural Market Trends (AMT) published prices for ostrich chicks, live birds and carcasses in *Landbouweekblad*. The publication of prices was discontinued due to criticism from within the ostrich industry and allegations that the published figures are giving a distorted picture of the industry. A further complication in estimating returns for primary production is the wide fluctuations in prices of products due to exchange rate fluctuations and product price fluctuations specifically for ostrich leather. The primary producer was shielded from these fluctuations to some degree as the processors set prices for the carcass which smoothed the price volatility. Some industry observers maintain that prices paid for carcasses by abattoirs was inflated relative to the processed product prices with the resulting benefit to the primary producer at the expense of the margins of the processor.

The figures used in the analysis are based on averaging the prices obtained from various sources and for the direct costs when feeding ostriches from the bag. The wide swings in grain prices also impacts on the feed cost and the gross margins thus obtained is not a norm for the industry. Feed cost can be significantly further decreased through the use of pastures or own feed production. Table 8 provides an analysis of bird price, feed cost and mortalities for various stages of primary production.

Table 8: Feed cost and mortalities

Age	Bird price (Rand)	Mortality (%)	Feed cost (Rand)	Margin (Rand)
11 months	2 300	0%	110	250
10 months	1 940	5%	820	393
3 months	630	25%	115	108
Day-old	250			
TOTAL			1 045	751

The margin in Table 8 refers to the margin after accounting only for the bird purchase price and feed cost in a system where birds are fed from the bag. This margin is highly sensitive to the mortality rates and the cost of feed components (lucerne, maize and oilseeds). A rule of thumb used in the ostrich industry is that the feed cost constitutes 70% of the direct production cost of a slaughter ostrich. Applying this rule of thumb yields a direct production cost of R1 493 for a slaughter bird from day-old to slaughter ready, with a R557 gross margin per bird which must off-set the fixed capital investment in land and infrastructure.

3.4.3 VALUE ADDING

A comparative industry performance of the two major ostrich product producers in South Africa are:

Klein Karoo (November 2007)

Turnover	R1 000 000 000
Net income	R25 600 000
Net margin	2,56%

The low margin is partly ascribable to a loss at the seed division and that meat could only be exported for five months of the financial year through a ban on the export of meat to the EU as a result of bird flue outbreaks. A turnover per ostrich as comparative figure with other industry participants is not meaningful as the turnover and income figures are a consolidated figure of the ostrich and the seed divisions.

Mosstrich (January 2008)

Ostriches slaughtered	70 000
Turnover	R224 000 000
Net income (pre tax)	R21 500 000 (9,6% on turnover, pre tax)
Turnover / ostrich	R3 200

These reported figures include the abattoir and tannery operations.

The profitability of an abattoir can be estimated using the estimated R2 000 income from meat and offal sales (see paragraph 3.4.1) and a price of R36 per kilogram carcass paid to the farmer. Assuming a 42 kg carcass, the cost to the abattoir is R1 512, leaving R488 per carcass to cover the processing costs, packaging, product transport and sales commission (or in-house sales costs). The packaging and transport cost is estimated at R248 per bird leaving R240 per bird to defray processing and overhead cost. Assuming an overhead cost of R100 per bird, leaves R140 per bird to service the capital expenditure. The latter can be estimated at between R500 and R1 000 per bird pending the size of the abattoir. This yields a pay-back period (excluding consideration of the time value of money) between 3 and 7 years pending the size of the abattoir.

The profitability of a tannery can be estimated by using the examples of Table 6 and Table 7. The R1 200 income from the tanned ostrich skin and the primary producer income of R750 leaves a R450 margin which must cover the processing of the skin to leather, overhead costs, marketing costs and yield a return on investment. Any comment on the adequacy of this margin is fraught with pitfalls as a host of variables impact on the cost of production. An estimate based

on a tannery dedicated to ostrich leather (with no other leather income), running at full capacity of 80 000 skins per year yields an operating cost of approximately R320 per skin. A net margin of R130 per skin is then available to service the capital set-up cost of approximately R36 million. This translates to a capital pay-back period of 3.5 years (excluding consideration of the time value of money).

3.4.4 FUTURE DIRECTION

During 2003/4, the SAOBC retained the services of a consultancy firm (Future Sense Inc) to conduct a study on the way forward for the ostrich industry. The study, OstriVision 2004, essentially identified a lack of value chain management as contributing to the stop-start nature of the ostrich industry and proposes *inter alia* Service Level Agreements (SLAs) between participants at various stages in the value chain as tool to attain smoothing of the business cycles. The study identifies responsiveness by the supply chain participants to preferences of the demand chain as key element to place the industry on long term sustainability.

OstriVision 2004 identifies two components of the financial outcome dimensions for long term profitability, viz.:

- “create and sustain a RSA Ostrich Brand Equity and Stimulate Trademark based sales demand”, and
- “sustain innovation based production and supply cost productivity improvements”

OstriVision 2004 expands on the strategy and methodology to attain the first bullet (marketing), but although identified in the broad analysis, no further attention is given to strategies to improve the supply cost.

The findings of this study recognizes the value that improved value chain management can contribute to the ostrich industry but also identifies areas of possible improvement in primary production that can contribute to remaining a competitive supplier (refer paragraphs 3.2.4 to 3.2.6).

The future direction of the industry can also be influenced by the divergent views in the primary product / slaughter age debate (refer paragraph 3.2.6). The view currently held by the majority of producers and the dominant processors as also stated by the SAOBC is that ostrich production should be managed to limit the volume of product available to the market. This approach essentially maintains the scarcity value of ostrich leather. The resulting low volume of meat reaching the market is well short of demand at up to 1 000 000 slaughter birds per year as estimated by the World Ostrich Association. Moving to these slaughter volumes will, however, have a devastating impact on the scarcity value of ostrich leather and under such a regime ostrich leather will most likely trade at a slight premium to bovine leather rather than being sold as an exotic leather. The findings of this study points to the technical feasibility of producing ostriches for slaughter at 8 – 9 months making use of the more efficient feed conversion ratio. Such feeding strategy will require a shift in the main target markets for ostrich leather towards garments rather than accessories (boots, handbags, etc.). The change in production practices towards optimal feed conversion will, however, only be achieved over the medium to long term. If this approach is successful, ostrich meat will become the primary product of ostrich production with possible differentiation in the leather market through product offering of large volumes of young leather and niche production of older leather.

The threat to attempts by the South African ostrich industry to maintain the exclusivity of ostrich products is that large scale ostrich production is initiated outside South Africa. Proponents of production of ostriches have attempted the setting up of large scale ostrich production ventures but to date with no success in raising the required capital. To counter the threat of large scale

production being initiated in other parts of the world, the South African ostrich industry is proposing public intervention through regulation of the export of breeding material (live birds and fertile eggs). This approach is also proposed in OstriVision 2004. Initiatives to establish new ostrich ventures are currently being considered in North African countries, notably in Sudan where an irrigation area of 1 900 ha is earmarked for establishing an ostrich farming venture.

4. Black participation in the ostrich industry

4.1 CURRENT STATE OF BEE

The ostrich industry, through the SAOBC has formulated a sector charter, Ostri-BEE, that promotes participation by blacks throughout the value chain with a focus on training artisans in value adding (abattoirs and tanneries) and structured mentoring in both primary production and value adding. Ostri-BEE has set targets for development of black management positions in value-add businesses and supports the advancement of employees on ostrich production farms.

The following projects are mentioned by SAOBC as Ostri-BEE projects:

- Klein Karoo Agri Business Centre (KKABC). This is an initiative between SAOBC, ABSA, and KKI to advise new entrants to ostrich farming and assist with business planning and funding applications. The initiative has resulted in the creation of approximately 300 new employment opportunities in the ostrich industry.
- De Hoop project. Women are supported to produce feather and egg shell products.
- Dysselsdorp Feather Sorting. The project provides employment for approximately 100 people in the sorting of feathers. KKI supplies the project with unsorted feathers, which, after sorting is bought back by KKI.
- Mossel Bay Leather Goods. This is an initiative launched by Southern Cape Ostrich Tannery (SCOT) through which unemployed women in the Mossel Bay area are trained in the manufacture of leather articles which are sold in the tourism industry.
- Mosstrich BEE Trust. Mosstrich is currently owned by approximately 160 primary producing members. A trust was created to hold 6 000 preference shares (representing 6,5% of the issued share capital) on behalf of 250 employees of Mosstrich and SCOT. The employees receive dividends through the shareholding of the trust.
- Kuruman. A group of 30 black farmers has started an ostrich farming venture.
- IMPEC/KSSSOFP. The Khula Sizwe Small Scale Ostrich Farmers Participation Incentive (KSSSOFP) was established in 2006 and was supported by the National Department of Agriculture and the National AgriBEE Fund with a R9,3 million grant to buy a 49% shareholding in Integrated Meat Processors of the Eastern Cape (IMPEC), a value-adding entity that de-bones and packs meat for export and tans ostrich hides for the production of high quality ostrich leather. The partners in IMPEC are Phillippé, a company established in 1998 primarily for the ostrich leather trade. IMPEC owns 40% of the abattoir, 49% of the tannery and 100% of the de-boning and packaging plant. Khula Sizwe members raise ostriches from day-old to a 4 to 5 months old when it is sold to IMPEC. The finishing of birds to slaughter ready is then done in feedlots owned by IMPEC. Approximately 100 Khula Sizwe farmers each raise batches of 100 day-olds

each. This initiative is currently the most significant black empowerment initiative in the ostrich industry.

Besides the projects listed by SAOBC, there are small scale initiatives by black participants such as two women (Ms. Felicity Fielies and Ms. Lynn Botha) at De Aar in the Northern Cape, involved in the raising of day-old birds. Ms. Fielies also owns a feed mill with a capacity of 10 tons per hour to produce feed pellets. Lucern and maize is sourced from Orania, approximately 130 km from De Aar. Ms. Fielies envisages the development of a black owned ostrich industry in the Pixley ka Seme district of the Northern Cape with De Aar as the hub with an ostrich abattoir.

4.2 BEE OPPORTUNITIES

The extent and potential value of opportunities for participation in ostrich primary production by black farmers and production of value added products by black entrepreneurs is determined by the future direction of the industry. As discussed under paragraph 3.4.4 there are two possible scenarios for the future direction of the ostrich industry, namely:

- Maintaining the current industry strategy of attempting to limit annual global output to approximately 350 000 birds slaughtered per year. The dominant producers of the South African industry are following this strategy. Under this strategy, black participation will be through replacement of current participants as the industry will have no volume growth under this scenario.
- Moving the industry towards optimal feed conversion with a long term possibility of significantly increasing the number of ostriches slaughtered per year. Under this scenario the industry could experience volume growth with an associated increase in the number of wage and self employment opportunities.

The scenario of ostrich production moving towards optimal feed conversion is not considered to be achievable over the short or medium term and BEE opportunities are discussed within this context. The reigning industry output targets and target markets are assumed and opportunities for participation are discussed in terms of the profitability of the sub-sector.

Analysis of the ideal conditions for ostrich production as regards acceptable climate, grazing potential and feed cost, indicates that areas not traditionally contributing significant numbers of slaughter ostriches have the potential to be utilized for this purpose. It is generally accepted that ostriches thrive in the drier areas of South Africa. Specifically for breeding, areas with low summer rainfall are preferred. During the boom triggered by the BSE outbreak in Britain, ostrich farming expanded to summer rainfall areas, notably near Rustenburg, Magaliesburg, Pretoria and Warmbaths. Breeding posed a problem in these areas and after the meat prices returned to lower levels, most initiatives in the summer rainfall areas dwindled and discontinued operations. As example, during the BSE induced boom, 30 farms were registered for ostrich production with the state veterinarian at Rustenburg, none of which is currently in production. Target areas for production should thus be sought in the western (drier) parts of the country rather than in the higher rainfall areas in the eastern part of the country.

As discussed under paragraph 3.2.3, the proximity to the source of feed is a critical factor in the feed cost to produce a slaughter ready ostrich. Ideally, the potential to produce feed or pasture under irrigation is required in close proximity to where the ostriches are raised. Under paragraph 3.2.1 it is indicated that ostrich production currently takes place predominantly in the Klein Karoo and the Southern Cape. The feed cost comparison in paragraph 3.2.3 implies that the Klein

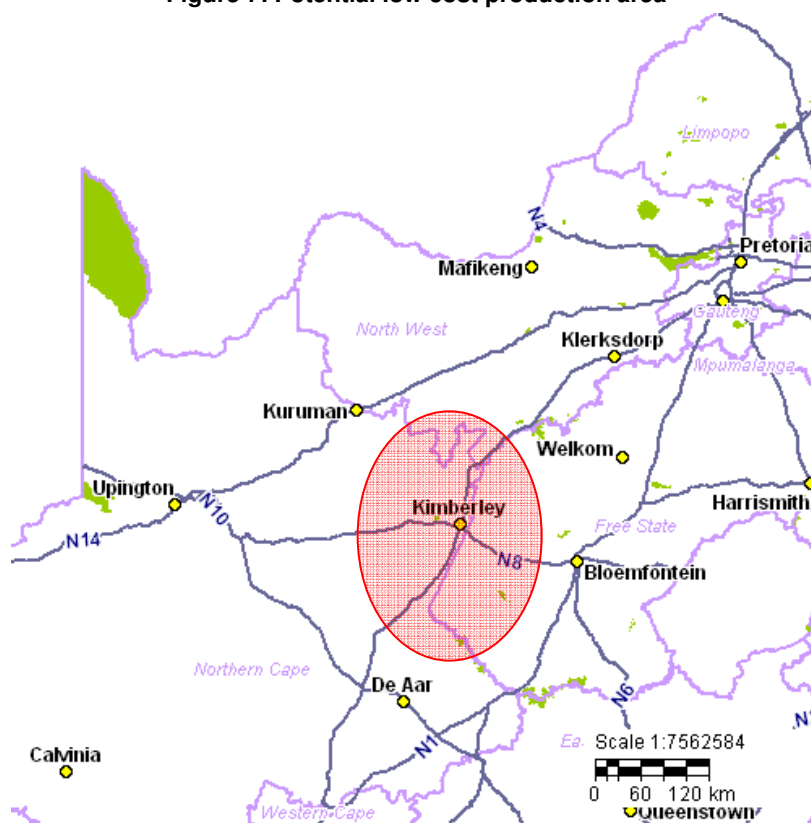
Karoo is not the lowest cost production area and that areas with greater assured water supply for irrigation could produce ostriches at a lower feed cost.

During the period when ostriches were farmed for the leather and the feathers, ostrich farming was done in the Orange River Basin near Uppington, Kakamas and Keimoes with an annual output of approximately 8 000 slaughter birds. The benefit of this area is the dry climate and access to secure irrigation for feed production. With the introduction of meat as a significant contributor to the income from an ostrich, the farming in the lower Orange River suffered as there was no EU approved ostrich abattoir and the distance to the closest facility was beyond what is recommended as the maximum distance to transport ostriches. The farming could not be maintained on the income from the leather and feathers only and the production volume was not sufficient to merit the construction of a local abattoir.

Establishment of an ostrich farming community in the lower Orange River at an annual throughput that would justify operating a small EU approved abattoir (20 000 birds per year) is hampered by the availability of unused irrigable land in the river valley. Irrigable land in the river valley is fully developed, mostly to high value permanent crops. New irrigation development will have to take place outside the river valley which requires pumping of the bulk water supply at a high energy cost. The low value crops (lucerne and maize) can not justify the energy cost of pumping relative to the potential of high value perennial crops.

The irrigation areas of the upper Orange River, the lower Vaal River and the Vaal-Harts and Taung Irrigation schemes is climatically suited to ostrich farming and is currently producing significant volumes of lucerne and maize. In this area, illustrated in Figure 7, it is possible to produce ostriches at a lower unit feed cost than in the Klein Karoo.

Figure 7: Potential low cost production area



The area indicated in Figure 7 includes irrigable areas under utilisation by black farmers such as the Taung irrigation scheme, Bucklands at the confluence of the Vaal and Orange Rivers and irrigation areas in the Xhariep district of the Free State along the Vaal and Orange Rivers. The Vaal-Orange River basins also has unallocated irrigation water rights of which 4 000 ha was earmarked for black farmers by the Department of Water Affairs under Minister Asmal during the early 1990's.

Any initiative to involve black farmers in the primary production of ostriches will be through the replacement of current producers within the targeted output of 250 000 to 350 000 birds per year. This is achievable at a production cost advantage in the area indicated in Figure 7. However, the absence of an EU approved abattoir within that area is a disadvantage. The economic viability of the construction of an abattoir for the area must be evaluated against the current surplus slaughter capacity in the industry (refer paragraph 3.3.2). Industry participants mooted the concept that black farmer participation in ostrich production can be stimulated through subsidizing the transport of ostriches to existing abattoirs, thus improving the capacity utilisation of current abattoirs rather than investing in the creation of further capacity.

Participation by black farmers or investors in the value-adding steps in the sub-sector must be considered against the background of the current over capacity in the industry and the available opportunities in existing processing businesses. KKI, through its initiative to stimulate the trade in their unlisted shares provides an opportunity for black investors to participate in the value chain. This model where the ownership of the processor is de-linked from the co-operative model where the processing facility is owned by the primary producer allows investment in either or both the primary production and value-adding.

5. Linkage Programme in support of black farmers

The design of a linkage programme to support farmers to have improved access to input supplies and markets for their produce is based on the characteristics of the value chain for which the improved access is sought. In South Africa the fresh produce, eggs and broiler/live chicken sub-sectors typifies the value chains in which the small scale farmers are active with a large number of formal and informal market channels. A linkage programme for these sub-sectors will take cognisance of the formal and informal market channels and will attempt to improve the profitability of the small scale producers in the informal markets and create access to the formal markets if that will enhance growth and profitability. Support in the informal markets will take the form of quantifying the margins at which the small scale producer operates and assistance with establishing realistic price points whereas the support to access the formal markets will be through assistance with negotiations with buyers. The formal markets also have various market channel options, ranging from auction selling through market agents (fresh produce markets) to supply agreements with processors, wholesalers and retailers. Support in the formal markets also includes skills development of the farmer to enable production to the specifications required by the buyer.

The ostrich value chain is markedly different to the multi-channel sub-sectors. The ostrich sub-sector is characterised by the dominance of the export market for meat, leather, pet food and feathers with insignificant local sales. Local sales in a scenario where export markets absorb most of the product, takes place at the export parity price and volume growth in local sales is not expected to the extent where the local market becomes a significant outlet for ostrich products. The dominance of exports results in a value chain with a single market channel, with a few large processors handling most of the product. This narrows down the design of a linkage programme to assist the new entrants to comply with the product specifications of the processors as they in turn obtain from the markets into which they sell.

The nature of a support programme for new entrant black farmers through linkages to the markets, input supplies and finance is furthermore a function of the nature of any proposed black primary production initiative. Two divergent approaches to black participation in primary production is possible:

- A large scale initiative to develop ostrich farming by black participants in target areas where there is a competitive cost advantage for primary production. This will require establishing support infrastructure at the target areas for product handling and processing and will result in a competitive position relative to the current production areas. This approach will be in conflict with the industry vision and will require investment in additional processing capacity to further increase the surplus capacity in South Africa. In this instance, a support programme for new entrant farmers will have to be set up *de novo* in the targeted production areas.
- Support for the settlement of black farmers within the current spatial production pattern and through making use of existing handling and processing infrastructure. This will require no further investment in processing capacity and is the lower cost option. In this instance, a support programme for new entrant farmers can draw on the already available technical, financial and managerial skills development from the industry.

An envisaged support programme for black ostrich farmers can also be differentiated on the source of the support, i.e., through government extension services, through existing industry structures or through a third party contracted support programme. It is proposed that any support programme for new entrant farmers be designed in close co-operation with the industry through the SAOBC as they have already invested significant effort in the development of production manuals and support systems for new entrant farmers.

Linkage programmes are generally designed to support the new entrant farmer during the transition phase from start-up to full participation in the formal value chain. Once the stage has been reached where the farmer is a commercial participant in the value chain, the support required by the farmer should be at his own expense and the linkage function is replaced by services available in the market. A support programme is thus ideally designed to phase out public sector financial support for the services over the implementation period with a horizon determined by the period deemed necessary to attain full commercial participation in the value chain. A linkage programme can thus motivate public sector support during the initial implementation period with provision for phasing out the public sector support over the planned implementation period. A problem experienced by initiators of linkage programmes is the availability of public sector support for an adequate implementation period. A multi-year programme is required for new entrant farmer to be formally skilled in the required disciplines and to gain sufficient experience in producing to the required standards before a farmer can be considered a commercial participant in a value chain. This period is a function of the complexity of the production process. In the case of the ostrich industry it is proposed that new entrant farmers be exposed to a linkage programme for at least three years, i.e., the set-up year when formal skills development takes place and at least two production cycles thereafter.

6. Annexure

ANNEXURE I: INTERVIEWS

Contact	Location	Reason / representing
Mr. A. Visagie	Kimberley	Former chairperson: Central Ostrich Producers Organisation
Mr. K. Gaorelwe	Hartswater	Prominent black commercial farmer
Mr. H. Gouws	Douglas	Large scale commercial ostrich farmer / agri-business owner / GWK official
Me. F. Fielies / Me. L. Botha	De Aar	Black women ostrich farmers
Dr. M. Jarvis	Wellington	Ostrich nutrition consultant
Mr. A. Kruger	Oudtshoorn	CEO: South African Ostrich Business Chamber
Mr. S. Jonker	Oudtshoorn	President: Ostrich Products South Africa (Pty) Ltd., the world's largest integrated ostrich producer.
Mr. W. Nel	Oudtshoorn	Department of Agriculture: Research station
Dr. F. de Wet	Mossel Bay	CEO: Mosstrich
Mr. N. Bester	Grahamstown	Co-owner / manager: Phillipe/IMPEC
Mr. J. Swart	George	Owner: Karoo Farming Group. Co-owner of a tannery, contractor for construction of abattoirs
Mr. M. Bashi	Kimberley	Economic unit, Northern Cape Department of Agriculture
Dr. H. v Rensburg	Bloemfontein	Economic unit, Free State Department of Agriculture
Mr. F. du Plessis	Mafikeng	Economic unit, North West Department of Agriculture
	Taung	Municipal manager. Telephonic / e-mail correspondence re. abattoir at Reivilo
Mr. P. Strijdom	Johannesburg	Owner of IMEX, exporter of ostrich meat and leather
Mr. P. Cornelius	Pretoria	Livestock market analyst, AMT.