

Kunene South and Erongo

Livestock farming in western Namibia

Because of the arid to semi-arid nature of this area agriculture is limited to small stock and some large stock

Geography of the system

Kunene south stretches from the Atlantic ocean (Skeleton coast) to include the entire Outjo district and the Etosha National Park in the east and from just north of Sesfontein ($\pm 19^\circ$ latitude) to the Ugab river in the south. Various agro-ecological zones can be differentiated namely the Damaraland basalt table mountains, Damaraland hill/footslope associations, Damaraland lowland hills and Namib desert plains with part of the Central Plateau

This sub-region constitutes 52.3% of the entire Kunene region and covers an area of 6,656,032 ha. The sub-region comprises of the following areas with corresponding approximate sizes:

Etosha National Park	2,287,000 ha
Commercial farming area	2,334,306 ha
Communal farming area	2,034,726 ha

Rainfall

Kunene south

The Kunene South is a semi-arid summer rainfall area with 73% of the rainfall occurring from January to December. The long-term average rainfall is 215mm (with a median of 206) in the vicinity of Khorixas and increases to 400 mm at Outjo. The coefficient of variation is 55.6 which means that the rainfall is highly variable and that the area is very drought prone. At Khorixas the extremes range between 19 and 522 mm. The number of rainy days per year varies between 0 to 5 to 43. The mean evapotranspiration is 3,000 mm. Farming only starts with rainfall exceeding 150 mm (Du Pisani - Long-term data of Weather Bureau).

Due to the erratic rainfall conditions there are only ephemeral rivers namely the Ugab-river in Sorris-Sorris area, Huab-river in Fransfontein area, Hoanib in Sesfontein area and they are irregular and unreliable (Vigne 2005).

Erongo

The region has a number of climatic zones, which run parallel to the coastline, namely the cool foggy coastal zone, middle desert zone, eastern desert zone, pro-Namib, the escarpment and the Namibian highlands. The mean rainfall varies between 0 mm in the

west and 350 in the east. The variance in rainfall changes from 100% in the west to 50 in the east. Most of the region lies in Growing Period Zone 1 to 6 with an average growing period of (AGP) of between 0 and 48 days, generally regarded as less than suitable for effective cultivation. Agricultural potential is very limited in the Namib because of extreme aridity (Vigne 2005).

Topography

Kunene south

The topography is very rough, broken and undulating, comprising hills and valleys dissected by dry river gorges which seldom carry water.

The "Escarpment" is roughly composed of 50% eroded surfaces of the degraded escarpment, and 50 % high mountains of the escarpment. This relatively flat highland plain (elevation about 1,000 to 1,200 metres stretches from the border of the communal area to the basalt ridges of the Grootberg (1,645 metres) to the west. The Grootberg forms the edge of the escarpment which drops to the plains towards the Namib which have an elevation of about 500 metres. Towards the eastern border of the Kunene south area a second land province classification can be found "Central Plateaux" with the sub component Plateaux with Karst on hard Damara limestone (Vigne 2005).

Soils are marginal to the desert and consist of a thin layer of soil strewn with stones, overlaying a hard stratum in the process of desiccation. In the south the parent material is granite and mica schist and in the central area patches of surface limestone and mica schists are found.

Erongo

The Erongo Region lies on the Namibian highlands at an altitude above 1200 m, and partly across the Central Namib Desert, a 150 km wide coastal plain below 800 m. It straddles the great escarpment and includes Namibia's highest mountain, the Brandberg at 2579 m above sea level. Other prominent features are Erongo (2319 m) and Spitzkoppe (1759 m). Four ephemeral rivers run from east to west namely the Ugab, Omaruru, Swakop and Kuiseb rivers.

Tenure, farm structure and size

The total area on which title deeds are registered is 2,334,306 ha as compared with 2,034,726 ha communal land. It is not clear which percentage of the 68,735 registered in the 2001 population and housing census live in the southern part of the *Kunene region*. In the title deed farming area there are 593 surveyed farms belonging to xxx owners. The total theoretical carrying capacity of these farms is approximately 196,000 cattle. In practice there was a substantial decrease in the land productivity of this district which is also reflected in its vulnerability to drought.

Erongo

This region has a total size of 6,357,900 ha of which the title deed farming area covers 1,946,532 ha. The Erongo Region has approximately 31.5% (2002738 ha) of its area covered by nature parks and recreational areas, which are located mostly in the western areas. Commercial farms cover 34% mainly in the east while communal farming areas cover another 33%. Of the communal areas only 24% (8% of the total) are demarcated farms. The remainder consist as open communal areas (Vigne 2005). It is a sparsely populated area with only 1.7 persons per Km² and a relative small household size of 3.8.

Table 1: Census information in Erongo region

Census indicator	
% rural	20
Area (Km ²)	63,579
Pop density Persons/ Km ²	1.7
Number of HH	27,496
Average HH size	3.8

In the commercial areas of Kunene south and Erongo cattle/beef production is by far the dominant production system comprising 85% and 77% of the total livestock respectively. Modern breeds and crossing between them are common on commercial farms. Goats and sheep are kept more or less in equal numbers. In the communal areas however, goats are becoming much more prominent and in terms of total stocking rate (Goats converted to large stock units) they keep just as many goats as cattle (See Table 3).

Cattle herds mainly consist of the Sanga type which is well adapted for the harsh conditions in the west. According to the livestock census almost all goats are of the Boerbok breed (Table 2).

Table 2: Livestock numbers in the commercial and communal farming areas of Kunene south and Erongo (2004 census)

Area	Cattle	Karakul	Dorper	Other	Total sheep	Angora	Boerbok	Other	Total goats
Kunene S commercial	89156	853	78	41953	42884	0	52024	102	52126
Kunene S communal	18450	266	0	27171	27437	0	113114	7930	121044
Total Kunene S	107606	1119	78	69124	70321	0	165138	8032	173170
Erongo commercial	28764	1041	1210	27777	30028	0	21200	0	21200
Erongo communal	21432	0	0	37533	37533	0	126716	0	126716
Total Erongo	50196	1041	1210	65310	67561	0	147916	0	147916

Table 3: Occurrence of various livestock species in commercial and communal areas of Khomas, Otjozondjupa and Omaheke regions expressed as a percentage of the total number of livestock in these regions

Region	%		
	Cattle	Sheep	Goats
Kunene S commercial	84.92	6.81	8.27
Kunene S communal	42.71	10.59	46.70
Erongo commercial	77.11	13.42	9.47
Erongo communal	43.91	12.82	43.27

Production and marketing

All the goats are marketed alive to South Africa and forms a tiny proportion of the national figure. These numbers are not a true reflection of the total goat production since a large (unknown) number is sold to speculators in southern Namibia from where export permits are obtained. One can also conclude that most goats in communal areas are sold to speculators. An analysis by Vigne (2005) of main marketing channels in communal areas shows that there is heavy reliance of speculators, particularly for small stock – which are the major livestock marketed in the area. This is supported by the finding of Vigne (2005) that farmers mainly sell livestock when the need for money arises. The number of goats, sheep and cattle marketed relative to the total Namibian output is shown in Tables 4, 5 and 6 respectively.

It is clear that sheep are only kept for private consumption.

Table 4: Marketing of Goats

DISTRICT	RSA MARKETS		TOTAL	
	2003	2004	2003	2004
Kunene S: Outjo	5568	5461	5568	5461
Erongo: Omaruru	0	0	0	0
Karibib	0	0	0	0
Total Namibia	283446	262972	283446	262972

Table 5: Marketing of sheep

DISTRICT	RSA MARKETS		TOTAL	
	2003	2004	2003	2004
Kunene S: Outjo	200	0	200	0
Erongo: Omaruru	0	0	0	0
Karibib	0	0	0	0
Total Namibia	839656	493492	839656	493492

Table 6: Marketing of cattle

DISTRICT	EXPORT ABATTOIRS		RSA MARKETS		TOTAL	
	2003	2004	2003	2004	2003	2004
Outjo	6 475	4 905	100	0	6 575	4 905
% of Nam	4.5	3.5	1.4	0	2.2	1.7
Omaruru	1 439	1 807	855	1 426	2 294	3 233
Karibib	863	588	0	2	863	590
% of Nam	1.6	1.7	0.5	1.0	1.1	1.3
TOTAL Namibia	143 885	139 162	150 601	144 573	294 486	283 735

The sales of cattle from these two regions are more or less on a 50:50 basis to local abattoirs and RSA markets and form only a small fraction of the national produce (Table 6). In the Erongo and Kunene south regions the turn over of cattle for 2004 was only 4.8% and 4.5% respectively which is very low. The average stocking rate for the commercial area in 2004 was 1 LSU per 52 ha and for the communal part the figure was 1 LSU per 43 ha.

The title deed farms in Kunene south are hosting 105,000 LSU which means a stocking rate of 1 LSU:22 ha is applied while for the communal area the corresponding figure is 1 LSU per 47 ha.

The general stocking rate therefore is approximately 50% of the original allocated figure for the entire area. It is a well-known fact that bush encroachment also became a serious problem in Omaruru district.

One of the reasons for this low density of domestic animals is that some farmers in these regions, apart from a severe bush encroachment problem, introduced game farming as a form of diversification. Findings of Erb (2004) show that 57 farmers in Outjo district (Kunene south) and 69 in Omaruru/Karibib (Erongo) are registered as hunting farms with between 5 and 9 game species per area. Unfortunately no information is available on a regional basis pertaining to income and number of game hunted/harvested.

Management practices

Communal

Farming is the key source of income in the sub-region and 91.1% of farmers do sell livestock. However, an analysis of main marketing channels shows that there is heavy reliance of speculators, particularly for small stock – which are the major livestock marketed in the area.

Generally, there is overall low rates of vaccination, as recommended, against the important cattle production diseases: black quarter, botulism, and brucellosis, and the important small stock disease pasteurilla. Of particular concern is the low percentage of farmers vaccinating cattle against anthrax, which is compulsory.

While the extent of the problem of internal and external parasites varies in the sub-region from year to year, the survey shows surprisingly low levels of recognition of parasites as a problem, particularly in the case of internal parasites. Only 41.2% of respondents recognise internal parasites as a problem and only 59.2% of these apply recommended treatment (Vigne 2005).

Concerning routine animal husbandry practices, there is room for improvement with regard to dehorning of cattle, while rates of adoption of castration and use of registered brand marking are relatively high. Provision of licks is practiced by three quarters of farmers, but this is usually only salt block. It is likely that in some areas there is a need for licks containing minerals, particularly phosphorus (Vigne 2005). Protein supplement during the winter and dry autumn is also advisable.

Responses showed that 59.3% of respondents kept livestock management records. But this says nothing of the quality of these records, or whether they cover production and or financial matters.

Concerning the fundamental matter of range management, 60% of respondents said that they did not think it was possible to practice effective grazing management in communal areas (Vigne 2005).

The survey of Vigne (2005) confirmed the limited importance of crop production in the sub-region. However, the questionnaire focused exclusively of cash crop production, and thus did not capture concerning small-scale (also known as 'backyard' gardening) gardening, which is an important source of nutrients for some households.

At the farm Gainatseb just east of Khorixas there is an irrigation farm where a few farmers were resettled.

At Eerstbegin (North of Khorixas) the Government started a date production unit of 55 ha which is presently still in production.

Sesfontein irrigation: Get info from Stoney: Ha + farmers)

Commercial

In terms of Government's land reform programme a large number of farmers have been resettled on commercial farms in Kunene south. According to the extension officer in that area, farmers

Farmers market on a regular basis. More or less half of the animals, mainly weaners, are sold at local auctions while the rest are sent to export abattoirs in Namibia.

Earlier surveys (1979) show that most of the commercial areas have adequate infra structure (Camps and water points) to apply reasonable to good rangeland management

practices. It is however not known to which extent these facilities have been maintained and which level of range management is applied.

Agronomic production

The entire region is not suitable for rain-fed crop production. Established grazing provides some opportunities for increased production in the 350 to 400 mm zone but this practice has not been adopted yet.

Underground water for irrigation is very limited and therefore limited to home gardens for own consumption.

Sesfontein

Extension offices

Khorixas, Sesfontein, Fransfontein, Outjo

The existing extension worker to farmer ratios in the area, are calculated as 1:232 full-time, farming households.

Approximately 50% of the Erongo Region comprises nature parks and recreational areas, which are located mostly in the western areas. Commercial farms cover 35% mainly in the east while communal farming areas cover another 15%. Of the communal areas in Erongo only 24% (8% of the total) are demarcated farms. The remainder consist as open communal areas (Vigne 2005).

The Erongo rural area is sparsely populated with about 5500 households of which 1044 (\pm 800 communal and 240 commercial) are dependent on agriculture as their main source of income. Wages and salaries form the basis of a livelihood for 66.6% of the households.

For every cattle unit communal farmers in Erongo keep 1.35 sheep and 2.2 goats. The sheep: goat ratio is 1:2.2.

Region	No HH	Percentage of HH with main source of income						
		Farming	Business	Wages + salaries	Pension	Cash remittances	Other	Not stated
Erongo	27496	3.9	7.9	66.6	9.6	8.0	2.8	1.3

Region	%		
	Cattle	Sheep	Goats
Erongo commercial	77.11	13.42	9.47
Erongo communal	43.91	12.82	43.27

AREA - DEC 2004	CATTLE	KAR_SH	DORPER_SH	OTHER	TOTAL SHEEP	ANGORA_GT	BOERBOK	C
Erongo Commercial	28764	1041	1210	27777	30028	0	21200	
Erongo communal	21432	0	0	37533	37533	0	126716	

While most farmers in the Erongo region swithed over to a mixed game/beef production system the western part is mainly suitable for small stock.

References

- Erb,KB. 2004. Consumptive wildlife utilization as a land-use form in Namibia. MBA thesis, University of Stellenbosch.
 Vigne, P. 2005. Towards a National Small Stock Development Plan.