Eastern and Southern Africa Hides and Skins Compendium

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Forward

This compendium is the first edition of the Eastern and Southern African Hides and Skins of domestic species of Bovine, Ovine and Caprine. This publication is prepared with the collaboration of the National Experts of the Associated National Projects to the Regional African Leather and Footwear Industry Scheme (RALFIS) US/RAF/92/200 and the international Hides and Skins Improvement Expert of the Regional Programme.

The present animal population of the world is some 1.43[1] billion heads of bovine and some 1.74 billion sheep and goats and the total world trade of hides and skins is estimated to be about US$ 4.4 billion per year and the world trade in leather (all types including pre tanned and finished) is estimated to be about US$ 8.45 billion annually.

This compendium covers only eight of the African countries or about 48 percent of the African domestic Bovine population, 28 percent of the African Ovine population and 34 percent of the African Caprine population. Compared with the animal population of the world, this compendium covers 6.4 percent of the Bovine, 5.1 percent of the Ovine and 9.9 percent of the world Caprine population.

The main reason for publishing this information is that it seems very difficult to find this type of information in the African countries, and we believe that this type of data is vital for the people in research, planning, trade and industry to be able to correctly interpret the present trade statistics, as well as understand the advantages and constraints when dealing with raw hides and skins from various African origins.

The edition places special emphasis on giving information on various breeds of livestock. This is because of the inherent characteristics of raw hides and skins which determine amongst other things the size of hide or skin, the substance and the grain pattern.

It is hoped that the information will lead to better understanding of the type and quality of raw materials produced in these countries and contribute towards elimination of most of the constraints facing the sector. Greater access to information by the tanning sector relating to types of raw materials and sources of supply should lead to increased utilization of hides and skins from these African countries.

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1. COUNTRY PROFILE

Ethiopia is located in the highlands of the "Horn of Africa" between 3 and 18 degrees North latitude and 33 and 48 degrees East Longitude. It has an area of 471,000 square miles or 1,221,900 square kilometers.

1.1 POPULATION

The last census on human population was conducted in 1984 when the population was 42 million. However, according to the estimate made in 1992, the total population is estimated to be 52 million with a population growth rate of 3 per cent per annum.

1.2 PHYSICAL FEATURES

The land constitutes two irregular massifs of the central highlands bisected by the Great Rift Valley which runs from the South West of Lake Turkana (Rudolf) to the North East across the Red Sea. These are surrounded by extensive lowlands. Altitudes range from over 4500 meters above sea level in the northern Simien Mountains to less than 120 meters below sea level in the Afar Depression.

The climate is conditioned by the variable altitudes with average temperatures ranging between 35 degrees Centigrade in the Lowlands and 5 degrees Centigrade in the Highlands. Three climatic zones, base on altitude, are identified in general, namely , Cool (Degas) over 2500 meters, Temperate (Woina Degas) between 1800 and 2500 meters, and Hot (Koal) below 1800 meters.

Rainfall is bimodal, with the long rains occurring in June to September and the short rains in February/March. The main dry season occurs during October to January while the second one occurs during April to June.

2. TYPES, BREEDS, AND ANY OTHER PHYSICAL FEATURES OF CATTLE, SHEEP AND GOATS

2.1 CATTLE

Ethiopian livestock are basically indigenous and product of inbreeding rather than cross-breeding. The Ethiopian cattle has three origins, namely, the Domestic Cattle (BOS PRIMIGENIUS or HAMITIC LONGHORN), non-humped, the BRACHYCEROS, short horned and found in North and West Africa, and the ZEBU, humped cattle, Bos Indicus and both came from India and Arabia.

There are a number of types and breeds of cattle in Ethiopia. Of these, the following are the most important ones:

2.1.1 The SANGA type of cattle have long horns and hump which is rather small and cervical or cervico-thoracic in position. There are two main breeds of these type of cattle, namely, DANAKIL (also called Adal, Afar, Keriyu or Raya-Azebo) and Abigar (also called Dinka, Nuer and Shilluk). The cattle are named according to the various clans and tribes who keep them. The Sanga type of cattle has also given birth to a very large and extremely important group of cattle which still persists today in rather large numbers throughout Africa.

2.1.2 The long-horned Fulani, Fellata or Bororo is another type of cattle which is completely different from the Sanga type. The red Bororo cattle has very large horns and are very aggressive. The main breeds include the KURI and the SHEKO.

2.1.3 There is also the intermediate group Sanga-Zebu type which includes the breeds known as HORRO, ARADO, and FOGERA.

2.1.4 The Zebu type of cattle have short horns and a large hump which is thoracic in position. They also have large dewlap and navel flap or prepucial sheath. The large invasion of ZEBUS displaced the SANGA types of cattle from large parts of Ethiopia and the Eastern coast of Africa. The animals classified under this type of cattle are called Ethiopia Arab, Barca, Borana (this is the most famous Ethiopian breed), Arsi, and Abyssinian Zebu (more or less the same as the EAST AFRICAN SHORT-HORNED ZEBU).

2.2 SHEEP

Types of sheep are differentiated/designated by the type of their hair cover, that is, between hairy and wool types. Most of the Ethiopian sheep belong to the hairy type. However, there are many types/breeds in the making up of Ethiopian sheep population, namely: (a) Hairy, Thin Tailed (Hamele, Barca); (b) Woolen, Thin Tailed (arrif); (c) Fat tailed (Rashid, Akale Guzai, Tucur, Menz, Arsi-Bale, Adal, Horro); (d) Fat Rumped (Black Head Ogaden). About 75% of the sheep are found in the highlands.

2.3 GOATS

The "Abyssinian" goats, like sheep, consist of various types usually bearing the names of their locations (Highland, Adal/Afar, Somali, Nibian, Long-haired Gishe, Arado/Werie/Shukria,, Zehil, Barca, Hassen, Abahalak). Generally, there is no great difference among goats in Ethiopia. All of them are small in size, with short and smooth hair. The goats are mostly (about 75%) found in the hot and arid lowland regions.

3. LIVESTOCK POPULATION

The last livestock census was taken in 1978. Presently, the population is estimated to be about 30 million cattle, 24 million sheep, and 18 million goats. There are also about 53 million poultry/chicken, 7 million equine, and 1 million camels.

	CATTLE	SHEEP	GOATS
b) Livestock population	30 million	24 million	18 million
c) Off-take rates (Commercial)	7%	33%	36%
e) Production of hides and skins	2.1 million	7.9 million	6.5 million
f) Hides and skins Average weight	Dry-5-7kg Wet-salted-20 Green-20 Kg	Dry-0.75kg Wet-salted-2.25 Kg	Dry-0.55kg Wet-salted-1.65 Kg
g) Grades of raw hides and skins			
i) Grade 1	50%	40%	40%
ii) Grade 2	30%	40%	35%
iii) Grade 3	20%	20%	25%
h) Common methods of preservation			
i) Wet salted	10%	80%	20%
ii) Air-dried/ framed	90%	20%	80%
iii) Other	0%	0%	0%
% Tanned to:			
i) Wet blue	16-23%	0-14%	91-100%
ii) Crust	13-26%	1-8%	0-9%
iii) Finished	52-64%	0-20%	0-10%

TYPES OF HIDES AND SKIN DEFECTS

Before Slaughter	During Slaughter	During Preservation
Brands, Grain scratches and tears Smallpox and streptothricosis Other defects caused by Mange, Tick, Lice, cockles and Stephanofilariasis	Bruises, Rubbed or dragged grain, Improper bleeding, poor pattern or irregular shape, flay cuts, gauge marks, scores, corduroy, fouling with blood, stomach contents and dung(filth stains), improper after-cleaning and trimming defects, cracked grains and stretch marks, fallen hide defects, poor substance, old-age defects.	Putrefaction, mouldy hide and substance defects, flakiness, mottled effect, peppiness, taint, veininess, lacing defects, folding defects, lime-drying defects, smokiness, salt-curing defects salt stains, gypsum stains, heating, metallic stains, red heat, hard spots. Ground drying defect Putrefaction and heat damage, Hide separation resulting into blister, Ball-drying, Transportation damages, resoaking and frame drying or resalting of poorly preserved hides and skins.

The Ethiopian cattle hides are classified as x-light, light, medium, heavy, and x-heavy. The average area-yield per kg. in sq.ft in wet blue is as follows:

TYPE	WEIGHT	AVERAGE	KG	YIELD/KG
X-Light	0-4lb	2.0 lb	0.91	4.55 sq.ft
Light	4-8 lb	6.0 lb	2.73	13.65sq.ft
Medium	8-12 lb	10.0 lb	4.55	19.11sq.ft
Heavy	12-16 lb	14.0 lb	6.36	26.71sq.ft
X-Heavy	16> lb	18.0 lb	8.18	34.36sq.ft

Average yield for sheep skins is 5.5 sq ft per piece while for goats is 5 sq ft per piece.

4. TANNING CAPACITY

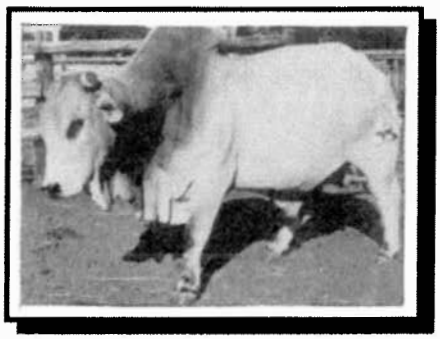
There are thirteen tanneries in Ethiopia out of which eight are well established and six of these are public owned. The other five are privately owned.

No.	Tannery	Location
1	Addis Ababa Tannery	Addis Ababa
2	Dire Tannery (Pvt)	" " "
3	Ethiopian Tannery and Tanning	" " "
4	Awash Tannery	" " "
5	Wallia Tannery (Pvt)	" " "
*6	Alai Mudie Tannery	" " "
*7	Nalbandian Tannery	Debre Zeyit
8	Modjo Tannery	Modjo
9	Mekonen Tuji Tannery	" " "
10	Ethiopian Tannery	Ejersa, near Koka Dam
11	Combolcha Tannery	Combolcha
*12	Modern Akaki Tannery	Addis Ababa
*13	Blue Nile	Addis Ababa

* New private tanneries that have acquired sites and started construction and plant erection.

The major importing countries of Ethiopian hides and skins mainly in the semi-processed stages are:

- Italy(24%)
- Japan (20)
- England (15%)
- U.S.A (13%)
- France (6%)
- Others (15%)



Boran

1. COUNTRY PROFILE

1.1 AREA AND EXTENT

Kenya is located in East Africa roughly between 4 degrees South Latitude and 5 degrees North latitude, thus straddling the Equator. It extends from 35 degrees to 45 degrees East Longitude. It has an area of 582,000 square kilometers.

1.2 POPULATION

The last census on human population was conducted in 1989 when the population was 21 million. Current estimates put the population at 23 million with a growth rate of 3% per annum.

1.3 PHYSICAL FEATURES AND CLIMATE

The great Rift Valley cuts across the country from north at lake Turkana through central highlands to the south and into Tanzania at Lake Natron. To the East and from the coast are Eastern lowlands rising from 0 m to 500 m above sea level and extending 250 km from the coast. There are Northern Plains and the Eastern plateau rising 500 m to 1000 m above sea level. The highlands rise to 5,199 m at Mt. Kenya with the Nyandarua ranges, Mau Escarpment and the Cherangani Hills rising to about 3000m above sea level. To the west is the Lake region falling between 1000m and 1,500 m above sea level.

The climate differs according to the average temperatures ranging between 39 degrees in the Eastern plateau and northern plains to 5 Degrees in the habitable highlands. The average annual temperatures are 35 degrees maximum and 25 degrees minimum.

Rainfall is bimodal with the south west monsoon bringing in long rains between March and May and north east monsoon bring short rains between September and November. Average rainfall ranges from 200mm in the Northern plain lands, 500mm in the eastern plateau and 750mm at the coast and central highlands. Arid areas averages 250mm of rainfall annually.

2. TYPES AND BREEDS OF CATTLE, SHEEP AND GOATS

2.1 CATTLE

The majority of cattle in Kenya are indigenous East African short horned Zebu of various sizes with the largest being the Boran breed occupying northern western plains and the smaller maasai humped Zebu occupying most of the Eastern and southern plateau. There are many crossbred cattle arising out of a successful artificial insemination service particularly in the highlands, the lake region and the eastern plateau so that it is rare to find a 100% humped herd in these regions.

There are also exogenous breeds of cattle from Europe, mainly of dairy and dual purposes. These include the Friesian (including the Holstein), the Guernsey, the Jersey and Ayrshire, the Simental and the Indian Sahiwal. Smaller numbers of Herefold, Aberdeen Angus, the Brown Swiss etc are also reared by very few farmers in the Highlands. Dairy cattle account for 26% of the National herd.

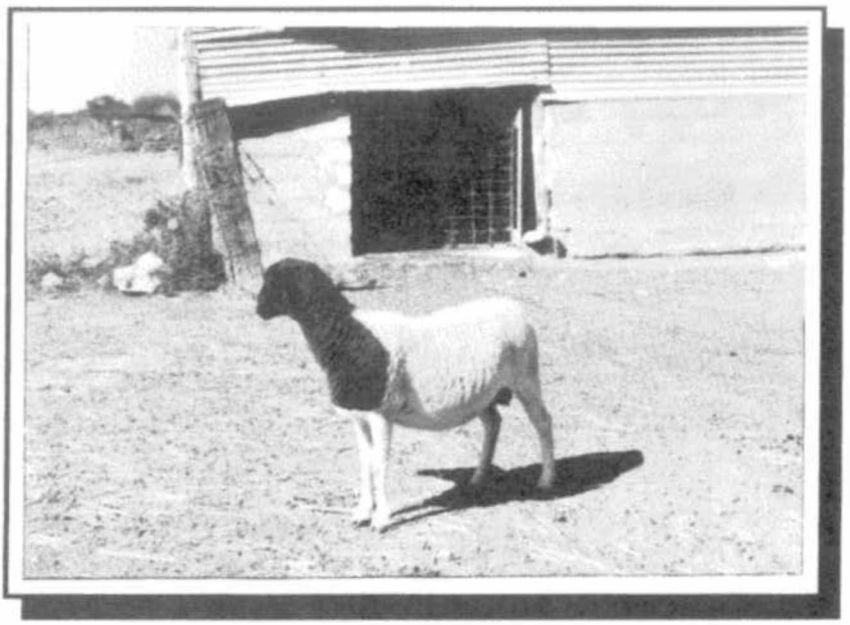
2.2 SHEEP

Most of Kenyan sheep are hairsheep accounting for 91% of the flock grazing in the Southern and eastern plateau and the northern plainlands. These sheep consist mainly of the fat tailed Dorper, the Red Maasai and the Nyanza fat tail breeds. There are also few woolsheep and mutton breeds like Merino, Romney Marsh, Hampshire Downs, Comedale and Suffolk found on the highlands and eastern plateau as well as southern plateau.

2.3 GOATS

The indigenous meat goats are the East African, the Galla, the Nubian and the Bedouin. The Boer goat is also reared particularly in some highland areas. There are also exogenous goat breeds like the Togenburg, the Angola and the Anglo-Nubian, some of whom are reared mainly for milk production. Only 0.2% of the National flock is kept for milk production.

Sheep - Cross-breed



3. LIVESTOCK POPULATION

Livestock census is under preparation. Estimates currently are 11.7 million cattle, 8.3 million sheep, and 9.6 million goats. There are also various numbers of equine(horses, donkeys, and mules), porcine camels and poultry besides wildlife species of various kinds sometimes grazing with domestic animals and which are sometimes cropped for meat.

LIVESTOCK POPULATION	*CATTLE 11.7 million*	*SHEEP 8.3 million*	*GOATS 9.6 million*
a) Off-take rates	8.2%	28.1%	41%
b) National kill Abattoirs in urban and peri-urban centers.	70%	39%	20%
c) Total kill(1992) (recorded) Estimated	845,888 1,500,00	427,114 2.5 million	1,020,324 2 million
d) Hides and Skins production (recorded) (estimated)	0.7 million 1.5 million	1.2 million 2.5 million	1.5 million 2 million
e) Non-Recovery	14%	34%	29%
f) Sources	70% Urban	61% Rural	80% Rural
g) Average weights of Raw hides and skins per piece	Dry 5-6Kg Green-20 Kg Wet Salted- 15 Kg	Dry Sheepskin 0.6 Kg/skin Green 1.8 Kg/skin Dry salted 0.9 Kg/skin	Dry Goatskin 0.5 Kg/skin Green 1.5 Kg/skin Dry salted 0.8 Kg/skin
h) Godowns and Tannery Grading Grade 1 Grade 2 Grade 3 Grade 4	 34% 25% 11% 30%	 23% 30% 24% 23%	 19% 40% 31% 10%
i) Methods of preservation a)Wet salted b)Air dried c)Ground dried e)Other(none at all)	 3% 95% 2% -	 5% 85% 8% 2%	 5% 85% 8% 2%
Average weights Yield/piece in sq. ft	5.5 Kg/per piece dry weight 4.75 sq. ft	0.5 Kg per piece 4.5 sq. ft	0.5 Kg per piece 4.5 sq. ft

TYPES OF HIDES AND SKIN DEFECTS

Before slaughter	During slaughter	At preparation and preservation
Brandmarks Disease conditions e.g Lumpy skin disease, ticks, mange Streptothricosis, Scratches, Horn rakes barbed wire marks	Cuts, bruises, rubbed grain,irregular shape, gauge marks, corduroy.	Poor pattern or irregular shape due to i) wrong trimming ii) wrong suspension further corduroys and gauge markings during fleshing Putrefaction, autolysis and staleness Ground drying defects in remote areas

EXPORTS AND IMPORTS

Uncontrolled cross-border imports of raw hides and skins from neighbouring countries is prevalent. Most of the exports from Kenya are in semi-processed form, with skins forming the bulk of wet-blue exports.

4. TANNING CAPACITY

There are fourteen tanneries operating currently and in 1992, those in operation processed 920,000 cattlehides and 6,500,000 skins. All the tanneries are privately owned.

KENYA	Installed capacity for Hides	Installed capacity for Skins
Bulleys Tanneries Ltd.	840,000	1,800,000
Alpha-Rama	250,000	1,000,000
Kamiti Tanners	150,000	1,500,000
Leather Industries of Kenya	300,000	
Bata shoe Company	200,000	10,000
Deras Tannery	400,000	750,000
Babar Tannery	480,000	
Nakuru Tannery	15,000	1,200,00
Sagana Tannery	150,000	
Kitale Tanneries	60,000	
E.A. Leather Factory	15,000	140,000
New Market Leather Factory	200,000	
Aziz Din Tannery	10,000	25,000
Bawazir Tannery	240,000	1,885,000
TOTAL CAPACITY	3,310,000	8,310,000

NOTE: It is estimated that Kenyan tanneries are presently working at about 50% of the installed capacity. Therefore approximately 1,500,000 hides and 3,700,000 skins were processed for the year 94.

Tanneries may shift production from hides to skins or vice versa depending on market requirements and availability of raw materials. Export of raw hide and skin is allowed.

1. Country Profile

Malawi is a small land-locked country south of the Equator with some 900 kilometers long, varying in width from 80-160 kilometers and covering an area of 118428 square kilometers. It is bordered to the north and north-east by Tanzania; to the East south and south-west by Mozambique and to the west by Zambia.

The country is dominated by Lake Malawi which measures 570 kilometers in length and 16-80 kilometers in width. Lake Malawi is the third largest African Lake and the world,s 11th largest. Its waters lie 450 meters above sea level occupying the southern most end of Africa,s Rift Valley.

1.1 Climate

Malawi has a tropical climate, but with five months of rainfall and seven dry months per year. It is during rain season that the few commercial livestock farmers do conserve some stock-feed in form of hay and silage for feeding their livestock during dry season when grazing becomes critically short.

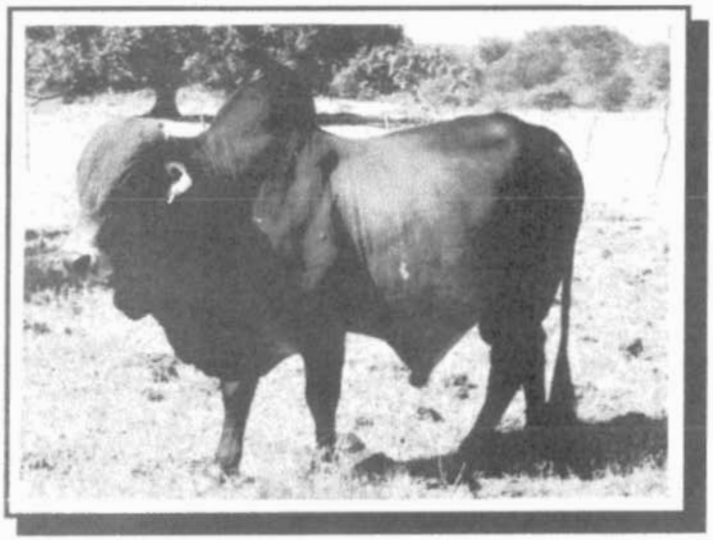
The lake shore areas have a low rainfall and a warm relaxing climate with mean daily temperatures ranging from 26 degrees centigrade in January to 21 degrees centigrade in July. The highland areas have greater temperature changes and the air is bracing. The nights can be cold even in summer.

1.2 POPULATION

The human population is about 9 million with national literacy rate of about 40% while livestock population is standing at 0.8 million heads of cattle, 0.9 million goats and 0.1 million sheep.

2. BREEDS AND TYPES OF LIVESTOCK

Malawi Zebu is the major breed of cattle which is indigenous and small bodied animal. Malawi Zebu cattle has long horns with very big humps. The color is either black or brown or mixed. Other available breeds are British fresian cattle and their crosses for milk production and brahman cattle and their crosses for beef production. With regards to goats and sheep, the majority are indigenous goats and sheep although there are some few exotic breeds of goats and sheep in the country like Boer Goats and Dorper sheep both from South Africa plus their crosses.



Zebu

3. LIVESTOCK POPULATION FOR PAST FIVE YEARS IS AS FOLLOWS:

YEAR	CATTLE	GOATS	SHEEP
1989	833136	802721	85722
1990	832713	842857	92408
1991	849766	856400	93764
1992	844170	942296	100133
1993	874310	951162	101464

	CATTLE	SHEEP	GOATS
a) Livestock population (1993)	874,310	101,464	951,162
b) Off-take rates	8-12%	5-10%	10-15%
c) National Kill/ annum			
Urban(Lilogwe & Blantyre)	22,964	50,000	60,000
Rural	66,579	41,000	82,000
d) Average age at slaughter	3 years	1.5 years	1.5 years
e) Production of hides and skins	75,411	31,000	63,000

*NOTE:Production of skin is low and may not reflect actual production which is proberbly higher than indicated. It is likely most of the skins are moved into neighbouring countries where demand is higher.

4. TANNING SECTOR

Raw material suppliers are controlled by the cold storage company which has been there for a long time as the sole buyer and exporter of raw hides and skins. The sector is liberalized and other buyers have entered the market.

Liwonde Tannery, the only one in Malawi, was initially set up as a cottage industry and later developed into a full-fledged tannery through UNIDO/UNDP technical assistance. This tannery has a capacity of 200 hides per day and it is still working towards optimum capacity utilization.

1. COUNTRY PROFILE

1.1 AREA

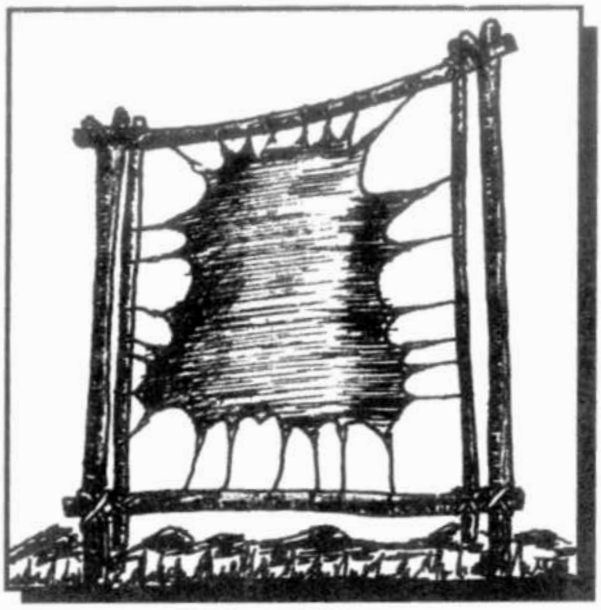
Sudan is located in North East Africa with an area approximately 2.5 million kilometer squared. It is the largest country in Africa and borders Eight countries namely: Ethiopia, Uganda, Egypt, Kenya, Rwanda, Central Africa Republic, Chad and Libya.

1.2 POPULATION

The last census on human population in Sudan was conducted in 1993 and it gave the population as 25 million with 67% being rural based 23% being urban and 10% Nomadic. The population compriese of 51% male and 49% female.

1.3 PHYSICAL FEATURES

Sudan has a relatively hot climate with the temperatures going up to 30 degrees centigrade plus during summer. The climate is normally hot and dry from September to October and rainy from April to May except for the Red sea coast. Sudan is endowed with water resources from the Nile and its tributaries and other seasonal water sources.



Air-suspended hide

2. LIVESTOCK TYPES AND BREEDS

2.1 CATTLE

The majority of cattle are predominantly short horned Zebu breeds classified in types and sub-types, all with humps as follows: ex. kenana white, butana brown(for dairy), ex. bagara different colors(for beef). There are few foreign breeds for Industry in Central agricultural Sudan. Some crossing is being introduced.

2.2 SHEEP

Sheep found in Sudan are mainly hair type sheep classified according to areas and tribes with different colors for each and long ears and tails.

In southern states there are Nilotic sheep with short tail and ears.

2.3 GOATS

There are the Nubian and desert types with long ears and long hair mainly black color and a few in brown colour.

There are also camels which are classified into pack and riding type or the tribal ownership.

3. LIVESTOCK POPULATION

From the figures adopted for National Strategy, Sudan currently has 22.2 million cattle, 22 million goats, 16.4 million sheep and 2.8 million camels.

	CATTLE	SHEEP	GOATS
Livestock population	22.2 million	22 million	16.4 million
Off-take rates	8%	24.9%	26.9%
National kill	1.72 million	5.5 million	4.4 million
Hides and skins recovered	1.7 million	4.3 million	3.9 million
Average green weight	16-20 Kg	26-32 ib/doz	14-16 ib/doz
Ave grading%			
Grade 1	10	40	30
Grade 2	30	20	20
Grade 3	40	20	20
Grade 4	20	20	30
Defects			
Mange	Common	Common	Common
Ticks	Common	Very little	Very little
Streptothicosis	Common	-	-
Pox	Common	Common	Common
Brands	Common	-	-
Horn rakes	Common	Little	Medium
Marks	Little	None	None
Knife-cuts	Common	Little	Little
Poor pattern	Medium	Little	Little
Putrefaction	Common	Common	Common
Contamination	Common	Common	Common
Hair	Common	Common	Common
Red heat	Little	Little	Little
Insect	Common	Common	Common

Preservation method adopted in percentage of total production.

	CATTLE	SHEEP	GOATS
Ground Drying	10	10	15
Suspension	25	60	80
Dry salting	60	5	-
Wet salting	5	25	5

4. TANNING CAPACITY

There are ten mechanized Tanneries and pickling plants licensed but not all working. Sudan also has the biggest artisan/native Tanning Industry handling considerable quantities of leather.

The major tanneries are:

1) Ghezira tannery

2) Khartoum tannery

3) White Nile tannery

4) Afro-tannery

5) Salim tannery

1. COUNTRY PROFILE

Tanzania has an area of 881,000 sq.km which includes the mainland Tanganyika and the islands of Zanzibar and Pemba. The country's total population according to the most recent census stands at 26 million people.

The main physical features include coastal belt along the Indian ocean to the east running down from north to south , a chain of mountains on the north which includes Mounts Kilimanjaro and Meru, a highland plateau to the south and southwest and vast Savannah lands in the middle and west of the country. There are three major lakes namely Victoria on the north west, Tanzania on the west and Nyanza on the south west. There are two rainy seasons along the coast and one season in the rest of the country.

2. Types of breeds of cattle, sheep and goats

In commercial farms there are European breeds, as well as indigenous breeds which are outcome of crossing with European breeds especially in the ranches for beef. In the communal sector you find indigenous Zebu, Nkele and others. Other improved breeds include sheep for wool, goats for milk and indigenous breeds for meat.

3. Livestock population estimates

	1992	1993	1994
• Cattle	12.7 million	13.04 million	13.620
• Goats	7.4 million	7.9	8.05
• Sheep	3.55 million	3.84	3.950

	CATTLE	SHEEP	GOATS
Livestock population (1993)	12,776,643	3,551,999	7,747,668
Off-take rate Commercial	8%	25%	25%
Production of hides and skins (recorded) (estimated)	1,022,131 1,800,000	526,799 980,000	1,936,917 2,010,000
Quantities of recovered hides & skin 1990 1991 1992 1993	 775,105 705,276 917,941 1,022,131	 327,840 301,870 418,714 526,799	 506,175 525,180 719,872 1,936,917

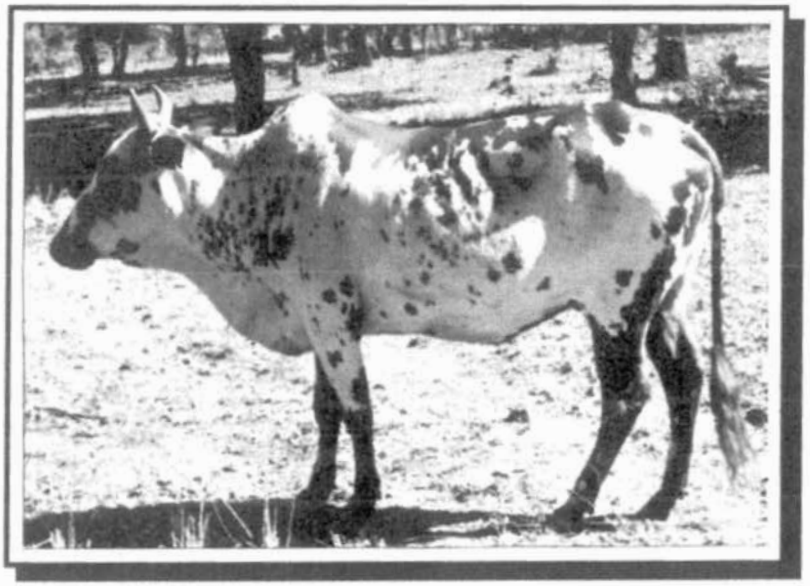
TYPES OF HIDES AND SKIN DEFECTS

Before slaughter	During slaughter	At preparation and preservation
Brandmarks Disease conditions e.g Lumpy skin disease,ticks,mange Streptothricosis, Scratches, Horn rakes Barbed wire marks	Cuts, bruises, rubbed grain, irregular shape, gauge marks, corduroy	Poor pattern or irregular shape due to wrong trimming wrong suspension gauge markings during fleshing Putrefaction, autolysis and staleness Ground drying defects in remote areas

Grades of raw hides and skins are as follows:

Grade	Salted	Ground Dried	Suspension dried
i	14%	0%	12%
ii	37%	8%	24%
iii	32%	32%	36%
iv	16%	56%	22%
Reject	1%	4%	6%

Angoni



4. TANNING CAPACITY

There are three large tanneries and two small ones operating in Tanzania namely Moshi Leather Industries Ltd., Tanzania Leather Industry Ltd.(Morogoro), Africa Tanneries Ltd (Mwanza), Afro Leather Industry and Himo Tannery.

Himo Tannery is a rural Tannery.

TANZANIA	Installed Capacity	Estimated Production for 94
Moshi Tanneries	400,000	under rehabilitation
Morogoro Tanneries	400,000	under rehabilitation
Mwanza Tanneries	400,000	160,000
Afro-Leather Dar es Salaam	40,000	40,000
TOTAL CAPACITY	1,240,000	200,000

NOTE: Morogoro and Moshi tanneries are presently under rehabilitation and therefore the total production figures are some how low. Both tanneries should complete their rehabilitation works during the course of 1995.

1. COUNTRY PROFILE

The population of Uganda is estimated at 17 million people of which 51% are female. 80% live in the rural areas engaged in some form of agriculture. The country has a total mass of 239,000 sq.km out of which 25% is in lakes, rivers and swamps. Uganda is about 1200 meters above sea level, rising to 5109 meters in the Rwenzori mountains.

The southern border is mostly covered by Lake Victoria which provides the source of the Nile. The climatic conditions with two rainy seasons in the south and the annual rainy season in the north (bordering Sudan), provide Uganda with a favourable climate. Uganda is also endowed with fertile soil and therefore has a high livestock - carrying capacity.

2. LIVESTOCK BREEDS

The cattle population consists of approximately equal number of short-horned Zebu and Ankole long horn and cross breeds between the two. There also exists cross breeds between indigenous cattle and Zebu from Tanzania. All goats and sheep are indigenous breeds but differ in size from one region to the other.

Types, Breeds and physical features

CATTLE

Indigenous and include the Ankole long horned 49.5% (Sanga, Nsagalla),East African short-horned 32.3% (Zebu), intermediate, non-descript breeds 18.2% (Nganda)

SHEEP

Fat tailed and include Masai type, East African Black head and East African long tailed

GOATS

Include small East AFrican goat, Mubende Goat and Kigezi Goat

3. LIVESTOCK POPULATION

The livestock population in Uganda (1993) is estimated at 4,729,966 cattle, 4080,487 goats and 1,066,383 sheep.

	CATTLE	SHEEP	GOAT
Livestock Population	4,729,966	1,066,383	4,080,487
Off-take rates Commercial National Kill	13%	13%	19.6%
Production of Hides and skins	600,000	300,000	800,000
Average weight (KG) per piece	Raw- 6 dry weight	Raw-0.5 dry weight	Raw-0.5 dry weight
Method of Hides & Skin preservation			
i) Frame	50%	0%	0%
ii) Ground	28%	40%	40%
iii) Pole	20%	60%	60%
iv) Dry salted	2%	0%	0%

TYPES OF HIDES AND SKIN DEFECTS

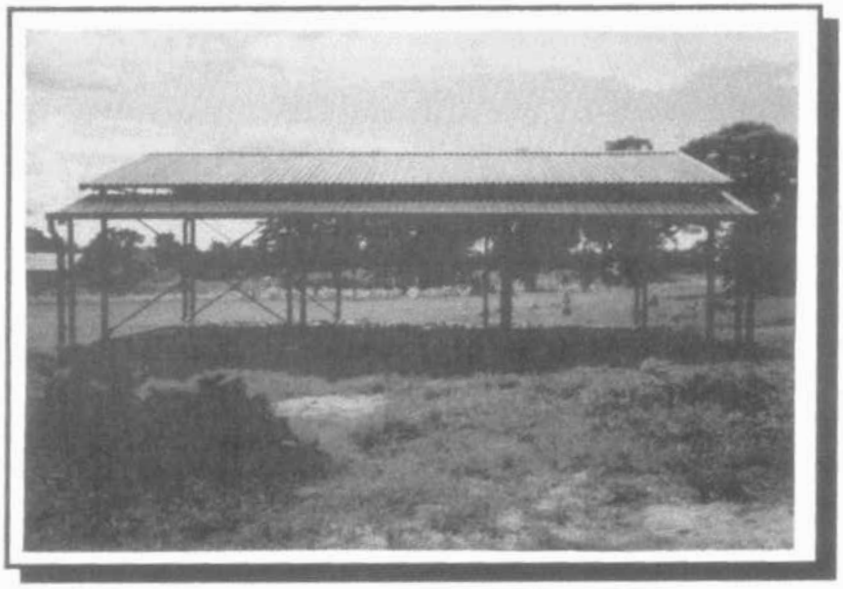
Before slaughter	During slaughter	During preservation
Ring worms, Pox, Mange, Brands, Lumpy skins, scratches, whip lashes, tick bites.	Fallen hides, irregular shapes, bruising, bad breeding, dragged grain, scores, gauge marks, flay cuts, dung, blood marks.	Hair slip,ground drying, pole drying, vermin and beetle damage, improper framing and cracks.

Most of Uganda's hides and skins are exported in raw form due to the under-capacity utilization of the country's tanneries. The situation is likely to change as ULATI tannery has been privatized and will be rehabilated.

a) Raw hides and skins:
Kenya, U.K, Holland, Egypt and Pakistan

b) Dry salted:
Hong Kong, U.K

c) Wet blue:
Holland, Switzerland, Brazil, Italy and Pakistan.



Construction of new Slaughter-House in Iganga town

4. TANNING SECTOR

There are three existing tanneries, Uganda Leather and Tanning Industry Ltd.(ULATI) which is being privatized and two other private ones. Production capacity is as follows:

a) ULATI- Cattle-195,000 Hides and 390,000 skins/annum
b) Alhamedy Tannery- Cattle- 80,000 hides(wet Blue)
c) Rural Tannery-100,000 skins
d) Dragon King-Mbarara-104,000 hides(projected)
e) Masaka Tannery (planned)
f) Ruwenzori Tannery (planned)

1. COUNTRY PROFILE

Most of the land in Zambia lies at an altitude of 1000-2000 meters consisting of spacious rolling wooded landscapes, except where they are cut by the valleys of the country's great rivers Zambezi, Kafue, Luagwa and Luapula.

The main commercial areas are:

Southern province, Central province, Lusaka province, Copperbelt province and the Eastern province. Except in the river valleys, the climate though tropical is altitude modified and does not present extremes of heat, temperatures rarely rise above 30 degrees centigrade and the south west may even drop to 20 degrees centigrade during the coldest months of the year.

2. BREEDS OF CATTLE

In the commercial sector, there are exotic breeds such as Africanda, Boran, Hereford, Fresian and Jersey while in the traditional sector, main breeds to be found are Zebu and Sanga type such as Tonga, Ngoni and Barotse breeds. Crossbreeding is encouraged in the dairy beef for improved milk yields and disease resistance, in the commercial sector, this is already been done.

	COMMERCIAL SECTOR	COMMUNAL SECTOR
Altitude and climatic conditions	1000-1500m, Ambient Summer temperature +30 - 35 degrees centigrade	1000-1500m + 30-35 degrees centigrade.
Types and Breeds of cattle	Exotic breeds such as Africanda, Boran, Hereford, Fresian and Jersey. Some cross breeding has taken place over a number of years for both daily and ranched cattle to improve disease resistance.	Main breeds to be found are Zebu and Sanga type such as Tonga, Ngoni and Barotse breeds. Cross breeding is encouraged both in dairy beef cattle for improved milk yield and disease resistance.

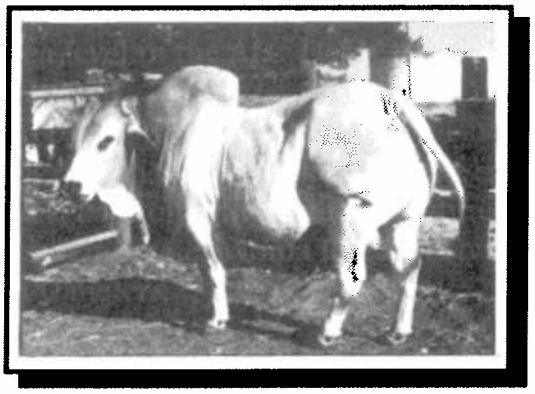
3. LIVESTOCK POPULATION

The cattle population in the commercial sector is approximately 500,000 while in the traditional sector they are estimated at 2.7 million.

Raising of cattle is both in the traditional and commercial sector with the traditional sector having 70% of the total herd. Present government policy is deliberately biased towards the traditional sector and rightly so since it is felt that this sector is more vulnerable and is in dire need of guidance and assistance.

	COMMERCIAL SECTOR	COMMUNAL SECTOR
Cattle population Average live weight	+500,000 350-450 Kg	2.7 million 250 - 300 Kg
Total off-take	15 - 17%	9.2%
Reproductivity Calving rate	75-80%	56.7%
Calving interval age at first calving seasonality of calving	12 months 2 years	1 year 8.5 months 3 years 9 months 70% of calving during June-December
Available slaughter facilities	ZCSC 4 abattoirs -Lusaka - 300 heads/day -Mongu - 100 heads/day -Livingstone-120 heads/day -Chipata - 30 heads/day Private -1 Galaunia farms - 100 heads/day -1 Lendor Burton - 40 heads/day -1 Chibote 80 heads/day -1 Kembe 30 heads/day	72 slaughter houses owned by District councils
Types of preservation % -wet salting -dry salting -other(frame, peg, ground etc.	 95% 2% nil	 5% nil nil

	COMMERCIAL	COMMUNAL
Type of defects Diseases	Alopecia, Anthrax, Dermatitis, Pox, warts, tumours, Eczema	Alopecia, Anthrax, Dermatitis, Pox, Wart Tumours, Eczema
Parasitic	Lice, Tick, Nematodes Biting insects	Lice, Tick Nematodes, Biting insects
Mechanical defects	Brands, Thorn/barbed wire scratches, Horn rakes	Brands, Thorn/barbed wire scratches, Horn rakes
Post mortem & flaying/ curing defects	Flay cuts, Stretch marks	Flay cuts, stretch marks, poor pattern, rubbed and dragged grain, Dirt, urine, manure defects, improper bleeding.
Storage and transportation damages	Red heat, symptoms of bacterial action and infestation on dried hides	Autolysis, Hair slip, Red heat, symptoms of bacterial action, molds, insect infestation on dried hides



Boran-bull

4. TANNING SECTOR

Zambia's tanning industry has expanded rapidly since 1988 with three more mechanized tanneries established, bringing the total number of tanneries to four. Bata tannery, which is the oldest is a fully integrated factory, processing from raw to finished leather and incorporating a footwear plant.

The estimated Tanning Capacity is as follows:

Company	Hides/Day	Current Capacity utilization
Bata	700	500
Asaria	350	150
Kembe	300	120
SIDO	200	150
Total	1,500	920

1. COUNTRY PROFILE

Zimbabwe lies between the Zambezi and Limpopo rivers which constitute its northern and southern borders respectively. To the east lies the mountainous border with Mozambique and on the west flat country bordering Zambia and Botswana. The area of Zimbabwe is 38 888 000 hectares.

	COMMERCIAL SECTOR	COMMUNAL SECTOR
Altitude and climatic conditions	1000-1500m, Summer Ambient Temp. 30 Degrees average	300-1500m, Summer Ambient Temp. 35-40 Degrees and higher
Breed of Cattle	European breeds,but some cross-breeding with indigenous breeds for ranched beef cattle for disease resistance	Indigenous Zebu and Sanja type-Nkone, Tuli, Mashona with some cross breeding with European to improve size and milk yield.

1.1 POPULATION

The last census conducted in 1992 reflected a population in excess of 10 million, but this is generally believed to be less than actual.The present population is probably nearer 11 million - 12 million.

1.2 PHYSICAL FEATURES

The areas in the vicinity of the Zambezi and the Limpopo rivers are low lying with altitudes from 300 meters and are known as low veld. The central part of the country is plateau with altitudes ranging from 1000 meters to 1500 meters and is known as high veld. Most agriculture and ranching takes place on the high veld central plateau which flattens towards Botswana and Zambia in the west. The eastern border is extremely mountainous and supports thriving timber, coffee, tea and fruit growing industries.

Ambient summer day temperatures are 30 degrees centigrade on the highveld and 35 to 40 degrees, and higher, in the lowveld.

Rainfall averages 80 cm annually for the country as a whole. But can be much lower in the west which is categorized a drought prone area, and much higher along the eastern border. The wet season runs from early November to April.

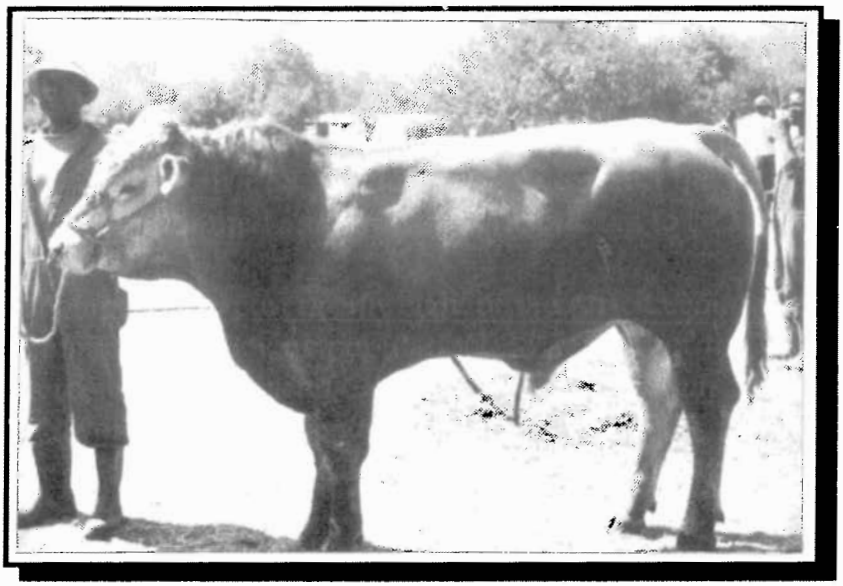
2. TYPES OF BREEDS AND PHYSICAL FEATURES OF CATTLE, SHEEP AND GOATS

The national herds and flocks in Zimbabwe are subdivide into two categories - commercial and communal, the latter peasant/subsistence farmer owned. There are distinct differences between livestock from the two sectors. This is important when discussing hides and skins in Zimbabwean context.

2.1 CATTLE

Commercially owned cattle are generally of European breeds, particularly so with regard to dairy stock. Crossing is practiced with the indigenous breeds for ranched beef cattle to increase resistance to disease.

Exotic beef breed



2.1.1 Communal sector cattle are normally indigenous Zebu or Sanga types which include Inkoni, Tuli, Mashona, with some cross breeding with European breeds to improve size and milk yield.

2.1.2 As with Sanga type cattle elsewhere in Africa, horns are typically long and a smallish hump is usual. There are several hybrid breeds, their vernacular names having origins in clan and tribal names.

2.1.3 The Zebu type in Zimbabwe have shorter horns than the sanga and a more pronounced hump. Much cross bleeding has occurred and it is sometimes difficult to differentiate between Sanga and Zebu strains where characteristics of both types are equally dominant in progeny.

2.2 SHEEP

Zimbabwe is not good sheep country and the population is small. 98% of Zimbabwe sheep are " hair " type, and possibly have origins in Northern types brought down during past Bantu migration.

2.3 GOAT

Goats are raised mainly in hot lowveld areas by communal owners. Stock is a hybrid of the Transvaal boer goat, and Indian and Abyssinian strains derived from Somalia, Nubian

and other sources. Zimbabwean goats tend to be small in size(5-8 sq ft), with short smooth hair.

3. LIVESTOCK POPULATION

It is many years since a livestock census was conducted. Figures for goat and sheep are therefore not reliable. But estimates for the cattle populations are reliable, because dipping is routine, legislated for by Government and accurate records maintained. The cattle population is about 6 million. Goats are estimated at 2.3 million and sheep at 0.65 million, about 3 million combined.

	COMMERCIAL SECTOR	COMMUNAL SECTOR
Cattle population	2 million	3.8-4 million
Average live weight	450 Kg	350 Kg
Off-take rate	15 - 20%	1 - 3%
Distribution of sex (at slaughter)	35 - 40% female	25 - 30% female
Average age at slaughter	2 - 4 years	5 -8 years
Available slaughter facilities	CSC 5 Abattoirs to EEC standards a)500 head/day each b) 12-15 Municipal and private abattoirs 50-100/ day c)150 private abattoirs pending registration, some merely pole and slab 1-5/ day	Basic condition often without slab or pole.
Production volume of hides	450,000 (90% of commercial slaughter)	100,000 rural abattoirs butcheries
a) Slaughter House	50,000(10% of commercial slaughter)	
		150,000 basic conditions
b) Rural slaughter	95% plus	
Volume of collections to commercial channels	25 Kg plus	90% plus
Average green weight	40 sq ft plus	20 Kg minus
Average area		35sq ft with a few exceeding this

	COMMERCIAL	COMMUNAL
Types of preservation %		
Wet salting	95%	25%
Dry salting	5%	75%
Other(Frame, peg, sunshine, smoke)	Nil	Nil
Average weight		
Wet salted	20Kg + (all grades)	16 Kg minus
Dry salted	15 Kg	12 Kg
Dry		Few if any, sun or shade drying very unusual
Type of defects		
Diseases	Alopecia, Anthrax, Dermatitis, Pox, warts, tumours, Eczema	Alopecia, Anthrax, Dermatitis, Pox, Wart Tumours, Eczema
Parasitic	Lice, Tick, Nematodes Biting insects	Lice, Tick Nematodes, Biting insects
Mechanical defects	Brands, Thorn/barbed wire scratches, Horn rakes	Brands, Thorn/barbed wire scratches, Horn rakes
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Storage and transportation damages	Red heat, symptoms of bacterial action and infestation on dried hides	Autolysis, Hair slip, Red heat, symptoms of bacterial action, molds, insect infestation on dried hides

4. TANNING CAPACITY

An estimated Total of 1,020,000 pieces per annum of Bovine Hides is tanned by tanneries as follows:

- Belmont 288,000
- Eagle 288,000
- Imponente 180,000
- Bata 144,000
- Deraswiss 120,000

Total 1,020,000