Group VII

AFRICANDER

Origin

The Africander breed has been developed from the native Hottentot cattle of the Cape of Good Hope. The derivation of these cattle is not known with any certainty, although a number of authors have developed theories to account for their origin. Bosman maintained that the Hottentot cattle were purebred *Bos indicus* in no way related to the Bantu cattle of southern Africa. Epstein (1933) was also of the opinion that these cattle were pure *Bos indicus* of the type with long lateral horns of oval cross section and with muscular cervico-thoracic humps. He suggested that their forebears were brought by Semitic tribes from Asia via the former land isthmus at the southern end of the Red Sea to Abyssinia and thence to the Great Lakes area where, in his opinion, interbreeding between the Semites and the Bushmen produced the progenitors of the Hottentots. As the Bushmen possessed no cattle, the lateral-horned *Bos indicus* stock is assumed to have remained pure. Curson and Thornton (1936) suggested a course for their migration from the Great Lakes westward toward the west coast of the continent and then southwards to the Cape of Good Hope. During this migration no cattle-owning tribes would have been encountered and so there would have been no adulteration of the herds. Cattle were observed in the possession of the Hottentots at the Cape of Good Hope by the Portuguese navigators in the late fifteenth century and large herds of the local cattle were acquired by the Dutch when they founded their settlement there in 1652.

Suggestions have been put forward (Baughman, 1951; Martinho, 1955) that genetic material both from European cattle imported by the Dutch and Portuguese, and Indian cattle introduced through Mozambique and the Cape, may be present in the Africander, but Bisschop, J. H. R. (*Personal Communication*), basing his objections on the difficulty of transporting anything but very small numbers of cattle in the early colonial days, has suggested that these speculations should be disregarded. He has further pointed out that cattle introduced

through Mozambique would have come in contact with the progenitors of the Nguni rather than of those of the Africander cattle. Slijper (1951) concluded, from a consideration of the position, structure and insertion of the hump, that the Africander was not a purebred zebu, but a cross between a zebu and another type of cattle.

A considerable amount of crossing undoubtedly took place between the Hottentot cattle and European cattle which were introduced into the more thickly populated parts of the Cape of Good Hope in the latter part of the eighteenth century, but it was found that oxen with a degree of European ancestry were inferior in draft qualities to the native cattle, and herds of the indigenous cattle were maintained, especially in the more remote districts, for the provision of the trek oxen which were the only means of transport throughout the greater part of southern Africa.

During the Great Trek (1836-1842) Africander cattle accompanied the " voortrekkers " northwards. There can be no doubt that crossbreeding took place whenever they came in contact with Bantu cattle but many of the " voortrekkers," preferring their own cattle, appear to have kept their herds pure.

During the rinderpest outbreaks of 1896 and 1899 and again during the Anglo-Boer war (1899-1902) the numbers of Africander cattle were much reduced, but a few herds, notably that of Mr. Josef du Plessis of Theunissen in the Orange River Colony, remained intact. After the end of the war the Africander, largely on account of its excellent draft qualities, remained popular, and numbers increased rapidly until the appearance of alternative means of transport, together with a renewal of the importation of cattle from Europe which resulted in an increase in crossbreeding for the production of beef cattle, again threatened the continued existence of this type of cattle (Opperman, 1950).

A movement for their preservation was, however, initiated and the " Africander Cattle Breeders Society " was founded in 1912. Registrations rose rapidly until, in 1936, the herdbook of the Society was closed. In 1951 almost 30 percent of the cattle owned by Europeans in the Union of South Africa were of Africander type (Joubert, 1953).

Conditions in the native home of the breed

Location, topography and soils

According to Joubert (1953): " The breed is at present largely concentrated in three distinct parts of the country, viz. the northern ranching region, the Cape Midlands and eastern districts, and the western parts of the Transvaal and Orange Free State. The latter

two regions may be considered to have been the home of stud-breeding of Africander cattle and it is in these parts in particular that the development of the breed took place prior to the establishment of the Breed Society. But the area in which the Africander has its greatest role to fulfil from a commercial standpoint includes the savannah country of Bechuanaland and the northern Transvaal together with a strip of low veld bordering the Limpopo in the north." These regions are part of the inland plateaus of the Union of South Africa, which vary in altitude from approximately 500 to 4,000 feet and are characterized by their general lack of mountain ranges and their open flat to slightly undulating plains.

The soils of the " Lowveld Bushveld " are usually heavy and derived from volcanic rocks.

Climate

The interior of South Africa has a subtropical climate modified by the proximity of the ocean and the altitude of the central plateau.

In winter an anticyclone associated with the subtropical high pressures is centered over the Orange Free State and the plateau has dry cold weather with clear skies, light winds and frequent frosts. The depressions of the westerlies which pass south of the Cape of Good Hope may, however, affect the interior as far north as Pretoria, producing temporarily very cold weather with heavy rain and occasional snow.

In the summer the intertropical convergence moves south over the Transvaal and pressures are low over the remainder of South Africa. Although this is the season during which the greater part of the precipitation occurs, the skies are generally clear over the plateau and day temperatures are high with mean maxima generally in excess of 80° F., while the diurnal range may be as much as 30-40° F. (Kendrew, 1953).

Climatological data for several stations representative of the Africander cattle areas in the Union of South Africa are presented in Table 129.

Vegetation

Those parts of the Union of South Africa which are most suitable for the Africander cattle are included in the so-called bushveld regions, which have been described by Acocks (1953) as " tropical bush and savannah country " and subdivided by him as follows:

a) *Lowveld Bushveld.* This is the characteristic open *Acacia nigriscens-Sclerocarya-Themeda* savannah of the Lowveld, developed at altitudes of between 500 and 2,000 feet on soils which are usually heavy and derived from volcanic rocks.

TABLE 129. – CLIMATOLOGICAL DATA FOR FIVE STATIONS IN THE AFRICANDER AREA

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
LOUIS TRICHARDT (MARA) (*North Transvaal*)													
Mean maximum temperature, °F.	81	80	79	78	74	70	70	73	78	81	81	82	77.2
Mean minimum temperature, °F.	63	62	60	56	49	43	44	47	53	58	60	62	54.8
Mean temperature, °F.	72	71	70	67	62	57	57	60	65	69	71	72	66.1
Mean rainfall, in.	4.13	3.03	3.31	1.10	0.67	0.31	0.24	0.16	0.35	1.46	2.87	3.11	20.7
ZEERUST (*West Transvaal*)													
Mean maximum temperature, °F.	87	86	83	79	74	69	69	75	80	85	87	88	80.2
Mean minimum temperature, °F.	62	62	58	49	39	33	33	39	47	56	59	61	49.8
Mean temperature, °F.	75	74	70	64	57	51	51	57	64	71	73	75	65.2
Mean rainfall, in.	3.94	3.78	3.94	1.46	0.75	0.39	0.12	0.20	0.71	1.57	2.83	3.98	23.7
VRIJBURG (*Armoedsvlakte*) (*N. W. Cape*)													
Mean maximum temperature, °F.	90	88	83	79	73	68	68	74	79	85	87	89	80.2
Mean minimum temperature, °F.	61	60	57	49	40	33	31	36	43	52	56	60	48.2
Mean temperature, °F.	76	73	70	64	56	50	49	55	61	69	71	74	64.0
Mean rainfall, in.	3.15	2.99	3.66	1.89	0.71	0.24	0.12	0.24	0.31	0.98	2.01	2.72	19.0
HOOPSTAD (*Western O.F.S.*)													
Mean maximum temperature, °F.	86	84	82	76	70	66	65	71	76	82	83	86	77.2
Mean minimum temperature °F.	60	59	55	47	39	32	31	36	42	51	55	59	47.2
Mean temperature, °F.	73	72	68	62	55	49	48	53	59	67	69	73	62.3
Mean rainfall, in.	3.03	2.87	3.58	1.42	0.63	0.20	0.28	0.28	0.47	1.30	2.36	2.68	19.1
QUEENSTOWN (*Eastern Cape*)													
Mean maximum temperature, °F.	85	84	82	76	71	66	64	69	74	78	80	84	76.1
Mean minimum temperature, °F.	58	58	56	49	43	37	37	40	45	49	53	56	48.4
Mean temperature, °F.	72	71	69	63	56	51	51	55	60	64	66	70	62.3
Mean rainfall, in.	2.95	2.72	3.19	1.50	1.02	0.39	0.59	0.51	1.06	1.50	2.83	2.18	28.9

Temperatures: Louis Trichardt, 44-year means; Zeerust, 46-year means; Vrijburg, 31-year means; Hoopstad, 10-year means; Queenstown, 77-year means.
Rainfall: All stations, 30-year means.
SOURCE: Division of Meteorology, Pretoria (Bisschop, J. H. R., *Personal Communication*).

b) *Arid Lowveld Bushveld.* This association occurs at the same altitudes and is similar to Lowveld Bushveld, except that *Themeda* is replaced as the dominant grass by *Digitaria* spp.

c) *Springbok Flats Turf Thornveld.* This vegetation type occurs on very flat land and varies from the basic open thornveld to, with overgrazing, dense thornveld. In the more open type the dense, coarse, tufted grassland includes *Ischaemum glaucostachyum, Sehima galpinii, Setaria woodii, Themeda triandra, Elionurus argenteus, Digitaria* spp., *Eragrostis* spp. and *Panicum* spp. with scattered trees of *Acacia karoo, A. arabica,* and *Ziziphus mucronata.* The dominant tree species in the dense thornveld are *Acacia heterocantha, A. arabica, A. gerardii, Dichostachys glomerata, Ziziphus mucronata,* and *Grewia flava,* with, between them, grasses of mixed types dominated by *Themeda* spp. and *Cymbopogon plurinodis.*

d) *Mopani Bushveld.* The chief occurence of this vegetation type is in the Limpopo valley as well as east of the Drakensberg in the northern Transvaal towards Portuguese East Africa. Typically there is a low, fairly dense growth of scrubby *Copaifera mopani,* associated with *Acacia* spp. (including *A. heteracantha*), *Combretum apiculatum* and *Sclerocarya caffra,* and with grasses such as *Anthephora pubescens, Brachiaria nigropedata, Bothriochloa insculpta, Eragrostis superba* and *Schmidtia bulbosa.*

e) *Kalahari Thornveld.* In the western Transvaal, western Orange Free State and adjoining parts of the Cape Province and Bechuanaland, this type of bushveld is found on deep, loose sandy soils overlying calcareous tufa. The trees and shrubs consist of *Acacia giraffae,* and other *Acacia* spp., *Tarchonanthus camphoratus, Grewia flava,* etc. and the more important grasses include *Themeda triandra, Eragrostis* spp., *Aristida* spp., *Cymbopogen* spp. and *Cynodon* spp.

f) *False Bushveld.* In the midlands and eastern districts of the Cape Province the original Eastern Province Grassland has become invaded by thorntrees. Typical trees and shrubs are *Acacia karoo, Scutia myrtina, Copparis citrifolia* and *Gymnosporia polyacantha,* and the dominant grasses are *Sporobolus fimbriatus, Digitaria eriantha, Eragrostis curvula, Cymbopogon plurinodis, Themeda triandra,* etc.

Physical characteristics of the breed

The original Hottentot cattle from which the Africander breed is derived appear to have shown a considerable variation in type and color. Early accounts refer to these cattle as being lean and gaunt in appearance and prints dating from early colonial times show tall, long-legged cattle represented as being humpless but with heads and horns similar to those of the Africander cattle of the present day.

Since the formation of the Africander Cattle Breeders Society selection has been directed towards obtaining uniformity of conformation and coloration, and only animals meeting the type requirements have been registered by the South African Studbook Association. Selection for a powerful, free-striding type of trek-ox has been superseded by selection for beef production under the prevailing open range conditions of the natural habitat of the cattle.

The modern Africander as admitted to the herdbook (Figures 98 and 99) is a strongly built, long-bodied animal with a good spring of ribs, fair depth of chest and strong, well-placed limbs. The head is coffin-shaped when viewed from the front, with the greatest width over the eyes and with the forehead and face measuring respectively two and three-fifths of its length. The supra-orbital arches are well developed, especially in bulls, giving the eyes an appearance of smallness. The forehead is flat and diminishes in width to a fairly narrow, rounded poll. The profile of the head is convex with the highest point over the eyes and with the poll lying well back. The face diminishes only slightly in width to the strong, broad and deep muzzle. The horns, in their classical form, come from the skull direct without pedestals and grow spirally in a downwards and backwards direction, then turn upwards and forewards and finally, in mature animals, again backward. The line of growth of such classical horns is sideways and downwards below the line of the poll and behind the plane of the forehead. Horns, the direction of growth of which is more upright are, however, quite common, as are those which do not show the spiral twist. There is some indication that the horns tend to become shorter and lighter with improved feeding and management. All Africander horns are smooth and dense of fiber, oval in cross section and usually show a distinct posterior ridge. The ears are relatively small and are placed horizontally below and slightly behind the horns.

The neck is strong, of medium length and is usually carried horizontally or lower. The muscular cervico-thoracic hump is massive in the male but less so in the female. Its profile runs upwards and backwards at an angle of 30 to 35 degrees and drops on to the withers at an angle of about 45 degrees. The dewlap is well developed. It

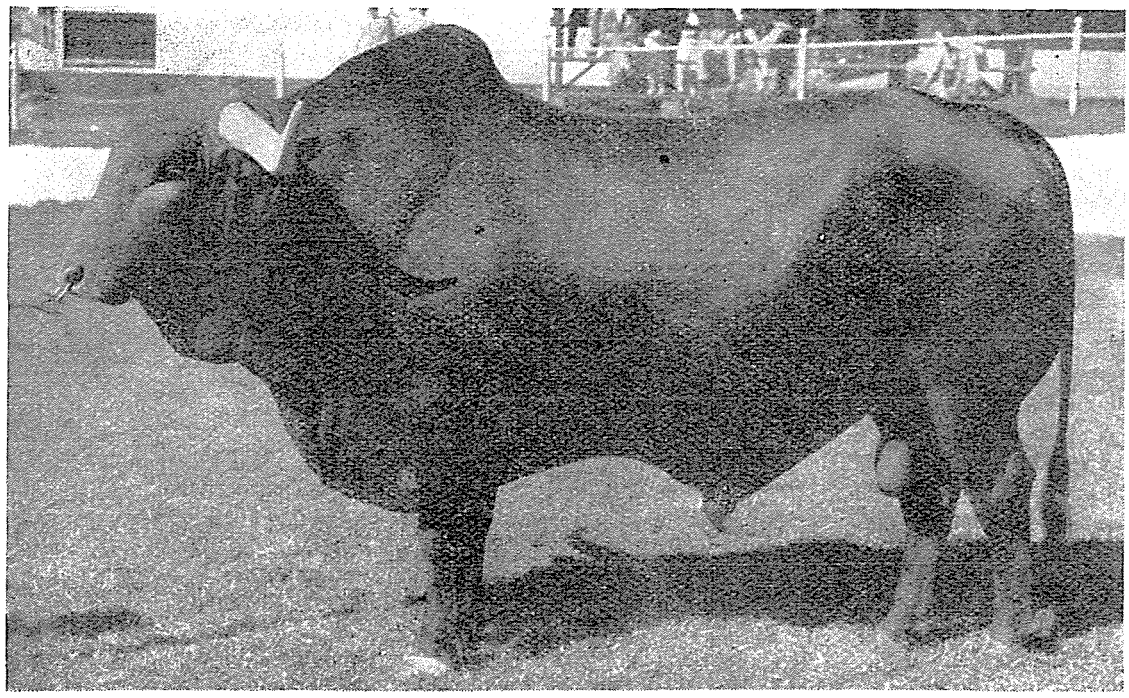
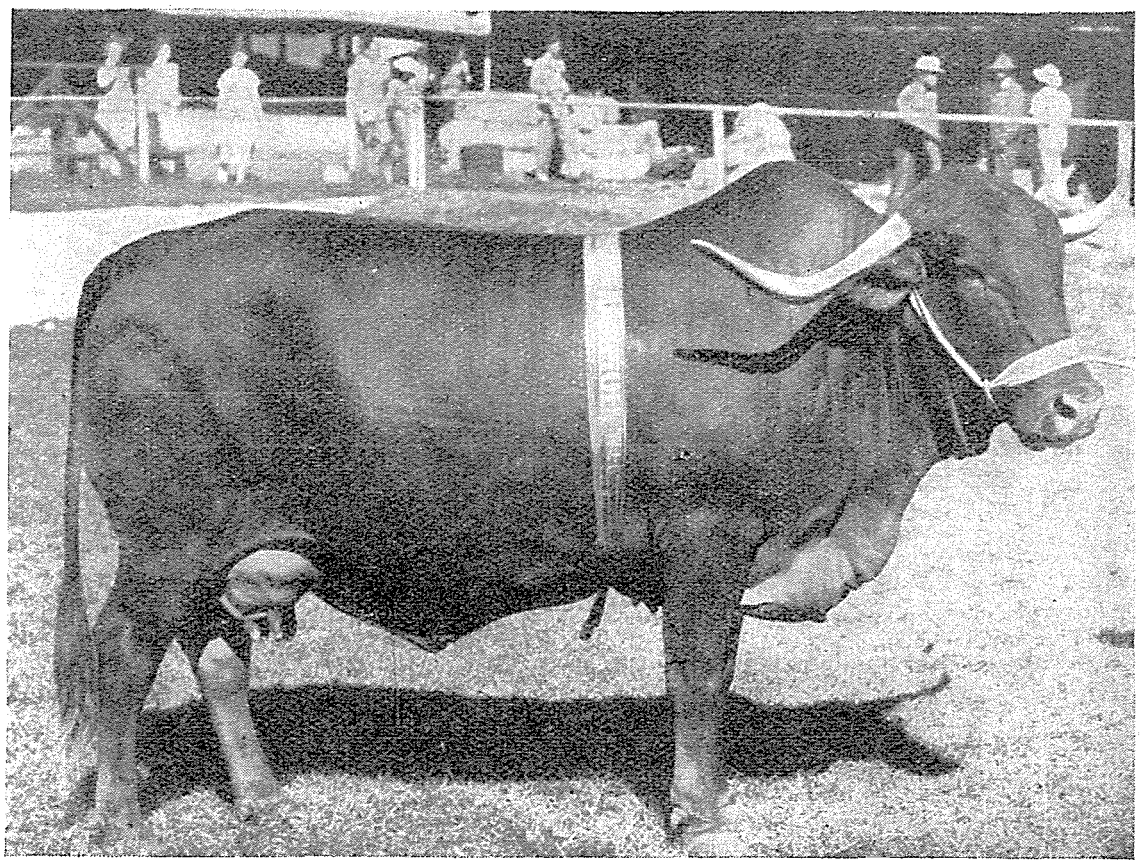


FIGURE 98. *Africander bull.*

FIGURE 99. *Africander cow.*

Courtesy of *Farmer's Weekly*



starts as a double fold just behind the chin but within a few inches becomes a single fold and then, after a slight notch in the region of the throat runs deep, but without fulness or much tendency to show folds, to terminate between the front legs without joining the umbilical fold.

The shoulders are of good length and slope, well muscled and very well attached to the neck, withers and chest. Shallow crops are not often seen. In general the body is sufficiently wide and deep but the length of the legs of many animals gives them an appearance of shallowness. There is a distinct contrast in the conformation of the body between the old draft type and the more recently developed beef type of Africander. In the former the well-developed thoracic vertebral spines produce a rather narrow roofy back, running upward and forward to the hump while the loin, which also tends to be roofy, slopes upwards to the rump, so that the topline is hollow as seen from the side and lacks development of the "eye" (*longissimus dorsi*) muscles. In the latter the thoracic vertebral spines are not prominent and the topline is straight, wide and full with well-developed "eye" muscles, particularly in the loins. The ribs, too, are well sprung so that the chest, as compared to the older type, is considerably rounder in cross section. In both types the abdomen is well developed. In bulls and steers there is a moderate development of the umbilical fold.

The hindquarters tend to be light. As a consequence of the prominence of the sacrum, the rump is roofy, rather lean of musculature, of fair length but considerable slope. In some individuals the hookbones tend to be too wide and high set, and this, combined with the tendency of the pinbones to be excessively close together, results in the rump being triangular so that there is a cow-hocked stance and gait of the hind limbs. The buttocks are full and round but the outer thighs tend to be overlean. There is a characteristic notch in the sacrum just in front of the tail-setting which is relatively high. The tail is long and slender with the vertebrae visible down to the hocks.

The legs, which are well placed, small and clean of joints and light but dense of bone, are comparatively long in the old trek type but shorter in the modern beef animals. The feet tend to be large and are of very dense, hard horn. The gait is free and active.

The hairy coat consists of both outer (medullated) and inner (non-medullated or woolly) coats. Although the inner coat is seldom in evidence, it can be thrown up quickly when climatic conditions demand its extra protection. The coat coloration includes, in different individuals, the whole range between red, through golden-yellow and yellow, to gray. For purposes of registration, only the various shades of red are recognized, although white is permitted on the udder and scrotum and on the underline. Black in the coat or on the horns or hoofs

constitutes a disqualification. The hide is fully pigmented and is amber or brown in color. The horns are flesh-colored to creamy white, with amber tips. The hoofs are amber-colored. The muzzle varies between flesh color and light amber (Bisschop, J.H.R., *Personal Communication*).

TABLE 130. – AVERAGE MEASUREMENTS OF AFRICANDER CATTLE AT ARMOEDSVLAKTE RESEARCH STATION

	No. of animals	Age, years	Length of body, cm.	Height at withers, cm.	Height at hooks, cm.	Width between hooks cm.	Heart girth, cm.	Depth of chest, cm.
Males	12	2.0	147	131	134	44	183	68
	12	4.2	164	140	140	51	212	70
	10	6.1	169	139	139	52	216	80
	5	8.1	173	141	141	52	216	81
	3	10.1	169	141	143	51	218	80
Females	25	1.2	117	111	117	34	142	53
	25	2.1	131	121	126	42	167	61
	25	3.2	139	125	129	45	170	64
	25	4.2	144	128	133	46	179	66
	30	5.0	145	127	131	48	180	67
	25	6.2	148	128	132	48	184	68
	23	7.2	146	130	132	49	184	69
	12	8.2	149	131	132	48	184	69
Oxen	25	1.2	118	114	120	33	146	55
	25	2.2	132	124	129	38	165	61
	25	3.1	149	132	137	46	185	69
	21	4.1	157	139	142	53	202	74
	16	5.2	164	143	145	56	207	75

SOURCE: Data provided by the Director of Veterinary Services, Onderstepoort, Pretoria (Bisschop, J. H. R., *Personal Communication*).

The average hide thickness, taken behind the shoulder in line with the tuberosity of the scapular spine, of 190 cows and heifers at the Armoedsvlakte Research Station was 0.59 cm., that of 112 oxen, 0.62 cm., and that of 42 bulls, 0.67 cm. (Bisschop, J. H. R., *Personal Communication*). Bonsma (1949) reported a mean skinfold thickness of four cattle as being 1.10 cm. on the shoulder and 1.60 cm. over the thirteenth rib. Eight Africander cows of average liveweight of 1,104 lb. at an average age of 5.6 years gave wet hides of a mean surface area

of 56.67 square feet, and mean weight of 84 lb. Twenty-three steers, of average age and fasting liveweight of 3.3 years and 1,031 lb., gave hides of mean weight and surface area of 93 lb. and 57.76 square feet, while eight steers of an average age of 5.9 years and liveweight of 1,493 lb. gave hides of mean weight and surface area of 106 lb. and 66.56 square feet. A group of 12 older steers (mean age, about 13 years), with an average liveweight of 1,430 lb., gave hides, the average weight and surface area of which were 111 lb. and 66.57 square feet (Bisschop, J. H. R., *Personal Communication*).

Bonsma (1949) measured the diameters of hairs from the coats of Africanders and exotic cattle, and found that Africander hairs measured on the average 53 μ as compared with 30 μ for animals of the British beef breeds.

TABLE 131. – AVERAGE LIVEWEIGHTS AND BODY MEASUREMENTS OF AFRICANDER CATTLE AT THE MARA RESEARCH STATION

	Age	Live-weight, lb.	Length of body, cm.	Height at withers, cm.	Height at hips, cm.	Chest girth, cm.	Depth of chest, cm.
Females	1 year	482	115	113	108	136	46
,,	2 years	779	140	130	126	164	61
,,	mature	1 190	154	134	132	187	68
Males	mature	2 000	175	142	146	224	76

SOURCE: Bonsma *et al.*, 1953.

The average birthweight of 246 male calves at Armoedsvlakte Research Station was 66.7 lb., and that of 267 female calves, 60.5 lb. (Bisschop, J. H. R. *Personal Communication*). Bonsma (1949) gave 67 pounds as the average birthweight of Africander calves at the Messina Experimental Station. The same author (1955) has given the following liveweights for Africanders at different stages of growth: at 1 year, 440 lb.; at 2 years, 815 lb.; and at 2 ½ years, 875 lb. (means of 4 observations). He gave the average weight of a mature Africander cow as being 1,188 lb., with an average height at the withers of about 130 to 140 cm.

Average measurements of Africander cattle at the Armoedsvlakte Research Station are given in Table 130, and average liveweights and measurements obtained at the Mara Research Station in Table 131.

Bonsma (1955) found that the average body temperature of Africander cattle at the Messina Research Station at about an hour before sunrise was 100.78° F. ± 0.67.

Functional characteristics of the breed

Heifers at Armoedsvlakte Research Station calved for the first time at about 3 years of age. The average duration of 566 gestations at the same station was 291 days with a range of 283 to 299 days. At Armoedsvlakte, 92 heifer calves were born to every 100 bull calves (Bisschop, J. H. R., *Personal Communication*).

Joubert (1952) reported a twinning percentage of 0.083 from data obtained from the Africander herdbook, while at the Mara Research Station, during the period 1935-1951, 0.287 percent of 2,093 births were twin calves. At Armoedsvlakte, 0.47 percent of the Africander calves born in the period 1926-1956 were twins, as compared with 0.48, 0.82, and 0.18 for the Friesian, Red Poll and Sussex births at the station, or 0.51 percent for the exotic breeds taken together (Bisschop, J. H. R., *Personal Communication*).

Bonsma (1949) has reported that Africander bulls at the Mara Research Station had an average serviceable life of 8 years and 10 months.

Africander cows normally give sufficient milk to rear their calves well. Cows have been known to give 4 to 5 gallons of milk daily for a few weeks after freshening, but these are exceptions. As a rule production is low and lactations rarely last more than 9 months.

Bonsma (1949) gave 10.8 lb. as the average daily milk yield of Africander cows over 10 months. The same author (1955) found the mean daily milk production of 83 Africander cows to be 11.7 lb. over a 23-week period. He also reported that, at the Mara Research Station (in Northern Transvaal), 50 Africander cows weighed 1,297 lb. on the average at the beginning of lactation and 1,003 lb. at its conclusion; a weight loss of 22.7 lb. as compared with 23.8 percent for the whole experimental group which included Hereford and Africander x Hereford crossbred cows. The latter percentage would probably have been higher if the calf mortality amongst the Herefords had not been approximately 10 percent greater than among the Africander and crossbred cows, so that a number of Herefords dried up soon after calving and lost less weight than they would have done if their calves had lived to weaning age.

Butterfat percentages of 5 and 6 have been obtained.

Bonsma (1949) found that Africander cattle were able to walk at least 16 miles and, on one occasion, 40 miles in 12 hours with the maximum atmospheric temperature reaching 94° F. and that they were very much better able to do without water over periods of 24 to 48 hours than were cattle of the exotic beef breeds.

Africander cattle are today maintained primarily for beef production. Joubert (1953) considers the breed particularly suited for this

purpose in low rainfall subtropical savannah areas where their ability to withstand high air temperatures and droughts makes them more successful than imported European breeds.

At the Johannesburg Fat Stock Show in 1948, 12 Africander steers averaged 60 percent dressed weight and in 1950, 8 two-tooth steers of an average liveweight of 812 lb. dressed out at 58.1 percent. Four steers, of which three showed 4 teeth and a fourth only 2 teeth, were fattened at the Potchefstroem College of Agriculture in 1949. They averaged 1,150 lb. liveweight and dressed out at 64 percent (Opperman, 1950).

Fifteen Africander steers of approximately 3 years and 4 months of age which had been maintained on natural grazing at Armoedsvlakte were slaughtered at Onderstepoort at the end of the summer of 1956, after a 60-hour train journey. The average liveweights of the cattle at the farm and the abattoir were 1,183 lb. and 1,056 lb. respectively, representing a loss during transit of 127 lb., or 10.7 percent of the farm weight. The average warm carcass weight was 609 lb., or 57.7 percent of the liveweight on arrival at the abattoir. Seven of the carcasses were graded " Super," seven " Prime," one I, and none in the grades II or III (Bisschop, J. H. R., *Personal Communication*).

When five Africander sides of beef were analyzed into fore- and hindquarters, the following mean data were obtained: weight of side, 298 lb., weight of beef, 258 lb.; percentage of beef, 87; weight of bone, 40 lb.; percentage of bone, 13; weight of forequarter, 162 lb., or 54.5 percent of beefside; weight of beef in forequarter, 138 lb. (85 percent of forequarter weight); weight of bone in forequarter, 24 lb. (15 percent of forequarter weight); weight of hindquarter, 136 lb. (45.5 percent of weight of beefside); weight of beef in hindquarter, 120 lb. (88 percent of weight of hindquarter); weight of bone in hindquarter, 16 lb. (12 percent of weight of hindquarter) (Bisschop, J. H. R., *Personal Communication*).

Bonsma (1938) has demonstrated that whole coat colors in the Africander are inherited epistatically, the darker being dominant over the lighter. The same authority (1956) has drawn attention to the occurrence of hereditary faults in the breed including testitular hypoplasia, straight hocks, pigeon toes, wry tail, and coarse hair.

Crosses with other breeds of cattle

The Africander has been used extensively in southern Africa (i.e. in the Union of South Africa, the Rhodesias and, to a lesser extent, Nyasaland) both for grading up inferior types of undifferentiated native cattle and for crossbreeding to European beef breeds. The

crossbred European x Africander cattle have shown marked hybrid vigor in the first generation, but higher grades by European bulls have failed to withstand the adverse environmental influences of the ranching areas and have tended to show negative adaptatory changes in growth, production and reproduction.

Work is in progress at the Mara Research Station on a long-term project of fixing a new breed of beef cattle, to which the tentative name of Bonsmara has been given, the individuals in which have $^5/_8$ Africander and $^3/_8$ Shorthorn in their ancestry. These cattle, which show the superior beefing abilities of the Shorthorn while retaining the hardiness and resistance necessary to withstand the climatic, nutritional, disease and management conditions found in the ranching areas of southern Africa, have done very well at Mara and are now being tested in other ranching areas of the Union and Southern Rhodesia. The average liveweight of yearlings in the herd at Mara has been 490 lb., and 40 percent of 8-month-old animals had liveweight of 600 lb. off natural pasture. A calving percentage of 87 was obtained from about 800 cows on open range. Cows in this herd produced, on average, appreciably more milk in an 8-month lactation period than either purebred Africanders or Herefords (Farmer's Weekly, 1956; Bonsma, 1956; Bisschop, J.H.R., *Personal Communication*).

Rhoad *et al.* (1945) reported an experiment at the Iberia Livestock Experiment Farm, Jeanerette, Louisiana, in which Africander x Aberdeen-Angus calves were compared with Aberdeen-Angus, Zebu, and Zebu x Angus. The Zebu bulls were of Kankrej breeding. The average birth and 6-month weights for the Africander x Angus calves were 70.8 lb. (46 observations) and 379.3 lb. (39 observations) as compared with 60.1 and 324.5 lb. for Aberdeen-Angus, 78.1 and 397.5 lb. for Zebu, and 72.8 and 385.0 lb. for Zebu x Angus calves. The mean birth and 6-month weights for the whole group were 72.3 and 381.2 lb. respectively.

Performance in other areas

Africander cattle were exported to the United States in 1931 and to the Philippines in 1937. The results of the crossbreeding in the United States have been given above. The second world war caused the loss of the Africanders bought by the Philippine Government. A few bulls were also imported into the " White Highlands " of Kenya where their crosses with the Boran cattle proved to be no better than the purebred Borans. Four bulls and two cows are maintained for experimental crossbreeding at the National Cattle Breeding Station, Belmont, Queensland, Australia (CSIRO, 1956).

Sources of breeding stock and information regarding the breed

In 1951, rather more than 37 percent of the 109,542 purebred cattle registered by the South African Studbook Association (about 40,550) were Africanders, while close to 30 percent of the cattle owned by Europeans in the Union of South Africa were of Africander type. *The Economic and Statistical Review of Southern Rhodesia* reported that, in 1952, no less than 24,272, or almost half, of the purebred cattle of Southern Rhodesia were Africanders, while 300,571 of the 488,798 cattle were Africander grades.

Further information on the Africander breed can be obtained from:

The Africander Cattle Breeders Society of South Africa, 17 Hill Street, Bloemfontein.

The Director of the Division of Animal Husbandry and Dairying, Department of Agriculture, P.O. Vallis, Pretoria, Union of South Africa.