

The Transkeian Director of Agriculture quotes the following figures for purchases through the influence of Demonstrators (*vide* Annual Reports)—

	Vegetable Seeds. (Packets).	Fruit Trees.	Fertiliser (Tons).
1938.....	1,099	1,287	1,069
1940.....	1,379	641	980
1942.....	2,398	1,349	2,371
1944.....	1,126	984	1,573

In some districts, Alice in the Ciskei being a good example, water from soil erosion dams is used to irrigate vegetable patches. In other areas where exactly the same facilities are available little is even attempted.

(iv) Methods of Cultivation.

62. One of the greatest changes in agricultural practice has been the substitution of the plough for the hoe. This is not meant to imply that the hoe has been entirely superseded—the bulk of the population still use it. But the plough has made cultivation easier. At the same time it has reduced contour terracing, brought about up-and-down ploughing and aided erosion. (The old Imincele or contour grass banks of the Zulus are rarely met with nowadays.) It has caused cereals to play a more important part in agriculture, which has, in turn, had a detrimental effect on the land and on the nutrition of the people. It has tended to emphasise the economic as against the purely social value of cattle. It has increased the man's share in the tasks of cultivation.

The last point has repercussions in many spheres. Thus one of the factors responsible for the recurrent mining and industrial labour shortage during the spring (ploughing) months is the return home of the Native males. Annexure V, showing the number of Natives employed on the Witwatersrand Gold Mines at the end of each month for 1937/43, illustrates this.⁽¹⁾

It also raises the question as to what effect migration of labour has on agricultural practice in the Reserves. There is, of course, an element of truth in the statement that it has no effect because the Native male in his original setting was not a cultivator, the tilling of the fields, the sowing and the harvesting being left to the women. As a result, so the argument runs, even when the Native man is at home to-day he does nothing. **Apart from the fact that this sweeping statement is not always true, the Council doubts whether a sound agricultural system, as distinct from a primitive semi-subsistence system, can be built up with such a considerable proportion of the adult male working force absent.**⁽²⁾

63. The same field is usually cultivated for several successive seasons, until it shows signs of exhaustion. It is then left lying fallow, while new land is cleared and worked. Ploughing usually starts after spring rains. Apart from ploughing, now increasingly done by men, other cultivation is done by women using hand hoes. Planters, harrows, cultivators and other large items of equipment are few and far between, though the demand for them is increasing.

64. According to the 1936-37 Agricultural Census the distribution of ownership of ploughs, wagons and trolleys, among Native families in the Native areas of the Union, was as follows:—

TABLE VIII.—Native Areas—Number of Native Families per Plough, Wagon and Trolley, 1936/37. (a).

	1 Plough to— (Families)	1 Wagon and trolley to— (Families)
Cape.....	2.4	38
Natal.....	3.4	79
Transvaal.....	2.6	16
O.F.S.....	2.9	14
Union.....	2.6	33

(a) Adapted from Table XVI, page 113 of U.G. 18/1939.

In 1934, the Director of Agriculture for the Transkei estimated there were 100,000 ploughs in the Transkeian Territories [Pim's figure for 1930 was 78,000⁽¹⁾]. The details regarding the Ciskei in 1937 were as follows:⁽²⁾

- 1 plough per 2.6 families;
- 1 harrow per 13 families;
- 1 planter per 81.4 families;
- 1 cultivator per 31.5 families;
- 1 wheeled vehicle per 27.2 families.

Sharing of ploughs and implements is said to be uncommon, though hiring (often on the basis of a share of the crop) is fairly frequent.

65. Seed selection is rare, and seed is still sometimes sown broadcast. It is undoubtedly true, however, that, partly due to the activities of Departmental officials, sowing in rows is becoming increasingly common. In addition (as was mentioned in paragraph 60 above), the policy adopted by the Native Affairs Department at the outbreak of war of assisting Native producers to acquire both crop and vegetable seeds by selling at subsidised prices has met with a ready response, and a variety of seeds have been sold.⁽³⁾

66. Natives, especially the more enlightened, are beginning to use artificial fertiliser, and since the war considerable quantities have been sold on the same subsidised basis as seeds.⁽⁴⁾ To induce them to use manure and prepare compost is, however, proving to be a more difficult task. Considerable attention is being paid to this problem on Irrigation Settlements, and Scotch carts have been made available for cartage purposes. It is a growing practice, especially in the Transkei and Ciskei, to use cow dung, maize stalks and trash as fuel and thus further deplete the soil.⁽⁵⁾ In wooded country, bushveld, thornveld or near plantations where timber is more plentiful (e.g. Mapumulo, Potgietersrust or Piet Retief) dung is available as manure, but even in some of the better-endowed areas the constant search for building material and fuel is rapidly depleting natural resources. In addition, manure is frequently carted away from the Reserves and sold to European farmers.

67. Weeding is usually done by the women. Hand-weeding or hoeing is the usual practice, though in a few instances animal-drawn cultivators are in use. To teach the Native to weed adequately is proving a most difficult task. He also almost completely fails to grasp the importance of thinning, for, like the contemporaries of Jethro Tull, he cannot see how fewer plants can produce a larger crop. Scaring away birds, buck and other animals during the growth of the crop is an important occupation of the children.

⁽¹⁾ Pim: "A Transkei Enquiry," page 48.

⁽²⁾ Review of the Activities of the Native Affairs Department, 1943/44, page 5.

⁽³⁾ *Ibid.*, page 8 *et seq.* The subsidy was 45 per cent. from 1940 to 1944, 20 per cent. for 1944/45 and ceased on the 31st March, 1945.

⁽⁴⁾ See previous footnote and paragraph 60 above.

⁽⁵⁾ See Section on "Forestry" below.

⁽¹⁾ See also Report of the Inter-Departmental Committee on the Labour Resources of the Union (1930), especially page 9.

⁽²⁾ See Table XXXIV relating to "Absentees from the Reserves."

68. Pumpkins, green mealies, etc. are gathered and consumed as they ripen. The agricultural season ends with the final harvest, when the ripe ears of kaffircorn and maize are broken off by hand, loaded into large baskets and stacked in temporary granaries until thoroughly dry. The stalks are left standing as food for the cattle. Other crops, such as peas or beans, are generally gathered about the same harvest time.

69. Threshing, shelling and husking are usually carried out by hand. The Native Affairs Department has, however, rendered assistance in the bigger producing areas, e.g. by threshing wheat (Nebo, Taungs, etc.); by grading, weighing and railing maize (Lichtenburg).

(v) **Storage.**

70. The traditional arrangements for storing grain not immediately required in pits, baskets or thatched huts (depending on tribal practice) have been considerably upset by sale to the trader. Storage and subsequent resale is an important function of the trader. Though the introduction of marketing control has limited the once considerable profits made by many traders, it is significant that there are constant complaints that the present margin, particularly in the case of maize, does not provide sufficient compensation for ordinary trade risks such as loss, handling small quantities, etc. *plus* the tediousness of control.

Agricultural Officers in a number of areas report the increased use of galvanised iron storage tanks—a practice which the Department is attempting to further—but this practice is still comparatively rare. The need for storing is so important that it warrants special attention, particularly because there are certain technical difficulties associated with it.

(vi) **Crop Yields.**

71. Primitive agricultural methods result in low yields. For instance, a fair average estimate by Agricultural Officers puts the average grain yield at about two bags per acre. Double this should easily be within the Natives' reach. Progressive Native growers reap considerably more; e.g. in the Lichtenburg area, where many produce maize on a profitable commercial scale, there was a surplus of 30-40,000 bags of maize and 20-30,000 bags of kaffircorn in 1943-44.⁽¹⁾ European farmers, Agricultural Schools and Native Agricultural Demonstrators produce four to six bags per acre and more.⁽²⁾

Chart I, which compares average annual maize yields on Native Demonstrators' and owners' plots for 1939-44, provides some idea of the increase in yield it should be relatively easy to secure by using improved methods. The yields of "owners' plots" in this chart are above the average of Native-worked lands. These "owners" are, generally speaking, either better-off Natives who do not have to go out to work, or Natives who happen to be at home for the season concerned and who are thus able, if not always willing, to look after their land. The usual practice of the Native Agricultural Demonstrator is to secure the co-operation of an owner who allows him to tend a section of his (the owner's) field, this section serving as an object lesson.

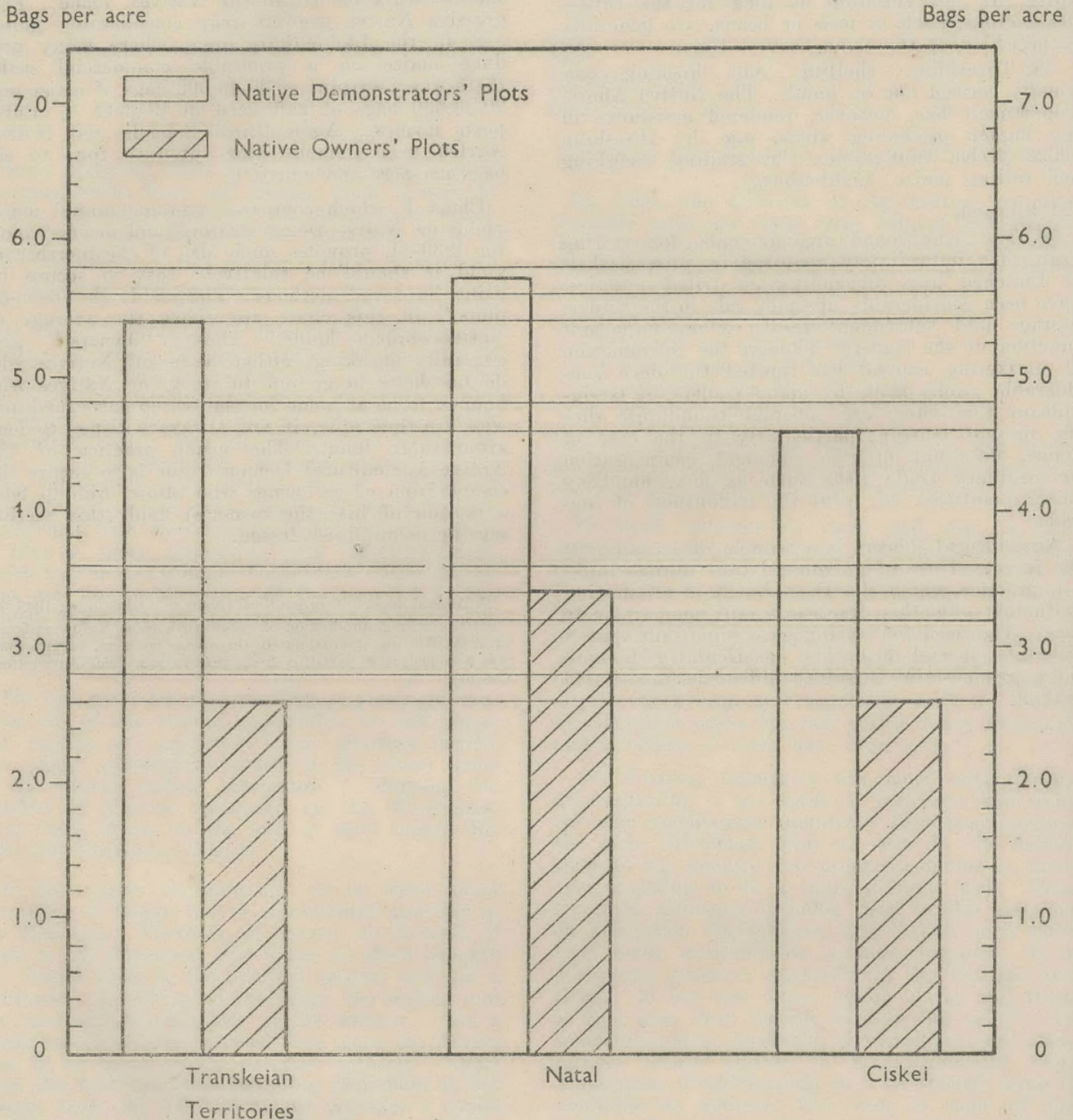
(1) Annual Report of Agricultural Overseer, Lichtenburg, 1943/44.

(2) The average production of maize per acre on European farms in 1935/1939 was approximately three bags per acre, though there was a considerable variation from year to year (*vide* Agricultural Census).

CHART I.

Comparative Average Maize Yields in Bags per Acre (Native Areas), 1939-1944.

(Based on Reports of Assistant Directors of Native Agriculture.)



12. As a result of these low yields the quantity of foodstuffs available per head is often very low. Tables V and VII illustrate this. The broken nature of the country in which most of the Reserves lie and the resultant variations in soil, climate and rainfall, together with the considerable fluctuations in annual production illustrated in Chart II, make generalisation difficult. It is significant, however, that seventy out of eighty-nine Native Affairs Department's Agricultural Officers, scattered over all the Native areas, reported in 1943 that in their opinion the crops grown in their area did not provide sufficient food for the inhabitants. Their answers were qualified by remarks such as "enough could be grown if the cultivators were more enterprising," "they rely on purchases made with the men's earnings," or "food supplies are adequate in summer, though milk is short during most of the year."

Supplies in most Reserves have to be augmented by purchases from local stores. The shortage of

food is felt particularly during the "starvation months" before the reaping of the new crop. Dr. Kark has found that school children in the Polela area show a periodic loss of weight between August and October.⁽¹⁾ Such a shortage is common in thriftless primitive communities, and, writing in 1907, Bryant says that among the Zulus "in perhaps eight families out of ten there is a normal annual recurrence of severe dearth throughout the spring or early summer months of August, September and October, and even later. During the whole of this period, members of all such families, children as well as adults, have to be usually content with but one full meal a day, generally taken in the evening time. This, then, is the period when they have recourse to the amaThebe and the other herbs of the veldt".⁽²⁾

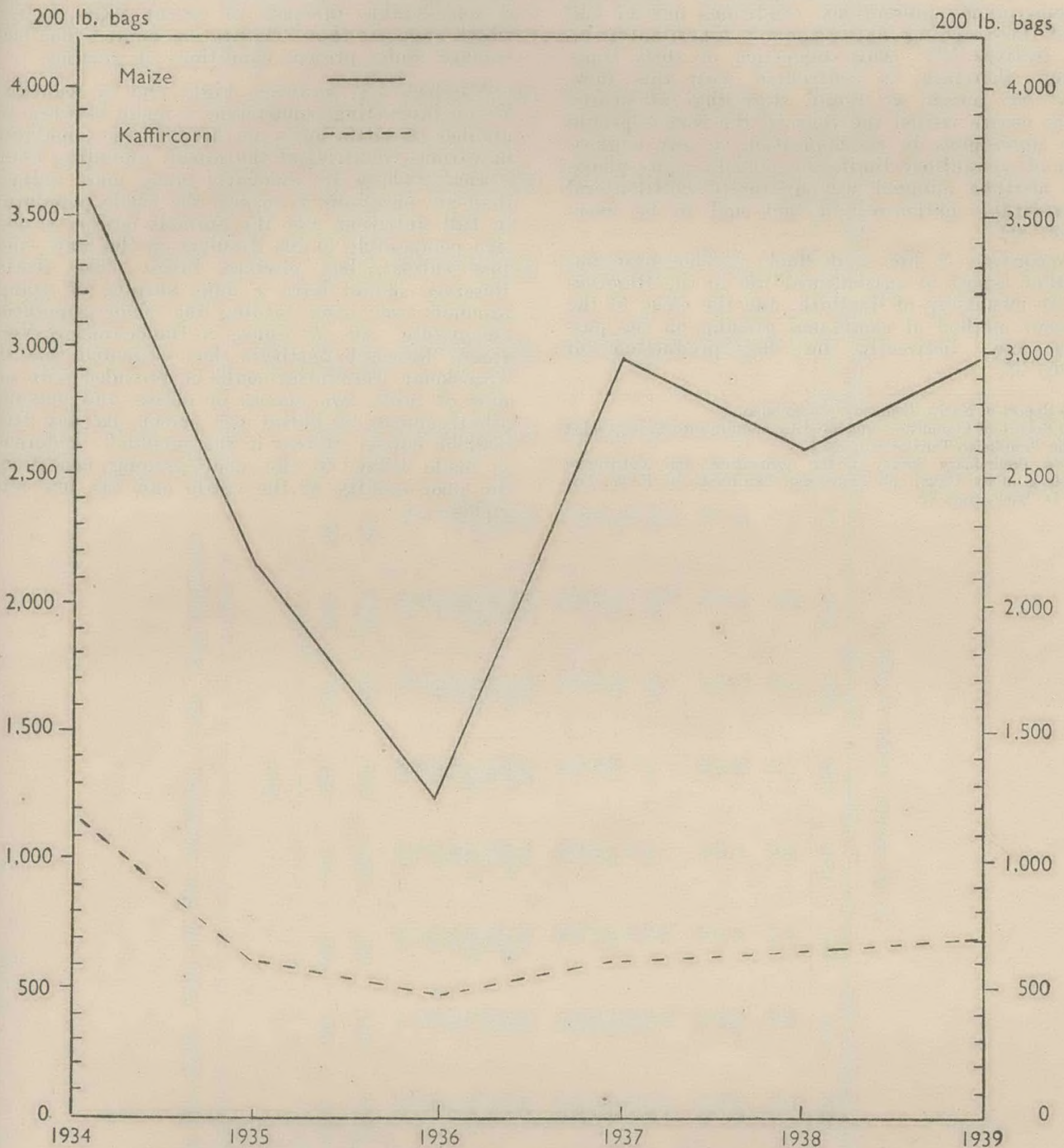
(1) Annual Report of the Polela Health Unit, 1943/44.

(2) "Native Foodstuffs and their Preparation," by Rev. A. T. Bryant, page 9.

CHART II.

Maize and Kaffircorn Production in Native Areas (Agricultural Census.)

(Based on Table IV.)

**(b) Animal Husbandry.****(i) Importance of Livestock (particularly Cattle).**

73. To the majority of tribes living in the South African Native Reserves, cattle are extremely important not only for economic but also for social and religious reasons. While this is generally true, there are minor differences: for example, among the Lovedu in the Northern Transvaal "the primary value to the Natives of cattle is not economic, but social; they regard cattle as a food only in the last resort, though there is no taboo against killing them. Ownership of cattle is not the chief or even a very important method of reckoning status. Cattle are not subject to as many taboos as elsewhere in South Africa, e.g. they may be herded by girls or women."⁽¹⁾ Among the Pondo, however, "cattle are of primary economic importance. Meat and milk are prized foods and are considered much more savoury than grain. Before contact with Europeans, clothing was made of hide, supplemented by the skins of goats and

wild animals, and cattle were the principal medium of exchange and the medium in which court fines were levied. Wealth was accumulated mainly in cattle. Further, cattle are the means of keeping on good terms with the ancestral spirits, and so of securing health and prosperity, because the maintenance of good relations with the ancestral spirits depends upon making the proper ritual killings of cattle at various stages in the life of the individual, and in sickness. In folk-tales the hero is often saved by a miraculous ox. Cattle are also the means of obtaining sexual satisfaction, since a legal marriage cannot take place without the passage of cattle; the right to limited sexual relations is legalised by the passage of a beast, and the fines for illegal relations were levied in cattle. The possession of cattle gives social importance, for they are the means of securing many wives and adherents, and of dispensing hospitality and showing generosity, on which virtues status largely depends. Also the possession of cattle in itself gives weight and dignity to the owner."⁽¹⁾

⁽¹⁾ "The Realm of the Rain Queen," by E. Jensen Krige.

⁽¹⁾ "Reaction to Conquest," by M. Hunter, page 69.

74. The importance of cattle to the Natives has been stressed intentionally, because overstocking is so frequently suggested as one of the principal factors responsible for the rapid deterioration of the Reserves. "The conception of cattle has become under present-day conditions one of the most far-reaching anti-economic inheritances of the Natives."⁽¹⁾ Any suggestion of stock limitation, therefore, is confronted with this fact. "At the outset we would state that at nearly every centre visited the voice of the Native people was unanimous in its opposition to any suggestion of compulsory limitation; and in many places the attitude adopted was distinctly hostile, and considerable patience and tact had to be exercised."⁽²⁾

According to Fox and Back, "The most important aspect of agricultural life in the Reserves is the ownership of livestock, and the effect of the present method of communal grazing on the pasture and, indirectly, on the production of foods."⁽³⁾

(1) Report of Native Economic Commission.

(2) Report of Committee appointed to enquire into Overstocking in the Transkeian Territories, page 1.

(3) A Preliminary Survey of the Agricultural and Nutritional Problems of the Ciskei and Transkeian Territories, by F. W. Fox and D. Back, page 42.

(ii) Livestock Population.

75. Livestock population figures for a number of years are shown in Tables IX and X. It will be noted that in practically no instances is there a considerable increase in recent years, a fact which suggests that "saturation point" has been reached under present conditions of grazing.

Numbers are, however, high, and in Annexure VI an interesting comparison is made between the number of cattle units per head of the population in various countries of the world, including South Africa. There are evidently many more animals than are necessary to sustain the whole population in full nutrition, but the animals occupy a position comparable to the dwellers on the land—they just subsist, but produce little. The Native Reserves should have a huge surplus of animal products even after feeding the whole population adequately. Dr. D. Coles, of Onderstepoort Veterinary Research Institute, has estimated that the Transkeian Territories could be provided with one pint of milk, two ounces of cheese and one-and-a-half ounces of butter per person per day from 350,000 cows. Where is the surplus? Reference is made below to the poor grazing conditions, the poor quality of the cattle and the low milk yields.

TABLE IX.—Cattle, Sheep and Goat Population—Native Areas (Agricultural Census).

Region (a).	Cattle.					Sheep.					Goats.					Per head of population, 1936.		
	1927.	1930.	1934.	1936.	1939.	1927.	1930.	1934.	1936.	1939.	1927.	1930.	1934.	1936.	1939.	Cattle.	Sheep.	Goats.
	,000's	,000's	,000's	,000's	,000's	,000's	,000's	,000's	,000's	,000's	,000's	,000's	,000's	,000's	,000's			
Cape Province—																		
North Western.....	109	111	97	111	91	143	122	126	89	104	272	237	161	161	181	1.25	1.00	1.80
Herschel.....	34	32	15	20	35	95	94	39	44	62	49	43	24	33	58	0.56	1.22	0.90
Glen Grey—Queenstown.....	62	62	35	69	69	270	357	196	182	221	92	104	72	83	110	0.93	2.47	0.98
Ciskei.....	94	85	104	99	112	259	299	279	316	308	135	160	159	129	117	0.82	2.63	1.08
Transkei (total).....	1,387	1,569	1,455	1,548	1,573	2,800	3,197	2,091	2,461	2,428	1,238	1,197	780	897	803	1.40	2.22	0.81
„ Highlands.....	314	350	286	310	337	505	565	360	359	382	330	339	198	188	171	1.27	1.48	0.77
„ Midlands.....	607	642	608	657	670	1,697	1,879	1,194	1,427	1,432	563	517	342	421	370	1.36	2.95	0.87
„ Coastal.....	466	577	560	580	566	599	753	537	675	614	345	341	240	288	261	1.53	1.78	0.76
Natal (excluding Zululand)—																		
Highlands.....	105	120	124	126	135	33	35	30	28	31	81	80	73	59	62	1.25	0.28	0.59
Midlands.....	329	354	299	324	338	82	86	76	85	80	340	321	299	354	335	1.05	0.27	1.14
Coastal.....	125	134	128	137	139	16	15	16	20	21	66	60	59	66	50	0.85	0.12	0.41
Zululand (total).....	514	646	570	596	687	140	171	128	138	138	321	398	300	287	289	1.87	0.48	0.90
„ North.....	111	141	116	141	170	19	16	8	7	9	62	76	42	44	44	1.75	0.09	0.54
„ Inland.....	343	433	375	375	427	112	150	117	128	122	242	305	245	228	224	1.94	0.66	1.18
„ Coastal.....	60	73	78	80	90	10	5	3	3	6	18	17	13	16	21	1.80	0.07	0.35
Transvaal—																		
Central.....	164	185	120	141	181	35	45	40	51	60	63	87	54	97	95	0.61	0.44	0.84
Western.....	54	46	38	70	53	23	23	27	32	30	17	15	53	23	27	1.85	0.86	0.61
North and Eastern.....	386	462	413	342	401	55	63	83	75	83	283	371	413	357	412	0.78	0.11	0.81
Orange Free State—																		
East.....	25	20	7	13	19	62	54	13	20	25	10	11	7	7	7	0.71	1.05	0.36
Other Areas.....	80	79	61	57	66	103	114	157	60	65	137	136	100	75	87	—	—	—
TOTAL: All Native Areas.....	3,467	3,906	3,466	3,651	3,899	4,115	4,675	3,300	3,600	3,655	3,106	3,219	2,555	2,629	2,632	1.23	1.21	0.89

(a) For details of Regions see Table I.

TABLE X.—Pigs, Donkeys, Horses and Mules in the Native Areas (Agricultural Census).(a)

Region. (b)	Native Population 1936.	Pigs.		Donkeys.		Horses.		Mules.	
		1930.	1937.	1930.	1937.	1930.	1937.	1930.	1937.
Cape Province—									
North Western.....	89,200	1,000	4,300	18,000	20,900	4,000	5,300	—	100
Herschel.....	36,300	3,300	6,200	1,700	2,300	3,100	3,000	—	—
Glen Grey—Queenstown.....	73,600	9,100	13,400	2,000	2,300	4,700	4,700	100	—
Ciskei.....	120,200	7,000	11,000	2,200	2,100	8,100	8,000	—	—
Transkei (Total).....	1,107,100	180,100	167,400	8,900	12,100	126,100	116,800	200	200
„ Highlands.....	243,100	30,800	24,200	2,700	4,000	40,500	33,300	—	—
„ Midlands.....	484,100	80,200	78,400	4,000	5,800	55,300	52,300	100	100
„ Coastal.....	379,900	69,100	64,800	2,200	2,300	30,700	31,200	100	100
Natal (excluding Zululand)—									
Highlands.....	100,600	5,600	4,900	5,800	7,000	16,000	13,200	100	100
Midlands.....	309,500	15,200	18,900	20,900	27,900	8,700	9,700	—	—
Coastal.....	160,800	9,300	6,100	3,200	7,000	1,600	1,300	100	—
Zululand (Total).....	318,300	8,000	10,700	12,600	21,300	6,900	6,000	100	100
„ North.....	80,600	1,100	800	1,600	2,500	100	100	—	—
„ Inland.....	193,200	6,400	8,000	10,300	17,100	6,800	5,800	—	—
„ Coastal.....	44,500	500	1,000	800	1,800	100	100	—	—
Transvaal—									
Central.....	114,900	21,900	21,000	18,200	17,800	500	300	300	200
Western.....	37,700	2,900	4,000	3,300	5,400	700	1,000	100	100
North and East.....	439,300	41,400	40,300	56,600	67,800	800	400	1,300	900
Orange Free State—									
East.....	18,600	1,000	1,400	400	600	3,600	2,800	100	100
Other Areas.....	36,400	4,900	4,900	16,600	5,400	5,600	3,300	200	100
TOTAL: All Native Areas...	2,962,400	311,000	313,000	170,000	200,000	190,000	176,000	2,600	1,900

(a) A dash does not necessarily mean a total absence—numbers may be negligible. These figures are only collected for certain years.

(b) For details of Regions see Table I.

(iii) Unequal Ownership of Stock.

76. The figures showing the number of stock per head of the population in the last column of Table IX and in Annexure VI do not present the whole picture, as stock is unevenly distributed.

77. Actual figures regarding stock ownership are most difficult to secure, but such information as it has been possible to obtain is summarised in Table XI. It would have been an advantage if the actual number of stock owned could have been shown, but these figures could not be secured.

TABLE XI.—Distribution of Cattle Ownership, Native Areas.

Area.	Date.	Owners owning 5 head and less.		Owners owning from 5 to 25.		Owners owning more than 25.		Total owners.		Total Cattle.	Remarks re non-ownership.
		No.	Per-cent.	No.	Per-cent.	No.	Per-cent.	No.	Per-cent.		
Ciskei (a)— Kingwilliamstown.....	1944	1,866	42	1,371 (31 per cent.) own 6-10 head. 1,216 (27 per cent.) own 11 head or more				4,453	100		2,442 or 35 per cent. of local taxpayers own no cattle.
Keiskama Hoek.....	1944	33 per cent. taxpayers		38 per cent. of taxpayers				71 per cent. taxpayers			29 per cent. of taxpayers own no cattle.
Transkeian Territories (b)											
Umtata.....	1942	2,855	40	3,860	53	503	7	7,218	100	} 42,816	} There are approximately 70,600 families, so at least 44 per cent. own no cattle. (c)
Engcobo.....	1942	3,064	35	5,094	57	734	8	8,892	100		
Nqanduli.....	1942	1,880	31	3,635	61	471	8	5,986	100		
Elliotdale.....	1942	895	23	2,531	66	426	11	3,852	100		
St. Marks.....	1942	2,883	49	2,682	46	320	5	5,885	100		
Tsomo.....	1942	2,076	49	1,989	47	154	4	4,219	100		
Xalanga.....	1942	1,034	32	1,969	61	228	7	3,231	100		
Natal— Polela (d).....	1942	55	59	38	40	1	1	94	100	568	32 Homes (26 per cent. of total) owned no cattle.
Nongoma (e).....	1945	116	3	1,275	42	1,713	55	3,104	100	112,383	
Nqutu (e).....	1945	420	10	2,843	71	747	19	4,010	100	67,186	
Umlagi (Umbumbulu) (e).....	1945	2,522	49	2,569	49	64	2	5,155	100	35,912	
Transvaal (North)— Louis Trichardt (f)— Mpefu Location.....	1945	23	10	170	74	36	16	229	100	4,215	
Trust Farm "Dwarsspruit".....	1945	5	7	71	92	1	1	77	100	862	
Orange Free State— Thaba 'Nchu (before culling) (g).....	1939	586	39	875	58	44	3	1,505	100	—	
Thaba 'Nchu (after culling) (g).....	1944	1,245	60	822	39	18	1	2,085	100	—	

(a) Information from the Assistant Director of Native Agriculture, Ciskei.

(b) Information from the Chief Veterinary Officer, Umtata. These seven districts include parts of each of the three regions into which the territories have been divided in this Report and, at the same time, include about one-third of the total cattle, sheep and goat population.

(c) Mr. W. G. Mears (then Under-Secretary for Native Affairs). *Vide* Witwatersrand Mine Natives' Wages Commission Report, page 10. This assumes that all cattle owners are heads of families which is not necessarily the case.

(d) 1942-43 Annual Report of Polela Health Unit.

(e) Information supplied by Senior Veterinary Officer, Natal.

(f) Information supplied by Government Veterinary Officer. The figures are based on the numbers at each kraal for which one Native has taken the responsibility for dipping, etc. Variations in environment and density of population prevent these figures from being an absolutely true cross-section of the whole district.

(g) "Cattle Units." This area has accepted livestock limitation under Proclamation 31/1939. Information supplied by Senior Agricultural Officer.

Though these figures are probably subject to a large margin of error (owing to the difficulty of determining just who is the owner, the constant change of ownership and the *sis*a custom, i.e. the custom of placing cattle under the care of other individuals), they are sufficient to indicate the inequalities which exist.

For instance, in the two Ciskeian districts (Kingwilliamstown and Keiskamahoe), 30-35 per cent. of the taxpayers own no cattle; in the seven Transkeian districts (Umtata, Engcobo, Nqanduli, Elliotdale, St. Mark's, Tsomo, Xalanga) "44 per cent. of the families have no cattle at all, 20 per cent. own from 1 to 5 head, and the remaining 36 per cent. have upwards of five";⁽¹⁾ in the Umkomaas River valley at Polela 26 per cent. of the families owned no cattle. While it has been impossible to secure figures for all districts, there is no reason to assume that distribution of ownership is more equitable elsewhere. The distribution of stock among owners in the districts of Natal and the Transvaal shown in the Table bears this out. In the Rustenburg district, which is one of the wealthiest Native cattle areas, a few commoners own 200 head of cattle or more, and one chief runs 5,000-6,000 head on tribal land. Even here, however, many families have no stock at all. The Agricultural Officers in the Bulwer, Impendhle, Himeville districts of Natal reported that "stock, like land, is unevenly held, some possessing 100 head, others none."

78. The same inequality of ownership is, if anything, more pronounced in the case of small stock. In the seven districts of the Transkei referred to above "33,923 families, i.e. 47 per cent., have neither sheep nor goats, and of the sheep owners 13.39 per cent. own from one to five head, and of the goat owners 25.22 per cent. own from one to five head."⁽¹⁾ In one location, which was considered to be an average one for the Territories, three out of a thousand stock-owners owned 70 per cent. of the sheep and 50 per cent. of the cattle in the locations.⁽²⁾ **Evidently thousands of families in the Reserves not only own no land but also possess no stock.**

(iv) Livestock and Land.

79. It has already been suggested that increases of human and livestock population leading to increased pressure on land may be one of the factors responsible for the relative stagnation and decline in quality of the latter. The increase in cultivated land consequent upon the increase in human population has made even less land available for grazing.

80. Without management and capital, it is impossible to go on adding more and more stock to a fixed quantity of land. Because "overpopulation" is such a relative term, however (depending as it does on factors such as climate, natural resources, capital available, etc.), care has to be

⁽¹⁾ Witwatersrand Mine Natives' Wages Commission, Report, page 10.

⁽¹⁾ U.G. 21/1944, page 10.

⁽²⁾ Fox and Back, *op. cit.*, page 45

used in the use of "density" figures. Table XII is, at the same time, revealing. In it an attempt is made to indicate changes in human and livestock population density per square mile between 1926 and 1936. It also compares human and live-

stock densities of population. Finally, in the last two columns the "cattle unit" density in Native areas and a number of adjoining European areas is compared. It is notable that this density is markedly higher in the Native areas.

TABLE XII.—*Human and Livestock Population per Square Mile: Native Areas and Selected European Farming Areas.*

Region.(a)	NATIVE AREAS.				1939, "Cattle Units" per square mile (d).	
	Population per square mile.		Cattle Units per square mile.(d)		Native Areas.	Adjoining European Farms(e).
	1926 (b) (est.).	1936.	1926.(c)	1939.		
Cape Province—						
North Western.....	13.7	14.9	32.8	31.3	29.0	27.3
Herschel.....	55.4	53.2	96.1	60.2	94.5	95.0
Glen Grey-Queenstown.....	52.1	62.0	113.9	108.6	120.9	87.0
Ciskei.....	95.4	95.4	139.3	158.3	168.0	112.0
Transkei.....	71.5	79.5	159.4	168.6	168.0	—
" Highlands.....	58.3	65.4	132.3	122.5	131.5	114.3
" Midlands.....	72.5	79.8	176.2	177.1	177.8	—
" Coastal.....	82.5	91.8	159.2	196.0	188.9	—
Natal (excluding Zululand)—						
Highlands.....	67.0	83.3	109.7	135.4	144.0	82.7
Midlands.....	93.0	117.7	159.3	170.7	188.9	89.0
Coastal.....	145.0	196.0	173.2	198.1	177.8	—
Zululand.....	36.2	41.6	79.6	92.7	104.2	—
" North.....	21.4	23.1	36.5	48.6	52.1	—
" Inland.....	45.4	54.3	142.4	131.9	159.1	—
" Coastal.....	66.3	72.0	107.0	139.0	144.0	—
Transvaal—						
Central.....	61.2	64.5	105.1	105.9	131.5	33.5
Western.....	49.0	44.0	72.9	96.0	84.1	39.8
North and East.....	51.4	64.2	68.0	72.7	84.1	—
Orange Free State—						
East.....	50.0	46.8	101.1	55.3	70.3	—
SUB-TOTAL.....	56.6	64.6	109.5	116.0	—	—
TOTAL.....	50.2	57.2	96.2	101.5	—	—

(a) For details of Regions see Table I.

(b) The 1926 Native population has been estimated on the basis of the average annual rate of increase in each area.

(c) As the exact area of the individual Native Reserves in 1926 is not known the 1936 area (prior to the passing of Act 18/1936), has been used.

(d) "Cattle Unit" means one head of large or five head of small stock. (Proclamation 31 of 1939, Section 1.) Estimates have been made where exact figures are not available.

(e) A fairly comparable sample of European farms has been selected by taking the European occupied portion of magisterial districts partially occupied by Reserve Natives. No comparable statistics are available for the Natal coastal strip where the Europeans concentrate on sugar production. Zululand has also been excluded because the Europeans generally own the better agricultural portions of the land. North-Western Transvaal had to be left out because of large portions of Crown Land unoccupied and unsurveyed in many instances, thus making the area figures unreliable. Native-owned stock on the farms has been included.

(v) Methods of Animal Husbandry.

81. Though stock are so important to the Natives, there is no evidence to show that they have done anything out of the ordinary to improve their animals by breeding or making provision for fodder reserves to tide them over the winter months or periods of drought.⁽¹⁾ Through a mixture with more sensitive European breeds the pure Native indigenous stock such as the Zulu, Swazi, Pondo, Bavenda or Bapedi has largely disappeared. With few exceptions, such as in the Rustenburg Reserves, the majority of the existing animals are consequently poor, and unable to stand the rigorous (and deteriorating) conditions of Reserve life. More sensitive breeds would not stand these conditions at all.

82. European methods of agriculture have effected one major change in the form of veterinary regulations. Compulsory dipping, inoculation and other methods of treating diseases have probably reduced the stock mortality rate, but annual losses are still extremely high. Livestock losses in Native areas for the year 1937 are shown in Annexure VII. Total cattle, sheep and goat losses in this year amounted to 298,000

(8.3 per cent. of total holdings), 466,000 (12.9 per cent. of total holdings) and 280,000 (10.6 per cent. of total holdings) respectively. These losses are about twice as high as losses in the rest of the Union; a position which is all the more disquieting since losses by Europeans in the Union are altogether excessive. If cattle are valued at the extremely low figure of £4 per head the annual loss from them alone exceeds £1 million, though it should be remembered that a fair proportion are eaten, and hence add to food supplies.

83. As part of its stock improvement programme the Native Affairs Department has established camps in various areas where good quality sires (bulls, rams and stallions) are maintained in order that their services should be available for grading up Native stock.

84. Practically all the bulls are Africanders. There are a few instances where European dairy breeds are being introduced to a limited extent [e.g. Red Polls, Shorthorns and Frieslands in the Butterworth Betterment Areas; Red Polls and Frieslands (plus Africanders) at Thaba 'Nchu; Brown Swiss at Witziesshoek], but these are exceptional. Another exception is the attempt to improve the indigenous Zulu ('Nkone) strain by selective breeding at Vuma Experimental Farm, Eshowe.

⁽¹⁾ Annual Report of the Director of Native Agriculture, 1942/43, page 1.

The reason given by the Department for its policy is to use the Africander cross to form an improved base on which to use dairy and dual purpose stock when grazing conditions have improved. Though this is realised, it is contended that too much attention is being paid to such factors as the common preference for the indigenous sleek-coated Africander. Africanders have become too much the general watchword. While they are certainly hardy animals, they suffer from being poor milkers, and one of the primary requirements of the Reserves to-day is more milk. No breed will do well without feeding, and *when grazing conditions have been improved* emphasis should be placed on strains yielding a fair quantity of milk. Some suggest that more attention should be paid to selective breeding from indigenous stock.⁽¹⁾

⁽¹⁾ Unpublished thesis by B. B. Murecott, "The Rehabilitation of the Native Reserves", University of Stellenbosch, 1944.

(vi) Milk Yields.

85. While sheep and goats yield some milk, the total amount secured from this source is infinitesimal. Sheep are kept more for their wool. Goats give about half a cupful of milk a day, but this is usually only drunk by small boys. One of the uses of these animals is for sacrificial purposes.

86. Cows, then, form the principal source of milk, yet cows' yields are woefully low. It is not generally realised how low they are. For this reason the following Table, which is based on figures collected by Dr. Kark at the Polela Health Unit, is revealing.

TABLE XIII.—Milk Survey: Polela, Umkomaas River Valley, Natal. (a)

Month of Survey.	No. of homes surveyed. (Homes.)		Percentage of homes with no cows in milk. (Percentage Homes.)		Total No. of cows in milk. (Cows.)		Sample of cows whose yield was measured for 1 week. (Cows.)		Mean yield of cows in sample. (Pints per cow per day.)		Estimated total daily yield. (Pints.)		Estimated mean yield per home. (Pints.)	
	1942.	1943.	1942.	1943.	1942.	1943.	1942.	1943.	1942.	1943.	1942.	1943.	1942.	1943.
March.....	126	303	54.6	62.5	122	242	20	14	2.9	2.3	353	547	2.8	1.8
June.....	128	384	83.8	81.6	36	96	13	12	1.6	1.8	57	173	0.5	0.5
September.....	130	418	90.8	87.3	24	86	8	6	1.8	2.0	43	168	0.3	0.4
December.....	127	422	56.9	56.9	95	390	36	18	3.2	4.3	308	1,648	2.4	4.0

(a) Vide Annual Reports of Polela Health Unit 1942-43 and 1943-44. See also "Cattle and Milk in a Native Reserve" by S. L. Kark in "Race Relations" Vol. XI No. 2, 1944, page 30.

From the above Table it is evident that in this area, even during the best season of the year, over half of the homes have no cows in milk, while from June to September eighty to ninety per cent. of the homes are in this position. Actually a more equitable distribution exists, because it is not uncommon for the "well to do" to give milk to certain homes without any, but this practice does not reach all persons. Yet milk in a fermented form used to be one of the principal articles of diet.⁽¹⁾

The mean yield per cow is very low, ranging from as low as $1\frac{1}{2}$ to 2 pints per day in June to $4\frac{1}{4}$ pints per day in December. The average period of lactation is also very short.

(vii) Departmental Milk Schemes.

87. Mention should be made of the various milk schemes inaugurated by the Native Affairs

⁽¹⁾ Bryant, *op cit.*, page 1.

Department. These schemes were started primarily as an urgent measure to alleviate malnutrition, but they also have other purposes in mind, viz., to serve as a basis for investigating avenues for increasing the production of milk on Trust land; to act as demonstrations in the handling of milk cows; and, finally, for the production of bulls and heifers for distribution in the Reserves.

They have been criticised on the grounds of their high production costs, their use of land which could be used for Native settlement, their apparent favouring of isolated places and their lack of value as demonstration projects in that the Natives are not generally interested. **The importance of exploring all measures to increase milk production must, however, be emphasised.**

The following Table gives particulars of the various schemes for 1944-45:—

TABLE XIV.—Departmental Milk Schemes, 1944/45.(a)

Centre.	District.	No. of Cows.	Average Quantity of Milk issued (Gallons per Day).	Type of Cow.
Gompies.....	Potgietersrust.....	21	20	Friesland.
Blydshap.....	Thaba 'Nchu.....	57	30	Jersey.
Taungs Tribal School.....	Taungs.....	23	23	Jersey.
Wesselsvlei.....	Kuruman.....	46	25	Red Polls.
Glen Red.....	Vryburg.....	17	8	Shorthorns.
Binfield (b).....	Victoria East.....	80	68	Friesland.

(a) Review of Activities of Native Affairs Department, 1944-45, page 10.

(b) It is from this centre that Healdtown Training Institution is lent six cows for supplying milk to children of the Practising School.

(viii) **Cash Income from Livestock.**

88. There is no doubt that one of the basic causes of the poor quality of the stock in most of the Native Reserves is the uneconomic attitude of the Native towards stock. Quantity rather than quality is of cardinal importance. In the words used previously, "stock just subsist; they produce little."

89. The cash income derived from the sale of animal products is very small. In the Transkeian Territories and the Ciskei the Mine Wages Commission estimated the value of the annual production of an average family from its lands and stock to be—

TABLE XV.—*Value of Family's Annual Production.*(a)

	Transkeian Territories.	Ciskei.
Animal products sold	£4 4 0	£3 2 0
Animal products consumed	4 3 7	4 0 6
Crops consumed	6 3 6	6 11 6
TOTAL	£14 11 1	£13 14 0

(a) U.G. 21/1944 paras. 144 and 152. The complete tables are reproduced in Annexure VIII.

90. Annexure IX contains a table based on the 1937 Agricultural Census figures (the latest available) for the production of wool, mohair, hides and skins in Native areas. In this table, approximate values have been attached to these products (wool 6d. a lb., mohair 9d. a lb., 8s. a hide and 1s. a skin), and on this basis the total value of these products produced in all Native areas amounted to only about £416,000 (wool contributed nearly three-quarters and hides one-quarter of this amount).

91. Propaganda in favour of stock sales, which has been assisted by the high prices ruling during the war, has led to an increase in the income from the sales of live animals. According to the Senior Veterinary Officer, cattle exports from the Transkeian Territories for the last few years were as follows:—

Year.	No.
1939.....	25,554
1940.....	27,634
1941.....	39,719
1942.....	44,290
1943.....	43,069
1944.....	31,678

Table XXXVIII shows that stock sales in the Native areas realised some £237,000 in 1943 and £225,000 in 1944.

92. In addition, in a few areas the Natives are receiving additional income from the sale of milk, cream, poultry and eggs. For example, milk and cream to the value of £2,200 was supplied to the Tweespruit Dairies by 100 Natives in the Thaba 'Nchu district during 1943, over half the suppliers receiving less than £10 per head. During the peak month of December, 1943, £237 worth of milk (7,076 gallons from 78 suppliers) and £36 worth of cream (460 lbs. butterfat from 14 suppliers) was received.⁽¹⁾ Proceeds from the sale of cream by residents of the Tanga Betterment Area, Butterworth amounted to £180 in 1942, £288 in 1943 and £135 in 1944.⁽²⁾ The Butterworth Egg Selling Society supplied the East London Egg Circle with 1,370 dozen eggs in 1939 and 1,166 dozen in 1940.⁽³⁾ The Hammanskraal Amalga-

(1) Fuller particulars are given in the Tables in Annexure X. Tables are based on information supplied to the Additional Native Commissioner, Thaba 'Nchu by Messrs. Tweespruit Dairies, Ltd.

(2) Information supplied by Agricultural Officer, Butterworth.

(3) *Vide* Annual Reports of Transkeian Director of Agriculture.

mated Native Farmers' Association sold £53 worth of fowls and £22 worth of eggs on the Pretoria market between July, 1944 and July, 1945.⁽¹⁾

(c) **Forestry.**⁽²⁾

93. So great is the need for the development of forestry in the Native Reserves that more can be said about this need than about the existing position. (See Part VI of this Report.)

"The Union of South Africa is more poorly endowed with timber than almost any other country in the world."⁽³⁾ Nowhere is this truer than in the Native areas, and yet, according to the Director of Forestry, "Up to now no clear-cut policy has been laid down which is adequate to provide even for the present direct needs of the Native population in the way of fuel, building and other timber, much less one that makes provision for the future."⁽⁴⁾

94. One of the principal factors hindering progress at the moment is the overlapping of administration and control which makes it difficult to formulate a policy. Thus there are at present four different authorities concerned with forest policy in Native areas, viz., the Department of Forestry, the South African Native Trust, the Ciskeian General Council and the Transkeian Territories General Council. The last two are relatively less important, as they are concerned only with some plantations in their own areas. The Ciskeian Council maintains about 150 acres of plantations in the Herschel and Glen Grey areas, while the Transkeian Council has already established approximately 10,000 acres of plantations and has plans for their extension.⁽⁵⁾

95. After the passing of the Native Trust and Land Act in 1936, all forests in Native areas, with the exception of demarcated forests of the Forestry Division, were vested in the Trust. The Trust has not so far established any plantations, but it has "reserved" a number of its forests, i.e. surveyed and brought them under stricter control in terms of the Regulations.⁽⁶⁾ Control over unreserved Trust forests is, however, extremely lax (if not non-existent), particularly where control is vested in Native headmen (headmen's forests) and no permit is necessary or charge made for the collection or cutting of produce of unreserved species. Only a minute portion of the Trust forests has been reserved so far. Though new areas are being added, they are not being added quickly enough, and unless the process of reservation is greatly speeded up many of the forests will, in the meantime, have been irredeemably destroyed.⁽⁷⁾ Particulars of reserved Trust forests as at the 31st December, 1944, are given in the following Table:—

(1) Information supplied by the Additional Native Commissioner, Hammanskraal.

(2) The term "Forestry" is used in the widest sense to include indigenous forests and plantations.

(3) Memorandum on "A Post-War Afforestation Policy" by the Director of Forestry.

(4) Memorandum entitled "A Forest Policy for the Transkei" by the Director of Forestry.

(5) Proceedings of 1944 Session of United Transkeian Territories General Council, page xxiii. Approximately 4,800 acres were taken over by the Council from the S.A. Native Trust on the 1st June, 1943.

(6) See Section 74 of Trust Regulations, Proclamation No. 494 of 2nd April, 1937.

(7) As the Native Affairs Department did not have the necessary forestry staff the Keet-Rogers Memorandum of 1938 provided that the Department of Forestry would assist in reserving certain portions of unreserved forests as time and staff became available. Unfortunately it did not remove the legal difficulty of headmen's control.

TABLE XVI.—*Reserved Forests: S.A. Native Trust, 31st December, 1944.(a)*

District.	No. of Forests(b).	Extent in Acres.	Remarks.
Barberton.....	1	4,000	Afforestation scheme being conducted in this area with advice from Forestry Department.
Letaba.....	3	1,100	
Piet Retief.....	1	—	
Sibasa.....	3	1,413	Further areas for reservation have been recommended by the District Forest Officer (Forestry Dept.), and are being considered by the Native Affairs Department.
Eshowe.....	3	512	
Transkeian Territories(c).....	94	36,250	The portion of the Matiwani Range forming the headwaters of the Umtata River the most important.

(a) Details extracted from the Registry, Department of Forestry.

(b) The number is not a very good guide as some of the forests are very small, e.g. Sikewa forest of the Lower Xabane group (Transkeian Territories), which is under two acres.

(c) "Headmen's Forests" number 1,542, covering 52,700 acres. "Demarcated (Forestry Department) Forests" cover 281,500 acres. This includes 153,000 acres of indigenous forest, 20,000 acres of plantations, 85,000 acres of land not suitable or available for immediate afforestation and 23,000 acres of land which can be used for immediate afforestation.

96. The Trust has also been responsible for planting about nine hundred acres in connection with drift sand reclamation in Northern Zululand, as well as a number of plantations in collaboration with the Department of Public Health as part of the anti-malarial campaign along the Natal coast belt. In a few areas (such as Alice) trees have been planted to arrest erosion. The two commercial plantations at Swartkop and Bulwer established by the Natal Native Trust now fall under the South African Native Trust, and since the war have proved a lucrative source of revenue, supplying a considerable quantity of mining timber, softwoods, rough building poles, firewood and matchwood. In 1943-44, gross revenue amounted to about £15,000.

IV. The Need For Rehabilitation.

97. There is no doubt that under existing conditions the Native Reserves are not used to their best advantage. They are generally backward areas, and the whole atmosphere in them is one of stagnation, of poverty of people and resources. There has been little if any attempt to integrate them into the national economy; they have been largely ignored and neglected. Isolated experiments have indicated what some of the possibilities of large-scale development are, but such experiments are relatively insignificant in relation to the problem as a whole.

98. Such a state of affairs cannot continue. Not only is the deterioration of the Reserves affecting European areas through the drying up of watersheds, the spreading of soil erosion and so forth, but the general debility of the Reserve population means that the major portion of the Union's labour force is only attaining a very low degree of efficiency. The latter point is of major significance in view of the constant complaints about the existing acute shortage of Native labour. While the position is sufficiently serious at the moment, the constant pressure of population will make matters still worse.

99. It is obvious that the aim of any rehabilitation scheme must be the improvement of human welfare. It is equally obvious that any such scheme must start with the people themselves—the people whose welfare is to be improved and the people who are going to have to carry out the rehabilitation plans.

At the present moment the majority of Reserve inhabitants are poor, illiterate and undernourished. Many are suffering from one or other debilitating disease. There is more than adequate proof to substantiate these statements.

100. Family budgets collected by the Mine Wages Commission and repeated in Annexure XIII to this Report show the standard of living of the average Reserve family to be extremely low.

Average cash income from all sources is in the region of £25 to £35 per wage earner per year, and the monetary value of home produce consumed is only an additional £10 to £15. Thus an income of some £40 to £50 per year has to provide for five to six persons.

101. Custom, inertia, suspicion and ignorance act as a brake on progress. The following section reveals how inadequate educational facilities are. At least thirty to forty per cent. of the Reserve population receive no worth-while schooling. It is doubtful whether any plan for major reforms can be carried through while the mass of people concerned are illiterate. It is even more doubtful when many of the Native chiefs are themselves illiterate. Experience has proved again and again that rehabilitation schemes can only be carried through if the co-operation of the people is secured, and if these people are able and willing to help themselves.

102. But people cannot help themselves or benefit fully from education when they are badly housed, diseased and malnourished. Sufficient information is given in the next Section to indicate the need for improved housing and sanitation, improved water and food supplies and better medical facilities. The standard of health of a community is, after all, the main index by which we can judge that community's stage of progress. An improvement in the health of the Reserve inhabitants is not only one of the first steps towards an improvement of the Reserves, but it will also have a major effect on the efficiency of the whole of the Union's unskilled labour force, as well as the health of the Europeans.

103. Another hindrance to progress is the present wholesale migration of labour. For this reason Section VI is devoted to a study of this problem before rehabilitation plans are discussed. Ignoring the sociological effects, it is indeed doubtful whether a sound agricultural system in the Reserves or an economic industrial force in the towns can be built up on the present system of wholesale migration of labour. According to the Director of Native Agriculture⁽¹⁾ "the labour force to-day is composed of men who are neither workers nor peasants, but poor shadows of both, standing with one foot in the Reserves and the other in the towns."

To bring about the obviously desirable change will require gradual adjustment, and it is certain that for a long time to come a considerable proportion of the labour force will have to have at least a residential site in the Reserves. In addition, to enable some to earn a livelihood by full-time agriculture in the Reserves will require a major change in agricultural practices.

⁽¹⁾ Address to the Natives' Representative Council, November, 1944.

104. Agriculture forms the principal occupation in the Reserves to-day, yet, as Section III has shown, agriculture is in a sorry plight, and in no single sense of the word is enough food produced for the most elementary requirements of health. Both crop and animal products are short. Present practices are not only destructive of natural resources, but are wasteful of land and time. At the same time there is a general apathy towards any suggestions for improvement. Under present conditions the majority of Natives in the Reserves are not true agriculturalists.

For these reasons one of the first steps in the rehabilitation of the Reserves must be the establishment of a sound agricultural system. Agriculture must be directed to the production of *more food*, particularly protective foods such as milk and vegetables. To do this will require a complete change from the present totally uneconomic method of land distribution, allocation and use; it will require considerable research, education and propaganda; it will require improved methods of cultivation, animal husbandry, marketing and so forth. Plans for the establishment of a sound agricultural system are discussed in Section VII.

105. But even if an agricultural transformation was effected the Reserves could not provide an adequate living for all the existing population domiciled there, let alone make provision for increases in this population. A large number will have to give up all thought of having a right to arable and pastoral land, and will have to live on a residential site in one or other of the village or urban centres. To make provision for these people a diversification of the Reserve economy will be necessary.

The creation of village centres is in itself an advantage, in that it leads to the growth of a number of service industries, while it makes possible the provision of various services, such as water and sanitation, as well as community, health, educational and recreational centres.

In short, the Reserves must be made a much more integral part of the national economy. Power, communication and transport facilities must be improved. Their only salvation lies in the acceptance of the fact that a smaller but *more efficient* percentage of the population must remain on the land. The rest must find occupations in mining, farming, industry, commerce, service and other occupations. The following quotation from the "Economist" is particularly apt:—

"Peasant proprietorship, making for small, inefficient units, is in its present form an obstacle to any lasting reform of European agriculture. The single peasant without co-operative organisation, wherever he may live on the Continent, earns the barest minimum, and is rather an object of pity. . . . The most important point is that the countries which are highly industrialised, and those whose peasants have an efficient co-operative system, obtain the highest yields. Agriculture becomes efficient in the same degree as a country is industrialised. After this war peasants (in S.-E. Europe) will again demand more land. Yet more land is in itself no solution. A redistribution of land and co-operative organisation should be the first step to the industrialisation of agriculture."⁽¹⁾

It is for this reason that the Council makes a plea for a more comprehensive plan than one which attempts to provide merely for the re-planning of agriculture, and makes tentative suggestions in Section VIII regarding ways and means of bringing this about.

(1) "The Tractor and the Plough," from the Economist of 6th May, 44.

106. While the co-operation of the people will be necessary to bring about the rehabilitation envisaged, however, it is also true that a strong lead will have to be given by the State. This will require adequate funds and trained personnel. It will also involve a general re-organisation of the administrative machinery along the lines suggested in Section IX.

V. The People In The Reserves.

A. INTRODUCTION.

107. Reference has already been made in the previous Section to the fact that any plan for the improvement of Reserve conditions can only be carried out with the co-operation of the people themselves. They must work for the plan. In order to make it possible for them to make their maximum contribution, it is essential that their standard of health and education should be raised.

B. HEALTH.

(i) Malnutrition.

108. It is becoming more and more evident that malnutrition by reducing resistance, is directly or indirectly responsible for much of the ill-health in the Reserves. Reporting on Ciskeian conditions in May, 1945, the Nutrition Officer of the Department of Public Health stated: "It is more a question of chronic malnutrition, or lack of proper and enough food, than one of actual famine and starvation."⁽¹⁾

109. One of the most general pictures of the state of the Natives' health is provided in "The Nutrition and Health of South African Bantu School Children," by Kark and Le Riche.⁽²⁾

Dr. le Riche finds that Native boys and girls are significantly lighter, shorter and smaller than European children of the same age, and arrives at the important conclusion that **environmental factors such as nutrition and preventable disease are at least as important as hereditary factors in deciding the size of children.**⁽³⁾

Dr. Kark is extremely critical of the system of employing ill-defined clinical scales in assessing the nutritional state of groups of children, while there is no exact method of clinical assessment. He attempts to overcome the difficulty by preparing an analysis based on the principal groups of clinical abnormalities, and in so doing submits the following Table, showing the number of children presenting none of these abnormalities:—⁽⁴⁾

(1) "Report on the Nutritional Aspects of Distress Conditions in the Southern Ciskei, May, 1945."

(2) "Manpower," September, 1944.

(3) *Ibid.*, page 46.

(4) *Ibid.*, page 121 *et seq.*

TABLE XVII.—The Number of Children Presenting No Abnormalities of the Clinical Groups of Signs Classified.(a)

Districts arranged in order of decreasing incidence.	Boys.		Girls.	
	Number of cases.	Percentage incidence.	Number of cases.	Percentage incidence.
Pietermaritzburg..	212	55.49	227	57.03
Qumbu.....	154	44.25	241	49.90
Nqutu.....	121	42.61	231	49.37
Pretoria.....	97	27.87	184	39.31
Kentani.....	91	21.01	113	29.50
Bloemfontein.....	93	23.19	102	24.40
Witzieshoek.....	50	22.13	98	19.25
Bochem.....	52	11.20	52	15.81
Letaba.....	49	9.57	50	16.40

(a) Diseases of the skin, mouth, teeth, ears, lungs, eyes, heart and abdomen, defective posture and crippling and other disorders, e.g., goitre.

It must be emphasised that the absence of any clinical abnormalities in the above Table does not indicate a positive state of health, but is rather a negative indication of the number of children who did not present any gross sign of disease on clinical examination. **The perfectly healthy child was a rare sight, while the majority of children had definite clinical evidence of ill-health.** Moreover it would be false to compare these results with those of others workers among other groups in this or other countries. They could not, for example, be compared with the figures for the much less intensive official Nutrition Survey of European school children.⁽¹⁾ It is also noteworthy that only a limited number of districts are covered, and one or two notoriously poor areas, such as Middeldrift and Kuruman, are excluded.

110. This Survey by Kark and Le Riche conclusively demonstrates that there are a multiplicity of factors which adversely influence health and nutrition.

Food deficiencies are among the most important. Thus evidence showed that "avitaminosis and mineral deficiency diseases are common. Clinical abnormalities resulting from a deficiency in Vitamin A and B₂ groups were undoubtedly the commonest specific signs noted. With regard to the latter, there is considerable evidence that ariboflavinosis is a very prevalent deficiency disease among the Bantu of this country. The pellagra and pellagra-like group of diseases is on the increase, and they are already a major nutritional and public health problem in this country. There are also more general signs of lack of food. The thin, round-shouldered, flat-chested, potbellied child with spindly legs was such a common sight that it can only be concluded that many were on the borders of starvation."⁽²⁾

111. **These conditions make the reform of Reserve agricultural practice a matter of utmost urgency. In Section VII the Council lays considerable stress on the need for increased food production—particularly production of milk and vegetables. For the time being at any rate agricultural policy must be devoted almost solely to this end.**

(ii) **Housing, Water Supplies and Sanitation.**

112. **The prevention of disease is materially associated with the provision of homes which will incorporate modern principles of hygiene, as a sense of dignity and self-respect cannot take root in an environment produced by the squalor of a mud hut.**

The average Native hut is poorly constructed and poorly ventilated, it has no outlet for smoke, and is usually damp, dirty and infested with vermin and rodents.

A survey of a hundred and forty-eight homes in the Umkomaas River valley, Polela, in 1943-44 showed the mean number of huts per home to be 3.32. 405 of the 492 huts were circular, and only one home had no circular hut. Seventy-three per cent. of the huts had a wattle framework daubed with earth, and thirteen per cent. were made of earth sods. All had earth floors. Of the hundred and forty-eight homes, no fewer than twenty did not have a single hut with a window. 394 of the so-called windows were wooden shutters made of planks. 478 of the 492 huts had thatched roofs.⁽³⁾

In a survey of a hundred dwellings at Tampo-stad, in the Rustenburg district, during 1937-39 it was found—⁽⁴⁾

55 were rectangular houses, with mud walls and iron roof;

10 were rectangular houses, with mud walls and thatch roof.

20 were European type houses, with brick walls and iron roof.

15 were circular huts with mud walls and thatch roof.

Members of the Department of Health are at present working on designs for a simple, inexpensive type of house, and several such experimental houses have already been erected in the Transvaal.

113. Whether overcrowding is common or not is difficult to determine, but shortage of building materials is likely to make it serious in some areas.

Instances also occur where Natives cut down the number of huts by making more of the unmarried members of the family sleep in each in order to reduce hut tax. In this way a valuable custom, calculated to mitigate the spread of disease by the prevention of overcrowding, is lost.⁽¹⁾

According to data collected by the Chief Medical Officer of the Transkeian Territories in twenty-two locations during the March-May 1944 typhus campaign, the average number of persons per hut was 1.9, the average number of huts per kraal 3.01 and the average number of persons per kraal 6.03.

114. Closely associated with the home is, of course, the need for hygiene and sanitation, facilities for ablution and the provision of pure and adequate water supplies. Reference is made in the section on Education to the lack of water supplies and sanitary facilities at schools. Not only is a considerable amount of time wasted by womenfolk in collecting water (and wood), but the task must impose a considerable strain and have a detrimental effect on health, particularly where the women are malnourished, pregnant, old or ill. In addition, the water itself is frequently polluted and impure.

"The water problem has (in many areas) become practically as acute as the food problem. . . . Native women (sometimes) have to walk from five to seven miles to fetch a tin of water from stagnant pools where cattle and donkeys also mess and drink in the water. In providing relief in such areas the question of a clean and regular supply, at least for domestic use, simply cannot be ignored."⁽²⁾

In a Home Condition Survey of a hundred and eighty-three homes by Native Health Assistants in seven locations in the Umtata area in 1943 the following conditions were found:—

Number of homes	183
Average number of persons per home—	
Adults	3.9
Children	2.6
Total	6.5
Latrines	7
Water supply—	
Fenced spring	31
Open spring	83
Stream	67
Dam	1
Rain-water tank	4

115. With the object of improving supplies of water for domestic use, and for the watering of stock, the United Transkeian Territories General Council and the Department of Native Affairs have for some time been engaged in sinking boreholes and wells, erecting pumping plants, building dams and reservoirs and fencing springs and wells. **Much, however, remains to be done.**

⁽¹⁾ First Report of the National Nutrition Council, U.G. 13/1944, page 5. The detailed health survey of a sample group of European children in Vrededorp, Johannesburg, by the New Education Fellowship did, however, yield comparable results.

⁽²⁾ *Ibid.*, page 127.

⁽³⁾ Annual Report of Polela Health Unit, 1943/44.

⁽⁴⁾ Unpublished thesis by C. A. McDonald.

⁽¹⁾ "Tuberculosis in S.A. Natives, with special reference to the disease amongst mine labourers on the Witwatersrand." S.A. Institute of Medical Research No. XXX, Vol. V, March, 1932, page 30.

⁽²⁾ "Report on Conditions in the Southern Ciskei," by the Nutrition Officer, Department of Public Health.

Difficulties are enhanced in some areas by the existence of chemical impurities in underground water. Many of the highly mineralised chloride-sulphate waters are actually poisonous to stock and man when ingested over long period. This is particularly true of some of the waters rising in the Cretaceous and Bokkeveld formations, and in the Old Granite of the North-western Cape and North-eastern Transvaal.⁽¹⁾ Excess of fluorine in the Red Granite waters of parts of the Transvaal and North-western Cape makes these waters even less suitable, as the continued ingestion of such water will give rise to severe mottling of the teeth in children and perhaps to even more serious chronic disease.⁽²⁾

As the provision of pure water supplies is so important, and the effect of various impurities has not yet been fully investigated, funds should be made available for further investigation, while control should be exercised over unsafe supplies. At the same time existing expenditure on measures to improve water supplies should be increased.

116. Sanitary facilities in the Native Reserves are practically non-existent. There is a great deal of truth in the statement that pigs, poultry, sunshine and the elements are the present "sanitary officers" in these areas. To persuade the Native to use pit latrines is a long and uphill task, while it is almost as difficult to induce them to prepare compost pits which provide the best answer to the problem of refuse disposal. Increases and concentrations of population make the need for the introduction of improved hygiene and sanitation even more urgent.

117. In suggesting remedies the Council finds it necessary to go to the root of the whole of the present mode of living in the Reserves.

Any improvement can be effected only by an improvement in social and economic conditions as a whole. Not only are the huts defective, but their whole lay-out and siting is not conducive to progress. The introduction of some effective zoning system, more especially the planning of settlements and village centres, should do much in assisting the introduction of improvements in housing, water supplies, sanitation, culture and education. The Council is also recommending the establishment of such centres on other grounds, e.g. providing for the landless.

When suggesting such rezoning and the establishment of small settlements and villages it is essential that there should be a considerable measure of control over such matters as lay-out, type of houses,⁽³⁾ limitation of livestock, the provision of adequate water supplies, sanitation facilities and other amenities; otherwise many of the ills characteristic of peri-urban locations and of the large settlements of the Tswana⁽⁴⁾ will arise.

(iii) Health Services and Health Conditions.

118. The National Health Services Commission has recently reported fully on the state of the health and health services of all races in the Union.⁽⁵⁾ To avoid reiteration, therefore, the non-Native aspect of this topic is not dealt with at any length.

119. Dealing as the present Report does with Natives in the Reserves, two statements made by

the Commission are of particular interest. **The first is that "First and foremost among the causes of ill-health are the economic poverty and the social backwardness of the greater part of the Union's population." The second is that existing health services "are NOT available to all sections of the people of the Union of South Africa—they are distributed mainly among the wealthier sections who, on account of their economic potentialities, should need them least; and are but poorly supplied to the under-privileged sections who require them most." The Council supports both of these contentions.** To cope with their population of 17,600 Europeans, 1,154,000 Natives and 12,300 Coloureds (1936 Census figures) the Transkeian Territories have at present 56 medical practitioners, 14 hospitals with beds for approximately 600 Natives, 100 Europeans and 20 Coloureds, and 48 rural Native clinics. In addition there are two Leper Institutions accommodating in all 800 lepers.⁽¹⁾ It is no wonder that the National Health Services Commission wholeheartedly endorses the statement in the 1937 Report on National Health Insurance that "the medical and nursing services in the Native areas are entirely inadequate and have only a very small effect in reducing the preventable ill-health and suffering which prevail." Special tribute is due to those who, in face of considerable odds, are attempting to provide some of these services. **It is, however, fully realised by the Council that no amount of hospitalisation or medical care will avail unless adequate preventive measures are taken.**

120. Unfortunately any attempt to assess the state of health of the Reserve population is hampered by the almost complete absence of reliable statistics. In the words of the Secretary for Public Health in his 1941 Report, "It must again be emphasised that accurate records for Natives are entirely lacking, and that this is a very serious deficiency in our statistical data, as the Natives constitute . . . not only the bulk of the population but also that proportion of it in which preventable disease is most prone to occur. We know from general observations and from those somewhat scanty and unreliable records which are available that (certain) diseases are common among Natives. . . . Statistical evidence of a reliable nature is, however, entirely lacking, except with regard to certain specific groups of Natives. We, therefore, do not know how prevalent these (disease) conditions are even in the urban areas and in regard to the bulk of the Native population, which lives in the Native territories and rural areas, we are entirely dependent on general impressions."

For this reason, the Council wishes to reiterate the recommendations made in its Sixth Report, regarding the need for an improvement in the Union's social statistics particularly in respect of the Native population.⁽²⁾ Such an improvement should include the extension of compulsory registration of births, deaths, infectious diseases and marriages to the rural Native population at an early date. To give a clear picture of the health of a community, however, even more information is required. Demographic data, including the study of the everchanging structure of the basic family unit, health indices, including food supplies, budgets, education statistics and more specific physical indices such as growth rates, as well as an assessment of mental development and social behaviour, are all required. This provides another field for the extension of research. The Polela Health Unit has demonstrated the feasibility of collecting such data.

⁽¹⁾ "A Geo-Chemical Survey of the Underground Water Supplies of the Union of South Africa," by Dr. G. W. Bond of the Electricity Supply Commission.

⁽²⁾ "Endemic Fluorosis in South Africa," by T. Ockerse (Government Printer G.P.-S.6850), page 133.

⁽³⁾ Where building material is scarce, such material will have to be provided. On the Umzimkulu Trust Settlement an improved type of hut with a minimum diameter of 12 feet and a minimum height of 7 feet is insisted on.

⁽⁴⁾ "Land Tenure in the Bechuanaland Protectorate", by I. Schapera, Chapter V.

⁽⁵⁾ U.G. 30 of 1944.

⁽¹⁾ Information supplied by the Chief Medical Officer, Transkeian Territories.

⁽²⁾ U.G. 35/1944, Annexure I, para. 12.

That there are certain grave difficulties in the way of introducing a comprehensive collection of vital statistics cannot, however, be denied. There is the question of the many superstitions and suspicions of the Natives. These can, however, be overcome. At the Polela Health Unit in Natal the task of winning the interest and confidence of the Natives has been difficult, but the Unit is making progress in this direction. There is also the administrative problem, and the present machinery would have to be expanded tremendously, not only by means of extra staff, but also by the establishment of numerous offices in the heart of the Reserves. According to the Office of Census and Statistics, when the registration of Native births and deaths was compulsory in Natal, a fee of either 6d. or 1s. per registration was paid to Natives who were specially appointed to register births and deaths. Investigation showed an appreciable increase in the number of registrations when the collector's financial resources ran low! For this reason the administration will have to be entrusted to responsible persons. A further difficulty arises in respect to certification. In the Native Reserves, where there is on the average one medical practitioner to 21,500 persons, a comprehensive system of certification is out of the question. A National Health Service, with provision for the following-up of cases of illness among all sections of the population, and a more accurate diagnosis of the cause of death, should eventually remedy this. There is no doubt, however, that a long period of patience and perseverance must be faced, during which the confidence and co-operation of the Native people will have to be won.

121. In an attempt to collect as much data as possible regarding health standards, the Council asked the Director-General of Medical Services for details regarding the rejection rate of recruits for the army. In addition, the rejection rate of mine recruits for a number of years was kindly supplied by the General Manager of the Native Recruiting Corporation Ltd.

A study of these rates showed, however, that while they could be used for certain purposes their use in other directions, e.g. to illustrate general standards of health, is misleading.⁽¹⁾ For one thing, in neither case do the recruits form a completely representative sample. The Council has therefore refrained from drawing any definite conclusions. For information the Tables are reproduced in Annexures XIV and XV. The Council would, however, emphasise the need for the exercise of care in interpreting these figures.

122. The absence of vital statistics which would provide one of the most satisfactory methods of determining the trend of a nation's health also makes it impossible to give exact figures for the Native birth rate, death rate or infantile mortality rate. According to the National Health Services Commission the Native birth rate per thousand of the total population "is probably well over 40, to judge from various surveys which have been made. Whether such factors as economic deterioration of the Reserves, the system of migratory labour for the Mines with consequent absence, permanent urbanisation of an ever-increasing proportion of the Native population, and the prevalence of venereal diseases are resulting or will result in a decline of the birth rate among the Bantu section of the Non-European population cannot be known with certainty; but it would be surprising if they did not have this effect."⁽²⁾

(1) Precisely the same conclusion was arrived at by Captain Lew in the United States of America. Though there is no doubt about the value of rejection rates of army recruits for other purposes, he stresses the limitations on the use of physical examination findings of selectees for the purpose of appraising general health status or the incidence of minor defects. ("Interpreting Statistics of Medical Examinations of Selectees," by E. A. Lew, *Journal of American Statistical Association*, September, 1944).

(2) U.G. 30/1944, page 94.

The Polela Health Unit gives the following figures for its area:—

Birth Rate per 1,000 of Population.

	1942-43	1943-44
River valley	45.09	31.90
Other areas	—	39.94
All areas	—	37.45

While practising in Msinga district Dr. Gale estimated, on the basis of a sample survey, that the average number of children per mother was 5.27.⁽¹⁾ Data for Tamara, near Kingwilliamstown, quoted in Appendix 20 of the Native Economic Commission Report, put the average number of surviving children per married woman at 4.32.⁽²⁾

123. That the birth rate is high is reflected to some extent in the population figures. The total Native population of the Union according to the four complete censuses grew as follows:—

TABLE XVIII.—Growth of Union's Native Population.(a)

Census.	Native Population.	Percentage Increase over previous Census	Average Annual Percentage Increase
1904.....	3,491,056	—	—
1911.....	4,019,006	15.1	2.03
1921.....	4,697,813	16.9	1.57
1936.....	6,596,689	40.4	2.29

(a) Union Year Book No. 22, page 986.

The average annual percentage increase between 1921 and 1936 was very high. The lower rate for 1911-1921 was probably partly due to the influenza epidemic following on the last war. For the sake of comparison the increases in population in a number of British dependencies as between 1921 and 1937 may be quoted: 28½ per cent. in Ceylon, 34½ per cent. in Jamaica, 25 per cent. in Malta, 29½ per cent. in St. Vincent and 24½ per cent. in Trinidad.⁽³⁾ Unfortunately, such factors as the varying number of non-Union Natives, the long periods elapsing between the censuses, as well as the difficulties of enumeration, affect the validity of these census figures, particularly in the Native areas, where part of the increase may be due to improved enumeration. The difficulty of arriving at firm conclusions on the basis of such unsatisfactory census figures is exemplified by the contrast between Raymond Buell's 1928 statement, based on a comparison of the 1911 and 1921 censuses, that "population in the Transkei does not appear to be increasing rapidly,"⁽⁴⁾ and Dr. Jokl's 1943 Report, using the official census figures up to 1936, to the effect that "the Native population (of the Transkei) increases every year by about two per cent., a very high rate if it is considered that during the last hundred years no other indigenous population in the world is known to have shown a similar increase in numbers."⁽⁵⁾

Sufficient information is, however, available to indicate that the rate of increase of Native population is high, and the age distribution is characteristic of a population with high birth and death rates.

(1) Arithmetic Average. Fox and Back, *op. cit.*, page 386.

(2) Arithmetic average of the number of children alive when the information was collected. See also para. 791 *et. seq.* of U.G. 22/1932.

(3) "Social Developments in Dependent Territories," I.L.O.

(4) "The Native Problem in Africa," Vol. I, page 108.

(5) "Native Manpower Resources, with special reference to the Transkeian Territories." (Reprint from Associated Scientific and Technical Societies of South Africa).

TABLE XIX.—Age Distribution of the Union's Native Population (Percentages).

Census Year.	0-15 Years.	15-60 Years.	Over 60 Years.	Total.
1911.....	40·71	54·18	5·11	100
1921.....	41·65	54·02	4·33	100
1936.....	40·54	53·85	5·61	100

124. Figures for the Native death rate, when available, are rarely less, and often more than twice as high as that for Europeans.⁽¹⁾

Dr. Kark's figures for Polela for 1942-44 were:—

Death Rate per 1,000 of Population.

	1942-43	1943-44
River valley	38·33	20·90
Other areas	—	21·70
All areas	—	21·45

⁽¹⁾U.G. 30/1944, page 94.

125. One of the principal difficulties of relying on impressions rather than figures is that personal impressions vary so considerably. This is particularly true of Native infantile mortality. The National Health Services Commission records, "the consensus of opinion among medical officers of health, and the evidence of several surveys, is that the Native infant mortality rate (per 1,000 live births) is not less than 150 anywhere, and in some areas is as high as 600 or 700.⁽¹⁾ In 1932 the Native Economic Commission reported that it received estimates for different areas ranging between 237 and 500 per 1,000. The establishment of Health Centres at Polela and Umtata has provided us with a little more reliable information, as these Centres have commenced systematic studies. Thus the following figures for deaths during childhood in the Umtata district were collected by Dr. McGregor, who is in charge of the Umtata Rural Clinic Scheme.

⁽¹⁾ *Ibid.*, page 95.

TABLE XX.—Umtata District—Deaths during Childhood.

	Total Number of Live Births.	Died before Two Years.		Died 2-16 Years.		Total.	
		No.	Percent.	No.	Percent.	No.	Percent.
"Red" Natives.....	721	331	45·9	67	9·3	398	55·2
"Dressed" Natives.....	705	188	26·7	72	10·2	260	36·9
Combined "Red" and "Dressed".....	1,426	519	36·4	139	9·7	658	46·1

A point worth stressing is the fact that the figure is higher for "red" than for "dressed" Natives, a fact which tends to discount some of the theories about the "healthy savage."

The above figures may be compared with the infantile mortality rate of 311 per thousand arrived at by Dr. G. W. Gale after a Sample Survey covering 500 mothers in the Msinga district, Natal, during 1930 and with the following compiled by Dr. Fox in 1937.

TABLE XXI.—Sample Data Regarding Child Mortality (Native Areas), 1937.

District.	No. of Mothers questioned	Child Mortality per 1,000 Live Births.		
		1 Year or under.	2 years or under.	18 years or under.
Ciskei.....	295	164	244	374
Transkei.....	1,432	284	379	557
Basutoland.....	153	140	189	290
Mean.....	—	242	327	508

126. These examples are insufficient to enable one to state what the infantile mortality rate actually is. They are only useful as estimates, for they are based on a questioning of individual women regarding their "maternal reproductive" history, and not on a system of birth and death registration. At Polela, where births and deaths are registered, the infantile mortality rate per 1,000 live births was 275 in 1942-43 and 246 in 1943-44, but this only covers a very small proportion of the total Reserve population.⁽¹⁾

The information is, however, sufficient to show that the rate is extremely high compared with recent rates recorded in other countries, and considerably higher than that for Europeans in South Africa, which for the three-yearly period 1935-1938

averaged 59 per 1,000 live births. On the other hand, if one takes into account the population census as well, the Native rate must clearly be lower than some of the figures sometimes quoted.

Unfortunately a similar lack of vital statistics occurs among most primitive communities, and this limits the opportunity for comparison. Hailey reports that "in Kenya an estimate was on one occasion given of 400 per 1,000. The figures recorded for the British Tropical African Colonies as a whole give 172·8 per 1,000 births; the Nyasaland selected area gave 154·6 per 1,000; the Uganda figures give 356·5 for the northern province, falling to 72·1 in Entebbe; special inquiries made during the Gold Coast census of 1931 showed a rate of 170·6; the Foréamic survey in the Lower Congo gives 175·4 per 1,000 for children up to one year old."⁽¹⁾ In the Federated Malay States the infantile mortality rate was 147 per 1,000 in 1937, while in the same year the figure for the Straits Settlements was the lowest on record, viz., 155·80 per 1,000. Both these areas have experienced a marked fall in the rate since the 1914-18 War as a result of improved health and other measures.⁽²⁾ It is, however, extremely doubtful how accurate some of these figures are.

127. The infantile mortality rate is one of the best indices of the state of health of a community, and improvements in health and medical services are usually followed by its fall—especially where it is very high. Thus, largely owing to the activities of the Health Unit, the rate in the Polela River valley area fell from 275 per 1,000 live births in 1942-43 to 138 in 1943-44 (it was 284 in the "other areas" in 1943-44).

The principal causes of the high rate among Union Natives seem to be poverty and ignorance. These lead to underfeeding, unsuitable feeding, and forcible feeding; gastric and intestinal disturbances resulting from bad feeding and from the

⁽¹⁾Hailey's "African Survey," page 128.

⁽²⁾ Social Developments in Dependent Territories, I.L.O., page 7.

⁽¹⁾ Annual Reports of Polela Health Unit.

use of polluted water; and to respiratory diseases, particularly bronchitis and pneumonia and whooping cough. An analysis of the causes of death of 474 Native children under one year old referred to in the 1942 Annual Report of the Umtata Rural Health Clinics⁽¹⁾ showed that no less than 64.1 per cent. of the deaths were caused by diarrhoea and 15.6 per cent. by chest diseases. The same Report summarises the principal complaints of infants under two years old as follows:—

TABLE XXII.—*Diagnosis of Infants under Two Years—Umtata Area, 1942.*

Diagnosis.	Number.	Percentage.
Diarrhoea and Dysentery.....	1,088	27.1
Constipation.....	599	13.9
Deficiency Diseases (a).....	100	2.5
Chest Diseases.....	1,382	34.5
Skin Diseases.....	162	4.0
Diseases of Eye, Ear, Throat and Mouth..	104	2.6
Zygmotics.....	148	3.7
Other.....	466	11.7
TOTAL.....	4,009	100

(a) This figure does not take into account instances where nutritional deficiency was also a factor leading to other ailments.

128. Another factor closely associated with the infantile mortality rate, and about which more information will have to be obtained, is the maternal mortality rate. No figures are available, but according to the Health Services Commission "there is . . . sufficient evidence available from the records of public hospitals, location nursing services and medical missionaries to explode the myth, at one time widely prevalent, that the difficulties and pathological sequelae of childbirth are virtually unknown among Native women."⁽²⁾

129. As morbidity statistics are either totally lacking or completely unreliable, it is almost impossible to indicate the incidence of various diseases among the Native Reserve population. **The table published regularly by the Department of Health in its Annual Report, showing the number of cases of notifiable diseases among the Non-European population returned by medical practitioners, is inadequate and misleading.** For those requiring further information on the incidence of specific diseases such as leprosy, typhus, smallpox, etc. the special reports which are incorporated from time to time in the Annual Reports of the Secretary for Health are probably the most useful.

130. Probably the most widespread notifiable diseases in the Native Reserves are enteric, leprosy, typhus, plague and tuberculosis.

Enteric is closely associated with poor sanitation and impure water supplies, which factors are also responsible for the prevalence of other intestinal complaints.⁽³⁾

In a sense lepers are the best provided for in the way of institutional treatment, in that there are several large leper settlements in the Reserves, though each one is fully utilised.

Typhus is another disease of poverty, dirt and insanitation, and its constant occurrence in the Native areas (many cases are probably never seen by doctors) is a serious reflection on existing living conditions. The lower incidence in Natal is attributed by the Public Health Department to the

vigilance and activity of the Native Malaria Assistants, a factor which strengthens the argument in favour of providing improved and increased medical services. Contributory factors in Natal are the better food and warmer climate, which reduces the need for blankets.

The hyperendemic areas for plague are the Northern Orange Free State, Glen Grey in the Ciskei and St. Mark's in the Transkeian Territories.⁽¹⁾ It is essentially a disease associated with rats and field rodents, and is spread among them by their fleas.

There seems to be a great deal of misconception about the prevalence of tuberculosis among Natives. Once again the lack of figures is largely responsible. The 1932 Tuberculosis Research Committee concluded that "tuberculosis is endemic in the Native territories", but in the tribal state "the Natives have a high degree of resistance."⁽²⁾ The latter conclusion is supported by a survey of 20,000 Natives in Natal, which showed that the incidence rate from tuberculosis was low in the Reserves (0.25 per cent.), but was much higher in urban areas (1.5—2 per cent.).⁽³⁾

131. Non-notifiable diseases which are prevalent in the Native Reserves are venereal diseases, malaria and bilharzia. On the subject of venereal diseases, the Health Services Commission concluded that "the startling figures, in the neighbourhood of ninety per cent., periodically announced by public scaremongers are not confirmed by scientific survey (though there is no need to exaggerate . . . figures in order to make out a case for the improvement of public health services)."⁽⁴⁾ Much infantile mortality and blindness are due to its existence. According to Kark, "As a single disease entity, syphilis remains our outstanding problem."⁽⁵⁾

According to Dr. Bennett, of the Mount Coke Native Hospital (Ciskei), in his district: "Ten years ago hardly 1 per cent. of rural maternity cases were syphilitic. To-day 22.1 per cent of maternity cases have positive Wasserman reactions." The 1944 Annual Report of the Department of Public Health shows the total number of venereal disease cases treated and attendances among Non-Europeans for the year to be: In hospital, 18,362; outdoor, 279,386.

Venereal disease is one of the diseases whose incidence is aggravated by migratory labour, and it is significant that the Native name for it is "the white man's disease." The success which has been attained in its treatment at various clinics belies the fear that the Native will not subject himself to voluntary treatment. At Polela, forty per cent. of the 1942/43 cases *continued* treatment in 1943/44. The use of penicillin will considerably reduce the duration of the treatment. **A considerable extension of propaganda and treatment is called for.**

Measures to control malaria in the Natal and Zululand Native Reserves are undertaken by the inspectorate staff of the Public Health Department. Considerable use is made of specially trained Native malaria assistants. Lack of roads has always been a handicap. Quinine depots have been established at numerous centres and, in addition, in the Reserves adjoining the controlled areas, anti-larval and anti-mosquito measures are carried out. In the inland river valleys, anti-mosquito control by weekly spraying is undertaken.

(1) U.G. 8/1945, page 10.

(2) S.A. Institute of Medical Research Report.

(3) "A South African Team looks at Tuberculosis," by B. A. Dormer, J. Friedlander and F. J. Wiles. Proceedings of the Transvaal Mine Medical Officers' Association, November, 1943.

(4) U.G. 30/1944, page 96.

(5) Annual Report of Polela Health Unit,

(1) These Clinics were established in January, 1941, with financial assistance from the Native Recruiting Corporation and taken over by the Department of Public Health in April, 1943.

(2) *Op. cit.*, page 95.

(3) See para. 114, *et seq.*

Gum trees are being planted in the flat, water-logged sections of the coastal Reserves. Natives born and bred in the lowveld sections of the Ubombo and Ingwavuma districts are malaria-tolerant.

Malaria field work in the Transvaal revolves round the Malaria Research Station at Tzaneen, which is the headquarters of the Senior Malaria Officer and his staff. There are also a number of sub-sections staffed by health officials. Seventy to eighty Native malaria assistants serve the twelve Native Commissioner areas.

Malaria affords a striking instance where preventive measures have been very effective. This is reflected in the following figures, compiled from the reports of the fifty-four Native malaria assistants operating in the Natal malarious areas (which include twenty magisterial districts with an aggregate Native population, in 1936, of some 750,000):—

TABLE XXIII.—*Malaria Among Natives in Natal Malarious Areas. (a)*

Year ending.	Cases.	Deaths.
1932.....	38,889	3,677
1933.....	28,651	1,000
1934.....	31,270	1,003
1935.....	10,836	119
1936.....	3,171	72
1937.....	2,571	115
1938.....	1,912	46
1939.....	1,557	40
1940.....	428	13
1941.....	698	12

(a) Taken from Annual Reports of Public Health Department.

Despite this "there is, of course, still much room for even more effective control; and a **considerable increase of anti-malarial field staff is urgently required.**"⁽¹⁾ The discovery of D.D.T. may effect a radical change in the malaria situation in the future.

Bilharzia is to be found over a large portion of the Transvaal, Natal and the eastern coastal belt of the Cape, north of East London. In these areas the high incidence of bilharziasis and intestinal parasites in Native children contributes a great deal to ill-health and malnutrition, and Europeans are, in turn, affected.

The results of several departmental surveys of Native school children are summarised in the following Table:—

TABLE XXIV.—*Bilharzia in Native School Children.*

Year.	Area covered by Survey. (a)	Total Number examined.	Number infested.	Percentage of Total infested.
1938	Sibasa district.....	1,577	590	37.4
1938	Nelspruit.....	1,016	290	28.6
1938	White River.....	391	195	50.0
1943-1944	White River.....	108	78	72.2
1938-1943-1944	Marico.....	460	223	48.5
1943-1944	Nylstroom.....	985	106	10.8
1943-1944	Bushbuckridge.....	100	38	38.0
1943-1944	Derdepoort (near Pretoria).....	495	43	8.7
1939	Natal Coastal Belt (b)	4,489	470	10.5(c)

(a) Vide Annual Reports of Department of Public Health.

(b) Each river valley between the Tugela and Umkomaas Rivers and up to twenty-five miles inland. See "Bilharzia in Native Schools," by Dr. B. A. Dormer, S.A. Medical Journal, Vol. XVI, No. 19 of 10th October, 1942.

(c) Of 20,741 European school children examined, only 249 or 1.2 per cent. were infested.

(1) U.G. 30/1944, page 96.

132. Mention should also be made of dental caries among the Natives. The Chief Dental Officer of the Department of Public Health points out that the few surveys which have been carried out indicate that the incidence of dental decay is very high, and is increasing very rapidly, especially among those Natives who eat "civilised" foods. It is less prevalent among Natives living under primitive conditions. Very few facilities exist for the proper treatment of the disease. The solution lies in prevention. Eating of proper non-caries-producing foods will to a large extent prevent dental caries, and here again health propaganda is very important.

Another malady about which few statistics are available is blindness. According to Dr. Boshoff, although the figures for blindness among Non-Europeans are appallingly high, they are actually an under-assessment, due to their incompleteness. Available figures show the incidence to be 400 blind per 100,000 sighted or partially sighted Natives. These high figures are upsetting, but it is even more alarming to know that in certain districts, e.g. North-western Cape, Western and Northern Transvaal, the incidence varies from 1,000 to 2,000 blind per 100,000 sighted or partially sighted Natives. The total annual amount spent on blind pensions at 10s. per month to Non-Europeans now exceeds £160,000. "Once more the remedy lies in prevention. If one adds the amount of money spent on blind pensions to the amount of misery and suffering involved, and takes into account the loss of labour and the cost of belated instead of timely medical treatment, then the prevention of eye diseases in South Africa obviously becomes a sound business proposition."⁽¹⁾

133. One of the most striking features about health conditions in the Native Reserves is the prevalence of debilitating conditions which prevent the inhabitants from producing their maximum efficiency.

It is also noteworthy that practically all diseases prevalent in the Native Reserves are associated with overcrowding, poor standards of personal hygiene, inadequate sanitation, impure water supplies, malnutrition and general poverty. To this extent, they are all preventable.

In spite of high infantile mortality (of uncertain extent), the population is increasing faster than the Native Reserves can support it; hence, efforts to improve health and reduce deaths can only be regarded as desirable at this stage provided *far greater efforts* are made to improve the nutritional foundations on which the larger population that will result must depend. Otherwise, improved medical services *alone* may hasten the utter ruin of the Reserves.

134. There is a great need for the extension of the extremely inadequate hospital, medical and nursing facilities. The rural Natives, given the facilities within reasonable distance of their homes, will make fairly good use of modern medical services. For example, the rawest of Natives come from as far afield as Mapumulo and farther to the King Edward VIII Hospital, Durban. Practically all those responsible for running clinics or hospitals have had similar experiences.

"Statements to the effect that the Bantu do not take advantage of treatment offered are simply an indication that the particular clinic or service has not developed a suitable home visiting system, which is not a follow-up of cases from a clinic to homes, but which regards

(1) "Blindness and Diseases of the Eye in South Africa," by Dr. P. H. Boshoff, S.A. Medical Journal, 12th May, 1945.

the home as the foundation of the service, and thus visits all homes in the area, encouraging the people to attend the clinic for examination and to continue with treatment if necessary."⁽¹⁾

The Mines Prevention of Accidents Committee comments on the eagerness of Natives to acquire a knowledge of First Aid, and the number of Natives who qualified increased from 7,600 in 1934 to almost 30,000 in 1943.⁽²⁾

135. There is, however, no denying the fact that medical personnel working with the Native have still to combat not only poverty, but also ignorance and conservatism. **For this reason the powerful modern weapon of propaganda should be in the vanguard of any health scheme, and without the full and intelligent use of it, progress must inevitably wait upon the pace of the most ignorant.** Trained Natives should be of considerable assistance, as to put propaganda across it is necessary to have a thorough understanding of the Natives' mental processes, customs and idiom of speech. Propaganda should form part of the general education scheme.

136. To sum up, the solution of the whole problem lies in co-ordination.⁽³⁾ Health services must be completely integrated with *all* the activities of individuals, families and communities. An improvement in health is dependent not only on an extension of curative services, but also on improved *preventive services*; on improvements in agricultural practices and foodstuff production, economic conditions, education, housing, water supplies, sanitation and so forth. It cannot be stressed too often that health improvement is dependent on an improvement in social and economic conditions as a whole.

The best solution seems to lie in the extension of educative, preventive and curative services *through the same agency*, such as is done at the Polela Health Centre or is proposed for the community centre at Kambi, near Umtata. Home visiting should be the ultimate aim of such an agency, but it will probably be some time before this ideal can be attained in all Reserve areas. **The Council therefore wholeheartedly supports proposals for the extension of Health Centres ("Community Centres" might be a better name), where a team of medical personnel, agriculturalists, educationists and other trained personnel work together.⁽⁴⁾ It is probable that such a scheme would involve the defining of departmental responsibilities, but the need for a closer integration of State Departments' activities is clear.**

G. EDUCATION.

(i) Introduction.

137. The Council considers that the educating of the whole of the Native community is one of the fundamental steps towards an improvement in the health, welfare and efficiency of this community. Such a step would also enhance the Natives' contribution to the Union's total national wealth.

It is extremely difficult to isolate the treatment of Native education in the Reserves from the treatment of Native education as a whole. For this reason this Section deals with Native educa-

tion in general, but wherever possible particular reference is made to Reserve conditions. In addition, account has been taken of the fact that an Inter-departmental Committee on Native Education reported only nine years ago.⁽¹⁾

(ii) Missions and Education.

138. The Inter-departmental Committee dealt in detail with the history of Native education in South Africa. To a large extent this history may be said to be the history of the Missionary Societies. Frequently the same building served for both church and school. Gradually government responsibility and assistance has increased, and to-day salary grants are paid and supervision and inspection exercised in the case of those schools deemed entitled to aid. As missionaries generally act as the superintendents of aided schools, however, Native education still remains largely a mission concern. Of the 2,020 Native schools in operation in the Cape Province in 1944, no less than 2,007 were housed in buildings provided by the churches, or by the people through their church organisations.⁽²⁾ The frequent contention that Native education should be taken away from the missions fails to take into account its immediate financial impracticability, let alone other considerations.

(iii) Control, Finance and Management.

139. Native education (other than higher and agricultural) is administered by the Provincial Departments of Education. The Natal, Orange Free State and Transvaal Education Departments have special Native sections. Each province has a Chief Inspector of Native Education, and an Advisory Board of from twelve to eighteen members, including representatives of the missionary societies. Only in the Cape Province is there no separate inspectorate. A recent step has been the creation of the Central Advisory Board mentioned below.

140. Since 1926 Native education has been financed through the Native Development Account (since merged in the South African Native Trust Fund), which was administered by the Minister of Native Affairs in consultation with the Native Affairs Commission. The amount available comprised, originally, a block grant of £340,000 from Government⁽³⁾ and one-fifth of the Native General Tax Revenue.⁽⁴⁾ From time to time the proportion of the General Tax allocated to the South African Native Trust Fund was increased, until eventually in 1943 the whole was paid in to the Fund, four-fifths to be devoted to education and one-fifth to general development.

This proved most unsatisfactory. At the time it was instituted the Fund had not sufficient revenue to meet ordinary expenditure, and, being in itself practically incapable of expansion, did not admit of development. The position was met by frequent legislation increasing somewhat arbitrarily the proportion of the poll tax made available for educational purposes, until total expenditure on Native Education in 1944-45 was approximately four and a half times what it was in 1926. From the 1st April, 1945, however, Native education became a service for which Parliament will make provision. Under the new Act a Union Advisory Board on Native Education, with the Secretary for Native Affairs as Chairman, has been appointed to advise Government and the Provincial Councils on matters relating to Native education and the maintenance, extension and improvement of educational facilities for Natives.⁽⁵⁾

(1) Annual Report of Polela Health Unit, 1943/44.

(2) Information supplied by the Secretary, Witwatersrand Chamber of Mines Prevention of Accidents Committee.

(3) The attempts of the Transkeian Territories Co-ordinating Welfare Council deserve mention in this respect. See also Worthington's "Science in Africa," pages 461/2.

(4) A more detailed description of the activities of these Centres is given in the Report of the National Health Services Commission and the Annual Report of the Department of Public Health for 1943/44. To facilitate inter-departmental co-operation the Council advocates quarterly conferences (para. 268 below).

(1) U.G. 29/1936.

(2) Address by the Chief Inspector of Native Education (Cape Province) to the Transkeian Territories General Council, 26th April, 1945.

(3) Act No. 46 of 1925.

(4) Act No. 41 of 1925.

(5) Native Education Finance Act No. 29 of 1945.

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