

1. 1  
76 Fm

<sup>x</sup>  
**The**  
**AGRICULTURAL**  
**RESOURCES**  
**of**  
**SOMALIA** <sup>x</sup>

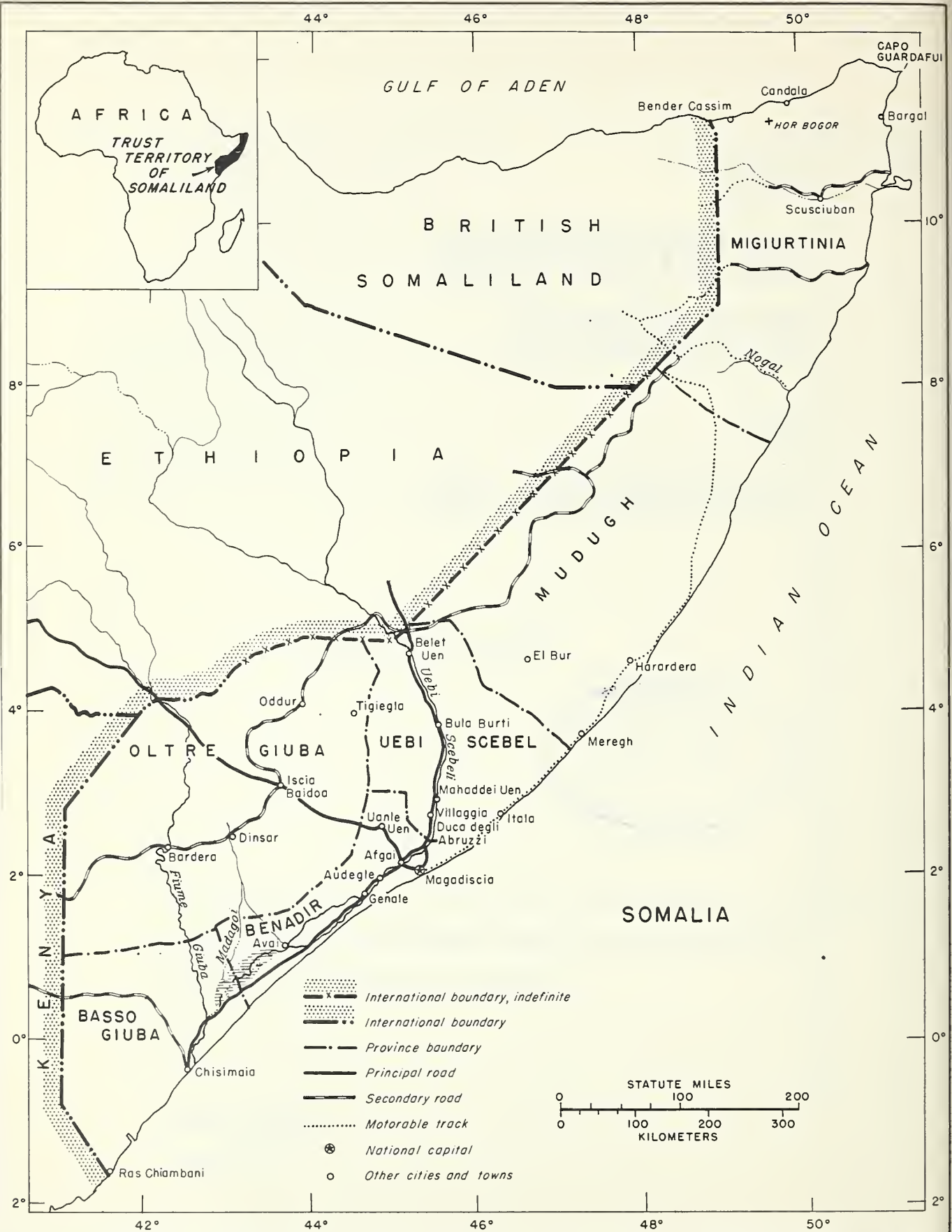
BY  
HENRIETTA M. HOLM



---

**United States Department of Agriculture**  
✓ **FOREIGN AGRICULTURAL SERVICE**

**MARCH 1956**  
✓ **FAS-M-4**



## CONTENTS

	Page
Summary	
Physical factors affecting agriculture .....	1
Agriculture	
Agricultural areas .....	4
Native agriculture .....	4
Pastoral economy .....	7
Italian agriculture .....	10
Agricultural trade .....	14
Administrative measures for agricultural reform .....	17
Sources .....	20

This report has been brought together to provide the general reader, rather than the specialist, with a comprehensive outline of agriculture in one of the world's less familiar localities. Information derived from various published governmental reports, and from the accounts of travelers and Italian pioneers has been freely incorporated to that end.

March 1956.

## SUMMARY

Before World War II, Somalia was an Italian colony. In November 1949, the United Nations General Assembly approved the creation of Somalia as a sovereign state in Africa. Somalia was ordered to become independent by the tentative date of 1960, and until then to be administered under Italian-United Nations trusteeship.

If an effective degree of self-sufficiency is to be realized in the few intervening years, the country's agricultural economy must undergo rapid and vigorous expansion. Only about 5 percent of Somalia's potentially productive land is now actually under cultivation. Negative features of the country's agricultural economy are great variation in climate from year to year; scarcity of water; prevalence of pests and animal disease; and principally, the low esteem held by the native for crop cultivation, coupled with his over-emphasis on the social importance of owning as much livestock as possible.

Roughly a thousand Italian commercial farmers and operators of industrial enterprises based largely on agriculture represent the bulk of the foreign farming population. Shortages of both capital and labor since the war have resulted in reluctance to venture into large-scale investment or expansion, in view of the uncertainty of the country's future when Italian administration and financial support is discontinued. The country is now chiefly dependent on Italian grants-in-aid. Only a third of the total European concession area - nearly 190,000 acres - is currently under cultivation. The banana industry, which accounts for more than 30 percent of Italian production and exports, may be in particular jeopardy. It seems improbable that subsidization by the Italian Banana Monopoly, which now moves the crop at prices somewhat above world levels, will continue after 1960. No alternative crop has yet been sufficiently developed to replace or augment the banana trade.

On the credit side of the ledger, the Italian Government has implemented an economic development program for the 6 years 1954-60, which is largely directed toward improvements in agriculture, water resources, and transportation facilities. Since early 1950, recommendations of American technical missions have been under study and development.

THE AGRICULTURAL RESOURCES OF SOMALIA  
by Henrietta M. Holm

Somalia (the Trust Territory of Somaliland) lies on the least elevated part of an inclined highland region sloping eastward and southward from Ethiopia and British Somaliland to the Gulf of Aden and the Indian Ocean. It forms the extreme eastern edge of the African continent north of 2 degrees S. latitude. About a million and a quarter people, including 25-30,000 Arabs, a thousand Indians and Pakistanis, and 5,000 Italians, reside within the Territory's 198,000-square-mile area.

PHYSICAL FACTORS AFFECTING AGRICULTURE

Topography.--Divided by a series of river valleys, the Somali plateau descends from the Ethiopian highlands as a regular plain. It merges finally on the southeast with an alluvial just behind Mogadiscio to Ras Chiamboni at the Kenya frontier, and with coastal sand dunes on a low, leveled belt parallel to the ocean. To the northwest the plain rises to meet extensions of the Ethiopian mountains, which in turn, slope into a narrow maritime plain and a sand and coralline seabeach along the Gulf of Aden from Bender Cassim to Capo Guardafui. The dunal strips, formed over the centuries as sand, gravel, and bits of seaside cliffs were blown inland by strong monsoon winds, range in width on the Indian Ocean from 35 miles in the northeast to less than a mile at the country's southern limits and on the Gulf of Aden, vary from 5 miles to 200 yards

Elevations are as high as 7,000 feet in the Hor Bogor area between Bender Cassim and Candala, average 1,400 feet along the Ethiopian border, and decline to just above sea level at most points on the Indian Ocean south of Bargal. In south central Somalia the monotony of the plateau is relieved by isolated abruptly elevated knolls of volcanic rock, called bur. Bur Acaba, near the town of the same name, is typical. Four-fifths of the Territory's area is estimated to be in pasture and woodland, with about 14,000 square miles of thick thorn forest. Over large areas there is no indication of a vegetative covering in recent times.

Climate and Rainfall.--Somalia's distinctions of climate are determined by two monsoons - the northeast and southwest - whose annual ranges dictate each year's weather. Monsoon winds blowing from the west over the Indian Ocean shift regularly from north to south and south to north. During the northeast monsoon a cool current flows from northeast to southwest along the Indian Ocean coast toward the equator. Temperatures are then tolerable on the north coast and highest in the interior and on the south coast. Air movement is offshore when the southwest monsoon blows the current from

southwest to northeast; southern Somalia is at its coolest while the north coast becomes very hot, its tempering winds laden with dust and sand.

Temperatures range from 60° to 110° Fahrenheit. The interior of the land is hotter than the coast, and shows greater daily variation. Over the entire country, however, there is less seasonal change than the fluctuation throughout a day.

Climatic interest in Somalia centers on rainfall, rather than on temperature. Big rains commence when the monsoons blow directly over the ocean from the southeast, and lessen in intensity as they swing north by degrees to cross the Arabian Desert. The transition takes about four months. Rains may begin early in some years, be greatly delayed in others, with wide variation in total fall from year to year. The success or failure of any year's crops and pasturage depends on its pattern of rainfall.

Mean annual precipitation ranges from 20 inches to less than 10. On the coast the average is about 16 inches south of Mogadiscio, and from 11 inches north of the Uebi Scebeli to 2 inches at Bender Cassim. Inland, in the savannah where rains last longer, the average is 22 inches in the vicinity of Bardera and 16 inches further west near the Ethiopian border. Although the sporadic showers of the Gu season furnish fair water for cultivation, most of the moisture is windswept to the west into Ethiopia.

Somali Seasons.—Applying a principle of division based on the incidence of the two monsoons, and on the timing of rainfall rather than its quantity, Somali seasons are divided to correspond with the months indicated below:

1. Gilal: December to March/April. Driest season; great heat; violent northeast monsoon. In most years, a crisis in pasturage occurs during Gilal; land is rested; cotton and other crops commenced in the preceding Der season are harvested.
2. Gu: April to June/July. Period of heaviest rains in the plains, little felt on the coasts. In this season principal sowings of corn, cotton, sesame, and beans take place.
3. Hagai: July to August/September. The hot weather; undulant coastal rains; southwest monsoon; harvest follows.
4. Der: September to November/December. Light rains in the plains, heavy on the coasts. Season for durra (grain sorghum) culture; best for sesame; pastures are green; cotton harvesting is begun.

Water Resources.—Permanent sources of fresh water for human and animal consumption are few and widely spaced in Somalia, and, in the rainless seasons, far from sufficient. Only the largest river, the Giuba, is perennial. The smaller Uebi Scebeli, 300 miles to the north, is dry several months each year except for pools and ponds in the depressions of its bed.

Temporary streams or bohols, are those such as the Torrente Ischia and Madagoi, inland between the Giuba and Uebi Scebeli waterways, and, in the northern provinces, the Uadi Nogal, Uadi Giael and Vallala del Daror. All are impermanent streams, often empty of water, but becoming torrents in brief periods of heavy and sudden rainfall. Numerous minor sand-rivers, with groundwater visible only in the rainy seasons, are found in the highlands of Migiurtinia and along the province's coasts, as well as in the area south of the Giuba.

Irrigation by diversion is practised in the Uebi Scebeli area, and especially in the Giuba region, the earth's humidity is conserved by banking the edges of cultivated plots. In zones of greatest rainfall, however, almost no effort has been made by the natives to dig canals and construct dams, cisterns, or storage reservoirs of sufficient depth to retain adequate rainwater for use in the dry months. Generally, dependence has been on shallow wells, springs, and water-holes, and on small natural reservoirs formed of rainwater impounded in depressions along river banks. These are also found in the zone between the rivers where rainfall on the west side of the dunes, following the land's contour, gravitates toward the ocean. As pond waters recede, cultivation of crops near the rain-pools is possible even in dry seasons.

On the dunes' east sides are occasional springs and water-holes caused by seepage of rainwater back to the sea. Many of these are salty, their waters high in calcium and magnesium content, with a debilitating purgative effect on man and stock. Small temporary reserves of water are also found where rainwater percolates through the soil in the gypseous zones of Mudugh and Migiurtinia Provinces.

Soils.-- The type of shifting cultivation which dominates Somalia's native agriculture may be attributed in part to the character of the country's soils, which require long periods for recovery and regeneration. In areas of the land where precipitation is heaviest, as on the highlands near the Ethiopian border, the sudden violence of rainfalls causes erosion of both sheet and gully types. Intense heat and lack of humus and moisture prevent the natural development of a vegetative covering. Without protection from the effects of sun and rain, soil structure soon deteriorates. Mineral deficiencies are widespread, and, because of oxidation of organic substance, fertility of the soil is low. Fertilizers are quickly leached out by the force of even scanty rainfalls. In the drier areas, deep plowing is harmful, since it breaks through the thin top layer of humus and exposes more soil to weathering.

-4-

## AGRICULTURE

Agricultural Areas:--A direct relation between the country's soils, its water supplies, and the social and economic life of its native people is apparent. Possibilities for the growing of crops under satisfactory conditions are good only on narrow stretches of generally alluvial land bordering the Uebi Scobeli and the Giuba Rivers. Here, however, where soils and water resources are best and where mixed farming should reach its maximum, the presence of the tse-tse fly prevents livestock grazing or its use for draught power. Cattle and often camels die from the sleeping sickness resulting from the fly's bite. Rinderpest and tick fever are prevalent as well. Along the rivers, practically the entire native farming population, also, suffers from malaria and various amoebic diseases resulting from the drinking of river water.

Though soils are generally less productive and water supplies inadequate in the area between the two rivers and from Harardera to Chisimaio on the coast, the bush is often broken by small scattered tracts where farming can be associated with stock-raising. Success of the crops and the availability of pasturage, however, depend almost entirely on the year's rainfall.

Crop production in north Somalia is confined to scattered stands of date palms, and to forest growths of aromatic gums and resins in a roughly triangular area from Bender Cassim on the Gulf of Aden to Bargal on the Indian Ocean, and south to Seuseiuban. Here, in Migiurtinia Province, where no streams flow continuously and precipitation is low, the stunted, dry vegetation will not support camel life. Only goats can be raised by the herdsmen, and these at poor feeding levels.

Native Agriculture.--In the naturally limited, primitive Somali economy, little opportunity for investment exists except in livestock. The highest social status attains, therefore, to the herd-owner. Wealth is counted by numbers of animals rather than their fullest economic return. Competition between tribes for larger herds, and best pasturages and watering-places is brisk and, until the restraint of the Italian regime, was usually bloody. Through the generations, most powerful tribes have relegated to the cultivation of crops those weaker in numbers and poorer in stock, slaves taken in battle, and their descendants. Tribal wars, with slavery, have been practically abolished since the first Italian occupation in 1903, but most Somalis adhere to the traditional tribal organization by which the survival of old inherited feuds is fostered. The tribal system was primarily solidified by the need for united defense of livestock and water and pasturage rights. With nomadism, it remains an obstacle to a modern agricultural economy which cannot be eliminated without revision of the whole social structure.

Settled Native Farming.--Of more than a million Somalis deriving their livelihood from stock-grazing, farming, or combinations of the two, just over



240,000 people are estimated to engage exclusively in farming. Of these about 12-15 percent are hired farm laborers. The type of agriculture carried on by those who work their own land reflects not only the geographic limitations faced by the Somali farmer, but also the economic apathy into which his class has fallen.

Only enough land is cultivated to supply the immediate needs of the farmer's family -- with a meager margin of produce in good years only for storage, or for barter for the livestock products of nomads or the Arab and Indian traders' cotton cloth and simple manufactures. Farm holdings are ordinarily operated by the family, with little outside labor, although clearings are frequently made by communal effort. Farms average less than 5 acres in size where rainfall is good, and range from 8 to 15 - and occasionally larger - in zones of lowest production. Interplanting is practised rather than crop rotation. The cultivated area is sub-divided into small plots planted in haphazard rows with a variety of each crop the family may require. With absence of specialization, yields are characteristically low.

Dry culture predominates, with emphasis on cereals. The success of any type in different areas of the land is determined by the normal quantity of big and small rains. Durra (grain sorghum) is the base crop along the Uebi Scebeli River and in coastal regions and favored interior localities as far north as Harardera. Along the lower Giuba, corn is first in importance, but durra does well in the Der season. In the upper Giuba, and in the vicinity of Genale, Audegle, Uanle Uen and Afgoi, corn is cultivated in the season of greatest rains, durra when the lesser rains come. Cotton, sesame, beans, sweet potatoes, and various fruits and vegetables are generally raised in association with corn and durra.

Because of the nature of the soil, the Somali farmer must rest his land for long periods, depending on several successive fallow years between the cultivation of any plot and its next use for crops. He must, accordingly, utilize an area at least a third greater than his acreage in crops in any one year.

Traditional tools--small hatchets (massar) and knives (sef) are used to cut the brush. The short-handled hoe (iambo) and the cavava, a small, slightly bent plank with a handle in the center and two ropes at the far edges, pulled by two or three men or by a camel, suffice to prepare the land. Crops are sown by hand, in the Gu and Der seasons. Care is limited to superficial hoeings to discourage weeds and conserve the soil's moisture, and, in the Giuba region, to the raising of earthen ledges around each plot to retain such water as may be available. Except for the dung and urine deposited on the fields by stock feeding on crop residues, fertilizer is not used. European-type plows were given to native farmers by early Italian settlers, but were never put into wide use due to the impracticability of

raising livestock in the tse-tse fly zones to pull them as well as to the detrimental effects of deep plowing on the soils of the drier areas. With rainfall frequently irregular and scanty in the growing seasons, crop failures are common. If the harvest should be abundant, grains stored in the customary native fashion - in leaf-lined pits in the ground - may be as much as 30 percent unfit for consumption at the year's end. Since, in addition, the Somali farmer is disinclined to put more than a minimum of labor into his land, particularly in a year following one of good production, he operates under an almost continual deficit, each family indebted for basic necessities.

Distribution and use of crops sown in each planting season. on an average farm of slightly more than 4 acres in the lower Guba - or most productive - agricultural area, is as follows:

<u>Crop</u>	<u>Acres</u>
<u>Gu season:</u>	
Corn, with beans, pumpkins, and potatoes .....	1/2
Corn, with cotton .....	1-1/3
Corn, with sesame .....	1
Cotton, alone .....	1/10
Fallow .....	1/3
<u>Der season:</u>	
Corn, with beans .....	4/5
Durra .....	4/5
Cotton (the <u>Gu</u> sowing) .....	1-2/5
Corn, with sesame .....	4/5
Sesame, alone .....	1/2

Corn, durra, beans, pumpkins, and potatoes are used for family consumption; cotton and sesame are exchanged for supplies of livestock products, oils, tea, coffee husks, sugar, salt, spices, cloth, and other simple domestic necessities.

Nomadic herding with farming.--Migratory livestock-grazing, combined with the production of durra, beans, and oilseeds, and, in the north, the gathering of aromatic gums and resins, is practiced by close to 30 percent of the native population. In the central Bur Guba region, a semi-nomadic herdsman-farmer is typified as owning 6 cattle, 2 camels, and 4 goats, and planting - in the Gu season only - 10 acres of land to durra and beans, with 5 acres left fallow. Beans and durra, milk and milk products are used for the family's food; veal, cattle hides, kids, and two kidskins, sold. Except for ceremonial occasions, meat is eaten infrequently, unless sick stock must be destroyed.

## Pastoral Economy

The herdsman.--First place in Somalia's indigenous economy is held by an exclusively pastoral, non-farming group which represents nearly 45 percent of the native population. Subsistence is totally derived from herds of camels, sheep, goats, and cattle. With water badly distributed and pasturage variable, stock must be moved with the rains. Pastoral tribes migrate continually, following traditional patterns of travel, exactly as did their ancestors. Where the welfare of the herds is a factor, however, one will penetrate another's territory without compunction to the extent that the strength of the tribe permits.

The herds.--The limited water of the dry season (Gilal) and the variations in each region's type of forage are determining factors in the species of the herds. Camels and goats, able to travel several days between water-holes and to feed on the ends of spiny acacias, survive in desolate localities where even the sturdy Somali zebu cattle cannot live. They are found in greatest numbers in the areas corresponding to the country's driest zones, but are raised in association all over Somalia, except in north Migiurtinia, where the scanty vegetation is sufficient only for goats. Nomadism based on sheep-raising takes place in more restricted zones since the animal will not travel more than 12 miles a day. Sheep predominate south from Obbia along the coast, and inland where water resources are not too widely spaced and plant forage is available. Cattle are the animals considered of most social significance, and therefore most desired. The herdsman who raises them must live or migrate where water supplies are most abundant. Cattle herds are placed near wells or the coastal sand-dunes, or where in the dry season, when the tse-tse fly is least active, they may be grazed away from river banks during the day and driven to water at night with comparative safety.

Livestock numbers vary with the particular year's water and pasturage conditions. When the dry season, Gilal, begins earlier and lasts longer than usual, the herds dwindle below their strength in years of more favorable weather. In any year, their continual migrations through the brush add to the difficulties of accurate enumeration. Table 1 gives representative tabulation of the livestock population as of June 30, 1952, prepared by Italian authorities from information furnished by tribal leaders, with due consideration given to actual availability of water and forage required for each of the species in that year.

Table 1. - Livestock population, by provinces and species, Somalia <sup>1/</sup>  
(In thousands)

Province	Cattle	Camels	Goats	Sheep	Horses	Donkeys
Migiurtinia	0.3	40.4	238.3	54.0	<sup>2/</sup>	1.7
Mudugh	41.8	119.6	342.4	73.4	0.1	1.4
Uebi Scebeli	77.3	302.1	739.1	98.6	0.1	3.9
Benadir	406.5	189.8	407.1	191.3	0.1	6.4
Oltre Giuba	208.4	575.1	1,085.6	156.6	<sup>2/</sup>	1.6
Basso Giuba	107.7	73.9	104.8	69.6	-	4.2
Somalia	842.0	1,300.9	2,917.3	643.5	0.3	19.2

<sup>1/</sup> As of June 30, 1952

<sup>2/</sup> Less than 50 head

Source: Ministère des Affaires Etrangères, Rome, 1953-54.

Rapport du Gouvernement Italien à l'Assemblée Générale des Nations Unies sur l'Administration de Tutelle de la Somalie, 1952, 1953.

Four breeds of zebu-type cattle, or mixtures of these breeds, are raised: Surco, common along the left bank of the Giuba; Gasara, a hardy animal which thrives where excessive dryness prohibits less sturdy stock, bred all over the country for milk; Garre, or Ghezza, named for the tribe which breeds it in the Ghel du Dafet region, raised principally for meat and hides, but also a good milk producer; and the Boran, recognized in many parts of Somalia as a beef breed. The types are not ordinarily distinct; a general mixture is prevalent.

Most Somali cattle are large, rangy stock, fairly healthy in appearance. Milk production averages about a half-gallon daily. Only enough milk is taken to satisfy the tribe's daily needs; the rest of the cows roam with the herds. While animal proteins and fats are high in the nomadic diet, probably much more milk and meat could be profitably used than is at present produced. An experimental beef-canning plant, opened some years ago on the Giuba River, abandoned operations after only a few months trial; herdsmen refused to sell their stock.

The dromedary type of camel is raised exclusively in Somalia. Breeds are the Galgail, Gherra, and Elai. As with cattle, all young females are saved for breeding, or for the marriage "dot". Only the best of the young males are kept as reproducers, or for transport; others are slaughtered. Many camel herds keep only one stallion. Camels are seldom ridden, except by frontier troops, since the country's few trails are narrow, and, in the brushland, dangerous for camel-drivers.

Along the coasts and in the upper Giuba area, a limited number of Blackhead Persian fat-tailed sheep are almost always attached to each herd of goats, at a ratio of about 22 sheep to 100 goats for the Territory as a whole. The proportion varies, however, from region to region. Goats are of two types, one smaller, giving less milk and meat, but hardier where water and forage are scarce. Both breeds are white, with some mixture of black or brown, indicating Arabian origin. In general, sheep produce little more milk than is required to feed their young; goat's milk is more plentiful, and their meat is preferred to mutton by the natives. Goatskins, also, have greater commercial value than those of sheep.

Horses are raised on the plains of north Somalia, principally in the Nogal region and near El Bur. These are pony-sized, defective in conformation, with limited endurance. Only the men ride horses; donkeys are ridden by women and children, and generally used for carrying water, wood, and other burdens.

Because of the national influence of the Moslem religion, there are very few swine in Somalia. Chickens are fairly common around towns and villages, but no accurate estimate of their population can be made.

Livestock Products.--Milk is the dietary item essential to the herdsman. Italian authorities have variously estimated the daily per capita consumption, by stock-raisers, of fresh and curdled milk and milk products at from 3 to 6 quarts, and up to 9. Camels are milked by men; women usually milk the cows, goats, and sheep. Part of all the fresh milk is consumed by the owners, part of the cows and goats milk, and occasionally that of sheep, is used in making liquefied butter (sehen) for the household, for sale along the tribe's line of migration, and for export. Whey (garor) is also a popular item for trade. In making these products, the milk of one species of animal is never mixed with that of another.

Animal fats are obtained also from the sheep's tail, from the camel's hump, and from entrails and bone marrow at the slaughtering. These subocs, or subacs - terms applied to all animal fats and greases, including sehen - are sold in the natural state, or in liquefied form to natives who own no livestock, or for limited export. Subocs commonly used as medicine among the natives are the natural fats of the leopard, giraffe, the rhinoceros, and the ostrich.

With his food requirements largely met, and the sale of butter, milk, animal fats, and skins providing his modest necessities beyond food, the herdsman is totally sustained by the stock he maintains; the condition of each depends on the year's rainfall. The tendency to collect animals puts

further strain on the already meager water and feed supply. Water and pasturage sufficient for a herd large enough for a tribe's maintenance are definitely inadequate for huge surpluses of stock.

Fishing Tribes.--Apart from Somalia's agricultural and pastoral groups, a small minority of her native population relies principally on fishing for its existence. The Bagiuni of Somalia's southern coral-barrier islands, and other fishing tribes both north and south of Mogadiscio as well as on the country's northern coasts and along its larger rivers, catch enough fish to satisfy their own dietary needs. There is practically no demand for fish, however, as either food or feed, by inland herding and agricultural tribes.

The preparation of fish and marine products for export to Arabia, Kenya, Tanganyika, and Zanzibar has traditionally held a place of importance in the native economy, although the trade--handicapped by lack of large boats and the use of primitive equipment and methods of preservation--has never been large. Italian industrial firms, using native fishermen, have expanded the field for exports of tuna and shark's meat, whale oil, ambergris, and pearls and mother-of-pearl.

#### Arab Farms

Contrasting with the native form of agriculture is that of the Somali Arabs, who cultivate, in total, about 3,700 acres of farmland near the rivers' edges. Arabian agriculture in Somalia is almost always an enterprise complementary to the owner's commercial activity. Crops raised are those readily absorbed on the local market, such as fruits, tobacco, and beans. Arab installations frequently are mechanized in some degree, water-lift irrigation is used, and, in general, operation of the farm holding is on a relatively high technical level.

#### Italian Agriculture

While only a fifth of Somalia's five thousand Italians are engaged in agriculture and agricultural enterprises, and only a third of the conceded area is under cultivation, the Italian impact on the Territory's agricultural economy is proportionately greater than their numbers would indicate. In recent years, Italian exports of cotton and bananas alone have comprised over 60 percent of the value of total agricultural exports.

Concession areas.--Most Italian agriculture is centered near the banks of the Uebi Sccebali and lower Giuba Rivers. At Genale the concession area nears 70,000 acres; Afgoi farms are about a tenth as large. At Villaggio Duca degli Abruzzi, where soils are probably the country's best, 60,000 acres are under concession. Along the Giuba the conceded acreage is 40,000. Emphasis on irrigation by water pumps and networks of canals, with contouring of the land and the use of chemical fertilizers and machinery, has

greatly increased natural productivity.

Bananas, sugar cane, cotton, peanuts, corn, and grapefruit are principally cultivated at Genale. Afgoi farms raise mainly cotton, peanuts, beans, and corn. On the Giuba, Italian enterprises produce bananas, cotton, peanuts, corn, various fruits, and, on an experimental basis, sisal. The plantation of the Societa Agricola Italo-Somala (SAIS) at Villaggio Duca degli Abruzzi produces sugar cane, cotton, corn, and peanuts. Bananas and cotton are the export crops; grains, fruits, oilseed crops, and, recently, sugar cane, are mainly for home consumption.

Production Levels.--Exact calculations of the various crops' yields have not been made. Estimates have been made by Italian authorities, however, providing an approximation of the average returns of specified agricultural products in the Giuba and Uebi Scebeli areas. (Table 2).

Table 2.--Acreage and production of principal crops in the Giuba and Uebi Scebeli areas of Somalia, 1938-39 and 1947, 1950, 1951

Crop	1938-39	1947	1950	1951	Crop	1938-39	1947	1950	1951
	Acreage(1,000 acres)					Production (1,000 long tons)			
Cotton	12.4	1/	7.2	2/	Cotton	3.4	1/	0.3	0.5
Bananas	11.4		8.9	9.4	Bananas	39.4	-	43.4	38.4
Sugar cane	3.0	4.2	3.2	4.9	Sugar cane	60.0	3.5	4.9	4.9
Sesame	0.3	2.0	-	-	Sesame	0.1	0.1	-	-
Corn	16.6	23.7	-	-	Corn	6.8	6.7	-	-
Peanuts	1.5	12.6	2.5	0.7	Peanuts	0.3	0.9	0.8	0.2

1/ Less than 50

2/ Not available

Source: Ministere des Affaires Etrangeres, Rapport du Gouvernement Italien a l'Assemblee Generale des Nations Unis sur l'Administration de Tutelle de la Somalie, 1953, Rome 1954.

Labor.--Since the war particularly, Italian planters have been handicapped by a shortage of native manpower. Farmers are few in the Territory, and, in the sowing and harvesting seasons, not inclined to leave their own fields. Once the natives are hired, they will put in a maximum of no more than 5 hours daily, and may or may not show up for consecutive days work.

The Italian expedient of arranging piece work - with each job designed to last about 3 hours - is an only partly successful stimulus to labor.

Often the average Somali can be induced to work only one 3-hour stint at the same task; production at this rate is insignificant. In a further attempt to attract and retain man-power, large agricultural enterprises have provided native-type housing on the plantations for their laborers. The native, however, views this convenience more as a curb to his liberty than as an accommodation. He prefers to return each night to the less restrictive atmosphere of his own village, where the possibility of any encroachment on his personal privacy seems to diminish. Under these conditions, Italian hopes of controlling absenteeism diminish also, for in his own hut off the farm the native feels no obligation to return to work until he wishes to do so. Consequently, on a plantation with work for 200 natives the daily labor contingent may total 30, with no one working more than 5 hours.

Italian cotton growers have found it uneconomic to attempt to hire native farmers to cultivate and pick cotton on their plantations. If the social status of the farm laborer cultivating food crops for another is held to be low according to Somali standards, that of the hired worker in the cotton fields is even more despised. Best results occur when local farmers are given land already cleared and provided with cotton seed, water for irrigation when required, corn seed to be interplanted with the cotton crop for the Somali family's own use, and cash advances on the crop. In return, cotton grown on the plot is picked for and sold only to the owner of the concession. Such co-participation arrangements between concessionaire and native farmer are popular with the Somalis, at least to the extent that their proportionate numbers bound by the agreements exceeds the number than can be employed by the day. Agreements are not always respected, however; more attractive terms offered by competing concessionaires frequently result in broken contracts.

Mechanization.--Lack of hand labor has necessitated the use of mechanization wherever possible, and to the extent that machinery can be obtained. First efforts of Italian planters to replace equipment lost during the war were hampered by indecision as to which types would perform most effectively on the farms, and by the lack of dollar exchange for purchases in the United States. Two Italian agriculturalists visited this country in late 1952, and as a result of their survey, in 6 month's time machinery valued at nearly \$700,000 had been ordered for experimental use in Somalia. Satisfactory increases in production have subsequently been reported by various plantations, with a limited easing of labor difficulties. Progress is slow, due to the native farm laborer's almost complete lack of education on the fundamentals of mechanized farming.

Banana Industry.--Of major importance to Somalia's commercial agriculture are its great banana plantations. Prior to World War II, some 20,000 tons of Somali bananas were exported each year to Italy. Plantations reclaimed after their conversion to the production of more basic food crops during the war have been yielding over 40,000 tons of bananas annually in most recent years. The Italian Banana Monopoly, still Somalia's only major banana importer, has absorbed from a quarter to half of each year's crop for subsidized sale in Italy.



The discontent of insular Italy's citrus and deciduous fruit growers and the public's resistance to the high prices upheld by the Monopoly for the relatively inferior Somali product is reflected in the plantation owner's resentment of what he considers too rigid import controls. No satisfactory outlet for that part of the crop rejected by the Monopoly has yet been found. Similarly, since banana exports represent more than a third of the value of the country's overseas trade, great concern is felt among banana growers as to the crop's future when Somalia becomes independent in 1960. Presumably, the support of the Banana Monopoly will terminate then. Meantime, poor highways and harbors, with the expensive necessity of crating fruit to be lightered from landing wharves to ships offshore, add to the trials of the banana plantation owners, as well as to those of all producers of competitive Somali commodities.

Other Principal Crops.--Before World War II about 2,500 tons of cotton - the amount depending on the year's rains - were produced annually in Somalia. For their own use, natives grew about half in mixed varieties where floods receded in the upper river valleys. The remainder was made up of long-staple Egyptian varieties - Sakel and X-1730 - produced for export on Italian concession lands further east. Numerous samples of medium-staple cotton have subsequently been imported from the United States, Uganda, and Italy for trial in areas of little rainfall. These have been found better, on the whole, than the Egyptian types traditionally grown. Due largely to the shortage of hand labor, however, with the continued incidence of bollworm and other plant parasites, postwar production for export has never reached more than a few thousand bales, although percentagewise the crop has represented nearly 30 percent of the value of the export trade. The future of cotton in Somalia would seem to be linked both to the irrigation potential, and to that of labor and mechanization.

Sisal, typically drought resistant, has been experimentally introduced within the last few years as an alternative to cotton. About 1,200 tons a year have been successfully produced for export to Italy and England. There has been a limited expansion of the acreage under cultivation, as well as research into the commercial possibilities of new varieties of imported plant stock.

Sugarcane, produced and processed almost solely by the Societa Agricola Italo-Somala (SAIS), is no longer an export item. Increased domestic consumption since the war, and, again, fluctuating labor supplies, are primary negative aspects in the commercial progress of the crop. Even under a rotation system so designed that only part of the area devoted to cane is planted each year, with the rest plowed under to provide a second-year cutting, native labor is generally not sufficient to strip and cut the reduced yield, or to load it for conveyance to the mill. Usually nearly half the country's sugar supply must be imported.

## AGRICULTURAL TRADE

In addition to the Italian commercial crops, native products - principally hides and skins, and sehen, the liquefied butter, with aromatic shrub crops, and gums and resins from the provinces of the north - complete Somalia's exports. Commodities of indigenous production are usually sold through Italian industrial interests or Arab and Indian tradespeople.

All wheat flour, rice, coffee and coffee husks, tea, spices, processed foods, cotton piece goods, machinery, and petroleum products are imported. The extent of sugar and cereal imports depends on the success of the year's crop.

To illustrate the trend of trade, exports of the agricultural produce of both native and foreign economies during 1953, by destination, as well as the origin of the bulk of the country's agricultural imports for the same year are noted in tables 3 and 4.

Table 3.-Exports of principal native and foreign agricultural products, Somalia, by country of destination, 1953  
(In long tons)

Country of destination	: Live animals	: Fish and fish products	: Cattle hides	: Sheepskins and Goatskins	: Camel hides	: Sehen (butter)	: Bananas	: Oilcake	: Sesame seed	: Incense	: Cotton
Aden	: 198	: 84	: 33	: 187	: 148	: 12	: 11	: 34	: 1,009	: --	: --
Arabian Peninsula	: 150	: 25	: 19	: --	: 60	: 91	: 4	: --	: 28	: --	: --
British Somaliland	: 1	: --	: --	: 67	: --	: 67	: --	: --	: --	: --	: --
Eritrea	: --	: --	: --	: 102	: --	: --	: --	: --	: --	: --	: --
Ethiopia	: --	: 1	: --	: --	: --	: --	: --	: --	: 2	: --	: --
French Somaliland	: --	: --	: --	: --	: 13	: --	: --	: --	: --	: --	: --
Italy	: --	: 164	: 738	: 318	: 166	: --	: 29,662	: 344	: --	: 17	: 955
Kenya	: --	: 18	: 9	: 10	: 62	: --	: --	: --	: --	: 26	: --
United Kingdom	: --	: --	: --	: 40	: --	: --	: 20	: --	: --	: --	: --
Zanzibar	: 157	: 145	: --	: --	: 70	: --	: --	: --	: 13	: 3	: --
Other countries	: 4	: 6	: 43	: 98	: 89	: 5	: 8	: --	: --	: --	: --
<b>Total</b>	: 510	: 445	: 842	: 842	: 315	: 456	: 29,702	: 359	: 34	: 1,095	: 958

Source: Ministero des Affaires Etrangeres, Rapport du Gouvernement Italien a l'Assemblee Generale des Nations Unis sur l'Administration de Tutelle de la Somalie, 1953  
Rome 1954.

Table 4.-Principal agricultural imports, by country of origin, Somalia, 1953.  
(In long tons)

Country of Origin	Meat and meat products	Dairy products	Cereals, and cereal products	Fruits, and pre-vegetables, fresh or preserved	Sugar, refined	Coffee, tea, and spices, and cocoa	Tobacco, and incl. tobacco mfgs.
Aden	1	2	2,206	829	1,018	257	2
Arabian Peninsula	-	-	49	1,778	4	9	-
British Somaliland	-	-	224	37	252	8	-
Eritrea	-	-	-	19	-	1	-
Ethiopia	-	-	35	3	-	76	1
French Somaliland	-	-	98	5	-	-	1/2
Italy	20	50	923	655	28	8	85
Kenya	1/2	26	2,500	87	5	1,080	28
United Kingdom	-	-	-	1/2	-	-	1
Zanzibar	-	-	33	72	2	14	8
Other countries	1	1/2	38	202	1,268	28	2/3
<b>Total</b>	<b>22</b>	<b>78</b>	<b>6,106</b>	<b>3,687</b>	<b>2,577</b>	<b>1,481</b>	<b>125</b>

1/ Less than 50.  
2/ Not available

Source: Ministère des Affaires Étrangères, Rapport du Gouvernement Italien à l'Assemblée Générale des Nations Unies sur l'Administration de la Somalie, 1953  
Rome 1954.

## ADMINISTRATIVE MEASURES FOR AGRICULTURAL REFORM

In its guardianship of the Territory, the Italian Administration has attempted to give priority to improvements in the native economy, in the belief that this course of action would bring about an earlier, more substantial contribution to the self-sufficiency of the land by 1960 than would similar attention to the development of Italian concessions in Somalia. It is apparent that the static native economy cannot be abruptly changed. Under Italian guidance, however, much has been done, and is projected, to improve the lot of both nomad and farmer, and to keep the wheels of gradual economic reform in motion.

Problems have been found to vary in the different districts. The economy of Migiurtinia, particularly, depends first on the collecting of incense and gum arabic, secondarily on fishing, with livestock raising supplementary. Somali producers in the area have no outlet for their goods except through Arab and Indian tradespeople who, as sole middlemen to the markets of the Arab coast, too often impose on the native. Needed here are: a reformed credit system between the resin gatherer and the buyer; expansion of fisheries, with adequate equipment for navigation offshore; and improvement of pasturages in the vicinity of the resin growths, to reduce loss of labor by migration. Date cultivation, also, could be expanded in this locality.

Near the Vallala del Nogal and in Mudugh, efforts to reduce nomadism have been made more difficult by the feuds of two strongly antagonistic tribes, the Darot and the Hania. Water is badly distributed - a serious source of contention. Of primary concern is the location of new permanent supplies, with fair rights of access to all. Guidance in better selection of herds, and more efficient use of the potentially commercial livestock products obtained is also indicated.

In Benadir and the southern river regions, the various ethnic groups have been blended to a greater degree, by association, but actual integration is slight. Small Bantu (Negro) farmsteads, with those of Somalis, are found close to the large Italian agricultural concessions. While interdependence between these groups would here seem greater, close contact has brought with it the more delicate complexities of peaceful relations between negro and Somali, tribe and tribe, and African and European, in addition to the basic problems of water and pasturage.

Divisions of the Italian Administration's Bureau of Agriculture and Zoology, headquartered at Mogadiscio, have attempted to provide both central and regional advisory and experimental services related to agriculture and to the basic land problems contributing to the nomadic social structure. The Agricultural and Forest Service endeavors to assist farmers in their work by directing programs, suggests plans for land reform, cooperatives, and

irrigation enterprises, and controls deforestation. The Zoology Department is charged with the study of livestock, pasturage, water conditions, and migration routes. It determines areas in need of wells and endeavors to teach modern methods of stock-breeding and the preparation of livestock products for the export trade, by illustration of simple improved techniques. Sound films in the Somali language are used, since almost all the nomads are illiterate. It has been found that best contact with the nomads lies through using European-trained native tribesmen as teachers. Although their numbers are now relatively few, as they increase it is hoped that the herdsmen may be educated to the rational rotation of pasturage, to conservation and fair division of water supplies, and to store forage. If standards of the herds could be raised, and the malpractices of iron-branding of animals, and of haphazard skinning drying eliminated, the country's exports of livestock products could contribute considerably more to the reduction of trade deficits than has been the case in the past.

In the regional services, the Alessandra Agricultural Center is devoted to native agriculture, offering assistance and demonstration. Genale Center specializes in cultivation experiments and studies possibilities for the extended use of mechanization. Several small sub-stations or sections, as at Baidoa, are staffed by native agriculturalists trained especially to deal with the problems of dry-land farming. The services of Entomology and Phytopathology, Experiments, Anti-Pest (Locust), and Meteorology function equally for the welfare of the native farmer and for the European concessionaire.

At the end of 1953, 18 agricultural cooperatives and 2 irrigation unions were active in the Uebi Scebeli region, with 6 others nearing completion. The total area serviced exceeds 3,000 acres, or about 13 percent of the region's total. On the Giuba, 7 irrigation unions, operating on about 3,700 acres, and one agricultural cooperative (125 acres developed) were in full use by 1954. Three additional irrigation unions, to serve over 1,600 acres, were then under formation. Future plans for expansion aim for the irrigation of up to 14,000 acres, or 6,000 farms in the Giuba area.

Under the Administration's program for the selection of seeds best suited to the country, several imported types of hybrid corn were found to yield up to 50 percent more than native varieties. A number of Somali farmers showed interest in acquiring the improved seed for their own planting. Introduced also, for testing on several hundred acres of experimental farmland, were new varieties of cotton, soya beans, ramie, dwarf durra, and castor beans.

Paralleling the programs for seed and type selection is one for the control of plant parasites and pests. In the brush, as well as in intensely cultivated areas, airplane spraying has been successfully employed in the last few years.

For 1954-60 a wide range of developmental projects relating to irrigation, well-drilling, construction of storage facilities, introduction of agricultural equipment, and road and port improvements, has been proposed by the Italian Government. While the priority under which the separate undertakings will be commenced is not yet entirely determined, those basically designed to develop the native economy will, generally, take precedence.

Since the assumption of Italy's administrative authority in 1950, American aid has been instrumental, both in the planning and operation of Italian development schemes for Somalia. Among primary suggestions for the transition from old methods to the new, rather than final goals in development, were ground water surveys for excavation or rehabilitation of wells; experimental work with hybrid corn, a livestock genetics study, and research into the feasibility of using various types of agricultural machinery in Somalia. Continuing technical cooperation and development assistance has been projected for the remaining years of Italian guardianship.

\*\*\*\*\*

SOURCES

Ministere des Affaires Etrangeres, Rapport du Gouvernement Italien a l'Assemblee Generale des Nations Unis sur l'Administration de Tutelle de la Somalie, 1952 and 1953 Rome, 1953, 1954

United Nations, The Trust Territory of Somaliland Under Italian Administration, New York, 1952

Shantz, H. L., and Harbut, C. F., The Vegetation and Soils of Africa, National Research Council and The American Geographical Society, New York, 1923 (Research Series #13)

Corni, Guido, Somalia Italiana, Volume Secondo, Editoriale Arte e Storia, Milano, 1937-XV

Italian Somaliland, H. M. Stationery Office, London, 1920

Food and Agricultural Organization of the United Nations, Yearbook of Food and Agriculture, 1954, Vol. 8, Part 1, Rome, 1955

\* \* \* \* \*





