PEASANT CACAO FARMING IN WEST CAMEROON
AND FUTURE PROSPECTS OF
CAMEROON COCOA.

by

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Special Course Essay

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INDEX

I. INTRODUCTION.
   Status, Location, Area and Population 1
   Natural Regions 2
   Climate, Economy 2
   Soils 2

II. METHODS OF ESTABLISHMENT.
   A. Land Preparation: Land under forest 3
      Land under bananas 4
      Land under food crops 5
   B. Nursery Work: Planting material 5
      Central Nursery Programme 5
      Nursery Pests and Diseases 6
      Seeding Distribution 6
   C. Field Planting and Maintenance 7
   D. Field Pests and Disease 8
      Black Pod Disease, Routine Spraying 8
   E. Preparation for Market 9
      Harvesting, Fermentation 9
      Drying, Regulations, Artificial Drying, 10
      Samoan Drier 10
      Sun Drying, Marketing 12
      Land Tenure 13

III. FUTURE PROSPECTS. 14
   Production 1958-59 - 1962-63 14

IV. PROSPECTS OF EXPANSION. 15

V. SUMMARY. 16

ACKNOWLEDGMENT. 17

BIBLIOGRAPHY. 18

APPENDIX I. Map. 19
I. **INTRODUCTION.**

**Status:** The former French Cameroons became independent on 1st January 1960 as Republic of Cameroun. On 1st October 1961, the former British Southern Cameroons (now West Cameroon) as an outcome of a United Nations Plebiscite conducted in February 1961 to determine the wishes of the people, unified with the Republic of Cameroun (now East Cameroon) to form the Federal Republic of Cameroon.

**Location:** Cameroon is situated on the west coast of tropical Africa. It is bounded on the west by Nigeria and the Gulf of Guinea, on the south by Rio Muni, Gabon and the Republic of Congo; and on the east by the Central African Republic and Chad.

**Area and Population:** Cameroon is roughly triangular in shape (see map, Appendix I), with the base along the coast and the apex touching Lake Chad some 870 miles north of the coast. It is 183,381 square miles in area and has a population of about 5 million. In the north there is a preponderance of Semitic-Negroid peoples mainly of Moslem faith and in the south mainly Negritos and Bantus, many of whom have been converted to Christianity. It is estimated that about 20% of the total area is in cultivation under all crops.

**Natural Regions:** The country consists of four natural regions - the low coastal plains with equatorial forests in the south; a central plateau 2500-4500 feet above sea level; a mountainous forest area with some 8000 feet peaks in the west; and in the north a savannah area sloping from the ...
central plateau to the Lake Chad Basin. In the otherwise low-lying southwest is Cameroon Mountain which rises to a height of 13,350 feet.

**Climate**: In the south, the climate follows the usual tropical pattern. Temperatures are high with only slight seasonal variations. Rainfall varies enormously from the south as one proceeds northwards. Rainfall is very heavy in the south with an annual average of 150 inches. At Debundsha, situated west of the Cameroon Mountain the annual average rainfall is 390 inches. It is regarded as the second wettest place in the world and in 1946 a rainfall of 494 inches was recorded. In the south the rainy season commences between March/April and continues till about the end of October; July and August being the wettest months. This is followed by the dry season. The onset and end of the rainy season is usually characterised by tornadoes - sometimes accompanied by thunderstorms. The tornadoes are often responsible for heavy losses on banana estates. In the extreme north rainfall is low, with an annual average of less than 20 inches. The occurrence of very dry winds - the harmattan - is common during the northern dry season.

**Economy**: Cameroon is mainly an agricultural country. More than 75% of its revenue is derived from the export of agricultural products. The central and northern tribes are extensively engaged in stock rearing - mainly cattle, sheep and goats - on natural pastures, whilst the southerners are mainly farmers and traders. Cocoa, coffee, bananas, rubber, palm oil, palm kernel, tea, cotton, hides and skins as well
as timber are exported.

Cacao cultivation is restricted to the tropical forest belt of the south where the greater proportion of the cocoa exported is produced by peasants, though some is produced on estates.

Soils: A land capability survey is in progress. Generally speaking the soils of the cocoa producing areas vary considerably. In the coastal areas the soils are mainly volcanic in origin, reasonably fertile and free draining, so that it is not a practice to construct drains in cacao farms. The volcanic soils are reasonably fertile and are dark brown in colour. In other areas they are clay-loams, dark or reddish brown in colour and in reasonable state of fertility.

The methods of establishing cacao described are as practised in West Cameroon.

II. METHODS OF ESTABLISHMENT.

A. Land Preparation: The method of land preparation in the establishment of cacao is normally determined by its state, depending on whether the land is under high forest, or already under cultivation.

(a) Land under forest: Preparation of land under forest for cacao takes the following sequence. Underbrushing and selective thinning of forest shade to about 50% starts during the dry season for planting the following June. Underbrushing consists of cutlassing of undergrowths and other tangles on the paths along which the cacao will be planted.
The paths are spaced according to the desired spacing. Spacings vary from 5'x5' for local Trinitario types to 12'x12' for Amazonas, but spacings of 8'x8' and 10'x10' are more commonly used. After establishment the forest shade is progressively thinned to about 30% as the cacao grows.

This method has the advantage that establishment costs are low, but also has the following disadvantages:

i. Falling trees in progressive thinning usually cause damage to young cacao.

ii. Forest trees provide good hiding places for rodents which are a serious pest.

iii. Mechanical Cultivation or spraying is rendered very difficult or impossible.

iv. Considerable skill is required in selective thinning to maintain a uniform degree of shade.

v. Patchiness in growth often occurs as a result of uneven degree of shade and young cacao is often found not to grow well near related spp. e.g. Triplochiton.

(b) Land under bananas: Because of the long term nature of cacao, small farmers do not normally establish it as a pure crop. It is common practice to establish cacao in banana estates in the second or third year. In this method bananas are planted after underbrushing, lining out, and holing. Felling is done as soon as possible after planting the bananas to minimise damage to the sprouting young bananas. This is a more popular method on account of the quick returns derived from the bananas from the first year onwards. The bananas
bananas and some of the taller trees left as wind breaks provide shade for the young cacao.

(c) Land under food crops: Establishment in food crop farms is also practised. In this method seedlings may be used or seeds may be planted at stake among food crops of maize, cassava or coco yams. With stake planting 2-3 seeds are planted per stand and gradually thinned, the best being left by the second year.

B. Nursery Work:

(a) Planting material: All planting material distributed by the Extension Service are F3 Amazons from a seed block of F2 Amazons established in 1955 from pods imported from Ghana. In their second year of bearing pods cost 2/6d each to produce. These are sold to farmers at a subsidised rate of 6d per pod. Farmers may raise their own seedlings in baskets or on beds from pods supplied by the Extension Service.

(b) Central Nursery Programme: Central nurseries run by the Extension Service, are sited at convenient places in the cacao growing areas. The main aim is to produce good seedlings for all intending growers. All seedlings are raised in whalehide or polythene pots. Nursery work commences in November with the erection of top and side shade. Shading material consists of bush sticks and palm fronds.

Filling of pots constitute one of the major operations in the nursery programme. Pots are filled with top soil or ordinary soil mixed with compost. Filled pots are arranged...
arranged in the form of beds 4 feet wide with 1 foot paths between. For ease of checking they are arranged in lots of 500 and are prevented from falling over by split bamboo tied on pegs 1" or 2" below the top of the pots, round the outer edge of the beds formed by the filled pots.

Sowing is done in December to January. Fresh beans are sown flat 1½" deep and covered with soil. Heavy watering follows sowing and continues every other day until germination, which takes place in 4-6 days. Supplies are made as soon as possible after germination to main uniformity in growth. Maintenance consists in regular watering, repairs to shade, weed control and pests and disease control.

(c) Nursery Pests and Diseases: Incidence of rodents digging out and eating sown beans is common. Fencing nurseries with zinc sheets or fine mesh wire netting as well as trapping and the use of rodenticides are practised. Seedling-wilt is common. Routine spraying with perenox (4 lbs. in 100 gals. water) is carried out weekly for the first four weeks after germination. Psyllids and jassids, crickets, caterpillars and hoppers are the main pests. Dusting with 5% DDT dust and spraying with Didimac 25% at 3 pints in 100 gals. water are effective in control.

(d) Seedling Distribution: Distribution of seedlings start from June onwards. The cost of production per seedling to distribution stage is about 1/6d. Whalehide pots cost 3d each (landed cost) and polythene pots 2d each. Because they are deeper, polythene pots give a lower percentage
of bent or broken tap root seedlings as compared with whalehide pot seedlings at time of distribution. Whalehide pots can however be recovered for use a second time. Polythene pots are cheaper and stand handling better during loading and off-loading on distribution lorries, and are now more in use.

Seedlings are available to all farmers at a subsidised rate of 4d each, transported free to the nearest motorable point of his field. Members of cooperative societies are allowed seedlings on credit on the production to a distribution officer of completed credit forms from their various societies. Vegetative propagation is not practised except on estates.

C. Field Planting and Maintenance:

Free advice and assistance of the Extension Service staff are available to all farmers during the various stages of their farm work. Holing is completed in advance of planting season. Holes are about 12"-15" deep and 8"-10" wide. After placing a seedling in position, the whalehide pot is removed before filling. Polythene pots are split for ease of removal before placing the seedling in position.

Maintenance: The major operations after planting are the control of weeds, pests and diseases. Supplying is done during the second year and progressive thinning of shade is done as necessary to make room for the growing plants. If established among food crops, cultivation may continue till a good canopy is formed.

Amazons...
Amazons come into bearing from the third year.

Pruning which consists of removal of unwanted growth to give the trees the desired shape and a balanced framework on which the crop will be borne, starts in the third year. Generally, the heights of the trees are controlled after the second jourquette. Thereafter, all chupons are removed and further pruning is restricted to the removal of dead wood and mistletoe - a common parasite of cacao. Cutlassing is done once or twice yearly to control weeds.

D. Field Pests and Disease:

The main pests and disease of mature cacao fields are monkeys, rodents, biting ants, stem borers, capsids, leaf eating hoppers and beetles. Monkeys and rodents have been known to cause considerable loss to pods where they are not controlled. So far there are no incidents of swollen shoot or witches brook disease but cherelle wilt is common.

Black Pod Disease: This is by far the most serious of fungus diseases under Cameroon conditions, and where not controlled may cause losses of up to 80% of a potential crop. As a result of heavy losses caused by this disease, the Extension Service runs spraying schools in which farmers are taught how to control the disease by fungicidal sprays. The main crop is borne during the rainy season when conditions favour the spread of the disease.

Routine spraying starts in May when trees come into bearing and continues till the end of August. Spraying takes place at 3-weekly intervals, with Perenox at 4 lbs. per 100 gals. ...
gals. water, using knapsack sprayers. Regular spraying together with regular harvesting, and the removal and burying of all infected pods are effective. It was found uneconomical to spray trees which yielded less than 12 pods per season.

E. Preparation for Market:

(a) Harvesting: Regular harvesting of ripe pods, at the right degree of ripeness, good fermentation, as well as careful drying and good storage to avoid contamination are essential in the production of good quality cocoa. Harvesting consists of cutting ripe pods with a sharp cutlass, taking care not to damage the cushions. Pods high up on trees are harvested with long-handled harvesting knives. Harvested pods are collected into baskets and heaped at convenient places on the farm. When completed, pods are opened and the beans are extracted.

(b) Fermentation: The collected beans are transported to the fermentary for fermentation. Fermentation is done in boxes or baskets. Where boxes are used the fresh beans are emptied into fermentation boxes. When filled the boxes are covered with banana leaves, and these leaves are kept in position by placing weights on the top. Boxes are raised to permit drainage. Where baskets are used, the sides are lined with banana leaves before filling. After filling, the ends of the leaves are folded over the beans and more leaves placed on the top to provide a good cover. The leaves are kept in position by placing weights on top. Fermentation is done in 6 days, with turning on the second and fourth days,
during which the beans are thoroughly mixed.

(c) Drying: Because the main crop is harvested during the rainy season when there is inadequate sunshine, much of Cameroon cocoa is artificially dried.

(d) Regulations: Due to the fact that cocoa is likely to be tainted with smoke in artificial drying and thus lower its quality, artificial drying is controlled. By the "Cocoa Control of Preparation Law" fermentation of cocoa can only be done in boxes and baskets. All driers have to be inspected and licensed if in good state before they can be used. This is done in advance of harvesting season. Contaminated cocoa is liable to seizure and the producer is liable to heavy fines, imprisonment or both.

Very unfortunately, these regulations are enforced by the Extension Service, which does not make for good relations with the farmers.

(e) Artificial Drying: Several types of artificial driers are in use, but the most popular to the small holders is the Samoan type of drier. It is reasonably cheap to build and maintain, and when properly built there is no danger of cocoa contamination by smoke.

(f) Samoan Drier: The drier consists of a flue made out of 6 petrol or tar drums, 5 with the tops and bottoms removed and the sixth with only the top removed. The drums are fitted together with a few inches of one into the other and the joints riveted. The joints are made smoke tight...
tight by binding them round with asbestos tape. The tape is held securely in position by binding round with wire or putting a metal band over it, the ends of which are bolted.

The flue so made is placed in a 3' wide trench built with bricks. The trench is sloped so that the chimney end is one foot above the firing end. A hole is cut at the chimney end and a zinc chimney fitted; the joints being sealed with putty. A wooden framework about 8'x14' is built over the flue, 4' above the firing end. The framework is supported on uprights which are extended to hold a roof. A zinc wall 4' high is built round the framework to retain hot air from the flue. Over the 4' wall cross pieces are built in to hold foldable drying mats made from bamboo lathes and woven with fibre. The roof is extended to enclose the fermentary and provide space for storing dry wood. The chimney sticks through the ridge of the roof which may be of thatch or corrugated iron sheets.

A piece of expanded metal is placed at the firing end, on which dry wood is piled and lit. The firing end is provided with a lid which is used as a damper in controlling the rate of burning and so regulate the temperature.

Wet fermented cocoa is spread on the drying platform 2"-3" thick, depending on the quantity on hand, and kept regularly raked backwards and forwards with a wooden rake to ensure even drying. Batches of 500-700 lbs. dry cocoa are turned out in 2-3 days depending on how long the drier is kept running. The cocoa so dried is of good quality. Where local material is used the cost of a Samoan drier installed
may be less than £25.

(g) Sun Drying: In sun drying the wet beans are dried on raised platforms on mats to avoid contamination by domestic animals. The platforms are made of 8 or more forked sticks fixed in 2 rows 4'-5' apart and about 18" between the rows with the forks facing each other. Over the forks are placed cross pieces to form a framework on which a drying mat is spread. Wet cocoa beans are spread on the mat and turned as necessary until they are dry. Drying takes 5-10 days depending on the intensity of direct sunshine.

Dried beans are spread out on mats and all defective beans - broken, flat, germinated, mouldy, weevily etc. - and any extraneous matter are hand picked. Picked beans are bagged ready for sale.

(h) Marketing: Cameroon cocoa is marketed through a Marketing Board. Government interest is represented on the Board by the head of the Department of Marketing and Exports. Estate and peasant producers are represented by members appointed by the government. Unlike Trinidad where a producer can look for his own market, all produce is sold through the Marketing Board. Its main function is to secure the most favourable arrangements for the purchase and evacuation of all produce for export. It fixes the basic producer price in advance of each marketing year. Producer prices are published and all produce is purchased through licensed buying agents, mainly cooperative societies and local firms. The buying agents pay producer prices as fixed by the Board and...
receive commission from the Board on the tonnage purchased. The Board arranges for sales on the world markets and builds reserves from which producer prices are subsidised in bad years. As far as it can afford, the Board is responsible for assisting in the economic development of the producing areas by annual grants to a Development Agency, the Chairman of which is also appointed by Government.

(1) Land Tenure: Apart from government lands and land acquired for public use, all land is owned by the natives in their various tribal groups. Peasants therefore farm on freehold lands. The size of farms is determined by the size of the family and the availability of capital for the employment of hired labour.

In the coastal districts in the vicinity of plantations where vast areas were acquired for plantation purposes, there is some land pressure, but elsewhere land is available.

III. FUTURE PROSPECTS.

Cameroon cocoa production has increased steadily during the past five years and is likely to continue to increase (Table 1).
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*(East and West Cameroon inclusive)*


This is due mainly to better control of black pod disease, and the coming into bearing of Amazons introduced in 1955, seedlings from which are annually distributed from central nurseries. Like other West African countries Cameroon produces good quality bulk cocoa which is more in demand on the world market. Labour costs are reasonably low, 3/6d-4/6d per day as compared with BW:4-85 per day in Trinidad.

Living standards are of course much higher in Trinidad, and she is well compensated by her premium price for flavour cocoa.

The Far East, mainly Borneo and New Guinea are likely to be competitors for cheap labour but their production is still low (Table 1), and any increase is likely to be taken by Australia, whose demands should increase with rising ...
rising population. Hardly any would therefore be available for sale on world markets.

IV. PROSPECTS OF EXPANSION.

A considerable proportion of the suitable cacao areas are yet uncultivated due mainly to lack of communications. (A land capability classification is on hand and until completed no exact acreages can be quoted.) The building of roads recently by Timber Companies, into the otherwise inaccessible areas, for timber extraction is gradually providing some access into these areas and cultivation is starting. Capital is the main limiting factor, but peasant establishment costs, by their popular method of planting in banana farms, from which they get quick returns are low. All seedlings raised annually from Central Nurseries are sold, and often demand exceeds supply.

Consumption in the major consuming countries has recently been reported to have increased and prices have risen steadily. The prospects of future crops are described by dealers as "disturbing" in both the main producing areas of Brazil and West Africa. The disturbing position in West Africa is said to be due to the reappearance of Swollen Shoot Disease in Ghana as well as capsid damage. Crop levels can be maintained by intensive pests and disease control measures, but unfavourable seasons as well as other pests and diseases have still to be reckoned with. Cameroon can therefore continue to increase her production to help to maintain the levels and meet the world's increasing demand for
raw cocoa, which currently is reported to be some 59,000 tons short of the estimated 1,105,000 tons (Economist, March 23rd 1963).

V. SUMMARY.

Peasant cocoa production in West Cameroon has been outlined. The industry has expanded steadily during the past 5 years and there are prospects of further expansion.

Peasant farming standards are however still low, due mainly to illiteracy and poor methods. As in other parts of the tropics young educated men tend to turn away from farming, which they regard as a job for the illiterates. There is a need for a change of this attitude, especially in the Cameroon, with agriculture as the main economy. In this respect the introduction of farm settlement schemes, planned on a long term basis, would help to improve standards.

The Extension Service is doing a good job in improving standards by free advice and assistance to farmers in various aspects of their farm work, but it is felt that the enforcement of regulations should be the concern of an entirely different department, for obvious reasons.

Increasing world demands for raw cocoa and the recent trend towards price stabilization by International Cocoa Agreement, and which is likely to be accepted by the main producing countries would lead to increased future planting in East and West Cameroon as well as in other producing areas.
Acknowledgment is made to Mr. H. A. Squire for helpful discussions and suggestions in the course of writing this essay.
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