

GOLD COAST DEPARTMENT OF SOIL AND LAND-USE SURVEY

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R E S T R I C T E D

POSSIBLE AREAS IN THE GOLD COAST
FOR SUGARCANE PRODUCTION WITH SPECIAL
REFERENCE TO AN INVESTIGATION IN THE
LOWER PRA VALLEY

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Introduction

The production of cane by manual labour to supply a sugar factory is only possible where the peasant farmer or labouring population has no alternative means of obtaining a livelihood. It involves the hardest agricultural work in the tropics and the inhabitants of the Gold Coast would not undertake cane production by such means. The growth of cane, on small patches of ill-drained, sandy alluvium, for sale at high prices as a sweetmeat cannot be taken as an indication of their readiness to produce cane as raw material for a sugar factory. This subject has been discussed previously: Charter, C.F. Report on the sugar industry of the Belgian Congo with special reference to the possibility of establishing a sugar industry in the Gold Coast, para. 29. (Gold Coast Department of Agriculture, Soil Survey Division. 1949. MS.)

This means that, if a sugar industry is to be established in the Gold Coast, cane production will have to be mechanized as much as possible. This, in turn, means that the terrain chosen will preferably have to be either flat or only very gently undulating. Sugarcane production by mechanized means is possible on land that is decidedly undulating but, as there has been no previous experience in the Gold Coast of conducting large-scale, erosion-proof agriculture on such terrains, it would hardly be advisable to start sugarcane production in such territory. At the beginning at least, this limits possible areas to two types: (1) the coastal plains in the south-east of the Gold Coast and (2) the stretches of alluvium bordering the larger rivers. In both of these types of areas cane production would be safe and could be commenced at any time, as far as the soils are concerned as the latter are sufficiently similar to known sugarcane soils for production to start without a pilot scheme to test the areas out.

Sugarcane production on undulating lands of the
forest and derived savannah woodland zones

Sugarcane could be produced by mechanized means on the more gently undulating red soils of the forest region and of parts of Northern Ashanti in the derived savannah woodland region, e.g. the Amantin area. (Derived savannah woodland is savannah woodland that, due to cultivation and fires, has replaced forest. It occurs under a forest climate). Immediate attempts at production on the soils of these areas would be very inadvisable since little or nothing is known about how they would react to mechanized arable agriculture. I do not know of any areas of similar soils elsewhere in the world which produce cane on a commercial scale.

With a crop such as sugar needing a factory for its production a pilot sugar scheme would seem to be out of the question. (The Japanese, however, are reputed to have made successful use of pilot sugar factories in Hainan that ground about ten tons of cane an hour. Further information about such small pilot factories would be useful). The suitability of the soils in question for mechanized arable agriculture could be tested out and the problems they present investigated on a pilot scheme for the production of annual food crops. Pilot schemes of this character would be well worth-while, considering possible future economic conditions in the Gold Coast. The results of such investigations into mechanized arable agriculture could be applied satisfactorily to the growth of sugarcane. The proposed pilot scheme to investigate the possibilities of mechanized food crop production in the Amantin area (Northern Ashanti) would give the required information. A similar pilot scheme in the Colony, say to the south of the cocoa belt in the rainfall zone of 45-70 inches would also give useful information. Subsistence farming is at the present time moving northwards from the coast into this zone.

In both the derived savannah woodland and forest regions sites suitable for sugarcane factories with respect to communications and water supply could be found without difficulty.

The mere growing of a few stools of sugarcane on experiment stations will not provide the information required. Sugarcane will grow more or less satisfactorily on the great majority of tropical soils with rainfalls of between 45 and 80 inches a year. This is not the problem. What it is essential to know is how to handle particular soils successfully and economically by mechanized means in the production of sugarcane. This requires experimentation on some scale, and trials should be conducted on a complete part of a drainage basin, though not necessarily on one covering a very large area.

Sugarcane production on the coastal plains and river alluvia

On the coastal plains, the only areas suitable for large-scale sugarcane production are those to the south-east of the Colony that lie on either side of the lower part of the Volta. Here, cane could only be produced by irrigation, however. At present, it does not appear possible to irrigate the plains east of the Volta. The Accra-Akuse-Ada plains to the west of the Volta will be irrigable from the dam to be constructed at Ajena and much of this area will then be capable of producing sugarcane on the scale necessary to supply a central factory. A number of the soils are very suitable for sugarcane production and full details about them will be provided by the soil survey just being completed. It will be necessary, however, to determine proper methods of handling them by mechanized means and of applying irrigation water and these problems will be under investigation on the Kpong Pilot Irrigation Scheme about to be started. (The information so obtained would also apply to the coastal plains east of the Volta, if it were later found possible to irrigate them as the soils are closely similar).

It is assumed, however, that the initiation of a sugar industry is proposed for a date earlier than that by which production could be undertaken by irrigation on the Accra plains.

The only other area that might be immediately suitable for mechanized cane production would be the stretches of alluvium bordering the larger rivers. Unfortunately few of the Gold Coast rivers are bordered by any significant expanses of suitable alluvium; even towards the mouth of the Volta where this river crosses the southeastern coastal plains the alluvium on either side is only about three-quarters of a mile in width. In many places where such lands do occur, e.g. by the sides of the Volta and its tributaries in Northern Ashanti and the Northern Territories, they may be unsuitable on account of the difficulties of flood control, climate (too long and severe a dry season) and communications.

The soil surveys conducted, or being conducted, in the Upper Densu, the Ayensu and Upper Tano Basins have disclosed no lands suitable for establishing a sugar industry in the near future. After careful consideration of the Gold Coast as a whole, both from maps and from my extensive travelling, it appeared that the only possible area where all the necessary conditions for the establishment of a moderate-size sugar plantation and factory might occur would be the lower Pra river basin north of the 45-inches isohyet. The necessary conditions have been discussed in a previous report, Charter, C.F.: The peasant sugar industry of Northern Nigeria and suggestions for its development, paras. 14 to 20 inclusive. (Gold Coast Department of Agriculture, Soil Survey Division. 1949. MS.) A lower minimum rainfall, however, has been accepted in order not to exclude land that stands same chance of growing cane commercially.

The part of the lower Pra basin selected for examination lies between where the river leaves the undulating forest zone to cross the narrow coastal plain and the 45-inches isohyet to the south. This area comprises approximately 7 square miles of more or less flat, alluvial land below 50 ft. in elevation. If all this area were satisfactory for cane growth it would, on the basis of 20 tons of cane per acre, 10 tons of cane per ton of sugar and allowing for the production of plants and two ratoons, supply enough cane for the manufacture of 5,000 tons of sugar per annum, this being the smallest size of factory it would be economic to consider.

I have had the area in question examined and find that the soils are not heavy alluvia as required but more or less shallow sands which, however suitable they may be for garden production of cane for chewing, are quite unfitted for production of cane for a factory producing sugar. Furthermore, the number of low hills protruding through the sandy alluvium are larger in number than indicated by the 1:62,500 topographical map and this alone would interfere with efficient mechanical tillage.

Until a senior officer can be recruited to take charge of a special team for ad hoc investigations of this nature, other alluvial areas cannot be examined. There is, however, little or no prospect of such investigations disclosing suitable territory for sugarcane agriculture on a plantation scale.