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COLONIAL AGRICULTURAL PRODUCTION

The Contribution made by Native Peasants and by Foreign Enterprise

SIR ALAN PIM

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PREFACE

THERE is at the present time a noticeable quickening of the British political conscience over colonial as well as domestic affairs. Public interest in 'Beveridge' and social problems generally has its parallel in lively discussion in Parliament and the Press on the subject of colonial welfare.

Much of the discussion has to do with the particular question of combining the efficient exploitation of colonial natural resources to the general benefit of mankind with concern for the essential interests of the colonial peoples themselves. In agriculture, as the introduction to this book shows, the problem is largely one of deciding how to adjust the balance between the two principal systems of enterprise prevailing in the countries concerned, namely, the system of plantations capitalized and managed mainly from outside, and that of peasant production mainly in the hands of native small-holders, and how the two systems can be made complementary.

Hitherto few writers have dealt with this problem as a whole and Sir Alan Pim is here breaking new ground, or, at all events, ploughing deeper than most of his literary predecessors. At the beginning and end of the book the author sets out the problem in its widest aspects, weighs up the virtues and vices of each of the two agricultural systems and suggests what could be done to improve the position. Primarily, however, the work is a study of facts rather than theories; as the author describes it, it is 'a history of plantation and peasant production in representative colonial dependencies, more especially in connexion with export crops'. The last words, incidentally, serve as a useful warning against the not uncommon mistake of treating the problem as though it were simply one of plantation versus 'subsistence' economy. The native peoples certainly need to subsist, but they also need the opportunity of increasing their share in the larger-scale commercial exploitation of their country's agricultural crops, and in its trade with other parts of the world.

In several of the colonies surveyed in this book plantation development has given birth to important subsidiary problems arising out of the large-scale import of labour, and its corollary a large resident immigrant community with all the social, economic and political issues which ensue therefrom. An examination of these problems in British Malaya, where they are especially acute, has recently been made by Dr. Phyllis Kaberry on behalf of Chatham House, and the result will shortly be made available under the title *The Development of Self-government in Malaya.*

Finally, as a measure of the human significance of the problem under discussion, it may be added that the native populations dealt with in this book exceed in the aggregate one hundred million—mostly inhabitants of the Far Eastern dependencies—of whom the large majority are affected closely, if not directly, by the 'plantation-peasant' issue.

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March 1946

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THE great changes which have taken place during the present war show clearly that a new stage has been reached in dealing with the general problem of colonial development. The whole economic organization of one of the most important colonial regions has been overturned—temporarily at any rate; the world trade pattern has been largely disrupted. Powerful vested interests in new fields of production created during the war may obstruct the return to former sources of supply, and the increasing use of substitutes will affect colonial exports. Economic diversification will be greatly increased.

On the other hand a strong stimulus has been given to the growing movement of opinion towards a fuller recognition of what is involved in colonial responsibilities, and in particular of the necessity of a much more positive and constructive economic policy for colonial dependencies. The accepted aim is for a higher general standard of income and of living for all colonial peoples. The extent to which and the methods by which it can be realized are in the main determined by the amount and character of the local resources and by the ability of the inhabitants to make use of them, but a very important factor, more especially as regards the speed of advance, is the aid which they will be able to obtain from outside sources, and in particular from the metropolitan countries. For the most part this aid takes the form of capital or capital equipment, of the introduction of scientific methods, and of organizing ability, when the Governments concerned have established the necessary preliminary conditions of law and order and a reasonably adequate system of transport and communications. The import of capital and of foreign agencies for controlling its application introduces all the problems financial, economic, social, and political, of what Dutch economists have called a dual economy, in which a small section of the population exert an influence out of all proportion to their numbers. This aspect of the question will become increasingly important as the political advance, postulated in the accepted British policy, moves forward towards its ultimate aim of self-government.

The present study is however primarily concerned only with a part of this immense field, though one of vital importance to the majority of colonial dependencies, that of agricultural primary production, more especially of the commercial crops in which alone foreign investors are largely interested.

Evolution of the Plantation System

When the colonizing nations took over control of their dependencies they had for the most part to deal with societies of a precapitalistic type and ways of thinking, a mass of small family or other groups organized for self-subsistence on a very low level and with little or no exchange of agricultural products other than purely local. The type of agriculture varied according to the physical conditions, from the intensive cultivation of irrigated rice lands in the Eastern dependencies and of small areas in Africa with a relatively dense population, to the shifting cultivation found in various forms over practically all the colonial territories. Their aims and ambitions were not so much economic, since these can only have a very limited scope before the introduction of a money economy, as social, and deviations from traditional practices were not regarded with favour as they tended to upset the stability of the society or group. The standard of living was necessarily very low.

The introduction of external capital into colonial agricultural primary production has mainly taken the form of the development of plantations as the most obvious economic instrument for establishing a raw material exporting economy in countries either with a local population previously content to supply their own primitive needs or in which labour could be made available from external sources. They were for the most part developed in the period of expanding markets, and the conditions of tenure were determined by the necessity of attracting capital. So far as British dependencies were concerned these conditions were determined by the English conceptions of land ownership and of tenancy. There was however the very important difference that in colonial territories these conditions operated in a purely economic atmosphere far removed from the common traditions and public opinion which play so large a part in modifying the economic aspects of land ownership in England, and to a large extent in other European countries.

Plantations in general were not much interested in the general social consequences of their activities. This was the more important as their successful operation depended not on securing a higher return by the introduction of mechanical devices for saving labour, but on the presence of masses of unskilled cheap labour. Substantial results were obtained by methods which were usually rough and ready, with little assistance from science, and sometimes arbitrary and oppressive. In the limited areas where the climate was suitable for Europeans capital was introduced by settlers contemplating permanent residence, who in many cases regarded their land rather as an estate than as a purely economic plantation. In their case the social and political problems of a dual economy were even more in evidence, though they took rather different forms, and the personal relationships implied in the conception of a landed estate played a large part.

Outlook for Agricultural Production

The position to-day differs in essential respects from that which obtained up to early in the present century. As W. K. Hancock puts it in his *Survey of British Commonwealth Affairs*:[1]

> formerly private capitalistic enterprise was trusted to produce both profit and welfare. In recent years, and more especially since the depression of 1930, it has no longer been possible to count on the traditional stimulus to colonial development, the prospect of finding an export for sale in a profitable world market and so setting in motion the sequence of investment, development, the creation of new income, and the raising of living standards. It is harder for the colonies than for the Dominions to find a remedy by diversifying their agriculture and establishing new industries, and plantation agriculture is essentially specialized and therefore difficult to change without the loss of much invested capital. Scientific advances and the development of agricultural skill among the native peoples have also altered the conditions of competition, and some of the most important agricultural raw materials are threatened by the chemical production of substitutes.

It is being increasingly recognized that the foundation of all plantation agriculture, the expectation of adequate supplies of cheap labour, is becoming uncertain, while the supply of labour by indentures or by contracts with penal sanctions has been largely abandoned.

International economic developments, and especially the pursuit of autarchy as an aim, and the growing disparity between the prices of raw materials and of manufactured products, have played a large part in making the position of colonial producers increasingly difficult both for plantations and peasants, particularly for small or medium sized plantations with limited capital resources and for those peasants who had reduced their food production in favour of commercial crops. On the other hand war necessities have shown the possibility of making great changes in a short time, given adequate capital and organizing ability, in such essential matters as the expansion and improvement of communications, the initiation of health measures, and the organization of production and distribution on a regional or international instead of on a purely local basis. It would, moreover, be difficult to over-estimate the importance to all colonial agricultural producers of international decisions on such matters as

[1] Royal Institute of International Affairs, Oxford University Press, Vol. II, Part 1, 1940; Vol. II, Part 2, 1942.

the adaptation of the Atlantic Charter to colonies, currency agreements, measures to secure a greater continuity and regularity of demand with a reasonable stability of prices, and tariff and trade policies.

The Two Systems: Their Mutual Compatibility

For the purpose of realizing the declared aim of raising the standard of income and of living of the colonial peoples the question would, however, still remain of whether it is necessary or possible to make a deliberate choice for colonial territories between a policy of native production and an extension of industrial and capitalistic enterprise. It is equally necessary to consider what conditions must be established so that each of these systems may operate with the maximum efficiency and to what extent they can be made mutually complementary.

In an article in *Agenda* Lord Hailey has summarized the position as follows:

> 'In respect of the major part of agricultural production of the exportable type—with the exception of sugar—it has been an outstanding tenet of (British) colonial policy that peasant production is to be preferred to any of those forms of development involving the use of imported capital and management which are generally known as the "plantation system". The strong prejudice against that system represents in fact the extension into the economic field of the doctrine of trusteeship. But the question has not in fact been viewed entirely as one for the exercise of applied ethics. There have been other obvious grounds, not the least of which has been the desire to respect the rights of natives over their lands, and to avoid the social results of converting self-cultivating peasants into wage-earners. Over a certain range of production this policy has justified itself. But there are also products in which the peasant cultivator has proved to be at a serious disadvantage in a modern competitive market, palm oil and palm kernels . . . are a case in point. . . . In seeking a remedy for this situation there need be no question of recourse to the older and cruder form of the "plantation system". But there are, as Fiji amongst other countries has shown, methods by which capital can take its share in the scientific development of products of this class without injury to native interests, and it may now be necessary for colonial administrations to take an active interest in exploring these methods.'[1]

Lord Hailey's reference suggests the dynamic character of this problem and the dangers of too sweeping generalizations in either direction. Important issues not of a directly economic character are involved

[1] 'Colonial Policy and some of its Post-War Problems,' *Agenda*, Vol. 1, No. 2, April 1942, p. 112.

such as those of health and of education, the latter of special importance to the peasant. Fundamentally it is an economic problem, and under conditions of economic and political freedom the main determining factor would be the relative costs of efficient production under each system. It is, however, almost equally a political and social problem and the setting in which it has to be considered to-day differs in many respects from that of fifty or even thirty years ago. I. C. Greaves in his book *Modern Production among Backward Peoples*[1] remarks that seasonal crops by peasant cultivation are as much a characteristic of the twentieth century as plantation cultivation was of the seventeenth, so laying stress on the important part which Government policies have played in the adoption of the various forms of the two systems.

As the result of modern developments the continually changing position has however now reached a stage when the general problem must be considered from a wider point of view than that of the use of imported capital and management, though this must long continue to be the dominating factor. The difference between the two systems from the economic point of view consists in the relative advantages of large- and small-scale units of production, but the plantation cannot be identified wholly by area. The characteristic distinguishing feature is, as Greaves has put it, a uniform system of cultivation under central management. The Fiji system is thus a plantation system though with some peasant features, while many European holdings in Central America, growing bananas and cocoa by means of shifting cultivation, though classified in the available statistics as plantations, are in reality peasant holdings. An intermediate tripartite system involving the co-operation of Government, a plantation organization, and peasants, is exemplified in the Gezira irrigation scheme of the Anglo-Egyptian Sudan.

From the economic aspect the justification of the withdrawal of land from native occupation may be measured by the relative contribution made by plantations to general welfare either directly by the greater productivity of the alienated lands and the employment given to wage-earners, or indirectly by the increase in native production owing to the adoption of improved processes introduced by foreign management. This will vary from crop to crop, and profit and loss calculations are only a part of the problem. The physical conditions, the climate, the density of the population, and the nature of their reaction to the new conditions, are all important. The Governments are directly interested because of their dependence on taxation receipts, and an essential feature in the position from their point of view is the extent of the contribution made to local resources from the profits of these undertakings, especially from those with their headquarters in

[1] Allen & Unwin, 1935.

the metropolitan country. Other factors to be taken into consideration are the greater stress now laid on food production and the insecurity which may result from excessive specialization, as illustrated in many colonial territories during the depression. Even more important in the long run is the necessity of maintaining and increasing the fertility of the soil.

The general argument in favour of plantations is stated by de Kat Angelino. In his view trusteeship is an empty phrase unless it advances the standards of nutrition, health, and education, and this would not be disputed. It implies, however, an increased productivity and revenue, and he considers that native systems of production cannot meet their urgent needs rapidly enough, but must be reinforced by organizations on a more scientific basis. Such organizations will provide the resources for developments of all kinds, and by force of example and pressure of competition influence the indigenous policy so that it substitutes an active conception of land ownership for a passive one. For the sake of the native population itself the European trustee dare not show too much patience and tolerance. It must bring into action its own resources of knowledge and technique directly and quickly.

Private plantations are of course not the only way in which these requirements can be met as the history of the Netherlands Indies has shown. Given sufficient capital and scientific skill plantations may work wonders under suitable conditions and teach most valuable lessons, but this is not enough in itself to negative the claim made on behalf of peasant production in West Africa that 'wherever the native system of production is practicable and wherever it is adequately guided and encouraged it will effect more in the long run, it will open up a country more widely, thoroughly, and economically, than would be possible in any other way'.[1] Possibly, however, only painful experience will teach some African populations concerned with products such as palm oil how severely world competition punishes those who will not adopt the most efficient technique of production, and this might still be true even if international agreements led to a greater stabilization of prices. No statistics are however available showing the total productivity of labour under the two systems, as export returns are a very inadequate test.

Apart from the economic issues immediately involved, a point to be taken into consideration in the ultimate interests of the territories concerned is that, even ignoring crude general statements such as that plantations are incompatible with trusteeship, a plantation system is according to Hancock not a real society but 'an economic agglomeration created for the pursuit of profit and no substitute for primitive

[1] Sir H. L. Duff, *Cotton Growing in Nigeria*, Empire Cotton Growing Committee, 1921.

societies which maintain their members in sickness and in health'. This is even more true when, as has happened in the case of all the more important plantation products, individual planters are displaced by stronger companies whose representatives are essentially birds of passage. On the other hand strong companies are in a better position to pay higher wages and to provide better housing and working conditions. Settlers again would to some extent fall into a different category.

From the practical point of view the competition or the possibilities of co-operation between plantation and peasant production must be considered product by product, though other factors are important, such as the extent to which a new product can be fitted into a suitable system of crop rotation. Both systems of export production, if they are to work efficiently, imply the previous development of material assets, more especially of an adequate system of transport and communications, and of non-material assets including health services, education, both general and technical, and an organization for the application of scientific knowledge and technique. If the competition between them is to be on fair terms it must be assumed that adequate support will be given, particularly to the weaker party, the native peasant. In this connexion the system of land tenure and of tenancy are of fundamental importance. On the scientific side and in connexion with the provision of credit facilities and marketing Governments will have to undertake many tasks for the native producers which organized capitalistic undertakings can carry out for themselves.

Cultivation

The main stages in the supply of any agricultural raw material are the actual cultivation, processing, and transport and marketing. At each of these stages the rival systems of plantation and peasant production have relative advantages and disadvantages, though this rivalry does not exclude possibilities of collaboration to their mutual advantage. For the more important plantation crops efficient cultivation requires the application of scientific technique, plant or seed selection, the maintenance of uniform methods of treatment over large areas, and the prevention or checking of diseases and pests. With these in turn are connected the greater ease or difficulty of supervision, and the fundamental question of the amount and character of the labour required. Plantation methods are more easily applied to crops for which the labour demand is fairly equally distributed throughout the year; they present much greater difficulties in the case of crops with large seasonal requirements of labour. In countries with a dense population such as Java these difficulties may not be found, and both here and in the West Indies seasonal work on plantations has been an almost indispensable adjunct to the local peasants with their very small average holdings. When the workers' families can play a large part the peasant has the advantage in general, though plantations can deal with this difficulty by family settlements as in the case of the tea industry in areas where the local population is small.

Quality again must not be merely maintained, but must steadily be improved, as scientific knowledge advances or requirements change, if the export market is to be retained, and in most cases this implies an adequate system of grading. On the other hand there is often a market for qualities other than the best, and, while powerful interests may sometimes make it difficult for the peasant to receive the full premium attaching to quality, the absence of overhead costs and the possibility of reverting to subsistence cultivation may make it possible for him to carry on a cheaper if less scientific production on what he would consider a reasonably profitable basis. This would apply more especially to products the quality of which is not vitally affected by the immediate treatment after collection. In the case of long-term crops the possibility of withdrawal from and return to the market will depend partly on the extent to which a balance has been retained between subsistence and commercial crops, and partly on whether an interruption in exploitation may result in a deterioration in the source of the product. In general the balance of advantage between the two systems may often turn on the ease or difficulty with which native growers can be taught by an agricultural department the latest knowledge or technique in regard to the choice of plants or trees, the methods of cultivation and the prevention of disease.

Land Utilization and Tenure

It is here that the problems of land utilization and of land tenure in its relation to the native social organizations are of vital importance. It is for Governments to lay down the broad lines of land utilization either for plantations or peasants; among both classes there are many instances of failure to achieve satisfactory results through the mistaken use of unsuitable land. Substantial capital expenditure may however be necessary to make the land available for the contemplated crops, more especially expenditure on the provision of controlled irrigation in areas of inadequate rainfall or for special crops such as wet rice. Plantations may be in a position to provide these facilities on a small scale, but peasants will in general be dependent on action by Governments, and large irrigation schemes are of too great importance to the whole community to be left free from Government control.

Land tenure in colonial countries is nevertheless mainly a peasant problem because of its connexion with the whole social organization. Plantation holders have in general no difficulty in securing satisfactory terms and in the past the tendency has been to give them rights so extensive as to reduce the incentive to efficient operation or to making the best use of the land. For the peasant the problem is very different. Whether it is a question of increasing the production of such a crop as rice for marketing purposes, or of taking up some new commercial or industrial crop, he approaches it not as an individual, but as a member of a smaller or larger community closely connected by social and religious bonds, and with a considerable degree of community control over the use of his land. That use is in the main governed by customs evolved to meet the conditions of a static self-subsistence economy, and the standard of subsistence is so near the margin that any change towards meeting the new conditions created by a wider economy is looked on with suspicion as liable to imperil the stability of the community.

The question thus arises whether this difficulty should be met by the development of individual or family tenure, or by attempting to educate native opinion so that the social organization, while continuing to maintain co-operative production and direct or indirect community control over the land, may use that control to more progressive ends. The problem is most acute in areas with a relatively dense population where the average holding is so small as to allow little or no margin of production over that which is essential for subsistence. It is not in advanced Java that the great increase in native-grown industrial crops has taken place, but in the relatively backward Outer Provinces with their scanty populations and primitive system of shifting cultivation. Experience has indeed shown that native fears are by no means without foundation as to the effects on both their social system and their economic security of incorporation in a money economy with agricultural specialization instead of one based on food production and traditional custom. While efficiency of production must be the aim of land policy if the peasant is to take his proper place in the economic structure, the methods of attaining it must take account of native opinion if such undue disturbance of the social organization is to be avoided as would prejudice the chance of success. Situations are nevertheless likely to arise in which it may be essential to overrule native opinion if it is in favour of maintaining customs or practices which would ultimately lead to economic disaster.

Credit

The strength of plantation, and particularly of foreign, enterprise does not however depend only on superior technique and knowledge, it is also as a disposer of capital that the plantation has an advantage over the small grower. So long as the local economy is on a subsistence basis the need for agricultural credit may not be prominently felt, but at an early stage of agricultural advance seasonal credit will be required for carrying on during the period before the marketing of the crops. If the standard of living is to be raised by the production of more valuable crops this will have to be supplemented by medium or long-term credits for capital expenditure. An increase in primary production involves the introduction of the means to make the labour of the individual more fruitful. These include the adoption of mechanization within the limits set by the local conditions—and experience has shown the danger from such a simple improvement as the adoption of the plough—the improvement of crops, the introduction of better farming practice, including mixed farming in suitable areas, and the extension of small-scale irrigation where possible. This problem of credit has to be solved if the peasant grower is not to be very seriously handicapped as compared with the plantation and exposed to the dangers of servitude to moneylenders by pledging his crops or his land.

Various methods have been tried for providing agricultural finance, including the extension of co-operative credit societies, the compulsory contributive system of the French Sociétés de Prévoyance, the *takavi* system of India, and the land banks of Ceylon and Mauritius, but the Netherlands Indies appear to have dealt with this problem on the most comprehensive and successful scale in their great organization of village and central banks. The co-operative organizations in British dependencies are still on a very small scale and their growth has been slow and subject to many set-backs, while the much stronger French and Dutch organizations have been criticized as doing nothing to foster the powers of initiative of the peasant, the essential quality in which he is apt to be specially deficient.

The Processing of Products

In the second or processing stage of agricultural production the determining factors are the amount of capital and the degree of scientific skill required for the treatment of the commodity. Where, as in the case of sugar and palm oil, complicated and costly machinery is essential to the greatest efficiency of production, or where a high degree of scientific skill is required to develop special forms of the product, large plantations, hitherto necessarily foreign controlled, have a substantial advantage over both small plantations and the peasant grower. How far these handicaps on the latter can be reduced by systems of co-operative organizations is a field which has not as yet been much explored, but the difficulties are great both in the field of finance and of technical organization. Apart from the technical advantages of large-scale operation strong plantations are better able to secure the essential regularity of supply, which is a very difficult problem for co-operative associations of small growers. The ownership of plantations is, it is true, not always essential to the investment of

capital in processing industries, as is illustrated in the case of cotton, but when large-scale operation is necessary for maximum efficiency investment may have to be stimulated by the granting of monopolies over extensive areas which in turn will raise intricate problems of price control and possibly of land utilization.

Marketing

The third or marketing stage of production involves the problems of transport and communications as well as those of the actual marketing. Communications are in general a question for Governments, and transport other than purely local is not as a rule in the hands of the actual producers, though there are exceptions as in the case of large organizations such as the United Fruit Company in the West Indies. Packing and transport are however more easily arranged for plantations than for small growers and this is an important consideration in the case of such products as bananas, suited in other respects to peasant production but requiring special methods of packing and transport. In the actual marketing again peasants all over the world are in a very weak position unless they are co-operatively organized, and experience in many parts of the world has shown the weaknesses of such organizations. They are handicapped not only by ignorance of world market conditions, but to a much greater extent by their dependence on middlemen who absorb the bulk of the profits, not only in the capacity of marketing agents, but often also as the peasants' sole source of credit. This weakness is as apparent in Africa as it is in the East and West Indies, and the necessity of direct intervention by the Governments concerned to secure fair marketing conditions for the peasant producers seems to be increasingly recognized.

Social and Political Issues

The purpose of this chapter has been to set out some of the main factors influencing the relations between plantation and peasant agricultural production. To these two systems may be added as possible alternatives the tripartite partnership between capital, peasant and Government, tried in the Sudan, and the dual partnership between capital and cultivator, illustrated in Fiji and in the Netherlands Indies. The factors determining the choice of methods are in the main economic in character, but the social aspects are no less important than the purely economic. While efficiency in production must be the object that purpose should, as far as possible, be achieved by methods which will not cause undue disturbance to the existing social organization if the chances of success are not to be prejudiced. Even the political repercussions of land policy cannot be left out of consideration, The political life of a community where plantations support a large body of agricultural wage-earners will obviously differ materially from that of a community of peasant landholders. If a large proportion of that labour is of foreign origin the problems arising are very difficult of solution.

This theoretical presentation of the position must however be made more definite by a comparison with the actual facts as illustrated by the experience of colonial dependencies, and for this purpose the following chapters will deal with the history of plantation and peasant production in representative dependencies, more especially in connexion with export crops. They will begin with the Netherlands Indies with their long continuous history of economic development which has made them a real laboratory of economic experiments. The lessons to be learned from even their early experience still have a value to-day.

II. THE NETHERLANDS INDIES, MALAYA, CEYLON AND MAURITIUS

THE NETHERLANDS INDIES

THE Malay Archipelago, lying astride the equator, and with the adjacent peninsula dominating the gateways between the Indian and Pacific Oceans, has been for centuries the source of raw materials which have been a magnet attracting the trades of the world though their systematic development was only undertaken in a comparatively recent period. The whole great area with its hundreds of islands cannot, however, be considered as a natural unit primarily because of the wide differences in climate and in the character of the soil, which have had a great influence on the course of economic development. While the islands near the Equator—Sumatra, Borneo and New Guinea, for example—have a copious rainfall throughout the year, the islands to the east and south have less total precipitation and a dry season. Java occupies an intermediate position. In soils again there is a marked distinction between the volcanic islands forming the southern curve of the archipelago, including Sumatra and Java, and the remainder including Borneo and New Guinea which show no recent signs of volcanic activity. The best soils are those developed from recent deposits, more especially those of volcanic origin, because of the leaching effects of heavy tropical rainfall on mature soils. Partly from these causes and partly for historical reasons Java and the adjacent island of Madura have had a relatively advanced socio-economic status throughout history. The difference has been recognized by the Dutch administrative differentiation between Java and Madura and the Outer Provinces, and the control and development of the latter only began to be seriously undertaken during the present century. The great differences between them are shown by the following figures (see page 14) of their respective areas and populations.

The overwhelming majority of the native peoples are of Malay stock with wide divergences in language, religion, and levels of material civilization. Among the native inhabitants who form 97·4 per cent of the total population live the foreign groups—Europeans (0·4 per cent), Chinese (2·0 per cent), and other Asiatics (0·2 per cent)—each with its own customs and standards of living. Of the 240,417 Europeans, 192,571 lived in Java and Madura, and 28, 496 in Sumatra; similarly, of the 1,233,214 Chinese, 582,431 lived in Java and Madura, and 448,552 in Sumatra, with the adjacent tin-producing islands. The term European is, however, a legal one, and disregards race; it includes

Netherlands Indies, Area and Population, 1930[1]

	Area Sq. Km.	*per cent*	*Total Pop. No.*	*per cent*	*Native Pop. No.*	*per cent*	*Density of Total Pop.*
Java and Madura	132,174	6·9	41,718,000	68·7	40,891,000	69·1	315·6
Outer Provinces	1,772,171	93·1	19,009,000	31·3	18,247,000	30·9	10·7
Total	1,904,345	—	60,727,000	—	59,138,000	—	31·9

Note.—Recent estimates put the total population at some 70 millions and Broek[2] gives the average density of population in Java as about 950 per square mile, higher than that of any other agrarian area in the world except that of the Nile Delta. The latter part of this statement seems open to doubt.

not only Americans and the large number of mixed race, but also Japanese and some 9,000 natives. In this culturally and economically 'plural society' generally speaking the native forms the agrarian base, the Chinese and Arabs the commercial middle class, and the Westerners the small but ruling apex of the socio-economic pyramid. Of the native population in 1930 the census returns showed that 6·96 per cent of male workers in Java and Madura were engaged in native agriculture as their main occupation in addition to 6·6. per cent working as labourers on estates. The corresponding percentages in the Outer Provinces were 74·7 per cent engaged in native agriculture, and, except in Eastern Sumatra, a not much higher percentage than in Java employed on estates.[3] Native energies are of necessity mainly devoted to food production, more especially in Java where the increase in population has been phenomenal. In 1815 Raffles estimated the population of Java at 4·6 millions, but the tables in the annual statistical reports commence with a native population of 12·5 millions in 1860 as against a population of 41 millions in 1930. The proportionate increases of Europeans, Chinese and Arabians were considerably larger. It has been a race between population and production, and it is no small achievement that the standard of living has been maintained at a level higher than that of most of the densely populated Asiatic countries. During the last thirty years mineral industries have made a substantial contribution to the local resources, but in the main it is the agricultural wealth of the archipelago which has made this possible.

[1] K. J. Pelzer, 'Population and Land Utilization', Part 1 of *An Economic Survey of the Pacific Area*, edited by F. V. Field, International Secretariat, Institute of Pacific Relations, 1941, p. 54.

[2] Jan O. M. Broek, *Economic Development of the Netherlands Indies* (Inquiry Series), International Secretariat, Institute of Pacific Relations, 1942, p. 17.

[3] J. H. Boeke, *The Structure of Netherlands Indian Economy* (International Research Series), International Secretariat, Institute of Pacific Relations, 1942, pp. 141 and 171.

Historical Background

The development of the manifold agricultural possibilities of the great archipelago has been the result of the combined operations of the Government itself, of plantations, and of peasants. The part which has been played by each of them has been a major issue of Government policies over a long period, and for an appreciation of the present position it is necessary to give a brief sketch of the historical background.[1]

The rule of the Dutch East India Company lasted up to 1798. The early phase of destructive exploitation of the spice trade with the Moluccas was accompanied by the extinction of the inter-island trade, which, with the State of Mataram in Java as its centre, had been a main source of wealth and had largely influenced both agricultural production and local industries. This was succeeded by a long period of increasing pressure to make the Javanese natives grow such crops as were desired by the Company to be delivered either as tribute or for a small return. Control was in the hands of the local Regents. Java was first brought into touch with more liberal conceptions of colonial administration by Raffles early in the nineteenth century. His aim was to increase production by giving an economic incentive to the peasants, and to replace compulsory labour and forced delivery of crops by complete liberty with self-interest as the spur, supplemented by concessions to private capitalists to develop plantations employing native labour. Taxation was to replace the tribute in goods and services, and it was to take the form of a land tax representing cash payments equivalent to about two-fifths of the estimated produce. Arbitrary control of production by Government through the Regents was to be abolished. Plantations took the form of extensive grants to concessionaires (*particuliere landerijen*) whose rights were as unrestricted as those of the Zamindars in Bengal.

British administration did not last long enough to bring this policy into properly controlled operation, but when the Dutch returned they criticized the 'misguided policy of free cultivation' as having resulted in subjecting the peasants to moneylenders, and by the pressure of heavy unfamiliar cash obligations having given them no real incentive to produce export crops or to increase the area under cultivation beyond that required for bare subsistence. The economic results had been disappointing, more especially as regards the main aim of reducing the debt of the East India Company. As de Kat Angelino remarks,[2] this was partly due to the failure to provide Government guidance and

[1] This sketch is based on two recent books: J. S. Furnivall, *Netherlands India*, Cambridge University Press, 1939, and Broek, op. cit.

[2] A. D. A. de Kat Angelino, *Colonial Policy*, Vol. I (Abridged Translation), Nijhoff, 1931, pp. 17–18.

instruction so that these closed economic units with their production entirely organized for consumption within a small circle could be induced to accept a fundamental change in their methods. The alternative of free capitalist enterprise had little attraction for the Dutch, as at that time it would have chiefly benefited the British, while the East Indies had to meet the competition of the Dutch West Indies which were closer to European markets and had ample slave labour.

After some hesitation, the Dutch finally decided in favour of what ultimately became the 'culture and consignment' system of Van der Bosch, 'a project of planned economy on an imperial scale'. The main aim was the increase of export crops, at first partly in the interests of Java, but afterwards in the interests of Holland itself. The main reason for the change in objective was a purely political reason, the separation of Holland from Belgium, which both introduced confusion into Dutch finances, and, as Holland had no manufactures, left no incentive for the development of a colonial market which could be supplied by Belgian factories. After 1840 only the mother country benefited by the vast profits on enormously increased exports which paid off the old debts and made substantial contributions to the Netherlands budget.

The basis of the new system was an arrangement under which the native population, instead of paying a cash land revenue, would discharge their liabilities to the Government by making over one-fifth of the area of the culturable land of the villages for the production of export crops under the control of the Regents and supervised by Dutch officials. Produce such as sugar which had to be worked up for export was made over to capitalists for that purpose, and the necessary labour was provided by dividing the villagers into four groups, one to grow the crop, a second to reap it, and two others for transport to the factory and labour in it. The village was to be considered as having fulfilled all its liabilities when the crop was ripe, and other types of labour were paid for—theoretically at any rate. The commodities produced in this way were exported through a State agency for sale in Holland. The most important were coffee, sugar, and indigo, though tobacco, tea, cinnamon, cloves and nutmegs were also grown on a considerable scale.

Under the original conception private enterprise was to continue to function and it operated through the Raffles land concessions, a few grants made by the Dutch Government, concessions in the Native States, and voluntary agreements between village authorities and contractors. New land grants were on a small scale mainly because applicants wanted land in populous regions with abundant labour supplies, while Government wanted them to take sparsely populated areas. Growing financial pressure on the Dutch Government resulted in restrictions on private enterprise and a wide compulsory extension of the culture system until Javanese agriculture and exports formed one

huge Government business concern. In one sense Java became an immense plantation engaged in producing export commodities which could be sold in Holland, but the cultivation was not under any central skilled direction, nor could any assistance be given by science. The sole duties of the supervising officials were to see that the necessary areas were planted, and the produce exported or sent to factories for processing. If the original scheme had been adhered to of taking only one-fifth of the area for culture crops and maintaining a proper balance between export and food crops, the system would not have been oppressive, and this was the position in some regions which in fact showed a substantial increase in diffused prosperity. Much more generally, however, the direct interest of the State in the profits from exports, and the resulting pressure on officials to increase the production of export crops—often in quite unsuitable areas—led to a much larger proportion of village lands being taken over, to interference with the necessary crop rotation, and to destruction of the proper balance between export and subsistence crops. There was much chicanery over the wages of labour (the basis of the whole system was cheap compulsory labour), and over the payments made to factories for sugar cane.

A delusive appearance of prosperity was given by the immense increase in exports, and the great profits made by European and Chinese manufacturers, contractors and officials. The great increase in population was accompanied by a substantial, though not corresponding, increase in imports. Ultimately, however, the system collapsed from the cumulative effects of the increasing realization of its abuses, and of the resulting economic distress and disorganization of the Javanese people. This was reinforced in Holland by growing doubts as to the morality of the *batig slot*—the State profit on trade—by confusion in the State accounts, and by the development of Dutch manufactures needing markets, coupled with the change in public opinion towards freedom of trade and of private enterprise. By 1870 only sugar and coffee with a little pepper and cinchona were cultivated on Government account, and arrangements had been made for the free sale of sugar in Java and for the gradual withdrawal of Government from its production. Government production of coffee continued on a small scale up to 1918.

Private enterprise made substantial progress from 1850 onwards, though the direct attack on the culture system only began in 1862. In 1870 agricultural production for export was still practically confined to Java, and the main products were still coffee, sugar, indigo, tobacco and tea. Much the larger proportion of the coffee was still cultivated for the State under the 'culture' system, and most of the sugar went to Government contractors, who operated with greater freedom than before. There were about 100 of these sugar factories and the normal area allotted to each was about one square mile. Of the 2,800,000 acres

(1·6 million *bouw*) in private estates, about three-quarters belonged to Europeans, and the rest to Chinese, except for about 100,000 acres in native hands. These could not be regarded as plantations, since the owners, who were often absentees, merely took a high rent from the peasants, usually for rice cultivation. There were rather less than 100 plantations on lands leased from Government. The normal area was 500 to 700 acres, mostly under coffee, and most of them seem to have been formerly Government plantations. There were also about 150 enterprises based on so-called free agreements which had taken over areas the subject of previous agreements between village elders and the State. They were mainly engaged in the production of sugar or tobacco, and 10 per cent were in Chinese hands. A further 150 plantations in the Native States represented a practical continuation of the abuses of the culture system in private hands.

The passing of a new Agrarian Law in 1870 and the opening of the Suez Canal marked the beginning of the 'liberal' period based on the principles that the interest of the overseas population is the interest of the mother country and that the free play of economic forces would benefit equally the native and the Western entrepreneur. This period witnessed the gradual development of probably the most scientific and efficient plantation industry which has existed in any colonial dependency, coupled in its later stages with a great increase in peasant production under Government stimulus and encouragement.

The Agrarian Law of 1870 was a measure showing unusual foresight as regards the dangers of the future. In it was recognized that, while private capital needed land for agricultural purposes, the vital interests of the natives would be endangered if transfer was unrestricted. The Law therefore prohibits the sale of land—except of small urban lots—to other than indigenous Indonesians. The demands of capitalist entrepreneurs were met by providing for Government leases for seventy-five years of unused lands of the public domains, and by allowing Indonesians to rent their lands for short periods with prior Government approval. As a result, according to an American observer, quoted by Broek,[1] 'the all-important fact is that the tenancy system so widespread in India or the United States of America, is practically non-existent in the islands'. The Law has certainly done much to prevent the growth of a landlord and tenant system and of the indirect control by moneylenders, which has had such pernicious effects in many agricultural countries.

Tenancy is practically confined to Java, and for the most part takes the form of small-scale share-cropping of *sawah* (irrigated) land, which Boeke[2] describes as both a cause and a consequence of the sub-division of the land resulting from the increase in population. In striking contrast to the effects of this method of tenure on estates in the West Indies, which will be dealt with later, Boeke considers that in Java it is excellently adapted to the circumstances in which rice is there cultivated and to the use of family labour. It allows the cultivator, who has not sufficient land of his own, to grow his staple food without adventuring into the domain of money traffic and it enables the owner of a small *sawah* to supply himself with a cash income by letting out his land without losing the use of it. He lets his *sawah* (the rent being prepaid) on condition that he is allowed to work his own land as a share-cropper. The two parties divide the risks between them, hence both are interested in growing a crop which is partly independent of the market and for which there is a stable local demand. The landowner who leases for share-cropping is much more intimately involved in the enterprise than one who leases for money. He has to supervise the results of the activities and may have to come to the rescue with seed, cattle or a plough; therefore he cannot live too far away from his land, and socially must not be too far above the cultivator. Finally, the share-cropper retains his independence as a workman and does not sink in the social scale by becoming a wage-earner. It is a partnership in which one party furnishes the land and perhaps a little capital, while the other contributes the working power. The share-cropper, moreover, is not always the weaker party; economic enquiries in several regions in Java have indeed led to the conclusion that economically he must be regarded as the stronger of the two. A comparison with the position in the West Indies will emphasize the fact that the effects of apparently similar forms of tenure will differ widely according to the different local circumstances and traditions.

[1] Broek, op. cit., p. 11.
[2] Boeke, op. cit., p. 45.

The rapid change over from public to private production after 1870 is illustrated by the figures for the value of exports derived from these two sources. State exports decreased from a value of 64,400,000 guilders in 1856 to 46,500,000 guilders in 1870, and to 16,300,000 guilders in 1885, while of the last figure coffee represented 12,800,000 guilders. Private exports increased during the same period from 34,300,000 guilders in 1856 to 61,200,000 in 1870 and to 168,700,000 guilders in 1885. The opening of the Suez Canal assisted the new agrarian policy in bringing about an immense increase in production, and capital investment was stimulated by the abolition of slavery in the United States and political unrest in South America. According to somewhat doubtful census returns, the native population of Java doubled between 1845 and 1875, and increased by 50 per cent between 1880 and 1900—from 19,540,000 to 28,380,000. During the latter period the area under native cultivation increased from 4,980,000 acres to 7,100,000 acres, though of this increase only 170,000 acres represented irrigated rice land. Up to 1900 the Outer Provinces made practically no contribution to agricultural exports.

The course of events illustrates both the strength and the dangers of a plantation economy, the large part which can be played by its own agencies in improving its methods, and the possibilities of simultaneously developing peasant production where the native population is sufficient to support both systems. Planters obtained their lands both by the systems mentioned above, by the conversion of Government short-term leases into long-term hereditary leases (*erfpacht*), and on a larger scale by leases from cultivators sanctioned under the Rent Ordinance of 1871. Sugar was the chief aim and between 1882 and 1884 alone eighteen new factories were built. Between 1870 and 1885 the out-turn of sugar increased from 152,000 metric tons to 380,000 metric tons, coffee more than held its own, and tobacco showed a large increase. The same period, however, was marked by the appearance of the familiar dangers to agricultural enterprises. Coffee disease appeared in 1878 and was met by a change over from Arabica to Liberica coffee. Much more serious was the drop in prices which in the case of coffee and sugar fell by more than 50 per cent between 1877 and 1884. The effects were aggravated by the unsound methods of finance which, as in the case of Ceylon and later of Kenya, had grown up in the days of hopeful prosperity. Two British banks, the Hong Kong and Shanghai and the Chartered Banks, and two Dutch banks, the N.H.M. (Netherlands Trading Company) and the Java bank, had operated with reasonable caution, but the numerous Culture banks had under the stress of competition become more and more imprudent in giving long-term credit on inadequate security and doubling their risks by discounting their own securities—buying pigs to be paid for out of pork. The resulting crisis had far-reaching results disastrous to many of the individual planters, but beneficial to the industry as a whole by leading to more scientific and economical production, sounder finance, and to a reorganization of the economic structure of European society. The former planter-owner was largely replaced by stronger limited companies with competent managers. The Culture banks remained, but they were no longer autonomous and were linked up with more normal and much more powerful banking organizations. Not planting interests, but the financial interest of capitalists dominated Indian policy and they insisted on strict control, on improvement in the methods of production, and on a common sales policy.

One outcome of the common policy was a great improvement in technique between 1870 and 1900; the output of sugar per acre was doubled, coffee planters had met the disease in Arabica coffee by transferring to Liberica, and, when that too was affected later, by a second change to Robusta, so that in spite of disease, the out-turn of coffee nearly trebled over the period. Plantations also diversified their products, and the success of export methods in the case of sugar led to their introduction for other crops and to the private organization of

experimental stations. A second crisis in 1895 led to a closer association and to the formation of a General Syndicate of Sugar Manufacturers. The greater variety of products is shown by the fact that in 1870 sugar and coffee represented nearly 75 per cent of exports, but in 1900, though their production had largely increased, they only represented 40 per cent of exports. The contribution of the native towards production for export, except as a manual labourer, was still negligible. The main assistance given by Government during this period was by the initiation of an extensive irrigation policy in 1890, but a modest beginning to the great scientific activity of the later period had been made by the establishment of a Government Cinchona plantation run on commercial lines with paid labour as early as 1854. The success of that plantation led to the cultivation of cinchona by private plantations, and to such an increase in production that it had to be brought under control by the establishment of the Bandoeng quinine factory in 1898, one of the earliest signs of State intervention in this sphere. The Chinese made even greater progress during this 'liberal' period than the Europeans, and they competed with Europeans in direct agricultural production.

So far as the Indonesian population was concerned, however, the results of this apparent great increase in prosperity were definitely harmful. Europeans and Chinese increased both in numbers and in wealth. The native population increased by some 50 per cent in numbers, but decreased in average wealth. The rents paid for the lease of their land by planters and the rates of wages decreased largely. Planters who had paid 500 fl. per *bouw* (1¾ acres) for rent and wages in 1884 were paying only 307 fl. in 1903. The native community were becoming impoverished and the results were seen in the import of rice and cotton goods which in 1875 represented 59·9 million fl. out of total imports of 108 million fl., but in 1900 with a far larger native population represented only 53 million fl. out of total imports of 176 million fl. Goods for European consumption had increased from 5·9 million fl. to 26·7 million fl. An efficient plantation industry increasingly controlled by strong capitalist organizations had made great advances, but they were largely secured at the expense both of the native populations and of the home manufacturers whose markets depended on native welfare. When depression came in 1900 the whole position had to be investigated by a Royal Commission on 'Diminishing Welfare'.

The Report of this Commission coincided with an important change of opinions and of policy in Holland. Up to this time the policy had in general been one of *laissez faire*, but this had shown its inadequacy even on the purely economic side by its lack of enterprise and failure to develop the Outer Islands, apart from its effects on the native population. This was now to be replaced by the so-called Ethical Policy, under which, as Furnivall puts it, the previous reluctant, unorganized and amateurish intervention of the State in economic activities was to be changed for a definite policy of using all the resources of the State to develop agriculture, mineral production, and commerce. This policy was to be more especially directed to promoting the advancement of the Indonesian peoples by improving education and public health, organizing credit, and protecting the peasant and labourer against exploitation. Dutch and native civil servants had always been expected to stimulate native agriculture, but under a 'liberal' regime they had little support and no basis of scientific knowledge. The first step to a new agricultural policy was the establishment in 1905 of a Department of Agriculture primarily intended for the improvement of native agriculture. Economic progress and the development of wider conceptions led in 1911 to the merger of this department into a much wider scheme dealing not only with agriculture, but also with industry and commerce, and in 1934 this was converted into a Department of Economic Affairs.

The planters on their side were stimulated by the depression of 1900 and by Government activities into realizing the necessity of improved organization and technique, and developing closer relations with the State. The Syndicate of Sugar Producers was gradually consolidated into a corporation with its own experimental stations and, after the war of 1914-18, with a single sales organization. Four similar combinations for tea, cinchona, coffee and cocoa, and rubber were amalgamated in an agricultural syndicate with experimental stations for each group. In the Outer Islands there was a similar organization for tobacco producers. These three great combinations kept in touch with Government through committees which were represented on a central organization, the General Federation of Indian Industry and Commerce, which also represented other forms of European enterprise. The President of this federation was a member of a committee appointed to advise Government on economic questions, which also includes representatives of native interests. Thus the whole structure of economic life was linked together in an elaborate economic constitution functioning in respect of economic matters much as a political constitution functions in political affairs.

These details seem somewhat remote from the subject of this book, but they show the extent to which well-managed plantation industries can help themselves, and the elaborate organization which both industries themselves and the Government considered necessary to maximum efficiency, as well as the value attached to close co-operation between the industries and Government. This co-operation has been marked in the sphere of scientific research and experiment. The original Government cinchona plantation has already been mentioned and its effects in introducing cinchona to plantations. Its cultivation spread later to peasants to whom the Japanese gave advances and bought up the crop to the detriment of the Dutch monopoly. As the market became doubtful, the Government plantation experimented with tea, and this again was taken up by plantations, and later by peasants, unlike the position in most British territories. Even greater results flowed from the plantations known collectively as the Government rubber business, which originated from plantations taken over from the Forest Department in 1900. Like the cinchona plantations these were run on commercial as well as scientific lines, and their experiments were the foundation of the great rubber industry practically confined at first to plantations, but then, under Government stimulus and encouragement, taken up by peasants on such a large scale as to disturb the rubber market of the world. Scientific research was first developed through private plantation agencies, but these were followed by Government organizations grouped in sections under the Director of the Botanical Gardens. Other institutions for the practical application of science were similarly co-ordinated in a general Agricultural Experimental station. Finally all the scientific activities, both public and private, were brought together to a common clearing house, the Council of National Science.

Agricultural Production in Java and in the Outer Provinces

The history of agricultural development up to the beginning of the twentieth century has been dealt with. The most striking feature of the present century has been the gradual shifting of agricultural as well as of other forms of economic activity from Java to the Outer Islands. This is marked, both as regards plantation and peasant production. The early planters engaged in the production of the traditional commodities, sugar, coffee and tobacco, but with the increasing industrial demand for tropical raw materials, attention shifted to rubber, vegetable oils and fats, and fibres, sisal more especially. It is the latter products which are predominantly produced in the Outer Islands.

Two stages may be distinguished, the first of expansion up to 1930, and the second of the period of severe economic depression after that year and of the partial recovery which was interrupted by the outbreak of war.

The following tables[1] give the value of agricultural exports at different periods and the proportions contributed respectively by Java and Madura as compared with the Outer Islands, and by plantations as compared with peasants:

[1] Broek, op. cit., p. 42.

Value of Agricultural Exports 1894–1940 (*In million guilders*)

Year	Total Exports	Java and Madura	Outer Provinces	Plantation	Native
		Percentage of Total			
1894	154	82	18	89	11
1913	419	65	35	76	24
1928	1237	58	42	65	35
1933	306	50	50	59	41
1937	660	35	65	54	46
1938	426	43	57	60	40
1939	495	46	54	63	37
1940	593	40	60	63	37

Value of Export Crops of Java and Outer Provinces (*In million guilders*)

Year	Outer Provinces Total	Java and Madura Sugar	Other Crops	Total
1913	146	153	120	273
1928	519	376	342	718
1935	161	36	97	133
1938	244	45	137	182
1939	268	78	149	227

These figures show the increasing importance of the Outer Provinces both in plantation and peasant production and their more rapid recovery from the depression of the early nineteen-thirties. An outstanding feature of the last decade was the collapse of the great sugar plantation industry of Java, which in 1920 represented 48 per cent of the total Javanese exports.[1] The severity of the blow which this dealt to a native economy which had come to rely largely on wage labour may be judged from the facts that the wages paid by plantations decreased from 83,549,000 fl. in 1931 to 7,097,000 fl. in 1935, while the rents paid for the land under sugar dropped from 24,899,000 fl. in 1931 to 3,898,000 fl. in 1935.[2] On the other hand native rubber production in the Outer Provinces showed an embarrassingly large increase, and the plantation product of palm oil, also from the Outer Provinces, expanded to a proportionately much greater extent. The exports of palm oil products from the Netherlands Indies represented 24 per cent of the world exports in 1939 as compared with 5 per cent in 1929.[3] In their distress from the general slump in prices all sections of the community turned to Government for help, and one result was the imposition of a strict control—international or national—on the production of four major commodities, rubber, tea, sugar, and cinchona. Both in this respect and in measures for the protection of the home market there was a reversion from the free trade policy of 1870 in the direction of the planned economy of an earlier day.

The growth both of plantation and of peasant export production has

[1] Broek, op. cit., p. 42.
[2] Pelzer, op. cit., p. 157.
[3] Broek, op. cit., p. 30.

however followed different lines in Java and in the Outer Provinces. The principle of plantations is the same in all parts of the archipelago, but there are important differences in its application to the two regions, partly on account of the great differences in population densities, and partly on account of the greater maturity of Java's economy. Plantations in the Outer Provinces are generally larger, but they grow a smaller range of commodities, concentrating on crops with a relatively low labour requirement (imported labour is expensive), and mostly specializing in one product. There are only six major plantation products, rubber, oil palm, coconuts, tea, tobacco and coffee, with an increasing production of sisal. Hevea rubber occupied 63 per cent of the area in 1939 and oil palms 17 per cent; 1,219 estates represented an area of 1,421,000 hectares,[1] 42 per cent of which was planted. The main plantation region is in the East Sumatra coastal plain, where great estates growing mainly rubber and tobacco have an average area of 3,200 hectares. In Borneo rubber and coconuts predominate. In the main, the Outer Islands have to rely on imported labour supported recently by substantial family settlements organized by Government. The labour force employed in 1930 numbered 479,000; in 1934 it fell to 232,000, rising again to 334,000 in 1940. Javanese have been steadily replacing Chinese in this form of employment. In Western Sumatra the position is different, as fertile soils, a relatively dense, energetic and agriculturally skilled population, a long period of effective Dutch control, and a good transport system have resulted in a much greater variety of crops, mainly native grown.

The position in Java with its abundant supplies of local labour differs in important respects. Up to 1930 sugar was much the most important product, occupying an area of over 200,000 hectares, and employing some 60,000 permanent and more than 700,000 temporary hands. The economic crisis brought down the area to 32,000 hectares in 1935, when the labour employed was only a small fraction of the previous force; though it has since risen to about 90,000 hectares, there appears to be no prospect of the industry recovering its former importance. The position in 1939 was that Java had 1,182 plantations with a total area of 1,074,000 hectares of which 57 per cent was planted. There was, however, much less specialization than in the Outer Provinces. Only slightly more than half the estates specialized in one product, and combinations of two are common. The larger plantations deal primarily with twelve major commodities, rubber, tea, sugar, coffee, tobacco, kapok, cinchona, sisal, coconuts, cantala fibre, essential oils and cassava. A number of minor crops are also interplanted, as are also some in the first list such as cantala, kapok and essential oils.

Taking the whole of the archipelago, 2,401 estates occupy 2,495,000

[1] One hectare = 2·4711 acres.

hectares of which 48 per cent was under cultivation. Their products represented, in 1939, 63 per cent of the total agricultural exports.[1] The types of native production of commercial and export crops show similar wide differences in Java and Madura and in the Outer Islands. In Java and Madura the land used for native agriculture in 1938 had a total area of 7,855,900 hectares.[2] The Javanese cultivator, however, with his small holding representing less than 0·2 hectares per head of total population is of necessity first and foremost a food producer for his family or at most for the local market. He must concentrate on food crops giving a high yield, more especially on rice. Government policy since the depression has also concentrated on the increase in local food production and this has been assisted by the reversion to native agriculture of half the area of irrigated land formerly devoted to sugar. Native production for export is practically only the surplus which remains over after domestic and local requirements are satisfied. In Java this surplus is obtained from annuals grown in rotation with rice, such as tobacco, peanuts, cassava and maize, or from perennials such as coconuts, kapok and tea, grown wherever room is available. In view of the great increase in population, it is surprising that the export of native-grown crops has increased since 1894, though the native share of 25 per cent in the last two years is primarily the result of the decline in sugar cultivation. In 1928 the value of native exports was 135 million fl., 19 per cent of exports; in 1937 the figures were 57 million fl. and 25 per cent. The native share would probably be larger but for the fact that much of the profits go to the Chinese and Arabs who form the intermediary group of traders, shippers and moneylenders. Another possible factor suggested by Broek,[3] apart from the Government policy of encouraging food production, is the lingering distrust from the days of compulsion with small, if any, hopes of profit.

In the Outer Provinces the situation was very different, mainly as the result of the low population density. Except in the Moluccas and in Western Sumatra where there was forced cultivation Europeans could only buy what the natives offered voluntarily, and the Chinese middleman played a minor role. There was neither the need nor the desire to work for wages. The native could retain the initiative and reap the profits. The local labour could easily find work in the shifting cultivation of the village community, and foreign enterprises had to depend on outside labour. The native, however, though he would not work on the plantations, was greatly influenced by their example, and profited from it by employing a part of the area of the *ladangs* in producing commodities such as hevea rubber and copra, which could be produced with the minimum labour and inconvenience. Thus, without

[1] Broek, op. cit., pp. 38–39.
[2] Pelzer, op. cit., p. 148.
[3] Broek, op. cit., p. 35.

additional clearing, commercial planting could be started. Rubber trees were often set out simultaneously with the rice. Maintenance costs were very small and rubber tapping is usually done by the family, while the processing both of rubber and of copra was not beyond their capacity. The great expansion in rubber production in response to a growing demand will be dealt with later. Surpluses of other crops, including coffee, maize, tobacco and various spices, are of minor importance.[1]

Commercial agriculture on these lines has yielded comparatively large profits, and Broek estimates that, even taking into account the normal cash income received by the Javanese from sugar plantations, the *per capita* value of native agricultural exports to the natives of the Outer Provinces is nearly double that received by the Javanese. The decline in the sugar industry has increased the relative advantage of the Outer Provinces and given their inhabitants a much better chance to raise their standard of living. On the other hand this method of economic advance carries with it a serious danger for the future. Ninety-one per cent of the cultivators practise shifting *Padang* cultivation. This system, though well adapted to maintaining the fertility of the soil so long as the interval between successive periods of cultivation is long enough, becomes a menace of the first order when an increase in population or in the demand on the land reduces the period below that which is necessary for recuperation. In the more developed parts of the Outer Provinces (i.e. Sumatra, Celebes and the Lower Sunda Islands) that position appears to have been reached.[2]

Spheres of Plantations and Peasants

Considering the position as a whole it appears therefore that under the conditions prevailing in the Netherlands Indies with adequate supplies of labour of an agricultural bent obtainable either locally, as in Java, or by recruitment from Java and China, as in the Outer Islands, no line can be drawn between plantation and peasant export products, though the type of product in each area will differ according to the local circumstances. Plantations have largely taken up what were formerly peasant crops as supplementary sources of income, and, except sugar and oil palms, there appears to be no plantation crop which is not also largely cultivated by peasants. Even sugar, though its production by natives is discouraged, appears to be grown to a considerable extent for local consumption. An essential point is, however, that in the case of some important commodities the plantation and the peasant producers cater for different markets. The special case of rubber will be considered later, but the difference in markets is very

[1] Broek, op. cit., p. 36.
[2] Pelzer, op. cit., p. 151.

noticeable in regard to tobacco, which has to meet requirements of many types. Though natives provide a substantial proportion of the tobacco prepared on plantations and therefore shown as a plantation export, the bulk of their crop is used for the native cigarette industry, much of it for the clove cigarettes which provide a market for a large proportion of the Zanzibar clove crop.

An interesting feature of both plantation and peasant agricultural development is the extent to which even this, one of the botanically richest regions of the world, has drawn on outside sources for its main products, both commercial and even for subsistence. Of the major crops only coconuts, sago, spices and soya bean are indigenous. Tea came from China, coffee and oil palms from Africa, cinchona from Peru, tobacco from temperate America, kapok from tropical America, maize, sisal and other fibres, and cocoa, from Mexico, tapioca and rubber from Brazil, tung oil from China. Sugar and rice had been introduced before the arrival of the Dutch. Government organizations have been mainly responsible for the introduction of these crops and for their development on peasant holdings, but plantations have played a large part in the early experimental period.

Capital Investment

Such a great agricultural expansion could not have been achieved without a very large investment of capital. The Government contribution apart from their own plantations and the provision of the necessary framework of transport, communications, and scientific assistance, has mainly consisted in the wide development of the traditional system of irrigation which, unlike the position in most other agricultural countries, is provided free of cost both for plantations and peasants, except that sugar plantations have to pay a fee for its distribution over their estates. So far as private enterprises are concerned, the Dutch and local Chinese are estimated to have invested 1,500 million fl.[1] in agricultural enterprises. Dutch capital predominates in Java, but in the Outer Islands other foreign interests, mainly British, American, French, and Belgian, have contributed a large share of the total capital invested. In rubber less than half the total investments are from Holland, the British have large interests in tea, and the French and Belgians in oil palms. The total British investments in estates is estimated by Callis[2] at 200 million fl. What the native contribution has been cannot be estimated as it takes the form almost entirely of capitalized labour.

[1] Broek, op. cit., p. 32.
[2] Helmut G. Callis, *Foreign Capital in South-East Asia* (International Research Series), International Secretariat, Institute of Pacific Relations, 1942.

Plantation and Peasant Production of Tea and Rubber

The scale and type of agricultural expansion has been dealt with. For the purposes of this study it will be useful to supplement this by an attempt to analyse the respective advantages and disadvantages of plantation and peasant methods of production for some major commodities. These can be most conveniently considered separately at the three main stages of actual production, processing and marketing. The very different proportions of the various commodities contributed to the total export production are illustrated by the fact that in 1938 99·4 per cent of the sugar, 98·3 per cent of the cocoa and 81·9 per cent of the tea were returned as plantation grown, while 84·6 per cent of the kapok, 94·1 per cent of the copra, and 99·6 per cent of the pepper came from native farms. As it is not possible to deal with more than a small number of representative commodities it will be convenient to concentrate on two products subject to international regulation, tea and rubber, and a third which has been the subject of considerable controversy, palm oil. Tea will only be dealt with in connexion with the special conditions existing in the Netherlands Indies, but rubber will require fuller treatment, affecting as it does the whole of South-Eastern Asia, but particularly the Netherlands Indies and Malaya. The question of palm oil will be considered more conveniently in connexion with West Africa.

Tea Industry

The tea industry is now predominantly a plantation industry almost all over the world, and its decline in the one great exception, China, shows the severe handicap imposed on the small and scattered peasant producer not so much in the actual growing of the crop as in its processing and marketing. In these spheres large-scale operations have an overwhelming advantage in their possession of capital, scientific skill, facilities for the collection of the produce, and familiarity with the exacting conditions of an international market. Boeke adduces the native tea cultivation in West Java as an excellent illustration of the difficulties under which the peasant producer, who has no direct connexion with his market and has to depend on a chain of middle-men, suffers in the case of a product which has to undergo an industrial process, and with regard to which he is not given the option of keeping his product for his own or local use in case the percentage of the colonial market price offered him does not satisfy him. 'Almost 18 per cent of the tea produced in Java is obtained in the form of wet leaves from the people. To supply the demand, tea gardens totalling an area of over 66,000 hectares are run by natives, and in 1938 the deliveries of the green leaf brought in almost 4·5 million guilders. Government intervention was needed, however, to prevent the native product being used as a buffer when the demand decreased and prices fell, and this happened not once but several times. When in 1933 the Government came to the assistance of tea growers and instituted a restriction based on the international tea growers' agreement, the wholesale price, which in 1926 was still ten cents per half-kilogram, had dropped to a cent and a half. Government protection (fixing the price of the wet leaf) was required to prevent the native business from being made to foot the bill and go to pieces.'[1] Price fixing of this kind is, however, only possible when the native product is supplied in fairly large lots within an area sufficiently limited to be surveyed. Village transactions dealing with small quantities are beyond the reach of Government aid.

Rubber Industry

Apart from Burma, four colonial dependencies of South-Eastern Asia are substantial producers of rubber: Thailand (Siam), French Indo-China, Malaya, and the Netherlands Indies. In Thailand it is grown on small Malay and Chinese plantations, and in Indo-China on a limited number of large and scientifically managed French plantations. Malaya and the Netherlands Indies are much the largest producers and are better fields for a comparison of the possibilities of plantation and peasant production. Much more information is also available with regard to them. They have been rivals in this sphere of enterprise for the last thirty-five years after earlier pioneering efforts in Malaya. This rivalry was changed into a large measure of collaboration under the stress of the economic crisis of 1930–3, which forced both of them to become members of the international organization for the control of rubber production. Their lines of development have however differed in many respects, and it will be convenient to consider the histories of their industries separately, but to combine the statistics of the results of their efforts, and the comparison of the relative advantages and disadvantages of plantations and peasants in the production of this commodity.

The Outer Provinces

In the Netherlands Indies, Sumatra is much the largest producer of rubber both plantation and native. Borneo comes next, with Java a long way behind. The Sumatran Malay was introduced to rubber early in this century through the contacts between East Sumatra and Malaya. Traders and returned coolies brought with them seeds and cuttings, and by 1908–9 European capital began to take an interest in its future.

[1] Boeke, op. cit., p. 179.

The European example and the high prices of 1910–12 encouraged both well-to-do Malays and Chinese to start small plantations. Government officials also promoted this development. As local seeds and seedlings became available during the war of 1914–18 the interest in rubber cultivation spread among Sumatran natives and in Southern and Eastern Borneo, and plantations were also extended. As noted earlier, the *ladang* system of tenure provided scope for small plantations, and the natives very quickly learned the methods of tapping and preparing rubber. The Stevenson restriction scheme which was applied to Malaya in 1924 gave a great stimulus to the industry in the Netherlands Indies, and extensive capital—partly of American and to a less extent of British origin—was invested in it.

Little capital was required by natives for this new adjunct to their main occupation of growing food crops, as the necessary land was available free of cost, and the extra expenditure on clearing the land and planting trees was small. Tapping was done either by the owners and their households, or by hired labour usually paid on the half-share system, though with low prices the owner may have to give more than a half-share to the labourer and with high prices he may be able to give less. Where labour is scarce the owner is largely at the mercy of the tapper and there is a danger of too intensive exploitation to the detriment of the trees. Where the family itself does the tapping, the work can be kept going when prices drop, but, unless food production has been reduced below the level required for subsistence, they can discontinue tapping when the drop in prices makes the labour involved not worth the gain. The Dutch plantations have always aimed at a high degree of efficiency and economy in management, and they have received adequate scientific assistance both from their own organizations and from the scientific departments of Government. The latter have also given extensive assistance to native growers. As a result of these favourable factors the exports both of plantation and peasant rubber had reached by 1929 more than half the corresponding figures for Malaya.

Other factors were, however, unfavourable to the peasant producer. Concurrently with native rubber production a chain of middlemen was organized as a link between the producer and the exporter. At first they were mainly Chinese, and many abuses grew up, including wholesale adulteration by the producers, and the use of false weights and measures by the middlemen. Other undesirable practices were the use of advances as a means of binding the producers, and of commercial articles as currency. By the late nineteen-twenties this business had largely passed into the hands of Malays, but export was still in Chinese hands. Processing, originally carried on in Singapore, was transferred to the Indies; later, mainly as the result of rubber restriction, and of assistance given by Government, native producers improved their methods and the raw product was made ready for the market by the producers themselves.

As the result of the international agreements entered into in consequence of the crisis of 1930 the Netherlands India Government attempted to make the native rubber planters produce less rubber. They had practically no information as to the area of the plantations or the number of the trees, and from 1934 to 1936 they attempted to reduce production by levying a special export duty on the product, a duty which by 1936 had reached fantastic heights. In the course of two and a half years more than 85 million guilders were demanded as duty from nearly 800,000 rubber growers. Even then however the scheme was ineffective, as the native rubber produced exceeded the assigned export quota by more than 30,000 tons and Government was obliged to withdraw nearly six million guilders' worth of estate-rubber export licences from the market in order to make room for the native product.

At the end of 1935 the Government decided to follow the example of Malaya by introducing individual rubber restriction, a measure which it had previously been considered impossible to enforce. This involved the immense task of taxing and registering nearly 600 million rubber trees on 788,000 plantations. The productivity of each cultivator's plantation was carefully determined and by 1937 it was possible to introduce the new system over the whole of the archipelago. Under the new system, which is also that previously adopted in Malaya, a number of export licences are issued to each owner of a plantation. These permits are made out to bearer and are freely negotiable within a considerable area. The mere possession of a plantation thus becomes a source of income. Plantation owners are free either to work up to their own export licences, or to live on what they can get by the sale of their licences. There is an extensive and very variable market for these coupons. Restriction may thus, in Boeke's opinion, ultimately lead to the classification of rubber plantations into sleeping groves on the one hand, and on the other hand areas which for various reasons are in a particularly favourable position to produce inexpensively. This position would be altered if the Government restricted the right to negotiate the licences or valued the untapped tappable plantations at so much less than the present figure that the owners would be obliged to exploit their plantations.

Plantation and Peasant Industries in the Netherlands Indies and Malaya

The respective advantages and disadvantages of plantation and peasant producers of rubber are much the same in Malaya and in the Outer Islands of the Netherlands Indies. In both areas the plantations depend on imported labour though the cost of its introduction and maintenance may be rather less in the Indies. Plantations have the

advantages of greater facilities for increasing production per acre by the introduction of bud-grafting and of higher-yielding clones, and by improvements in tapping so as to secure regularity of output. Government advice and assistance can induce the peasant to introduce improved strains, but the process is slow, and experience has shown that it is much more difficult to get him to adopt new methods of cultivation requiring meticulous and continued care and attention. Plantations again can provide the capital necessary for the expensive plant required to ensure the progressive improvement and development essential to modern industrial enterprises.

As regards marketing again estates have the advantages of better and more uniform quality, a more regular output which can be guaranteed, and the ability and scientific skill to develop new specialized forms of rubber. A notable example of this is the increasing market for latex which has so far been almost entirely produced by plantations, though it may not be beyond native capacity, if the necessary assistance is provided by Government. The estate advantage as regards uniformity of quality has diminished to some extent as native producers have been assisted by the Governments of both the Netherlands Indies and Malaya to improve their methods of preparation, but it still remains substantial, and American requirements in particular have sometimes been based on certain definite standards which could only be counted on in plantation products. When organized on a common basis plantations are also in a better position to uphold the interests of producing countries against the tendency in consuming countries to take advantage in times of depression of opportunities of buying rubber at sweated labour prices. The question of competition with artificial rubber will however further complicate this problem.

The one great advantage of the native grower is his cheaper product, and experience both in Malaya and in the Netherlands Indies has shown that its average quality can be substantially improved with advice and assistance provided by Governments. Against this, however, is the consideration that the native producer has to market his product through middlemen, a large proportion of whom are Chinese. These astute business men are thus able largely to control the sale of native rubber, and are equally ready to squeeze the cultivator in one direction or the consumer in another if they get an opportunity to do so. To some extent also the peasant is dependent for tapping on labour hired on a sharing basis, more especially when prices are high. This practice tends to the use of destructive tapping methods, though an official inquiry made in 1932 did not show any serious deterioration of the trees.

On the other hand, against the advantages enjoyed by plantations must be set the overhead charges on account of expensive European supervision, interest on capital, maintenance charges, and their dependence on imported labour. These factors are of special importance in times of depression, and it is the high cost of these overhead charges which has frequently been responsible for the replacement of the resident proprietary planter by the manager of a strong foreign company. The results of this tendency are visible in all the various plantation countries first settled by individual planters. To meet these charges plantations are practically obliged to continue to produce as much as they can even if the price has fallen to unremunerative levels. The native producer has no such commitments and, in the case of rubber, can stop production when the price is no longer remunerative, unless, as has been the case in Malaya though less often in the Netherlands Indies, he has given up growing adequate food crops and is therefore dependent on rubber for the necessities of life.

There does not appear to have been up to the present any systematic enquiry into the difficult problems of the reaction of the native producer to varying price levels, or into the factors limiting his output as compared with potential capacity. While his reaction to changes in price levels appears to be more rapid than that of estates, the expansion of his output may be limited by other factors such as the inaccessibility of his plantation, and the difficulties of finding labour for increased tapping. There can also not be the same confidence that the tapping methods will be such as to assure the permanence of the increased output.

It will, however, be useful to consider any general conclusions in the light of actual experience, and the history of the industry from 1929 to 1940 in Malaya and the Netherlands Indies gives an interesting illustration of the effects on plantation and peasant production of a long economic depression. The results are summarized in the two following tables.[1]

The first of these tables deals with the period from 1929 to 1932, before the introduction of the Rubber Regulation Scheme. It was compiled by a well-known authority, Dr. Whitford, and the figures for Malaya and the Netherlands East Indies are as follows:

	1929		1930		1931		1932	
Price in United States Cents per lb.	19·1		11·8		6·0		3·4	
				Per cent				
Estates	*Prod.*	*Pot.*	*Prod.*	*Pot.*	*Prod.*	*Pot.*	*Prod.*	*Pot.*
Malaya	100	93	97	87	98	84	98	83
Netherlands East Indies	100	95	100	92	108	93	100	75
Natives								
Malaya	100	96[2]	102	94[2]	98	88[2]	89	75[2]
Netherlands East Indies	100	88	83	55	82	42	58	23

[1] From information kindly given by the International Rubber Regulation Committee.

[2] Includes non-European estates; their area in these years is not available, but in 1937 their area was about five-twelfths that of small-holders.

In this statement the first column takes the actual production in 1929 both estate and native at 100 and the second column gives Dr. Whitford's estimate of the percentage of potential production represented by the actual production of that year. In subsequent years the first column gives the percentage which actual production bore to that of 1929, and the second column gives as before the proportion of actual production to potential production in that year. The figures in this statement bring out the continuity of estate production over a disastrous period, and the very different responses of the Malayan and Netherlands East Indies native producers to catastrophic changes of price. This difference is probably partly due to the inclusion in the Malayan figures of those for non-European estates, but another factor is probably the fact mentioned above of peasants in Malaya—including many Chinese—who do not grow enough food or other crops for their subsistence and must therefore rely on rubber for an income. In the Netherlands East Indies the fall in the proportion between the native rubber actually produced and the estimated potential out-turn is striking. Knowledge of the native possibilities of production was in fact very deficient; their quota was provisionally fixed at 71·5 per cent of estate production when regulation was introduced in 1934, but in 1936 this was raised to 91 per cent. This percentage was based on a tree count giving an estimate of 1,800,000 acres as the area under native rubber. A later estimate based on a partial accurate survey gave a total area of 3,000,000 acres.

The second table below gives the figures of actual production for the whole period from 1929 to 1940; they are as follows:

	Price d. per lb.	Rate of Release per cent	Malaya Estate (1,000 tons)	Malaya Native (1,000 tons)	Netherlands East Indies Estate (1,000 tons)	Netherlands East Indies Native (1,000 tons)
1929	10·25		246	201	152	106
1930	5·94		237	199	151	88
1931	3·12		240	196	163	87
1932	2·31		240	178	152	60
1933	3·25		241	219	169	113
1934	6·25	87·14	262	217	190	183
1935	6	67·5	243	135	151	143
1936	7·75	62·5	233	132	157	149
1937	9·5	83·75	315	189	241	205
1938	7·22	55	246	115	172	149
1939	9	58·75	245	117	193	183
1940[1]	12·06	83·25	334	215	277	265

These figures show the very rapid response in native production both to the fall in prices up to 1932 and then to the small rise in 1933. In Malaya the response to the rise in 1933 was also marked. When

[1] The acreage of the estate and native plantations in 1940 were as follows: Malaya, estates, 2,107,003 acres and native, 1,373,986 acres; Netherlands Indies, estates, 1,566,976 acres and native, 1,806,516 acres.

regulation was introduced in 1934 from 1 June of that year Malaya had fairly accurate information about areas and productive capacity from the experience of the Stevenson scheme, the statistics relating to which were brought up to date by 1935. From the first therefore they fixed quotas for the individual holdings both estate and peasant, the latter numbering about 340,000 in the Federated Malay States alone. The Dutch had no such statistics available and, as noted earlier, individual quotas for their 788,000 peasant holdings were only fixed in 1937.

Future Prospects

The future prospects of the rubber industry taken as a whole will largely depend on the national and international policies of the major industrial countries with regard to the control of production and the stabilization of prices, together with the new issue of the industrial fields to be occupied respectively by the natural and synthetic products. So far as the natural commodity is concerned, Boeke's summing up of the position as regards the future of the native industry is as follows. He notes that in spite of its rapid progress 'many people think that it will not, in the long run, be able to compete with Western enterprises, which are so much more highly perfected technically and better organized, and can therefore reduce their costs of production to a figure below that of the cost price of the native product. Registration in the Netherlands Indies has certainly brought out the fact that a large number of the native plantations, neglected or overtapped, are in a deplorable condition. On the other hand there are also numerous instances of well-cared-for groves, of selection and improvement of species, and of rapid changes for the better in the working up of the product. It is therefore by no means impossible that the abovementioned differentiation' (i.e. that between 'sleeping groves' and production areas)[1] 'assisted by technological field propaganda and other help, will produce a large number of native industries capable of competing'.[2]

'Other authorities however take a much more favourable view of the prospects of native production on a cost price basis. They point to the fact that the peasants continued, and even increased, production in the early stages of the Regulation Scheme of 1934 when the Export Tax reduced the return to the growers to less than 1d. per lb. In their opinion also Boeke's classification of the native plantations is somewhat misleading as a description of their general condition from the point of view of production.'

There are obviously a number of uncertain factors in this equa-

[1] See p. 32.
[2] Boeke, op. cit., p. 120.

tion, including the characters of future industrial demands, the extent to which the native producer may be able to meet them, the alternatives open to him, and the price which would be attractive enough to induce him to continue production. Other questions which may require consideration are those relating to the extension of a more varied food production, and the long-term effects of present methods on the fertility of the soil. While plantations should be able to hold their own against the native product if they continue to show the necessary enterprise and scientific initiative, the prospects certainly seem favourable for the native producer being able to keep a large share of the market in his hands provided that he receives a reasonable measure of assistance at the various stages of primary production, processing, and marketing. It is even more to his advantage than to that of plantations that rubber is an all-the-year-round crop so that sale for cash can be made every few days.

Land Tenures

Before going on to deal with some special Malayan aspects of the rubber problem two important questions remain in connexion with the Netherlands Indies affecting both plantation and peasant production of all descriptions: (1) the system of land tenure under which estates and peasants carry on their activities, and (2) the organization for providing the agricultural credits so essential to the small-holder. Taking up the first of these questions, the following table[1] gives a classification of estates in 1938 according to the methods of tenure.

Java and Madura Classification	Areas in hectares	*Outer Provinces* Classification	Areas in hectares
Government Estates	20,531	Government Estates	10,079
Privately owned	339,512	Privately owned	741
On long leases	558,193	On long leases	452,774
Hired from Native States	59,572	Agricultural concessions	941,331
Leased from natives on short leases	101,394	Leased from natives on short leases	377
Total	1,079,202	Total	1,495,902

Note.—Of the total area in estates in the Outer Provinces 1,249,473 hectares are in Sumatra.

The table shows the marked differences between the forms of tenure in Java and in the Outer Provinces, the result partly of actual experience in Java, but mainly because of the much larger proportion of the Outer Provinces included in Native States. In the private estates of the Raffles period in Java the landlord had a right as representative of the State to one-fifth of the produce and could also take rent almost without restriction. These powers, and the competition for

[1] Pelzer, op. cit., p. 161.

tenancies, left little inducement for the investment of capital in plantations by largely non-resident owners, including many Chinese, and resulted in such oppression as led to various outbreaks. A policy of resumption was therefore decided on after 1910 and by 1930 more than half the area had been resumed. Even of the remaining area, only about one-sixth was planted in 1938. The neglect of development of these estates may be compared with the similar experience of large estates in South Africa and in Kenya as well as in Central and South America. The bulk of the plantation area in Java is held either under hereditary long-term leases (*erfpacht*) under the Agrarian Law of 1870, or rented from cultivators on short-term leases for the growing of sugar cane. While native customary rights are not reserved under *erfpacht*, there has been growing consideration of native interest in granting these concessions. Similarly the grants from Native States in Java have been changed since 1920 from a very oppressive 'culture' system under private control to one of leases giving possession for fifty years, rent being paid to the local native organizations for the land used, and forced labour abolished.

The agreements with cultivators which are the bases of the great Java sugar industry are the most interesting Dutch experiment in co-operation between plantation and peasant interests in actual production. The land concerned is for the most part irrigated rice land (*sawah*), and it may be rented from the village communities by planters, either by registered communal agreements accepted by two-thirds of the co-sharers for periods up to 21½ years at a rent fixed by Government on the basis of the land revenue, or by similar private agreements, but with no security of tenure beyond two crops ahead (3½ years). In areas where planters and natives are on good terms, the second alternative is usually preferred by both parties. On the expiry of the lease the land returns to the village for rice cultivation, another area being then rented to the factory. Before the crisis of 1930, it was estimated[1] that for a large factory dealing with an area of 3,000 *bouw* (5,250 acres) the annual expenses were about three million fl., of which the natives received about one million fl. in wages and 130,000 fl. in rent. So long as conditions were reasonably prosperous the arrangement usually worked well, though disputes about the irrigation essential both for rice and sugar cane were apt to occur, and difficulties also sometimes arose in connexion with the crops preceding and following on sugar cane.

Tobacco—mainly grown in the Outer Islands—is another crop in which the cultivators co-operate with the planters in production; but instead of making land over to the planters, the people cultivate it under the direction of the planters. There are different arrangements in the three main centres of production as regards the division of the

[1] Furnivall, op. cit., p. 317.

risks and charges, and tobacco is usually one element in a fairly long period rotation.

In the Outer Provinces there have been extensive changes in the conditions of plantation tenure. The original long-term concessions from Native States entirely disregarded the rights of the peasants, and Government, after requiring at the end of the last century the surrender by the States of their power to grant concessions, replaced them by a new form of concession for seventy-five years similar to the *erfpacht* leases given in areas under direct administration. Control was facilitated by the fact that in general the necessary labour had to be imported, at first under indentures and later as free labour, but in both cases under strict Government regulation.

As regards native land tenure in Java and Madura,[1] the principle accepted by the Government, as laid down in the Agrarian Law of 1870, was that native land rights would be respected. Serious complications were, however, introduced by the simultaneous declaration that all land not held in private ownership—a conception entirely alien to native customary law—was part of the domain and therefore at the disposal of Government. This provision was attacked as conflicting with native land rights, and as a result a distinction was drawn between 'free' and 'unfree' domain land. Unfree land can be cultivated by natives after permission has been obtained from Government. The *adatrecht* recognizes both communal possession of all land except the gardens and the sites of houses and hereditary individual possession; there are two types of communal possession, one with periodical redistribution of the land and the other with fixed shares.

The Dutch have regarded a transition to individual ownership as a necessary condition to agricultural improvement and, under regulations framed in 1885, communal ownership must be abandoned when three-fourths of the members holding rights in the communal lands demand individual possession. So far little use has been made of this provision. Instead they stop redistributing the land, and, according to native customary law, this leads to individual possession. Hereditary individual possession is, however, not equivalent to ownership because the community retains an ultimate right of disposal, and the occupant cannot sell or mortagage the land to anyone who is not a member of the tribe or village. Individual possession can be converted into ownership by a recording in the land register and issue of a title, but little use has been made of this right which is foreign to *adatrecht*. In any case no native land can be sold to non-natives nor can more than one-third of the land of any village be rented at a time to sugar plantations.

The following table[2] shows by percentages the proportions of irrigated and of dry land helds by various forms of tenure in 1932, and the

[1] Pelzer, op. cit., p. 158.
[2] Boeke, op. cit., p. 93.

great change which has taken place in the proportion of communal land liable to redistribution since 1882.

Holdings	1882 per cent	1922 per cent	1932 Wet per cent	1932 Dry per cent	1932 Total
Permanent holdings saleable to natives without restriction	38	75	59·6	88·5	76·4
Permanent holdings unsaleable or saleable under restrictions	24	14	21	8·5	13·7
Periodically shared out or distributed	25	5	8·8	0·5	4
Reserved for village officials	—	5	9·4	1·3	4·7
Village property	—	1	1·2	1·2	1·2
Total	87	100	100	100	100

The proportion both of wet and dry land liable to redistribution varies greatly in different parts of Java, and is much higher in Eastern Java where it is intimately connected with sugar cultivation. The decline in that industry has therefore probably increased the percentage of permanent holdings.

No corresponding statistics are available for the Outer Provinces. There also native land tenure is regulated by the various forms of *adatrecht*. Both communal rights and individual possession are found. Much the greater proportion is held as shifting cultivation on the principle of the right of cultivation of wild land. Under it, when the cultivator abandons his *ladang* and makes a new clearing, he loses his rights to the old clearing. The position is, however, being changed fairly rapidly by the extensive planting of long-term crops which has been dealt with earlier. When fruit or other trees are planted on a *ladang* the planter acquires individual property rights so long as the trees survive. The ultimate right to the soil belongs to the community and on this basis it preserves control over the rights to collecting wild products, hunting, and cultivation for its own members.

The progress made in native commercial agriculture has been remarkable and it has been accompanied by a great increase in the proportion of the land held in individual possession. The progress in Java is the more striking, as the area of the average native holding per landowner liable to pay land tax is only 0·38 hectares of wet land and 0·5 hectares of dry land.[1] Fragmentation does not, however, appear to be serious and there does not seem to be any marked tendency towards the development of large estates or to increasing subjection to moneylenders, though information on this subject is inadequate.

Rich soil and the abundant and well-distributed rainfall of the greater part of Java, with the wide extension of irrigation in the drier areas, have made these advances possible, but the economic stimulus only became really effective in fairly recent times. In Furnivall's

[1] Boeke, op. cit., p. 41.

opinion[1] this change was not only due to the stimulating influence of the Agricultural Service—once it had become practical by a detailed study of native methods—and the fostering care of the civil service both European and native, together with the examples provided by plantations, but was also the result of a reaction of the new nationalism on economic life.

Agricultural Credit

An essential condition to these advances was, however, the organization for the provision of agricultural credits, and, under the 'liberal' policy pursued up to the end of last century, there was a serious danger of moneylenders (mainly Chinese) acquiring a dangerous measure of control of the land by holding out the attractions of easy money. Some attempts were made to counter the tendency by State intervention, including legislation dealing with conditions on sugar plantations, and the organization of savings banks. The change of opinion and of policy called the 'Ethical' movement coincided with a growing realization of the danger from Chinese pawnshops and moneylenders, and an officer was placed on special duty to work out a scheme for State pawnshops and agricultural credit banks. His report[2] was in favour of starting from the basis of the traditional village granaries, developing them into paddy banks providing loans in kind, and supplementing these with village cash banks and with reorganized subdivisional savings banks. He advocated a gradual development on voluntary co-operative lines, but Government in its new 'Ethical' zeal separated the aims of co-operative organizations and the provision of credit. Concentrating in 1905 on the latter, it made the formation of banks one of the foremost official duties of civil servants and by 1912 there were over 12,000 paddy banks and 1,161 village banks in Java in addition to an *Afdeeling* (subdivisional) bank in every Regency except one. The only link between all these banks was at first a central audit, but the realization of the danger to all banks from individual failures led to a policy of centralization, and finally to the whole machinery of State moneylending being co-ordinated by a General Public Credit Bank which controls subdivisional banks and supervises village banks. A great system of State pawnshops has also been organized to compete with the Chinese pawnshops. The co-operative movement as such has made little progress though in recent times the nationalist movement has led to the foundation of numerous 'wild' co-operative societies, but little is known about their activities.

[1] Furnivall, op. cit., p. 322.
[2] Furnivall, op. cit., p. 357 *et seq.*

The scale of operations of these State credit institutions was extensive and Furnivall[1] gives the following figures for 1930:

	Loans during 1930 (*mil. fl.*)		
	Java	*Outer Provinces*	*Total*
Pawnshops	171·7	22·4	194·1
Afdeeling banks	57·6	14·7	72·3
Village banks	40·8	3·5	44·3
Paddy banks	7·2	—	7·2
Registered Co-operative Societies	0·1	—	0·1
Total	277·4	40·6	318·0

These great credit organizations have enabled the people to raise money on much more advantageous terms than when they resorted to Chinese pawnshops; there is a fairer valuation, the rates of interest are lower, the clients are assured of the protection of their interests, and better care is taken of their pledges. This has been accomplished at a profit to the State reaching a maximum of 12 million fl. a year and showing a total profit of 150 million fl. between 1905 and 1930.

The aim of the State has not been the encouragement of co-operation, but the provision of credit, but there has been a good deal of Dutch criticism of the methods employed both from the economic and the political points of view. Economic criticisms have been mainly on the largely mutually contradictory lines of too little or too easy credit, on the heavy expenses of management, and on the large proportion of the loans granted for non-agricultural purposes, more especially by the *Afdeeling* banks. Against this, however, must be set the outstanding fact of the financial stability shown by the weathering of the economic blizzard of 1930–3. These banks may be accepted as important factors in giving peasant producers a fair chance, and their financial success is an illustration of the resisting power of an organized peasant economy to adverse circumstances.

The criticisms on political grounds raise more complicated issues. In general they take the line that the organizations lack the stimulus to character which is provided by a true co-operative movement. They are on European lines, and must operate under European supervision; they give credit but without requiring co-operation. On the other hand they have trained large numbers of Indonesians in spheres of work which were formerly a Chinese monopoly and in which they will gradually qualify for responsible posts. In Furnivall's opinion[2] the separation of the economic problem of credit from the social problem of co-operation may not in the end be disadvantageous. The success in dealing with the former may stimulate the growth of a co-operative movement among the people which will have greater vitality than a State-sponsored scheme.

[1] Furnivall, op. cit., p. 359.
[2] Furnivall, op. cit., p. 361.

Results of 'Ethical' Policy

The real substance of the criticism is directed not so much against the credit organizations as against the methods which have been followed in carrying into effect the 'Ethical' policy to which the Netherlands Government committed itself early in this century. The general aim of that policy was to build up the economic welfare of the native producer, but Dutch opinion has been by no means unanimous as to its success. Dr. Boeke, formerly adviser for co-operative credit in Java and later Professor of Tropical Economy in Leyden, in his review of the economic history of Netherlands Indies, expresses the opinion that all the benevolent activities of the Government in the social, economic and financial spheres have left the cultivator rather worse off than he was before the war of 1914–18.[1] In particular, as a former head of the credit service, he says, 'I really cannot assure you that the people are any better off for the millions that they have borrowed from the State Banks'. The only popular response to all the nostrums which have been put forward is an increase in numbers, while foreign capitalists and foreign energy take out of native hands a rapidly increasing share of native activities. Dr. Boeke has set out the reasons for this pessimistic conclusion more fully in his recent work. He diagnoses the fundamental weakness of the 'Ethical' policy in the fact that all the measures taken had two characteristics in common: 'they all regarded the people as under tutelage, as incapable of co-operating actively in the business of improving their lot; and further all assumed that the people had never lacked anything but the opportunity to elevate themselves—an opportunity which if put in their way they would seize with both hands'.[2] In all the activities for the good of the people it is the civil service which acts as promoters and as 'uplifters'; the Government has taken complete charge after some ineffective attempts to include representatives of the interests affected in the working organization. This coercive form of help and instruction was resented by the better-educated and more independent individuals. As Furnivall has put it, the method adopted was that of doing things for the native population rather than of developing their capacities to help themselves.

In Boeke's opinion, it is not to be wondered at that the reaction against the 'Ethical' policy came, on the one hand, from those natives who did not want to be treated like children in charge of a guardian, from men who desired to have a hand in running things, and, on the other hand, from colonial politicians, whose experience had taught them that the difference between East and West in the colony was not only a difference in opportunities for economic progress, but a differ-

[1] Furnivall, op. cit., p. 403.
[2] Boeke, op. cit., pp. 101–3.

ence in the general outlook on life, in social principle. A clear distinction must be drawn in this connexion between the masses and the individuals who are raising themselves above them.

These criticisms of Dutch methods in dealing with the most fundamental of all colonial questions, that of eliciting the capacities of the native peoples in all spheres of activity, are a good illustration of the objective and unprejudiced approach of modern Dutch thinking to problems of such complexity. They seem, however, unduly severe if the economic history of Netherlands Indies is compared with that of other tropical dependencies under a different regime.

Effects of the Economic Crisis of 1930

The Indonesian peasant producer suffered severely during the economic crisis of 1930–4, but he weathered the storm. Plantations suffered even more severely. The great rubber industry kept up production so far as the sanctioned quotas allowed, as the figures given earlier have shown, and continued to give employment to their labour force. The sugar industry, which had been the mainstay of the Javanese economy, was less fortunate. When in 1931 China and British India imposed new high duties on sugar, the Netherlands India Government was compelled to come into the Bradbourne plan. The Sugar Export Ordinance prohibited the export of sugar without a licence and the quantities for export were fixed by decree. The first estimates of world consumption were too optimistic, and further restrictions were necessary, until by 1934 the area sanctioned for sugar cultivation had been cut down from 200,000 hectares to 34,000 hectares. This was estimated to represent a decrease in production from three million tons to 550,000 tons. Even this was not enough and the controlling body advised that no sugar should be planted. The number of factories had already been reduced from 179 to 45, and the remaining owners represented that they must either keep their factories going or shut down permanently. Finally, a small area calculated to yield 460,000 tons was sanctioned. This concession saved the industry from extinction, but it cannot be expected that this unique form of combination between plantations and native cultivators will regain its position as the economic centre of Netherlands Indies affairs.[1] No accurate balance can be struck as to the effects on the local native population of the resulting great fall in the wages formerly paid to the 60,000 permanent and over 700,000 temporary labour force. Very acute distress must have been caused even if the loss was offset by making additional land available for food or other crops. It would be the more felt as compared with the areas previously devoted to native production, as the inhabitants of the sugar producing areas had to a greater extent

[1] Furnivall, op. cit., p. 436.

based their lives on a cash economy, founded on wage payments.

Dutch experience in the late nineteenth and the earlier part of the present century agrees with that of other colonial territories in showing the limited power of resistance to economic depression of an unorganized community of individual planters. The history from 1930 onwards suggests that even their financially much stronger successors, making full use of scientific assistance, cannot, as in the case of the sugar industry, contend against long-continued adverse tariffs and world economic conditions. As they are controlled from abroad, their interests are less closely connected with those of the whole local community than are those of individual planters who look forward to permanent residence. Their prospects of survival under serious adversity may depend on their being of such importance to the metropolitan country that it cannot afford to let them go under. Their characteristic specialization, in which lies one of their main advantages, more particularly where large capital is involved, becomes a serious danger if conditions alter to their disadvantage, and once destroyed they are unlikely to revive. The longer they have been in operation, and the more completely the local native society has adapted itself to the wage labour provided by them, the greater is the blow to that society if they are compelled to withdraw.

So far only economic considerations have been taken into account, but political developments may be an equally important factor in determining the future prospects of any large-scale plantation system, more especially a system controlled by external interests. In the case of the Netherlands Indies, and similar considerations apply to other dependencies, the growth of nationalist feeling in Java was a marked feature of the period preceding the present war. The course of the war and Japanese policies during their occupation have intensified that feeling. When peace returns it is intended that the Indies should remain an integral but self-governing part of the Kingdom of the Netherlands, an equal partner with Holland. This status will give their people both the incentive and the power to organize their economy in the way which they may think best adapted to promoting the economic prosperity and general welfare. What their attitude may be to a plantation system which results in such a large proportion of the natural resources of the archipelago being under external control is difficult to forecast, even if the alternatives to this 'economic expedient' would result in those resources being relatively undeveloped.

MALAYA

The Malay Peninsula faces Sumatra on the Straits of Malacca and historically has been closely connected with it. It has an area of

51,070 square miles and lies between latitudes 1° 12′ and 6° 50′ North. It is therefore purely tropical in character. Its economic history resembles that of the Outer Islands of the Netherlands Indies rather than that of Java with its dense population, but it lacks the great stretches of rich volcanic soils which represent the wealth of Sumatra. Its main natural features are the central backbone of granite mountain ranges rising to 7,000 feet, descending through extensive foothills to the flat coastal areas. To the south the mountain ranges shade off into the plains which form the larger part of Johore. The coastal plains are alluvial in character, clays and peat in the west fringed by a belt of mangrove swamp, sands or sandy gravels in the east, ridges of high ground alternating with low-lying swampy land. Practically the whole area was originally covered with forest, much of it very dense. It is a country of heavy rainfall, with no marked dry season except along the coast, high humidity, and uniform temperatures. Sir F. Stockdale[1] assigns as the basic factor controlling Malayan agriculture the general poverty of the soil, especially in the foothills and in the south. The only exceptions are the coastal alluvial flats, the plains of Kelantan in the north-east, and the limited areas of basaltic soils derived from the rocks of the Pahang volcanic series. The general low fertility is largely due to the absence of any extensive dry season permitting of the accumulation of readily available nutrients in the soils. Malaya provides in fact a good illustration of the illusory character of the appearance of soil fertility given by a luxuriant tropical vegetation. The greater part of the Peninsula lies east of the mountain ranges, but the capital investments of the last forty years have been practically confined to the smaller area west and south of the ranges.

Population

An epitome of the history of Malaya is provided by the following table giving the density and composition of the populations of the various States as given by the census of 1931. There was a large increase up to the beginning of the present war, particularly among the immigrant populations, but later census figures are not available. In considering the figures from the agricultural point of view, more especially as regards the relations between plantations and peasants, it should be remembered that the great majority of small-holders are Malays or other Malaysians; Indians are, so far as agriculture is concerned, almost entirely employed on plantations, and the Chinese, while the large majority are engaged in non-agricultural occupations including tin mining, are represented in agriculture both by a considerable number of estate owners and by about a third of the labourers

[1] Sir F. Stockdale, ***Report on a Visit to Malaya, Java, Sumatra and Ceylon***, 1938 (C.A.C. 454), H.M. Stationery Office, 1939.

employed on plantations, besides contributing a large number of small-holders. The Straits Chinese, as distinguished from recent immigrants, are largely in control of the economic life of the colony.

Populations of the Malay States

Name of State	*Population*	*Density per square mile*	*Main racial components as percentages of total population*			
			Malays	*Other Malaysians*	*Chinese*	*Indians*
Federated Malay States			*per cent*	*per cent*	*per cent*	*per cent*
Perak	765,989	96	27	8	42	21
Selangor	533,197	169	12	11	45	29
Negri Sembilan	233,799	92	35	3	40	21
Pahang	180,111	13	50	11	29	9
Total (F.M.S.)	1,713,096	60	26	9	42	22
Johore	505,311	67	28	18	43	10
Kedah	429,691	118	65	1·6	18	12
Kelantan	362,517	63	90	1·0	5	2·2
Perlis	49,296	156	81	0·2	14	2
Trengganu	179,789	37	92	—	7	0·7

Note.—The Straits Settlements are not included in this statement. Of their component parts, Labuan is near Borneo, and Singapore and Penang fall into an entirely different category. Malacca and Province Wellesley are small relatively densely populated areas on the mainland. Malacca has a population density of 291 and Province Wellesley of 488. In Malacca 51 per cent of the total population are Malays or other Malaysians, 35 per cent are Chinese and 12 per cent are Indians. The corresponding percentages in Province Wellesley are 49 per cent, 34 per cent and 16 per cent.

The figures in this statement show both the backwardness in development of the three eastern States of Kelantan, Pahang and Trengganu and the extent to which the indigenous Malay population falls short of the immigrant population of Chinese and Indians in the advanced western States. Johore combines the characteristics of both regions. Kelantan is an example of an almost exclusively Malay State with a fairly adequate population. This is, however, the result of a dense concentration in the coastal plain with a very sparse population in the rest of its area. The interesting reactions of the Malay population to these special conditions will be mentioned later.

Agricultural development has taken place mainly in the foothills, the coastal areas of the west and east coasts, and the plains of Kedah and Johore. Mangrove swamps in the west have been cleared and drained for rubber, coconuts, and oil palms, with the result sometimes of serious shrinkage of the peaty soil. Swamp jungle has also been cleared for the growing of paddy, and the inland heavily timbered hill-lands have been cleared for the growing of rubber, oil palms and other crops.

Of the 4½ millions total population of the peninsula, about 1¼ millions are now engaged in agriculture. Of these 400,000 are working on estates, and about 800,000 adults occupy small-holdings. The main crops in order of acreage are as follows: rubber, rice, coconuts, oil palms, pineapples, fruits, areca nuts, tapioca, bananas, coffee, vegetables, derris, tea, gambier and tobacco. Oil palms are a purely plantation crop, rice is entirely a peasant crop, and the other main plantation crops, rubber and coconuts, are also grown largely by small-holders. Estates predominate in rubber and small-holdings in coconuts. Peasants have therefore a wide field of production, but Malays only play a major part in the cases of rice, coffee and coconuts; other forms of peasant production are largely due to Chinese enterprise and skill. The whole agriculture of the country, however, at the beginning of the recent war was dominated by rubber with its total of 3¼ million acres out of a total cultivated area of 5 million acres. Slightly over 2 million acres were estate owned, and 1¼ million acres were included in holdings of less than 100 acres, mainly in Johore and Perak. The actual figures for the production of estates and of peasant holdings are given in the table on page 35.

Economic Development

When towards the end of the last century the economic development of Malaya began to be seriously considered, the position was very different from that in Java at the earlier corresponding period of the extension of plantations in that island. The Dutch had available a long experience of the compulsory cultivation of many of the most important plantation crops (though not of rubber, oil palms or tea); the population even then was dense and increasing rapidly so that an adequate labour force was available for plantations without seriously affecting the native capacity for the production of their own food requirements. Communications, though primitive and poor by modern standards, were not very inadequate given the requisite man power. Malaya was in a very different position in these respects. It was a potentially rich but undeveloped country with a scanty population of a type much less inclined to agriculture, with practically no communications except by sea or by boat on the rivers, with an almost unlimited need for health services, like almost all tropical countries, but with very little money to pay for them, or for all the material improvements in transport and communications essential to any economic advance. The necessary taxable capacity could not be built up within any measurable period on the basis of the local resources in men and money, and the only method of breaking the vicious circle visible at the time was to encourage the investment of British and Chinese capital in mines and plantations and to impose taxes on their output or

profits. Plantations on a small scale had, it is true, a long history in the western coastal areas of Malaya. The earlier planting enterprises were interested in pepper and gambier followed by nutmegs and cloves, tapioca, sugar and coffee. Chinese had played a large part in the cases of tapioca and sugar.

Rubber Industry

The whole position was changed by the spread of the hevea rubber tree. Though first introduced in 1875 its cultivation made slow progress, partly from labour difficulties, and partly because everything had to be learned as regards cultivation, tapping, and factory organization. Some method of controlling malaria was essential and also improved means of transport and communications. The labour difficulty was solved by the importation of Indian and Chinese labour, but the necessary rates of pay were considerably higher than in Java. This handicapped Malaya in comparison with Java though not to the same extent in comparison with Sumatra, where development was taken up later. The rubber boom which culminated in 1910–12 resulted in a large extension of plantations, mainly British but also Chinese, and in the complete displacement of their earlier staples; oil palms and coconuts were added later. The Malay inhabitants disliked the drudgery of work on plantations and took instead to planting parts of their small-holdings with rubber trees. Their methods of preparation were however necessarily very crude, and the Agricultural Department, which was first established in 1904, concentrated its attention almost entirely on plantations until well after the war of 1914–18. Four associations of the rubber planting interests began research work in 1910, but, unlike the position in Java, little systematic scientific work was done until the Rubber Research Institute was established in 1926. It was financed by a tax on rubber exports. When the Institute was established the position of the industry was unsatisfactory. An attempt had been made to meet the slump in prices of the early nineteen-twenties by the Stevenson scheme of restriction, but as the Netherlands Indies would not join, the chief result was an immense increase in the production of the Dutch islands both European and native, while in Malaya itself Malays and Chinese were producing rubber at a cost with which the European plantations as then carried on could not compete. The work of the Rubber Research Institute had pointed out the way to the reduction of costs and the increase of yields on lines similar to those followed by the Dutch in the East Indies, but the Ormsby-Gore Report of 1928 criticized the Malayan estates as still relatively backward both in the unduly heavy weight of overhead costs and in the inadequate recognition of the importance of scientific research. This applied more especially to the smaller estates. A steady improvement had however already commenced and it was accentuated by the disastrous experience of the economic crisis of 1930. When the present war broke out Malayan estates were on the average quite on a level with those of the Netherlands Indies both as regards the relative costs of production and the application of the results of scientific research. It is even claimed that they were somewhat ahead in clonal seed development. The Institute had done much valuable work on bud-grafting and the production of higher yielding classes, on the use of fertilizers, the methods of cultivation and preparation, and on pests and diseases. In 1937 the bud-grafted area had risen to 219,935 acres out of a total tappable estate acreage of 1,883,250 acres; of this area one quarter was not being tapped as the result of rubber restriction. The production of latex had expanded greatly.[1] Of this area 75 per cent was owned by European companies, 16 per cent by Chinese (mainly individuals), 4 per cent by Indians, and 5 per cent by other Asiatics. The Institute had paid equal attention to solving the problems of native small-holders, particularly by appointing Asiatic rubber instructors working under the Agricultural Department to give lectures and demonstrations on all aspects of production, more especially on the control of diseases. The preparation of latex was also taught and a small smoke house was invented costing only six dollars. In some districts the latter was not adopted because, in the absence of a proper system of grading, the difference in price was not sufficient compensation for the extra time and labour involved. This is a difficulty found in many systems of native production including, for example, the palm oil of West Africa and the wool of Basutoland.

Capital Invested

The table on page 35 shows the result of all these efforts to expand and control a great industry. The nominal value of the sterling capital invested in Malayan rubber companies is estimated by Mills at £53,599,000,[2] including capital accumulated out of reserves and issues of vendors' shares, but excluding money invested and subsequently lost. The estimate also does not allow for the difference between nominal and real values, and it excludes appreciable sums invested in France, the United States of America and Shanghai, besides £1,672,000 denominated in Straits dollars. The total labour force employed on the estates in 1937 included 351,404 Indians and Chinese. The very large sum paid in wages—the rate of which is considerably above the average local standard—only reacts therefore to a small

[1] L. A. Mills, *British Rule in Eastern Asia*, Oxford University Press, 1942, p. 22.

[2] Mills, op. cit., p. 213.

extent on the Malay population directly, but indirectly they reap substantial advantages.

Other Estate Crops

While rubber over-shadows all estate products in Malaya, palm oil comes as a strong second, and coconuts are of considerable importance, with tea as a minor industry. Palm oil will, as already said, be dealt with in connexion with West Africa. Here it is enough to note that in Malaya it is entirely a plantation product in the hands of strong companies working on scientific lines, and that local opinion considers some 2,000 acres as the minimum area which can be profitably operated considering the cost of the necessary capital equipment. Coconuts were originally a purely native industry, but were taken up later by estates, and out of a total estimated area of 609,417 acres about 20 per cent was on estates, the remaining 80 per cent being on Asiatic-owned small-holdings. In 1937 Malaya was the fourth largest exporter in the world, coming after the Philippines, the Netherlands Indies and the British South Pacific islands: 145 estates and 300,000 native small-holders contributed to the exports which represented 10 per cent of the world exports of copra and 4·5 per cent of coconut oil. As in the case of rubber the chief native handicap is in connexion with the careless methods of preparation resulting in an inferior product. Formerly the drying of native-produced copra was almost entirely carried out by Chinese middlemen in kilns of a most primitive type. Recently efforts have been made both to provide cheap kilns which could be operated by the small-holders themselves, and to improve the methods of the Chinese middlemen. One difficulty has again been the inadequacy of the premium on quality, but for this the generally depressed state of the industry may be partly responsible. Substantial capital is involved as the pre-depression value of the estates was estimated at 56 million Straits dollars, and the value of the small-holdings at 120 million dollars. Pineapples are an instance of the inclusion in estate operations of a product cultivated since 1890 on small separate plantations usually in Chinese hands. Rubber estates later took them up on a substantial scale as a catch crop, but marketing remained in Chinese hands. In recent years at least two-thirds of the 75,345 acres (1937) under pineapples were included in small separate plantations, and over 57,000 acres were in Johore. The industry was still almost entirely in Chinese hands. The weakest points were the poor methods of canning and grading; the production of Hawaii was not only twenty-eight times greater, but the Hawaiian product was also superior in quality. Derris is another product recently introduced and grown partly as a catch crop on rubber estates and partly by Chinese small-holders.

Credit Organization for Estates

The larger estates are in general adequately capitalized. For the smaller estates in the Federated Malay States assistance is provided through the Government institution of the Planters Loans Board with a capital of $4 million which performs for them many of the functions of an agricultural bank. It does not, however, benefit small-holders. The operations have been outstandingly successful largely as the result of the work of experienced visiting agents who reported on loan instalments. This system would be more difficult to apply to the cases of small-holders.

Malay Agriculture

The great part played by European estates and by the Chinese in the agricultural industries of the country has been dealt with. It remains to consider the place which is available for the Malayan inhabitants. The table given on page 47 shows the extent to which they are outnumbered by Chinese and Indians in the Federated Malay States and in Johore. Except in Johore, this is only offset to a small extent by immigrants from other parts of Malaysia. With the very serious political problems arising out of this disparity in numbers this book is not concerned, though they are likely to become even more difficult as a result of the war. In the economic field the part which Malays can play in the activities of the colony is partly a psychological problem. Their attitude to the new opportunities opened to them and to the external competition has been well described in the following passage: 'The Malay is gifted and can do most things well and easily; where the population is sparse and there is no struggle for existence, he is inclined to let indolence get the upper hand. Where he is thick on the ground and the idler is less easily tolerated he has shown himself capable of hard and regular work and of performing any manual labour required. Competition with other Asiatic races with exceptional character and industry is too much for him.'[1] The outstanding instance quoted of their capacity under suitable conditions is the State of Kelantan with its densely concentrated population in the coastal plain. There, as Mr. Haynes describes the position, idlers are not tolerated in their own households, and the Malays have shown themselves as not only expert agriculturists, craftsmen, and fishermen, but also as labourers not only on public works, but even on plantations when they are suitably handled. It would, however, have been quite impossible to carry out the economic development of Western Malaya without the large-scale importation of labour, more especially at the pace set by the rubber boom and the great expansion of tin mining.

[1] A. S. Haynes, 'Administrative Problems in British Malaya', Address to the Royal Empire Society's Summer School, Oxford, 27 July, 1934. The following analysis of the position of the Malay peasant is mainly based on information kindly given by Mr. Haynes.

Nevertheless, the Malays remain the basis of the life of the country so far as local food production is concerned, and in Malaya food and rice are practically convertible terms. They have also shown their adaptability by the substantial share which they contribute to the production of other food and money crops. Rubber is an outstanding instance, but coconuts, fruits, areca nuts, spices, tobacco and gambier may also be quoted. Rice is, however, the traditional basis of their farming, with maize as a recent supplement. Rice is of special importance not only because there are large areas of suitable land and a climate favourable to its growth, but because under Malayan conditions it appears to be essentially a small-holder's crop, and wet rice cultivation does not bring with it the dangers of soil deterioration referred to by Sir F. Stockdale as following on the cultivation of most annual food crops or other rapidly growing crops.

Rice Problem

In Malaya, as in other similar dependencies, there have been two schools of thought about the cultivation of rice, and the policies followed in the several dependencies have reflected these schools. Malaya and Ceylon have until recently considered that growing rice was relatively unimportant in view of the ease of buying it with the proceeds of exports, of rubber in the case of Malaya. In Java and the Philippines, on the contrary, the Governments have put domestic food supplies in the forefront of their policy. The results were seen in 1919–21 when the Governments of the Federated Malay States, the Straits Settlements, and Johore, incurred losses of 42 million dollars over the importation and sale of rice. The States of Kedah and Kelantan furnished a striking contrast, but their non-agricultural populations were relatively small. The lesson was, however, not taken to heart, and as the Report of the Drainage and Irrigation Department for 1938 states, up to 1931 padi lands were year by year going out of cultivation in all parts of Malaya. Not a single successful irrigation scheme had been created since the Krian irrigation scheme (in Perak) was completed in 1906. In periods of rubber slump those small-holders who had been lured by the prospects of large profits into converting the bulk of their holdings into rubber plantations had been reduced to great distress. It was not until 1930 that the problem was really faced by the Rice Cultivation Committee, when the economic crisis had again emphasized the vital importance of domestic food supplies, and, as a result of its recommendations, a Drainage and Irrigation Department was established in 1931. The results of its work, coupled with the increased attention given by the Agricultural Department to the problems of padi cultivation has, according to Sir F. Stockdale, exceeded expectations, and the production of rice rose from 264,000 tons in 1930–1 to 342,150 tons in 1935–6, though this only represented about 40 per cent of the total requirements. The improvement has been entirely due to the work of small-holders, and, except for a limited number of Chinese and a few Indians in Lower Perak and adjacent areas, practically the whole of the 739,000 acres under rice in 1938 was in the hands of Malays with a small proportion of other Malaysians. The Rice Cultivation Committee considered proposals for the establishment of large-scale rice plantations cultivated by mechanical methods such as have been developed by Chinese capitalists in Thailand, but subsequent tests of these methods have demonstrated that they are not suited to the local conditions.[1] The future therefore remains with the Malay small-holder, and while it is eminently desirable that he should have a supplementary money crop, as well as fruits, vegetables and poultry, the basis of his farming, if it is not to be too widely discrepant from his traditions, must be the cultivation of rice.

Essentials to Malay Welfare

For his prosperity the essentials are therefore land—including an adequate proportion suited to rice cultivation—water control in its double and closely related aspects of irrigation and drainage, a system of tenure giving adequate security, and an organization providing agricultural credits and protection against the exactions of moneylenders and middlemen. These are in addition to the general requirements for the promotion of health and education and for making scientific advice and assistance freely available to the cultivator.

Considering the economic weakness of the Malay peasant as compared with his foreign rivals, the solution of these problems cannot be left to the free play of economic competition. They all require control under definite Government policies, and it is essential that these policies should be consistently carried out. In the background of the problem of the land lies the question of the racial composition of the population, of the extent and type of immigration, and of the opportunities to be given to Malays, to other Malaysians, and to Chinese. To a large extent they are political problems and their solution may be even more difficult as a result of the war. A redistribution of the agricultural Malay population from the limited congested areas may be possible to some extent, but it would probably be slow in operation. Sir F. Stockdale states that in the new areas being developed under irrigation the rate of colonization was tending to lag behind the provision of land made available for cultivation, and he finds the causes

[1] Stockdale, op. cit.

partly in the rise of rubber prices in 1937, but also in the uncertainty as to the type of padi best suited to the country and the failure to give adequate thought to the facilities required in respect of communications and transport facilities. The Rice Cultivation Committee recommended the encouragement of the immigration of rural Malays from related stocks and instanced the fact that out of 28,915 Banjavese in the Federated Malay States, 18,152 had settled in the Krian irrigated area planting rice, only 69 being in towns.

There are large tracts in Malaya suited to rice cultivation; they lie mainly in the coastal plains, but also in the alluvial lands along the large rivers and in small scattered areas in the inland valleys. A considerable part of the coastal plains has however been planted with rubber and coconuts while much was still undeveloped in 1931. Malay interests have been safeguarded by the reservation for them of much of the existing padi land as Malay Reservation in the Federated Malay States and in Kedah, and as Malay customary land in Malacca, with similar reservation in a part of Kelantan where, however, the problem is not acute. In the important rice regions of Perlis and Lower Perak, although these are not reserved areas, Malays have also held their own. The problem of reservations takes a prominent place in the thoughts of those who are interested in Malay welfare. Capital seems to have all the land which it needs both for its own use and to provide a large revenue for the country.

Drainage and irrigation, after many years' neglect, have been systematically taken in hand since the establishment of the Drainage and Irrigation Department in 1931. In addition to the extension of the 1906 Krian project, large irrigation schemes were under construction before the war in Perak, Selangor, Malacca and Johore, and some were partially completed. Surveys had also been carried out in Pahang, Kelantan and Trengganu. The Reports of the Department show an impressive record of good work which, incidentally, has been carried out almost entirely with Malay labour.

Systems of Land Tenure

As regards the systems of land tenure estates outside the colony are held under grants or leases. The grants are not equivalent to freehold and are in general subject to a quit rent and to other conditions express or implied. For small-holders an interesting scheme based on the Torrens system has been evolved. It is equivalent to a form of peasant proprietorship, and title is based on entry in the *makim* register. The Land Code embodying the system provides not only for an accurate survey of the boundaries of the land and for a single standard form of document of title with an annexed survey plan which has to be registered in a Government office, but also for a statutory obligation to use the land for the purpose for which it has been alienated and, if required, for the insertion of special conditions in the document of title prescribing the nature and extent of the cultivation. Changes of ownership must be registered and endorsed on the title to be effected. These titles coupled with a complete and up-to-date survey are stated to make it easy to find the ownership of land with accuracy and without delay, a position which certainly does not obtain in many countries, colonial or other.

The system bestows substantial advantages on the owner, but on the other hand the resulting greater facilities for borrowing have led in the opinion of some authorities to an increase in the tendency of the Malay small-holder to run into debt. This is always a danger from the provision of easier credit for a primitive people unused to a money economy. It can be guarded against provisionally by a policy of limiting the powers of transfer and encumbrance such as is implied in the schemes of Malay reservations, but a permanent cure can only be provided by the gradual effects of a suitable education.

Agricultural Credits

Apart from health and education—and notwithstanding the advanced state of the medical services in Malaya, the problems of malaria and of very heavy infant mortality have by no means been solved in the rural areas—the remaining essential for the Malay peasant is the provision of agricultural credit and, as has just been shown, protection from moneylenders and middlemen of all types. The undue share of agricultural profits taken by middlemen is a universal problem of peasant agriculture, more especially in the case of relatively primitive peoples unused to a money economy, and has already been referred to in connexion with the Netherlands Indies. It affects practically all forms of peasant money crops in Malaya, including rubber, and the middlemen are usually Chinese. In the case of the rice industry it takes the special form of the dependence of the padi grower on the millers, almost invariably Chinese, who prepare the crop for the market. This form of the general problem is not confined to Malaya, it is equally found in other rice-growing countries.

The position in Malaya was set out in the Report of the Rice Cultivation Committee. Their Report states that prior to 1918 it was apparently very general for padi cultivators to be penalized in the market price of their padi owing to combinations among Chinese millers, who were then the only buyers. An attempt was made to improve conditions by the establishment of two Government rice mills in the Krian district, the only area in which a large irrigation project was then in operation. The effect of their establishment was to enable padi which was unencumbered by advances to be sold for a fair market price, and

the influence of the mills as a price regulator extended over a very wide area. Unfortunately, however, the majority of the cultivators were not free to sell their padi on the open market and the Committee found that throughout the padi-growing regions the percentage of indebtedness varied from about 40 per cent to 90 per cent. Indebtedness takes two forms, that incurred with Chetties and others for mortgages on land, and that incurred with Chinese shopkeepers and others for advances in cash or kind to assist the cultivators during the period when the crop is growing. Of the two, the latter was by far the more widespread and pernicious. On the prevailing system cultivators obtained goods during the growing period of the crop, and, when repayment was made at the time of harvest, the sum set off against the debt was far below the true market value of the produce. At one time the Government Rice Mill (one mill was closed in 1926) undertook to advance money to cultivators, but the difficulties of obtaining repayment, together with the complication of the Government system of audit, resulted in losses and the system was discontinued. The problem is therefore reduced to one of agricultural credits, and more especially of seasonal credits, and, as the Committee was opposed to any scheme of Government advances to cultivators,—which might be held to compete with the co-operative movement—they recommended as the most obvious method of improving conditions the widespread application of co-operative principles. They seem to have limited this conception to credit organizations and no mention is made for example of Co-operative Rice Mills owned and managed by the padi planters such as have been proposed for other rice-growing countries.

Co-operative Organizations

Co-operative organizations in Malaya were first started in 1921 and at first it was hoped that they would find their chief application in relation to agriculture and particularly to the padi planters. The need for credits was apparently not seriously felt by other producers. These hopes have not been realized and, though co-operation has acquired a considerable popularity in Malaya, its greatest development has been not in agriculture, but in Thrift and Loan Societies among Government employees and urban and estate workers. The Report for 1939[1] shows that the number of co-operative societies of all types was then 657, with 111,036 members, and a paid-up capital of $9,138,676, as compared with 389 societies in 1935, with a membership of 65,776, and a paid-up capital of $5,462,569. Agricultural credits, however, only represented a small fraction of their activities. Rural credit

[1] R. Boyd, *Annual Report on the Working of Co-operative Societies in the Federated Malay States and Straits Settlements for the Year 1939*, printed privately, 1940.

societies were 86 in number, with a membership of 2,676, and a paid-up capital of $90,538, as compared with 70 societies in 1935, with a membership of 1,818, and a paid-up capital of $73,606. The aim of these societies was to make each Kampong self-sufficient in respect of its needs for short- and medium-term credit. In addition there were at the end of 1939, 39 Seasonal Credit Societies in the western coastal rice-growing areas, with a membership of 708 and a paid-up capital of $6,395. This type of society was reported to be expanding rapidly though debt was a serious handicap in some areas. Co-operative marketing was represented by eight groups of rubber producers, who jointly marketed 60·65 tons of rubber, and by a number of egg marketing societies who sold 57,891 eggs. The great potential importance to Malaya of both of these lines of advance is obvious. Agricultural objectives were also included in the activities of the 51 General Purposes Societies which are primarily thrift societies, with a membership of 6,668, and a working capital of $23,404. It was in fact the experience of joint working in these societies which encouraged the eight groups of rubber producers to attempt co-operative processing and marketing of their product. In other parts of Malaya co-operation appears to have made no progress.

The Report states that there was more life and activity in co-operative societies in rural areas in the Federated Malay States in 1939 than ever before, but the statistics themselves show how little progress has so far been made in dealing with the general problem of agricultural credits as compared for example with the great organizations in the Netherlands Indies and in French Africa. The Malayan societies were also less successful in meeting the economic blizzard of 1930 when their assets were largely frozen. The comparison is, however, not altogether a fair one as the essential characteristic of co-operative societies is that they should rest on a purely voluntary basis, while the French Sociétés de Prévoyance are definitely compulsory in character, and the Netherlands Indies organization is so to a large extent though less directly. The weaknesses of a compulsory system as regards its effects on character have been referred to earlier. A voluntary system must of necessity make slower progress, but in so far as it is successful its effects are felt much outside the circles of its actual membership. Nevertheless the advances made in Malaya hardly suggest an adequate appreciation of the problem of rural indebtedness and of the scale of the efforts necessary to deal with it.

As in the case of the Netherlands Indies the whole of the economic structure of Malaya will have to be rebuilt after the war and among the many problems which will press for solution, none will be of greater importance, or demand more careful and impartial consideration, than the laying down of a clear and consistent policy as to the relations between the claims of the great foreign communities and the essential interests of the Malay inhabitants of the country.

CEYLON

Two tropical colonies in the Indian Ocean will be considered next, Ceylon and Mauritius. Their problems have a general similarity to those of Malaya and the Netherlands Indies, but there are important differences both in regard to the character and scale of the problems and the methods adopted in dealing with them. Ceylon has an area about half that of Malaya (or of England) and lies between latitudes 6 degrees and 10 degrees North. The northern half or dry zone forms a great plain from sea to sea and has a relatively scanty and irregular rainfall from the north-east monsoon. The south-eastern coastal plains have similar characteristics. In these regions malaria is a serious menace. Most of the population and of the agricultural production is concentrated in the wet zone comprising about a quarter of the island. It includes the great central block of highlands rising to over 7,000 feet and the coastal plains to the west and south-west. This zone has an ample rainfall mainly from the south-western monsoon. Broadly speaking only the wet zone is up to the present suited for economic development on a large scale, but in that region comparatively little suitable Crown land still remains available and the recent policy has been to reserve such land for peasants or Sinhalese of moderate means. The dry zone has however not always been a depressed area, and one of the most striking features is the system of huge reservoirs or tanks built between the third and twelfth centuries to supply irrigation. Many of these great works have been restored to use in the last fifty years. When they fell into decay in the fourteenth century the blight of malaria depopulated the areas which were formerly the chief centres of life and culture. Malaria is still the main cause retarding the restoration of the reservoirs.

The population at the census of 1931 numbered 5,313,000, representing an average density of 224 to the square mile. It is dense in the plains of the wet zone and in the valleys of the central highland area, but relatively sparse elsewhere. Its composition reflects both the political and economic history of the island. In 1931 65 per cent of the total population was Sinhalese, 27 per cent Tamils, 6·1 per cent Moors, and 0·6 per cent Burghers and Eurasians. Europeans only numbered 9,153 or 0·17 per cent. A large majority of the Sinhalese are engaged in agriculture, including a substantial number of estate owners as well as peasants. The Tamils include two main elements; rather less than half are comparatively recent immigrants employed as labourers on plantations, another large section are the result of an early Tamil invasion of the northern part of the island where they form a majority of the population. The so-called Moors are a vigorous and industrious

Muslim community, mainly of Arab origin, the result of the long Arab domination of the seaborne trade of the Indian Ocean. The Burghers and Eurasians represent the period of Dutch rule. It is a complex plural society in which the small European element has economic strength out of all proportion to its numbers but, as independence has approached, difficulties in regard to the relation between the two major Sinhalese and Tamil communities have been much in evidence.

History of Plantations

The history of plantation and peasant cultivation in Ceylon has a general resemblance to that of Malaya, though with some features more akin to the experience of Java. As in Malaya, plantations of the modern type have had to depend largely on labour imported from India since the Sinhalese population was neither large enough to provide a surplus supply adequate to the needs of plantations nor are they in general inclined to take up this form of wage labour. As in Malaya and in the Outer Islands of the Netherlands Indies, plantations have concentrated their attention on a few products, though these have varied from time to time. The long history of plantations in Ceylon includes the rise and fall of at least two groups of individual planters as the result mainly of external economic and political developments, and their supersession by much stronger companies as in the case of Java. The agricultural aptitude of the Sinhalese also more nearly resembles that of the Javanese than that of the peoples of the Malay States.

Passing over the period of Dutch rule which has contributed the 'Burgher' element to the population of the country the first stimulus to the establishment of coffee plantations came from the abolition of slavery in the West Indies, which held out prospects of an expanding market for Ceylon coffee growers. This was followed by a reduction of the United Kingdom import duty on Ceylon coffee to the level of that imposed on the West Indies products. At first, however, progress was slow, and rapid development only began in 1835 and continued with increasing intensity for ten years. It provided an excellent illustration of how not to run a plantation industry. By 1839 extravagant expectations, usually combined with inexperience, led to a period of rash speculation more like a land boom in Western America than a sane plantation investment. By 1848 there were 367 plantations, and approximately 60,000 acres were under cultivation out of 400,000 acres sold. Credit was much too easy at high interest and it is estimated that £3,000,000 was invested between 1837 and 1845. Many civil servants were among these pioneers, as they were encouraged to invest in plantations. The management was usually extravagant and unscientific, with wild competition for labour. There were many absentee owners

represented by incompetent managers. When depression came in 1847, largely as the result of the halving of the differential duty which protected Ceylon coffee from the competition of Java and Brazil, the heavily indebted planters were unable to stand against it and the large majority were obliged to sell their estates at low prices. To the industry the crisis was a blessing in disguise as the new planters had no crippling burden of debt and had learnt their lesson. Extravagance and unscientific cultivation were replaced by sound finance and careful attention to the details of management. Helped by a substantial rise in the price of coffee, and a fall in the wages of labour and of other types of expenditure, the industry showed a rapid recovery, and by 1857 there were 404 European plantations with a coffee acreage of 80,950 acres, while the area of native coffee plantations had reached 48,000 acres. Sinhalese production had also expanded, and the Sinhalese had imitated the European plantations in improved methods of cultivation and preparation. From 1848 to 1869 native grown coffee represented from a quarter to a half of the total exports. Expansion was continuous up to 1870 and on the basis of the anticipated prospects of the industry heavy expenditure was undertaken by the Government on the Colombo-Kandy railway and on the harbour at Colombo. Before the harbour was completed in 1886 the industry had practically ceased to exist.[1]

Another generation of planters was ruined and this time not from their fault except that they had failed to heed the warnings of Dr. Thwaites, Director of the Peradeniya Gardens which have played a part in Ceylon corresponding to that played in Java by the Agricultural Station at Buitenzorg. The coffee bug (*Hemileia Vastatrix*) first appeared in 1868 when the industry was at the height of its prosperity. For the first few years the crops were only slightly affected and the disease was regarded as unimportant by all except Dr. Thwaites. The declining yield in some tracts was offset by the extension of the industry to new areas, and the maximum export of 1,054,030 cwt. was reached in 1870, while the maximum acreage under European plantations of 275,000 acres was not reached until 1878. High prices had given the decreasing yield an unprecedented value. After 1880, however, the full effects of the blight showed themselves and by 1886 the yield had fallen to 179,254 cwt. In 1895 it was only 56,618 cwt. Estates found no buyers. Such planters as survived turned first to cinchona from about 1876, but over-production led to a collapse of prices from 10*s*. in 1880 to 2*s*. 4*d*. in 1886. By 1902 cinchona had become a minor industry. In the meantime, however, planters had begun to appreciate the possibilities of tea with which Dr. Thwaites had been experimenting from 1860. Planters were slow to take it up, partly because

[1] For the history of plantations, see L. A. Mills, *Ceylon under British Rule, 1795–1932*, Oxford University Press, 1933.

of the larger capital and greater care and skill required and the large profits first realized from cinchona, partly because of the preference in the United Kingdom for China tea. By 1887, however, the area under tea had increased to 157,000 acres, and in 1936 there were about 2,360 estates with an area of over 557,000 acres under tea, some 80 per cent being owned by British companies and 20 per cent by Sinhalese. The industry in its modern form is described by Mills as one of the most progressive, most scientific, and best-organized industries in the world. Tea from Sinhalese plantations is of inferior quality. The chief competitors with Ceylon (apart from Assam) are the cheap teas of the Netherlands Indies.

The second major industry of Ceylon came even later, again largely as the result of the scientific experiments of the Peradeniya Gardens. In 1898 the area under rubber was only 1,871 acres but, thanks largely to the discovery of 'wound response' greatly increasing the yield, and to a fall in the price of tea, the acreage (including both estates and Sinhalese holdings) had risen to 266,972 in bearing by 1920, with an additional 130,932 acres planted but not bearing. The later history resembles that of Malaya as regards the introduction of the Stevenson scheme, followed later by the creation of a Rubber Research organization and by great improvements in methods of cultivation and preparation. In 1936 the planted area was about 605,000 acres. As in the Netherlands Indies and Malaya, the Sinhalese have about half the rubber cultivation in their hands including both estates and small-holdings, a much larger percentage than in the case of tea.

From both of these great industries the individual European planter has been practically eliminated by the large company.

The third major export of Ceylon is the product of the cocoa palm, coconuts—fresh and desiccated—copra and coconut oil. In 1920 these represented 27 per cent of the exports, but though the volume continued to increase the heavy fall in prices has reduced the proportionate value to some 16 per cent: about 1,100,000 acres are under coconuts, but only a part is cultivated on scientific lines. This industry has always been mainly in Sinhalese hands, both estates and small-holders, though, as in Malaya, European plantations have also extended their operations in this direction. A coconut research scheme was inaugurated in 1933, and this was followed in 1935 by the setting up of a Statutory Board with authority to issue export licences and certificates of quality. As in the Netherlands Indies, though not to the same extent, minor products have recently been of greater importance than was the case in earlier stages of the colony's history. They include cocoa, areca nuts, cardamoms, citronella, oil, papain and various fibres, in addition to the remains of the cinnamon industry; all are predominantly Sinhalese products. Tobacco is also grown to some extent as a peasant crop, mainly in the northern Tamil areas.

A new factor, the result of political developments, has lately come into operation, complicating the position of the plantation industries in Ceylon. Indian opinion has long been growing increasingly critical of the export of Indian indentured labour to colonial territories, and in response to that change of opinion the systems of indentures have been either abolished or largely modified. The system of recruiting labour for Ceylon has not been one of indentures and, as a system, has not been seriously criticized. It has operated to the advantage of both countries while being essential to the plantation industry of Ceylon. Considerations of internal politics have, however, recently led to steps being taken by the new Sinhalese Government which Indian opinion considers unfair to the interests of Indians resident in Ceylon. Suggestions have therefore been put forward for suspending Indian emigration to Ceylon. If these proposals are followed up by action in this direction the effects on plantations might in time be very serious. Even apart from this danger, which is probably only temporary, the increasing industrialization of India may greatly reduce the export of its labour to all colonies, much as the industrialization of Germany during the second half of the last century practically stopped the previously large emigration to America.

Food Production

So far the crops considered have been money crops (though coconuts are also an important food product), but the main concern of the peasant must always be his food, and in Ceylon as in Malaya the staple food is rice though considerable quantities of other food crops are grown. As in Malaya again the local crop of rice only supplies about one-third of the needs of the island, and reliance has been placed for the balance on imports from India and Burma. Food production has not taken the same prominent place in Government policy as in the Netherlands Indies, and this has led to the same difficulties as in Malaya. As elsewhere, two kinds of rice are grown, ordinary padi or wet land padi and dry land hill padi, but the former is much the more important, and the area under it is estimated at 850,000 acres. Abundant water supplies are essential to its successful cultivation, and it is therefore largely dependent on the work of the Irrigation Department which by its control of some two hundred major works (mainly reconstructed ancient tanks), minor works, village channels and village tanks, provides water for about half the area. The Department's main task, apart from important functions in connexion with flood control and drainage, is to help in dealing with the most difficult agricultural problem in Ceylon, that of making better use of the dry zone areas with their sparse and irregular distribution of rainfall. Where tank irrigation is available rice is the obvious crop, though the unwillingness of settlers to move to areas so notorious for malaria, and the sparseness and lack of energy of the local population, make it hard to utilize some of the major works to their full capacity. There are however other obstacles which tend to prevent the economical use of water. The Report of the Irrigation Department for 1939 points out that the real intention of irrigation tanks is to supplement the rainfall by providing a supply of water at the crucial later stages of the crop, the cultivator having taken advantage of the rains for the sowing and the earlier stages. This is the general practice in India, but it is not that of the average Sinhalese peasant. He does not commence his operations on rice cultivation until the rains are nearly over and relies on irrigation for all stages of his crop. The Report of the Agricultural Department for 1938 explains this anomaly. It points out that in the dry zone the first necessity of the impoverished peasant is to get food as soon as possible when the rains begin. He therefore starts work on his *chena* (shifting cultivation) crops which are quicker and on the whole more certain, and does not get down to his padi until he has finished work on the *chena* near the end of the sowing season.

The yields of rice in Ceylon are in fact very low, as was pointed out by the Banking Commission. Actual figures are not given for comparison with the much higher yields in Java, China, and Japan, or the very moderate yield in India, but the Commission states that Mr. J. H. Brayne, who visited Australia on behalf of the Ceylon Government, had reported that mechanical methods of plantation rice cultivation had resulted in the average farmer, who held twenty times as large an area as his counterpart in Ceylon, getting five times as much padi per acre.

The political and social circumstances would make plantations of this type impossible in Ceylon, but the Report of the Agricultural Department for 1938 suggests as a possible alternative a combination of integral land reclamation on Italian lines coupled with tenant farmers working under supervision on the lines adopted in Fiji, which will be dealt with later. Up to the present, however, no definite policy appears to have been adopted by the Government and Sir F. Stockdale has expressed the opinion that an insufficient amount of attention was being devoted by the Agricultural Department to this main food crop, though the need for special studies as an accessory to colonization schemes and the development of the activities of the Irrigation Department was realized.[1]

Agricultural Credit

It remains to consider the effects on plantation and peasant production of the systems of agricultural credit and of land tenure. The

[1] Stockdale, op. cit.

former can be more adequately estimated in Ceylon than in most colonial dependencies, as a general survey of the position was made by the Banking Commission of 1934. The chief factors which affected the direction of development in Ceylon are operative in newer colonies depending mainly on export products, so that the experience gained in Ceylon may be of advantage as suggesting dangers to be guarded against. The main banking and credit facilities were evolved as the product of a financial structure designed to suit the conditions of a pioneer agricultural country producing a very small number of agricultural products and dependent on non-indigenous capital. It was natural therefore that they should be closely connected with the exporting agencies, and, in the absence of any Government policy, that access to them should be practically confined to the very limited class who could provide securities of the type required by ordinary banking practice. As indigenous agencies began to take a larger share in production the position became more and more unsatisfactory, though the gap was partly filled by the local small capitalists represented by the Chetiyars, shopkeepers, and pawnbrokers, and money-lenders of various types. During the second decade of this century the problem became political as well as economic when the prospects of advance towards political independence led to demands for progress towards a similar independence in the economic sphere.

In some respects the problem of agricultural credit in Ceylon is less complicated than in most other dependencies, because their main industries of tea, rubber, and coconuts, representing 92 per cent of their exports, are not subject to the drawbacks of intense seasonal activity requiring much elasticity in the supply of credit as well as of labour. On the other hand credit is required for the long period of growth before the crops come into bearing, especially in the case of coconuts. The fourth main crop, rice, is a seasonal crop with an internal market and is not directly dependent on world conditions. In the periods of prosperity of the coffee and cinnamon plantations during the last century it was not the absence of credit facilities but too easy credits which were one of the chief dangers to the planters. Crippling debts from injudicious advances were one of the chief causes of the collapse of two generations of planters when adversity followed on temporary prosperity. A similar tendency, though on a much less serious scale, has shown itself in Kenya and elsewhere at a much later date. Taking the position in 1934 as set out in the Report of the Banking Commissions the tea industry is predominantly in the hands of strong companies with adequate finances, and small-holders play little part in it. Of the area under rubber 245,000 acres were held by sterling and rupee companies which for the most part have adequate financial resources, 31,000 acres by 204 private European owners of many types, 160,000 acres by 4,830 Sinhalese planters, and 140,000 acres by small-holders. Forty-five thousand acres were held by 86 plantation owners of other nationalities. The coconut industry was in a much worse position as the result of three years of low prices following on a period of relative prosperity, which had tempted many to unwise expansion on borrowed money. That industry takes precedence of all others in the village economies as the 1,200,000 acres under coconuts represents the peasants' main source of money income, while more than 90 per cent of the area was in Sinhalese hands, and more than half of this was included in small-holdings of under ten acres. All types of holders were in a serious financial position. Seventy-five per cent of the Sinhalese holdings were mortgaged at more than 15 per cent interest, and it was believed that 500,000 acres had passed into the control of Chetiyars. Sixty per cent of the total area had been mortgaged for amounts higher than the total market value, and at interest rates from 8 to 30 per cent. No credit organizations could have prevented a severe crisis as the result of the collapse of prices, but the burden under the existing system had become unbearably heavy. The types of credit required for both of these industries were for the most part long-term credits for development, and medium- or short-term for expenses of maintenance and labour expenses during the period up to maturity. The position was quite different as regards the rice industry, which is essentially a peasant industry not providing employment throughout the year and requiring to be supplemented by some other source of income. The main long-term requirement is better irrigation facilities, which are the responsibility of Government. The credit required is in the main short-term credit, and to some extent medium-term credit for such purposes as the purchase of stock. Where the peasant was an owner-cultivator his only sources of credit were the village dealer or local moneylender whose customary seasonal charges varied from 25 to 50 per cent, and through whom the crop generally had to be marketed. If the peasant was a tenant his position was no better, as his landlord was equally exacting. A great deal of the padi land was passing into the hands of moneylenders.

Complaints of the inefficiency of indigenous producers are apt to ignore the heavy handicap imposed on them by the character of their credit resources. The only valuable form of security available to the ordinary Sinhalese is his land, and agricultural land is the least desirable form of security for Commercial Banks. It is not a liquid asset and loan transactions on land are always cumbrous. In Ceylon uncertainty of title has been a very serious obstacle notwithstanding the existence of a system of land records, and the concentration of the work of the banks in Colombo has made them of little use to residents in country areas. The establishment of a State Mortgage Bank in 1931 following on the recommendations of committees in 1920 and 1927 was the only direct step taken by Government to deal with the credit problem apart

from some limited efforts to found co-operative credit societies. Its main purpose was to provide long-term credit to the small and medium plantation owner as its advances were limited to Rs.5,000 as a minimum and Rs.150,000 as a maximum. One special object was to enable such planters to convert short-term mortgages at high rates of interest into long-term mortgages at low rates. The Bank had no capital and accepted no deposits; its resources were derived from debentures issued on the security of mortgage loans further guaranteed by Government as regards both principal and interest. It supplied a real need but in a very limited way. Nearly all borrowers were the owners of small and medium-sized estates, more especially rubber and tea estates. Coconut estates took very little as their position and prospects were too bad. The total loans up to 1934 amounted only to Rs.1,188,671. The main obstacle to the Bank's operations was the uncertainty of title to land, as it was not empowered to lend unless a clear title could be made out. The small-holders could get no help as the limit of Rs.5,000 was too high for them. The main support of development by the Sinhalese themselves have been the Chetiyars, and in the opinion of the Commission their record has been on the whole a good one. Their rates of interest were often high, but they took great risks and incurred many losses by making advances on what proved to be unreliable security owing frequently to defects of title. The main defect in their methods has been in fact too great a readiness to give credit (on terms) which was bad both for borrower and lender. They were not anxious to acquire land, but were often compelled to foreclose to avoid total loss. When this happened they did not as a rule keep on the former owners as tenants on the ground that having no further interest in the land they would be even more inefficient than before. Small-holders of rubber or coconuts are in a much worse position as regards long-term credits than small estates. Their uncertainties of title are greater and the tendency to fragmentation is another obstacle to their getting advances on any reasonable terms. They must in the main rely on shopkeepers and petty moneylenders, including the most rapacious of the whole genus, the Afghan.

In regard to marketing again the small or medium-sized plantation is at a serious disadvantage as compared with the large estate, and the small-holder is in an even worse case. In the case of all but the larger rubber estates a frequent arrangement is that individual plantation owners get advances direct or through brokers on agreement for the future delivery of produce. As there is no regular market for futures this works hardly for borrowers as they have no means of checking the prices, which are reported to be often very low. Similarly in the case of coconuts only large estates have direct credits with banks. Most estates are financed by shippers who give advances on the security of produce further secured by mortgages on estates. The shippers are financed by the banks. Prices are fixed in advance and this system of contracting forward is even more unsatisfactory than in the case of rubber. Short-term advances both for current expenses and for capital purposes have brought many estates into almost perpetual indebtedness to exporting houses which through forward contracts have turned the connexion to their own advantage. Small-holders are in a weaker position. Apart from local moneylenders practically their only source of credit is the intermediate dealer whose sole aim is to buy as cheaply as possible without regard to the welfare of the producer. If he gives advances against the standing crop and takes it over the price is seldom fair and the position is little better where the small-holder does his own processing. There was at that time not even a central exchange for coconuts as there was for tea and rubber and the Banking Commission strongly recommended that one should be established.

Co-operative Credit

The sole asset of the peasant is his honesty and his willingness and ability to work, and it is by capitalizing this moral asset into personal credit that he can secure capital. This is the aim of Co-operative Credit Societies, and when the Commission reported in 1934 there were 897 such societies (including 762 primary credit societies in rural areas) with 30,277 members, Rs.740,624 paid-up capital, Rs.201,821 reserve funds and Rs. 961,790 deposits. There has been a considerable advance since that time and the Report of the Co-operative Department for 1942 gives 1,519 credit societies with unlimited liability and 41,217 members, and 100 societies with limited liability and 4,479 members. Of the advances made by the first type of society 42·2 per cent were for purposes connected with agriculture, but for the second group the percentage was only 14·6 There is as yet no provision for medium-term credits such as for the construction of wells, nor have Co-operative Land Mortgage Banks for long-term credits yet been established. Obviously a movement on this scale—and a considerable proportion of the societies cannot be described as efficient—only goes a very small way towards meeting the needs of peasants in all the many branches of cultivation.

Moreover, co-operative credit by itself cannot secure the economic status of the cultivator. His credit capacity must also be improved and this implies not only improved methods of production, but also more efficient processing and marketing, and as a rule also subsidiary occupations. In all these directions Ceylon is very backward in applying co-operative methods though some progress has been made recently. In 1940 there were 18 societies for marketing, but in 1942 there were 71 such societies, including 11 for coconuts, 11 for agricultural produce, 2 for padi, 2 for padi hullers, 1 for the processing and sale of rubber,

and 3 for tobacco. The quantities marketed through them were however very small. The Jaffna Malayalam Tobacco Sale Society was exceptional as it had 1,878 members and marketed the bulk of the Malayalam tobacco of that area. In connexion with the rice industry the problem of rice milling is not as difficult as in Malaya as there is no export and the bulk of the crop is converted into rice by pounding in a mortar. This is however a practice very wasteful of labour and one mill has been established while two others are under construction. The working of that mill has shown the very uneconomic character of the practice of each peasant bringing in his own small crop, wasting both his own time and that of the staff of the mill, and has resulted in suggestions for the forming of co-operative societies to pool the crops of their members and take them to the mill. The solution suggested by Mr. Brayne was that Government should either itself organize processing and marketing or assist private enterprise in this direction. The Banking Commission were in favour of marketing societies working under the Director of Agriculture and not under the Registrar of Co-operative Societies, and this would be in accordance with what appears to be the tendency in Jamaica.

A final point on which the Commission laid special stress was that the root of the matter would be found in the fact that the cultivator does not understand the economic function of credit and is unable to appreciate the advantage of credit in business. Any permanent cure must deal with this root problem. The difficulties of the cultivator are largely due to his ignorance and improvidence, and an essential step to the removal of these disabilities would be for the State to provide in village schools a course in the rudiments of agricultural economics. This they considered a matter of great importance in any progressive Colonial dependency.

Much of what is written above seems rather remote from the issue of plantation and peasant cultivation. It is in reality not so remote as it shows the great disabilities which British *laissez faire* methods have imposed not only on the native small-holder—and it is the progressive small-holder who especially needs credit and marketing facilities—but also on the small native plantation owner. It is far from being only a question of technical efficiency in production though this is a main factor to be considered from the economic point of view.

Land Tenure

There can, however, be no question as to the direct influence of the system of land tenure on peasant welfare. In the pre-European period under Kandyan rule the King was the owner of all land and parcelled it out in large or small grants for a return represented either by services rendered, by a contribution of a proportion of the crops, or by a combination of both methods. The services contributed by the smaller grant holders were largely in the form of labour for a fixed period in the year. The revenues were largely derived from the contributions from non-service lands. One-tenth was the proportion of the crop usually taken, but the share of the Crown might be as much as one-half. Gardens paid one-third or one-half and there was a special tax on coconuts. Service grants were hereditary and could not be alienated or sold for debt.

When the Dutch took possession of a part of the coastal region of the island, they maintained the traditional system of land tenure in the area under their control, including the compulsory labour on which public works of all kinds largely depended. When, however, they surrendered the island to the British in 1796 the Madras Government, which was responsible for its administration, decided to sweep away the whole of the traditional structure and to replace it by a tax representing one-half of the estimated produce of the crop. Coconuts were subjected to a special tax laid on each tree, though under Dutch rule the collection of the traditional tax on them had been abandoned. The new tax was moreover inevitably very roughly assessed and, worse still, its collection was farmed out, the farmers being largely officials both European and Indian. The natural result was an immediate revolt and in 1798 the Madras Government abandoned their whole scheme, reverted to service tenures as a means of obtaining labour, and re-established the former taxes on non-service lands, though the coconut tax was abolished.

The main change in the first half of the nineteenth century was the abolition of service tenures and *rajakaria*—the Government right to exact forced labour from non-service lands—and their replacement by increases in the land tax. The result was that they could no longer get labour for essential public works. The aim of the Government was to work towards the Indian system of an accurate topographical and cadastral survey followed by an assessment of a suitable rate of tax on each variety of soil and produce coupled with a record of all rights in land. Financial stringency and the minute sub-division of the land delayed this process for many years, but the final system follows the Indian model both in its merits and its defects.

So far as estates are concerned, the coffee, tea, rubber, and coconut industries have been built up on the basis of grants of unoccupied land claimed on behalf of the community by the State. It may be described as the British analogue of the system followed in the Netherlands Indies and of the French and Belgian *terres vacantes et sans maître*. It does not appear to have been prejudicial to native interests. As regards small-holders, the Banking Commission have referred to the serious difficulties caused by uncertainty of title notwithstanding the existence of a record of rights, entries in which can however be

contested in the Civil Courts. Partition and fragmentation also have their invariable hampering effects on efficient production. The system of tenancy again, as in many parts of India, is unsatisfactory and does not give adequate security to the tenant. The Report of the Agricultural Department for 1938 describes the system as a serious obstacle to the desired advance in rice cultivation. The smaller holdings are uneconomic and are often held in undivided shares which discourage permanent improvements, the larger are owned by absentee landlords chiefly aiming at the annual selection of those tenants who will give them the largest share of the harvest. As noted earlier, the heavy burden of debt has led to much of the land passing under the control of moneylenders. A recent interesting advance has however been in the direction of conditional freehold of Crown Lands under Ordinance 19 of 1935. This Ordinance provides for the mapping out of village areas, for establishing small-holders, for securing the utilization of the land for specific purposes, for preventing sub-division, and for regulating succession. The provisions are of special interest in connexion with some of the proposals for the West Indies and are largely in accordance with the principles which have been adopted in Malaya.

MAURITIUS

The remaining dependency in the Indian Ocean to be considered is the small island of Mauritius, lying just within the tropics and with soils and a climate resembling those of some of the West Indies, including a liability to destructive cyclones. Its chief interest in the present connexion is that it is a typical example of a one-crop country and that both its social and economic structure have been largely determined by French influences dating back to the eighteenth century. It was originally colonized by French settlers who worked their plantations with imported slave labour, but after the emancipation of the slaves in 1835 the ex-slaves refused their labour to the plantations; Indian immigration which had begun in the early days of British occupation was largely increased on an indenture basis, and the plantations became entirely dependent on Indian labour. Their indentures developed into permanent settlement, and at the census of 1931 Indians numbered 268,000 out of a total population of 393,000. The balance included 9,000 Chinese—mainly engaged in retail trade—and 116,000 general population of European, African or mixed descent. Pure whites number about 10,000 and are for the most part the descendants of French colonists. It is they who form the plantation community and mainly control the agricultural activities of the island. The systems of land tenure and of tenancy have been largely determined by the influence of French traditions.

Sugar Cane Industry

Even more than Fiji Mauritius is a one-crop plantation country. Its whole economic life is bound up with the production of sugar cane. Over 31 per cent of the whole area of the island was under sugar cane in 1936, and sugar represented over 97 per cent of the total domestic exports of the colony and of its small dependencies. Of the other small exports Mauritius hemp is a wild product; tobacco (prepared in Chinese factories) is grown to some extent, but only for the local market. Of the total cultivated area of 178,000 acres in 1936, 144,000 acres were under sugar cane, a somewhat smaller area than in 1931 when 156,000 acres were reported to be under that crop. Only 11,000 acres were available for food crops in 1931, and in spite of efforts to develop local food production the colony has been much more dependent than even the West Indies on imports for its staple foods. Swamp rice cannot be grown, and hill rice gives poor yields. Any extensive change in this respect would involve a dietary revolution for the Indian population, but war necessities have recently brought about the issue of orders that 20 per cent of all agricultural land should be under food crops.

Mauritius is not an island of large estates; of the total number of about 14,720 individual holdings of all kinds in 1936 about 14,000 were in lots of under 10 acres, and only about 50 in lots over 1,000 acres.[1] In the sugar cane industry processing was carried out in forty efficient factories, each factory serving a number of plantations in addition to that to which it was attached. Of the 144,000 acres under cane 62,000 acres were on estates with mills (including separate planters on such estates), 39,000 acres on estates without mills, but also including separate planters, and 42,000 acres held by independent planters. Of the estate plantations some 9,000 acres were Indian-owned and of the planters' area some 46,000 acres were cultivated by Indians, raising the total Indian area to 38 per cent of the whole area under cane. Much of their land is however of inferior quality with a low yield. Planters' canes are usually acquired by the factories on terms of division of the sugar produced, the factory receiving one-third. Many of the smaller planters are themselves workers on estate plantations, and are often dependent on the estate for financial assistance in cultivating their own plots. When the industry fell on bad times many estates divided up part of their lands among small-holders through sales by instalments spread over a term of years. When the instalments were all paid the land became the property of the tenant, unlike the corresponding development of share croppers in the West Indies. The producers were usually tied by contract to sell their canes

[1] *An Economic Survey of the Colonial Empire* (1936), Colonial No. 149, H.M. Stationery Office, 1938.

to the factory belonging to the estate from which they bought their land. The procedure was known as *morcellement*. Sir F. Stockdale, in his note on land tenures in the West Indies, mentions this system with approval as tending to maintain the fertility of the soil through the partial control maintained over the operations of the peasant purchaser. Dr. Tempany thinks that the system may have led to some, but not excessive, impoverishment of the soil mainly because the peasants' standard of cultivation is lower than that of the estate and they manure less. On the other hand their lands are usually the worst. The last twelve years have shown some interesting developments as adversity and scientific advance have led to a steady improvement in methods. The mean production of sugar has risen from 218,410 tons in the years 1929–34 to 312,190 tons for the years 1935–41. The area which prior to 1929 had risen to 170,000 acres fell to approximately 140,000 acres and was a little over 150,000 acres in 1939. Dr. Tempany estimates that the sugar yield in tons per acre has risen from approximately 1·70 tons per acre prior to 1929 to 1·89 tons mean 1929–35 and 2·60 tons mean 1935–41. This great improvement is mainly due to the introduction of higher yielding varieties, and also to some degree of improvement in agricultural and manufacturing processes. The new varieties are the results of extensive cane breeding research, partly financed by the industry itself. An important point is that, as in Trinidad, the much higher yields obtainable with improved methods have resulted in reversing a previous tendency to the increase of peasant production. The proportion of small planters' canes to total cane area has decreased from approximately 44 per cent in 1928 to some 33 per cent in recent years. This is not to say that peasant yields have not improved during this period. Dr. Tempany considers that under Mauritius conditions estate cane yields are about double those of small planters, and the figures given above would thus represent an advance in the yield by small planters from 1·09 tons per acre prior to 1929 to 1·62 tons per acre for the period 1935–41 as compared with similar advances for estates from 2·18 tons per acre to 3·24 tons per acre. Scientific advance therefore tends to favour plantation as against peasant production quite apart from the advantages of large-scale units of production. Small-holders do in fact improve their methods largely as the result of copying estates to the best of their ability, but they cannot be expected to avail themselves of the improvements suggested by the Department of Agriculture if there is no machinery for making these improvements accessible to them. Mauritius has only three agricultural instructors for the whole of the peasant agricultural population.

Technically the Mauritius sugar industry can hold its own with the West Indies, and probably with Cuba, as regards out-turn, though the yield per acre is a good deal lower than in Java or Hawaii. The relations also between the estates and the small-holders appear to be satisfactory on the whole and a real community of interest between estates and peasants is said to be recognized. The Commission of 1931 heard no suggestions that the dependence of the small planter on the estate was abused by the latter or that the arrangements for the purchase of the planters' cane by the factory were unfair to the weaker party. On the other hand the rates of wages paid to plantation labourers had been driven down to an 'irreducible minimum' in the effort to secure economical working and even if they have later risen to some extent it is hardly surprising that the great rise in prices following on the outbreak of war and resulting restriction of imports should have caused riotous demonstrations.[1]

Agricultural Credit

Apart however from the effects of world trade conditions, mitigated though they are by an Empire preference representing 40 per cent of the price received by the industry, there is a fundamental weakness in the position of the Mauritian producers resulting in the heavy indebtedness which cripples a large proportion of the estates. As in other plantation countries this indebtedness is partly traceable to a boom year (1921) when prices rose to extravagant heights, estates changed hands at very high prices involving a legacy of heavy mortgage charges, and planting was extended to unsuitable land. Many estate owners dissipated their windfalls on private expenditure, few used them to clear off indebtedness or to replace outworn machinery. The main cause however of this extensive indebtedness was the weakness of the traditional financial system on which the majority of estates continue to be run although it has produced several crises in the past. An interesting account of the working of this system was given by Sir Francis Watts and is quoted in the Report of the

[1] The Report of the local Commission of Enquiry shows that the actual riots were confined to the monthly-paid labourers on three estates in one area representing some 25 per cent of the total labour employed on them. Discontent was however much more widespread. The primary causes of the riots were the unduly low real wages (including amenities) of the monthly-paid labourers—much below those of casual labour—and the failure to enforce the payment of the minimum wage rates laid down by Ordinance. The general discontent was accentuated by the scarcity of supplies and the high prices resulting from war restrictions. But the basic causes were the unsatisfactory character of the relations between the managements and the workers on some of the estates, the inadequacy of the measures taken by the Government to replace the old semi-patriarchal system of management by a new organization of trade unions and collective bargaining, and—most fundamental of all—the economic difficulties resulting from the instability and general low level of the prices of their only important product. The position in the island provides a good illustration of the difficulties of a transition stage for a community composed of planters still largely under the influence of out-of-date ideas and a mass of unorganized and inefficient labour incapable of organization in the modern sense.

Commission of 1931.[1] Here it is sufficient to summarize its results.

While a proportion of the estates have working capital of their own and only use a town agent for the purchase of materials, or possibly as a broker for the sale of sugar, the more usual case is to work on borrowed funds. These are obtained from a *bailleur de fonds*, usually a local merchant or produce broker with credit at the banks. Advances are obtained if necessary from the banks on the joint credit of the *bailleur de fonds* and of the estate. The planter has to submit to the *bailleur de fonds* a budget for all his anticipated expenditure in the year, to give him the right of selling all the sugar produced, and if there is a debit balance at the end of the year, a mortgage on the estate for that amount. He becomes practically the business manager of the estate, supplying the owner monthly with the necessary funds for working expenses. The charges which have to be paid for this combination of financial accommodation and business management vary with the credit of the estate, but they are always substantial. The *bailleur de fonds* thus becomes either himself the principal creditor, or he is obliged to pledge his personal credit with the banks as security for advances which estates would not otherwise obtain. High interest charges are inevitable, but an even more serious evil is that neither high interest charges nor insufficient security operates as a check on the borrowing which is no longer governed by the resources of the individual estate. The *bailleur de fonds* has himself acquired an interest in the continued cultivation not only of an individual estate but of a group of estates, and his total liabilities tend to induce him to make arrangements for further credit both on his own behalf and on that of the principal debtors. In the closely linked small society of Mauritius this course is all the more likely to be taken even if it is not dictated by the personal interest of the *bailleur de fonds*, as the traditional policy towards clients' difficulties is one of forbearance beyond the extreme limit of prudence. As a result arrears of indebtedness have accumulated in many cases until they exceed the whole realizable assets including the value of the land. The *bailleur de fonds* has become practically owner subject to the claim of mortgagees, but he is himself heavily committed as principal borrower or guarantor and has to continue in the role of creditor-agent financing the estate by further borrowing to keep intact the fabric of credit which has become essential to his own safety. This position cannot carry on indefinitely.

To deal with this weakness a Mauritius Agricultural Bank was inaugurated some years ago. It is said to be working satisfactorily, but there is no recent report on its operations and it has probably come too late to assist a large proportion of the estates. Small planters are in an even worse case except in so far as it is to the interest of estates to finance them. There are also a certain number of Co-operative Societ-

[1] Cmd. 4034, H.M. Stationery Office, 1931.

ies which after many vicissitudes are said to be working well.[1] As usual however they can only touch a very small proportion of the peasant population.

A comparison with the agricultural debt position in Ceylon shows some interesting contrasts, partly due to the different character of the sugar industry as compared with rubber and coconuts, and partly to the greater interdependence of small and large producers in Mauritius. Another important factor is the existence of so many close family links between all sections of that small community, unlike the position in Ceylon where the weaker estates are mainly Sinhalese-owned and have no social links with the exporting agencies. The Mauritius position is however even more insidious in its tendency to the increase of debt to unmanageable limits.

[1] In 1936 there were thirty-four societies with 2,005 members.

III. FIJI AND THE WEST INDIES

FIJI

A NUMBER of colonial dependencies are scattered about the vast spaces of the Western Pacific. From the point of view of agricultural development much the most important—apart from the Philippines—are the Hawaian and Fijian groups of islands. Hawaii has been the scene of the development of a highly efficient plantation economy mainly producing sugar and various types of fruits including the pineapples referred to in connexion with Malaya. Labour has been largely provided by Japanese immigrants who have settled in such numbers as to have represented nearly half the population at the beginning of the recent war. Economically Hawaii occupies an exceptionally favourable position as the great market of the United States is open to its products. For the purposes of the present study, however, the agricultural development of Fiji presents features of special interest. The group has an area of 7,083 square miles, but about three-sevenths of the area is mountainous and only suitable for forest growth, and another two-sevenths is only adapted to cattle. The estimated population of 198,000 in 1936 included 100,000 Fijians and Rotumans, 85,000 Indians and 4,000 Europeans. Though the average density of population over the whole area is low the margin of land available for arable cultivation including plantations is in reality relatively small. In 1936 Government held 'open to settlement' about 180,000 acres suited for such purposes as cattle and sheep runs, coconut, rubber, and banana plantations. The bulk of the cultivated area is in the hands of peasant cultivators, either native Fijians and Rotumans, or Indians who have leased holdings from the native owners. The distinctive feature of the agricultural development of Fiji is, however, that it provides a remarkable instance of a working co-operation between capitalist interests and those of two very different types of peasant communities, together with a degree of Government control over the land, exerted with the full consent of the Fijian Chiefs, greater than that found in any other British colonial dependency.

Sugar Plantations and Tenancy System

When the group of islands was ceded to the British Government in 1874 European claims to 414,615 acres of land previously granted by Fijian Chiefs were substantiated, and claims to a further 20,000 acres purchased later for coconut plantations were subsequently validated, The aim of Government policy throughout has been to preserve to the Fijian and Rotuman inhabitants all the land required for their present and future subsistence, and in realizing this aim they have had a very large measure of success.

The solution of the problem of safeguarding the interests of peoples who had previously engaged only in subsistence cultivation, while at the same time meeting the demands of a progressive agriculture urgently required in the economic interests of the country, has involved very difficult questions of adjustment. The two agencies which have been mainly instrumental in bringing about agricultural progress have been the European planters and the Indian immigrants; the latter are now almost equal in numbers to the native Fijians and Rotumans, and must be considered as permanent residents. Both immigration and emigration have been insignificant in recent times. Their position is therefore very different from that of the Indians in Malaya. Europeans, Indians and Fijians have all contributed to building up the three major agricultural export industries: sugar, copra and bananas.

Prior to the ceding of the islands, and as a result of the American Civil War, European settlers began to cultivate cotton on the lands granted by Fijian Chiefs, and this was soon followed by the cultivation of sugar, now the principal industry of the islands. Various sugar companies sprang up but these were gradually amalgamated until now the whole of the sugar cane in Fiji is grown by, or for, the Australian-based Colonial Sugar Refining Company. It is estimated that 60 per cent of the whole agricultural community is dependent, directly or indirectly, on that Company, and about 46,000 acres are planted with sugar cane. The land is worked on a four-year system of rotation including a plant crop and a succeeding ratoon crop.

In the early days the sugar cane was grown by the various companies with hired labour indentured from India, and this system was continued by the Colonial Sugar Refining Company. Early in this century the Company found that the system was no longer working satisfactorily, as the Indians were becoming discontented with their position as hired labourers, and were tending either to drift back to India or to try and get land for themselves in Fiji.[1] In 1913 therefore experiments were begun with a view to converting the estate system into one of small-holdings, and establishing thereby a contented peasantry with a direct interest in the land. These experiments had such success that in recent times the Company has relied almost entirely for its supplies of cane on the efforts of small farmers who are

[1] The conditions among the indentured labourers was in fact such as to give ample reason for discontent. See the Reverend J. W. Burton, *Brown and White in the South Pacific* (Australia in a New World Series, No. 5), Australian Institute of International Affairs, 1944, p. 28. Indentured emigration from India was abolished in 1917 and by 1920 all Indians in Fiji were free.

either tenants of the Company or lessees of lands owned by Fijians. Approximately 85 per cent of the cane is grown by Indians, but Fijians are taking an increasing part and in 1936 there were 1,131 Fijian cane farmers. The Company owns five mills and purchases the cane at fixed prices.

The main features of this tenancy system may be summarized as follows:[1] the Company's leases are for ten years, each tenant has on the average ten acres and has to subscribe to definite clauses as regards the general scheme and methods of cultivation. Tenants are not permitted at present to grow any crops other than sugar cane and green manures, except that a rotation crop of rice may be allowed on low-lying lands. Small gardens round the houses are however encouraged. Renewals of leases are readily given and it is stated that no industrious tenant who has complied with the cultivation clauses of his lease has been refused renewal. Adherence to these clauses is enforced by a large number of supervising field overseers who assist when necessary the operations of the tenants. They are also responsible for transporting the cane to the factories by feeder lines at the Company's expense. The Company provides houses for the tenants, makes advances, arranges for manures at cost price, supplies implements at low hiring rates, and breeds the mules and cattle required by tenants, but there is no central organization for the actual cultivation of the holdings. Cane is reaped by co-operative gangs of peasants cutting each other's canes in rotation, this labour being paid and the charge debited to the respective growers. The tenants share in the advantages from the extensive cane breeding operations of the Company, which are comparable with those which have yielded such valuable results in Mauritius and the West Indies.

The system has worked satisfactorily on the whole though some improvements are contemplated and further changes may become necessary. It has developed a partnership between the owners of the factories and the land on the one hand and the cultivators as tenants on a leasehold tenure on the other. This is not to say that there are no complaints. Some tenants contend that the periods of the leases are too short, others feel that there is too much supervision of their operations, others again will be satisfied with nothing less than freehold tenure. As regards the system of inspection, in which lies the main difference from the position of the cane farmers of Trinidad, it is significant that tenants on the Company's lands produce crops up to the standard of the land under direct cultivation by the Company and not less than 10 per cent larger than the crops on lands leased from the Fijians where there is no supervision of the system of husbandry. Taken as a whole this system of partnership between a Company holding a monopoly and a peasant population seems to make a nearer

[1] Stockdale, op. cit., and H. M. Leake, *Land Tenure and Agricultural Production in the Tropics*, Heffer, 1927.

approach to the solution of the problem of adapting peasant production to the demands of world trade than the system previously described in connexion with Java.

Land Tenure

It has been noted that a considerable part of the cane produced by Indians is grown on lands leased by them from Fijians and that the Fijians themselves are taking an increasing interest in sugar cane production. This raises the wide question of the Fijian system of land tenure and of the measures taken to modify that tenure in the interests of improvement in the methods of cultivation. The various steps taken in that direction have been described as follows.[1]

One of the first official acts of the Government after cession was the prohibition of land transactions between natives and foreigners; this was followed by the Land Ordinance of 1880 legalizing the native customary tenure, and declaring that only when the native land holding unit had died out should the land fall to the State. It also provided for the issue of native leases for periods not exceeding twenty-one years. The increase in complexity of the land problem led to the passing of the Land Ordinance of 1905 which, with some important amendments, governed the position until 1940. The Ordinance allowed Fijians to lease their land to anyone they pleased provided that the consent of the Governor in Council had first been obtained. Arrangements for such leases had to be made through the Commissioner of Lands and the lease had to be registered. Fijian lessees were forbidden to transfer or otherwise embarrass their interest without permission, but other lessees were allowed to do so. The leases included certain conditions requiring the improvement of land. When a lessee wished to renew a lease he applied to the Commissioner of Lands. If an owner refused renewal he had to pay the value of improvements unless it could be shown that the land was genuinely required for his own use. Otherwise the lease was extended compulsorily. The usual term for agricultural leases was 21 years, and for extensions 10 years. Rents were paid through the Treasurer, 10 per cent being payable to Government, 40 per cent to the Chiefs, and 50 per cent to the *mataqali* or land-owning group. The alienation of native land by sale, grant, or exchange, was prohibited except to the Crown, and the Crown was empowered to buy the land of a *mataqali* which had been reduced in numbers, to resettle the members elsewhere, and to re-allot the land to other *mataqalis* needing land.

The result has been as regards alienation that in 1940 native owners remained in possession of some 3,770,000 acres out of a total of

[1] This description of the position is based on an unpublished study by Dr. C. K. Meek of the development of land tenure in Fiji.

4,500,000 acres, while of the area lost 415,000 acres represented the area leased to Europeans before the session of 1874, 118,336 acres had been acquired by the Crown owing to the extinction of *mataqalis*, and 82,215 acres represented unclaimed vacant lands. Fijians had been secured in their lands, but the legislation had not adequately met the complex situation caused in the main by the permanent settlement of Indians in the colony. Fijians had leased their land on a large scale to Indians,[1] and derived good incomes from the leases, but they had become increasingly anxious to gain the additional profits from sugar cane cultivation formerly considered to be specialized work beyond their capacity. Their social organization also prevented the security of individual tenure which cane production seemed to demand.[2] The Colonial Sugar Refining Company also wanted more sugar and had even approached the Governor in 1933 on the subject of importing more Indian labour. The Governor, however, insisted that Fijians should be given a fair chance, and to ensure this the Native Lands (Occupation) Ordinance was enacted. In the words of the Governor this measure 'enabled an individual Fijian cultivator to obtain security of tenure over a portion of tribal land, and to enjoy the proceeds of his labour without interference from other members of his communal group'. Owing to the full co-operation of the Colonial Sugar Refining Company, and to the encouragement given by District Commissioners, Fijians have since increasingly engaged in the cultivation of sugar cane. A problem which presents itself in many different forms in Africa appears therefore to have been largely solved in Fiji, but the type of peasant concerned is of course very different.

The solution of the problem of reconciling Fijian rights with the needs of Indian cultivators has presented much greater difficulties, and, as the area of land suited for sugar cane is limited, has been made more complex by the change in the attitude to sugar cultivation by the Fijians. The question was further complicated by the initiation of a policy in 1930 of protecting the Fijians from their own improvidence by reserving permanently for the exclusive use of Fijian communities areas of their own unleased land in the vicinity of villages. Apart from these reserved areas Fijian communities were, as already noted, free to lease their lands for periods up to twenty-one years. On the other hand it was open to Fijians on the expiry of the leases to resume their lands on payment of compensation for growing crops and for improvements. In some cases Fijians who had resumed their land then abandoned it, thus throwing good land out of cultivation and prejudicing the sugar industry. A general sense of insecurity resulted, and the Council of

[1] The area leased in 1936 was 308,000 acres.

[2] See Burton, op. cit., p. 7. Their communal methods of carrying on all their main social activities, including agriculture, brought very valuable results in social stability, but were unfavourable to new enterprises.

Chiefs passed a resolution calling on the Government to bring forward legislation which would ensure that when an owner resumed land he would continue efficient cultivation, and that if he failed to do so Government could take over the land and lease it afresh. It was suggested that District Advisory Committees should be formed in each District under the chairmanship of the District Commissioner to deal with all matters relating to leases, and in particular with the amount of rental and the amount of compensation payable for improvements.

Indian anxieties were not however allayed. Their main grievances were in connexion with the limitation of leases to twenty-one years, which they contended was not a sufficient period for the recovery of their capital expenditure. This discrimination against Indians was removed in 1930 and extensions under certain conditions were allowed for a further period of nine years. Keen competition led to heavy premiums being charged for renewal, and Indians created a problem for many of themselves by giving sub-leases at exorbitant rents. Only in special circumstances were agricultural leases up to ninety-nine years permissible where long-term plantations such as coconuts were concerned. In fact, whatever the theoretical period of leases, an enquiry made by the Director of Lands in 1940 showed that the average period during which native leases had been held without transfer was only seven years. Under this somewhat haphazard system many Indians had used the land wastefully and left it impoverished on surrender of their leases. The policy as stated by the Director of Agriculture in 1936 was to encourage the permanent settlement of genuine Indian agriculturalists on limited areas up to a maximum of fifteen acres so as to eliminate land-grabbing and speculation in land. For this purpose he recommended that leases should be capable of extension up to forty or sixty years.

By 1936 the Government had come to the conclusion that a greater measure of control over lands was necessary if the interests of Indians and Fijians were to be co-ordinated, continuity of policy and security of tenure assured, and the existing wasteful system of agriculture replaced by a planned economy. The Fijian Chiefs were of the same opinion and in Council (September 1936) passed the remarkable resolution 'that it is in the best interests of the native race that all the lands, including leases, not required for the maintenance of Fijian owners be opened up for settlement; that, to further this end a Committee be appointed to enquire into and determine the amount of land needed for the proper development by the native owners; and that all lands not so required be handed over to the Government to lease on behalf of the Fijians'. Thus the way was opened for the enactment which finally with the consent of all sections of Fijian opinion became law as the 'Native Land Trust Ordinance—No. 12 of 1940', an Ordinance which deserves study in many colonial dependencies.

It is unnecessary in the present connexion to follow Dr. Meek in a general analysis of the provisions of the Ordinance. The basic principles are the administration of all native land by a Board with a Fijian member for the benefit of the native owners, the continuation of the prohibition of the alienation of native land except to the Crown, and the prohibition of mortgages except with the consent of the Board. Other provisions included the setting aside of Native Reserves in which no land can be leased or otherwise disposed of except to Fijians, and the vesting of a general power in the Board to control all leases and licences of native land not included in such Reserves. Local Advisory Committees are to be appointed to assist the Board in this task. The Board will not only control all leases, but also all sales, transfers, and sub-leases, of leased land, though apparently there is no restriction on the power of mortgaging such land. The remaining chief grievance of Indian lessees, that relating to the term of leases, is dealt with by fixing a maximum limit of 99 years for 'properly designed areas', 50 years for isolated unplanned areas outside the margin of settled areas, and 50 years for grazing leases with a power of resumption after every 10 years. Under these provisions the Indian cultivator can get adequate land with the necessary security of tenure. The Fijian who wishes to take up export crops or introduce improved agricultural methods can not only get leases in the open area, but he can also within Reserves obtain an Agricultural Licence giving him the sole right of cultivation and residence for ten years.

Wide powers are given for the framing of regulations governing the grant and form of leases, and these regulations include provisions to secure the use of proper agricultural methods and the preservation of the land from deterioration. In particular the grantee of areas exceeding 50 acres for periods exceeding 30 years must spend a stipulated sum on permanent improvements within 5 years. He must also plant specified proportions of his holding within fixed periods in a good and husbandlike manner, applying adequate manure so as to keep the whole in good condition, and employ all measures necessary to the control of erosion. Land and trees within 24 feet of the bank of a river or stream must be preserved intact and steep slopes must not be cultivated.

The provision which met with most Indian criticism was the omission of the clause in former Ordinances requiring the payment of compensation for unexhausted improvements if Fijian owners refused to renew a lease, unless the land was genuinely required for their own use. The reason given for the omission was that such cases would not arise under the new procedure. The omission may nevertheless discourage improvements both in agriculture and in housing. Political considerations may possibly have played a part in the decision.

This enactment confers on the Government of Fiji powers of control over land such as are found in no other British colony, and if wisely administered it provides a basis for a long-range scheme of rural development. It should provide land for settlement either by Indians or Fijians, with adequate security of tenure and guarantees against wasteful cultivation. Indians will be encouraged to remain on the land, and, according as systematic planning is carried into effect, their leases can be extended to 99 years. Continuity of policy can be secured in the hope of placing the relations between Indians and Fijians on a permanent footing of good will. One of the remarkable features in connexion with the framing of the Ordinance has been the spirit in which these fundamental problems have been approached by the three communities concerned, though the questions raised were vital to two of these communities, and the ready acceptance by the Fijians of proposals for placing such extensive powers in the hands of the Government.

Other Export Crops

While the sugar industry controlled by a great capitalistic organization has been the basis of the agricultural prosperity of the islands, and the driving power towards reform in the conditions of land tenure, other money crops have been of substantial importance, and the necessity of securing the production of food crops has not been lost sight of. The second main agricultural export industry has been coconuts grown on an area of 131,000 acres (1936), three times the area devoted to sugar cane. Production is shared in about equal proportions between European estates of various sizes and Fijian communally-owned land. The labour on the estates is mainly Fijian working on one-year contracts. All sections of the copra producing community suffered severely from the low prices of the period after 1930, more especially the European estates. The Fijian producers were not so severely affected by the decline in prices, but were tempted to neglect their plantations. Special measures of assistance to the industry took the form of the remittance of certain export charges, and the Agricultural Department has directed special attention to combating insect pests, erecting improved hot-air copra driers, and general educational work among Fijian growers. The third export industry has been bananas, which are also important for local consumption. Ninety per cent of the crop is produced by Fijians and 7 per cent by Chinese; the export is almost entirely in European hands, the marketing being strictly controlled by regulations. Pineapples, citrus, and other fruits and vegetables are minor industries. Food crops adequate for local consumption are grown both by Fijians and Indians, the former producing their traditional staples of yams, taro, breadfruit, etc., with a variety of newer crops such as tapioca and oranges, the

latter their own special requirements including rice, beans, and pulses. Both communities grow tobacco for their own use though exports have not as yet been organized.

Agricultural Credit

It remains to deal with the other essential to a sound and advancing system of peasant production, the system of agricultural credits.[1] How far debt constitutes a serious problem in Fiji seems uncertain. Sir F. Stockdale was informed in 1937 that many of the cane growers were seriously embarrassed, as in the absence of suitable banking facilities they were apt to dissipate their only cash income, possibly all received within one month, and to be in difficulties later on. On the other hand tenants of the Colonial Sugar Refining Company, and other growers of cane not under lien to moneylenders, can, during the cultivation period, secure from the Company cash advances against their crops at 5 per cent interest, and they are also permitted to take advances for the erection of houses, and for the purchase of horses, cattle, seeds and manures. These privileges were at first confined to Indian growers, but were in 1933 extended to Fijian cane farmers, with the proviso that permission had to be sought from the District Commissioner, who would only give his consent if satisfied that the money was required for the sole purpose of carrying on cultivation in an approved manner. Most of their purely agricultural needs may therefore be provided for, but, in the case of Indians at any rate, ceremonial needs are a more prolific source of debt and these would presumably be met by borrowing from moneylenders on the security of crop liens.

There are, however, many growers who for various reasons are unable to take advantage of the Company's services and are therefore often compelled to pay high rates of interest on loans secured by crop liens. Improvident borrowing on this basis has also been fairly widespread; in one district for example it was reported that the value of the crop liens put in for collection at payment time by the Company sometimes exceeded the value of the crop. One form assumed by this menace was the practice of taking capital loans for the purchase of leases, the loans being secured under a system of compulsory renewal of crop liens from one year to another until the debt was extinguished. This practice was specially prevalent in the native lease area where the Company could exercise little control, and it was reported that the money had been borrowed at rates of interest of 15 to 20 per cent. Another factor making for indebtedness has been the exaction of heavy premiums for the renewal of leases, though in some cases Fijians are said to have been very generous in foregoing their dues in cases of distress or hardship. The position as regards these two main

[1] These paragraphs are also based on Dr. Meek's study referred to earlier.

causes of indebtedness should be improved under the new legislation which confers on the Government extensive powers of supervision. A steady cash income may be a great safeguard, but it also makes it fatally easy to resort to improvident borrowing on crop liens.

As regards the further and more dangerous stage of the mortgaging or transfer of land to moneylenders, Fijians are protected by the legislation prohibiting both the transfer and encumbrance of land, but Indians have full liberty to mortgage their leases and no information is available as to the results of this freedom, nor is it clear whether the Director of Lands can refuse transfer to a foreclosing mortgagee. Apart from the sugar industry no source of credit other than moneylenders appears to be available. On one island Sir F. Stockdale observed that many small coconut plantations seemed to carry fairly heavy mortgages, and other evidence suggested that I.O.U. indebtedness was common in all classes. On the whole however Dr. Meek accepts the opinion of a local officer of wide experience that the problem of indebtedness is not as yet a pressing one, though the dangers of a policy of drift have been forcibly illustrated in India and Burma, and under very different conditions in Zanzibar and Cyprus.

Another suggestion which has been under consideration was whether the problem of the indebtedness of Indian cane farmers could be met by an Agricultural Bank or a Co-operative Credit Society. Sir F. Stockdale inclined to the view that the time is not yet ripe for either type of organization. An Agricultural Bank would provide an additional source of credit without any provision for the encouragement of thrift, and might not be able to establish sufficiently close contact with the borrower to ensure safety for loans. As regards a Co-operative Credit Society he points out that experience in Trinidad and Mauritius has shown the difficulty of promoting co-operation among Indian growers of cane. Where credit has been made easy, and indebtedness not actively discouraged, there has been a tendency towards the increase of indebtedness. Without an educative period of training in thrift an alternative system of credit would be a danger, and at present there was too little cohesion among small-holders to justify an experiment in co-operation. On the other hand it has been suggested that Indian cultivators tend to settle in caste groups and have more cohesion than appears on the surface. Nor are they devoid of an instinct of thrift. When repatriation to India was common many took back considerable savings and the habit of thrift is still widespread and should not be allowed to disappear even if the main incentive to it has been removed.

In Fiji the credit problem has some special features, as Dr. Meek has pointed out, including the question of ensuring compensation for loss of improvements and the results of the operation of the Crop Rent Ordinance, particularly with regard to the system of compulsory renewal of liens. The possibilities of co-operative action are however not confined to the provision of credit facilities and in many countries the first efforts have not been in this direction, but towards co-operative marketing or to the formation of what in Malaya are called General Purposes Societies for joint action in purposes of general advantage. Fiji has made a modest beginning in co-operative marketing, but, apart from this, little attention appears to have been paid to the wider possibilities of the co-operative movement.

THE WEST INDIES

European Settlement in the Caribbean Area

The British dependencies in the West Indies with the mainland territories of British Guiana and British Honduras have been taken as a subject for the present study. They are however only a part of the great Caribbean and Central American area, which has been the sphere not only of plantation enterprise but also of attempts at early peasant colonization by various European countries. These attempts have been made both in the islands of the moderate trade wind tropics and on the elevated tropical plateaux of the mainland. In modern times this area has seen the first great scientific experiment in the employment of European labour under the ultra-tropical conditions of Panama, and projects for European peasant settlement in San Domingo and in British Guiana. Before dealing with the special problems of the British dependencies under the conditions of the present day it will therefore be useful to give a brief sketch of some of the earlier attempts at pre-scientific European settlement which have left their traces in permanent European communities of a peasant type. They are discussed by Grenfell Price in his book, *White Settlers in the Tropics*.[1]

Taking first the islands of the West Indies, they all lie in the trade wind zone of the moderate tropics; most of them are of volcanic origin and contain much fertile soil, though many include a large proportion of mountainous and broken country. While the general tendency has been towards the absorption of the white elements of the population by negro and mixed elements derived from African slaves, there are a number of interesting exceptions the most important of which are the settlements by the Mediterranean races, more especially those in Cuba and Puerto Rico. Puerto Rico had originally a substantial indigenous population which however was rapidly exterminated in the early period of Spanish rule. They were replaced by negroes and by white immigrants of good Spanish stock, to which were added a number of farmers from Louisiana in the nineteenth century. In 1898 there were reported to be 570,000 whites, 240,000 of mixed colour, and 76,000 negroes, and by 1930 the increase of 50 per cent in the population is

[1] American Geographical Society, 1939.

said to be entirely among the white population, the negroes and mulattoes having actually decreased. It is however not clear how the colour line was drawn. The coloured population is mainly concentrated in the coastal areas as the result of former plantation slavery, and plantations are still the predominant feature of the one crop agricultural economy. The white population has therefore more than held its own, though on a miserably low standard of living, and under recent more favourable conditions has shown considerable capacities in many directions including peasant agriculture and labour on plantations. The small Dutch islands of Saba and St. Martin, on the other hand, are the homes of pure white northern Europeans—French, Dutch and British—who have lived in the tropics, mainly as peasant farmers, for several hundred years, though isolation and the absence of economic opportunities has in some groups resulted in a very low standard of health and of living. Even in Jamaica some small German agricultural communities have survived for more than a hundred years though they are deteriorating as the result of negro competition. Similarly, small peasant communities of French origin have held their own in St. Thomas and St. Bartholomew, and British in the Bahamas, Cayman Islands, Old Providence, Utila, Grenada and St. Kitts, with Dutch and Portuguese in Caracas and Boneisa.

Barbados and St. Kitts provide particularly interesting examples of the replacement of an originally white population by negroes. An English expedition occupied Barbados in 1625 and by 1643 there were 37,200 white inhabitants against 6,000 coloured, a white density of 224 per square mile. St. Kitts and Nevis had a similar white population of 20,000 to 30,000 with no coloured element. Small planters and their mainly white servants cultivated plots of from five to thirty acres and grew tobacco or cotton. Even in Jamaica the white and black populations were nearly equal in 1673. The fall in the white population was however very rapid after 1650, partly as the result of the insecurity of the islands infested by disease and by pirates, and partly because the good type of early immigrants was replaced by the offscourings of England and the treatment of the white servants was scandalously bad. Economic factors contributed to the white decline. The most important was the growth of the slave trade providing a source of cheap labour. In Barbados and the Leeward Islands the growing exhaustion of the soil forced out the small planters who could not afford fertilizers, while both in these islands and in Jamaica large planters, frequently absentees, ate up the small farmers, and replaced white labour by the importation of slaves. By 1667 the 11,200 smallholdings in Barbados had been included in 745 large estates, and the negro population had increased to 82,000. The Leeward Islands and Jamaica developed on the same lines, and with the same results, including a one crop industry, the growth of a class of 'poor whites' and an increase in the mulattoes. Some white groups such as the 'red legs' of Barbados kept their racial purity, but on a miserably low standard of income and of health.

The mainland of Central America, though its countries are not for the most part dependencies but independent countries, provide some interesting examples of similar developments. Most of the Republics between the Rio Grande and Uruguay have a predominant Indian admixture in their populations, but Costa Rica and San Salvador are conspicuous exceptions with their large white Spanish-American populations. Though they are small in area and poor in natural resources, they are in advance of the other Republics in progress, civilization, and culture. In Costa Rica a white population of good Spanish stock occupied the plateau from a height of about 3,000 feet. The coastal areas on the Atlantic side are either tropical forest, or occupied by a negro population. As Indians were almost absent, the white population of the plateau increased steadily and was mainly composed of peasant agriculturalists. They had the advantages of comparative coolness, a climate healthy on the whole, adequate rainfall of the seasonal type, and fertile volcanic soil. Their chief occupations were coffee planting and cattle raising, and both whites and Indians kept away from the deadly climate of the coast. Until the United Fruit Company constructed a railway about 1889, and introduced negroes for banana cultivation they were protected by isolation from negro infiltration and negro diseases. By 1927 the population had quadrupled as compared with 1864, partly as the result of the introduction of the banana industry, and of the health campaign carried on by the Rockefeller Foundation against malaria, yellow fever and hook-worm. Remarkable progress has been made though the standard of living and of health is still very low, more especially among the coastal negroes, while the dependence of the white population on a single crop—coffee—makes their economic position a precarious one. Up to recently they were saved by isolation from competition with coloured races, but now that their isolation has been largely broken down their social homogeneity and their standards of health and of living are in danger from gradual negro infiltration.

So far only the very limited question of European peasant settlement in the Caribbean area has been dealt with. Long experience has shown that the Spanish peasant can survive and multiply under moderate tropical conditions notwithstanding the adverse factors of isolation, decimating diseases, and, in the smaller communities, of inbreeding. It does not show that they can maintain what would now be considered a reasonable standard of living and of health unless assisted by outside agencies, nor does it show that they can permanently survive the competition of coloured races.

The problem with which this study is concerned is, however, a much wider one. The great majority of the populations of the Caribbean area are not white but coloured, and the plantation and peasant economies to be considered are composed of the members both of the white community, of a substantial number of British Indians, and of the coloured peoples, chiefly though not entirely of African origin, who form the mass of the population. The main issue is in fact the part which has been, or can be, played in agriculture by the white and coloured communities; in the Caribbean area, far more than in the dependencies of the Far East and of the Indian Ocean, planters and Europeans are practically synonymous. It is this wider problem which it is proposed to examine in connexion with the British West Indian dependencies.

Plantations in the West Indies

In the eastern dependencies the problem has been in the main that of adapting to the requirements of a raw material exporting economy native populations previously content with a subsistence agriculture. Plantations or compulsory peasant cultivation were the obvious early means, and where the native populations were inadequate the necessary labour could be obtained from densely populated countries in the same region. In general, apart from seasonal labour, there has been a definite distinction between plantations with paid labour and peasant producers, though Java and Fiji provide instances of fruitful co-operation between plantations and peasants assuring the improvement of methods of cultivation and the maintenance of fertility. In the West Indies such indigenous populations as existed were rapidly exterminated, and there were no countries in the Caribbean area from which labour could be obtained.

The early attempts at white settlement have been briefly sketched, and the replacement of small settlers by large estates dependent on slave labour. Amalgamation was stimulated by the substitution of sugar for tobacco or cotton as the main crop, and up to the emancipation of 1838 the agriculture of the islands was of a single-crop plantation type based entirely on slavery. After emancipation the negroes were left with a great dislike to working on plantations even on wages, and there was a serious shortage of labour which was partially met by various expedients. One of these was the importation of negroes freed from slave ships; 14,113 such freed slaves were for example imported from Sierra Leone between 1841 and 1850. Trinidad and British Guiana at a later date imported Indian indentured labour on a large scale, and these immigrants and their descendants now form a large part of the agricultural communities in these colonies. In Jamaica and in other islands a considerable proportion of the negroes established themselves as squatters. The position gradually changed with

the introduction of additional staple crops (though sugar remained predominant), with a large increase in the population, and the development of new relations between planters and peasants. There have been periods of comparative prosperity and of serious adversity largely due to the vagaries of British fiscal policy. A long series of Commissions has dealt with various aspects of the economic position of the time, including in particular the problem of peasant cultivation.

The position after emancipation made it as difficult to establish a sound agricultural economy with a mutually advantageous relation between plantations and peasants as it proved to be thirty years later in the Southern States of the United States of America. On the one hand were the planters—large and small-holding on freehold tenure, accustomed to the employment of labour on a most extravagant scale, with little interest in the adoption of improved methods, and traditionally disinclined to the development of any such system of tenancy as would provide reasonable security of tenure and a resulting stimulus to improvements and to better cultivation. Opposed to them was the formless mass of the cultivating population, a people without traditions, without any bonds of unity except a common dislike of plantations, with no communal or group or even family organizations —a want only met to a small extent by the various religious communities—with little sense of public obligations even to a limited circle, and with the weakness of character and lack of initiative which are the inevitable relics of slavery. Considering the *laissez faire* policy so long followed by the Governments, and the absence of active interest in educational or other social progress, it is not so remarkable that such a community should have remained on a generally low level as that it should have evolved a considerable section of small farmers of a reasonably energetic and progressive type.

Land Tenure

The systems of land tenure illustrate the operation of these factors. Free concessions of land were originally the only means of attracting capital to the West Indies, and Europeans took with them their conception of the Roman system of land tenure and of freehold ownership. So far as manufactures were concerned they were only interested in the processes which these commodities required before export. For the most part they carried on their plantations with paid labour, but those not in a position to do this either cut up their plantations into small-holdings on freehold tenure, or gave leases with no security of tenure, often on a form of the *métayer* system providing for sharing the cash crop and for the tenants growing their own foodstuffs. A special system of tenancy was developed for the sugar industry, particularly in Trinidad, and Barbados has the 'located labourer' resembling the labour tenant of South Africa. There were no statutory provisions regarding security of tenure or the encouragement of improvements. There was no attempt at conditional freehold for small-holders such as is aimed at in Ceylon to secure sound methods of cultivation. The *métayer* system, though fairly efficient in Europe and apparently also in the Netherlands Indies, under the traditional limitations and conditions, has degenerated in the West Indies into little more than the share-cropping system of the Cotton States of the United States of America. Under it the landlord or his agent takes no personal interest in the estate, in the maintenance of soil fertility, or the welfare of the tenants. The tenants, with no security of tenure, and little stimulus to improve production because of the large fixed share taken by the landlord, take little interest in the land, in good husbandry, or in the maintenance of soil fertility. Many of the owners of estates are as much in need of supervision as the small-holders themselves.

A characteristic feature in all these developments has been the small regard paid to title. The tendency to squatting, so marked after abolition, still continues, and shows itself when there is any unusual economic pressure on the population. On the whole however it may now be said that Crown Lands have been delimited and titles are reasonably well established to the larger holdings. For small-holdings they are frequently neglected.

Systems of Agriculture

The main features of the agricultural systems in the Caribbean area, including both the islands and the mainland dependencies, as developed under these conditions have been described in a series of official reports and of private publications.[1] A movement from the previously universal estate system towards small-scale peasant farming, followed on emancipation, and this was associated both as cause and effect with the gradual introduction of new crops, diminishing to some extent the previous dominance of sugar. Such were cocoa in Grenada and bananas in Jamaica, which lent themselves to small-scale cultivation though also increasingly adopted by estates. Other new products helping to replace uniformity by diversity were citrus and sea island cotton. The Royal Commission of 1897 supported these tendencies by its recommendation that peasant cultivation should be gradually substituted for estates by a policy of land settlement for small-holders, and that other tropical products should replace sugar cane. Nevertheless the estate—company or private owned by a resident planter—still

[1] The description of the position in the West Indies is mainly based on the 'West India Royal Commission Report', the connected 'Report on Agriculture' by F. S. Engledow, C.M.G., and the Report by Sir F. A. Stockdale, K.C.M.G. (CAC 128).

remains everywhere the predominant economic unit, and sugar still accounts for more than half the total agricultural exports; in four of the six colonies it represents more than two-thirds of the exports.

Estates, however, represent many different systems of production and only a proportion would satisfy the essential conditions of plantations, a uniform system of production under central direction. With the rapid growth in population and the impoverishment of many formerly independent estate owners, peasant producers as small-holders and as tenants play an increasingly important part. In Jamaica the population of $1\frac{1}{4}$ millions includes 189,000 small-holders, and in Barbados—far the most highly cultivated of the Caribbean dependencies—small-holders own 16,000 acres of the arable area against 52,133 acres in estates. In Trinidad the 17,000 cane farmers (peasants growing cane on holdings of very varying sizes which they own or rent) produce 44 per cent of the cane crushed by the factories, and Jamaica cane farmers raise about 25 per cent of their cane. An interesting fact is that the Trinidad factories which formerly encouraged peasant farming as a cheap source of supply are now inclined to discourage it because they find that the much increased efficiency in direct estate management now enables them to produce cane at a price which peasant growers are not prepared to accept. A similar tendency has been referred to in connexion with Mauritius.[1] The main factor in bringing about a great increase in the yield per acre has been the scientific research into the production of improved varieties of cane, centring in the Imperial College of Tropical Agriculture in Trinidad.

The general impression of agriculture in the Caribbean area given by recent publications is a depressing one both as regards plantations and peasants. Subsistence agriculture is in general almost entirely in the hands of peasants, but the greater part of the food requirements, other than ground provisions (starch foods), is met by imports of flour, salt fish, meat, condensed milk, etc. Some of these, and more especially wheat flour, cannot be produced locally, but both custom and convenience hinder their replacement by locally grown foodstuffs. So far as production for sale is concerned both estates and peasants think in terms of export markets; cash crop and export crop are convertible terms. Specialization in a very limited number of products is the universal practice, with the attendant advantages and the serious dangers inseparable from such a system. The more important export crops and the areas in which they are produced are as follows: ***sugar***, general; ***bananas***, Jamaica; ***cocoa***, Trinidad, Tobago and Grenada; ***rice***, British Guiana; ***cotton***, Anguilla, Montserrat and St. Vincent; ***limes***, Grenada, Montserrat, Dominica, St. Lucia and Trinidad; ***coffee***, British Guiana, Jamaica and Trinidad; ***arrowroot***, St. Vincent; ***cloves and nutmegs***, Grenada. ***Coconuts*** are widespread and are the main crop

[1] See p. 73.

on many estates. Agriculture in the sense of balanced systems of production has still to be developed, and crops—apart from long-term crops—are not grown in planned rotations. Some, especially sugar cane, are grown continuously. Livestock are so few and so irregularly managed that they do not help to keep up the fertility of the land, while, except on sugar estates, fertilizers are not used. The average fertility is therefore low and can only be maintained even at this level by much shifting cultivation representing extravagant employment of land. In the production of all these export crops peasant and estate agriculture are completely interwoven, partly by the various systems of tenancy, but mainly by the general custom of the small peasant farmer of dividing his time between cultivating his own land and working for wages on an estate. This is dictated not only by the small average size of such holdings, but by the great value to the peasant of a fixed weekly wage.

The problem of plantation and peasant cultivation in the Caribbean area differs therefore in important respects from that in the Eastern colonies and still more from that in Africa. Except in the special cases of the sugar industry in Java and Fiji the line between the two systems in the East Indies and the Pacific area is a fairly definite one, the highly efficient plantations tending more and more to concentrate on special types of product beyond the capacity of the native grower. In Africa the element of competition between the two systems tends to be stressed both as regards the allocation of the limited labour supplies and as regards internal markets. In the Caribbean area peasant production has grown with an increasing population as an adjunct to a previously almost exclusively plantation economy—apart from the small Amerindian and Carib communities in British Honduras and British Guiana. Both systems have concentrated on production for export, and the part played by peasants has as elsewhere depended largely on the size of the profitable producing or processing unit. To a considerable extent physical features make them complementary to one another, as for instance in Jamaica where the valleys are laid out in plantations and the surrounding hills provide peasant holdings of shifting cultivation. The sugar industry is in a class by itself, but apart from this the great variety in the scale and type of plantations show much the same defects in methods of cultivation and in financial resources as the peasant producer. It is not only peasants who come under the strictures of competent observers as regards the prevalent standards of enterprise and working efficiency, though the great sugar industry appears to be an outstanding exception and to provide many examples of highly efficient production. As both plantations and peasants cater for the world market there are few of the complaints, which figure so prominently in parts of Africa, of competition between rival interests, as plantations are practically unconcerned with the local

market for foodstuffs. To a large extent the two systems stand or fall together.

Some disabilities, however, apply predominantly to peasant producers. Insecurity of tenure, and uncertainty as regards titles and boundaries, are serious handicaps and limit their credit. In general their holdings are in the more uneven and broken ground, either of Crown Land or land leased to them by plantations, and the usual—and almost inevitable—practice of shifting cultivation brings with it much greater dangers of damage from erosion. Rents are sometimes exorbitant. Specialization has greater risks for them than for plantations and, as everywhere, in marketing they are at the mercy of unscrupulous middlemen. One section of their class appears to have attained a reasonably adequate degree of economic security, the peasant proprietors with fairly substantial holdings producing a remunerative export crop, such as have constituted an important element in Jamaica. The available evidence appears however to show that they are unfortunately diminishing in numbers, not only from the pressure of low prices, but because of the tendency to sub-division and fragmentation which compels an increasing number to supplement their incomes by working for wages.

The fundamental fact, however, in an agricultural economy is, as noted by the Royal Commission on Agriculture in India, the attitude of mind of the cultivator himself, and there is a good deal of evidence to suggest that in the average West Indian peasant there is an absence of any general spirit of independence and self-help, the lack of a tradition of craftsmanship and pride in good work, and the tendency in all matters to appeal to Government—a tendency fostered in Jamaica and other islands by the inevitable dependence on the help of Government in such a calamity as a hurricane.

Sugar Industry

The dominating position of the sugar industry in the Caribbean area makes the relations between the estates and peasants engaged in that industry a question of special importance. Barbados, British Guiana, St. Kitts and Antigua depend almost entirely on sugar. It has again become the principal crop in Trinidad, it is also the main crop in St. Lucia, and it is once more beginning to rival bananas in Jamaica. The large part in cane production played by the peasant growers of Jamaica, Trinidad, and Barbados has been referred to. Sugar estates however include a wide variety of types falling into two general classes, with areas ranging from 2,000 to 10,000 acres, held as a rule on freehold tenure. In Trinidad and British Guiana they are mainly in the hands of large companies controlled from Great Britain and strongly capitalized. Elsewhere, as in Barbados, Antigua, St. Kitts, and to a less extent Jamaica, they are in the hands of individuals and local companies, but the advantages of large working units brings into action a general tendency to amalgamation. British Honduras represents the lowest stage where a number of inefficient Spanish plantations remain in the north, and a few ex-Louisiana planters carry on a struggling existence in the south. In the north one modern factory has recently displaced a number of small plants serving plantations with an average area of some 100 acres.

The continuous cultivation of sugar on the same land, characteristic of the West Indies, Hawaii and Mauritius, in contrast to the practice in Java, does not carry with it the same dangers to the maintenance of fertility and the prevention of erosion as are likely to occur in the case of other crops. Excessive specialization however brings its own dangers to the general agricultural economy of countries with rapidly increasing populations, and this applies more especially to the growing class of peasant producers for whom a gradual transition to mixed farming is an urgent necessity. These cane farmers, of whom the East Indians in Trinidad are a representative section, are peasant producers growing cane on areas varying from ½ acre to as much as 50 acres, which they own or rent, and selling their produce to factories for which also the smaller farmers work on wages. The larger cane farmers themselves employ paid labour. There is no system of supervision of their agriculture, but in some colonies Ordinances have recently been passed regulating the prices to be paid by factories for their cane. In general the system of working and of management is poor, no fertilizers are used, all cultivation is by hand, and food crops are little grown. As a result the yields are low, being only from half to two-thirds of the yields of estate lands on similar soil. In British Guiana the tenant yield comes nearer to the estate yield. Some of the sugar companies have organized credit societies for the assistance of cane farmers, but debt is nevertheless a universal burden for this class of producer, whose standard of living is in general very low.

The position in Trinidad has led to proposals to remodel sugar production in the West Indies on the lines followed in Fiji, but there are important differences in the position in the two areas. The initial stimulus to the change in Fiji was given by the danger of the plantations losing their labour, a danger which they avoided by converting their labourers into peasant producers. This is not the position in the West Indies. As regards the application of the system to the existing cane farmers the characteristic features of the Fijian system are the provision of technical supervision, and the arrangements for transport, housing, credit and equipment. These would be difficult to organize under West Indian conditions. The adequate supervision of holdings so variable in size and so widely scattered would be hardly practicable, apart from the general objections to the perpetuation of this small-scale specialized farming, and the lack of means of control of a large proportion of the farmers. The establishment of new groups of farmers on land not now occupied by cane would involve heavy expenditure on new factories, while the limitations on export imposed by the sugar convention could not be lost sight of. In an industry dependent on a world market a determining consideration as regards any wholesale change to peasant production would be the extent of the decrease in output which would be likely to follow and this would be of special importance in Barbados, where the highest possible production is essential to survival. On the other hand the position of the present cane farmers could be improved by greater security of tenure from estates, and by the provision of scientific assistance, though the ultimate aim should be the increase of mixed farming as frequently advocated for all small West Indian producers.

This is the position as regards the predominant agricultural industry of the West Indies and of the British Caribbean dependencies, an industry which is in general adequately capitalized and has reached a high degree of technical efficiency; which moreover receives prefer ential assistance amounting to 40 per cent of the price received by colonial producers. Assistance on a much larger scale has been given by the United States of America and by France to their colonial producers.[1]

The position is considerably worse for both estates and peasants as regards the other important agricultural industries including cocoa, cotton, rice, limes, coffee, arrowroot, and nutmegs and cloves. The estates producing these commodities are with few exceptions small properties in individual ownership, frequently short of working capital, in many cases embarrassed by mortgages, and often at a very low level in all aspects of working. Their rate of employment is also much less than on sugar estates. The financial difficulties of such estates must indeed be regarded as one of the major economic problems of the West Indies. Little however seems to be known of the financial circumstances, utilization of land, labour management and working practice on these estates. This is not an impressive record after some three centuries of occupation and points to the necessity of an economic survey on the lines of the recent survey of the cocoa industry in Trinidad.

Banana Industry

Much the most important of the subsidiary crops is bananas, which have long been the principal crop in Jamaica and are of importance in

[1] The future prospects of the industry may be improved as the result of recent scientific research into possible uses of its by-products, but information on this subject seems to be still inadequate for the formation of definite conclusions.

the Windward Islands and in Dominica. They were originally introduced into Jamaica as a small settler crop, and, though now extensively grown by large and medium-sized estates, they still are to a large degree a peasant industry, and are the crop to which the majority of small settlers mainly devote themselves. They are of some importance in British Honduras both as a small plantation and a peasant crop —though the prospects are poor owing to unsuitable soils and the prevalence of disease—and they are fairly extensively grown in the Windward Islands and Dominica, and increasingly in Grenada in place of cocoa. Until the progress of the war interrupted the trade the industry had for some time been comparatively prosperous, apart from the vicissitudes caused by hurricane damage, and Jamaican growers in particular, both planters and peasants, were able to sell all their bananas at prices at least one-third higher than those received by foreign growers in the Caribbean area. The special difficulties of transportation and marketing, and of developing a taste for bananas among consumers, were dealt with first by the great organization built up by the Caribbean monopoly of the United Fruit Company of Boston and its connected Standard Fruit Company, and later by these companies in association with the Jamaica Banana Producers' Association. The latter represented the growers' reaction against the monopoly of the company. Higher prices are made possible by tariff preferences in British and Canadian markets, and similar but smaller advantages are enjoyed by the growers in the other islands whose produce is marketed in Canada through a subsidiary of the United Fruit Company. As in the case of sugar therefore the comparatively favourable position of the banana industry has largely depended on Government assistance both through tariffs and by using its influence towards bringing about the co-operation of the great private organization which so largely controls the trade of the whole Caribbean area.

The weak points in the industry, affecting more especially peasant producers in Jamaica, have been the liability to disease and the long-term effects on the productive capacity of the land. The excellence of the marketing organizations has made bananas much the most attractive crop for small-holders because of its ready cash return, and banana adventuring, often as a practically exclusive crop, has been the common practice. Uncertainty of tenure, and the impossibility of applying fertilizers, has of necessity resulted in the general practice of shifting cultivation, a tendency accentuated by the spread of Panama disease which has made it necessary to abandon holdings where this disease has manifested itself, at any rate for some years. The more recent leaf spot disease represents a greater menace especially to the small-holder. It can be controlled by spraying, but this is an expensive process even for large estates, and for less efficient small-holders, more especially those in outlying areas, it may become practi-

cally prohibitive. Unless therefore immune varieties with the qualities necessary for commercial exploitation can be developed the prospects are not favourable. As moreover the new holdings made necessary by the spread of Panama disease or by other causes are often on hillsides their extension has been a fruitful source of soil erosion, menacing the agricultural future of the country. These practices have been most extensive in Jamaica, but are increasing in other colonies. In another respect also the banana industry provides a good illustration of the difficulties of agriculture for export in the West Indies. Such exports require a regular service of ocean-going ships, and in the case of bananas these must be of a special type. Industries on a small scale such as alone can be developed on many of the islands cannot be relied on to provide such amount or regularity of production as would warrant a regular service of ocean-going ships, while the inter-island service is rudimentary or spasmodic. In the case of British Honduras this was a serious adverse factor in addition to the spread of disease and the unsuitability of much of the soil.

Other Agricultural Exports

The next crop in order of importance is cocoa, still the main export of Grenada and of great importance to Trinidad. Like bananas it is mainly a peasant industry, particularly in Grenada, and up to about ten years ago a generally favourable course of prices led to both estates and peasants increasing their financial commitments beyond prudent limits without adequate regard to improving their methods of production. They were therefore not in a good position to meet the heavy fall in prices caused by the West African and Brazilian competition of producers with a lower standard of living, more especially as new methods of chocolate manufacture had reduced the premium formerly paid for the superior quality of their cocoa. Both estates and peasants have been reduced to great distress. Trinidad has attempted to assist them by a subsidy which Grenada cannot afford, and it is believed that the majority of West Indian cocoa growers cannot continue in business without either financial assistance or a radical change in their present system of cultivation. If plantations are to survive in competition with West Africa and Brazil they must increase their out-turn per acre by adopting scientific methods on the lines which have hitherto secured the position of plantations in the rubber industry, and have made palm oil plantations such dangerous rivals to peasant producers. There may not be the same scope for developing specialized uses for cocoa as there are for example in the case of rubber, but a substantial advance would be made by the introduction of improved varieties so as to eliminate the 20 to 30 per cent of the existing trees which under the present system yield practically no produce, and by transferring to other uses the considerable proportion of the plantations which are on soils not suited for cocoa. A suggestion has also been made for the combination of estates into larger units, following the example of companies in Montserrat and Dominica which have done valuable work in keeping up production over a very difficult period.

There is however another side to this problem illustrated by the fact that the recent serious riots on the sugar estates of Trinidad never spread to the cocoa producers in adjacent areas although the economic difficulties on the cocoa plantations were much greater. One factor in preventing tension seems to have been the more personal character of the relations between estate owners and peasants in the cocoa area finding expression both in direct contact and in the provision of minor amenities such as vegetable plots and housing facilities. Company management, however efficient or even liberal, tends to lose the human touch, though on the other hand where large concentrations of labour are concerned a strong company is much more likely to provide good conditions for its workers than the average individual employer. For the peasant specialization on cocoa has been a disaster, and this fact supports the view that specialization should give place to mixed farming for the purpose both of diminishing dependence on a single market and of supplying an internal market as well as raising the peasant's own standard of subsistence.

Limes, citrus, coconuts and rice are examples of hard-pressed industries affected partly by changes in the world markets beyond their control, but also by weaknesses in their own structure and organization including the inadequate capital of small estates, the great difficulty in organizing any effective combination in their own interests, an unsatisfactory basis for the relations between estates and small-holders, and the resulting dangers to the maintenance of fertility and of standards of cultivation.

Limes, including both lime juice and lime oil, are still the staple industry of Dominica and are of considerable importance in Trinidad and British Guiana as well as in several of the smaller Windward and Leeward Islands. They are grown predominantly on estates of small or medium size, weak in capital resources and now heavily indebted. Hurricanes and wither tip disease have hit them hard in the main centres of production and the world fame of the West Indian lime for quality has not saved them from the practical disappearance of the market for natural lime juice owing to the growing use of synthetic substitutes. There is still a market for lime oil, though on a reduced scale, and Jamaica has attempted to build up a small trade in fresh limes through its agricultural marketing division. The industry has been too weak and disunited to show much energy or resourcefulness in meeting these difficulties and the individualistic outlook of every West Indian island has been a fundamental weakness. This was the

main reason for the failure of an attempt to induce all West Indian colonies interested in limes to co-operate in a marketing organization.

On the side of actual production the weaknesses disclosed are even more serious. Apart from a few well-managed estates and attempts on a wider scale to introduce alternative crops little has been done to obtain scientific assistance or even to maintain a fair standard of husbandry. Cultivation is reported to have been commonly neglected and weeds insufficiently checked, so that fertility is not maintained, and erosion on a substantial scale is a necessary consequence. Planting up is often carried out on a crop-sharing system under which tenants undertake to plant the trees and tend them up to bearing. In return they are allowed to grow ground provisions among the trees, possibly receiving a cash payment in addition. Good planting cannot be effected in this way nor has the peasant any permanent interest in maintaining fertility. As in the case of cocoa a large proportion of the estates are in areas which experience has shown to be unsuitable for the production of limes on account of the practical certainty of wither tip disease. This has been the cause of widespread ruin of estates.

The pre-war citrus industry, mainly concentrated in Jamaica and Trinidad, is a relatively new plantation industry of some importance with possibilities of development which are described as highly uncertain. It has received substantial assistance from the Government of Jamaica, first in 1930 in the shape of a grant to the Jamaican Citrus Producers' Association, a co-operative organization of producers, for a central packing house for the purpose of improving the preparation of the fruit for market. Much progress was made in developing the trade, but prices were unfavourable, and internal disputes in the Association over marketing policy alienated some of the most enterprising growers and brought the Association into financial difficulties. In 1935 therefore Government took over the packing house and made loans available to planters for laying out new orchards, loans whose repayment by many of the less skilful planters is regarded as uncertain unless better financial returns can be secured. A feature of special interest in connexion with the industry is that its future depends not only on raising the general standard of cultivation methods, but also to an unusual extent on rationalizing and improving marketing methods, coupled with an energetic and resourceful sales policy. An expanding demand was being met by a more rapidly increasing production capacity in many countries, but the most important competitor with the West Indies was Palestine, over which the West Indies receives a substantial tariff preference.

Coconuts represent an industry of a different type in that its main product, copra, is not only an important export, but is also the raw material of a manufacturing industry including soap, margarine, edible oils and lard substitutes, which is carried on on a considerable scale in

Jamaica and Trinidad. Small factories in those islands supply practically the whole local demand for edible oils, and part of the demand for other coconut products. An attempt of the Coconut Growers' Association of Trinidad to get all the colonies to unite in a general selling and manufacturing scheme broke down, but the possibility of extending local manufacture has been much discussed and raises important questions of policy. The existing industries have been made possible by duties or restrictions on compulsory imports; Trinidad imposes prohibitive tariffs on imports of edible oils, and Jamaica prohibits their import except under licence. In Trinidad, however, protection was given conditional on arrangements under which the factories were required to pay a fixed minimum price for copra materially above the world level, to supply edible oil to the public at prices not exceeding those then prevailing, and to pay an excess duty equivalent to the customs duty on oils previously imported. These conditions have been fulfilled at a cost to the public, but in Jamaica the Government has lost revenue, the coconut growers have profited little, and the chief beneficiaries have been a number of inefficient small factories. The Jamaica scheme has therefore been a failure, but it seems *prima facie* not improbable that a properly organized scheme might fulfil the Trinidad conditions and would be desirable in the interests of Jamaica. In the smaller islands local consumption is inadequate to provide an economic basis for a factory, but the Trinidad scheme mentioned above contemplated the Windward Islands, such as St. Vincent, sending some of their copra to Trinidad for conversion into coconut products to be returned for sale in the local markets in place of the present imports. The scheme broke down partly because of the opposition of British soap makers, but mainly because of the reluctance of the Government of St. Vincent to lose the import duties on soap and cooking fat.

Apart however from fiscal and other considerations, the question remains whether it would be right to take further special measures to encourage either copra export or the development of secondary industries until production is made more intensive and efficient. The position in these respects is at present clearly unsatisfactory. Coconuts are one of the most widely spread and widely used crops in the West Indies. A few trees are the usual accompaniment to a peasant's house, and estates primarily devoted to some other crop often have a proportion under coconuts. There are in addition a considerable number of estates on which they are the main or only crop. In Trinidad and Jamaica they occupy 41,000 acres and in Tobago 10,000 acres. In British Guiana also the total area is large though usually shared with rice. In all the colonies a small number of estates practise orderly cultivation, but even these lack the knowledge essential to high level production. On the generality of estates the management of the crop is bad and much planting has been done on unsuitable land. Coconut growing in these circumstances becomes no more than an orderly kind of forestry with natural regeneration. Producers argue that they cannot afford drainage and other necessary improvements at the present level of prices, but under West Indian conditions the markedly low level of coconut growing is uneconomic, and represents an inadequate use of land which the West Indies cannot afford. It is moreover not merely a case of competition with equally inefficient coconut producers in many parts of the world, but also of competition with other oils, for some of which careful methods of production are being fostered by ample research. The main argument in support of plantations is that based on their superior efficiency, and that condition does not appear to be fulfilled on a large proportion of the estates in the West Indies. A great change has, it is true, taken place in the copra market as the result of the war, but it is not yet possible to form any opinion as to the permanence of the advances in prices. The competition of the whole range of oils and fats is not likely to be less in the post-war than in the pre-war period, though the relative importance of the various sources of supply may change.

Rice and Minor Crops

Rice, in most parts of the world pre-eminently a peasant crop, is in the British Caribbean area partly an estate crop in the main area of production, British Guiana, but it is grown on a small scale by peasants in Trinidad and British Honduras. In British Guiana it ranks next to sugar in importance and there is a considerable export trade to the West Indies, especially to Trinidad. The trade has however tended to decline owing to the competition of Burma and India, and the reasons for this decline are not to be found either in any inferior intrinsic quality of the local rice or in low average yields. They are the result of fundamental defects in the whole structure and organization of the industry. With the decline of the sugar industry rice has tended to increase as an estate crop; some sugar estates devote the wetter portions of their land to rice, and a number of abandoned sugar estates have been divided up into small or medium-sized estates growing rice as a sole crop. Parts are cultivated directly, and parts are leased to tenants at high rents, and almost all the estates are owned by individuals. The larger owners have rice mills where they both grind their own produce and buy in that of peasants, or mill it on commission. The rest of the 225 rice mills—mostly very small—are owned by merchants or dealers who buy the peasant produce, and either export it themselves or sell it to merchants. The estate owners are in many cases badly off, and most peasant growers are in debt to the millers, who in turn are indebted to the merchants. Many of the mills, and not only the smaller, are inefficient in equipment and in operation. Dressing, blending and marketing are equally inefficient, so that Government has had great difficulty in attempting to work a system of grading for export. The dealings of the many intermediaries represent a heavy burden on the actual producers, and more especially on the peasants. The methods of growing, whether on estates or peasant holdings, are primitive, and owe nothing to science or to the actual practice in Eastern countries. The maintenance of the waterways for irrigation and drainage, which are essential to the maintenance of fertility in the coastal area of British Guinea, is usually neglected, as it is accepted that rice cannot pay for proper maintenance of these works. Great improvements are clearly necessary both in growing, in processing and in marketing. These circumstances have led to the proposal to replace the numerous small rice mills by a large central mill financed by Government on the Essequibo coast, to be supplemented later by other central mills if necessary. This scheme is linked with plans for a guaranteed minimum price to growers, and for providing the necessary credits for the period between harvesting the crop and the sale of the rice to the importing country.

Other crops grown both by estates and peasants and of minor though considerable local importance are sea island cotton, arrowroot, cloves and nutmegs, coffee, tobacco and cassava. Cotton is mainly a product of the Leeward and Windward Islands; as an estate crop it is fitted in between periods of cane growing in some cane islands, but elsewhere it is the chief crop for some small estates. In the latter case the system is one of continuous cultivation followed by a rest, and is described as an unorganized form of shifting cultivation reducing soil fertility and often causing bad erosion. Cotton is more suitable as a peasant crop, both as a convenient source of cash, fitting in well with mixed farming, and as a component in a rotation not necessarily causing erosion. The needs of rearmament brought about a recent recovery in the industry, but its long-term prospects are considered to be precarious. As an estate crop it certainly seems to have no future in the West Indies.

Arrowroot is practically confined to St. Vincent where it is the principal crop and basis of export. One third is produced by peasants, and the remaining two-thirds by estates of varying sizes but mostly small and some of them heavily embarrassed. The industry is one with a limited market, so that St. Vincent would be seriously affected by its proposed extension to other islands. After prolonged adversity it was restored to a fairly satisfactory condition, mainly by the introduction of a compulsory marketing system under which all the arrowroot is processed and sold by a single organization, the Arrowroot Association, in factories of very varying efficiency. The crop is grown continuously and all on hillsides so that it is necessary to take precautions against erosion.

Cloves and nutmegs are grown in Grenada, where taken together they equal cocoa in importance. They are produced on estates and also by peasants; both have the great advantage of safeguarding the hills on which they are grown from erosion. The financial prospects of the industry are however poor. Coffee, once so important to Jamaica, is now a declining industry. Erosion has destroyed the plantations which once produced Blue Mountain Coffee, and the main estate production is of Liberian coffee grown on very small estates in British Guiana, with small patches of other types on cocoa estates in Trinidad, and a considerable production on peasant holdings in Jamaica. The methods of cultivation and processing are as a rule on a low level both in the case of estates and of peasants, and the prospects of the industry are small.

Tobacco for commercial manufacture is not an estate crop, but is widely grown in Jamaica on the larger peasant holdings with suitable land. Many cultivators have had the usual experience of disappointment and loss from attempts on unsuitable soils, but with Government assistance and advice there has been encouraging recent success in growing and manufacture. Local factories in Dominica and British Honduras have also developed production to some extent, but expert enquiry and advice is essential to healthy development. Cassava is another crop which has been frequently tried with small success. The latest attempt has been in British Honduras where a company is erecting a factory and planning both direct production and purchase from peasants.

Agricultural Credit

The heavy burden of debt on many of the estates and on the great majority of the peasants has been referred to in various places. Little has been done up to the present to meet their various needs for agricultural credit. So far as landowners are concerned, apart from the ordinary private banking facilities the most interesting developments have been in Trinidad where a Government Agricultural Bank has been established with a capital of $1,200,000 provided by a loan raised locally. It has the dual purpose of making loans to agriculturists secured by first mortgages on properties repayable over a period of thirty years, and also temporary advances on crops repayable within the crop season. On occasions Government has also made advances free of interest to certain owners of cocoa plantations who were unable from their own resources to meet expenditure on maintenance of their estates. The tendency to irresponsibility in regard to money obligations makes the problem of credit to peasant cultivators in the West Indies a very difficult one. There are agricultural credit societies financed by Government advances in Trinidad, and Co-operative

Loan Banks to which loans are made by the Agricultural Loan Societies Board in Jamaica, but their operations have been on a small scale.

Taking all the various factors into account it cannot be said that, apart from the sugar industry, the outlook for export agriculture in the West Indies was a very encouraging one before the outbreak of war. A diminishing volume of employment seemed probable in most of the branches of agriculture.

Serious as is this position for both plantations and peasants in their closely interwoven systems of production it is specially menacing to plantations which live by and for exports, except in so far as they can be connected with local secondary industries such as those depending on coconuts. Under West Indian conditions of population density in relation to the available area of good agricultural land efficient plantations are essential to the attainment of the necessary high level of production, and the regular wages paid by them are a very valuable supplement to peasant resources. On the other hand inefficient plantations without the necessary capital resources, and this description seems to apply to a considerable proportion of the existing plantations, contribute very little to the economic resources of these colonies, while the inadequacy of the area available in the more important colonies for peasant holdings suitable for adaptation to mixed cropping units is generally recognized. The general land hunger is in itself a social factor of great importance with dangerous possibilities. In theory land is available for purchase by peasants in almost any district in any one of the colonies, though where estates are reasonably prosperous there is a natural reluctance to sell any but mediocre land. In practice however there are many complaints of excessively high prices being charged, though the general situation is not clear, and in some colonies there are complaints of the heavy costs of survey and conveyancing. The position would be less difficult if any satisfactory local system of tenancy had been evolved, but this is unfortunately far from being the case. Insecurity of tenure is the general characteristic of local tenancies and the usual conditions of tenancy are either cash rents, often unreasonably high, or rent in the form of a share in the crop.

Share-cropping and Possible Developments

The latter 'share-cropping' system is found in all the British West Indies, but especially in the smaller islands. The landlord's part in all these colonies amounts to little more than collecting his share of the crop. In some cases he may grant grazing or fuel rights free; in others, as in the case of sugar cane, he may act as agent in arranging for the tenant's crop to go to the factory, making a charge for the service. In addition it may be provided by agreement that the tenant shall sell his crop only through the landlord. The system has been generally condemned. For the tenant it is harsh and dispiriting. As neither tenant nor landlord believes in the security of the letting neither will risk doing anything by fertilizers or cultivation to keep up the fertility of the land. In effect, therefore, sharing is equivalent to unsystematic shifting cultivation with all its attendant evils. The owner was forced into the system by inability to cultivate directly on a profitable basis, and the tenant, who would otherwise have been a worker on the estate, is equally unable to escape from it. Such a system, with the landlord as a mere incubus fulfilling no economic function, cannot produce a healthy agricultural economy.

Two lines of development have been suggested as possible. The owner might be encouraged and financially assisted to get his land into good order, and to manage it on an improved cash or share rent basis fair to the tenant and maintaining fertility in the soil. Alternatively Government might acquire the property and put the present share-croppers on it as land settlers. As regards the first solution, its success would depend mainly on whether it is possible to change the present crop-sharing into a mutually satisfactory relation between landlord and tenant, though the history of the system in the Southern States of the United States of America does not provide any hopeful suggestions in this direction. On the other hand, as noted earlier, France, Northern Italy, and the Basque Provinces of Spain, provide instances of more satisfactory forms of *métayer* tenancies, and a form of this tenancy seems to work satisfactorily in the Netherlands Indies.[1] In India, where many landlords had also become mere receivers of rent so far as the tenants were concerned, though they fulfilled useful functions in other respects as intermediaries between Government and the actual cultivators, large areas were in various parts of the country held on a crop-sharing basis. When it became clear that this arrangement was burdensome to the tenant and prejudicial to the maintenance of fertility the solution usually adopted was a conversion of the crop rents into cash rents on the basis of previous average receipts on estates under Government management through the Court of Wards or on other estates keeping regular accounts. In some precarious tracts of fluctuating rainfall the rents so fixed were modified annually on the basis of the areas cropped in that year, and in all cases rents were subject to reduction to meet special calamities such as those caused by hail, drought or locusts. Such a system would however be unworkable in the colonies in the absence of any regular organization of land records.

It is not easy to develop a satisfactory system of tenancy if neither owners nor tenants have sufficient knowledge of the systematic agriculture by which the use of the land can be permanently improved. The problem is further complicated if it involves re-establishing estate

[1] See p. 18.

holders, a large proportion of whom are heavily indebted, and enabling them to fulfil any real economic functions. In many cases the burden of debt might be too heavy for assistance to be given by Government with any prospect of repayment. The more efficient estates would be worth preserving as a valuable complement to peasant agriculture of the West Indian type, particularly when they are concerned with products such as sugar in which the estate has definite economic functions which in its absence would have to be arranged for in some other way. Many estates however would hardly seem to justify their preservation, especially in those islands in which share-cropping is most extensively practised, while an increase in peasant farming in all the colonies is required to ensure the larger production of food for local consumption and for dealing with the problem of under-employment.

Land Settlement

Peasant land settlement has in fact taken a prominent place in the proposals for improving the position in the West Indies. The Royal Commission of 1897 put it first among their measures for relief, and the West Indian Sugar Commission of 1930 supported their view. Many attempts at settlement have been made, but few have been on a large scale, and still fewer have been an unqualified success. There have been various examples of the disregard of some of the requirements contributing to the success of such settlements, though more successful examples are found, as in Anguilla, Nevis, and Antigua. One main cause of these failures lies in an inadequate appreciation of the fact that land settlement is only one aspect of peasant farming, and means no more than an orderly plan for settling people on the land in considerable numbers as small-holders, and providing them with assistance in purchasing and marketing, instruction in methods of cultivation and credit facilities. The necessary careful examination of the conditions of the area prepared for settlement has often not been adequately carried out nor have sufficient precautions been taken, through the system of tenure or otherwise, to secure mixed farming instead of specialization, compact holdings instead of scattered plots, and to avoid deterioration of the soil through improper methods of cropping and of cultivation. The weak points in the character of the West Indian peasants have been contributory causes, especially the lack of self-reliance and of any tradition of co-operation, the tendency to rely on Government assistance rather than on their own exertions, and the reluctance to meet such obligations as the repayment of loans or the payment of rent or taxes on small properties. It also tends to be forgotten that established cultivators have as much claim to assistance in their difficulties, such as those connected with marketing, as new settlers.

There appears to be fairly general agreement that the number of peasant holdings should be increased and their yield improved, but further land settlement is only one of the means, and as experience has shown, a very expensive means, of securing these aims. In many cases the results have been disappointing to the settlers, who cannot therefore yet be regarded as permanently established on the land. Efforts for the betterment of existing peasant agriculture might indeed have been more practical and fruitful, including the placing of the relations of landlord and tenant on a more satisfactory basis, particularly as regards providing for compensation for unexhausted improvements. Whether settlement is carried out by estates or through schemes sponsored by Government, it can only be successful if it is based on a definite policy as regards the system of tenure, the methods of agriculture and cropping, marketing—preferably co-operative, and in some cases, such as British Guiana, the responsibility both financial and executive for drainage and irrigation. Control and supervision are essential at the earlier stages, such as is made possible by the land tenure system in Malaya, and by the recent Enactment in Ceylon. This is difficult to secure where, as has frequently been the case, the holdings have been sold on an unrestricted freehold basis. This system of tenure has the serious weakness that the holdings are liable both to excessive sub-division on the death of the owner, and to absorption in larger interests, usually as the result of indebtedness to traders. There is the further consideration that improvements in the standard of life in the West Indies largely depend on the more intensive use of the soil and that large-scale enterprise has the advantage as regards efficiency of production. Unless therefore the small man can be brought into the sphere of large-scale production by some form of co-operative use of the land a reduction in the standard of living may be the effect of the extension of peasant settlement. As regards all these fundamental questions the procedure has hitherto been rather haphazard in many cases, but an interesting example of careful organization of a peasant settlement—though of peasants of a status much superior to that of the average West Indian—is provided by the scheme for refugee settlement in San Domingo, an experiment which unfortunately has been interrupted by the outbreak of war.

The San Domingo Refugee Settlement

That scheme, which was financed by privately raised capital, was organized as the result of the offer of the Government of San Domingo to receive 100,000 refugees from Central Europe. The terms of incorporation of the Settlement Association provided not only for agriculture as the main activity, but also for all the other types of occupation necessary to an almost self-contained community. The preliminary step to the formation of a long-term policy was the initiation of an agricultural, economic and social survey of the Dominican Republic carried out by the Brookings Institute. The immediate scientific needs were met by experts lent by the Government of the United States or from the Economic Survey, with the Director of the United States Agricultural Station in Puerto Rico as their chief economic adviser. A separate technical staff was however being organized.

The first Report of the Association deals with the period up to the end of 1940 by which time 252 settlers had arrived; 1,000 more were expected in 1941. The Report lays great stress on the necessity of strict discipline both with regard to health measures and to all the economic activities of the settlement. Wide powers were vested in a manager and all prospective settlers had to sign an undertaking to comply with the orders of the administration, to learn tropical agriculture and home economics, and ultimately to move to homesteads as permanent settlers, practising some form of agriculture for which they were considered to be fitted. Agriculture was however not to be the sole occupation, and the need was recognized for settlers with a modest capital of their own to set up small complementary businesses such as cheese-making, shoemaking and other industries. As regards agriculture the intention was that, after a preliminary training, including hard manual work, they should move into homesteads in groups of ten or twelve families. Each settler was to receive as his individual holding a plot of land not exceeding ten acres in area, with the necessary livestock and equipment. In addition they could become shareholders in plantation enterprises worked on co-operative lines. It was recognized that the foundation of the agricultural programme should be the provision of an adequate and balanced diet, which under the local conditions was believed to be attainable without much difficulty. This subsistence agriculture had however to be supplemented by some form of export production to secure a cash margin, and the proposed co-operative activities were mainly directed to this end, but also to some extent to the production of local food supplies, dairying more especially. Surplus products were expected to find good markets, both locally and in the rest of the Caribbean area, and—much the most important—in New York. The settlers' agricultural adviser recommended that they should avoid crops produced in other parts of the world by well-organized and capitalized industries, and should concentrate on 'peasant crops' in which competition was usually less severe. Dairy products and tropical fruits in particular were expected to find good markets, and land not suitable for ordinary agriculture was to be used for the production of essential oils and for timber.

Obviously the problems of a European peasant settlement in the West Indies differ in essential respects from those of a settlement of the local inhabitants and this would be even more true if the comparison was made with the ambitious scheme for a large-scale settlement in the isolated central area of British Guiana. Health problems, for example, would be less difficult, and the possibilities of white manual labour in a tropical rain forest climate would not enter into the question. The standard of living aimed at would also be very different. The agricultural and economic problems would however present many similar features, and a striking characteristic of the San Domingo scheme, though much less so of the corresponding project for British Guiana, was the elaborate regimentation and detailed control which were considered necessary to successful settlement. Whether the scheme would have been successful for this type of settler and operating under these very special conditions cannot now be said, but regimentation to this extent would hardly seem to be workable for the West Indian peasant with his individualistic tendencies and lack of any tradition of co-operation. Nor indeed would it be likely to appeal to British settlers under similar conditions.

Central Farms

The general aim of a modern agricultural policy for peasants is by some form of co-operative organization to enable the small-holder to obtain a share in the advantages of large-scale operation both as regards the scientific technique of production and the later stages of processing and marketing. One type of organization directed to this end which has been the subject of a good deal of discussion both in the West Indies and in parts of Africa is for the grouping of settlers round a central farm, which in the case of the West Indies would probably have to be maintained by Government. The central farm would supply instruction, grant advances on crops or other suitable credits, arrange by wholesale buying for cheap supplies of fertilizers and other requisites, and be a centre for the co-operative marketing of produce and a focus of general culture and social intercourse. It might also undertake heavy cultivation for settlers by the use of mechanical power. Successful farms carried on on these lines would, it is contended, provide for an advancing agriculture, and for the co-operation in production and in marketing essential to peasant welfare, while ensuring against the dangers both to the fertility of the soil and to the welfare of the settlers liable to arise from uncontrolled peasant operations depending on miscellaneous sources of credit. In a more elaborate form, and applied to a much greater variety of purposes, such a scheme would in many respects be analogous to that operating in the case of the sugar industry in Fiji.

There are however substantial difficulties in the practical working of such a system. If the central farm is to fulfil its intentions, its organization must necessarily be somewhat elaborate, and it will therefore be expensive unless it serves a large number of settlers. Co-operative marketing of produce from a large number of growers, moreover, depends for its success, as do all forms of marketing, on a reasonably steady output, and experience in many parts of the world has shown the difficulty of securing this from peasant producers. This has, for example, been one of the principal obstacles to the working of mills in connexion with the palm oil industry in West Africa, and it was apparently one of the reasons for the decision of the 'Huileries du Congo Belge' to change over from reliance on small producers to the establishment of their own plantations. In most cases the securing of a steady output would involve a considerable measure of constraint as regards cropping plans and the general programme of work. A central service for heavy cultivation by mechanical power, in particular, would imply a high degree of regimentation. The strain placed on any co-operative sales organization of small growers by any prolonged period of low prices may also be an important factor, as has been illustrated in the case of the Native Co-operative Union in Tanganyika and in the West Indies themselves. Apart therefore from the physical features of the West Indies, which in most of the islands do not provide many large homogeneous areas, a co-operative organization based on a central farm requires a subordination of the interests of the individual to that of the whole which would with difficulty find acceptance among peasants of the West Indian type lacking any traditional basis for joint action.

Collective Farms

Collective farming such as is being carried on in Russia on an immense scale would seem to be even less applicable to West Indian conditions. The limitations of the present study will not permit of more than a very brief summary of some of the factors distinguishing the conditions in the U.S.S.R. and in the West Indies respectively.[1] Russian policy hesitated for a long time between the development of agriculture on a peasant basis and collectivization. When under the Bolshevik regime it finally decided on the latter as the line of advance, the motives of the Government were almost as much political and ideological as economic. In the economic sphere the collectivization of agriculture was regarded as an essential factor in the industrialization of the country; more labour was needed for industries and it could only be rapidly obtained by transferring it from agriculture. Regular food supplies had moreover to be assured to the industrial areas, and this was for long a very difficult problem. Mechanization and scientific agriculture were the means to be used and they were particularly

[1] This is based on the following books: L. E. Hubbard, *The Economics of Soviet Agriculture*, Macmillan, 1939; Sir J. Maynard, *The Russian Peasant and Other Studies*, Gollancz, 1942.

applicable to the black earth and steppe grain-producing areas where collective farming has made the greatest strides. In the northern and north-western regions with a different climate and different types of agriculture they were less successful. The Machine Tractor Stations, in which an immense capital has been invested, to a large extent control the working of the farms—and incidentally the openings which they provide for skilled and semi-skilled labour have done much to change the mental outlook of the younger peasants. Mechanization appears to have substantially increased the out-turn per head of the rural worker, though with little advance in the out-turn per acre,[1] yet in spite of the transfer of millions of workers to industries, Sir E. J. Russell found in 1937[2] that Russian farms employed from two to four times as many workers per 100 hectares as in England.

In theory the farms are co-operative and democratic organizations, but the word co-operative has a very different connotation in Russia from that current in England, and in Hubbard's opinion the members of the *Kolkhoz* would be more correctly described as working co-partners—and very much the junior partners—with the State. Their share in the profits is measured by the number of working days, and the working day is not measured by time. Both the schemes of production and the systems of marketing are closely controlled, though the general assembly of the farm and its executive organ, the managing committee, have theoretically the ultimate authority within the limits of the State planning scheme. There is a market for all they can produce though the return to them in money or in goods is largely under State control, direct or indirect. As Maynard has shown, these sweeping and sudden measures did not represent such a revolutionary change in Russia as they would for the peasants in most countries because in many parts of the U.S.S.R. communal control of cultivation, including the periodical redistribution of land, was still a living memory. The tradition of communal control through the committee of the *mir* had accustomed them to the idea of central control of farming operations. The Soviet idea and practice of central scientific control was of course very different from the traditional organization, but nevertheless the *mir*, which had gone underground, reappeared as the general assembly of the collective farm, and as such exercises a considerable influence. The Machine Tractor Stations which meet the most pressing of the needs of the smaller peasants helped largely to reconcile them to the limitations on their freedom of production, and the richer peasants who opposed the new measures were 'liquidated'. On the other hand scope was left for the peasants' desire for individual possessions by allowing small areas to be set apart as their private property with liberty to keep a limited amount of stock and poultry.

[1] Hubbard, op. cit., p. 257.
[2] Ibid., p. 262.

The conditions which made the great experiment possible do not exist in the West Indies. Except in some of the main sugar producing areas, there are no great stretches of land suited to mechanical agriculture, and a large proportion of the present small peasant holdings are in broken country, and are devoted to crops best worked by manual labour. There are no great industries to which labour made surplus by changes in agricultural methods can be diverted, and as a necessary consequence there are no adequate internal markets. Their main cash crops cannot be guaranteed a home market or, up to the present, even an international market at a reasonable price. There is little surplus of good agricultural land and there is no traditional basis for communal activities in production. The advantages to the peasant from a collective farm system in respect of financing and marketing would therefore be much more difficult to realize in practice, while the disadvantages from the enforced regimentation and sacrifice of personal desires would be greater and more keenly resented than in the case of the central farms discussed earlier. Even under Russian conditions the great experiment was only made possible by the use of ruthless methods in the early stages though these were supported by a large measure of consent on the part of the poorer peasants.

These seem somewhat negative conclusions. The fact remains that even if these special types of organization are not suited to the conditions in the West Indies it is essential to the prosperity both of planters and peasants that large- and small-scale agricultural systems of production should be improved in efficiency and should be balanced in relation to the general interests of the community. This implies not only State policy and planning—having regard to the international economic policies on which these colonies are peculiarly dependent—but also a much wider application of the principles of co-operation in its many possible forms. This is necessary for many types of plantations, but it is much more necessary for the weak and unorganized peasants whose manifold needs have hitherto been met so inadequately.

IV. THE TROPICAL AFRICAN DEPENDENCIES

THE African dependencies of the European metropolitan Powers which will be considered in this chapter are all included in the central mass of the continent lying between the latitudes 20° N. and 20° S., and are therefore entirely tropical in general character except in so far as modified by elevation. The area of this great central block is over seven million square miles if the Anglo-Egyptian Sudan is included. The population has been estimated at 82 millions, but the density is very unequal, varying from 58·9 per square mile in Nigeria, and 44·9 in Uganda, to 14·0 in Kenya, 10·0 in the Belgian Congo, 8·0 in French West Africa, 4·8 in Northern Rhodesia and 3·6 in French Equatorial Africa. Even these very varying figures of average density do not show the inequality of the distribution; in Tanganyika, for example, with an average density of 14·8 per square mile, three-fifths of the territory is almost without inhabitants, mainly as the result of an absence of water supplies.

There is an immense variety of climates and of rainfall, including the steaming heat of the great equatorial river basins, the temperate conditions and moderate rainfall of the central plateau and of the eastern highlands, and the aridity of the semi-desert areas bordering on the Sahara desert to the north and the Kalahari to the south, and of northern and eastern Kenya. There is an equal variety of soils and of vegetation, from the often deceptive appearance of exuberant fertility of the rain forest of the equatorial river basins to the great bush and grass savannah tracts which include the bulk of Central Africa, and the highland areas, east and west, largely volcanic in origin. Broadly speaking, however, 'save for some exceptions, limited in area, the soil through that part of Africa with which we are concerned is generally poor, and soils of the arid or semi-arid regions, which make up perhaps half of the total area of the continent, have little humus. In addition one or more of the elements essential for plant growth, notably calcium and phosphorus, are insufficient over wide areas, and in arid conditions "brak" or "alkali", usually sodium salts, form layers toxic to plant growth.'[1] These conditions have an important influence not only on the possibilities of arable cultivation, but also on the quality of the stock which can be reared.

The water resources are very unequally distributed, and, except as primitive supplies for man and stock, are still practically unexploited. Except for the irrigation system in the Gezira of the Anglo-Egyptian Sudan and the French West African project in the Upper Niger no use

[1] Lord Hailey, *An African Survey*, Oxford University Press, 1938, p. 880.

has been made of the major rivers for irrigation purposes, and even minor schemes of this kind are still few and far between. So far as is known, however, opportunities for large-scale developments of this nature are in reality few owing to physical or climatic reasons. On the other hand there may be wide scope for smaller projects in countries like Nigeria, and the construction of dams for water conservation has hardly begun.

There is an immense variety of conditions as regards the degree of agricultural inclinations and of agricultural skill among the many peoples at all stages of civilization. On the one hand there are primitive self-subsistent communities such as those on the Nigerian plateau or in the equatorial rain forests; on the other hand there are pastoral tribes such as the Fulani and Masai, and comparatively advanced agriculturalists such as the cocoa growers on the Gold Coast and the cotton growers of Uganda. Some of the most primitive tribes have an instinctive judgment of soils, and practise an intensive subsistence agriculture. All are hampered by the wide prevalence of many debilitating diseases apart from the generally low standard of health of tropical peoples. A special problem peculiar to Africa is the very serious obstacle to the introduction of improved agricultural implements involving the use of animal power presented by the prevalence of tsetse. This scourge makes it impracticable to keep cattle in a large proportion of Central Africa. The alternative of an advance to mechanical cultivation is practically impossible for the peasant both because of the capital expenditure and the high cost of fuel.

The problem of plantation and peasant export production in tropical Africa is therefore of a different character and has a very different history from that which it has presented in the colonial dependencies previously considered. In these, economic considerations have been the deciding factors in the investment of capital in the production of a limited number of tropical products for which there was an expanding market, and Government policies were similarly determined by economic motives. The interests and attitude of the native communities were only taken into serious consideration at a later stage in countries where there was a substantial local population. As only a few special commodities were required, production was restricted to the limited areas providing the necessary conditions of soil and climate. In many cases there was practically no population in such areas and political problems only arose later as the result of the importation of labour by planters. Where the population was dense it usually possessed already a high degree of agricultural skill. European settlement as an end in itself was not an important factor, though planters, once established, for economic reasons tended to obtain a considerable degree of political control. The producing areas were in general not very distant from the sea, and internal transport and communications, though very important, were less essential than the organization of shipping facilities.

In the great continental area of Africa with its immense variety of soils and climates and every degree of density of population at all stages of civilization the problems were much more complex. The bulk of its resources both agricultural and mineral were far inland, and their development for export could not even begin until railways had made it possible to overcome the barriers which blocked the approach to the central mass of the continent, the swampy and malarious belt of forest on the west and the wide waterless strip on the east. Even railways however still leave the central mass under the disadvantage that its main economic resources are at so great a distance from the ports that the long haul to the coast involves such heavy transport costs as to constitute a serious handicap in the world market for the cheaper and more bulky products. In Africa again it was not merely a case of finding the best means of producing a few tropical commodities generally introduced from abroad. In West Africa it meant adapting to modern conditions old native agricultural industries, while in East Africa some of the products which they tried to develop for export competed with those of the great agricultural countries of the temperate zones. Except in a few areas of relatively dense population the inadequate supply and the poor quality of the local labour were a problem for plantations, and in these areas the climate was generally adverse to white settlement. Slavery and indentured labour from outside Africa were no longer possible expedients, apart from climatic difficulties which had frustrated some French and Belgian attempts at introducing Asiatic or other imported labour. Only slavery had made it feasible for Saiyid Said of Zanzibar to develop the great clove plantations in Zanzibar and Pemba, or the Portuguese to establish their early island plantations. Political policy also played a larger part in Africa. On the one hand European settlement in climatically suitable areas was regarded as an end in itself and the inducement to settlers to introduce European capital and management was not so much the prospect of profitable scientific production, about which many of them knew little, as the attractions of a new way of life. On the other hand, when a substantial native population already existed the maintenance of native social and political institutions and the development of agriculture on a peasant basis had become a definite policy, more especially in British dependencies. Political, social, and to some extent moral issues played as large a part as purely economic considerations.

WEST AFRICAN DEPENDENCIES

It has been noted earlier that the physical and climatic conditions and the densities and character of the native populations have combined to determine different lines of agricultural development in the western, central and eastern regions of tropical Africa. It will be convenient to begin with West Africa as representing both the earlier and the more important examples of agricultural development for export as distinguished from the separate though closely connected question of European settlement.

The French Dependencies

The earliest European attempt at plantations—apart from the Portuguese island plantations mentioned earlier—appears to have been after 1820 when an ambitious project of establishing in Senegal large plantations of cotton, indigo, and other products, on the lines followed by the Dutch in the Netherlands Indies, was put forward. Ignorance, the climate, the scarcity of labour, the poverty of the soil, and local wars, brought about an early collapse of these projects, and it was not until the close of the century that the construction of railways made it possible even to consider the production of export crops except near the sea or the small number of navigable rivers. Forest products were then the only export and the concession companies the agents for their collection and marketing. It was not until after the war of 1914–18 that a fuller realization of the possibilities of the French colonies led to the formulation of Sarraut's policy of *mise en valeur*, a part of which was the increasing cultivation of export crops. Under this scheme each colony should contribute its quota of the product for which it was best suited, and the State should co-operate by improving the means of transport on a large-scale plan. The lines which were followed in the development of different parts of the French territories differed widely, partly as the result of Government policies, but even more because of the great variations in the density of population affecting the supplies of labour essential to plantations. In French West Africa development has always been on the basis of peasant cultivation, and has been organized mainly through the official co-operatives called Sociétés de Prévoyance. The great ground nut industry in Senegal and cocoa on the Ivory Coast are purely peasant industries, and palm oil in Dahomey is also a peasant product. There are however large French banana plantations, and smaller plantations of coffee, sisal, kola, and rice, mainly on the Ivory Coast and in Dahomey. Special export facilities have been organized for bananas.

In French Equatorial Africa, with its generally very scanty population, the original intention of replacing the era of great concessions by one of small plantations has not been followed up except to a small extent in the coastal area, and the local administrations have instead pursued an active policy of stimulating native production, more

especially of cotton on a large scale, of oil palms in the Gaboon, and elsewhere of small rubber plantations.

A recent statement of French policy in Equatorial Africa is contained in one of the Memoranda drawn up in 1941 by the late distinguished negro Governor, M. Felix Eboné.[1] He assumes that the majority of the inhabitants will remain on the land within its traditional tribal framework and that in no other way is total progress possible for the native. The Memorandum continues as follows:

'We have a striking object lesson in the success of our collective cotton growing experiment in Ubangui-Shari which has raised poverty-stricken and primitive tribal groups to a level of prosperity which is astonishing. The absence of disorder or interference with customs which has characterized the economic revolution is due to the fact that it took place in the native's home where the requirements of labour could be met without migration, and the resultant benefits adapted to pre-existing conditions.

'What has been achieved with cotton in Chad and Ubangui-Shari can be achieved with other cash crops elsewhere until every district has its own means of producing wealth as well as food. The same method will be followed in each case—village or district cultivation developed by the collective labour and in the collective interest of the local farmers. This will bring with it an increase in population in situ and an improvement in economic and social standards and amenities without loss of tradition.

'Development of native agriculture on these lines is a surer guarantee of the colony's prosperity than any European exploitation with hired labour. The recruiting of labour disturbs the balanced development of the local community and the necessary alienation of land cramps its potential growth. I do not say that no concession at all should be granted to Europeans, but I maintain that it is in principle more profitable to assist the independent native farmer.

'The role of the European planter must, therefore, be transformed. Instead of developing his concession entirely for his own benefit he must make it a model farm for local native producers and act as their adviser and as the middleman for the marketing of their produce. He will supervise all aspects of local agriculture, help the villagers to grow new crops, advise them in their difficulties, and get them the seeds, plants and implements they need.'

It will be seen later that the Governor-General of the Belgian Congo takes a somewhat similar view of the future position of the European agricultural settler.[2]

The main development of European plantations has been in the

[1] *Colonial Review*, Vol. 3, No. 8, December 1944, Colonial Department, Institute of Education, University of London.

[2] See p. 128.

former mandated areas of the Cameroons and Togoland where the French took over the former German plantations and, unlike the British, excluded all German buyers. In 1937 there were three rubber plantations in the Cameroons, and ten companies growing cocoa, besides plantations of bananas; in this area however bananas are partly a peasant product. Coffee has also been 'stimulated' as a native product. In 1937 there were 240 European colonists, and European total production amounted to 77,000 tons as compared with 95,000 tons produced by natives. In Togoland similarly small plantations were encouraged, with palm oil as the main product both for Europeans and for natives, and coffee has received official stimulation as a native product.

Most plantation products receive special advantages in French territories. Preferential prices are secured in France and financed by import duties on similar products grown outside the French Empire.

In both regions official policy and not the respective economic advantages of the two methods of production has been the main factor in determining the extent of development of plantations. Official policy on this subject has been mainly influenced by the labour situation which was described in 1935 as the keystone in the development of the Cameroons. The necessity for the demographic protection of the native communities was insisted on in 1930 when a Bill was adopted by the Chamber of Deputies providing for large colonial loans. The general purpose of the policy in the Cameroons and Togoland was stated to be the preservation of a balance between native and European production, a balance largely governed by the distribution of labour between plantations and peasant agriculture. In 1937 a severe scarcity of labour and the danger of interfering with native food production led to the suspension of all rural concessions. The Administration has concentrated on sanitation and welfare services so as to build up an adequate population. Cotton has a special position. As in the Belgian Congo it is in French Equatorial Africa the main sphere of action of 'educative' productive policy under which European enterprise is only represented by cotton-buying companies with purchasing monopolies over large areas at controlled prices. They organize the ginning and marketing of the product. 'Educative' cultivation is also carried on in Togoland, in the Cameroons, and in parts of French West Africa. The Dire concession in the French Sudan represents a different type of enterprise as the Company organizes and controls the actual cultivation. Under their system each native cultivator in addition to growing cotton is required to plant one hectare of millet and one of rice as food crops. They proposed to establish 700 families,[1] but the terms of the agreements with the cultivators are not stated. In the earlier stages, at

[1] Hailey, op. cit., p. 1051.

any rate, labour was provided through administrative pressure on the local chiefs who controlled a largely serf population.

Major Irrigation Schemes

Some of the most interesting examples of French agricultural development have been in connexion with irrigation colonies. The first of importance was that on the Sotuba Canal near Bamako, a canal originally constructed for navigation purposes and for the provision of hydro-electric power. Far the most important scheme for the production of cotton is however in connexion with the great irrigation project for the Niger bend where the area commanded is estimated at 597,241 acres for the first stage, increasing ultimately to 2,372,166 acres including the area benefited by seepage. About half the area will be devoted to rice, of which Senegal imports up to 80,000 tons, the remainder chiefly to cotton. Like the Gezira scheme in the Egyptian Sudan, the Niger scheme is tripartite, the three partners to it being the Government, the Office du Niger—a corporation financed mainly by Government and controlled by a Director-General—and the peasant cultivators who will have to be brought in from other areas. A commercial company, the Association Cotonnière Coloniale, plays a minor part by supplying selected seed and by acting in some cases as agents for the Government in purchasing and marketing the crop. The whole responsibility for organizing the settlement of the cultivators and for the working of the scheme rests with the Office du Niger. Capital and revenue accounts have not been published as yet nor are figures of cropped area and of water duty available for comparison with similar projects elsewhere. Continuous cropping appears to be contemplated. The heavy capital expenditure estimated at seven and a half million pounds including secondary works involves interest charges at the high rate of 5½ per cent. The peasants who carry on the actual cultivation have necessarily to be collected from a wide area and the terms on which they will hold their land represent an extension of the French system of the grant of concessions to individuals from State lands, the grants depending as a rule on the fulfilment of certain development conditions. In the Sotuba Canal colony referred to above about 5,000 persons have been given allotments in which they will acquire full rights at the end of a probation period of ten to fifteen years, and there will be a large development on similar lines when the Niger canal project comes into full operation.[1] These arrangements are in accordance with the general policy for the individualization of property exemplified by the system of *immatriculation* and the simpler *constatation des droits fonciers*.

This great French project may be compared with its prototype the

[1] Hailey, op. cit., p. 862.

tripartite irrigation scheme for the Gezira in the Anglo-Egyptian Sudan. Construction on that scheme began in 1913 under circumstances which resulted in very high capital charges estimated at nearly £14,040,000. The commanded area was in 1937 estimated to be a little over 800,000 acres, which under the four-year rotation now in force gives an area under cotton, the only productive crop, of about 200,000 acres. They had commenced with a three-year rotation, but experience has shown that even with full command of Nile water a longer rotation was necessary to the preservation of fertility. The State took over all rights to the land on long lease subject to a fixed annual payment to right holders. The capital cost of the work, except that of subsidiary canalization, was borne by the State, which also bears the annual outlay on the maintenance of irrigation. The granting of tenancies to cultivators and the management of the cultivation have been entrusted to the Sudan Plantations Syndicate which maintains a large European technical and advisory staff. It markets the cotton crop, and the proceeds, after deducting ginning and marketing expenses, are divided in the proportion of 20 per cent to the Syndicate and 40 per cent each to the Government and the cultivators. Mechanical ploughing for the cotton crop and the supply of seed are carried out by the Syndicate, but the cost is recovered from the cultivator who also provides at his own expense all the other labour involved, including clearing water courses. The conditions of tenancy lay down that he must devote a prescribed part of his holding to subsistence crops, but no charge is made for the use of canal water in this cultivation. The food crops produced have in fact been very valuable to Egypt. The system gives a high measure of efficiency in cultivation and the conditions laid down have attracted and retained an adequate number of cultivators of whom about 75 per cent were in 1935 local inhabitants or their nominees. The tenants are markedly better off than their neighbours though their position as tenants under close supervision does not, in Lord Hailey's opinion, give them the same sense of stability, or the same interest in their holdings, as is secured by the conditions of tenure on the somewhat similar undertakings in India. The tenants on the Gezira have however come to the settlement with a very different background and with a lower capacity as colonists than the Indian cultivator, while some 12 per cent come from other territories and would probably not in any case be permanent settlers.[1] One defect which has been increasingly recognized has been the absence of any village organization for the purpose of welding them into real communities.

Schemes involving major irrigation works of this character must

[1] For a description of the Gezira scheme, see Hailey, op. cit., pp. 1053–5. The recent decision to nationalize the scheme in 1950 presumably forecasts the end of this very interesting experiment in tripartite operation.

clearly, under colonial conditions, be carried out by the State, and Government must maintain a large measure of control over the distribution of the water and over the agreements with the actual cultivators. This is especially the case when the main agricultural products are for oversea markets unlike the position in Egypt itself outside the Delta and on the Indian canal colonies. Additional reasons for Government control are the social and political problems arising out of the necessity of organizing the settlement of peasants collected from a wide area. The lessons to be learned from such schemes are therefore of limited application to the general problem of plantation and peasant cultivation. On the other hand they are of great importance as a guide to the methods and the prospects of similar schemes in other possible areas. Administrative pressure may produce the requisite number of settlers, but cannot produce cultivators of a suitable type content to make their permanent homes under the new and unfamiliar conditions.

Agricultural Credit

Agricultural credit for the peasants of the French territories is provided through the system of Sociétés de Prévoyance. These societies, the membership of which is compulsory and which are financed by a contribution collected from each cultivator with his tax, have been organized for 101 out of the 118 administrative circles of West Africa and are stated to have 8,500,000 members. The district administrator is president of each society and the secretary-treasurer is appointed by official order. There is however a council of administration elected by the members with advisory functions and similar committees in the sections elected 'according to local custom'. The budget of expenditure is first drawn up and the Government then fixes the amount of contribution required to meet this expenditure, and levies it accordingly. Their resources are thus large; the societies of Senegal had in 1934 1,200,000 members paying an annual contribution of 4,500,000 francs, those in the French Sudan had in 1936 1,005,396 members and a budget of 2,114,033 francs. The receipt of deposits is not permitted but loans may be taken with the approval of Government, and the Agricultural Loan Board in each territory is authorized to lend to the societies.

First organized in French North Africa with the aim of providing against times of famine by compulsory thrift they have been encouraged to adopt a much bolder policy in West Africa and have become one of the principal agencies in the programme for the extension of native production. They multiply and distribute improved seed, make loans in cash or kind, and buy and maintain breeding animals. In Senegal they have financed a large programme of well construction, and they also undertake the marketing of the ground nut crop. A standard price is paid to the cultivator on delivery followed by a bonus on the completion of the sale. The societies vary greatly in efficiency and abuses do occur which are magnified by Chambers of Commerce and by the French press who criticize in particular the participation of officials in trading business. In the Cameroons there is a similar organization with forty-four societies in addition to five societies of European planters. The native societies are similarly official in character and their scope appears to be even wider than in West Africa. It includes cattle breeding, the purchase of implements, the planting of coffee and cocoa nurseries, and the joint sale of produce. They maintain a substantial staff of agricultural instructors, and buy a great variety of agricultural machinery and equipment. Their expenditure in 1935 amounted to 1,579,728 francs and they had a balance of 485,579 francs. In Togoland the system is less fully developed, but six societies have a budget of 340,000 francs and they have received loans of 130,000 francs from the State. Their principal activity has been in providing palm nut crackers for village use, and they have recently added the construction of co-operative tapioca factories. In French Equatorial Africa there are as yet no such societies. An Agricultural Loan Board (Caisse Centrale) has been established for each colony included in French West Africa, as also for the Cameroons and Togoland. They are permitted to lend to Sociétés de Prévoyance, to co-operative societies and to individuals, but in the Cameroons at any rate the Caisse seems to have practically confined its assistance to European planters, and no figures are available elsewhere as regards loans to the native societies.[1] The whole system is characteristically French in its purely official and compulsory character and there appears to be no intention of relaxing official control or of devolving more responsibility on the native members. Their working is much less educative than would be a system of voluntary co-operative credit societies.[1] On the other hand they do get results of a striking character and have in the more advanced societies engaged the interest of many of their members. British dependencies provide many illustrations of the slow progress of any voluntary co-operative movement and of how little assistance such societies are to the great majority of the peasants.

The Belgian Congo

The Belgian Congo provides probably the best illustration in Africa, south of the Mediterranean coastal belt, of a policy of planned development on a large scale. The most striking characteristics of that policy

[1] Hailey, op. cit., pp. 1478–80.
See p. 43 for Dutch criticisms of the great Netherlands Indies credit organization.

may be summarized as follows. It had to begin from the basis of the great concessions and its first aim was to deal with the abuses connected with these concessions. The Congo however remained and still continues as a sphere of big business in which the Government itself has a substantial and in many cases a controlling share. There is little scope for small European enterprise in any sphere. The development again has been predominantly mineral and industrial in character. Official estimates quoted by Frankel[1] show that of the total capital invested up to 1932 only 9.6 per cent was applied to agricultural purposes, as compared with 41·4 per cent invested in railways and other transport, and 19·7 per cent in mining. Agriculture has however also been supported from loan funds raised by Government to the extent of approximately £765,000, and from revenue to the extent of £1,500,000.

The earliest steps for the promotion of agriculture after the Congo Free State was taken over by Belgium followed the tradition of large-scale alienations of land accompanied by conditions to secure fair treatment for natives and the fulfilment of development obligations. The most important of these concessions was that to the Huileries du Congo Belge which are now responsible for the bulk of the palm oil produced on the Congo and correspond in Africa to the great plantations of the East Indies and Malaya. Its history has some interesting features. On the basis of the concession given in 1911 the Company was to have the right to lease a maximum of 750,000 hectares divided between five circles of a radius of 10 kilometres, the area leased in each circle being dependent on the erection of oil mills of a given capacity. The selection was completed in 1926. In 1945 the Company was to be entitled to freehold rights in an area of 150,000 hectares, not more than 40,000 being in any one circle. If in the five years preceding 1945 it exported 30,000 tons of oil it would be entitled to ownership of the whole 750,000 hectares. As the exports from the Congo increased from 36,000 tons in 1930 to 70,000 tons in 1938[2] the last condition would, presumably, be fulfilled. Actually, according to information given to Lord Hailey[3] the Company had only selected 250,000 hectares in the five original zones, partly because of the difficulty in finding areas with no native villages. The terms of the concession had therefore been modified and the H.C.B. had been given the right to select a further 100,000 acres in small blocks of some 10,000 hectares in areas outside the five zones. One-tenth of the 100,000 hectares will be used for plantations, and the Company will get 100 years leasehold rights over the whole 350,000 hectares in four years' time. The feature of special interest in the alteration of the terms of the concession is that it is the

[1] S. H. Frankel, *Capital Investment in Africa*, Oxford University Press, 1938, p. 165.
[2] T. M. Knox, Address prepared for the British Association Section E. 1939.
[3] In dealing with the Belgian Congo I have been helped by notes kindly made available to me by Lord Hailey.

result of a change in the policy of the Company. While they have always devoted close attention to the scientific conduct of the industry both on its agricultural and technical sides they have hitherto mainly relied on the fruit from Nigerian palms from which their large central mills are able to extract up to 90 per cent. of the available oil. By milling fresh fruit they obtain oil with a lower f.f.a. content than almost all Nigerian oil. Under their new policy they are prepared to undertake the heavy expense of large-scale planting of trees with a higher oil content than that of the present local varieties, thereby spreading the overhead costs of the mills over a larger production of oil per ton of fruit milled. That they should consider it worth while to incur this heavy expenditure in areas from 400 to 800 miles distant by water from Leopoldville, the terminus of navigation on the Congo, with a further 150 miles by rail to the sea, is a fact of considerable significance in relation to the system of production in Nigeria which will be dealt with later. Other large-scale agricultural enterprises are represented by some of the old concessions and by the Compagnie Sucrière Congolaise which received a concession of 30,000 hectares on terms generally similar to those of the H.C.B.

These big business agricultural activities are of old standing and the recent tendency has been to concentrate on the development of a *paysannat indigène* as the proper complement to the large-scale mineral and industrial developments. One reason for this has probably been the experience of the small return on the capital employed in agriculture as compared with that engaged in mineral and other industrial developments. The heavy transport and handling charges—unavoidable in spite of low concession rates—are a serious handicap to the profitable export of all bulky agricultural products.

Two other factors have been the desire to raise the native standards of agriculture and of living, and the preoccupation of the administration with the difficulties caused by the inadequacy of the population and the effect on it of the constantly increasing demands for labour. Apart from some tentative approaches to creating a system of peasant proprietorship which have up to the present not been followed up, the policy of improving native agriculture and standards of living has been chiefly implemented by the system of compulsory cultivation. So far as commercial crops are concerned this system has been mainly applied to cotton and to a lesser extent to coffee. Rice is a marginal case as it is both a food crop and a commercial crop for consumption in the industrial areas. In fact the desire to increase its supply to these areas is said to have led to its compulsory cultivation in tracts in which transport difficulties make it unprofitable for the growers, and the Commission Permanente pour la Protection des Indigènes considered that cotton cultivation had similarly been imposed on people who already had more remunerative occupations. Both rice and cotton have been generally accepted as suitable peasant crops and, apart from the advantages or disadvantages of applying educative compulsion, the feature of special interest in the Congo is the definite place assigned to European capital in the organization of their industries. For rice vend is free as it is for coffee which is predominantly a product of European plantations, but zones have been established for factories which in effect gives them exclusive rights.

Cotton has a much more complicated organization. The right of free purchase given by the Cotton Law of 1918 had disastrous results, and the organization of the Compagnie Cotonnière Congolaise in 1920, in which the bulk of the capital was provided by the State and the banks, followed by the Décret Cotonnier of 1921, has resulted in an elaborate system of zoning for ginneries (because in no other way could the necessary capital be obtained), of markets supervised by Government at which alone cotton could be bought, and of fixed minimum prices laid down by Government. In general the ginneries have a monopoly of purchase in their zones, but are obliged to arrange other means than 'portage' for conveying unginned cotton from the markets to the ginnery. There are a certain number of free zones in which outside purchasers are allowed, but they must buy at the supervised markets and at not less than the fixed minimum prices. These prices are fixed before the beginning of the buying season by the Governor-General on the basis of previous actual prices and they remain unaltered through the buying season. To prevent annual discussions of a complicated kind a ready reckoner (*barème*) has been made out by Government in consultation with the Comité Cotonnier Congolaise fixing the local purchase price automatically in relation to the previous year's Belgian prices. An example quoted to Lord Hailey was that if the Belgian sale price of 1937 for ginned cotton was 8·50 francs to 8·75 francs then the *barème* on which the local purchase price would be fixed for seed cotton would be 3·63 francs for the southern regions. The whole of this would not go to the grower, but it would be distributed as follows: purchase price 3·00 francs, *fonds pour distribution d'outillage* 0·05 francs, *amélioration du réseau routier* 0·10 francs. For the northern regions the price would be 3·99 francs. Further, for the purpose of giving greater stability to the price paid to growers and avoiding violent fluctuations from one year to another, the Governor-General decided in 1938 to reserve a proportion of the receipts from good prices of that year so as to be able to maintain the price for 1939 at approximately the same level. What the *barème* would be for cotton bought by the new local factories is not stated. The reserved part of the price is not only applied to the purchase of agricultural implements and the improvement of communications and markets, but also to meeting the losses of the buying companies if the actual market prices are below the standard assumed. If they are above them the balance is paid into the reserve. The peasant producer gets the substantial advantage of a fixed price throughout the season, and a less violent scale of fluctuations from one year to another, but the toll levied on him is a heavy one and the fairness of some of its elements such as the financial charges has been questioned. It seems doubtful however whether the toll would be less heavy under the British system. For example, taking the case of Nigerian ground nuts the declared export value at Lagos was in 1937 and 1938 £12 8*s*. 4*d*. and £7 4*s*. 0*d*. per ton, while the average Kano market prices for those years were £6 7*s*. 9*d*. and £3 2*s*. 10*d*. per ton. The Kano market prices moreover did not represent the return actually received by the producer. Corresponding figures for Uganda cotton are not available.

Coffee is predominantly a European product, but native production, partly voluntary but mainly under the educative system, has expanded substantially both in the Congo proper and in Ruanda Urundi. It was apparently not affected by the prohibition of further European plantation in 1938.

In recent years, however, the Belgian Administration has not been content with educative cultivation of crops of an annual type and of coffee even if supplemented by such products as cocoa and jute. The Governor-General's speech of 1939 laid special stress on this point. He said that the black will only learn to love his land when it really nourishes him. For this it is not enough to develop annual crops, they must be supplemented by permanent plantations. Seasonal cultivation is almost a *cueillette;* the man cultivates and goes, nothing is left. Trees attach him to the soil where they embody his labour. Socially the native who has one or two hectares of oil palms or rubber trees is a true peasant. Moreover it represents the creation of capital, an economic fact of the first importance. The economic instability of new countries is due to the absence of native capital. The profits on external capital are exported or, if invested locally, the resulting profits are exported. Only the resident colonist accumulates local capital in his trees and what he does on a large scale the native can do on a small scale though with results far greater than any possible saving on the low local wages. The cumulative return to the mass of the population of a million such efforts would represent a very large capital. Ten days' work yearly for five years is no heavy *corvée*, but multiplied by a million it means 50 million days' work. Translating it into palm trees it means 200,000 tons of palm oil. Such are the results of capitalizing a little work. The native world is at the cross-roads of its destiny. Of his own initiative the native will do none of these things, he is not disposed to listen to our lessons. It is for us to take him by the hand, to say 'take your hoe' and 'work your field'. When we have thus led him step by step and brought him to the stage of a producing palm plantation we can say '*voilà ta trésor, et maintenant fais ce que tu veux*'. Our task will then be finished, the savage gradually transformed will emerge as a peasant. Until then the obligation to cultivate must remain in the law. It is clear that this Belgian conception of the future of the native peasant producer implies a policy of hustling him along the path of progress willingly or unwillingly, and that his activities are to be applied to practically every branch of what are ordinarily considered plantation activities. Sugar and tea are the only two important exceptions. For this progress he will need land, capital and scientific advice and assistance. Up to the present, scarcity of land has not been a problem on the Congo except in connexion with some European concessions, and in limited areas elsewhere, particularly in Ruanda Urundi where it is acute. The policy of the Administration has apparently been in favour of retaining customary tenures though there has been a movement in Belgium in favour of developing individual tenure. It is however recognized that the extension of commercial crops, and particularly of permanent crops such as oil palms, will tend towards individual tenure, a tendency also prominent in British West Africa.

As regards capital, while the requirements will be greater than in a subsistence economy they will be limited in the main to implements of a very simple kind, and to seed and seedling trees. Mixed farming does not appear to be contemplated for the native producer, nor the use of animal or mechanical power in actual cultivation, but here the general menace of tsetse is probably the determining factor. Under the system of educative compulsion the *barème* explained earlier includes a provision for the purchase of implements, so that to this extent the native is expected to provide his own capital. The system of co-operative societies does not appear to have been developed to any substantial extent. In fact the view of present native capacities reflected in the system of educative compulsion does not appear to be reconcilable with co-operative societies which imply a voluntary association for at any rate partially realized ends. The position would be different if, in the words of the Governor-General, the savage ultimately emerges as the peasant, and co-operative organizations might then be included among the aims of Belgian policy.

The third requisite to the advance of the peasant producer is adequate scientific assistance and advice, and in this direction the Administration has in recent years made substantial advances. The main purpose of the Yangambi Station of Ineac is, in fact, the development of a plantation system appropriate to native holdings. That station deals with rubber, oil palms, coffee and native food crops. The cotton stations at Bambesa and Gandajika also deal with native requirements, and the other Ineac stations deal with the long and short range problems both of European planters and of natives. The independent Caoulac organization is directly concerned with improving native agricultural methods, but concentrates chiefly on food crops.

Belgian native policy must however be viewed as a whole, and to a large extent their policy of native peasant cultivation must be regarded as ancillary to their main general purpose of providing a healthy basis for the mineral and industrial developments which are the economic basis of their financial structure. In particular the demographic aspects of the native question have never been absent from their minds. The Governor-General's speech of 1938 laid down as a first principle the vital necessity of a sane equilibrium between the villages and the industrial centres; an intense vitality of the customary societies is, he said, an essential condition of the prosperity of the colony. Out of a population of a little over ten millions, 500,000 are in European service. Restriction is essential because it is from the villages that recruits come and the departure of adult men affects the whole social structure. The labouring class does not reproduce itself. In the customary societies there are 2,600,000 adult men of all ages and 3,760,000 children, while the *extra coutumières* settlements have 400,000 men and only 211,000 children. The restrictions on recruitment and on the development of new enterprises first imposed on the recommendations of the Labour Commissions of 1928 and 1932 have been considerably modified as knowledge of the actual position increased and industrial labour became more stabilized. They are now on a provincial basis and the percentages first laid down are no longer insisted on. The Governor-General's speech of 1939 summarizes the new policy as consisting in '*favoriser jusqu' à l'extrême limite les entreprises Européennes, mais sans jamais franchir cette limite, sans violer jamais les droits des indigènes considérés comme impréscriptibles. Tenir la balance entre les intérêts divergents . . . suivre en somme une politique du juste milieu*'. He maintained that native agricultural development was an essential part of that policy and to the advantage of both parties. Contented peasants would not necessarily mean fewer recruits; they might demand better conditions of employment, and some types of enterprises might have to change their methods, but this is an inevitable, and desirable, result of any competition.

In the general scheme of things the European is not ignored, but it seems to be contemplated that direct agricultural primary production will not be his main sphere of action. The Governor-General's speech of 1938 lays stress on the consideration that a real native peasantry will assure work to many Europeans both immediately and in the future. Planters could have *metayer* tenants; would-be planters—whom it would be criminal to attract to Kivu—could find scope for their activities as *agents agricoles*, propagandists of new agricultural methods and cultures. When the plantations encouraged by them come into production their energies could be directed to the processing of the products and to the commerce arising from them.[1] Similarly the speech of 1939

[1] *Colonial Review*, loc. cit.

ends with the forecast that the great increase to which he looks forward in native production of cotton, palm oil and rubber would mean a tenfold increase in production, transport, secondary industries and imports, a great river bringing prosperity to black and white alike.

Belgian policy is then in the main directed to the support of 'big business' on the one hand and of peasant agriculture on the other. There is little scope for small European enterprise, and European plantations of small or moderate size have received little encouragement from the Congo Administration or from the Colonial Commission of the Belgian Senate. The chief areas of European settlement have been in Kivu—the only part of the Congo proper climatically suitable to Europeans—and in the Katanga where local markets were the attraction. Apart from palm plantations they have taken up the cultivation of bananas and other fruits, coffee, rubber, cinchona, and tea. In the Katanga, labour difficulties have caused many to go over to dairy farming which has made considerable progress. Even in Kivu however only 23,276 hectares had up to recently been alienated out of 8,000,000 hectares available, and the planters have constantly been in financial difficulties. Coffee planters in particular have suffered severely, and in 1938 the opening of new plantations was prohibited in the interests of protecting the capital already sunk in the industry.

Belgian colonial policy has not been opposed to an extension of European plantations on any question of principle, but as the result of its experience in practice. One school of thought which has at times been strongly represented in Belgium is in favour of mass white colonization (*peuplement blanc massif*) for the purpose of creating an internal market which would ensure the growth of commerce in the colony and the increase of the white population. To this movement the Governor-General's speeches of 1935 and 1936 answer with the question what crops can these colonists grow sufficiently profitable to support the European standard of life. He points to the fact that even then the coffee planters already wanted to stop the extension of coffee plantations, and the Katanga settlers were protesting against sending more colonists to an area where the market was already over-supplied. New colonists would end by being a public charge and if, as the publicists advocated, they were to depend for their living on growing maize for export to Belgium their existence would be a miserable one at the existing standard of prices. A newer version of the white immigration policy is that given by a Senator to Lord Hailey. He holds that in the equatorial regions with a relatively numerous and good labour supply there was ample room, if not for a permanent European population, at any rate for a semi-permanent one; that is to say for colonists creating enterprises, living on the Congo with their families and taking periodical holidays at home. His scheme resembles those put forward, and in some cases attempted, in other colonial territories. It consisted in the settlement of groups of Europeans occupying 500 hectare farms round central factories for the processing of their produce of coffee, oil or rubber. An expert 'agronome' would be in charge of their factories and would be available for general advice and for arbitrating in case of any differences between them. By mutual co-operation the colonists would carry on each other's business during periodical holidays in Belgium. He maintained that colonization of this type was a possible and valuable complement of big business and the development of native agriculture. The settlements would act as schools for new colonists just as the work on plantations would serve as schools for native producers. These somewhat unpractical proposals did not meet with the approval of the colonial authorities.

Recent speeches of the Governor-General show however that the administrative opposition to any large extension of European colonization, though the valuable work done by individual colonists is fully recognized, is based on the very practical grounds of the demographic position in the areas chiefly affected, and on the administrative and financial difficulties experienced in attempting to support the existing number of settlers. Both 'big business' and the native producer had in the opinion of the Government justified themselves by results, but the small European planter had been largely an embarrassment both in the spheres of finance and of labour. The Governor-General's speech for 1938 points out that in the three main areas of European colonization in Kivu the proportion of adult native labour in European employment is a high one, yet out of 68,927 hectares included in grants only 13,331 acres are developed (*mis en valeur*). In another European area only 3,040 hectares have been developed out of 11,024 included in grants. Local labour is clearly inadequate yet the Comité National de Kivu has reserved 190,000 acres for future colonists. The Governor-General maintains that although in theory the Administration might adopt an attitude of complete detachment whether colonists swim or sink, and might content itself with warning settlers of the risks and insisting on proper conditions of labour, in practice the position is not so simple when colonists unable to work their plantations appeal in their despair to administrative officers to help them in obtaining labour. While therefore very doubtful as to the advisability of a planned restriction of colonization in the interests of possibly inefficient present residents, and alive also to the dangers of a policy implicitly involving a guarantee of support to any permitted settlement, he considers that temporary restrictions such as those imposed on new coffee plantations are justifiable. The State must not set itself up as a Providence and so accept a role which it would have to carry out to the end, but in times of difficulty it may legitimately arrange for a breathing space so as to give existing enterprises an opportunity of accommodating themselves to new conditions. They must use the pause to rationalize their enterprises, stabilize and economize their labour, and improve its conditions so as to be able to meet competition. The intervention of the State in providing labour must not operate to prevent the ordinary effects of competition in raising wages and improving conditions. Whatever views may be held about the economic position one thing is certain, namely, that a supply of labour cannot be guaranteed in areas where the recruitment has reached saturation point.

Belgian policy towards European plantations has been of a more definite and planned character than those of the British dependencies. It can hardly be compared with the position of the East African Territories with their much larger areas climatically suited to European colonization, and their predominantly agricultural character without large-scale mining or industrial activities. The conditions are more analogous to those in Northern Rhodesia, and in both dependencies colonial producers suffer under an equally heavy handicap of heavy transport charges. The Belgian policy has not encouraged European settlement, but it is still on a considerably larger scale and engaged in a much greater variety of activities than is the case in Northern Rhodesia. For this however differences in natural conditions are largely responsible as well as the much more extensive network of communications.

British Dependencies in West Africa

In the British dependencies in tropical Africa the problem of plantation and peasant methods of production has taken different forms in West, Central and East Africa. The production of food crops for local consumption is entirely in native hands except in a few small areas of European settlement in Central and East Africa. In West Africa the type of food crop grown has depended more on the distribution of the rainfall than on its annual total, cereal crops predominating in regions with a dry season and root crops in areas with no such distinction of seasons. The standard of farming has depended mainly on the density of the population and on the amount and distribution of the rainfall. When the amount and the distribution of the rainfall render crop production certain the standard tends to be lower than when the rains are apt to disappoint and where there is only one season for crop production.

Population densities and the agricultural capacities of the peoples, together with the climatic requirements for special types of crops, have also largely determined the extent to which European plantations have been established for the production of agricultural export commodities. In the densely populated areas of Nigeria and the Gold Coast there was little opportunity for large-scale plantation agriculture, and in other areas the native inhabitants had shown their ability to produce the crops suited to the local conditions. Where the population was sparse there might be room for both plantation and peasant methods of production, as for example in the fertile Cameroon highlands with their ample rainfall.

Government policies played a large part it is true, as has been pointed out in connexion with the French dependencies, and in the British West-African dependencies the general policy has been opposed to the extension of European plantations and has inclined the balance in doubtful cases in favour of the native producer. This has not always been the policy, as there was a period during and shortly after the regime of the Royal Niger Company when the extension of European plantations was definitely contemplated.

In the absence of any pressure for European settlement the question of the establishment of European plantations was regarded primarily from the economic point of view, and native producers were left with the monopoly of those export crops which they had shown themselves qualified to produce satisfactorily. Such were ground nuts, cocoa, cotton, kola nuts and piassava, which could either be exported without special treatment or only required simple methods of processing. The requirements of the export trade were met where necessary by the introduction of grading, and European activities were concentrated on the commercial side of the industry and on the provision of capital for supplementary purposes such as the ginning of cotton. The stock and dairying industry, restricted to definite areas by the prevalence of tsetse, has also remained entirely in African hands, and the single large-scale experiment in European ranching, that made in Nigeria in 1913, was abandoned after heavy losses had been incurred.

The controversy between the advocates of European plantations and of those who were in favour of reliance on native methods of production has centred round palm oil, practically the only commercial product of a large tract in Nigeria, in which the poor and acid character of the soil makes other valuable agricultural commodities impossible. A similar controversy might have arisen about rubber, and, after the collapse of the wild rubber industry about 1900, Sir Walter Egerton—who had previous experience of Malaya—arranged for grants of land to some European companies to grow hevea rubber trees. Two of these plantations still survive and a number of small native plantations have also been developed near Benin. The growing of rubber on any large scale was however never encouraged by the Agricultural Departments as the price prospects were not attractive, and the general attitude of the Governments to European plantations would in any case have precluded further grants. Since the outbreak of the present war great efforts have been made to increase the output of rubber, but this is almost entirely from wild sources. It is also grown on a small estate near Sekondi on the Gold Coast and in some of the ex-German plantations in the Cameroons. Broadly speaking however it is of little importance to West Africa.

Oil Palm Industry

The position is very different as regards the oil palm industry, the preservation of which is essential to a large population in Nigeria and to the Nigerian finances. It is unnecessary to go into the details of the past controversies or of the uses of palm oil and palm kernel oil both local and in industries. The present position is that the only large-scale plantations are those of the United Africa Company. Of these there are three in Calabar and two in the Cameroons. In the Gold Coast there is a large oil palm concession at Sesi, and in Sierra Leone a plantation has been made over to them by the Government after it had been allowed to go to ruin. The plantations in Calabar and at N'Dian in the Cameroons have been scientifically planted with selected seed and fitted out with modern machinery. The area of the N'Dian grant was extended up to ten square miles on condition that the estate should be 'the means whereby possible improvements in palm culture will be tested on a large scale and demonstrated to the natives in a convincing manner'. One of the most important aspects was the selection of palms for seed purposes and their supply to the Department of Agriculture. These conditions have been faithfully kept both at N'Dian and in Calabar, and the U.A.C. have thus materially assisted in the development of seedling palm plots by Africans in the Eastern and Benin provinces of Nigeria. The plantation at Sesi is much larger—thirty-seven square miles in area—but there has been hitherto little scientific selection of palms and most of the fruit milled is from wild palms either on the plantation itself or in coastal groves connected with the central factory by a light railway. There is constant difficulty in getting men to cut and carry the palm nuts, partly owing to the lower money return as compared with wages on the cocoa plantations, partly because the local inhabitants have to a large extent lost the climbing aptitude. The factory only keeps going by importing men from the palm belt in Nigeria and they cannot get enough of them to operate on a full scale. Recently planting trials on a small scale have been made with seedlings raised from selected seed from N'Dian and the results are considered sufficiently promising to warrant an extension of planted palms.[1]

Apart from these factories the industry is left to the native growers, and the Government policy in Nigeria has been to try to improve their methods by the plantation of new holdings on improved lines, by

[1] These facts and a number of other passages in the section on British West Africa are based on the review of the agricultural position in the Technical Report by H. C. Sampson and E. M. Crowther of the Leverhulme Trust West Africa Commission 1938–9, printed privately for the Leverhulme Trust in 1943.

distributing high-class planting material, and by the introduction of better methods of extraction by hand processes. When central factories failed to obtain the co-operation of native producers in securing regular supplies the Agricultural Department first tried to organize the removal of redundant trees and the planting of seedlings where necessary. Much care and labour were involved which were not easy to provide for communal groves. These improvements in methods were supplemented by attempts to start new individual plantations with selected seed, including many demonstration plots on land attached to schools. The high yields from these plots gave a useful object lesson, and among an increasing number of classes there has been a demand for seedlings for prospective planters. The supply of such seedlings is however apparently still inadequate in spite of the assistance given by the United Africa Company. A greater difficulty is land hunger. The Chiefs and elders do not object to raffia palms, because they are short lived, but the oil palm, being long lived, is not as a rule allowed to be privately planted for fear that its planting would establish private ownership, as in fact it would. Prospective planters therefore often find it difficult to obtain possession of the land, while communal plantations are not yet within the sphere of practical politics as it is very difficult to arrange for the labour required for maintenance until the palms have grown sufficiently to look after themselves. As a result of these difficulties although there are now at least two thousand individual plantations in Nigeria the latest available figures give only 6,588 acres as their total area.[1]

Similar difficulties have attended the attempts to improve the methods of extraction and marketing. Produce inspection, and the progress made by the trading firms in arranging for the bulking and cleansing of native-produced oil before it leaves the coast, have been of considerable assistance, though it is not clear whether they are accompanied by adequate premia on quality. The greatest loss however is that which arises from the native methods of expressing the oil. In attempting to deal with this the Agricultural Department has tried to encourage the use of small-scale Deutscher hand presses which extract some 65 per cent of the oil as compared with 50 per cent extracted by ordinary native methods. Some 800[2] of these presses have been purchased, mainly by petty traders, but they cost eighteen pounds, a high cost for native purses; their output is only a very small fraction of the total, and even for them it is difficult to assure regular supplies; also the cracking of palm nuts is regarded as a woman's perquisite and their opposition has seriously blocked French attempts to spread mechanical presses. The intention that these presses should be purchased

[1] Knox, op. cit.
[2] This figure is given by T. M. Knox. The Report of the Leverhulme Trust West Africa Commission gives the number as 500.

and operated co-operatively is evidently not carried out in practice.

What then are the prospects of the Nigerian industry if the present policy is to be continued and what is the strength of the case for any extensive expansion of plantations? The case against exclusive reliance on the peasant system has been set out in the Address prepared for the British Association by Professor Knox, and may be summarized as follows: The efforts of the Agricultural Department to improve native methods of cultivation and of extraction has so far effected very little; the trees grow older and taller on the average, and their yield tends to decrease, while old trees are more liable to disease. Patch-work methods are utterly inadequate and the money should be spent on scientific planting on new areas. As regards oil extraction again in the varieties of oil palm indigenous to Nigeria the pericarp averages 43 per cent of the weight of the fruit, the remainder being nut, and of the pericarp about half is oil, the rest fibre and moisture. Thus there are about four hundredweight of oil in a ton of Nigerian fruit and of this native methods cannot extract more than two hundredweight. Further, the quality of the oil is inferior, it is often dirty, sometimes adulterated with potash, and frequently of a high f.f.a. content since the process which leads to the production of hard oil is slightly less laborious and slightly more productive than the soft oil process. Even the latter process never produces in any quantity oil of a sufficiently low f.f.a. content for refining purposes. To sum up, therefore, notwithstanding all palliatives nearly half the oil available in Nigeria is wasted, not enough is being done to maintain production by replanting, quality is sometimes poor and always irregular. A comparison with the Belgian Congo emphasizes these defects; there, as explained earlier, the Huileries are not content to continue on the basis of efficient extraction from nuts of the Nigerian types, but are concentrating on a policy of extensive planting of new varieties though they have to bear transport and handling charges heavier than those in Nigeria. Planters in the Dutch East Indies are still better placed. Their hybrid variety of the oil palm produces fruit with a 30 per cent oil content as compared with the 22 per cent of the Nigerian fruit, though the kernels are correspondingly smaller. From 100 tons of Sumatra fruit their machine methods can produce some 28 tons of oil, while from 100 tons of Nigerian fruit the usual native methods can produce about 11 tons of oil, and hand presses about 14 tons. Sumatra transport charges are much lower and the f.f.a. content of their oil is both substantially lower and more consistent.

As was foreseen by a Colonial Office Committee in 1925 Sumatra, which in 1923 produced only 3,000 tons of oil, by 1930 with the help of Malaya produced 50,000 tons against 36,000 tons in the Belgian Congo and 180,000 in the rest of West Africa. By 1938 the corresponding figures were 272,000, 70,000 and 145,000. The Eastern production increased five-fold in eight years, Congo production doubled, the African native industry declined by 20 per cent. The Colonial Office Committee of 1925 had recommended the grant of concessions to enable European enterprise to build up a plantation and mill industry. This policy was rejected, mainly for non-economic reasons, but economic arguments have attempted to minimise the danger from the East Indies and to show that the native industry can still survive in its essentials. In the first place the danger from over-supply of the market has proved to be a bogy. World supply has risen from 150,000 tons in 1923 to 488,000 tons in 1938 yet the demand for oil continues as strong as ever. A glut seems unlikely, as scientific advance is finding increasing use for all types of oils and fats and a probable deficiency of some types such as whale oil may even increase the demand for palm oil. Mr. Knox contends however that while the mere quantity of palm oil from the East may not be a fatal menace to Nigeria it will have a serious effect on the price and therefore on the return to the native producer. The price of palm oil moves relatively to the prices of competing oils and fats, but the graph of palm oil as a whole has become relatively low compared with that of its competitors as the result of the great increase in production. Hence the depression in Nigerian prices has been due in part to the Eastern competition. Moreover as the result of the irregularity in quality of the native oil it can never enter the edible oil market though machine methods could even in Nigeria produce an oil equal to Sumatra oil. Analogies drawn from the success of native methods in cocoa or even in rubber are false because of the simple processing methods which are all that is essential to those industries. The maintenance of a good and constant quantity of palm oil demands methods and a scale of production beyond the present reach of native enterprise, capacity and capital. Experience has shown moreover that it is impossible to be content with establishing European mills relying on supplies from native sources. Even if this system did work successfully the menace from the East would not be met because the mills would be at an economic disadvantage with those in the East where fruit of a higher oil content is milled. Hence the price paid to the native would be unduly depressed. Finally Mr. Knox deals with the argument that even if the Nigerian export trade in palm oil ceased the native industry based on the large and increasing internal trade would survive, and that other means might be found of meeting the Government financial difficulties. His contention is that whatever the possible dimensions of the internal trade it could not reach the proportion of the present external trade. Moreover the internal trade is a trade in soft oil, while most of the oil produced is hard for which the internal trade would provide no market. The native could still support life, but economic self-sufficiency is as little compatible with prosperity or with the maintenance of a reasonable

standard of living in Nigeria as it is elsewhere. The native would be pauperized and would be deprived of the few luxuries to which he has been accustomed. If a new civilization is ever to grow up in Africa comparable with that of the Middle Ages in Europe native prosperity must be increased and not diminished, and native institutions must be reformed, not preserved like a holy of holies which it would be sacrilege to violate.

He proposes to meet the situation by the establishment of further model plantations similar to those of the U.A.C. They should be established not as freehold, but as land leased for an adequate period so as to serve as examples to show the native in what way an industry must be organized in order to compete with other parts of the world. They would not interfere with native liberties more than reserved forests which have been accepted in principle, and they would pave the way for a native interest in such plantations of their own. Enlightened rulers would probably co-operate when they saw the results; they would require Government aid to finance the making of plantations and the erection of oil mills, but the investment might even be profitable for the lender as well as for the borrower, more profitable indeed than investment in 'native plantations' which leaves untouched the present wasteful methods of oil production. European ownership would not be required except for a few model estates. The natives themselves, assisted by expert European employers, could do the rest. To refuse to work along some such line as this would be either blindness to the plain fact of East Indian competition, or else a heartless attempt to deny prosperity to the native for all time. He supports this conclusion by a reference to Professor W. M. Macmillan who writes as follows:[1] 'By the paucity of good European examples West Africa undoubtedly loses something enjoyed by natives in the Union; and without some measure of capital equipment, which necessitates plantation methods, African agriculture can never reach its full stature'. Plantations, he adds, like any other progressive measure, must break in at some point on the tribal bases postulated by the policy of 'indirect rule', and he infers not that progress should be stifled, but that the policy should be revised. Mr. Knox concludes by criticising the sentence in the *African Survey*[2] which states that the problem is in the last resort mainly one for decision on political as much as on economic considerations, because these words seem to imply that there can be such a thing in a backward part of Africa as a political policy which is not inextricably intertwined with economic considerations. It is, according to him, just this blindness to economic factors which has so often characterized the official view of West African problems and which must in due course 'turn to the disadvan-

[1] *African Emergent*, Faber, 1938, p. 350.
[2] Hailey, op. cit., p. 1652.

tage of the native the very policies framed with the avowed intention of helping him'. Recent publications by the Colonial Office show that this criticism is no longer valid.

Sampson and Crowther in their Report for the Leverhulme Commission introduce some new considerations which further complicate the general picture. They point out that 'selected seed is not everything. Without adequate nourishment, no matter how inherently good the strain is, the palm cannot continue to produce large crops of fruit. The high yields per acre in the oil palm plantations of Sumatra are undoubtedly due to the richness of soils derived from comparatively fresh volcanic material, which contains reserves of available nutrients in its unweathered minerals. Climatic differences may also be involved, for Sumatra has less cloud than Nigeria. But even on the richer soils of Sumatra fertilizers are now in general use, and it has indeed been said that the oil palm is regarded merely as a machine for converting fertilizers into oil. Until the last year or two no comprehensive series of experiments had been carried out in West Africa to ascertain the manurial requirements of the oil palm or for that matter of any of the plantation crops.' Some experiments are now in progress on the United Africa estates under Rothamsted supervision, but the Agricultural Department has no estates of its own and it would be exceedingly difficult, if not impossible, to carry out such experiments on the irregular stands of trees of unknown history on native farms. A great deal more work will have to be done before there will be much hope of finding really desirable stocks or of solving the more rudimentary problems in the genetics of the oil palm. They point out that the present position of oil palm investigations in British West Africa compares very unfavourably with that in the Belgian Congo. There, moreover, although European plantations have been encouraged, the main purpose of the Yangambi Government agricultural station is to develop a planting system suitable for native holdings. Whatever be the future Government policy as regards European plantations they insist that the utmost use should at once be made of the opportunity the plantations provide for large-scale technical experiments even if this means that the Department of Agriculture must accept some of the financial burden.

As regards the general question of the future of plantations, they consider that except on the rich soils round the Cameroon mountains, the commercial value of plantation industries in the hands of European estates has yet to be proved in West Africa. Even on these volcanic soils it is evident that cocoa and oil palms cannot be made to pay at the world prices obtaining at that time; the banana was the only profitable crop. Whether estates such as N'Dian, with the overheads distributed over a larger area, can be worked profitably at world prices, has also still to be proved. The oil palms on this estate are not yet in full bearing and no definite estimates can be made as to the future annual income. It would seem that the real value of such estates lies in the knowledge gained and in the services rendered to the native oil palm industry by the United African Company which, being a trading company, depends to a great extent on the produce grown by Africans. It is only on such large estates that selection of oil palms for seed purposes can be made on an adequate scale and there is no doubt that Nigeria has benefited considerably by the able and willing manner in which the Company's representatives have met the demand for selected seed.

They recognize that the prospects of the industry do not seem rosy owing to the competition of the more efficient estates in the Far East, and the difficulties of making the Ibo appreciate the significance of the world market. Even however if the export trade decreases, the oil will remain an important local foodstuff which will continue to be produced and consumed whatever happens to world prices. With the increasing prosperity of other potential consuming areas in West Africa the demand will expand, and it may be that world prices will rise sufficiently to arouse more interest and perhaps to allow a bonus for superior quality. They do not refer to the difficulty raised by Mr. Knox as to the absence of a local market for the hard oil which is now the principal product, but presumably the methods of extraction could be changed to meet this difficulty.

Their general conclusion is, then, that the cultivation of plantation crops in West Africa is best left in the hands of African owner-producers with their low overhead costs and independent sources of food supplies. Ultimately it may be possible to secure some form of voluntary co-operation between producer, factory, and Government, with plantations worked communally under European supervision somewhat along the lines of the Sudan Gezira cotton plantations. At the moment this may seem a very long-range prospect, but it has to be remembered that the cocoa industry of the Gold Coast developed with phenomenal rapidity, and that considerable progress has been made in the co-operative preparation and marketing of the crop. In any event the problem does not in their opinion seem more difficult than that of introducing the principles of local self-government to the Ibo, which has already been undertaken with an unexpected measure of success.

The information available does not therefore suggest the necessity of any fundamental change in the policies of the West African Governments as regards plantation and peasant production, even as regards oil palms. What it does suggest is that the policy must take a much more positive and constructive form, that much greater activity should be shown in providing scientific assistance, and considerably more expenditure incurred in implementing their general policy by improving the methods of peasant cultivation. For oil palms this will include experiments on a much wider scale so as to evolve improved varieties, a wider distribution of selected seedlings, and much more intensive propaganda to bring about changes as soon as their desirability has been definitely proved. Some extension of plantations may well be an important element in this campaign, and improved methods of extraction will certainly be essential. Much will depend on the extent and the rapidity of the adaptation of communal and tribal organizations to economic ends directly or through co-operative societies. Progress on the purely voluntary lines hitherto followed may be too slow to save native society from very serious economic loss as the result of more efficient world competition, and the problem put by de Kat Angelino may well present itself—whether in the interests of the native peoples themselves patience may not be pushed too far. The most important governing factor will be the future course of prices, but much also depends on whether exporting agencies are prepared to assist by giving an adequate premium on quality. The war and the early post-war periods should be favourable to efforts to increase the rate of progress provided that the necessary staff can be obtained, because it will probably take some time for Eastern production to be fully re-established and other competing oils and fats such as soya beans and possibly whale oil are likely to be in short supply. On the other hand synthetic substitutes may further complicate the problem.[1]

Other branches of primary production in which further developments are possible are rubber and what have hitherto been the purely peasant industries of cocoa, cotton, and ground nuts. As previously noted, rubber estates have not been encouraged since the time of Sir Walter Egerton, and although there are a few small estates and some peasant cultivation in Benin the wartime extension of production consists mainly in a revival of the wild rubber industry essentially temporary in character. It is unlikely that rubber plantations will be substantially increased, partly because of the difficulties as regards making land available, and partly because the uncertainties as regards the competition of artificial rubber and production in the East Indies and elsewhere are discouraging to the investment of substantial capital in a new area of uncertain labour supplies. Peasant production may be encouraged and possibly supplemented by experimental plantations.

Cocoa Industry

Cocoa will certainly remain a peasant industry, and the problems relating to it are those of establishing the conditions necessary to its expansion on healthy lines. In French West Africa the steadily expanding production has been mainly on peasant holdings though there are a certain number of estates in the Cameroons. Cocoa has not received the special assistance on the French market which was provided in the case of other products such as oil seeds. The only factors suggesting a possible future for plantations are the experience which has been gained in Trinidad of the advantages derived from the replacement of poor strains and the increase noted by the Cocoa Marketing Commission in the premium on fine cocoa. Neither of these factors is likely to encourage plantations in British West Africa, and Sampson and Crowther consider that the methods adopted on the Gold Coast in establishing native plantations are very similar to, and even compare favourably with, those of European estates in other tropical countries. Apart from some cocoa on estates in the Cameroons the single European estate of some 1,000 acres was taken over by the U.A.C. in what is described as a dreadful state and has lately been made over to Achimota for training purposes. Strong as the peasant industry has shown itself to be it suffers from serious defects which may prejudice its future prospects if not dealt with in time. Apart from the long-term problems of the deterioration of the soil and of cocoa diseases and pests in some areas, and the still unsolved marketing difficulties dealt with by the Cocoa Commission, the scientific assistance to the industry is still inadequate, and complicated problems of land tenure are beginning to emerge. Sampson and Crowther remark that it is an extraordinary thing that until 1937 there did not exist within the cocoa belt of the Gold Coast a single agricultural station where research could be carried out into the requirements of the crop. The Agricultural Department was thus completely at a loss in suggesting counter-measures to outbreaks of disease because of their ignorance of the probable effects of such measures on the general health of the trees. Their suggestion of cutting away the diseased parts of trees resulted in an opening of the shade canopy, the results of which were disastrous. This serious deficiency has been met by the recent establishment of a West African Cocoa Research Institute. As regards land tenure the main problem is the growing tendency to transform peasant cultivation on a family basis into larger native estates worked by hired labour often paid on a crop-sharing basis. Peasant cultivation is in fact beginning to change to a landlord and tenant system with no tenant rights and without any improvements in methods of cultivation or of processing. There is a similar problem with regard to oil palms in Nigeria, and the difficulties which may arise from the absence of any definite policy on this question have been illustrated in many British dependencies. Something will be said in a later section on the general subject of land tenure.

[1] The *Report on Transport in Nigeria* by F. Smith suggests new factors which may be of importance to the oil palm industry. If palm oil can be substituted for Diesel oil for transport purposes the internal market would be greatly expanded and the Nigerian transport problem simplified.

Cotton and Ground Nut Industries

The cotton industry raises issues of a different character in Nigeria. In earlier days, when it was shown that American long stapled cotton could be grown in Northern Nigeria, a great expansion of the industry was looked forward to, and it was on this expectation that first the British Cotton Growing Association and then the Empire Cotton Growing Corporation extended their work in this area. Now, Sampson and Crowther make the rather disconcerting suggestion that it is very doubtful whether the early expectations can ever be realized in practice. The reasons for this are as follows, and they would lose none of their force if the industry were carried on on plantation lines. It appears that since American cotton was introduced into Nigeria the plant has changed its character to a considerable extent. On the one hand it has become more hairy and therefore more resistant to jassid and other disease-carrying insects. On the other hand, and what is more important, the short growing season in Nigeria, and the absence of irrigation providing controlled soil moisture, has resulted in a weak staple. Much work has been done at the E.C.G.C. experimental station to try and improve the strength of the fibre and its spinning qualities, but so far no strain has been produced which can be recommended for multiplication. Cotton cultivation is therefore now at a cross-road through no fault of the peasant, and there seems to be no prospect of a permanent large expansion of the industry so long as it is based on the type now grown. The position might change if experiments now in progress to resuscitate indigenous or long-established varieties had satisfactory results, but so far nothing definite has emerged. These special drawbacks would presumably not affect the great French project for cotton cultivation in its irrigation scheme on the upper Niger, as the system of water control should produce conditions analogous to those in Egypt and the Sudan.

Cotton cultivation however may have an independent value as one element in a system of rotation, and, like other cash crops, it should be looked at from the point of view of the standard of life of the African populations and the improvement of their methods of farming. It is this last point which is of special importance in connexion with the ground nut industry, which again must clearly remain a peasant crop. In the Gambia, and the same applies to French Senegal, the exclusive concentration on ground nuts has produced a very unbalanced system of agriculture entirely dependent on a single crop of very variable cash value. There is a similar danger in parts of Nigeria. Attempts are being made to remedy this, as by the encouragement of rice growing in the Gambia, but a further point of great importance to the future of the industry has recently been raised by the Leverhulme Commission. A main defect in the dietary of most parts of Nigeria is the shortage of proteins, and Dr. McCulloch, in a health survey of a district in Northern Nigeria, proposed that this should be dealt with by organizing the local crushing of ground nuts so as to make the valuable proteins contained in them available for human consumption. They could be added to the cereal flour already in use. A balance should be struck between the cash value of ground nuts as an export crop and the needs of subsistence agriculture. The possibility of finding a local market for the residues would be connected with the development of mixed farming, but this would be looking far ahead. He contemplated the restriction of the export of whole ground nuts to the surplus available after local needs for nutrition had been met. The Nigerian Government is now studying the question from this new point of view, but such a radical change not only in the methods of the industry and its markets but also in dietary habits would not be easy to carry out.

Agricultural Credit

The possibilities of establishing a system of mixed farming adapted to African conditions, and other methods of arriving at a higher standard of income and of living and of preserving the fertility of the soil, are outside the scope of this study, but something may be said of the problem which increases in importance with every advance in the status of the peasant, that of agricultural credit. So long as primitive subsistence cultivation was the general rule credit facilities were not necessary, and even in the early stages of agricultural advance the requirements were small. Large parts of West Africa have now however passed beyond that stage, and credit facilities have become essential to the commercial agriculture practised by peasants with growing ambitions, a type which is best illustrated in the cocoa industry. Up to the present the West African Governments have had no credit policy beyond a hesitating encouragement of co-operative societies. These are however predominantly marketing organizations, even on the Gold Coast where they have received their greatest development. If the situation is allowed to drift as it was in India and Burma there is a definite danger of its developing on the disastrous lines illustrated in those two countries. On the other hand the provision of too easy credit facilities has in other cases had very demoralizing results.

Taking the cocoa industry as the only large-scale example of the problem involved, the Report of the Cocoa Commission shows that the credit facilities required by a rapidly expanding industry have been mainly provided by the various classes of cocoa buyers to whom loans afford an opportunity of controlling supplies before they are actually available. They are in fact equivalent to forward sales and, as in the case of the coconut industry in Ceylon, often on very inequitable terms.

Apart from borrowing on the strength of the forthcoming crop farmers raise long-term loans by a bond which gives the usufruct to the lenders until it is considered to have yielded sufficient to cover the principal of the loan and also the interest, which is seldom less than 50 per cent and often more. Occasionally when a farm is pledged as security for a loan the crop is treated as a perquisite of the lender, who is entitled to repayment of the principal in cash and also to interest at 50 per cent or more per annum. A farmer who has pledged his farm and has no other security to offer may obtain a loan by the illegal method of entrusting a young daughter or a niece to the lender to act as his servant until the debt has been paid. Borrowing on one or other of the above methods is said to be widespread in the Gold Coast, and the Agricultural Department has estimated that 30 per cent of the farmers have pledged one or more of their farms, while Professor Shepherd states that according to his enquiries few farmers can, unless redemption is automatic, clear themselves of their rapidly increasing indebtedness. Further, even if the farmer is left in occupation he tends to become more and more indifferent to the condition of the farm and to efforts by agricultural officers towards his education in better methods. All the elements are present for a serious future problem though one not quite of the Burmese type as all concerned are as a rule natives of the Gold Coast.

The Co-operative Marketing and Credit Societies have so far done little to meet this need though statistically their rate of expansion was not unsatisfactory. Primarily they are Marketing Societies, but on the Gold Coast they only marketed 2·6 per cent of the total crop in 1936–7; in Nigeria the proportion was a little under 4 per cent. The total membership on the Gold Coast in 1938 was 9,711, and the paid-up share capital £26,422; in Nigeria in 1936–7 there were 6,509 members and the total resources of the Societies (i.e. the excess of assets over liabilities) was £3,723. Their credit and banking activities have increased rapidly in recent years on the Gold Coast, but in March 1938 their loans to members amounted only to about £19,000, apart from £1,320 advanced against cocoa in stock. Of the loans totalling £11,192 granted in 1936–7 three-quarters in numbers and nearly half in value were for the payment of labour, and about one-third was for the redemption of mortgages. In Nigeria this side of their work is much less developed, deposits are very small, partly because of the greater attractions of the savings bank, short-term loans are made on a small scale at 15 per cent interest, but no attempt has been made to deal with the mortgage problem. The carrying on of the work even on this very limited scale has absorbed an excessive amount of the time of the officers of the Gold Coast Agricultural Department. The Gold Coast Societies claim that their loan service is the only attempt which has been made to solve the local problem of agricultural credit, and that it is this attempt

which has influenced members to remain loyal and outside farmers to join the Societies. The Cocoa Commission consider that, apart from the services of the Societies in improving the methods of preparation of the cocoa and in giving their members a sense of solidarity, they have done invaluable pioneer work as credit and thrift societies, providing credit at reasonable rates when the only alternative was either extortionate moneylenders, or brokers largely using the money of European firms to secure control of prospective crops. The extension of their work has been hampered by the lukewarm and sometimes hostile attitude of the Chiefs, and the Commission is convinced that a co-operative movement can only flourish on the Gold Coast if backed by the whole-hearted support of the Chiefs. In Nigeria where there is a separate Department of Co-operation progress though slow appears to have been on sound lines notwithstanding the opposition of moneylenders, middlemen, and of native authorities interested in cocoa trading. There has been no such crisis as on the Gold Coast, and the Commission consider that marketing requirements can be met without the compulsory measures recommended for the Gold Coast by an expansion of the work of the voluntary Co-operative Societies so as to cover the greater part of the annual production. Their work as credit societies would presumably secure a corresponding expansion. The two problems of marketing and credit are in practice closely linked both on the Gold Coast and in Nigeria, and, on the Gold Coast more especially, the present very unsatisfactory position as regards credit would become a good deal worse if the opposition to the pre-war marketing organization led to such changes as would diminish the incentives to traders to give credit to producers on reasonable terms. The Commission therefore link these drastic marketing recommendations with the proposal that Government should adopt a definite policy of promoting co-operative thrift and credit societies. To carry this out on a scale sufficient to meet a rapidly growing need involves an immense problem of education, the difficulties of which have been illustrated in many parts of the world. If Co-operative Credit Societies are to be financially sound they must restrict their loans to productive purposes and these are far from covering all requirements. If however success can be achieved on voluntary lines the effects on the character and capacity of the peasant farmers should be of a much more stimulating nature than is possible under the compulsory organizations which have produced very valuable practical results in the Netherlands East Indies and in French West Africa. A half-hearted policy of drift will be disastrous.

Apart from cocoa the problem of credit does not appear to have received much attention in West Africa. There is no co-operative organization in the Gambia, and very little has been done in Sierra Leone. In Northern Nigeria the absence of credit facilities does not appear to have been a serious drawback until mixed farming was taken up as an aim to be pursued. The main handicaps to the peasants in all that great area have been the excessive cost of transport and the weight of taxation. For a bulky crop like ground nuts transport costs to the coast represent considerably more than half of the value of the crop at the port of shipment so that the return to the producer is small. Direct taxation is at the rate of 2·40*s*. per head of population as compared with 1·79*s*. per head in the South-Western provinces and 1·14*s*. in the South-Eastern provinces. There are, of course, other factors to be taken into account, but even allowing for them the discrepancy in rates seems to require some explanation.

The attempt to develop mixed farming has however raised the issue of credit facilities in a very definite form. The possibilities are still quite uncertain, and the small number of farmers (1,435 in 1937) who have been induced to make the experiment have been in nearly all cases enabled to do so by credits from the Native Administrations for ploughs and for cattle bought and trained by the Agricultural Department. Co-operative Societies have been proposed, but do not appear to have been formed as yet. Their prospects are doubtful owing to the probability of their members not being able to meet the regular instalments of rising purchase prices plus interest, even if the religious difficulties on the levy interest have been surmounted. The remaining industry for which co-operative credit has been attempted is that of palm oil, and in this case the special purpose is for the purchase of hand presses. Little progress has however been made up to the present in this direction, and, as noted earlier, much the larger proportion of the purchases has been by traders. Up to the present therefore it cannot be said that any serious attempt has been made to deal with the existing need for agricultural credits, still less to provide for the greater needs in the near future. The problem is further complicated by its close connexion with the interests of the very powerful marketing organizations.

The two remaining West African Territories are South-West Africa and Angola, but neither of these has been concerned with the issue of plantation and peasant cultivation. South-West Africa is a pastoral country so far as it is habitable at all. Portuguese policy in Angola, as in East Africa, contemplates the alienation of land in concessions by temporary grants which are confirmed on the execution of stipulated development conditions, but, judging by the character of the exports, plantations have not been developed on any considerable scale. The only large project for colonization was that of 1928 for the formation of peasant colonies in the highlands by the emigration of whole villages. It appears to have been somewhat similar to the Italian plans in North Africa as the sites were to have been surveyed and prepared in advance and the State was to provide assistance for the colonists in the form of

seed, stock, implements and credits. The costly scheme came at an unfortunate time and its abandonment was recommended in 1933. There does not appear to have been any systematic development of native export peasant crops.

V. BRITISH CENTRAL AND EAST AFRICAN DEPENDENCIES

Central African Dependencies

IN the British West African dependencies both plantation and peasant production, apart from the activities of peasant producers in connexion with food crops for local consumption, were concerned with export crops, and their respective spheres of operation were determined by economic factors. Political and racial considerations played little part. In the Central African dependencies of Nyasaland and Northern Rhodesia the position was different. They had the common characteristic that their possibilities as producers of export crops were practically limited to a few products which were sufficiently valuable to stand the heavy cost of the long railway haul to the coast, tobacco and tea in Nyasaland, tobacco and a little coffee in the eastern area of Northern Rhodesia. In the railway belt of central Northern Rhodesia this factor has been overshadowed by the growth of the large internal market on the copper belt, a market comparable with that provided for the Belgian Congo by the mines of the Katanga, and it is the needs of the mining areas which have determined the extent and direction of agricultural production both plantation and peasant.

In Nyasaland plantations were established on the large estates recognized as purchased from native Chiefs before the declaration of the Protectorate. The subsequent agricultural history of the country has represented a concentration on a succession of special crops, first coffee, then cotton, later tobacco and tea. The earlier European settlers were in the main of a good practical type, and, though at first there was practically no scientific assistance, it has been increasingly available both from Government services and from the Empire Cotton Growing Corporation. The handicaps were however serious and the history of plantation agriculture has been a depressing one. Coffee deteriorated very rapidly after 1900 and has now practically disappeared, while plantation cotton has followed a similar course since 1922. Tobacco is still the main European industry but it has become a specialized industry practically confined to flue-cured tobacco. Only tea remains as a purely plantation industry. Rubber and sisal have also been attempted, but with little prospect of success; sisal in particular cannot stand the heavy costs of transport. The European tobacco industry survived the shock of the economic depression which left them with much of their working capital sunk in heavy unsold stocks, but they were helped by the creation of a marketing scheme in 1936 with a pool for

the disposal of surplus leaf, also by special advances for planting. All plantations have been affected by the difficulty in obtaining local labour, as Nyasaland natives have been attracted by the higher wages obtainable in Southern Rhodesia and in the Union, with which Nyasaland planters cannot compete. The gap has been filled by immigrants from Portuguese territories.

Native peasant production has on the other hand shown a steady expansion stimulated by a Government policy which encouraged them to grow whatever crops they were able to and provided facilities for marketing and transport. Scientific assistance has been as much available to them as to Europeans within the limits of the staffs of the Government Departments and of the Empire Cotton Growing Corporation. Their first practical lessons in new crops and new methods were on estates, but they began commercial production by extending the previously existing cotton industry of which they now have a local monopoly. The British Cotton Growing Association gave substantial help by purchasing arrangements which remained in force up to 1930. Tobacco was taken up later and peasant producers are now responsible for the dark fired and air-cured tobacco. It is mainly grown on Native Trust Lands on which production is controlled by the Native Tobacco Board which supervises the methods of production, grading, and marketing, but a considerable quantity is also grown by tenants on European estates, and in their case the marketing is usually carried out under voluntary agreements by the European owners. The Imperial Tobacco Company has played an important part in developing the industry generally. There is no special organization for the provision of credit but its absence does not appear to have caused any serious difficulties.

So far as primary production is concerned the prospects in Nyasaland, with its unusually intelligent native population, appear to be of a gradual displacement of plantations depending on hired labour by peasant production carried on for the most part independently on Native Trust Lands but also to some extent by tenants on European estates. A system of tenancy giving definite rights to the tenant is an unusual phenomenon in Africa and, though criticized as not assuring the best use of the land, is an interesting example of an attempt to solve a problem which is of increasing importance in many parts of the continent. The future sphere of the Europeans, and to some extent of the Indians, will probably lie not so much in actual primary production as in all the subsidiary processes including marketing, transport, and distribution. Any large discovery of minerals would make a great change in the situation by providing a local market, but this would in the main probably benefit the peasant producers rather than plantations.

Northern Rhodesia presents an interesting contrast to Nyasaland in many respects. Like Nyasaland, but to an even greater degree, its agriculture is hampered by the long haul to the coast, and the possibilities of commercial production are limited to three widely separated areas. The first is round Fort Jameson depending on the Nyasaland railway, the second near Abercorn with its connexions via Lake Tanganyika to Dar-es-Salaam, and the third the main area of European settlement along the central railway line. Apart from the large concessions to the British South Africa Company and the North Charterland Company European estates have been established under a definite policy of settlement, and a part of this policy was to give the Europeans much the greater part of the land along the railway where alone commercial production was economically possible in the central area. Until recently there was nothing corresponding to the Nyasaland policy of encouraging native production, and the tribes were in general of a much less advanced type with a much shorter history of education. The Fort Jameson and Abercorn areas with no local markets were necessarily as dependent on export crops as Nyasaland, and, after some preliminary attempts at ranching or cotton growing, they concentrated on tobacco and on coffee respectively. Peasant production does not come into account in either case and there are only twelve small coffee estates at Abercorn united for marketing purposes in a Co-operative Society.[1] In the Fort Jameson area tobacco growing, fostered by the United Tobacco Company, had a short period of temporary prosperity up to 1927-1928 but the economic disaster of 1930 left only 54 planters out of 161, notwithstanding special assistance under a system of advances. The smaller planters are also largely dependent on a quota allotted to them in the Union of South Africa market. Grading and marketing are carried out through Tobacco Co-operatives. In recent years some attempt has been made to encourage tobacco growing by native peasants but until the question of the overcrowded native reserves has been satisfactorily settled, a task which is now being undertaken, and until transport facilities are improved, the prospects are small. One isolated European estate in the north-eastern area has developed essential oils with considerable success and has given a very valuable stimulus to African advance in a backward area. In the railway belt, the main area of European settlement, after some pioneer attempts at ranching, commercial cultivation has been almost entirely directed to the production of supplies first for the Katanga market and later for the internal market provided by the copper belt. There was a short-lived tobacco boom but the production is now very small; cotton was attempted on a considerable scale in 1923-4. The cotton was however a failure and subsequent investigations have shown that the local position as regards cotton pests makes it very improbable that it can ever be grown extensively either by Europeans

[1] The coffee industry at Abercorn is reported to have been abandoned.

or by Africans. Eighty per cent of the cropped area in the central belt is either under maize or in preparation for it. Over-production in the years of depression led to the introduction of a maize control scheme, and the basis of the scheme is the division of the internal market between European and native producers, the former being allotted 75 per cent of that market. An efficient Farmers Co-operative Society controls 80 per cent of European production and the Maize Control Board organizes the marketing on behalf of both communities. The surplus over the requirements of the internal market is exported. Wheat is grown on a small scale but is only possible with the aid of irrigation and is entirely a European product. The local requirements of ground nuts, beans, Kaffir corn, and the smaller millets are mainly met from native sources.

As regards pastoral activities, which are on a large scale only in Barotseland and in the railway belt, the European and native industries are closely connected. The European herds were built up by 'grading', that is by crossing native stock with imported sires. The proportion of casualties from introducing highly bred animals to an undeveloped country was very high and has resulted in increasing use being made of Afrikander cattle and of improved native breeds. The early Europeans were ranchers engaged in producing beef for local consumption and for export to the Congo. When the latter trade disappeared it was replaced by the new market in the rapidly developing copper belt. That was practically the sole market both for European and native beef producers, but Europeans turned their attention to dairying which is almost entirely in their hands and is mainly supplied from cattle on the arable farms. Competition between European and native interests is therefore confined to the beef market supplied either directly from European sources or indirectly through traders from native sources. As in the case of maize, over-supply led to the introduction of control and a Cattle Marketing Board was set up in 1937 in view of the failure to organize the cattle trade on a voluntary basis. The Board controls the market by its powers to fix minimum rates below which sales are illegal, to control grading for sale purposes, to arrange sales where necessary, and to advise Government as regards the imports of cattle. The effect of its operations on the European and native industries are thus not direct as in the case of maize but indirect through the principles applied to 'grade' and native bred cattle as regards seasonal prices and the system of grading for sale purposes. The problem remains, and it is by no means confined to Northern Rhodesia, whether a more organic connexion could not be developed between the European and native industries so as to make them complementary to each other. The possibility has been suggested of developing a system analogous to that under which Irish farmers sell 'stores' to England and Scotland where they are finished for the markets.

The problem therefore of plantation and peasant production takes a form in Northern Rhodesia, and the same applies largely to Southern Rhodesia, different from that in more typical colonial areas. It is not a case of finding the most efficient agency for satisfying the demands of a world market but of regulating the supplies of foodstuffs not requiring any processing to a limited local market liable to be completely disorganized by any substantial excess in supplies. Some form of control is essential in the interests of both communities. The scheme introduced for maize has given the peasant growers for the first time an efficient marketing organization for all their produce; their opportunities are not limited by the operations of the control but by the distance of their reserves from the railway line and the scanty facilities for transport. The fairness of the share of the internal market allotted to them is a separate question which need not be discussed here. The abolition of control would lead to disastrous results to both communities in periods of low world prices, though its maintenance will not save either class of producers from the harmful effects of over-production by their own community.

Essentially however the various steps taken are measures of a semi-political character for the protection of European agricultural interests and are in logical sequence to the reservation of the economically profitable areas to European planters. In the absence of control, as the experience of a period of serious depression has shown, substantial farmers with a large and varied production, able to apply improved methods, and if necessary to make large reductions in their expenditure, would be fairly secure against native competition. European farmers of the peasant type might also survive but at the cost of reducing their standard of living and the prospects of their children practically to the native level. Farmers of the intermediate type without any substantial margin of expenditure would tend to be driven out and they would be the majority. A further result of dependence on a market of this type is the general disinclination among existing European settlers to encourage any further settlement. This position would however be changed by an expansion of the internal market or by any effective measures for stabilizing the price of the minerals on which the whole local economic structure is dependent.

Two questions remain for consideration, agricultural credits and the effects on the fertility of the land of the respective systems of production.

So far as Europeans are concerned, there is no special organization for the provision of agricultural credits, but, as already noted, European farmers have been assisted by advances in periods of depression. Notwithstanding this help the disastrous results of inadequate capital resources have been illustrated by the disappearance of a large majority of the tobacco farmers in the Fort Jameson area, and there has been a considerable, though much smaller, proportion of failures among those of the railway belt. It is only in the latter area that the question of native agricultural credits has arisen with the spread of plough cultivation, and, as the peoples concerned are as a rule owners of cattle which they are willing to sell, there does not appear to have been any special need for the provision of external sources of credit. The effects on the land of the extension of commercial production have however been serious. The injudicious use of the plough without any of the necessary precautions against erosion, and the general use of sledges for transport, have had very serious results in causing erosion both of the sheet and gully type. These have been accentuated by the removal of the native reserves to the limits of economic access to the railway lines resulting in a general tendency to concentrate production in the areas nearest the railways. Continuous cultivation in these areas without the necessary periods of fallowing or other measures to maintain the fertility of the soil is leading to progressive deterioration of the land. European farms are much less liable to these dangers, partly because of greater skill in methods of cultivation but largely through having much more land available. The contrast is however not so much the result of any inherent deficiency in the system of peasant production as of a failure to give the peasant the assistance and scientific advice which he needs, backed if necessary by the application of pressure to secure the observance of essential precautions.

British East African Dependencies

There remain the East African territories, and for the purposes of the present study it will be enough to consider the British dependencies. Portuguese East Africa, though it produces a considerable quantity of sugar and cotton which are mainly exported to Portugal, and foodstuffs in excess of local requirements which are largely consumed in the Union of South Africa, does not appear to provide any valuable illustrations of plantation and peasant production. The information available on the subject is however very inadequate.

So far as the British territories are concerned it has already been noted that factors other than economic played a large part in the application of European capital and energies to agriculture. Differing political policies in the three dependencies, arising largely out of different historical backgrounds, have led to opposite results in some branches of production though in others they have been outweighed by economic factors. In Tanganyika a definite plantation policy in the German period was succeeded by an endeavour to act on the principles laid down in the provisions of the Mandate requiring special regard for native interests. In Uganda, after a short period of experiments in plantations, both political and economic considerations led to a policy of reliance on African peasant production. In Kenya, apart from a short period from about 1906 to 1910 of the encouragement of native production, the Government policy has in general been directed to the development of European settlement. European settlers, as individual landowners or as representatives of companies, have been the pioneers in all the new agricultural industries. They have had serious setbacks and suffered heavy losses but there can be no question of the extent of their contribution to the resources of the country. In the strictly economic sense however it is not a purely plantation system. A proportion of the settlers and companies commanding substantial capital developed plantations of export products new to the country, such as sisal, tea and sugar—the last an Indian monopoly in Uganda. A substantial number built up smaller plantations, mainly coffee, and in recent years pyrethrum, on scientific lines. Many, however, looked on themselves rather as owners of estates than as practical farmers, and though nearly all attempted to grow some export crop it was in many cases a cereal crop—maize particularly—which competes with the products of the great agricultural countries of the temperate zones and can ill bear the heavy costs of transport. A considerable proportion of the area under their control is still undeveloped mainly on account of the inadequacy of their capital resources. Difficulties in obtaining labour have also been a recurring problem as in the similar cases of French and Belgian settlers.

The African tribes are of very varied types. Some such as the Bugunda, the Kikuyu, the Kavirondo and the Wachagga have old agricultural traditions and are apt pupils for new techniques or for taking up the cultivation of new crops. A proportion are primarily pastoralists and have little inclination to agriculture, still less to working as labourers on plantations.

The wide differences in physical and in human characteristics as well as in Government policies make it necessary to deal separately with the three dependencies. Their economic interests are however very closely connected[1] and this is marked by the existence of a Customs Union. This in itself tends towards an assimilation of agricultural policies in some respects and to increased attention being paid to the development of an internal market. One aspect of this is represented by the growing opinion against excessive specialization except in a small number of commodities, and in favour of mixed farming where conditions permit of this being carried on. A change in this direction would have important results both for European and African producers. The Indian contribution to primary production is small in Kenya though considerable in Tanganyika and Uganda.

[1] The proposals published in the recent White Paper on *Inter-territorial Organization in East Africa* (Colonial, No. 191) for the establishment of a High Commission for the three Territories make a substantial advance towards common economic policies. Agriculture, would however, not be affected.

Uganda

In Uganda the Government policy as regards European and native production has resembled that of Nyasaland though resting on the firmer foundation of definite treaties. This was not the case in the early days when Sir Harry Johnston and his immediate successors were in favour of developing the country on plantation lines under European management for such products as rubber, coffee, and cocoa. Even up to the nineteen-twenties discussions were still going on about the possible need of land for alienation to Europeans as farms or plantations. This programme never materialized except to a very small extent, as, after the early grants which by 1914 raised the total area of European plantations to 20,000 acres, the demand for land fell off. The first cause was the war of that year which arrested all progress, but planters were also handicapped by the lack of capital, and by the scarcity and irregularity of labour notwithstanding the relatively dense native population. A fresh advance started in 1919–20 but as the result of severe setbacks, first in 1921 and then in 1930, there were only 103 European and 24 Indian estates in 1931 as against 106 European and 23 Indian in 1921. The main reason for a change in the attitude of the Government to European settlement was the phenomenal increase in the production of American upland cotton from its small beginnings in 1904–5. It still represented 80 per cent of exports at the outbreak of the recent war and its market was almost entirely in India. It is wholly an African industry but, like cocoa, it is no longer purely a peasant industry, as African plantations have begun to develop—mainly on *mailo* lands—worked by hired labour imported partly from the Belgian Congo. A considerable problem of tenancy has also arisen so far as the local cultivators are concerned and the Tenancy Act of 1926 seems to have been the first colonial legislation dealing with this subject. Cotton is likely to maintain its pre-eminence in Uganda though the need is recognized of greater diversification and considerable progress has been made in this direction. The crops chiefly encouraged for Africans have been coffee, tobacco, ground nuts, and oil seeds. Tobacco, for which the British American Tobacco Company put up cigarette factories, is almost entirely a peasant product, unlike the position in South and Central Africa.

European plantations have, after very useful experimental activities in the early years, played a decreasingly important part in primary production. Coffee and rubber have been the main products of European estates following on some preliminary attempts at cocoa; tea has also been introduced to a small extent. Indians have concentrated on sugar and sisal, and their sugar factories have supplied most of the sugar for East Africa. The area under native grown coffee, both Arabica and Robusta, is however more than twice as large as the corresponding areas on European estates; and a large coffee co-operative has been formed for the sale of native grown coffee.

The experience of Uganda has thus again shown that, given an adequate and intelligent native population and Government assistance through the scientific services and the necessary control of quality and marketing methods, there are few agricultural raw materials which the African peasant is not able to produce. On the other hand it also shows that, apart from the special cases of sugar and sisal, non-native capital and enterprise can find wide scope in processing and marketing activities. The dangers most to be apprehended from the transformation of a native subsistence economy to commercial agriculture are indebtedness and destructive exploitation of the land. Indebtedness is not yet a serious problem in Uganda, nor does it seem likely to be so, but erosion is fast becoming a menace in some areas. This is however not a necessary result of the use of peasant agencies of production, provided that precautions are taken against overstocking and the unskilful use of the plough.

Tanganyika and Kenya

In Kenya and Tanganyika the problem of plantation and peasant production has taken different forms in the highlands and in the lowlands below an elevation of about 5,000 feet. In the highlands it has been merged in the larger problem of European settlement, and the economic factors connected with the relative advantages of the two systems of production have been outweighed to a considerable extent by demographic and political considerations. The necessity of developing resources in the for the most part scantily populated highland region to pay for the Uganda railway led in Kenya to the adoption of a deliberate policy of European settlement as the speediest method of realizing this aim. This was reinforced and further justified by the prevalent view that the lessons learned on European plantations were the best agencies for promoting native agricultural advance. As Mrs. Huxley puts it in her life of Lord Delamere,[1] the development of the highlands by European settlers was considered as an 'economic necessity, a world necessity, and a cultural conviction'. European capital had to be attracted and this was to be done by establishing landed estates, not only, as in the West Indies, for the production of specific tropical commodities by plantation methods, but also to provide an African equivalent of the English country squire living in beautiful surroundings in an apparently suitable climate and practising any

[1] *White Man's Country*, Macmillan, 1935.

form of agriculture which seemed best to him with the aid of native labour. In the early stages this had to be carried out without scientific assistance and with very inadequate agricultural knowledge. Although many of the large estates have been divided up, mainly for the purpose of coffee plantations, substantial estates are still characteristic of the Kenya highlands, and indeed in many areas the scarcity of water supplies makes this inevitable. The conception of the land owner as against that of the working farmer has played too large a part. On the other hand the progress of the country has been largely due to the initiative and resource shown by many of the settlers under great difficulties and to the capital brought in by them. In the Kenya lowlands, where the conditions were much less attractive for European settlers, economic factors have in the main determined the distinction between European and native production. Political power has not been applied to preserve any special crops for Europeans.

History of Tanganyika

Tanganyika, though it also has large though scattered highland areas round Mount Kilimanjaro and in the Usambara Mountains and the southern highlands, has a very different history. In the German period European plantations were the general aim both in the highlands and in the lowlands for the production of the tropical commodities most needed by Germany. They were in general real plantations for the scientific production of specific commodities, mostly controlled by capitalist companies but including a number of individual planters. There was an elaborate scientific organization for their assistance. The provision of labour for the plantations was one of the chief pre-occupations of the administration, and compulsory recruiting was in fact a main cause of the occasional serious revolts. In the absence of railways up to near the end of the German occupation the plantations were for the most part confined to the highlands in the north and the coastal areas of Tanga and Pangani. The products to which most attention was devoted were sisal, rubber, cotton, coffee, and ground nuts, but, as in Kenya, the plantations of ceara rubber collapsed in the slump of 1913, the main losers being recent British purchasers. Important changes in policy were introduced by Dernburg from 1907, including the abolition of compulsory labour for private purposes, and of the indiscriminate granting of land to capitalist companies and to private settlers. Steps were taken to preserve native rights in land and to encourage peasant cultivation, especially of cotton, for which guaranteed buying prices were established. The opposition of the planters forced Dernburg to resign in 1910 but his policy was in the main continued by his successors, except that compulsory recruitment seems to have been largely maintained in practice. Peasant cultivation of cotton continued to be encouraged, and under missionary stimulus the cultivation of coffee began to spread among the Wachagga and in Bukoba. This was the position when the Mandate was taken over by the British Government. Subsequent developments were largely governed by the provisions in the Mandate laying stress on particular regard being paid to native interests in dealing with applications for the alienation of land and enforcing equal consideration for all nations. The first stage was the sale of the ex-German plantations except for a few which were added to native reserves in congested areas. Purchase was open to all, including Germans, and the result was a very mixed body of estate owners of many nationalities and of all degrees of efficiency. Further settlement thus raised both native and international problems. So far as native interests are concerned it is hardly unfair to summarize Kenya policy as having been until recently one of promoting native welfare so far as it did not interfere with European requirements, and Tanganyika policy as permitting European settlement in so far as it did not prejudice native interests and as communications were made available. Both territories have to consider the still unsolved problem of the effects on permanent European residents of a tropical climate modified by elevation.

The scrupulous observance by the Tanganyika Government of the mandatory provision regarding native interests is shown by the Bagshawe enquiry of 1929 setting apart the areas of possible European settlement, the action taken in accordance with that Report, and the provisions in the General Notice of 1930 restricting the alienation of land in eastern areas 'unless it is shown that the applicants are in possession of sufficient capital to undertake operations on an adequate scale especially in connexion with water supplies'. The general principle laid down was that it is not in the interests of the territory that non-natives should occupy land in what are primarily native areas unless there is good reason for believing that they will assist in the task of promoting the prosperity and general well-being of the country.

The influence of international considerations is shown by the hesitation of capitalists in investing money in a territory the future political status of which was uncertain—though this did not prevent large Indian investments—as well as in the reluctance to permit of the indefinite increase in the number of German settlers, efficient though they usually were and backed by capital of somewhat suspicious origin. These considerations have had a considerable influence on the operations of the main economic factors governing European settlement, communications, the prospect of markets, the capital required by prospective settlers, and the probable supply of labour. As a result the increase in settlement has been slow and hesitating, the main controversies having been in connexion with settlement in

the southern highlands. There, the most important scheme, the Delamere scheme, was a failure largely because it was vitiated by the Kenya conception of regarding estates as landed properties without an adequate realization of the capital required for their development. The recent Chesham scheme for group settlement by a small number of substantial settlers, with a central organization for processing and marketing, was theoretically on more practical lines, but was only in its initial stages when war came and does not appear to have been based on any definite aim as regards marketing possibilities. On the other hand the sugar plantations in the northern highlands, based on a new irrigation project, are a good illustration of the advantage to a whole area derived from the scientific application of capital.

Mr. Negley Farson attacks the absence of any systematic policy for white settlement on the ground that 'it is beginning to be a question whether you can afford the altruistic ideal of leaving your possessions to remain vast empty laboratories for even the best international experiments in native administration'.[1] He maintains that the scrupulous observance of the mandatory conditions is no excuse for the absence of any settlement policy, because the argument is not in line with the realities of to-day's African developments. It ignores the fact that the administration is doing nothing to prevent some 32,000 Asiatics from acquiring practically all the business in Tanganyika except the native cultivation of crops. He will not even acknowledge that the Government is noticeably active in promoting native progress, and, according to him, they do not seem to be aware of any necessity for the white man's development. The last is in fact the main theme of the 1940 Report of the Tanganyika Central Development Committee, which bases its recommendations for a large but unspecified increase in European, and to some extent in Asiatic, agricultural activities on the doctrine that the stimulus provided by the example of other races is essential to African development, and that the more widespread that stimulus can be made the quicker will be its effects. The Committee look forward to the development of an internal market as the result of the combined action of non-native immigration, the establishment of secondary industries, and an increase in native purchasing power resulting from stimulating them to do more productive work. The basis must however, for a long time to come, be the expansion of exports, and in their view native production, so easily discouraged by adverse circumstances, as was shown in 1930, cannot be relied on as adequate for securing the large expansion essential to placing the economic position of the Territory on a sound basis. They have in view however not an increase in specialized plantations, but the extension of settlement in mixed farming and pastoral areas with homesteads occupied in farming or

[1] Negley Farson, *Behind God's Back*, Gollancz ,1940, p. 140.

ancillary activities. In the most important area, the southern highlands, they rely on tea, pyrethrum, coffee, and tobacco, as possible export crops. For the internal market they look to meat, sugar, tea, and rice as possible commodities for both European and native production. Ultimately all will depend on a proper allocation and use of the available labour power, which, on the basis of the Report of the Labour Commission of 1938, they consider sufficient to meet all needs. They recognize however that suitable allocation may create difficulties and that the 'plant more crops' campaign of 1930 increased the difficulties of the sisal and other industries. Their recommendations are in fact similar to those put forward by the Kenya Closer Settlement Committee of 1939 and they show similar characteristics of vagueness. They make no mention of increase in the native rates of wages.

The character of the economic relations between Africans and European planters and settlers in West and Central Africa has been discussed earlier. In Kenya and Tanganyika the problem is more complicated and in Kenya it presents special difficulties. The fundamental question as regards the relations between the non-native and native communities are the allocation of the land and the uses made of it by the two communities. In Kenya the European highlands, as modified by the Land Commission of 1933, have been accepted by the British Government as a definite feature of their policy. The area in them available for farming is some seven million acres of which about 550,000 acres were under cultivation before the war. The number of registered occupiers was under 2,000, giving the average size of farms as 3,500 acres. A recent statement in the House of Lords gives the area suitable for cultivation as 1,300,000 acres of which 864,000 were cultivated.[1]

The size of a suitable economic unit varies according to the configuration of the country and to the type of agriculture. Most important of all, perhaps, it varies with the water supplies and these are limited, more especially in the eastern highlands where the streams disappear as they get down towards the pre-Cambrian formations. In the highlands the geological formation is generally suitable for small dams but there is little scope for large-scale dams. Bore holes have been fairly successful in a good many areas of the highlands and in parts of the coastal strip.

So far as land is concerned there is clearly ample room for many more settlers and it certainly cannot be said that all the land is used to the greatest advantage. Much is still locked up in large estates which have done little for its development. Such a position is obviously uneconomic and if the principles laid down by the Land Commission for large undeveloped areas belonging to 'any tribe, persons, or class' were applied to the White Highlands the results might be striking.

[1] *Hansard* 1-2-44, Col. 606.

On the assumption that European (and to a small extent Indian) agricultural activities must remain the foundation of the Kenya economic structure the existing number of settlers is much too narrow a basis to bear the burden of the heavy overhead expenses on communications and other public and social services. Either European settlement will have to be largely increased, and this is estimated to cost not less than £2,000 per settler besides requiring an extensive development of water supplies, or there will be a strong demand for applying a part of the land for other purposes, such as the settlement of native populations from heavily eroded areas or the establishment of peasant holdings with individual tenure. The recent increase of £250,000 in the capital of the Land Bank will not go far towards the full development of the area now held by Europeans. A local Committee which in 1939 dealt with the problem of closer settlement started from the premise that it is of vital importance for the future progress of the colony that the number of farmers should be increased and that the land should be effectively occupied and development intensified. The general line of advance should be in the direction of mixed farming and, on the assumption that the average size of such farms would be 700 acres as the necessary economic unit, this would imply a five-fold increase in the number of farms. When however the discussion came down to practical terms the number of new settlers for whom provision could be made within the next ten years was put at the modest figure of 150–200, apart from a community settlement for local impoverished Europeans.

The return of peace and the necessity of making provision for ex-service men of all races has now for the first time led to the formulation of a general Government policy for the proper use of the land. It is contained in the White Paper (Sessional Paper No. 8 of 1945) on Land Utilization and Settlement. This deals comprehensively not only with the questions of settlement by Europeans, Africans, Indians, and Arabs, but with all the connected problems of ensuring the fuller and more efficient use of the land and the maintenance of high standards of husbandry. It is based on the *Report of the Settlement Schemes Committee of 1944*. A Bill is to be introduced for the establishment of a Statutory Central Settlement Board to advise the Member for Agriculture, with subsidiary Boards to deal with African, Indian, Arab, and European Settlement.

So far as Africans are concerned the White Paper recognizes that it would not only be useless but disastrous merely to throw land open for African occupation unaided and unregulated. No settlement organization can be successful which does not establish the necessary physical conditions for beneficial occupation, more especially the assurance of water supplies and precautions against erosion. In the second place it must be able to give the substantial and carefully calculated financial help, technical guidance and control, both in the tribal areas and in native areas held on other forms of tenure which are essential to the transition from tribal subsistence agriculture to such a form of farming as will preserve the soil and secure a higher standard of living. An essential part of the policy will be to bring about a change in the African's attitude towards his stock which has led to heavy local overstocking and insufficient consumption of stock and stock products. The capital cost of obtaining new areas, fitting them for occupation by the provision of water supplies and other measures—such as for example the proposed Tana River irrigation scheme—will be heavy. Even larger expenditure, both capital and recurrent, will be involved by the development, reconstruction, and improvement, of the present native lands, more especially in connection with soil conservation and water supplies, and by a wide extension of the system of Agricultural Training Schools. There can be little hope of any substantial direct financial return and it is laid down that African settlement must be judged in the light of a long-range agrarian plan checking the present dangerous tendency towards deterioration of the land and making provision for the prospective increase in population. The Colony must face the obligation in the hope that there will result such a rise in the general standard of living as will enable the financial consequences of the necessary measures to be borne.

As regards Indian and Arab agricultural settlement the White Paper is less specific, but it provides for an investigation of local Indian and Arab demands, the selection of suitable areas with due regard to African claims, and consideration of the necessary financial, technical, and educational requirements.

The scheme for European settlement is framed on the basis of acceptance of the proposals of the Carter Commission for the allotment to this purpose of a specified area in the Highlands. It therefore rules out the alternative proposals for the use of part of this land for the settlement of other races. It is pointed out that on the European farmers in the Highlands there has fallen in large measure since 1939 the task of feeding—in the case of many primary commodities—the armed forces stationed in East Africa and the civil population of the Colony, and also of producing very large quantities of agricultural products for the Ministries of Food and Supply. The Under-Secretary of State has reinforced this argument against the liquidation of European settlement by a reference to the facts that over the past two decades British Governments have steadily encouraged such settlement, that demobilization will raise the problem of finding outlets for the energies of settlers, about 50 per cent of whom served in the fighting units, and that with the acute shortage of foodstuffs it would be folly to take such steps as would reduce production capacity, more

especially considering the possible developments in Asia and in the Middle East.[1] A settlement organization is to be established, administered by a Commissioner for European Settlement responsible to the Member in charge and advised by a European Settlement Board appointed and presided over by the Member.

In accordance with the proposals of the Settlement Schemes Committee the White Paper contemplates the settlement of about 500 new farmers, the limited number for whom room can be made by the subdivision of estates and the development of land still undeveloped. At least half should be tenants and the balance assisted owners. Openings are also expected for between 200 and 300 European farm assistants on established farms. It is intended that as many as possible should be ex-service men and women, and adequate arrangements will be made for their training.

The most important new features are the two tenant farming schemes, one for ex-service men with first priority for Kenya Nationals, and the other a separate scheme for Kenya Nationals only. The purpose of these schemes is to allow men with limited capital to make the best use of that capital by investing the whole of it in those working assets such as livestock and machinery by which economic production is maintained. The land available for such settlers includes the suitable unalienated Crown land in the Highlands and additional land to be purchased with funds provided by the Legislative Council. The funds required to be invested by the Government are estimated at £600,000 for the purchase of land and for permanent improvements and it is expected that a regular return on their capital will be received in rent.

The Assisted Ownership scheme is intended for men who prefer to be owners *ab initio* and who have sufficient capital resources. Land for them is only available from private sources and, according to the proposals of the Settlement Schemes Committee, their capital must in general be enough for the purchase of the land. The development and working capital may be lent by the Government on Settlement terms up to a limit of 90 per cent of the purchase price, provided that this does not exceed the valuation of the Settlement Board and that the total amount made available is sufficient for the settler's needs.

The additional capital required is estimated at £1,000,000, partly for loans to settlers under all three schemes, partly for permanent improvements, partly for the purchase of machinery, stock, etc., and partly for working capital. As far as possible these funds will be raised by a local loan. It is emphasized that it is not the intention that European settlement shall be subsidized apart from a possible reimbursement of a part of the cost of the Settlement office and of the expenditure on the training of ex-service men. It is hoped that unlike

[1] Address to the Fabian Colonial Bureau on *Labour and the Colonies* (East Africa and Rhodesia, 17 January, 1946).

calculated financial help, technical guidance and control, both in the tribal areas and in native areas held on other forms of tenure which are essential to the transition from tribal subsistence agriculture to such a form of farming as will preserve the soil and secure a higher standard of living. An essential part of the policy will be to bring about a change in the African's attitude towards his stock which has led to heavy local overstocking and insufficient consumption of stock and stock products. The capital cost of obtaining new areas, fitting them for occupation by the provision of water supplies and other measures—such as for example the proposed Tana River irrigation scheme—will be heavy. Even larger expenditure, both capital and recurrent, will be involved by the development, reconstruction, and improvement, of the present native lands, more especially in connection with soil conservation and water supplies, and by a wide extension of the system of Agricultural Training Schools. There can be little hope of any substantial direct financial return and it is laid down that African settlement must be judged in the light of a long-range agrarian plan checking the present dangerous tendency towards deterioration of the land and making provision for the prospective increase in population. The Colony must face the obligation in the hope that there will result such a rise in the general standard of living as will enable the financial consequences of the necessary measures to be borne.

As regards Indian and Arab agricultural settlement the White Paper is less specific, but it provides for an investigation of local Indian and Arab demands, the selection of suitable areas with due regard to African claims, and consideration of the necessary financial, technical, and educational requirements.

The scheme for European settlement is framed on the basis of acceptance of the proposals of the Carter Commission for the allotment to this purpose of a specified area in the Highlands. It therefore rules out the alternative proposals for the use of part of this land for the settlement of other races. It is pointed out that on the European farmers in the Highlands there has fallen in large measure since 1939 the task of feeding—in the case of many primary commodities—the armed forces stationed in East Africa and the civil population of the Colony, and also of producing very large quantities of agricultural products for the Ministries of Food and Supply. The Under-Secretary of State has reinforced this argument against the liquidation of European settlement by a reference to the facts that over the past two decades British Governments have steadily encouraged such settlement, that demobilization will raise the problem of finding outlets for the energies of settlers, about 50 per cent of whom served in the fighting units, and that with the acute shortage of foodstuffs it would be folly to take such steps as would reduce production capacity, more

especially considering the possible developments in Asia and in the Middle East.[1] A settlement organization is to be established, administered by a Commissioner for European Settlement responsible to the Member in charge and advised by a European Settlement Board appointed and presided over by the Member.

In accordance with the proposals of the Settlement Schemes Committee the White Paper contemplates the settlement of about 500 new farmers, the limited number for whom room can be made by the subdivision of estates and the development of land still undeveloped. At least half should be tenants and the balance assisted owners. Openings are also expected for between 200 and 300 European farm assistants on established farms. It is intended that as many as possible should be ex-service men and women, and adequate arrangements will be made for their training.

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[1] Address to the Fabian Colonial Bureau on *Labour and the Colonies* (East Africa and Rhodesia, 17 January, 1946).

the position as regards African Settlement no charge on account of these proposals will fall on the tax-payer, though there is an inevitable contingent liability of market collapse.

Finally, settlers under all three schemes will be required to conform to conditions of cultivation laid down by the European Settlement Board in the interests of good husbandry and the proper use of the land. To cover also other settlers landlord and tenant legislation will be introduced providing for the enforcement of strict rules for the care of the land and laying down the relative responsibilities of landlords and tenants. These proposals mark a notable advance on the present position, more especially as regards assuring a beneficial use of the land.

The same considerations underlie the proposals for dealing with the problem of 'African squatter' settlement in the Highlands. The number of 'squatters' is uncertain, but the Settlement Schemes Committee estimated the acreage under their crops at not less than 50,000 acres and the number of their cattle at well over 1,000,000, besides large numbers of sheep and goats. The majority of the cattle are completely unproductive as regards milk, and their main use is as currency for the purposes of social exchange. This represents a very wasteful use of over 2,000,000 acres of potentially valuable grazing ground. Their methods of cultivation are very destructive to the fertility of the soil. The 'squatter' system had its origin in pioneering days, and legally and economically is of a feudal type. By occupation of land they are tied to their landlord by law, and under the Resident Native Ordinance must work for him for at least 180 days in the year. The same ordinance requires the employer to provide the resident labourer with sufficient land to grow food for himself and his family. In practice, as the Settlement Schemes Committee remarks, the 'squatter' can have a practically unlimited acreage to grow maize and twenty to thirty acres for his uneconomic cattle. The Committee therefore recommended legislation to eliminate 'squatter' cattle within five years, and the strict limitation of their cultivation to the area necessary for their family food requirements. Adequate inspection to secure the observance of suitable methods of farming was also recommended. At the same time they stressed the point that it was not the purpose of these proposals to increase the availability of dairy stock for European farmers. It was on the contrary based on a recognition that the 'squatter' system has resulted in an extensive misuse of the land. What the Committee desired was a complete change in the labour system whereunder native-owned cattle would be grazed on native land and the labourer be paid adequately for his work. The White Paper recognizes the unsatisfactory character of the present position both economically and socially. It rejects at once the idea of the compulsory removal of these labourers to the native areas; there

is work for all to do in a great variety of occupations, and the more intensive development of the land and increased employment will further improve the position in this respect.

Both the labourers who wish to live outside the tribal areas and their employers must realize that the old system is out of date and must adjust themselves to a system less wasteful of the natural resources of the country, better calculated to provide socially desirable conditions for labour, and an economically efficient basis for production. The problem may be summarized by saying that what has to be done now is to put into practice a policy by which a large number of people who have, consciously or unconsciously, hitherto regarded themselves (and been regarded by their employers) as temporary residents in the Highlands can be established in conditions which are economically and socially satisfactory.

The legislative and other measures which will have to be taken to carry out this policy are not set out in detail but it is emphasized that the whole problem can only be seen in proper proportion if it is looked at from the standpoint of the protection from destruction of the soil and national resources of the Colony. The most immediately urgent measures are, however, described broadly as follows:

(*a*) The gradual substitution of economic for uneconomic stock and the promotion of the consumption of meat and milk as part of the normal diet. This difficult process will take time but should solve the problem of over-stocking.

(*b*) The education of the labourers themselves to invest their savings in objects other than stock and the opening out of economic opportunities.

(*c*) A move towards free labouring conditions and the improvement of housing, food, and wage rates, more especially for skilled workers.

(*d*) The setting up of village social organizations.

The policy thus outlined is of a long-term nature and must be judged by its achievements. It does not include the speedy liquidation of 'squatter' stock which would undoubtedly be felt as a serious hardship and as a measure for stimulating return to the tribal reserves. It contemplates that broadly speaking the agricultural resident labourers and their families must be regarded as having become a permanent and indispensable part of the population of the Highlands.

In Tanganyika the position as regards the allocation of land to Europeans or Indians is less crystallized. Even on the accepted principles outlined earlier more land could be so assigned either as block settlements or for the interpenetrative settlement which was reported to be preferred by native opinion in the southern highlands. There is no more scope for the small European farmer in Tanganyika than in Kenya, and in both territories the limiting factors will be the supply of labour and the economic opportunities afforded by the external and internal markets. Any large, and more especially any sudden, large increase in the number of settlers such as was involved by the Soldiers Settlement Scheme of 1919 might strain the labour supply severely, with very serious effects on the tribal economies. Moreover, having regard to the aim of raising the general standard of income and of living, its possible advantages to the territories would be largely nullified unless it was accompanied by a substantial rise in the present low rates of wages. Such a change would affect existing interests, and indeed some of the schemes for further settlement seem to have assumed that the rates of native wages will be as static in East Africa as they have been in South Africa. Much will depend on the extent of development of the mineral industries and of the hitherto very small secondary industries, which will largely determine the internal market both for non-native and for native producers. The mineral discoveries do not as yet hold out prospects of any such large extension as would change the whole position, and most of the mines now working appear to be short-term propositions; there are only a very limited number for which a long life can be expected. Secondary industries again are in the main limited to activities connected with local building activities and the processing of foodstuffs, though the exigencies of war have led to a considerable expansion such as for example the dehydration of vegetables largely native grown.

Assuming then that the prospects for the future are for a limited number of fairly large-scale non-native planters and settlers and of increasing efforts to develop the native production both of commercial and of subsistence crops the question is of special importance how far these two systems can be co-ordinated and made complementary to one another. If the conditions of production as regards the capital and scientific skill involved are such as clearly to assign special commodities to one of the two spheres no special friction between the communities need be involved. Similar considerations would apply in cases where, though dealing with the same commodity, they cater for different markets. If again they jointly supply a world market of which East African production represents a very small proportion, native producers would not be at a disadvantage if they were provided with adequate facilities for processing and marketing and with agricultural credit so far as may be necessary. In some industries it may even be possible to integrate the two systems by taking advantage of their relative capacity to deal with separate stages of production. On the other hand if they are to remain on the level of competition for a limited market with political power employed to assist one section of the community it will be impossible to make any advance towards the transformation of the present 'plural society' into a real community. The whole position will remain unstable.

Estate and Peasant Products

There are unfortunately no statistics available by which to compare the real value to the territories of the respective systems of production, taking into account both commercial and subsistence crops. The rates of wages would be an important element. The values of the respective exports are a very inadequate gauge. Considering however the main crops produced, the range is much the same in the two territories, though their relative importance is very different, particularly as regards sisal, which represents about half the domestic exports of Tanganyika. Of this 30 per cent came from Indian, and 40 per cent from German and Greek plantations. In the early days of Kenya when European activities in the highlands began to replace their mainly unsuccessful efforts in the coastal areas on plantations of rubber, coconuts, cotton, tobacco, and sugar, and the efforts to increase native production were relaxed, the competition between native and European interests concentrated round the supply of labour which Europeans complained of as being inadequate. In the developments after the war of 1914–18 the activities of the two communities have tended to diverge. At the present time tea, pyrethrum, and essential oils, are European monopolies and are likely to be preserved as such. In the case of tea this would follow both from the character of the industry and on account of the international agreement. Pyrethrum and essential oils could be grown by natives though the bulk of the suitable land is in the European area, but if their growing was taken up by natives an acute situation would arise, as the markets are very limited. Tanganyika has so far not taken them up to any extent. The newly revived flax industry is also European. Sisal is European and Indian, and the position is unlikely to change owing to the large capital involved.[1] Sugar is in a similar position except that its market is local. Africans only grow the cane for their own consumption and incidentally for making liquor. Cotton, ground nuts, simsim, and copra, are now native monopolies apart from some Arab coconut plantations, and wattle, which was formerly a European product, is now mainly of native origin. Both communities produce wheat, maize, coffee (in Tanganyika and Uganda), and animal products, including milk products and beef. The marketing of wheat and maize is controlled, and in so far as the maize is exported to the coastal market there is no conflict between European and native interests provided that the system of grading is not weighted unfairly in the interest of either community. As the result of war conditions the present position is that the total production of all kinds of foodstuffs is unequal to the demand, but in more normal

[1] As in the case of sugar in the West Indies, research is being carried on as regards possible uses for the by-products of sisal. Plastic materials and some chemical products have been mentioned as possibilities.

times the only conflict between European and native interests as regards wheat and maize would be in the home market. As regards wheat, for example, difficulties would arise in a limited home market from any substantial increase in native production unless there was an advance in the general standard of income and of living such as would follow on the development of mining or of other industries. As regards maize the main problems would be with reference to methods of grading and marketing. So far as the coffee market is concerned, apart from the administrative steps taken to prevent native production in Kenya except on a small experimental scale, no special difficulties seem likely to arise even if native production were increased. The world market for high quality coffee is a limited one, and the real competition is between the products of different areas or different individual plantations, as the variation in the prices obtained is very great. So far as the ordinary grades of coffee are concerned the world market is dominated by Brazil, and small local increases of production are of small account. The grading and marketing organizations are adequate, and include the only large-scale native co-operative organization, The Native Co-operative Union in Tanganyika. As regards animal products, European and native wool producers deal with separate markets though this need not be the case permanently if native breeds were improved; the process would however be a slow one. Dairying is of greater general importance and will become much more so with the development of mixed farming. In Kenya both the European and native dairies are controlled by the General Creameries Organization. Here again European and native production is directed to different markets as the tendency is to direct native produced milk to the making of ghee for consumption by the Indian community. This tendency is a natural result of the different conditions of production and the market is more than sufficient. The beef market presents more possibilities of racial difficulties, but hitherto the main problems have been the organization of stock routes crossing European estates between native producing and consuming areas, and the securing of supplies for the meat factory in face of the native unwillingness to sell cattle at the price which the factory could afford to pay before the war. Recently there appears to have been an acute shortage of beef owing to the requirements of the large number of Italian prisoners in addition to the demands of the armies. As regards the wider question of the possibility of European and African co-operation in the cattle industry, the proposal[1] previously mentioned in connexion with Northern Rhodesia deserves consideration, though its application to Kenya may be more difficult owing to the specialized character of the European cattle industry in that territory.

Taking the position in East Africa as a whole, there appears to be no reason why European, Indian, and African, activities in the production of agricultural raw materials should not be fairly satisfactorily co-ordinated so long as purely economic factors, including the rates of wages acceptable to Africans, are allowed to operate freely. Pressure should not extend beyond on the one hand requiring the members of native tribes to do work either on their own land or outside, at their own free choice, and on the other hand controlling their agricultural and pastoral methods to the extent required to prevent the destruction or deterioration of their only permanent asset, the culturable land. The crucial problems are on the political plane and relate to land tenure, the provision of labour, the possibility of a native share in secondary activities, and to social progress generally, not to primary production and marketing. Some of them would be seriously accentuated by any large increase in the European population depending on native labour. The Indian population is a complicating factor. Much more numerous than the Europeans, they are an essential element in the economic structure of both territories, but their interests come into direct competition at all levels above elementary primary production with European interests on the one hand and with native on the other. There are few countries where it is equally difficult to anticipate the integration of varied and often discordant elements into a real community. So far as native peasant production is concerned they have shown a very considerable degree of adaptability in introducing new crops and improved varieties, as well as in modifying their tribal land customs to the extent required by more modern methods of production. Their pastoral practices have presented a much more difficult and still unsolved problem. One not unimportant section are, however, in a very unsatisfactory position, the squatters on European estates but their problem has been discussed in connexion with the recent White Paper. Squatters are not found to any large extent on the types of plantation involving the largest investment of capital, those connected with sisal and sugar which depend entirely on paid labour. In the case of these industries it is unlikely that the typical plantation system will be modified in the direction illustrated in Fiji and to some extent in Nyasaland and Uganda.

[1] See p. 153.

Land Tenure

In considering the three groups of tropical African dependencies various references have been made to special aspects of land tenure and it may be useful to add some general considerations in relation to this question which appear to have a bearing on the subject of this study. In dealing with the general problem the position in Africa is in some respects advantageous, as the policies of the various Metropolitan countries concerned are still fluid and there is thus an opportunity of guarding against the dangers which have arisen from faulty systems of land tenure in other parts of the world. On the other hand the very limited knowledge which is yet available of African customary tenures makes it difficult to arrive at any very definite conclusions which must be largely determined by the actual local facts.

Broadly speaking, questions of land tenure can be regarded from three aspects: the rights of the State, those of the smaller or larger local community, and those of the family or individual. As regards the rights of the State, the various colonial Powers have in almost all cases maintained a claim to a superior or ultimate proprietorship over land and over its disposition, usually coupled with the declaration of an intention to recognize native customary rights. In the French and Belgian dependencies this has taken the form of a claim to control all *terres vacantes et sans maître* which may be compared with the 'free State land' of the Netherlands Indies. In British Africa there are three main categories. The first includes areas such as Tanganyika and the northern provinces of Nigeria, in which legislation has enacted that all land is subject to the disposition of the Government to be held and administered for the benefit of the natives of the territory. No title will be valid without the consent of the Government, though in most cases it has been made clear that this is not intended to invalidate native customary rights. In the second category, of which Kenya is typical, all land is treated as Crown land except in so far as already alienated, but definite areas have been set apart as Reserves, or Native Trust Land, for native occupation in accordance with their customary rights. The third category includes those areas such as a part of the Gold Coast in which it has been accepted that the land rights of the inhabitants are not qualified by any claim to ultimate or superior proprietorship on the part of the Crown.

In the first two British categories, as in the French and Belgian dependencies, the Governments have a large measure of control over the allocation and use of land, both directly in regard to the land not needed for native requirements, and indirectly by their influence over the evolution of native customary law when it comes into contact with new economic conditions. In the third British group, the changes will in the main take place by spontaneous adjustments influenced to some extent by judicial decisions based on the interpretation placed by the courts on native customary law. In all cases however a stage may be reached when it may be necessary to apply legislation to customary rights either for the purpose of clarifying them or of meeting urgent social or economic needs. This control by Governments, if it is to be wisely and effectively used, must be based on a previous determination of policy both with regard to the general allocation and use of land, and to the forms of land tenure, but calculated to contribute

to reaching the economic objective of conserving and developing the fertility of the soil and of raising the standards of living of the population. Many problems would be involved, including that of the extent to which plantations should be developed as an alternative or supplement to peasant production, or whether a dual or tripartite partnership should be aimed at. In areas of native production again, many complicated problems are likely to arise. Such are, for instance, how far the traditional practices by which in many places smaller or larger groups co-operate in production are compatible with modern requirements, and to what extent direct or indirect community control over the disposal of land is reconcilable with improved types of agriculture. In the interests of agricultural advance must we look to the growth of exclusive rights for the individual or the family, and if individualization is to increase, should it take the form of full proprietary ownership or of a heritable occupancy?

These economic aims cannot however be divorced from their social setting. A body of recognized rights in land, communal, group, and individual, exists. They were for the most part evolved to meet the conditions of a static self-subsistence economy and are bound to change under the more dynamic conditions of a wider economy, but these changes should as far as possible be effected by adaptations acceptable to native opinion. Failing this, the opposition to the change may be so bitter as to make it ineffective in securing the desired improvement.

Unrestricted individual rights in land, such as are involved in freehold tenure, are alien to African traditions. In all African societies community rights over land, usually associated with religious sanctions, have existed side by side with individual rights. There has existed a complicated series of rights of usage, such as a permanent or semi-permanent right to the usufruct of land, sometimes associated with a community right to graze over the land during seasons when it is free from the traditional crops, and individual rights to trees combined with community hunting or grazing rights. The right to individual or family usufruct in particular has been well recognized. These community rights may however be exercised in such a way as to form a serious obstacle to the improving cultivator who wishes to introduce new crops or new methods which do not fit in with the traditional practices.

In some areas social and economic stimuli have created conditions in which individual rights are tending to encroach on the ultimate rights of the community, whether that is represented by individual families or extended families, or by villages or tribes. Such conditions are, for example, the demand for land created by an increase of population which endows land with an exchange value realizable in the new cash economy, a change from shifting or semi-permanent agriculture to permanent agriculture, and the introduction of new permanent crops such as cocoa, bananas, coffee and oil palms. Similar results would follow economic developments encouraging specialization in agriculture, and the introduction of new implements such as the plough requiring larger areas for their economic use. To these must be added the desire of more advanced Africans to obtain land on conditions approximating to those of Europeans, to escape from community control, and to be able to reap the advantage by sale or otherwise of the improvements which they have made. In some areas also the concentration of personal powers in the hands of Chiefs has enabled them to dispose of lands to strangers in what is in practice individual right, and in others Chiefs have lost the basis of their traditional effective power as custodians of the rights of the community.

There can be no question of the value of the growth of a sense of individual right in the land as an incentive to effort to improve its condition, but in a primitive society, unused to a money economy, exclusive individual rights with a power to encumber or transfer lands carries with it serious dangers. The results of its improvident use for raising credit for purposes often not connected with agriculture have been illustrated in many parts of the world, including parts of Africa itself such as Egypt and Algeria. Apart from the effects on the individuals, the communal or village life is impaired by the introduction of alien elements, by the accumulation of large holdings by individuals which they are unable to use beneficially, combined with the growth of a landless labourer class, by rackrenting and absentee landlordism. There is an equal danger of the increase of sub-division and fragmentation resulting in holdings too small for a reasonable standard of living.

Where these evils have been allowed to develop unchecked a stage has ultimately been reached when it has been recognized that it was essential to attempt to control them by restrictive legislation which may take the forms of curtailing the liberty of transfer or encumbrance of a holding, of restricting transfer to certain defined classes, or of controlling subdivision or fragmentation. It is however very difficult to recover the ground which has been lost against the opposition of strong vested interests based on established customs recognized by the Courts, and attempts to secure this are likely to give rise to very complicated judicial issues. It would require an elaborate Governmental organization such as it would be difficult to establish.

Central Africa is however in the fortunate position that it is still possible to attempt to forestall these undesirable developments instead of waiting until their pernicious effects compel interference. Security of tenure is essential to agricultural advance on a peasant basis, but there is no reason why it should not be combined with such a measure of community control as to guard against the possible

harmful consequences of unrestricted individual tenure. The traditional conception still remains that the community has an ultimate concern in the control of the use of the land, and advantage should be taken of this conception before it has been seriously weakened by the spasmodic growth of unrestricted individual rights. Restrictive measures alone would, however, not be enough, they would have to be supplemented by actions of a much more positive kind. How far the constitution of the appropriate native authorities would have to be changed to give more adequate representation to the more progressive Africans is outside the scope of this study. A definite function of a positive kind which would be necessary to the successful working of a system of usufructuary tenure would be an arrangement for payment on behalf of the community of compensation for improvements so as to remove the temptation to illicit sale. A wide sphere of activity would also be opened out if the community organization could itself take an active part in promoting agricultural advance by such measures as the establishment of communal plantations for experimental and demonstration purposes—as in the case of oil palms—or the provision of agricultural credit, as has actually been organized for the promotion of mixed farming in Nigeria. In any case an adequate system of credits is essential to agricultural advance on peasant lines.

VI. GENERAL CONCLUSIONS

In the preceding chapters an attempt has been made to set out the main features of the agricultural development of typical colonial dependencies through plantation and peasant agencies. The territories selected include an immense variety of conditions both as regards physical features, climates, and the character and density of the populations. They have, however, the common characteristic of being all situated in the tropics, and of having attracted the investment of external capital by their capacity to produce special tropical commodities needed by the thickly populated industrial countries of the temperate zones. The only partial exceptions are limited areas in Africa where European settlement has been to some extent accepted as an end in itself. In some cases the history of development under the influence of the colonizing powers covers a period of centuries; in others it is comparatively recent. The methods adopted at different periods have to a large extent been affected by the 'climate of opinion' of the time in the metropolitan countries, including the economic doctrines commonly accepted. The major developments have however taken place during the period of expanding markets up to about 1930.

In some respects the present time is very suitable for an examination of the general position as regards plantation and peasant production. A great variety of experience has been accumulated of the working of the two systems during the long period of expanding markets, and under the impact of the economic crisis of the early nineteen-thirties. The growing changes in views as to the implications of colonial responsibilities referred to in the first chapter have increasingly affected Government policies. Scientific advances have opened out new possibilities to plantations, while peasants, stimulated by increasing Government support in the shape of scientific assistance and marketing organizations, have shown their capacities in many directions. The danger of excessive specialization both to plantations and peasants, but especially to peasants, and the necessity of a better balance between commercial crops and food crops, have been more fully realized.

On the other hand the present period is one of transition. War necessities have brought about a new position as regards the character of markets and the relative importance of the various raw materials, and of the different regions and systems of production. The possible effects of recent advances in the production of synthetic substitutes for certain important raw materials cannot be estimated as yet, though they may have serious implications for both plantations and peasants,

even more for the former than for the latter. It is still too soon to estimate the extent of lasting change which is likely to be caused by the recent developments in the great colonial areas. The changes, political and economic, which seem possible in Malaya, the East Indies, and the West Indies, may, for example, profoundly influence social and economic policies, including those relating to plantation and peasant production. Looking farther ahead, an advance towards self government in colonial dependencies may be accompanied by a change of attitude towards foreign capitalistic undertakings the profits of which are for the most part received by persons not resident in the country.

For present purposes it is enough, however, to confine attention to the conclusions suggested by the pre-war experience of these representative dependencies as regards the relations between plantation and peasant methods of agricultural production. Commercial crops must be the main subject of consideration, as it is with such crops alone that plantations in tropical countries are concerned. The peasant cannot, if he is to retain his security, disregard the necessity of growing adequate food crops, and in most cases they should be his primary consideration. Commercial crops are a necessary supplement if his standard of living is to be raised above a very low level, and under favourable conditions a surplus production of food crops may fulfil the same purpose.

A lesson to be learned from the history of commercial and industrial agriculture in these countries seems to be that no definite or permanent line can be drawn between agricultural products as regards suitability for plantation or peasant methods of production. Except sisal—and in most countries tea—there is no important crop which is monopolized by plantations; even sugar receives a large contribution from peasant producers in some areas, though they are generally dependent on estate factories for the manufacture of the sugar. The strength of plantations lies in their greater capacity for intensive production as the result of the application of scientific knowledge, more especially when it involves meticulous care in the details of cultivation, in their command of adequate capital for establishing large working units, and for providing the costly machinery required for some types of products, and in being able to organize greater regularity of supply and uniformity of quality for an increasingly selective world market. Recent scientific advances have assisted them by showing how great increases can be obtained in production per unit of area, and by making it possible through the application of new processes to supply their particular commodity in the special form required by the continually changing character of world demands. Their heavy overhead charges and specialized capital expenditure become serious handicaps if for any reason, such as outbreaks of disease, they are no longer able to produce the commodity in that area, or if the world demand for their product begins to decline. That these dangers have been realized is shown by the increased diversification of production in some plantation countries such as those of the Netherlands Indies.

In many cases again the prospects of plantations are largely dependent on the extent and character of the labour supply, and this is likely to be increasingly affected by changes in public opinion and in Government policies. This applies more especially to plantations in the large proportion of the colonial dependencies in which the local population is inadequate to provide any substantial surplus of labour, and in which labour has to be imported either from other countries or from distant areas in the same country. It was previously secured either by a system of indentures, or through other recruiting organizations involving contracts with penal sanctions. These have been largely abandoned and are unlikely to recur in the main colonial regions. The application of pressure by Governments to secure labour for private employers is no longer permitted. There are however some difficult cases in isolated dependencies, such as the systems of indentures adopted in Papua and New Guinea.[1] In such cases plantations would appear to be impossible without the use of some form of organized recruiting and this can be defended as being organized in the interests of the workers themselves as well as of the employers. The alternative would be a postponement of development, and probably a smaller production, though the ultimate results might be based on firmer foundations and be more constructive in character. These changes and the increased attention to demographic problems will make it less possible for plantations to count on a continuance of the supplies of cheap labour on which they have so largely depended in the past. A higher standard of wages and of housing and other conditions will be expected, and the development of industrial and of other forms of employment will create a strong influence in the same direction. A valuable result should be the greater use of labour-saving appliances and increased attention to the training of the labourer.

Peasants, on the other hand, have maintained and generally increased their hold on those agricultural products which are either marketed without processing, or which only require the application of simple processes within their financial and technical capacity. Their position is specially strong in the case of crops such as cotton, which require a large supply of temporary seasonal labour.[2] A good deal will

[1] This question is dealt with by J. W. Burton, op. cit., pp. 41–50. Apart from the effects on the village social organizations the author holds that the strongest argument against development on a plantation basis is not the possible abuses, but the fact that the system offers no worthy economic return to the native.

[2] In the Soviet Union a recently invented cotton picking machine is reported to have done the work of 35 to 40 cotton pickers, but it has still to undergo final tests under actual working conditions. (*International Industry*, January 1946, p. 30.

however depend on whether crops taken up by them can be suitably combined with their traditional agriculture. A peasant economy can also be more easily adapted to the modern policy of raising the local standard of subsistence by increasing the quantity and the variety of food crops which would not be financially profitable to plantations. Peasants again would be the chief beneficiaries if crops such as oil seeds, now exported in their raw state, were processed locally to the extent necessary to make their valuable food elements available to the home population. In the case of some crops peasants can share the world market with plantations by providing different types or qualities of the same product. Their chance of success in these directions will largely depend on the extent to which they receive the help and guidance necessary to enable them to overcome as far as possible their technical and financial backwardness. They cannot fairly be blamed for low standards of production, for supplying inferior qualities, and for the deterioration of their land, unless they receive the necessary scientific, technical, administrative, and financial, assistance and control. For these essentials the Governments concerned must bear the main responsibility, a responsibility which most of them have as yet accepted only to a very limited extent, though much can also be effected through the co-operation of non-official agencies such as the Empire Cotton-Growing Corporation, and in the case of some commodities from the help given by plantations engaged in the same industry.[1]

Political considerations apart, the methods of production in any area will largely depend on the local physical, climatic, and demographic position. Where the physical and climatic conditions are such that agricultural production is only possible after heavy expenditure on capital works, and more especially on large-scale irrigation works, the choice seems to be between operation by the State on a basis of tenants or small-holders and tripartite co-operation between the State, private capital, and peasant tenants or paid labour.[2] Similarly in a sparsely populated country to which labour has to be imported plantations may be the only method of enlisting the help of private capital. In the early stages they would have to employ paid labour, though later on it may be found economically and socially advantageous, as in Fiji, to give the labourers a permanent interest in their holdings by instituting a system of tenancy. In countries with an adequate, and more especially those with a very variable rainfall, and with a resulting low average out-turn per unit of area, pastoral activities are likely to predominate. The in-

[1] Cf. the help given by the oil palm plantation of the United Africa Company to the native industry, p. 135.

[2] Such a tripartite scheme is best illustrated in the Sudan Plantations Syndicate. The recent decision to terminate that experiment, and the fate of a somewhat similar project in Iraq suggest that such schemes may require special political conditions for their successful operation.

dividual peasant agriculturalist cannot work an adequate area nor command sufficient resources to stand up against the natural vicissitudes. Even the Chinese peasant has been baffled in Inner Mongolia, and the Andalusian peasant in most of Andalusia. The tendency is then towards larger economic units which may take the form of landlord and tenant or of some type of communal organization. In pastoral activities external capital has found considerable scope in some dependencies, but its operation is subject to many uncertainties under tropical conditions, as was illustrated in the case of Nigeria.

The position is more complicated in those countries in which the population is dense in relation to the culturable area, as for example in Java and in some of the West Indies. There the labour strength may be sufficient to support both plantation and peasant agriculture, and the main problem is to establish mutually beneficial relations between the two systems, so as to combine the advantages of the intensive production of plantations in specialized directions with the peasant's facilities for growing subsistence crops. The average peasant holding is too small to provide him with the necessary food and with cash resources, or to occupy his whole time. It is of great value to him to obtain paid employment on plantations for part of his time. From the economic, as distinct from the political or social point of view, the criterion of the success of such a mixed system lies in the degree of efficiency of the plantations and in the maintenance of a suitable relation between the two systems. Inefficient plantations which cannot maintain a high degree of intensiveness of out-turn, or afford to pay adequate wages, are not a permanent asset to any country which requires the maximum production from its land. If they fail in this their primary purpose, even if the failure is largely due to causes outside their control, they are no longer a source of strength to the country's economy and are likely to be replaced either by a system of small-holders or by conversion into one of landlord and tenant. On the other hand the fact has to be taken into account that as matters now stand the gradual transformation of plantations into collections of small-holdings probably entails a reduction in the total production of the country.

The history of British dependencies gives no justification for complacency as regards the success of our policy, or absence of policy, in dealing with developments of this type. British conceptions of land holding and tenancy when applied to countries and peoples of very different characteristics have had disastrous effects in some cases in leading on the one hand to the domination of moneylenders or of landlords who fulfil no useful economic functions, and on the other hand to the deterioration of the land from the absence of any incentive to the actual cultivator to maintain its fertility. The tendencies to partition and to fragmentation of peasant holdings have been additional adverse factors, partly resulting from the failure to develop

local industries which would absorb a proportion of the increasing populations and so reduce the pressure on the land. The organization of a system of credit for small-holders, and of some measure of supervision and control over their methods of agriculture, are necessary complements of a transfer from a plantation to a healthy peasant economy. For an intermediate stage, a landlord and tenant system, the development of a satisfactory system of tenancy is an urgent requirement, and this is equally essential in those areas in which peasant holdings are being transformed into estates owned by local inhabitants worked by a landless proletariat.

In countries with a peasant population the general problem is to raise the standard of production and of living by devising a system of collectivization of small-holdings which will enable them to function with an efficiency comparable to that of a large estate. Various methods of attaining this end have been widely advocated on theoretical grounds and have actually been put into practice in many countries, usually countries of an advanced type. In some cases, as in parts of Spain, such collective organizations are of very ancient origin. They represent various forms of communal organization but, except for one small experiment mentioned in connexion with Jamaica, and the refugee settlement in San Domingo, they do not appear to have been attempted in the dependencies which have been considered, not even in the Netherlands Indies. The most extreme form is exemplified in the collective farms of the Soviet Union. Other possible varieties are a co-operative organization of peasants carrying on cultivation jointly, and a jointly controlled central farm with peasant holdings grouped around it depending on the central farm for some of their operations as well as for advice, processing and marketing. A modification of the latter has been considered in connexion with the West Indies.

The great Russian experiment has been carried out under very special conditions. It was regarded as an essential part of an immense programme of industrialization to be carried out at any cost; it related for the most part to areas and to crops adapted to large-scale mechanized farming, and it could appeal to an old tradition of communal control of village agriculture. These conditions are hardly likely to be met in colonial dependencies. On the other hand there are in many native societies traditions of co-operation in agricultural activities by larger or smaller groups, and the field is still practically unexplored of attempting to adapt these traditions to more modern uses. The native authorities in Africa might also play a larger part in agriculture by establishing communal farms or communal plantations, such for example as have been suggested by Sampson and Crowther in connexion with the oil palm industry. But as yet there is no experience to draw on as regards the practical working of schemes of this type.

In the long-term interests of colonial dependencies the question remains of the relative stability and permanence of the plantations and peasant systems of production. Both are to a large extent governed by external conditions outside their control, more especially by the course of world prices. The position would be transformed for both systems, but particularly for the peasant and for the small or medium planter or settler, if it proved possible to bring about by international agreement a greater degree of stability in the prices of raw materials. The development of internal markets would also be of great importance, particularly to the peasants and the less specialized planters or settlers. Even then, however, natural vicissitudes and the inevitable variations in demand and supply would test the capacities of all producers. The advocates of plantations and of other forms of capitalist agriculture claim that through their greater capital resources they are able to maintain their operations and to continue providing employment in periods of economic depression when peasant cultivators are liable to be so discouraged as to cease production. The supporters of peasants maintain on the other hand that plantations are seriously handicapped by their heavy overhead expenses and by the great difficulty of transforming the specialized operations to which they are committed by their heavy capital expenditure. As a result they are in a weaker position than the peasant, who can if necessary either revert temporarily to subsistence agriculture or transfer his activities to some new direction.

The history of colonial territories seems to suggest that there is a measure of truth in both contentions. Not only plantations, but also peasants have in some cases, as for instance in West Africa, maintained production over periods of very low prices; in other cases, as in the Netherlands Indies and in Tanganyika, they have reacted quickly to a fall in prices by a decrease in production. On the other hand they respond very rapidly to a recovery in prices. Much depends on whether a balance has been preserved between commercial and subsistence agriculture, and whether, as in the case of rubber, operations can be temporarily closed down without serious injury to the basis of the industry.

Plantations again have often shown themselves able to maintain production and employment under very adverse circumstances, but the history of the older colonial dependencies shows many instances in which a long-continued depression, or the appearance of a disease affecting a special crop, has wiped out a whole generation of planters and replaced them either by much stronger financial organizations, usually controlled from outside the country, or by peasant cultivation in some form. Ceylon and the Netherlands Indies provide good illustrations of this type of change, as did the West Indies in their earlier period where small planters were absorbed by larger. In Ceylon it was a common saying that a third generation of planters was

unknown. In Kenya the position is somewhat different, as the type of economy aimed at is less specialized and less exclusively based on exports, but there too the wastage has been heavy, as it has also been in Nyasaland and Northern Rhodesia. There has been more continuity in the West Indies and in Mauritius, since the sugar industry was concentrated in large and efficiently managed concerns, but a large proportion of other types of plantation, and even of the smaller sugar concerns, are now in a precarious position and they have only survived because of the help received from Empire preference. It is true that much the same has been said of some types of British farming, but the causes here are more under control, and the changes resulting not so fundamentally serious as in some other countries.

While external circumstances, including natural calamities and the vagaries of world prices, have been the immediate causes of the great and sometimes sudden changes in the type of tropical colonial plantations, internal weaknesses in the system itself have been important contributory factors. For Europeans to maintain health under tropical conditions, even if modified by elevation, a fairly high standard of living is required such as can only be realized by operating on a considerable scale. It may be theoretically possible for the small farmer to do a great deal of his own manual work, but for the northern European at any rate this does not seem to be a practical proposition so long as native labour can be made available. These considerations become much more important when the prospects of the next generation are taken into account. In most tropical countries the children of planters or settlers cannot be given a fair prospect of healthy physical and mental development except by necessarily expensive arrangements to give them their education outside the country. Failing such precautions a gradual deterioration in the type is probable. For all these purposes a substantial reserve of capital is required to draw on in times of adversity, and the average individual planter or settler without an adequate backing of capital can only carry on by becoming more and more heavily indebted, usually at high rates of interest. His position is liable to be made much worse by the tendency which has everywhere shown itself in short periods of prosperity to apply temporary profits either to personal expenditure, or to undertake heavier obligations for extending the scale of his operations beyond his power to support later on. Banks and financial houses have been largely responsible for this tendency by a mistaken policy of almost pressing loans on borrowers who were in no position to take them with reasonable safety. The necessity of large-scale working also limits the number of possible plantations and of settlers, and seems to leave small prospects for successful so-called 'close settlement' except under unusually favourable conditions.

On the other hand plantations or settlers operating on scientific lines may be a very valuable economic asset to the country in which they operate both by their more intensive production, by the employment which they are able to give—provided that they can afford to pay adequate wages and to provide suitable working conditions—and by the lessons of principle and practice which they are able to teach the local inhabitants. Inefficient plantations can be transformed either by incorporation in larger undertakings or by being broken up into peasant holdings. The latter solution raises the difficult problems of tenure and of methods of cultivation which have been referred to earlier. The former implies a change from the personal relationship of the individual resident settler or planter to the more impersonal control of the paid manager, usually imported from outside and always liable to be changed. Economically the results may be advantageous, but socially they make the task of evolving a real colonial community even more difficult.

A distinction should be made between the general problem of European settlement in the tropical colonies and the more limited question of the use of imported capital and management for the achievement of specific aims in agricultural production. The first is very largely a political problem. The second is primarily economic, and in the present stage of colonial progress a plantation system of this type can still fulfil valuable economic functions when combined with a suitable system of peasant agriculture. The present stage, however, is probably only transitional. As the dependencies advance along the path of economic and social progress they will increase both their local capital resources and the capacity of their peoples to make use of them. Even apart from the possible effects of the corresponding political advance the result will probably be that even if the plantation system is maintained it will be largely taken over by local landowners or capitalists, not necessarily to the general advantage of the country. A more experienced peasantry will moreover be better qualified to take over new fields of agricultural production, and co-operative organizations may play a much larger part. The general tendency would appear to be in favour of the peasant, provided that he receives such training and scientific assistance as will raise his standard of production to an extent comparable with that in more advanced agricultural countries, and that he has adequate security of tenure and facilities for credit. In the case of most commodities a processing and marketing organization would be a necessary supplement, especially where exports are concerned, and in this direction external capital and managing capacity should find a wide field of operation for a long time to come.

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