

EMPIRE MARKETING BOARD STIMULATING TROPICAL RESEARCH*

TEA AND COFFEE FIGURE PROMINENTLY IN THE PROGRAM

SINCE the establishment of the Empire Marketing Board, four years ago, substantial grants have been made from its fund towards the maintenance and development of the Imperial College of Tropical Agriculture, Trinidad. The objects of the college are to provide training in the science and practice of tropical agriculture to students intending to become tropical planters, agricultural officers, or specialists in different branches of agricultural science, and to offer facilities for the study of tropical agriculture of graduates of other colleges and universities.

An important feature of the college is the provision for research which its new laboratories and fields afford. Past students of the college are now employed in India, South Africa, Swaziland, Southern and Northern Rhodesia, East and West Africa, Ceylon, Malaya, the West Indies, and other parts of the Empire. During the year just ended (May 1930) Professor F. L. Engledow of Cambridge University visited the college at the invitation of the Board to report upon the future policy of the college so far as teaching and research are concerned. Professor Engledow emphasised the interconnection between post-graduate training and research and made certain recommendations for the future development of the college which are now being considered by the Governing Body.

The Board's grants for tropical and sub-tropical development consists of £21,000 (\$105,000) capital and £55,000 (\$275,000) spread over a period of four years. Of this £6,000 (\$30,000) per annum for three years has been granted to the East African Agricultural Research Station at Amani, for which contributions estimated at £12,000 per annum are provided by the East African Governments. The research program of this station includes (1) surveys of the basic types of East African soils; (2) the collection and correlation of data regarding climate; and (3) a study of the results of the interaction of soil and climate as expressed in the natural vegetation. Investigations proposed relate to coffee problems; problems connected with the conservation or restoration of soil fertility; plant breeding with particular reference to coconuts, cinchona, tea, coffee, sugarcane, etc.; the collection and cultivation of a wide range of plants used as fish poisons, etc., for the study of the production and use of their active principles as insecticides in co-operation with work on this subject at the Rothampsted Experimental Station; virus diseases of tropical plants; and investigations on problems presented by specific pests and diseases.

Tea research is receiving attention both in India and Ceylon. A grant of £3,125 (\$15,625) capital and £687 (\$3,435) per annum for five years has been made to the Indian Tea Association, and similar sums are being provided by that Association. These grants were approved last year on the recommendation of the Indian Imperial Council of Agricultural Research, towards the cost of establishing plant and developing at Tocklai a laboratory of plant physiology where problems connected with the constitution and composition of the tea plant can be studied.

* From *The Spice Mill*, Vol. LIII, No. 8, August 1930.

Although considerable work has been done upon the study of soil and fertility problems, it is clear that only the fringe has been touched and that more research work on these problems is needed. It is now proposed to investigate the changes that can occur, or that can be brought about by various modifications of manūrial treatment, soil reaction, soil moisture and the like, in the composition of the tea plant (especially the leaves), and how such changes will affect resistance to insects and fungi and will modify the quality of the finished tea. These are problems, the solution of which would be of fundamental value not only to the Empire tea planting industry, but to other permanent plantations.

A capital grant has been made in the past year to the Ceylon Tea Research Institute, a sum of £1,000 having been granted for the purchase of experimental small-scale machinery and plant for the factory of the Tea Research Institute of Ceylon. The present staff of the Institute is qualified to undertake investigations in all the major branches of research as applied to the tea industry. Special attention is being paid to the fundamental physical properties of the soil, its degree of laterization and the inter-relationships between soil type, basic exchange and soil reaction. Already certain fundamental differences between average tea soils and other tropical soils are beginning to emerge. A comprehensive program of research on the changes accompanying tea manufacture is in hand and a detailed study is being made of the composition of the fresh leaf including the variation in composition from plucking, and at different times of day, over a pruning cycle.

The additional plant and machinery at the Institute's factory will make possible a more complete study of the withering and subsequent processes of rolling, fermentation and drying, and render possible the manufacture of tea from small quantities of leaf from the experimental plots and allow of comparisons being made between different treatments.