

Since detailed descriptions of the scientific work in progress at the various research institutes aided by the Development Fund are published elsewhere, only a brief outline of their work is given in the present report. The scheme, organised by the Society of Friends, for assisting unemployed men in cultivating allotments, was once again given financial support, in view of the great success of the work in 1933. Disappointment, however, is expressed that it was not possible to assist as many as had been hoped, chiefly owing to the difficulty in securing suitable land. The Rural Economy Section reports progress on nearly all sides, and rural industries are being developed over most of Great Britain on practical and profitable lines. Fishery research has also produced valuable results, particularly with regard to the herring and haddock industries. The determination of the best-sized mesh to use to ensure that undersized fish are not landed has enabled definite legal regulations to be enacted, and the survey of young haddock stock has rendered it possible to forecast the quantities of marketable fish and their probable distribution in future years. The report concludes with a financial statement and a schedule of the grants allocated during the year under review.

Agricultural Research in East Africa

THE Colonial Office has issued the sixth annual report (1933-34) of the East African Research Station at Amani (London: H.M. Stationery Office. 1s. net), from which it is evident that progress has again been made in all the various research activities with which the Station is concerned. As regards coffee investigations, the earlier impression that heavy applications of organic manures to *arabica* coffee effectively offsets the harmful influence of soil acidity has now been confirmed, while culture solution studies suggest a marked correlation between acidity of the medium and the degree of branching of the roots which occurs, high acidity being associated with an unbranched type of root system. Results of importance have also been obtained by the plant pathology section, as the vector of the mosaic disease of *Cassava* has been definitely proved to be a species of white fly (*Aleurodidce*). On the biochemical side comes the discovery that the fermentation of coffee is an unnecessary process so far as quality is concerned, though the difficulties of correlating quality with the method of preparation of the coffee are still not overcome. The cultivation of sisal (*Agave amaniensis*) continues to increase, and the first lot of seedlings raised at the research station are now becoming available for fibre tests, the standardisation of which has been considerably developed during the past year.

Fishery Research in the U.S.S.R.

THE organisation of fishery research in the U.S.S.R. is the subject of a brief but highly important article by Prof. B. S. Ilyin in the current issue of the *Journal du Conseil* (9, No. 3. Conseil Permanent International pour l'Exploration de la Mer. Andr. Fred Høst et Fils, Copenhague. December 1934). The Scientific Institute of Marine Fisheries, formerly the

Central Scientific Institute of Fisheries (Moscow), and the State Institute of Oceanography (Moscow) have been united under the name of the "Union Scientific Institute of Marine Fisheries and Oceanography". The new Institute is designed to function as a planning, guiding and co-ordinating centre for the activities of the numerous fishery stations situated around the coasts of the U.S.S.R. Its purpose is to promote the welfare of the fisheries by acquiring data concerning marine biological and oceanographical phenomena, and intelligently applying the results. In this connexion the formation of an economic section is of especial interest and importance in view of present events and tendencies in the fishing industry of Great Britain. The Institute will issue three series of publications—*Transactions*, *Records* and *Bulletins*—all in Russian, but the first two will be furnished with English, French or German summaries. The address of the Institute is Moscow, Verkhne Krasnoselskaya 17.

Research in the Electrical Industry

THE fourteenth annual report of the British Electrical and Allied Industries Research Association (the E.R.A.) shows that the electrical industry is fully alive to the commercial value of research. It has been well supported both by the Government and the various branches of the industry during last year, and although we do not agree that there can never be a point "at which research has all the support it needs and deserves", it has certainly not been "oversubscribed" in the past. The long list of researches the Association has before it, still inadequately financed, shows that there is need for further co-operative help. It is interesting to read that designers of insulating material for electrical material are now attaching less importance to a knowledge of the electric strength of their materials and more to their thermal conductivity. The importance of Fourier's theorems on the conduction of heat is being fully recognised, and also that temperature is a leading factor in electrical breakdowns. For some years the flame of the Méker burner has been the standard for the determination of "resistance to naked flame". It has been found that the standardisation of the burner flame in conjunction with simple correction factors is unsatisfactory, as flame temperature is not correlated to the calorific value of the gas in a simple manner. Further experiments are being made to develop a standard flame for scientific tests in connexion with 'inflammability'. The electrical resistivity map of the soil of England and southern Scotland has now been completed, and a summary of the work done on telephone interference has been published. Tests on radio interference are in progress. A list is given of the Government departments, engineering and scientific institutions, universities and colleges which have co-operated in the work of the Association.

Progress in Radio Communication

A paper by Col. A. S. Angwin giving a review of the progress of radio communication for the year