

and place them in proper perspective in the general framework of trading. Stress was laid by Mr. Hutchinson on the need for merchants and also spinners to have the fullest information available about the various characteristics of both main growths and new varieties. He said that at first it would probably be found better to superimpose any new tests on the established systems of classifications than to set up new systems. Nevertheless, marked additional sub-classification would certainly give rise to serious marketing difficulties. Selling would be made more complicated because many test results cannot be used as a basis for trading values, choice of material might be more restricted, and prices would be increased by higher classification costs, while adequate cover against price changes could not be arranged to cope with a multiplicity of qualities. There might be more scope for the use of scientific tests in normal 'spot' trading of cotton for immediate consumption than in 'futures' trading for covering price changes.

SYMPOSIUM ON THIOCTIC ACID

A SYMPOSIUM on the chemistry, biochemistry and pharmacology of thioctic acid was held during November 28 and 29 at the Institute of Pharmacology of the University of Naples. There were about a hundred participants, including Profs. Bovet, Chain, Condorelli and Rossi-Fanelli (Rome), Prof. Theorell (Stockholm) and Prof. Vannotti (Lausanne), apart from the speakers.

The symposium was introduced by Prof. D. Marotta, director of the Istituto Superiore di Sanità (Rome), and the first lecture was given by Prof. M. Calvin (California), who discussed the part played by thioctic acid in the photosynthetic cycle. Prof. Calvin reported the isolation, with the help of ^{35}S -labelled thioctic acid, of the natural active form from the plastids of algae. It is probable that, in this form, the carboxyl group of thioctic acid is bound in an ester linkage to a hydroxyl group of glycerol.

Prof. E. A. Braude (London) followed with an account of the synthesis of thioctic acid. He described a new method which affords a good overall yield in few steps and represents the first application of the Prins reaction (addition of formaldehyde to an olefin) to the synthesis of a natural product.

The pharmacology of thioctic acid was discussed in a lecture by Prof. L. Donatelli, who stated that the lethal dose in rabbits, mice and other animals lies between 100 and 220 ml. per kgm. weight. A strong antitoxic action of thioctic acid was demonstrated for acute and chronic poisoning by mercuric chloride, arsenite, arsenobenzoles, carbon tetrachloride, aniline and isonicotinic acid hydrazide. A remarkable diuretic and choleric effect was also observed in the rabbit.

The second day was devoted to the physiopathology and therapeutic applications of thioctic acid. Prof. P. Larizza (Cagliari) reviewed present knowledge on the part played by thioctic acid in biochemical processes and illustrated his experiments on phosphorus poisoning and steathogenic (Handler) diets in which thioctic acid normalizes the fat content of the liver. Prof. F. Rausch (Bad Rothenfelde) reported on the applications in human pathology, particularly in the awakening action on liver coma patients. This effect

was confirmed by Prof. A. Colarusso (Naples), who also discussed the liver-protecting action in hepatic cirrhosis and various forms of hepatitis. He noticed a remarkable diuretic effect on some of his patients with liver cirrhosis and congestive heart failure. The dose used was of the order of 20–50 mgm. per day, usually injected intravenously.

From these lectures and from the lively discussion which followed, it was clear that thioctic acid, apart from playing an important part in plant metabolism, may be a useful therapeutic agent, especially in diseases of the liver.

A. SEGRE

WATER RESOURCES OF GREAT BRITAIN

ALONG with the news of the reconstitution of the Central Advisory Water Committee (*Nature*, October 22) comes the welcome reappearance of "The Surface Water Year Book of Great Britain"*. A complete survey of inland water resources involves details of rainfall, surface water and ground water. The "Year Book" provides information about the surface water resources of most drainage areas and their rainfalls, and rather more detailed information relating to rainfall alone is issued annually in "British Rainfall", published by the Meteorological Office. Details of ground water resources are not yet available, but active steps are being taken to acquire and issue this information.

The first three "Surface Water" volumes dealt with the periods 1935–36, 1936–37 and 1937–45, and the fourth and present volume with the eight water years 1945–53. In the first two volumes the measurements reported were collected from various public and private organizations, and the distribution of the records was very uneven. This was improved in the third volume, and a further notable increased coverage occurs in the fourth volume largely as a result of the River Boards Act of 1948.

In the present volume Great Britain is divided into 103 areas, each area corresponding to one or more river basins. Within each area there is, first, a general description of the region, the gauging stations and the records available. Monthly evaluations of the average general rainfall over the drainage area for the standard period 1881–1915 are given, and then follow tables of monthly discharges and run-off, together with monthly evaluations of the general rainfall. An indication of extreme discharges is also given.

Thus the presentation of the data, so far as the monthly flow records are concerned, closely follows the pattern of the third volume, but the new volume does not give daily discharges for each station or the tables of frequencies. The possible inclusion of these data and other relevant information is, however, under consideration for the next issue, which it is hoped will cover only one water year. Meanwhile, the issue of the fourth volume is a notable step towards the systematic collection and dissemination of the basic data necessary for the formulation of a much-needed national water policy in Great Britain.

W. G. V. BALCHIN

* Ministry of Housing and Local Government: Scottish Office. The Surface Water Year Book of Great Britain, 1945–53. (Hydro-metric Statistics for British Rivers, together with related Rainfalls, for the Eight Years ended 30th September, 1953.) Pp. xi+167. (London: H.M.S.O., 1955.) 35s. net.