

EVALUATION OF NUTRITIONAL STATES

THE newly formed Nutrition Society began its active life at Cambridge on Saturday, October 18, with a symposium on "The Evaluation of Nutritional States". The audience included the president of the Royal College of Physicians, Lord Dawson, Prof. E. J. Bigwood, professor of biological chemistry in the University of Brussels, Prof. J. Preston Maxwell and the heads of a large number of biochemical and other laboratories. Messages of good-will had been received from various British scientific societies and from research workers in Britain and America.

In the morning, the chair was taken by Sir Charles Martin, who gave a brief history of the formation of the Society and, before calling on Sir Frederick Hopkins for his introductory address, paid a tribute to his success in ending the complacent attitude of the first years of the nineteenth century. Sir Frederick outlined the changes in the outlook of the science of nutrition during the fifty years that have passed since he gave his first lectures on nutrition.

The first session dealt with the assessment of the level of nutrition in man. Dr. Leslie Harris claimed that the nutritional state cannot be assessed satisfactorily without laboratory methods. Clinical methods suffer from lack of definite standards, and food deficiencies may be present without clinical evidence. He gave examples of tests for deficiency of several vitamins and dealt more fully with the saturation test for vitamin C. Examples were given of the response to the test by well-fed and slum children, and of the effects of the War. He discussed the causes of food deficiencies in Great Britain, and stressed the frequency with which sick persons are given inadequate diets.

Dr. H. M. Sinclair, who followed, questioned the validity of the assumptions on which the saturation tests are based. He preferred to base conclusions on evidence of failure of function; for example, the corneal changes, visible with the slit-lamp, due to deficiency of vitamin A or riboflavin. These functional changes may be due to deficiency of more than one nutrient. He discussed some surveys now being made in which the results of tests are being correlated with the diet.

Drs. J. Yudkin and G. W. Robertson discussed the incidence of lowered dark adaptation and the effects of treatment with vitamin A or carotene. They have found that in some factories in the Midlands, less than 50 per cent of workers between 15 and 20 years of age have good dark adaptation.

In the afternoon, with Sir Joseph Barcroft in the chair, the subject was clinical signs of dietary deficiency. Dr. B. S. Platt showed a remarkable

series of photographs to illustrate the effects of deficiencies in China and Africa. He stressed the incidence of mild wet beriberi; in some factories in Shanghai, half the workers had oedema of the ankles. He pointed out the relation of infection of the skin and mouth to vitamin deficiency and concluded by showing photographs of two groups of African workers, one ill-fed, listless and silent, the other well-fed, vigorous and noisy: the aim of the science of nutrition should be the cheerful vigour of the second group.

Dr. R. H. Dobbs enumerated various methods used in the assessment of the nutrition of children, particularly those of von Pirquet.

Mr. W. C. Nixon argued that pregnancy imposes a special strain that brings out latent deficiencies of nutrition. For example, among a poor Chinese population, vitamin B₁ deficiency was endemic. Frank beriberi appeared late in pregnancy, although during the earlier months the women suffered from cramps and vomiting. Oedema of the ankles might be present for several weeks before the onset of severe beriberi. Much of the illness associated with pregnancy may be due to deficient food.

The discussion of the nutrition of farm animals was opened by Dr. C. Crowther. He pointed out the differences in the aims and methods of the study of the nutrition of human beings and animals. The estimation of the nutritive value of the food of farm animals is much complicated by the fact that cellulose cannot be neglected. The calculation of the energy value of food has done more than anything else to improve the scientific control of feeding. Farm animals are not liable to suffer from vitamin deficiency unless they are confined and fed on concentrates. Dr. Crowther insisted on the interaction between the various constituents of a diet; it is not possible to regard the effects of constituents as merely additive.

Dr. H. H. Green gave examples of deficiency diseases in farm animals, including deficiency of trace elements. Dr. John Hammond showed a series of diagrams illustrating the effect of under-feeding mother and offspring on the growth and physical conformation of the offspring. The physique is permanently affected by a low level of feeding during the early months of growth.

Unfortunately, more than one of the speakers appeared not to have prepared his address and wasted the time of the meeting while he sought for his thoughts, or words in which to express them, and/or repeated himself. Open discussion had to be left until after tea. Although many members had left, there was a valuable exchange of views.