

Britain and the United States, had 20–30 per cent of the people suffering from malnutritional diseases before the War. The near-famine conditions now faced by the world are nothing new, but shortages are affecting those who, by their advantageous economic position, had previously been virtually immune from even the fear of famine.

Britain imports the largest quantity of food of any country in the world—in some cases as much in normal times as two thirds of the total of a given commodity entering into the world trade. If exporters are no longer compelled by economic needs to sell the food they badly need themselves, then the position is indeed difficult for the importers. The world position has been aggravated by that greatest scourge ever known to man—soil erosion—and the irrational over-exploitation of forests, fisheries and grasslands. The plea is made for policies based on real knowledge and quantitative data rather than half-knowledge or guess-work.

'Wellcome' Photographic Year Book

THE well-known 'Wellcome' Exposure Calculator, Handbook and Diary, published by Burroughs Wellcome and Co., has appeared in a modified form as the 'Wellcome' Photographic Year Book. The contents are similar, and those who made use of the original publication before the War will remember that it consists essentially of a diary, a number of pages ruled for recording the essentials of photographic exposures, a fund of useful photographic information, and a very useful exposure calculator. Used in conjunction with the illustrated examples of different types of subject, the calculator is one of the best of its kind. On the back of the exposure calculator, also in disk form, is a depth of field calculator with which the depth of field can be obtained for lenses of various apertures and focal lengths. The keen photographer will find the Year Book a valuable asset for the pocket.

Frank B. Jewett Fellowships: Awards

THE American Telephone and Telegraph Company, which founded the Frank B. Jewett fellowships for research in the physical sciences three years ago to commemorate the retirement of its eminent vice-president in charge of development and research, has announced seven awards for 1947–48. The purpose of the fellowships is to stimulate and assist research in the fundamental physical sciences, and particularly to provide the holders with opportunities for individual growth and development as creative scientific workers. The awards carry an annual stipend of 3,000 dollars to the holder and 1,500 dollars to the institution at which the recipient elects to do research. The awards are designedly post-doctorate, and only those who have recently received their doctorates or who are about to receive them are normally considered.

The awards for 1947–48 have been made to: (1) Dr. Martin G. Ettliger (University of Texas and Harvard University), at present investigating the chemistry of cyclopropane and dicyclobutane derivatives at the California Institute of Technology as a Jewett Fellow for 1946–47; he intends to continue his present research studies. (2) Wallace D. Hayes (California Institute of Technology), who proposes to investigate problems of transonic and supersonic fluid flow. (3) Paul Olum (Harvard and Princeton Universities); he is to carry out research in algebraic topology. (4) Aadne Ore (University of Oslo), at

present an F. E. Loomis Fellow at Yale University; he will work on the theory of combinations of electrons and positrons. (5) Dr. Alfred Schild (University of Toronto and the Carnegie Institute of Technology); he will study relativistic field theories in quantum mechanics. (6) Dr. Robert L. Scott (Harvard and Princeton Universities), at present Jewett Fellow, engaged in research in chemistry at the University of California; he is to continue his studies of the thermodynamics of solutions. (7) Edwin H. Spanier (Universities of Minnesota and Michigan), at present a Rackham Predoctoral Fellow at the University of Michigan; he will engage in research in the homotopy classification of continuous mappings.

British Iron and Steel Research Association: Appointments

MR. R. H. MYERS has been appointed head of the Steel Making Division of the British Iron and Steel Research Association and Dr. A. H. Leckie has been appointed deputy head. Mr. Myers studied under Profs. J. O. Arnold and A. MacWilliam at Sheffield, and, after a post-graduate course of one year, started his industrial career with the Midland Iron Company. Since 1930 he has been associated with research in the steel industry, as open-hearth officer to the Iron and Steel Industrial Research Council, in addition playing an active part in the Corrosion and Heterogeneity Committees set up jointly by the Research Council and the Iron and Steel Institute.

Dr. A. H. Leckie studied chemistry at University College, London, under Profs. F. G. Donnan and C. K. Ingold. After graduating, he was engaged in research for several years on molecular spectroscopy. In 1937 he joined the Technical Department of the British Iron and Steel Federation and was engaged on research on iron and steel works plant and principally on open-hearth furnaces. Dr. Leckie joined the British Iron and Steel Research Association, when that body took over the work of the Federation's Technical Department, and is in general charge of research work on furnace design and operation.

Radiocommunication Convention

THE Institution of Electrical Engineers is holding a Radiocommunication Convention during March 25–28, at which some seventy papers will be presented dealing particularly with war-time activities in this field and their resulting application to future peace-time development. The Convention will be opened on March 25 by Sir Stafford Cripps, President of the Board of Trade, after which Sir Stanley Angwin will give a lecture on "Telecommunications in War" On March 26 four meetings will be held dealing in turn with long-distance point-to-point communication, naval, military and aeronautical communication, and the special features of pulse modulation in communication systems. The subject of short distance communication will be dealt with during the following morning, while the afternoon and evening sessions of March 27 will be devoted to direction-finding and war-time broadcasting respectively. On the morning of March 28, Sir Edward Appleton will open the session on propagation with a paper entitled "The Investigation and Forecasting of Ionospheric Conditions". The afternoon of the same day will be devoted to radio components, and in the evening, Sir Clifford Paterson will conclude with a review of the Convention and the future trends of development indicated by the papers and discussions. At an

additional meeting to be held on April 2, a number of papers will be presented dealing with the various types of continuous wave radio navigational aids which have been developed during recent years.

Summer School in X-Ray Crystallography

IN recent years the study of materials by means of X-ray diffraction has come to occupy an important place in scientific research both in the universities and in industry. This field of study enters into physical, chemical, metallurgical, mineralogical and biological research. The necessary X-ray technique is, however, highly specialized, and for its proper understanding a fundamental training is required. An attempt to meet the demand for such courses was made at the University of Cambridge by the provision of Summer Schools in the years 1943-46. Although these schools were very successful, they are now to be discontinued; but, if the demand warrants, consideration will be given to their continuation at the Manchester College of Technology under the direction of Dr. H. Lipson. Correspondence should be addressed to the Director of Extra-Mural Studies, University, Manchester, 13.

Cambridge Summer School in Physical Chemistry

A SUMMER SCHOOL on "Some Recent Advances in Physical Chemistry" will be held in the University Department of Physical Chemistry, Cambridge, during August 16-23 inclusive. A course of eighteen lectures will be given by the staff of the Department on the following topics: (1) molecular structure and valency theory (6 lectures); (2) chain reactions (6 lectures); (3) physics and chemistry of rubbing solids (6 lectures). Practical work on these topics will be arranged for those who desire it. Demonstrations will also be given and full opportunity provided for discussion with the lecturers and with those carrying out research in the laboratory. An inaugural lecture will be given on the evening of Saturday, August 16, and the course will finish on the evening of August 23. Arrangements have been made for most of those attending the School to be accommodated in colleges. Applications to attend the School must be received by May 1. Inquiries should be addressed to the Joint Secretaries, Summer School in Physical Chemistry, University Department of Physical Chemistry, Free School Lane, Cambridge.

Pasteur Exhibition

A PASTEUR EXHIBITION will be held at the Science Museum, South Kensington, London, during April 10-May 26. The exhibition has been arranged and provided, with the assistance of the Cultural Relations Department of the French Foreign Office, by the Palais de la Decouverte in Paris, where it has recently been on show. This institution is devoted to the exposition of modern science, employing for the purpose the most advanced techniques of visual education. The Pasteur Exhibition includes a chronological account of the chemical and biological work of Louis Pasteur on fermentation, putrefaction, the spontaneous generation of life, and on the causative organisms of numerous diseases of men, animals and plants. The results of his work are illustrated by panels dealing with pasteurization in the brewing and other industries, and the raising of disease-free silkworms. A section of the exhibition deals with the Pasteur Institutes established throughout the world for the preparation of serums and vaccines for the combating of disease epidemics.

Fourth International Cancer Research Congress

THE Fourth International Cancer Research Congress will be held in St. Louis, Missouri, U.S.A., during September 2-7, 1947. The Union Internationale contre le Cancer having accepted the invitation of the American Association for Cancer Research, the Congress will be held under the joint auspices of these two organisations, with Dr. E. V. Cowdry, professor of anatomy, Washington University School of Medicine, and director of research of the Barnard Free Skin and Cancer Hospital, as president of the Congress. Of the three Congresses that have been held previously, the first was in Madrid, in 1933; the second in Brussels, in 1936; the third in Atlantic City, New Jersey, U.S.A., in 1939. The State Department in Washington having approved of the International Cancer Research Congress, official invitations will shortly be sent to foreign governments. Dr. M. G. Seelig, Barnard Free Skin and Cancer Hospital, St. Louis 3, Mo., is chairman of the Publicity Committee of the Congress.

An Optical-Acoustic Method of Gas Analysis

MR. A. WHITAKER, chief engineer of Ascot Gas Water Heaters, Ltd., Research Laboratories, Tolworth, Surrey, writes: "The instrument described by Dr. F. I. Callisen in *Nature* of February 1, p. 167, is being used in these laboratories. It is based on the description published by Dr. Luft-Oppau and has been further developed at our request by the Infra-Red Development Co., Ltd. A working model will be shown by Ascot Gas Water Heaters, Ltd., at the forthcoming Physical Society's Exhibition.

Announcements

PROF. W. J. DE HAAS, professor of experimental physics and meteorology in the University of Leyden, and Sir John Russell, formerly director of Rothamsted Experimental Station, Harpenden, Herts, have been elected foreign associates of the Paris Academy of Sciences.

THE Committee of Privy Council for the Organisation and Development of Agricultural Research has appointed Mr. James Turner, president of the National Farmers' Union, to be a member of the Agricultural Research Council.

MR. J. F. FOSTER, formerly registrar of the University of Melbourne and secretary of the Australian Vice-Chancellors' Committee, has been appointed secretary of the Universities Bureau of the British Empire, on the retirement of Mr. W. B. Brander from that office. Mr. Brander, who has been secretary since 1930, will continue for a while in an advisory capacity.

MR. N. F. ASTBURY has been appointed director of research to the Guest, Keen and Nettlefolds group of companies. Mr. Astbury was director of the Research Laboratories of Joseph Sankey and Sons, Ltd., one of the member firms of this group. It is intended that these laboratories shall now become the headquarters of the research organisation of the combine.

THE Research Council of Alberta is offering two fellowships, each of value 1,320 dollars for one year, tenable at the Council's laboratories, University of Alberta, open to graduates in chemistry and chemical engineering. Applications should be sent by air-mail to the secretary of the Council, University of Alberta, as soon as possible.