

the few firms with a thousand or more employees are scientific workers to be found in reasonable strength.

Sir Ben pointed out that the research associations in Britain are largely intended to help these smaller firms, and he went on to emphasize the wealth of opportunity in the exercise of craftsmanship to be found in this machine age if only it is recognized that the secret of craftsmanship lies in finer and finer control of the machine and in the apt choice of materials that goes with the knowledge of their properties. The extent to which exploitation is made of the vast field offered to the scientific worker and craftsman in fabrics manufactured from natural and mixed fabrics largely depends on the size and status of the textile industry. Success will depend on the knowledge of the materials being used, the appropriateness of machinery that is possessed for their utilization, and the instrumental aid which can be provided to enable the man at the machine to satisfy his creative instinct for craftsmanship. Such considerations, Sir Ben thought, are particularly important in industries that have grown from hand-craft. He also suggested that the time spent on discovering the principles on which manufacture in the textile industry rests provides the surest basis for the solution of future problems, and creates the intellectual climate which promotes discovery and the growth of new ideas. It is in the utilization of results coming from the research associations that the Textile Institute is specially important, and on its members rests a large share of the responsibility for seeing that methods now available for the more economical use of materials and for quality control in mills and factories are used.

Seed Health in Flax

PROF. A. E. MUSKETT, of the Faculty of Agriculture, Queen's University, Belfast, read a paper before Section K (Botany) of the British Association at its meeting in Belfast, in which he reviewed developments in the treatment of flax against seed-borne disease. A considerable number of such troubles include those caused by the fungi *Polyspora lini*, *Colletotrichum linicola*, *Botrytis cinerea*, *Fusarium lini* and *Phoma* sp. Seed-borne diseases of flax brought very considerable losses of yield during the First World War. The later discovery of organo-mercurial dusts did not solve the problem on flax as it did for cereals. 'Short-wet' methods were used, but eventually tetramethylthiuram disulphide ('Nomersan') was found to be the most effective seed-dressing. Prof. Muskett, however, went a stage further, and, using his 'Ulster' plating method, made a wide survey of the natural health of seed produced in various regions. This intensive work has now been continued for ten years, and shows that seed from the southern and eastern parts of Britain has little seed-borne disease. Larger yields of seed are, moreover, usually obtained in these drier and warmer areas. This simple but effective finding has been fully justified in practice, and the seed used in Northern Ireland is now all obtained from the south and east of England. The only disease fungus which is seed-borne to any extent from these areas is *Botrytis cinerea*, and that is dealt with by routine seed treatment. It is obviously much better to start with naturally clean seed than to treat diseased samples, and the results of this object lesson might well be applied to other crops and in other areas.

Microbial Genetics at the University of Glasgow

THE Nuffield Foundation has made a grant of £6,000 over three years for the expansion of research in the Department of Genetics, University of Glasgow. The grant will be used mainly for fellowships. It will make it possible to increase the research team working under Dr. G. Pontecorvo in microbial genetics. The approach followed in the past few years in the Department has been mainly that of making use of the resolving power of genetic analysis in order to get some insight into the details of biochemical organization of the cell. It is hoped that a strengthening of the team especially on the biophysical side may lead to useful advances.

Canadian National Research Council Scholarships

THE National Research Council of Canada intends to award about two hundred postgraduate scholarships which will be available without restriction of nationality for study in the fields of science and engineering during the year 1953-54. The majority of the awards will be tenable at Canadian universities and are divided into bursaries, studentships and fellowships worth, respectively, 600, 900 and 1,200 dollars each; they may be increased by an extra 500 dollars for the summer months. Bursaries are for graduates who have no previous research experience, studentships for those with at least one year of research, and fellowships for those in their last year of work for a Ph.D. About twenty of the awards will be tenable outside Canada and are divided into special scholarships for those who either have completed or are completing their work for a master's degree, and postdoctorate overseas fellowships for specialized training; the former are worth 1,500 dollars and the latter 2,500 dollars for twelve months. Applications should be made before February 1 to the Awards Officer, National Research Council, Ottawa 2.

Announcements

THE Institution of Mechanical Engineers has awarded its James Watt International Medal for 1953 to Sir Harry Ricardo, for his contributions to knowledge of the fundamental principles of internal combustion engines and the application of these principles to design and development. This Medal, which is in gold and is the highest honour that the Institution can bestow, is awarded every two years, and for it the Institution has the co-operation of the principal engineering institutions and societies in all parts of the world as nominating authorities.

THE Council of the Royal Society has awarded two Mackinnon research studentships to the following: R. C. Jennison, of the University of Manchester, for work on radio astronomy at the Jodrell Bank Experimental Station; and Dr. F. K. Duxbury, of King's College, Newcastle upon Tyne (University of Durham), for work on organic chemistry at the University of Liverpool.

THE American Association of Spectrographers is planning a symposium on "Emission Spectroscopic Determination of Metals in Non-Metallic Samples", to be held in Chicago on May 1. Papers in the fields of petroleum, geology, agriculture, pharmacy, biology, ceramics, etc., are invited. All inquiries should be directed to the chairman of the symposium committee, J. P. Pagliassotti, c/o Standard Oil Company (Indiana), Box 431, Whiting, Ind.