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Infestation of Grain by Insects

A SURVEY of the conditions of infestation in the grain trade in Great Britain was initiated about a year ago (*NATURE*, June 4, 1938, p. 1004), as a result of which it appeared that research into control and remedial measures against pest infestation of all stored produce was desirable. At the request of a Standing Conference representing the industrial interests co-operating in the work, the Department of Scientific and Industrial Research has agreed to undertake this research and an advisory service for industry. The work will be carried out with the technical and financial co-operation of industry, by the Imperial College of Science and Technology at the Biological Field Station of the College, at Slough, under the direction of Prof. J. W. Munro, professor of zoology and applied entomology at the College, to whom inquiries relating to this new service should be sent. Industrial organizations interested in the work should communicate with W. McAuley Gracie, chairman of the Standing Conference on Pest Infestation, Department of Scientific and Industrial Research, 16 Old Queen Street, London, S.W.1.

National Parks

THE winter number of the *Tree Lover* (3, No. 26, De la More Press, 2a Cork Street, London, W.1) includes an article on the case for national parks, which deals with the report of the Standing Committee on National Parks. In discussing this important question, many fall into the mistake of comparing Great Britain with Canada, the United States and other countries of the New and Old World of much larger size and with extensive tracts of wild, undeveloped countryside where great national parks or game reserves have been formed. These enthusiasts are apt to forget that Great Britain is, compared with such countries, a very small and densely populated island. This being said, the case for such national parks as are, or may be, feasible is a very strong one. As pointed out in the article in question, such a movement "falls in most signally with the aims of the Health Campaign on which the Government is at present engaged. If abundance of Playing Fields is essential for this, still more essential is the provision, or preservation, of national 'walking grounds', and regions where young and old alike can find refreshment and inspiration in the enjoyment of unspoilt Nature". The proposals of the Standing Committee on National Parks are well known. The chief question in connexion with these proposals is where the money is to come from. The suggestion is the Treasury. There is also a considerable body of influential opinion which considers that this question is one for the general public. That in fact if the public really want the national parks a fund should be opened to provide the money for their formation

and upkeep; that the British public will attach a greater value to, and have a greater interest in, the maintenance of national parks provided by their own endeavour than if they are more or less controlled by the Government and therefore nobody's child.

Meteorology for Airmen in India

A PAMPHLET of the India Meteorological Department, having the title "Meteorological Organisation for Airmen", brings up to date the information required by airmen in India who wish to take advantage of available information about actual and expected weather on the various aviation routes in that country. There are several classes of meteorological station in the organization that is concerned with meeting the demands of aviation, of which the most important are the forecasting centres where synoptic weather charts are prepared twice a day, namely, for civil aviation (Karachi, Calcutta and Poona), and for military aviation (Karachi and Peshawar). The India Meteorological Department is responsible for the aviation weather service on the trans-India route from the Gulf of Oman to Akyab, as well as along other internal air routes in India. The positions of the four types of meteorological station more directly concerned with the supply of information—the civil and military forecasting centres, the pilot balloon stations where the winds aloft are measured, and the aeronautical wireless stations—are clearly shown on a folding map. The codes for transmitting information about the weather have become more numerous in the course of years, in proportion as the information required has become more detailed and precise, and practically the whole of this pamphlet is taken up with them. Attention is directed in a foreword to a change instituted on July 1, 1937, which resulted from the establishment of an independent meteorological service in Burma. From that date the Calcutta Meteorological Office ceased to issue weather reports and forecasts for air routes in Burma and the 'general inference' for the Rangoon-Bangkok section, these being taken over by the Meteorological Office at Rangoon, but it has continued to issue reports and forecasts for the Calcutta-Akyab route.

"Earning whilst Learning" in American Universities

THE economic depression in the United States compelled university administrators and students to devise fresh plans for enabling poor undergraduates to pay their way. The Federal Government decided to help, not with scholarship grants but by financing work projects through the National Youth Administration. So new ways were discovered for using student labour and some proved so beneficial to all concerned that they became permanent. A summary of the more important is given in *Bulletin* No. 9 of the Office of Education (Supt. of Documents, Washington, D.C. 10 cents). This gives particulars of factories, printing-presses and other money-earning projects, of co-operative housing and other schemes for reducing students' living costs, and of the 'self-help' colleges which aim at making education as

nearly as possible self-supporting. These are described as strongly Christian in intent and influence, proclaiming the dignity of labour and the fundamental importance of training in heart and hand as well as head. Yale's bursary employment scheme, providing employment for more than four hundred of the residents in its new undergraduate hostels, is described in some detail. It is so popular that well-to-do students have applied for bursary work without stipend because of the opportunities it offers for personal development. Harvard also has lately introduced an employment scheme in connexion with its new dormitories. The report emphasizes the increasing recognition of the value of money-earning labour as a part of education, especially its contribution to character-building, and the advantages of co-operative living arrangements.

The Temporary Ley

THE Welsh Plant Breeding Station, Aberystwyth, has just issued a bulletin entitled "The Temporary Ley", price 7s. 6d. It is divided into four sections. The first compares the results obtained with station-bred and commercial grasses when used in simple mixtures. Although in the first year the commercial seeds gave the best yields, distinct advantages were shown by the station-bred varieties in the third year. Relative aggressiveness of the different species in a mixture is also an important point; timothy, for example, failing to become established when sown in conjunction with cocksfoot or perennial rye grass. Section 2 deals with the yield and persistency of different strains of grass and clover. Mixtures containing indigenous species gave both higher yields and better response to phosphatic manuring than those in which such species were in the minority or lacking. Pasture management and its effect on the sward is the subject of the third section. Swards differing widely in botanical composition were subjected to various systems of management, and it was found that the importance of a species is determined by the individual reaction of the plant to the type of management, as well as its ability to withstand competition from other components of the sward under those conditions. The final section consists of an article by Sir R. George Stapledon, director of the Station, on the establishment and maintenance of temporary leys. This will perhaps be of particular value to the agriculturist as it deals largely with the practical aspect of the question. Final emphasis is laid on the fact that success depends on the combination of a well thought-out seeds mixture with good management.

A Pioneer Garden Journalist

A SHORT chapter of garden history in the early eighteenth century is unfolded by Mr. W. Roberts, in a paper on Richard Bradley, F.R.S. (*J. Roy. Hort. Soc.*, 64, Pt. 4; April 1939). Bradley was the first professor of botany at Cambridge, and though he does not appear to have conferred much sound teaching upon his students, nor given academic dignity to the University, he was responsible for a series of

volumes which exerted considerable influence upon horticulture at that period. "A General Treatise of Husbandry and Gardening" was one of his greatest contributions, and forms the main subject of Mr. Roberts's paper. The text introduces "Such Observations and Experiments as are New and Useful for the Improvement of Land", and, indeed, Bradley's experiments represented his major contribution to horticulture, at a period when it was the fashion only to copy and quote. He states that his expenses in the study of the nature of plants and soils cost him upwards of £2,000, and he also travelled widely. Though his undertaking to establish a Botanical Garden at Cambridge did not flourish greatly, he distributed much garden knowledge of an exact order.

Earthing with Driven Copper Electrodes

A HUNDRED years ago, when electricity was usually generated by the use of frictional or Wimshurst machines and detected by gold leaf electroscopes, it was well known that an electric charge on a conducting surface could be dissipated by connecting the charged surface to earth. It is now found that owing to the increasing electric power behind modern networks, in order to get safe operation special attention has to be paid to the conductor connecting charged metallic objects to earth. Copper electrodes of small diameter cannot be driven with a sledge-hammer unless the ground be soft, as the rod will bend or the top will be deformed. The Copper Development Association of Thames House, Milbank, London, S.W.1, has published a booklet entitled "Copper for Earthing" which gives several useful hints on this problem. The most satisfactory method of driving copper electrodes into the earth is by means of an electric hammer which delivers a large number of light blows. The usual procedure is to choose the wettest or the most low-lying spot in the neighbourhood and drive a copper rod of small diameter into the earth to a depth of about eight feet. The earth resistance is then measured; if too high, several more rods can be driven in and connected in parallel. This is necessary for earthing mains where a possible fault current may be very large. The booklet points out that, even now, earth connexions are sometimes made by a few feet of conduit buried outside the house or under the floor in contact with a small iron plate or with the hot-water piping system. Sometimes even a large electric machine is earthed by binding the wire round a loose rock lying on the ground. In one case the earthing wire was found to terminate in a bottle of water!

London's Water in 1937

THE results of the chemical and bacteriological examination of the London waters for the twelve months ended December 31, 1937, are contained in the thirty-second annual report of the Metropolitan Water Board, recently issued (P. S. King and Son, Ltd., 14 Great Smith Street, Westminster. 10s. 6d.). Much of the report was drafted by the late director, Col. Harold, before his death last July, and the task