

International Congress for Entomology, held in Berlin in 1938, pp. 1429-1479. James Fletcher, in 1887, incepted studies on insects injurious to Canadian crops and in that year he became the first Dominion entomologist. Prior to this time he had acted for a few years in an honorary capacity. On Fletcher's death Dr. Gordon Hewitt, of the University of Manchester, succeeded to the post thus vacated: he held office from 1909 until 1920. In the last-named year the death of Hewitt led to the appointment of Mr. (now Dr.) Arthur Gibson as the Dominion entomologist.

The Canadian Entomological Service has steadily developed each year and has attained a commanding position in the Dominion Department of Agriculture at the present day. Both Fletcher and Hewitt contributed much to its growth and their good work has been worthily upheld and extended by Gibson. Field stations and laboratories are maintained at thirty different localities and there are ten plant inspection stations. When, however, it is recollected that the provinces Manitoba, Saskatchewan and Alberta alone, are larger than France, Germany and Italy combined, it will be realized that Canadian entomologists have no lack of problems to contend with. The Dominion Entomological Service now ranks as the most important of its kind in the British Empire.

Vegetative Propagation in Tropical Plantations

THE Imperial Bureau of Horticulture and Plantation Crops, East Malling, has issued Technical Communication 13 on this subject by G. St. Clair Fielden and R. J. Garner. It deals with the vegetative propagation of some fifty-five plantation crops, and follows a previous communication (issued in 1936) dealing with the vegetative propagation of some one hundred fruit varieties grown in the tropics and subtropics. The help of technical experts has been invoked for adequate treatment of such major crops as rubber, coffee, cacao, etc., while the foreign literature has been thoroughly combed for details of propagation of the less familiar, but nevertheless important, crops. One feature of the previous work, which commended it also to workers in temperate regions, is retained and considerably enlarged, namely, the section devoted to methods used in vegetative propagation. The descriptions are supported by simple, clear, line drawings of some seventeen types of graft and seven types of budding commonly used in vegetative propagation. Tropical workers will also be glad of the illustrated detail of the construction of loosely woven potting baskets which have been found so useful a substitute for pots in nursery work in the tropics. For those who wish to study originals, a list of references immediately follows the discussion on the propagation of each particular crop.

Weeding Methods in Teak Plantations

A. L. GRIFFITH, provincial silviculturist, Madras has recently discussed an investigation into different weeding methods in the formation of teak plantations in areas with a west coast climate (*Indian For. Rec., Silviculture*, 4, No. 2; Govt. of India Press, New

Delhi, 1939). The investigation was carried out on a number of small-scale experiments and four large-scale ones. Five methods of weeding were tried. At the time, the principal method of weeding the young teak was by the expensive way of forking. The experiments carried on since 1932 have demonstrated that the method termed scraping is cheaper and as efficient on light forest soils; and that other methods, such as the cheap weeding by weed cutting alone, are not worth while. Weed cutting by hand is by no means cheap in England. By the scraping method it is said that plantation costs are being reduced by Rs. 10 per acre and the quality is as good as formerly. The scraping is done in 4 ft. strips (2 ft. on each side of the line of plants). Weed growth was not cut before. The scraping is effected with an ordinary *mamoty* (like a pointed spade with a recurved handle), removing about $\frac{1}{2}$ in. of soil and cutting the weed roots at that depth below the original soil-level. The weeds removed are piled on the 2 ft. unweeded strips between the lines without cutting the weed growth on them. Or the operation may be carried out over the complete area, the weeds being then presumably removed.

Equine Encephalomyelitis in U.S.A.

IN an editorial article in *Public Health Reports* of April 5 the writer remarks that though equine encephalomyelitis may have existed for very many years in the United States, attention has recently been focused on it by the epidemic in Massachusetts in 1938 when human cases of encephalitis also occurred. There was, however, no indication of human contact infection in these cases. In 1939 only 8,000 cases of equine encephalomyelitis were reported in the United States, or only about 4 per cent of the number (184,662) reported in 1938. The incidence was 1.1 per 1,000 animals (horses and mules) in the affected counties and a case fatality of 30 per cent. The highest incidence was reported from counties in the far-western and Pacific States, a north-east-south-west strip of the central States and three Atlantic States, New Jersey, North Carolina and Florida. As in previous years, more than 90 per cent of the cases occurred in the summer or early autumn. This seasonal prevalence favours the current view that the principal means of transmission is by blood-sucking insects, especially mosquitoes. The prophylactic value of vaccination with a vaccine of chick embryo tissue is shown by the fact that the incidence of encephalomyelitis in vaccinated horses and mules was 0.37 per 1,000 in the vaccinated as compared with 1.2 in the unvaccinated. Other factors in the reduction of the disease were the retarding of insect breeding and increased resistance owing to previous attacks among the animals.

Vehicle Radio-Telephone Service

IT is reported from Pittsburgh, Pa., that the Bell Telephone Co. has applied for a permit to install transmitters and receivers on what is called a 'tie-up' with existing telephone facilities. The company has applied to the Federal Communications Commission