

WHAT OTHERS WRITE ON TURF

In this department will be given the substance of research in the various fields of scientific investigation which seems to have a definite bearing on turf improvement. The articles will summarize results of recent investigations made in various parts of the world. They are not published here as recommendations but simply as information for our readers and as suggestions which may have practical applications in many situations. Where the Green Section's tests or the information it has obtained from other reliable sources in this country substantiates or contradicts the results obtained by other investigators, comments to that effect may be included as a guide for our readers. In all other cases the reader will receive in brief the results and conclusions as given in the original papers.

WEED CONTROL AROUND THE WORLD

In these troubled times it is extremely encouraging to find that until very recently it has been possible for scientific investigators in South Africa, New Zealand, Australia, Germany, Canada, and the United States to cooperate with the Imperial Bureau of Pastures and Forage Crops in Aberystwyth, Great Britain, in the publication of a comprehensive symposium on weed control. The Bulletin of 168 pages containing this symposium was received in the office of *TURF CULTURE* last April. The 11 different articles appearing in the Bulletin have been written by authorities in each of these countries and present the many and varied aspects of the problem of weed control "as affected by the different types

of agriculture in the countries chiefly concerned, together with the practices characteristic of these countries, and the preliminary results of the extensive research programs which have been instituted."

It is unfortunate that space does not permit a review of each of the articles. However, since 10 out of 11 articles relate to weeds in pastures and arable lands, a general summary may be sufficient to indicate the major trends in researches on weed control in the countries chiefly concerned.

In the main, weed control is being attempted by cultural, chemical, and biological means. The cultural and chemical methods are being used quite universally and are discussed in detail by A. S. Crafts and R. N. Raynor of California and B. Rade-

macher of Germany. Government programs for weed control are described by L. W. Kephart in the United States and by B. Rademacher in Germany. The biological method is mentioned particularly in Australia and New Zealand. This method involves the introduction of insect pests and therefore necessitates extensive tests on many species of insects to determine those which will feed on the weed or weeds concerned and which at the same time will not feed in any stage of their life history on plants of economic value.

The weeds common to each of the countries are listed in the various articles, the most completely organized lists being those given for Germany by B. Rademacher and for Australia by C. H. Currie.

Bibliographies on weed control are also included by T. K. Pavlychenko of Canada, Currie of Australia, Rademacher of Germany, and Crafts and Raynor of the United States.

Poisonous plants are also discussed. R. H. F. Manske of Canada presents the possibility of classifying poisonous plants on the basis of their chemical analysis rather than their morphological characteristics. These plants are given particular emphasis by D. G. Steyn of South Africa who states that already more than 200 poisonous plants are known in the

Union of South Africa, only some of the most important of which are discussed in his article.

The only discussion of weed control in turf is given by John Monteith, Jr., who names the most common weeds in turf in the United States and discusses the possibility of controlling them by means of proper maintenance practices, by the judicious use of fertilizers, and by the use of selective herbicides such as arsenicals which will kill many of the weeds and yet not seriously burn the turf grass.

THE ANNUAL WHITE GRUB

The annual white grub (*Ocbrosidia villosa*) has been known to occur in various places in this country, but only occasionally has it been reported as the cause of serious turf injury. In 1937 the attention of the Green Section staff was called to a set of fairways in Pennsylvania where this insect had caused extensive and severe damage. It has been observed elsewhere causing serious damage in more limited areas of turf. It is possible, however, that in many instances it may have been responsible for some of the damage believed to be caused by one of the 2 to 4-year broods of the June beetle. C. R. Neiswander, of the Ohio Agricul-