BOOK REVIEW

An annotated index of plant diseases in Canada and fungi recorded on plants in Alaska, Canada and Greenland.

by H.L. Conners

Canada Department of Agriculture Publication # 1251. 381 pp. 1967. Queen's Printer, Ottawa, Canada. $8.50.

This volume includes both Canadian records of all diseases of cultivated plants (including nematode infections and physiological disorders); and also all published records of the occurrence of saprophytic and parasitic fungi on native and introduced vascular plants in Canada, Alaska and Greenland. It is difficult to say which of these two classes of data will be most widely used; but it is safe to say that both will be of great benefit to a wide range of biologists.

The primary breakdown is by genera of plants, which are listed alphabetically. Under each genus the included species are listed with English and French common names, approximate range, and an identifying number for reference under the fungus, other organism or condition. Under each fungus or disease entry the geographic area is given along with appropriate bibliographic references. Notes of varying length are included on history, control, etc., of major diseases, varying from a few lines to about 2500 words, which greatly increase the usefulness of the book to plant pathologists and workers in related fields. The index is very complete, and it should be noted that a repeated page number warns the user when the organism is reported on two hosts. The bibliography includes nearly 1300 references.

As one who watched the evolution of this book over several years, much of the time under most distracting circumstances, I can say without hesitation that it has been a very great undertaking, painstakingly and meticulously executed with a degree of precision that would be impossible for anyone without Ibra Conners' unusually dedicated approach.

The literature coverage is essentially complete to the end of 1964. As an example of the value of such detailed coverage, I may point out that for the plurivorous saprophyte Mycosphaerella tassiana there are some 180 citations. The names of the fungi have been very thoroughly revised. The host names have usually been well checked, but a few recent revisions have been excluded. (I am embarrassed to find I omitted to provide names in Saxifraga to replace a few revised after I wrote up their rusts.)

Such a book can never stay up to date, and many new records have appeared during its two years in press. It has also been impossible to include a vast number of unpublished records. However, this book will be a primary source of records for fungi and diseases in the northern half of North America for many years.

It is scarcely conceivable that, in nearly 400 double-column pages of fairly small print, there should be no typographic errors. A few have survived the attention of D. W. Creelman, who edited the book, the author, and several volunteers who helped from time to time; but those that I have seen have been very minor. Readers may note that the reference 571 at the foot of the first column of p. 3 should read 511.

The printing is clear, the binding allows the book to lie open at any page without "massage", and in all respects the book is simple to use.

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NEW AND NOTEWORTHY DISEASES

The cereal rusts, although generally widespread in Western Canada, caused little damage except in late-seeded fields. The incidence of common root rot (Bipolaris sorokiniana, Fusarium spp. remained at normal levels on wheat in Saskatchewan but caused moderate to heavy losses in barley in Alberta. Browning root rot (Pythium spp.) was present in many winter wheat fields in Ontario. Eye spot (Selenophoma donacis) was reported, for the first time in Canada, on durum wheat in Saskatchewan. The incidence of aster yellows virus in oats in Manitoba was the highest ever recorded. Barley yellow dwarf virus was commonly found in fields of wheat, oats and barley in the same province.

Bacterial wilt (Corynebacterium insidiosum) was commonly found in alfalfa stands in British Columbia and southern Alberta and new infestations of the bulb and stem nematode (Ditylenchus dipsaci) were found in southern Alberta. Leaf spot (Stemphylium loti) was reported, for the first time in Canada, on birdsfoot trefoil from Quebec. Northern anthracnose (Kabatiella caulivora) was destructive on red clover in northern Alberta and the same host was severely affected by common leaf spot (Pseudopeziza trifolii f. sp. trifolii-pratensis in Quebec. Clover phyllody virus was commonly seen in alsike and ladino clovers in Quebec and New Brunswick.

Stem rot (Sclerotinia sclerotiorum) caused extensive damage to yellow mustard in Saskatchewan and was more prevalent than usual on rape in Western Canada. Leaf and pod spots (Alternaria brassicae and A. raphani) were prominent on rape in the Prairie Provinces and particularly serious in Manitoba. Brown stem rot (Cephalosporium gregatum) and bacterial blight (Pseudomonas glycinea) were commonly observed in soybean fields in Ontario. A previously