DISEASES OF FIELD BEANS IN WESTERN ONTARIO IN 1962

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The outstanding feature of the field bean growing season was the extremely dry soil conditions that prevailed in the bean growing area of Western Ontario during June and early July. This condition resulted in the prevalence of fields that showed multiple nutritional disorders. Nearly all of these fields recovered following heavy rains that occurred during the second week of July, and made extremely good growth during the remainder of the growing season. In fact, such favorable growing conditions prevailed during late July and August that many bean fields had excessive vine growth. This was probably partly due to the fact that more nitrogen fertilizer is now being applied to the bean crop than was the case a few years ago. This excessive vine growth resulted in severe damage from white mold (Sclerotinia sclerotiorum) in numerous fields in Kent County.

The bacterial blights, (Xanthomonas phaseoli and Pseudomonas phaseolicola) were observed on all varieties of beans in Ontario but were more widespread and severe on the bush bean varieties, Sanilac and Seaway.

Root rot (Fusarium solani f. phaseoli) was present in almost all the bean fields examined but was severe in only a few instances. In one field in which the crop was almost totally destroyed by root rot the field had been successively cropped to white beans for several years. Some reduction in stand was also found in fields where drainage was inadequate.

Sunscald (nonparasitic) was present in most bean fields in 1962. Early maturing fields of beans, especially those planted to the varieties Sanilac and Seaway, were somewhat more affected than later maturing crops of beans.

Anthracnose (Colletotrichum lindemuthianum) was not encountered in the 1962 bean surveys. The infrequency of this disease may be attributed to the greater use of disease-free seed and the predominance of the anthracnose-resistant variety, Sanilac,

Common mosaic (virus) was rarely observed and was seen mainly on the Michelite variety. Yellow mosaic was prevalent in many fields. Rust (Uromyces phaseoli) was observed in only a few fields and infections were not severe,

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