INCIDENCE OF COMMON AND FUSCOUS BLIGHTS OF FIELD BEANS IN SOUTHWESTERN ONTARIO - 1969

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In 1969, a total of 68 fields of beans were inspected in two areas of southwestern Ontario. In addition, 21 select plots grown from Idaho- or California-produced seed were also inspected. The two areas were located near the town of Hensall, 30 miles north of London, and near Chatham, approximately 50 miles west of London. The select plots were scattered throughout Ontario, as far north as Goderich and as far south as Blenheim.

In addition to field surveys, the 68 fields and some of the select plots were photographed aerially on IR color 8443 film. Samples of infected leaves and pods were taken for laboratory analysis to determine the causal organism in each infected field.

Three inspections were made in most fields, except select plots, over the period July 29 to September 10. Most fields in the Hensall area were harvested by September 10, while harvest was just initiated on this date in the Chatham area.

Hensall experienced a very dry year throughout the growing season, resulting in little spread of blight, although infection foci were present on July 29. Chatham experienced very wet conditions prior to planting, which was delayed considerably. However dry conditions prevailed after this until harvest. In general, blight was more general, although not severe, in the Chatham area. In Hensall, some fields contained a high percentage of infected seeds in the stock used for planting purposes, but environmental conditions; in this area were not conducive to extensive spread of the pathogen.

Of the 68 fields inspected, 48 (70%) contained infection foci of blight. All fields inspected in the Chatham area were infected with blight, whereas 23 of the 43 fields inspected in the Hensall area were infected with bacterial blight. Of the 21 select plots inspected 4 contained blight.

Both the fuscous blight pathogen, X. phaseoli var. fuscans (Burkh.) Starr & Burkh., and the common blight pathogen, Xanthomonas phaseoli (E.F. Sm.) Dows., were isolated from infected leaves, pods, or seeds. In many cases both pathogens were isolated from material from the same field. Common blight was more prevalent in the Chatham area where this pathogen was isolated from 19 fields; six field were infected with the fuscous blight organism. In the Hensall area, the common blight organism was isolated from 21 fields. Of the four select plots affected, the fuscous blight organism was isolated from all four and the common blight organism from three.

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