

Winter Wheat Disease Survey in Simcoe County, Ontario.

R. J. Baylis

Since the official recognition of dwarf bunt in Ontario in 1952, five annual surveys of winter wheat have been completed by a joint effort of the Ontario and Canada Departments of Agriculture. The field surveys have established that the disease is fairly widespread throughout the areas of wheat production bordering on Lake Huron, but its occurrence seldom amounts to more than trace infections each year.

As indicated in previous reports, Kent and Simcoe counties were chosen for a concentrated survey by each Department. Dr. Fushtey of Guelph has inspected many fields in Kent over the past 3 years, particularly in 2 townships, in an effort to discover the source of dwarf bunt infection in several seed samples from the Chatham area examined by the Plant Products Division. To date not a single field with dwarf bunt has been found in Kent county. On the other hand, in Simcoe at the northern edge of the wheat belt which is concentrated in the south and western part of the province, an average of 25 percent of the fields surveyed showed dwarf bunt in the same period - 1955-57-inclusive.

Significant among the observations made each year in the same area is the fact that dwarf bunt infestation is increased very obviously by bad farm management. In 1955 (P. D. S. 35:6) a field very severely dwarf bunted was reported for the Stayner area in Simcoe. The following year (P. D. S. 36:4) several neighbouring farms were infested, one severely (1%). In the survey this year (1957), both of the farmers who had the severe infections had replanted to winter wheat on the same infested fields and again had the distinction of achieving a severely dwarf bunted crop. The unfortunate consequence of this indifference is that, between them these 2 farmers have spread the disease to several neighbouring farms by the sharing of seeder and combine, and to some by the sale of infested seed. A perfect example of how the pathogen is returned to the soil was photographed on one farm where a swather was operating at 10"-12" leaving the majority of dwarf bunted heads uncut within the stubble.

An unusual amount of lodging as a result of wet weather during ripening was evident in Simcoe as was the prevalence of take-all (Ophiobolus) resulting from early spring infection. Cercospora herpotrichoides which was observed in 1956 as a cause of lodging was not a factor this year.