## Bunt of Winter Wheat in South Alberta

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A form of dwarf bunt was first found in the field in south Alberta in 1955. This form appears atypical and does not produce excessive tillering or stunting of the host plant. The sheath on the spore is not as thick, or the germination period as long, as it is in the form that occurs in Ontario.

In 1957, 296 samples of winter wheat representing the crop years 1951-1957 were obtained from grain elevators. Microscopic examination revealed that 104 of the 296 samples contained bunt spores. Thirty-one % contained spores of Tilletia foetida, 16% spores of T. caries and 5% spores of T. contraversa. The oldest record of T. contraversa found was from a 1954 sample of Jones Fife winter wheat from Glenwood.

Host varietal differences were evident. Fifty-eight % of the Jones Fife samples, 38% of the Kharkov, and 18% of the Yogo samples were infested with various bunt spores. Spores of T. contraversa occurred in 29% of the Jones Fife samples, 3% of the Kharkov and none of the Yogo samples. Jones Fife comprises only about 10% of the winter wheat grown in Alberta.

Field surveys revealed common bunt in four, and dwarf bunt in four, of 99 fields examined in 1957. In 1958, 57 fields were examined. Twelve fields contained some common bunt and 10 fields had some dwarf bunt present.

## Cereal Smuts in Western Canada in 1958

W. Popp

Data obtained in the 1958 survey for smut in cereal crops in Manitoba are presented in Table 5. Yield losses based on the percentage of smutted heads in different fields ranged and averaged 0-12 and 1% in wheat, 0-20 and 2.3% in barley, and 0-1 and 0-.03% in oats.

Table 5. Cereal smuts in Manitoba - 1958

| Cereal | Smut | Percent smut | |
|---|---|---|---|
| | | Range | Mean |
| Wheat | Loose | 0-12 | 1.0 |
| | Bunt | - | 0 |
| Barley | Loose | 0-20 | 1.9 |
| | Covered | 0-5 | 0.25 |
| | False loose | 0-10 | 0.14 |
| Oats | Loose and Covered | 0-1 | 0.06 |

Loose smut of wheat was found frequently and abundantly in Lee, infrequently and only in trace amounts in durum varieties, and not at all in Selkirk and Thatcher. This smut is largely under control in the province because of the wide distribution of the highly resistant Selkirk wheat.

Smut in barley was mainly of the floral infecting type (loose smut) and occurred in all varieties. This smut is of particular concern because of the lack of resistance in currently grown varieties and the impracticability of large-scale seed treatment by existing methods.

Oat smut was negligible in amount apparently as a result of the wide distribution of the highly resistant Rodney and Garry oats.

Records of cars of wheat graded "Smutty" by the Western Inspections Branch of the Board of Grain Commissioners indicate that the incidence of bunt of wheat in the 1958 crop is below the average of the past 10-year period (Table 6).

Table 6. Bunt of Wheat in Western Canada

| | Aug. 1, 1957 to July 31, 1958 | | | Aug. 1, 1958 to Oct. 31, 1958 | | |
|---|---|---|---|---|---|---|
| Class of Wheat | Cars inspected | Cars graded "Smutty" | Percentage graded "Smutty" | Cars inspected | Cars graded "Smutty" | Percentage graded "Smutty" |
| Hard Red Spring | 187,842 | 133 | 0.07 | 39,007 | 18 | 0.05 |
| Amber Durum | 11,616 | 9 | 0.08 | 952 | 0 | 0.00 |
| White Spring | 210 | 0 | 0.00 | 55 | 0 | 0.00 |
| Alta. Red Winter | 216 | 24 | 11.11 | 108 | 1 | 0.92 |
| Garnet | 23 | 0 | 0.00 | 1 | 0 | 0.00 |
| Mixed Wheat | 123 | 1 | 0.81 | 19 | 0 | 0.00 |
| All Classes | 200,030 | 167 | 0.08 | 40,142 | 19 | 0.05 |

## Dwarf Bunt in Simcoe County, Ontario in 1958

R. J. Baylis

Five townships in Simcoe County were surveyed in mid-July for incidence of dwarf bunt in winter wheat. Dwarf bunt was found in 10/34 fields representing a total of 500 acres surveyed. In general, infestations were in trace amounts at the edges of fields. Two instances of severe (1.0%) rating were found on farms that had a previous record of dwarf bunt, and in the same area near Stayner, as previously noted (C.P.D.S. Ann. Rept. 37:27. 1957 (1958)). In one of the fields rated severe, dwarf bunt was observed throughout the 6-acre stand of a heavily awned type of wheat which possibly was Dawson's Golden Chaff or Dawbul. Dwarf bunt was not observed in the Ottawa Valley.