A white leaf spot and stunting, resembling the symptoms of zinc deficiency, were found in a field at Conquest. The condition appeared in plants in areas of the field where straw piles had been burned a number of years previously. In the burned areas the soil was low in organic matter and the pH was higher than that of normal soil. So far as is known, no conspicuous symptoms have appeared on cereals grown in the same field.

Traces only of aster yellows were found late in the season in the northern parkbelt area. The disease was virtually absent from flax in the open prairie. Alternaria blight (Alternaria linocola) was occasionally found in trace amounts in the parkbelt. Specimens showing injury from 2,4-D were received from Kincaid and Kindersley. Rust, stembreak and browning, and pasmo were not seen in 1960.

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RAPE DISEASES IN SASKATCHEWAN IN 1960

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The estimated rape acreage in Saskatchewan in 1960 was 550,000 with an average yield of 727 pounds per acre. Fungus diseases were again negligible in the dark brown and brown soil zones, but continued to be of slight, but increasing, importance in the black soils of the parkbelt. Heat and drought during middle and late summer were responsible for lower yields than in 1959.

White rust (Albugo cruciferarum) was again common in areas in the parkbelt where it has become established. Its incidence, however, is being kept at the trace to slight level where rotation is practiced. The disease was again most prevalent in the Melfort-Nipawin and Meadow Lake areas. The conidial stage was more conspicuous than usual in 1960. The development of Alternaria on the Albugo hypertrophies was not as conspicuous at harvest time as in previous years, probably due to the dry conditions prevailing in August and September. Conidiophores of the downy mildew fungus (Peronospora parasitica), however, developed on the hypertrophies caused by Albugo in a few fields at Meadow Lake and in two fields at Kinistino. This disease complex was not observed in 1959. The white rust fungus was collected on cruciferous weeds, but it is not known whether or not these strains will attack rape.

Ring spot or Black blight (Mycosphaerella brassicicola), which has previously been reported only from the Annaheim - Lake Lenore region, was found on 12 August at Meadow Lake and on 7 September in the Melfort - Nipawin area. The heavy development on stems and siliques at Meadow Lake, at such an early date, indicates that the disease had some effect in reducing yields, The symptom picture was complicated by moderate to heavy infections of black spot (Alternaria spp.) at Meadow Lake and slight infections of the same disease in the Melfort - Nipawin district.

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Stem blight (Sclerotinia sclerotiorum) was present in traces only in north-east Saskatchewan in the Aylsham area, where in some years it has been conspicuous. It caused slight damage in some fields at Meadow Lake where it was responsible for some lodging following a heavy mid-season rain. Traces of a late root rot, caused by Fusarium spp., have been found. It causes a premature ripening-off of affected plants with a softening and bleaching of the bark of the stems. It is felt that this disease might increase with continued rape culture. Traces of aster yellows were reported from Shellbrook, Annaheim, Meadow Lake and Regina.

CEREAL SMUTS IN WESTERN CANADA - 1960

W. Popp. [1]

Loose-smut infection averaged; 0.3 percent in Manitoba wheat fields. Infections ranged from 2 to 12.5 percent in Lee wheat and from a trace to 0.1 percent in Durum varieties. No infection was observed in Selkirk or Thatcher.

Bunt of wheat was not in evidence in field inspections. Carload-inspection records of wheat indicate that bunt contamination ("Smutty" cars) in Western Canada was moderate as compared to the past 10-year average. The disease was unusually scarce in Alberta Red Winter wheat; only 1 car graded "Smutty" in 1959 and none, thus far, in 1960.

Infection in barley fields averaged 1.1 percent. Loose smut was the most widespread, occurring in 73 percent of the fields examined with an overall average of 0.6 percent infection. Covered and false-loose smut were found in 22 and 23 percent of the fields with overall averages of 0.2 and 0.3 percent infection, respectively. False-loose smut was more common than usual. High moisture conditions, prevalent in 1959, probably resulted in better inoculation of the seed.

Loose and covered smut were not encountered in a random survey of oat fields. The smuts, however, may have been present in the relatively few fields that were sown with susceptible varieties,

Table 1. Smut in cereal fields of Manitoba - 1960

Cereal	Kind of smut	Per cent smut	
		Range	Mean
Wheat	Loose	0-13	0.3
	Bunt	--	0.0
Barley	Loose	0-8	0.6
	Covered	0-3	0.2
	False-loose	0-5	0.3
Oats	Loose and covered	--	0.0

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