

EPIDEMIOLOGY OF POTATO LATE BLIGHT IN THE PROVINCE
OF QUEBEC IN 1961

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The first late blight infection was recorded on July 18 in Labelle Co. Light to moderate infections were noticed in many fields in that district before the end of July. During the last ten days of that month, traces of blight were observed in Napierville, Compton, Drummond, Yamaska and Chicoutimi counties. Traces were also detected on Kennebec at Ste. Francois, Ile Orleans, near Qu bec City.

Early in August, the disease was observed in many potato fields in Chateauguay, Napierville, Laval, Joliette, Montcalm and L'Assomption counties and unsprayed fields were severely infected by August 12. Traces of blight were recorded on August 1 at Lennoxville and, twelve days later, a 50 per cent infection was recorded. It was also observed on August 12 in South Gasp  and, a week later, the disease was found in a few scattered fields in the Baie des Chaleurs region. It was also recorded on August 14 near Baie Comeau.

From Qu bec to Gasp , only traces of blight were detected at the end of August, particularly in a few scattered fields in Levis, Bellechasse, Kamouraska and Bonaventure counties. Elsewhere in the province, the disease was well disseminated and the degree of infection varied from light to moderate. Weather conditions in August favoured the spread of blight. Precipitation totals were twice the normal in the Eastern Townships and the upper part of the St. Lawrence River Valley, whereas in the Gasp  Peninsula and in the Lake St. John district, precipitation excesses ranged from forty to eighty per cent.

By September 8, potato late blight was severe and general in most regions of Qu bec. Unsprayed fields were already killed in the Eastern Townships, Montreal, Lake St. John and Chicoutimi districts. Tuber rot had been observed in Laval Co. and a few fields had up to 30 per cent of infection by September 10. The foliage of most resistant seedlings and varieties was killed by the disease in the above-mentioned regions. At that time, the spread of blight had also made some progress in the Lower St. Lawrence district.

According to potato inspectors, the potato crop was greatly reduced in the Labelle and Gatineau districts following the early appearance of blight, but only traces of tuber rot were recorded. Generally, the disease did not reduce the potato crop in the Eastern Townships and the Montreal districts. However, heavy losses were recorded in the Lake St. John and Chicoutimi districts. Tuber rot was also found in most of the fields grown in the Lower St. Lawrence area and was especially severe on heavy soils. The Keswick variety, cultivated on a large scale in the Matapedia Valley, was badly infected after digging time.

The following table indicates the extent of blight infection observed on resistant seedlings tested in the regional trials and sprayed with fungicides.

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Table 1. Incidence of late blight of potato seedlings in regional trials.

Seedlings	Ste. Clothilde		L' Assomption		Peribonka		Ste. Foye
	% blight	% tuber rot	% blight	% tuber rot	% blight	% tuber rot	% tuber rot
F5025	15	nil	100	nil	tr.	nil	tr.
F5609	7	"	92	"	nil	tr.	nil
F5649	30	"	100	"	31	nil	tr.
F52100	12	"	100	"	5	tr.	tr.
F5350	8	"	100	"	3	nil	tr.
F4724	16	"	100	"	5	"	nil
F5552	tr.	"	42	"	nil	nil	nil
F4519	10	"	100	"	nil	tr.	tr.

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