

Blight was first reported in N. B., on July 13 in a 2-acre field of Keswick at Plaster Rock, Victoria Co. A few other isolated cases were reported in late July and early Aug. but extremely dry weather checked the development of the disease. It did not gain any headway until late Aug, following a prolonged period of heavy rainfall which hampered spraying. By Sept, 6 late blight could be found in many fields in the St. John River Valley. Most seed fields and commercial table stock fields were top-killed but tuber rot, in some instances, caused serious losses. Blight was very prevalent in the non-commercial potato growing areas of the province (G. C. R., S. F. C.). A first infection was reported on July 6 in N. S. This is a week earlier than it has ever been reported previously. However, it did not become general throughout the province until Aug, 10. after which date it reached serious proportions. It was found in 160/263 fields inspected. Despite a vigorous spraying schedule the losses from late blight in the commercial potato growing areas would be between 20 and 30% with some fields a complete loss. Some instances of heavy losses from tuber rot in storage have been reported (R. C. L.). Late blight appeared in P. E. I. about July 15 and caused considerable damage in inadequately sprayed fields (G. C. R.).

Distribution by Provinces of Physiologic Races of
Phytophthora infestans in Canada in 1959

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During the fall of 1959, 113 samples of blight-infected potato tubers and tomato fruits were received from commercial fields and National Potato Trial plots located in five provinces. A summary of the races received is given in Table 11.

Table 11 Determinations of Races of P. infestans in 1959

Race	N. S.	N. B.	P. E. I.	Que.	B. C.	Total
1	6	-	7	-	-	13
3	-	-	-	-	2	2
4	12	6	17	21	1	57
1 + 4*	1	1	1	-	5	8
1.4	3	14	1	9	-	27
1.3.4	1	-	1	-	-	2
1.2.3.4	-	-	-	2	-	2
1.2.3.4.5	-	-	-	1	1	2
Total	23	21	27	33	9	113

* Indicates a mixture of races 1 and 4

Of especial interest is the occurrence of Race 3 for the first time in material received from British Columbia, and the appearance of Race 1, 2, 3, 4, 5, in British Columbia and Quebec. Race 3 occurred on three seedlings numbered 3425-11, 3426-29 and F5563 in a National Potato Trial located at Agassiz, B.C., while Race 1, 2, 3, 4, 5 occurred on seedling 3426-1 at Agassiz and on the variety Manota at Ste. Anne de la Pocatiere, Que.

Occasionally, races more highly specialized than 0 and 4 were determined in commercial varieties lacking genes for resistance. This is shown in Table 12.

Table 12 Races Determined in Major Commercial Varieties in 1959

Variety	No. of determinations of Race:				
	4	1	1 + 4*	1, 4,	1, 3, 4
Irish Cobbler	6	-	1	-	-
Sebago	3	-	-	-	-
Katahdin	3	1	-	2	-
Fundy **	-	1	-	3	-
Avon **	-	1	-	1	-
Kennebec **	-	6	-	2	-
Green Mountain	12	-	-	1	1
Keswick **	-	1	-	6	-
Netted Gem	2	1	-	1	1
Red Pontiac	1	-	1	1	-

** Variety containing 1 or more genes for resistance to blight.

LEAK (Pythium ultimum) caused losses in the Grand Forks, B. C. district. It was also found in 1 field on Vancouver Island (N. M.). Trace infections were seen in a 5-acre field of Green Mountain and in a planting of Teton at Ste. Anne de la Pocatiere, Que, (H. G.).

POWDERY SCAB (Spongospora subterranea) was reported in a few bins in the lower St. Lawrence valley in Que, (B. B.), and caused a 15% infection in Bliss Triumph at Scott's Bay, Kings Co., N. S. (R. C. L.).

COMMON SCAB (Streptomyces scabies) was generally light in B. C. but caused some losses in white-skinned varieties, particularly in the Okanagan Valley (N. M.). In n. Alta. infections were less heavy than in 1958, but caused the down-grading of some stocks of Warba. Some early varieties showed moderate infections in s. Alta. (R. P. S.). Sl. infections were seen in Sask. (R. J. L.) with 1 severe infection at Donwell (T. C. Vanterpool). Sl. -mod infections occurred on early varieties near Winkles, Man. (D. J. P.). Deep scab lesions were seen in north Simcoe Co., Ont. (H. W. W.) and light infections were general in s.w. Ont. (F. J. H.). Scab incidence, though widespread in the Guelph, Ont, district, was 5-10% below that of 1958. Serious damage was encountered in only a few cases.