There is little doubt that the infestation is of recent origin. None of the growers had noticed the trouble before 1955 and few of them before 1956. Almost without exception, growers whose land is infested with the nematode had purchased Dutch sets for planting and it has been found that, in recent years, such sets were imported from Illinois. Since recent outbreaks in New York State have been traced to infested sets produced in Illinois it is assumed that our growers also received some of this infested material. However, it has not been possible to examine imported Dutch sets and therefore final proof of the source of the outbreak is lacking.

SMUT (Urocystis cepulae). A light infection was observed in commercial fields in sections of the Kelowna and Vernon areas, B.C. (G.E. Woolliams). There was less loss from smut in the Dutch set crop in the Thedford Marsh, Ont., than in any recent years (J.R.C.). Onion smut, though widespread in the Bradford-Thedford areas, caused little damage since most growers treated their seed with 1 or 3/4 lb. of 50 or 75% thiram per lb. of seed. Some untreated plantings had as much as 90% smut (L.V. Busch).

YELLOWS (Callistephus virus 1). A light infection occurred at Morden, Man. in Foundation seed plots (W.C. McDonald). Tr. infections occurred in Ont. Infected plants were yellow, stunted, twisted, and failed to form a bulb (J.R.C.).

## PARSNIP

LEAF SPOT (Ramularia pastinacea) was mod. on all plants in a seed plot at Morden, Man. (W.C. McDonald).

YELLOWS (Callistephus virus 1). At Morden, Man. 3/4 of the plants in a seed plot were mod. infected (W.C. McD.).

## PEA

### The Incidence of Leaf and Pod Spot of Peas Caused by Ascochyta pisi in the Ottawa Valley

V.R. Wallen

Four fields of Sterling field peas and three fields of the variety Arthur grown in the Renfrew and Shawville districts were inspected twice during the summer of 1957 for the incidence of leaf and pod spot caused by Ascochyta pisi. The Sterling peas were inspected because screening tests, conducted in co-operation with the Cereal Crops Division, showed that variety to be more resistant to A. pisi than the varieties Chancellor and Arthur commonly

grown in this area. The field inspections showed no A. pisi infection in the Sterling variety while all three fields of Arthur were infected slightly.

Seed from two of the fields of Arthur and from the four fields of Sterling was examined in the laboratory for the presence of pathogenic fungi. The two fields of Arthur contained four and five per cent Ascochyta infection respectively. Seed lots from two of the Sterling fields were free of A. pisi, one lot contained 1 per cent, while the other sample contained 4 per cent A. pisi. An examination of the sample containing 4 per cent infection showed it to be a mixture of Sterling and small seeds from a foreign source.

## Other Observations

LEAF AND POD SPOT (Ascochyta pisi). A sl. infection was seen on Lincoln at Saanichton, B.C. (W.R. Orchard). Sl. infections also occurred on Pioneer and Perfection at Creston and on Thomas Laxton at Grand Forks, B.C. All were grown for seed. Infection was confined largely to the lower leaves (G.E. Woolliams). Infection was sl. occurring as patches in a field at Portage la Prairie, Man. (W.A.F. Hagborg). Seed-borne infection was tr.-sl. with no secondary spread in a 65-acre field of Arthur at Cobden and in another field at Douglas, Ont. (V.R. Wallen). Sl. infections occurred in Thomas Laxton in Queens Co., P.E.I. (R.R. Hurst).

FOOT ROT (Ascochyta pinodella) was sl. on Lincoln at Saanichton (W.R.O.), and seen in 2 fields at Creston, B.C. (W.C. Broadfoot). It was sl. in a 1-acre field of garden peas at Aylmer, Que. (V.R.W.).

GRAY MOLD (Botrytis cinerea) was tr. at Ste. Foy, Que. Infection appeared to be initiated from fallen floral parts on the leaves (D. Leblond).

POWDERY MILDEW (Erysiphe polygoni). Sl. infections were seen in a 15-acre field of Pioneer at Creston, B.C. (G.E.W.). Mildew was sev. on all varieties with the exception of Thomas Laxton and Onward at Charlottetown, P.E.I. (R.R.H.). Heavy infections developed late in the season on Fenland Wonder at Kentville, N.S. Yields did not seem to be affected (K.A. Harrison).

NEAR WILT (Fusarium oxysporum f. pisi (Linford) Snyder and Hansen race 2.). The presence of this organism in Ont. has now been confirmed, and isolations from plants collected throughout the canning crop areas indicate that race 2 is rather widely distributed. Infection was sl. in most of the fields sampled although a mod.-sev. infection occurred in a 10-acre field near Troy, Wentworth Co. This disease is a potential threat to the pea industry since the majority of the canning pea varieties are of Perfection parentage and offer no resistance to this pathogenic strain of Fusarium (B.H. MacNeill).

MYCOSPHAERELLA BLIGHT (M. pinodes). Sl.-mod. infections occurred in a field at Portage la Prairie, Man. (W.A.F.H.). One of 2 fields of Sterling examined at Shawville, Que. showed a sl. infection of blight (V.R.W.).

DOWNY MILDEW (Peronospora pisi) was tr. on Lincoln at Saanichton, B.C. (W.R.O.). It was seen in all fields on the Creston Flats, B.C. Infection was present on most plants but was confined to the lower, shaded leaves. It did not appear to be causing appreciable damage (G.E.W.).

BACTERIAL BLIGHT (Pseudomonas pisi). A mod. infection was recorded in experimental plots at Portage la Prairie, Man. (W.A.F.H.).

LEAF BLOTCH (Septoria pisi). The lower leaves of Arthur were mod. infected in a field at Douglas, Ont. (V.R.W.).

RUST (Uromyces fabae). Sl.-sev. infections were present in seed plots at Fredericton, N.B. (S.R. Colpitts). Rust was tr. on American Wonder, Thomas Laxton and Little Marvel at Charlottetown, P.E.I. (R.R.H.). Late infections caused little damage at Kentville, N.S. (K.A.H.). Tr. infections recorded in a garden at St. John's,Nfld. (O.A. Olsen).

ROOT ROT (various pathogens). Fusarium sp. caused a tr. of root rot in Lincoln at Saanichton, B.C. (W.R.O.). Many canning crop fields were affected in Ont., as in previous years. Yields were undoubtedly reduced in the more sev. cases (J. Cutcliffe). Mod. infection of root rot, with Aphanomyces and Fusarium spp. and R. solani involved were noted in fields at St. Jean, St. Edouard and Napierville, Que. (R. Crete). Infections ranging from tr.-20% occurred in garden plots at Fredericton and Gagetown, N.B. (S.R.C.).

MOSAIC (virus). A 10% infection on Lincoln at Saanichton, B.C. caused sl. damage (W.R.O.). Late planted peas in a garden at Kentville, N.S. were 100% infected. Aphid infested commercial fields in Kings Co. showed appreciable infection in the last few leaves on the vines late in the season (K.A.H.).

STREAK (virus). Mod.-sev. infection occurred in a field near Troy, Ont. (B.H. MacN.).

STUNT (virus). Typical symptoms of Wisconsin pea stunt were observed in a hybrid pea nursery at Portage la Prairie, Man. Affected plants were stunted, the upper portion showed a tight rosette of leaves, stipules and blossoms, no pods had formed and vein clearing had occurred in the leaves. The diseased plants were readily observed because of the dwarfed, upright growth beside prostrate plants bearing pods (W.C. McD.).