First report of *Sclerotinia sclerotiorum* on *Lathyrus sativus*

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Lathyrus sativus, **commonly known as grass pea, has been added to the host range of the important fungal pathogen,** *Sclerotinia sclerotiorum. L. sativus,* **a drought tolerant pulse crop, is being developed for the brown soil zones of southern Manitoba, Saskatchewan and Alberta.**

Can. Plant Dis. Surv. 70:1, 17-18, 1990.

Lathyrus sativus, **appele communement gesse cultivee, a ete ajoute a la liste d'hôtes du redoutable champignon pathogene** *Sclerotinia sclerotiorum. L. sativus,* **une legumineuse** *a* **grains résistante a la secheresse, a ete selectionnee pour les zones de sol brun du sud du Manitoba, de la Saskatchewan et de l'Alberta.**

Introduction

Sclerotinia sclerotiorum (Lib.) de Bary is found worldwide on a wide range of host plants. Purdy (1979) reports it being recorded on 64 plant families, 225 genera and **361** species. It occurs in rather high incidence in the families: Leguminosae, Compositae, Polygonaceae, Solanaceae, Crucifereae, Umbelliferae and Vicieae.

Special field crops such as buckwheat, canola/rapeseed, mustard, fababeans, field beans, field peas, lentils, safflower and sunflower, found in the above-mentioned plant families, are susceptible to *S. sclerotiorum* and often comprise part of the rotation scheme of many farmers in Manitoba, Saskatchewan and Alberta.

Lathyrus sativus (L.), commonly known as grass pea because its leaflets are long and grass shaped, belongs to the family Vicieae. Due to its drought tolerance, Lathyrus has excellent potential for production in the low rainfall areas of the Canadian prairies where no annual pulse crop can presently be grown as an alternate crop. Many of the production practices used in field pea are transferable to grass pea.

A breeding program was initiated recently at the Agriculture Canada Research Station, Morden, Manitoba, to produce cultivars which are adaptable to the drier regions of the Prairie Provinces and which have little or no BOAA (beta-oxalylamino-L-alanine). BOAA is a neurotoxin which causes an irreversible crippling and paralysis when Lathyrus is consumed as a major part of the diet for an extended period of time. This program has been successful (Campbell and Briggs, 1987) and feeding studies are presently being conducted before the release of cultivars.

This note is to add *L. sativus* to the host range of *S. sclerotiorum.* In Figs. 1 and 2 symptoms of *S. sclerotiorum* infection are illustrated on the stems and pods. The infected stems (Fig. 1) take on a bleached appearance, which is characteristic of infection of other plant species by this pathogen. A white cottony growth of the fungal pathogen, which gives rise to the name 'white mold', was not apparent on the foliage. Perhaps this was because moist, humid conditions did not persist long enough. On the pods 'white mold' and sclerotial formation had occurred (Fig. 2). The source of infection was not determined, but it appeared to have originated from the soil.

The diseases caused by this pathogen occur generally in the cool, moist areas of the world. However, *S. sclerotiorum* may occur in localities considered to be hot and dry. *L. sativus* is being developed for the brown soil zone extending from south central Manitoba, through southern Saskatchewan to the foothills in southern Alberta. *S. sclerotiorum* would seem to be a production problem in that region only in times of persistent moisture. It also could be a production problem if Lathyrus was grown in areas with generally higher moisture levels and cooler temperatures.

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Accepted for publication November 23, 1989.

Literature cited

1. **Campbell, C.G., and C.J. Briggs. 1987. Registration of low neurotoxin content Lathyrus germplasm LS 8246. Crop Sci. 27:821.**
2. **Purdy, L.H. 1979.** *Sclerotinia sclerotiorum*: *History,* **diseases and symptomology, host range, geographic distribution and impact. Phytopathology 69:875-880.**

Fig. 1. In the center of the picture note bleached nature of *Lathyrus sativus* stems infected by *Sclerotinia sclerotiorum*.

Fig. 2. Pods of *Lathyrus sativus* showing characteristic 'white mold' and sclerotia.