Lowbush Blueberry Fact Sheet

Botrytis Blight of Lowbush Blueberry

Introduction

Botrytis blight may be a serious problem in blueberry fields, particularly along coastal areas of the Province or during seasons of persistent wet weather during the bloom period. The disease is caused by the fungus ***Botrytis cinerea*** Pers. This fungus has an extremely large host range including weeds, cereals, berry crops, vegetable crops, ornamentals, forage crops, etc. There have been losses of 30-35% recorded in lowbush blueberries in Nova Scotia from **Botrytis** blight (Fig. 1).

Fig. 1 - Severely infected blueberry clone

Symptoms

The fungus may attack blossoms (Fig. 2), fruit and leaves. Leaves may also become infected by contacting diseased tissue. Leaves turn light brown in colour and may become covered with the characteristic gray mould. Infected flowers turn brown and shrivel up. During damp weather the gray mould can be seen on the infected tissue. Entire flower clusters can be destroyed (Fig. 3) and young green fruit may be infected by contacting infected blossoms or blossom parts.

Life Cycle

The infection cycle of **Botrytis** on lowbush blueberry is not well understood (Fig. 4). Research findings to date indicate that the fungus overwinters on infected weeds within and outside the blueberry field. During periods of wet weather in the spring the fungus produces spores on the overwintering diseased tissue and are wind blown to developing blueberry blossoms. The length of time necessary to establish infections is not known, but outbreaks of the disease are associated with several days of wet weather during bloom. The number of disease cycles and thus the severity of disease is dependent upon the number of wet periods that occur during bloom and shortly after bloom. Infected corollas (petals) may drop and become attached to other plant parts (i.e. leaves and other flowers) and thus new infection sites are established. Young green fruit may be infected by contact with infected blossoms.

Fig. 2 - An infected blossom showing characteristic gray mould.

Early blueberry clones are the first to become infected because they come into bloom first. Given wet, humid conditions, the fungus can become well established on these early flowering clones and be a source of infective spores for later flowering clones. Spore populations tend to be low in spring reaching a peak during bloom. Strangely, they remain high through the summer with spores being produced on previously infected blueberry and weed tissue but blueberry tissues are no longer susceptible. The following year very few spores are produced on the blueberry debris because the nutrient sources in the infected tissue have been used up. For this reason, weeds appear to be the important initial source of the fungus.

Fig. 3 - Severely infected flower clusters

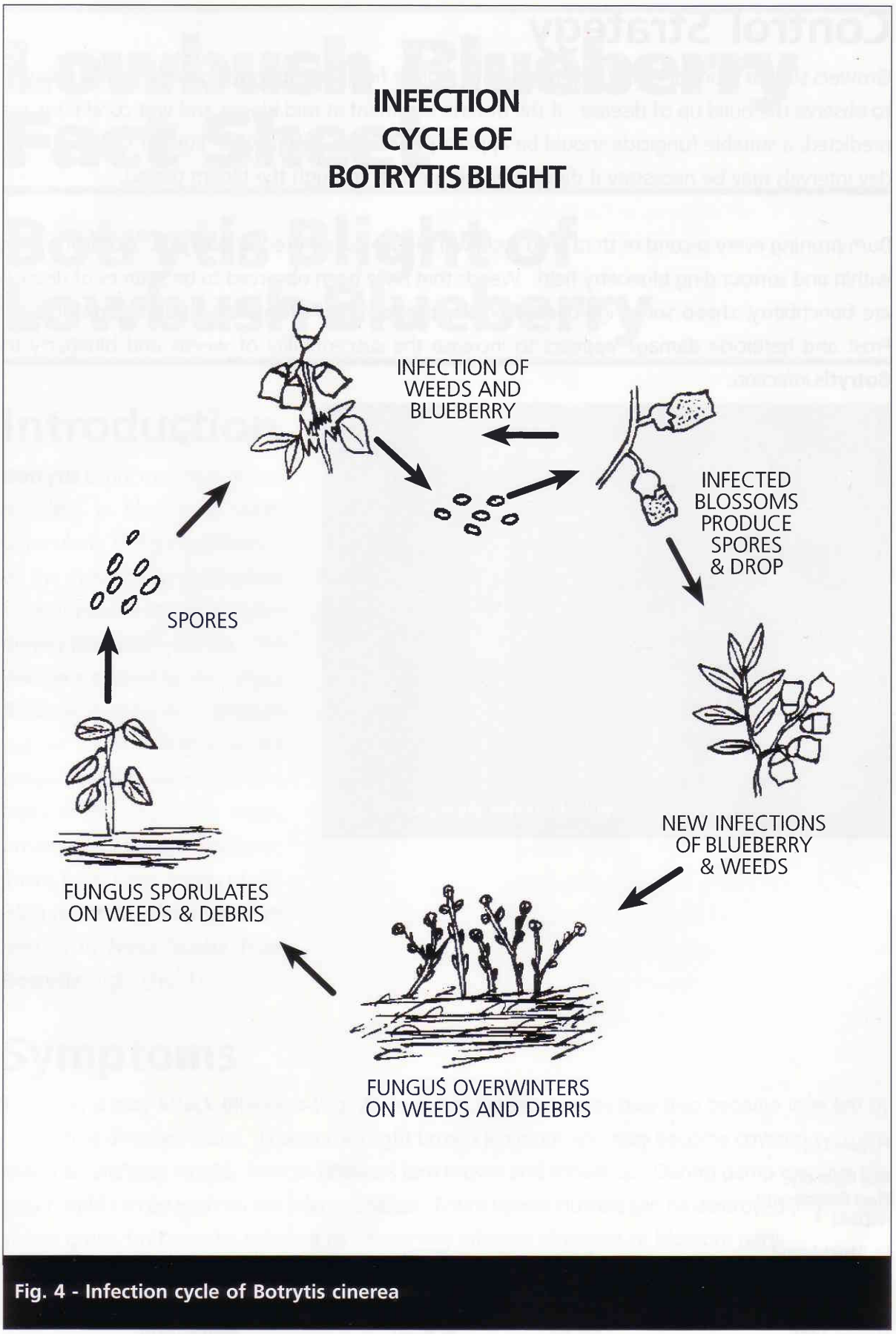

Fig. 4 - Infection cycle of Botrytis cinerea

Control Strategy

Growers should monitor early flowering clones in their fields for **Botrytis** infections. It is possible to observe the build up of disease. If the disease is evident at mid bloom and wet conditions are predicted, a suitable fungicide should be applied prior to the wet period. Further sprays at 7-10 day intervals may be necessary if damp weather persists through the bloom period.

Burn pruning every second or third crop cycle will reduce overwintering **Botrytis**. Control weeds within and surrounding blueberry field. Weeds that have been observed to be sources of disease are bunchberry, sheep sorrel, goldenrod, Pearly everlasting, **Potentilla** sp., and some grasses. Frost and herbicide damage appears to increase the susceptibility of weeds and blueberry to **Botrytis** infection.

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