# *Botrytis squamosa* Walker


**Fig. 1.** Symptoms of Onion leaf blight (OLB) disease. Initial stage (a) and severe stage (b and c) (Source: http:/images.google.com.au/images?hl=en&um=1&q=Botrytis+squamosa)

Disease: Onion Leaf Blight (OLB)
Causal Agent: *Botrytis squamosa*
Classification: K: Fungi, P: Ascomycota, C: Leotiomycetes, O: Helotiales, F: Sclerotiniaceae

Onion leaf blight (OLB) is one of the important fungal diseases of onion that occurs in many growing areas of the world. The fungus primarily attacks the leaves and causes significant yield loss under wet conditions. *Botrytis squamosa* is the causal agent of OLB and the fungus can easily be confused with other species in the same genus that also cause onion diseases. The pathogen overwinters in soil as sclerotia.

## Distribution and Host Range

OLB disease is widespread in the UK, but it has restricted distributions in France, China and Canada. The fungus is endemic in commercial onion fields in Florida and Texas (USA). *B. squamosa* is not reported in Australia yet, but the other *Botrytis* species that causes onion neck rot (*B. allii*) is recorded in Tasmania with considerable negative impact on the onion industry (Chilvers *et al.* 2004). *B. squamosa* is restricted to *Allium* spp. such as onion, garlic, and leek.

## Biology and Ecology

The fungus overwinters on infected plant parts in the field as sclerotia. Under moist conditions and moderate temperatures, sclerotia serve as primary source of inoculums for outbreaks of OLB in commercial onion fields. The sclerotia are produced on infected onion leaves and bulbs before or after harvest. The disease spreads through spores which is enhanced by prolong wet conditions, high relative humidity and little air movement. No resistant onion varieties/cultivars against the OLB disease have been reported yet.

## Symptoms:

*B. squamosa* mainly attacks onion leaves. The first symptoms appear as a small white lesion on the leaf surrounded by a greenish halo (Fig. 1a). This early symptom can easily be confused with insect or mechanical damage, or herbicide injury. In later stages, the lesions expand and also many new lesions appear that cause premature die-back of leaves (Fig . 1b and c). Severely affected onion fields develop a blighted appearance that result in small size onion bulbs.

## Potential Impact in Australia

OLB is a major disease of onion in cool climate areas. Therefore Tasmania, a major onion growing state in Australia, might be at high risk with this disease if it successfully arrives and establishes in the region.

## Management and Control

Both cultural practice and chemical spray play an important role in OLB management. A suitable OLB disease-forecasting model that determines the optimum timing for sprays is very important for onion growers. Destroying infested onion debris helps in keeping the inoculum source low in the field. Cultural practices, such as deep ploughing and crop rotation, also reduce the number of sclerotia in the soil.

## Further Reading

1. Chilvers et al. (2004). Australasian Plant Pathology. 33: 419-422.
2. Sonoda et al. (1981). Florida Agricultural Experiment Station Journal series No. 3335/Proc. Fla. State Hort. Soc (1991). 94:151-154.
3. http://vegetablemdonline.ppath.cornell.edu/factsheets/Onion_Botrytis.htm

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