European brown rot *Monilinia fructigena*

BIOSECURITY FACT SHEET

What is it? *Monilinia fructigena* is one of several fungi causing brown rot and blossom blight on stone fruit and pome fruit trees worldwide. Brown rot is a serious disease that causes significant losses on fruit crops. Although controls for brown rot are already in practice in the fruit growing regions, many countries quarantine for this pathogen due to implications for market access.

Distribution. It has a more restricted distribution than some of the other species, occurring in Europe and Asia, but not in North America. Reports of its occurrence in South America are likely to be errors in identification. It is a quarantine pest for Canada, the USA, Australia and New Zealand.

For current distribution go to https://gd.eppo.int/taxon/MONIFG/distribution

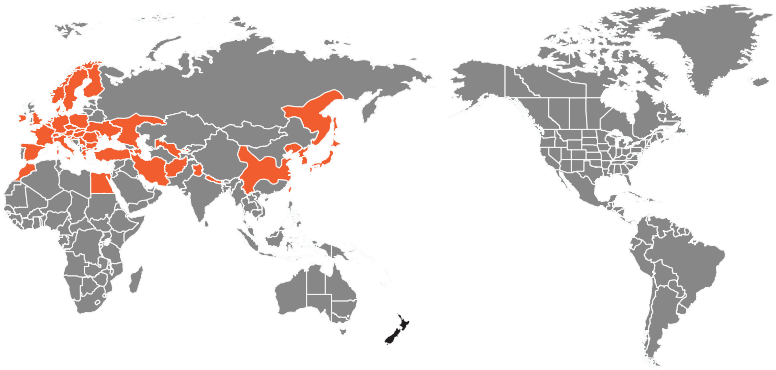

Photo – *Rasbak 2010*

Familiarise yourself with the common pests and diseases in your orchard so you can distinguish them from the attack of exotic organisms.

Photo – *Sanja565658*

Morphology. To distinguish *M. fructigena* from the other brown rot fungi, the fruit with lesions should be incubated on suitable growing media to observe cultural characteristics. Molecular tests may be done on mycelium from pure culture or on infected fruit.

Biology. Blossom blight develops in the spring, particularly in moderately warm, moist weather. Infections occur on individual flowers generating brown lesions that can spread to other flowers in the cluster and into the twigs. Affected flowers wilt and collapse, and some fall to the ground, others remain on the tree and sporulation on the blighted blossoms under moist conditions provides inoculum for further spread. Infection of fruit can take place at any time during fruit development, but the disease is only severe in ripe or ripening fruit.

Dispersal. The most likely means of introduction of *M. fructigena* would be infected fruit brought in commercially or by individuals from other continents, but trees or scions with twig blight infections, unless quarantined could carry the fungus more directly to populations of hosts. Once introduced it could spread readily by means of conidia carried by the wind or insects.

Symptoms. Disease symptoms are clearly visible in the field and in storage. Brown rot infected mature fruit quickly develop into a brown decay. The first symptoms on ripe fruit are small, superficial, circular brown spots that quickly begin rotting. Eventually the whole fruit becomes discoloured and water is lost causing a mummified fruit to form. The fungus often spreads by growth from diseased fruit to healthy ones in the same cluster, or as conidia to other tissues.

Disease management:

- Disease incidence is significantly reduced by removing thinned, rotten and mummified fruit early in the season.
- The need to control other fungal pathogens must also be considered in a chemical application programme for brown rot.
- Understanding the interactions between pathogen, host and the environmental factors can help reduce the cost and damage to the environment due to the application of fungicide.

Source: CABI

To report any suspected exotic organism, call MPI on:

0800 80 99 66

December 2022

If you have any queries please contact biosecurity@summerfruitnz.co.nz