

Appendix 4:

Best Management Practices (BMPs)

An important piece of the systems approach that helps minimize the risk of infestation in a facility is the application of effective BMP's during the nursery production cycle. *C. buxicola* is a pathogen that can be found in plant debris both on the surface and buried in the soil and can infect leaves and young stems of susceptible plants. Transfer of infected debris to the soil, clothing and equipment is effortless when working with these infected plants. Minimizing the potential movement of the pathogen is a critical factor for growers to consider when planning their production practices. For example:

- To minimize spore or infected plant debris movement by persons or equipment, growers should review their production schedules and practices to reduce spread of *C. buxicola* when spore movement is most active. This could mean:
 - Sanitizing tools and equipment in between blocks of host plants
 - Avoiding working in beds with host plants during rainy periods, high humidity or right after irrigation,
 - Only working in host plant beds at the end of the day with subsequent sanitation of clothing and tools before the beginning of work the following day.
 Where a policy is adopted, it should be included in the Phase 1 Nursery Manual
- Use practices to promote airflow (thinning of canopy or spacing containerized plants) and drying of leaves since infection is favoured by high humidity.
- Avoid overhead irrigation when possible and use drip irrigation instead.
 - Water in the morning to allow foliage to dry quickly
 - Prevent irrigation runoff from pooling around plants
- Facilities which run only closed production (propagated from their own stock) and have no incoming plants or outside visitors are low risk to import the disease.
- Facilities that purchase host plants from a variety of suppliers have a larger risk of importing the disease.

C. buxicola will survive in soil in Boxwood plant debris.

- Although *C. buxicola* sporulates on leaves of plants, spores will only survive through infection of Boxwood plant material, including Boxwood debris that has fallen to the ground. **Plants with *C. buxicola* will often shed their infected leaves which, if not gathered and disposed of properly, may provide a long-lived source of infection.**
- The fungus (mycelium) growing within the leaves or other infected plant tissues can survive temperatures below 5°C for extended periods, as well as above 30°C.
- When the source of nutrition is depleted, the fungus has the potential to produce hardy microsclerotia which can survive for more than 5 years on plant debris in soil
- Debris should be collected and disposed of by burning or disposal off-site. This may occur during winterization, when moving containers from bed to bed, when potting up, etc.