



Plant Health for the horticultural sector: key considerations

UK gardens and woodlands are threatened by increasing numbers of invasive plant pests (including insects and pathogens), which can be spread in infested planting material. This risk can be mitigated by ensuring good biosecurity practice throughout plant supply chains.

This guidance aims to help those responsible for growing or handling live plants to follow good biosecurity practice and reduce pest risks from trade pathways.

Key plant biosecurity considerations

Plant origin

Any movement of plant material through trade carries the risk of introducing pests into new areas. International trade poses additional risks of introducing new pest species to the UK. Packaging material can also harbour pests, e.g. in pallet wood.

It is essential to know the pests of the plants that you handle and assess the biosecurity procedures of all your suppliers to judge the potential pest risks.

Plant hosts and growing media

Plant pests can infest live plant material, e.g. roots, stems, leaves, flowers and fruit. Some pests can persist in growing media/soil. Seed, rooted cuttings and bare root stock have a lower risk of carrying plant pests. Containerised or root balled plants have a higher risk.



Covered borehole water storage tank.

Assess your site(s) and know your suppliers

Consider the following when assessing pest risk.

- **Water source:** Water is an effective carrier of many pathogens. Mains or borehole water supplies tend to be low risk. Sourcing water from open reservoirs, ponds, rainfall butts or extracting from rivers can carry a higher risk, unless the water is treated using a method proven to kill damaging microorganisms.
- **Drainage:** Puddles and excess run-off can spread waterborne pathogens. Containerised plants should be grown on a free-draining surface, preferably raised above ground. Persistent puddles in nurseries and plant retail areas – especially on roadways – are high-risk.
- **Growing media:** Is the growing media sterile? This may be particularly important when using peat-free mixes that may contain local authority green waste, bark and coir (the latter being imported from the tropics).

- **Visit prospective suppliers:** Assess the plant health policies and procedures of your suppliers. Are they fit for purpose?



Puddles can act as reservoirs of waterborne pathogens so good drainage is key.

- **Quarantine areas:** Are 'quarantine areas' used to ensure externally sourced stock is well separated from other plants? Are these monitored over several months for pests and associated symptoms?
- **Surroundings:** Are shelterbelts and landscape trees/shrubs growing in and around the nursery premises monitored? Are these healthy?



Phytophthora lateralis infecting Lawson cypress adjacent to a garden centre.

- **General nursery hygiene:** Is the site free of weeds, spilt soil/potting mix and piles of soiled pots? Are there facilities for disinfestation of tools, pots, boots and vehicles?

- **Plant disposal:** How are unhealthy or unwanted plants dealt with? Dumping such plants close to the nursery premises carries a high risk of pest proliferation. Ideally, plants should be disposed of through a contained composting system and isolated from stock or natural ecosystems. Reusing growing media is a high-risk practice as it can spread pests on your site and beyond.
- **Plant health knowledge:** Who effectively oversees pest management? Are staff trained? Are visitors informed of site biosecurity procedures?

Understand your obligations

Follow plant health regulations, e.g. the notification scheme for importing some high-risk plant species, which, along with Plant Passports and Phytosanitary Certificates, aim to protect against the introduction and spread of pests. More details are available at: planthealthportal.defra.gov.uk

Certification to improve supply chain biosecurity

One way of having confidence in the health of the plants you grow and handle is by becoming certified. The voluntary Plant Healthy Certification Scheme, now being rolled out in the UK, is based on the Plant Health Management Standard. More details are available at: planthealthy.org.uk

Strongly consider promoting biosecurity across the supply chain by becoming Plant Healthy certified and by sourcing from growers who are scheme members.

More information

Further details of our work on biosecurity are at: www.forestresearch.gov.uk/research/global-threats-from-phytophthora-spp

To discuss any aspect of Forest Research's work on biosecurity threats, contact: sarah.green@forestresearch.gov.uk