



Key principles to minimise plant health risks in Scotland

Scotland's plants underpin the health of the nation, but plant pests and diseases can cause major economic, environmental, and social costs. Risks to plant health in Scotland are rising due to increased global movements of plants and soil, coupled with environmental change allowing novel pests and diseases to establish or endemic ones to flourish. We all need to act to address these threats.

The following five **Key Principles** outline important steps to protect plant health in Scotland. We hope you will find them useful when considering your own plant health needs.

SOURCE PLANTS WITH CARE

Movement of plants is an important pathway for spreading pests and diseases which may hitchhike on plants, in seed, soil and packaging. Taking steps to start with healthy plants is vital.

KEEP IT CLEAN

Biosecurity best practice can reduce the spread and establishment of plant pests and diseases. These organisms may be microscopic and can easily go unnoticed.

PLAN NOW FOR FUTURE CHALLENGES

Designing, modifying and managing systems to increase their resilience can reduce the impacts of pests and pathogens in future. This will be multi-faceted and apply to choices over specifications, source, actions on the ground, training and research.

EMBED PLANT HEALTH IN POLICIES AND PRACTICES

Developing consistent practices, incentives, guidance and regulation can minimise the risk of outbreaks and their consequences. Encouraging best practice at all stages from planning, through procurement to planting will reduce plant health risks.

PROMOTE WIDESPREAD UNDERSTANDING AND AWARENESS OF PLANT HEALTH THREATS

Informed individuals and businesses can minimise threats to plant health and reduce the unwanted impacts of pests and diseases. Consistent messages across all sectors will help encourage collective and individual actions.



SOURCE PLANTS WITH CARE

Movement of plants is an important pathway for spreading pests and diseases which may hitchhike on plants, in seed, soil and packaging. Taking steps to start with healthy plants is vital.

- Ensure all plant movements are legally compliant
- Seek locally sourced and well-grown plants when acquiring new material, and support reputable and quality assured suppliers
- Take particular care with international movement of plants, and import plants only when absolutely necessary
- Be vigilant when purchasing species known to be vectors of serious pests and diseases
- Carefully match plants to be suitable for their planting location: stressed plants can be particularly susceptible to pests and diseases

Positive activities which already exemplify this principle

- Potato 'safe haven' scheme – advisory/voluntary. Started by industry and then adopted by government. Preventing disease being brought into the country – growers audited and have to sign up annually.
- Nature conservation areas developing own local nurseries and schemes to support UK production (e.g. Woodland Trust)
- Seed health inspections (EPPO standards etc)
- Making use of natural regeneration and self-seeding

Further activities which could be taken to underpin this principle

- Stronger border inspections and pre-border regulation, tackling gap in regulation of on-line purchases
- Greater consistency of regulation across sectors (e.g. the same plant species could be used in forestry and landscaping yet with very different controls)
- Increased awareness of emerging issues which cross sectors, which may be of concern to one but invisible to others (e.g. tomato industry concerns about rugose virus yet found in horticultural seeds in garden centres).



KEEP IT CLEAN

Biosecurity best practice can reduce the spread and establishment of plant pests and diseases. These organisms may be microscopic and can easily go unnoticed.

- Ensure plant movements adhere to established quarantine and inspection protocols
- Assess and mitigate the risk of introducing or spreading disease into new areas when designing and undertaking planting programmes (e.g. landscaping, habitat restoration, woodland creation)
- Embed good biosecurity practice in all business operations to minimise the risk of moving pests and pathogens (e.g. via live plants or indirectly via material on or in machinery, vehicles, packaging etc)
- Maintain good biosecurity practices when accessing land for leisure activities to avoid spreading pests and diseases (e.g. via soil or plant debris on boots, tyres, dog paws, or recreational equipment)

Positive activities which already exemplify this principle

- Biomats at RBGE which disinfect footwear and act as an educational/awareness raising tool
- Bikewash stations for mountain bikers; mud brushes left for use in trail car parks.

Further activities which could be taken to underpin this principle

- Promote greater awareness and consistency of approach across sectors and locations
- Provide additional facilities at leisure sites (e.g. foot mats and dog paw wash)
- Develop practical systems for cleaning large machinery and share best practice protocols between sectors



PLAN NOW FOR FUTURE CHALLENGES

Designing, modifying and managing systems to increase their resilience can reduce the impacts of pests and pathogens in future. This will be multi-faceted and apply to choices over specifications, actions on the ground, training and research.

- Maintain awareness of current and emerging potential plant health threats, and consider the wider impacts of your choices, and adapt systems accordingly
- Encourage diversity in agricultural, horticultural and forestry systems (including diversity of varieties, species, resistance types, site-rotation and age classes)
- Plan well ahead to ensure adequate locally-grown stocks of plants are available
- Adopt integrated pest management practices and facilitate the development of new and improved biocontrol methods
- Expand the use of new technologies for the detection and management of plant health threats

Positive activities which already exemplify this principle

- Rapid outbreak responses and coordinated action (e.g. Asian longhorn Beetle; Oak processionary moth – once realisation it had been imported in 2019)
- Development of disease resistant varieties (e.g. of potatoes against PCN)
- Producers work together voluntarily to improve health status of the plants they are cultivating and lessen the wider plant health risk (e.g. trade in Poinsettias)

Further activities which could be taken to underpin this principle

- Investment in plant/tree nurseries to enhance growing capacity to meet demand from land use change and for large scale infrastructure projects
- Shift to longer term contract growing and expansion of local seed collection
- Improved Risk assessment of any potential new species for potential plant health issues
- Further improvements to horizon scanning, including consideration of early warning systems (e.g. greater surveillance efforts linked to information sharing)



EMBED PLANT HEALTH IN POLICIES AND PRACTICES

Developing consistent practices, incentives, guidance and regulation can minimise the risk of outbreaks and their consequences. Encouraging best practice at all stages from planning, through procurement to planting will reduce plant health risks.

- Embed plant health principles into wider policy and resource management practices and ensure consistency of approach (e.g. across sectors and nations, and when redesigning grant aid)
- Align grant schemes to incentivise good plant health practices (e.g. adopt timelines which support local production of plants for landscaping projects)
- Explicitly include plant health and biosecurity as value criteria in the procurement process for major purchases of plant material (e.g. by recognising the costs of disease outbreaks)
- Support accreditation mechanisms promoting plant health
- Ensure monitoring and surveillance are appropriately resourced and targeted

Positive activities which already exemplify this principle

- Strategy for *Xylella*: Governments acted quickly to put stringent rules in place but may be limited by focussing on a few key species.
- *Bemisia tabaci* policy was effective: could provide a model?
- FSC certification of sustainably sourced timber and paper products

Further activities which could be taken to underpin this principle

- Embed plant health more strongly in UKFS and UKWAS in next revisions – as shapes schemes receiving grant aid
- Improve regulation (incl. across UK) for development of whole range of new bio-pesticides, looking at benefits as well as risks
- Support ICM/IPM principles to minimise dependencies on chemicals.
- Investigate the possibility of the polluter pays from a plant health perspective. Who pays for introducing new pests and pathogens?



PROMOTE WIDESPREAD UNDERSTANDING AND AWARENESS OF PLANT HEALTH THREATS

Informed individuals and businesses can minimise threats to plant health and reduce the unwanted impacts of pests and diseases. Consistent messages across all sectors will help encourage collective and individual actions.

- Develop and support plant health education and training programmes to meet business and stakeholder needs
- Raise consumer and trade awareness of risks to plant health and the benefits of good biosecurity practice
- Encourage public awareness of pests and diseases, the importance of individual actions and how to report concerns
- Promote wide awareness of the value of Scotland's plants, the connectedness of actions and why plant health matters (e.g. value of natural environment, amenity, horticulture, agriculture, forestry etc), and the importance of monitoring and surveillance

Positive activities which already exemplify this principle

- Plant Healthy Scheme
- Fight against Blight Allotment Testing scheme
- Communications campaigns such as "Don't risk it" and "Tree killer on the loose"
- Volunteer projects and citizen science campaigns (e.g. Observatree and SpittleBugHunt)

Further activities which could be taken to underpin this principle

- More active messaging at all levels from schools to consumers using a variety of communication channels including printed material, internet, television and displays at venues and transport hubs
- Provision of promotional materials across all areas of plant production from large nurseries through to small specialist growers
- Greater engagement of key influencers (e.g. media presenters on gardening shows)



For formation on all aspects of plant health threats, from diagnostics and control to outreach and education please visit:

planthealthcentre.scot/knowledge-bank

Visit the Scottish Government website for plant health advice and for guidance on the plant pests and diseases that are of a significant risk to Scotland:

sasa.gov.uk/plant-health

gov.scot/publications/plant-pests-and-disease-guide/

Information on a wider range of pests and diseases can be found on Defra's plant health portal and plant health risk register:

planthealthportal.defra.gov.uk/

secure.fera.defra.gov.uk/phiw/riskRegister/

To notify the appearance, or suspected appearance, of a harmful plant pest in Scotland, please contact Horticultural and Marketing Unit (HMU):

hort.marketing@gov.scot

Report a tree health problem via the Forest Research TreeAlert online portal:

www.forestresearch.gov.uk/tools-and-resources/tree-alert/

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