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Preventing the introduction and spread of yacon viruses

Date: Feb 2022

This is a guide for those who are currently growing or were proposing to grow yacon.

The key points are:

Potato yellowing virus (PYV) has been identified in yacon, which was being grown in England

PYV has the potential to spread to potato and other crops and cause symptoms

The import of yacon in GB is currently prohibited

If yacon is currently being grown in GB, good biosecurity practice is recommended to prevent the spread of potentially damaging viruses

Background

Yacon (*Polymnia sonchifolia* syn. *Smallanthus sonchifolius*) is a tuberous root plant in the family Asteraceae (Fig 1). It originates from the Andean highlands, from southern Colombia to northern Argentina.

Outside its region of origin yacon is cultivated in Brazil, China, Czechia, Estonia, Italy, Japan, Korea, Mexico, New Zealand, Russia, Taiwan and the United States. It has edible roots and is also used for medicinal purposes.

In 2020, potato yellowing virus (PYV) was identified in yacon being grown in England. Previously in 2018, yacon imported into GB from several sources was also found to be infected with the same virus.

PYV is a GB quarantine pest that is not known to occur in GB, but which poses a threat to the health of GB plants. It has the potential to infect a range of crops including potato and pepper and other wild *Solanum* spp., and is transmitted through sap, pollen, seed and by the peach-potato aphid (*Myzus persicae*), which is widespread in GB. In potato, PYV can cause mild yellowing in the leaves or may remain symptomless. PYV infected pepper plants have shown mosaic and necrotic spotting on leaves and stems, and necrosis of the buds and fruit. PYV poses no risk to human or animal health.

Currently yacon can be legally moved within GB, but while there remains a significant degree of uncertainty over the general disease status of this crop, we recommend that it should not be grown in the future.



Fig. 1. Yacon roots. © ShareAlike 3.0 Unported (CC BY-SA 3.0)

Biosecurity guidance

If yacon is currently being grown or stored, we advise the following to prevent the spread of PYV and other non-native viruses:

- Yacon should only be harvested for personal consumption and should not be sold or transferred to other sites (and all tubers should be removed from the soil)
- Tubers of yacon should not be saved for planting in the following year to avoid carry over of any viruses harboured in the tubers
- PYV mainly spreads to other host plants via aphids. It is therefore advised that once harvested the remaining yacon plant material (leaves and stems) should be destroyed, either by incineration (burning on site) or via deep burial (to a minimum of 2 m) in accordance with waste regulations, or bagged and disposed of with waste for landfill
- Any waste material from the tubers, including peelings, can be disposed of in general waste bins to go to landfill and should not be composted
- The yacon planted area should be cleared of all plant material, including weeds
- If any yacon plants regrow in the following year, they should be destroyed as for the plant material above
- Many non-native viruses are transmitted mechanically (on people, clothes, equipment etc.), so hygiene best practice should be followed:
 - Wash hands with soap before and after handling the yacon plants or tubers
 - Clean any tools and equipment which have been in contact with yacon thoroughly to remove all plant material and soil

Advisory Information

If you have any further queries about yacon, import requirements or plant health controls, please contact your relevant plant health authority:

For **England and Wales**, contact your local APHA Plant Health and Seeds Inspector or the PHSI Headquarters, York. Tel: 0300 1000 313 (please select option 3 when calling)
Email: planthealth.info@apha.gov.uk

For **Scotland**: Contact your local RPID officer for Agriculture crops
<http://www.gov.scot/Topics/farmingrural/Agriculture/AOcontacts/contacts>

Contact Horticulture and Marketing Unit for Horticultural crops
Email: hort.marketing@gov.scot
Web: www.gov.scot/PotatoHealthControls

For **Northern Ireland**, contact the DAERA Plant Health Inspection Branch:
Tel: 0300 200 7847 Email: planthealth@daera-ni.gov.uk

For additional information on UK Plant Health please see:
<https://secure.fera.defra.gov.uk/phiw/riskRegister/>
<https://planthealthportal.defra.gov.uk/>
<https://www.gov.uk/plant-health-controls>
<http://www.gov.scot/Topics/farmingrural/Agriculture/plant/PlantHealth/PlantDiseases>
<https://www.daera-ni.gov.uk>

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