

Giant willow aphid in New Zealand

The giant willow aphid (GWA), *Tuberolachnus salignus*, was first recorded in New Zealand in 2013. Since then it has spread rapidly throughout the country. Over 50 species and hybrids of willow in New Zealand are hosts of GWA. Some poplars and other species are also affected.

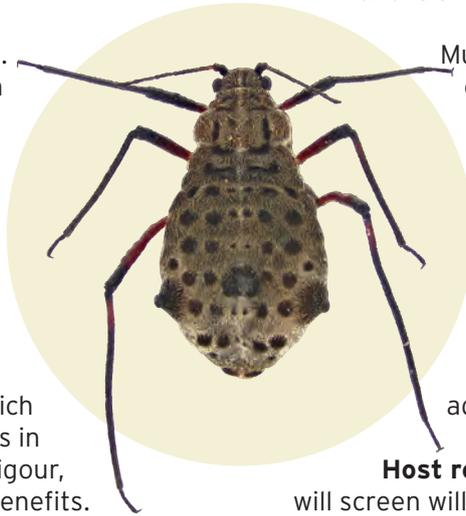
The aphids are present year-round. Numbers increase substantially in late summer when large colonies develop on host trees. The aphids feed by sucking sap from stems, reducing the trees' health and vigour.

Willows are widely planted to stabilise river banks and slopes, and prevent soil erosion. Willows also produce pollen and nectar which are valuable food sources for bees in spring. By reducing the willows' vigour, GWA threatens these important benefits.

GWA feeding activity also produces large quantities of honeydew - a sugary substance that coats the tree and rains onto anything beneath. This causes numerous problems:

- Honeydew attracts large numbers of wasps which are a public health and nuisance factor. Wasps also predate on some native insects and bees, and rob honey from hives.

- Honeydew collected by bees results in the formation of crystallised 'cement honey' which is difficult to extract and may negatively impact hive health.
- Surfaces coated with honeydew become covered in sooty mould which can interfere with photosynthesis and is a nuisance factor.



Multiple industry partners are working on long-term sustainable solutions to minimise the impacts of GWA. The most promising options are:

Biological control: Scion will assess the suitability of a known parasitoid and undertake the necessary risk assessment and public consultation to introduce this specialist biological control agent into New Zealand.

Host resistance: Plant & Food Research will screen willows and poplars to identify resistant varieties which in future could replace existing trees.

Multiple industry partners will investigate short-term risk mitigation options - for example wasp control and new beehive management techniques - to reduce the severity of GWA's effects while long-term sustainable solutions are developed.



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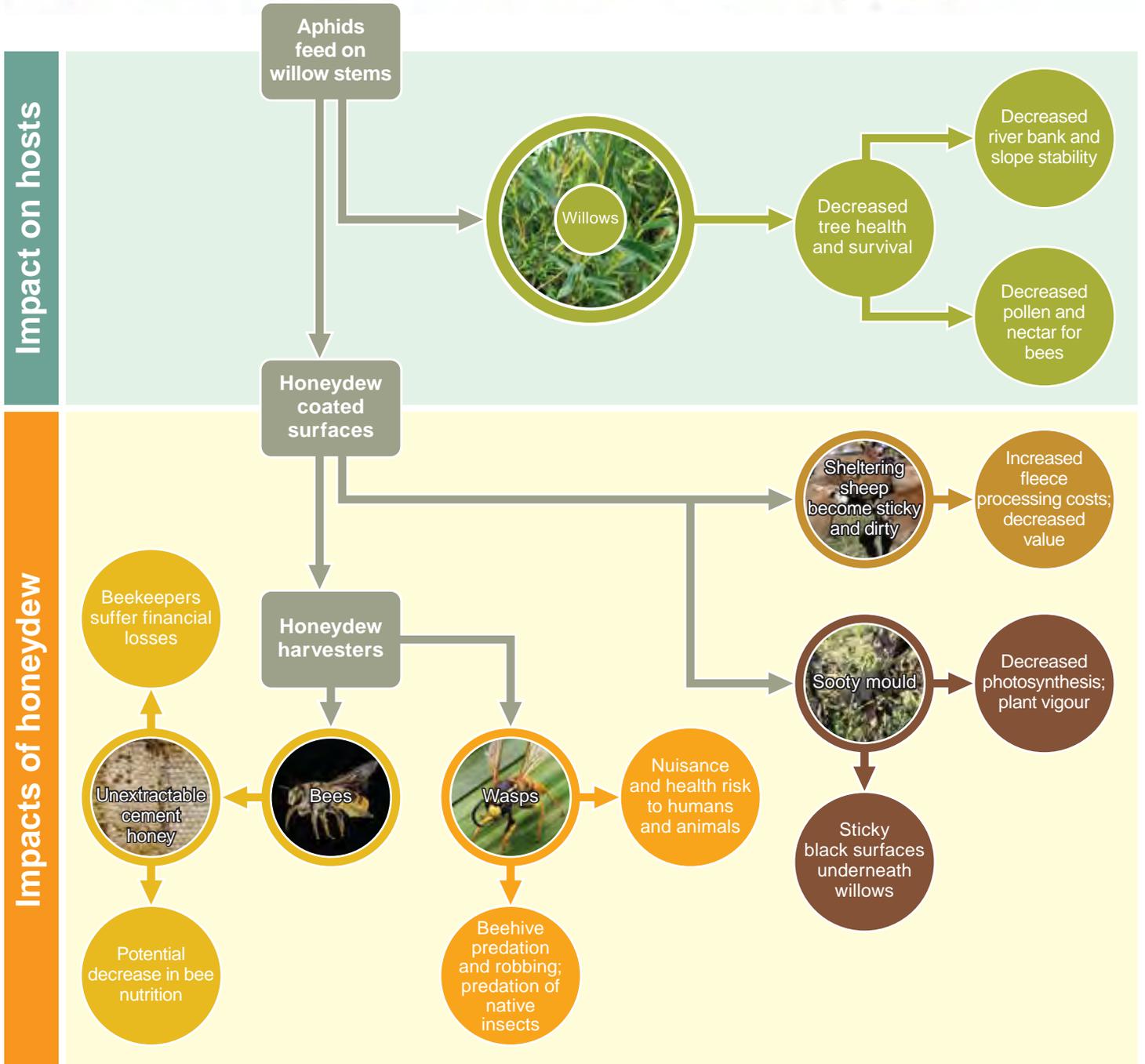
Photo: Bryce McQuillan



Giant willow aphid impacts and solutions



Photo: Bryce McQuillan



Solutions		
Resistant willows	Biological control	Risk mitigation
  <p style="text-align: center; background-color: #007060; color: white; padding: 5px;">Regional Councils</p> 	 <p>FORESTS • PRODUCTS • INNOVATION</p> <p style="background-color: black; color: white; padding: 5px;">Overseas collaborators</p>	 <p>BEES GIVING LIFE</p> <p style="background-color: black; color: white; padding: 5px;">APICULTURE NEW ZEALAND</p> <p style="background-color: #f1c232; color: black; padding: 5px;">Wasp Tactical Group</p>