AWRI Australian Wine Research Institute | Wine Australia

Fact Sheet
VITICULTURE

Grapevine berry inner necrosis virus (GINV)



Key messages

- Grapevine berry inner necrosis virus (GINV) has recently been detected in Australia, in table grape, wine grape and rootstock varieties.
- The impact and significance of GINV on Australian wine grapes is NOT YET KNOWN.
- GINV can occur in vines with symptoms and without symptoms, and a positive result does not necessarily mean a vine will become symptomatic.
- GINV can be spread through infected propagation material and common mites.
- For wine grape growers, recommended management of GINV is consistent with existing virus management practices - including practising good vineyard hygiene, control of vectors (mites) and use of clean planting material.

What is GINV?

Grapevine berry inner necrosis virus (GINV) is a grapevine-specific virus that can infect table grape, wine grape and rootstock varieties. There is no evidence that GINV causes vine death.

GINV was first described overseas in the 1980s and is established in parts of Asia. It has likely been a recent introduction into Australia, detected through improved diagnostic testing.

Where has GINV been detected in Australia?

To date, GINV has been detected in:

- Victoria
- Queensland
- South Australia
- New South Wales

Australian detections have occurred in table grape, wine grape and rootstock varieties, including vines showing no symptoms.

How does GINV affect wine grapes?

- Overseas, foliar symptoms have been associated with GINV in some wine grape varieties
- The potential impact on vine yield, fruit quality or resultant wine sensory characteristics is NOT YET KNOWN

What symptoms might be seen?

Not all infected vines show symptoms. Where symptoms occur, they can be variable and non-specific, and may resemble nutritional disorders, other grapevine viruses, herbicide damage or damage to buds by grapevine rust mites (*Calepitrimerus vitis*) and grape bud mites (*Colomerus vitis*).

Possible vine symptoms include:

- Delayed or uneven budburst
- Leaf mottling, yellowing or mosaic patterns (Figure 1)
- Reduced vigour or restricted shoot growth (Figure 2)
- Shortened internodes or zigzag shoots
- Smaller leaves
- Internal necrosis of shoots (Figure 3)

Fruit symptoms (reported mainly in table grapes overseas) may include:

- Compact bunches
- Smaller berries
- Uneven ripening
- Internal browning of berries (sometimes without external symptoms)

How is GINV spread?

GINV spreads through:

- Distribution of infected propagation material
- Grafting using infected vine material
- Vectoring by the Erineum leaf mite (*Colomerus vitis*), also known as the grape bud mite or grape blister mite

As for all grapevine viruses, there is no cure for GINV once a vine is infected.

The virus is not known to spread directly by machinery, people, or on cutting implements, but may be carried in infectious mites that travel on plant material, equipment, tools, clothing or footwear. Infectious mites can also be dispersed within and between vineyards by wind. Good hygiene practices reduce the risk of spread.



Figure 1. Leaf mottling, yellowing and mosaic patterns associated with GINV in table grape vine pre-flowering.



Figure 2 Reduced vigour and restricted shoot growth associated with GINV in table grape vine pre-flowering.



Figure 3. Internal necrosis of shoot associated with GINV in table grape vines at EL 17 – EL 29 (12-16 leaves separated).

What wine grape growers should do now

Current recommendations are precautionary and consistent with good vineyard practice:

1. Understand the virus status of your vineyard
    - Consider testing existing vines to understand the GINV status of your vineyard, particularly before introducing new planting material
2. Use clean planting material
    - Source pathogen-tested propagation material
    - Discuss the health status of propagation material with your supplier
    - Avoid sharing or exchanging propagation material with unknown virus status
    - Keep records of vine material sources
3. Manage mite vectors
    - Monitor mite vector populations and manage using Integrated Pest Management (IPM) principles
    - Where chemical control of GINV mite vectors is deemed necessary, use products registered for the target mite species and follow label directions and AWRI Dog book guidelines
4. Maintain vineyard hygiene
    - Follow 'clean in, clean out' practices
    - Clean machinery, equipment, tools and footwear to remove all soil and plant material after working in blocks showing GINV-like symptoms
5. Monitor and confirm
    - Monitor vines for GINV-like symptoms throughout the season, especially in spring
    - Tag and track suspect vines. Watch for changes over time and spread to neighbouring vines.
    - Do not rely on visual symptoms alone, laboratory testing is required to confirm GINV infection

What to do if you suspect vines may be infected by GINV

- Do not remove vines based on symptoms alone
- Arrange testing for GINV through an accredited laboratory (see below)
- Test for a range of grapevine viruses to assist in determining the cause of symptoms
- Photograph, record and tag suspect vines to monitor changes over time

What to do if GINV is confirmed

Advise your propagation material supplier if detected in young vines, and consider the following to inform appropriate management:

- Impacts on vine performance: canopy growth, yield and fruit composition
- Incidence and distribution of GINV within your vineyard
- Presence of mite vectors and risk of spread
- Proximity to and/or likelihood of other sources of infection

Testing and support

Testing for GINV and other viruses is available through accredited laboratories, including state agriculture departments:

- Agriculture Victoria
  Phone: (03) 9032 7515
  Email: chs.reception@agriculture.vic.gov.au
- DPIRD Diagnostic Laboratory Services
  Phone: (08) 9368 3351
  Email: DDLS@dpird.wa.gov.au
- Biosecurity Tasmania Molecular Diagnostics
  Phone: (03) 6165 3777
  Email:
  plantdiagnosticservices@nre.tas.gov.au
- Elizabeth Macarthur Agricultural Institute
  Plant Health Diagnostic Service
  Phone: (02) 4640 6240
  Email: emai.phds@dpird.nsw.gov.au

Check with each laboratory for recommended sampling, packing and submission (including biosecurity) requirements.

Bottom line for wine grape growers

Take an informed approach –

- Consider testing your own vineyard to understand the GINV status.
- If you are purchasing planting material, request a recent set of virus-testing results to ascertain GINV status prior to purchase.
- If GINV-positive planting material is being considered, assess the risks in the context of your vineyard before making a planting decision.
- Maintain good vineyard hygiene and manage mite vectors where appropriate.

More information

- PIRSA GINV website:
  https://www.pir.sa.gov.au/ginv
- Plant Health Australia GINV Fact Sheet:
  https://www.planthealthaustralia.com.au/new-factsheet-supports-awareness-of-grapevine-berry-inner-necrosis-virus/
- Vinehealth Australia GINV information:
  https://vinehealth.com.au/2026/04/gin-virus-detection/
- EcoVineyards Mite control Fact Sheet:
  EcoVineyards-fact-sheet-Biocontrol-of-common-Insect-pests-bud-blister-and-rust-mite-FINAL.pdf
- NSW DPIRD Managing Vineyard Pests Fact Sheet:
  https://www.dpi.nsw.gov.au/__data/assets/pdf_file/0010/110998/managing-vineyard-pests.pdf
- Vinehealth Australia Farm-gate Hygiene Resources:
  https://vinehealth.com.au/tools/farm-gate-hygiene/
- Australian Table Grape Association – Grapevine berry inner necrosis virus (GINV):
  https://australiangrapes.com.au/grapevine-berry-inner-necrosis-virus-ginv/
- Fan, X., Dong, Y., Yin, Z., Ren, F., Hu, G., Li, Z., Li, N., Zhou, J., & Wang, G. 2017. Occurrence and genetic diversity of grapevine berry inner necrosis virus from grapevines in China. Plant Disease, 101(1), 144-149. Available from:
  https://doi.org/10.1094/PDIS-05-16-0694-RE.

Contact

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