

# DPI Primefact

## Sampling for grapevine red blotch virus and other viruses

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*Sampling for virus testing in grapevines is a simple process and can be completed throughout the life cycle of the grapevine. Before sending a sample, check with the laboratory about their preferred sample type and preparation. Keep samples cool in an esky and/or fridge until they are sent to ensure sample integrity. Avoid sampling when it is hot.*

### Visually inspecting vines

To identify vines that might be infected with viruses, walk up and down the rows, looking for any vines that have discoloured or blotchy leaves. Tag these vines for future sampling during dormancy and before pruning.

### Sampling dormant canes

Collect between two and five 200–300 mm canes from vines across both cordon arms. Tag the sampled vines and label or note the row and position in the vineyard for future reference using flagging tape. Taking a photograph with a phone that has geolocation enabled will also help record the sample location. Samples should be wrapped in paper towel and stored in a labelled ziplock bag. If sampling a whole block as a pooled sample, roughly work on a ratio of 5 to 6 vines per 1,000 vines scattered across the whole block (Figure 1). Ensure samples are collected from throughout the whole block. Label each of the canes with the vine number for traceback to either re-test or confirm positive results if required.

**Tip:** make sure to include the sample number, variety/clone and vine number on the bag and laboratory sample sheet (Appendix 1) and to keep a copy for your records. Label individual canes in a pooled sample with vine number so that if a positive result is returned, individual vines can be re-tested.

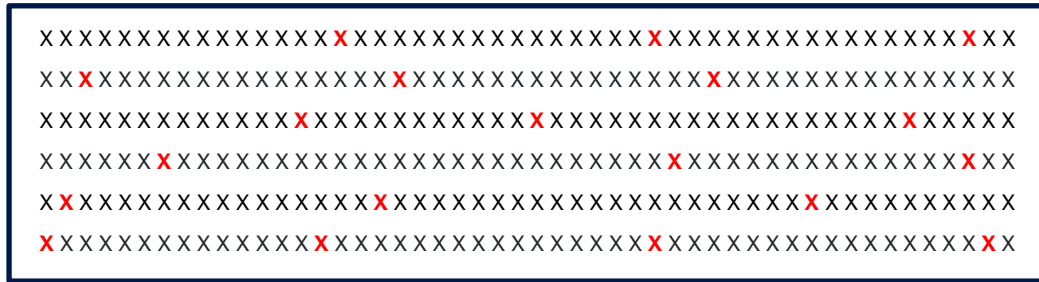


Figure 1. A representation of a vineyard block where x marks a vine. The red (x) indicates a sampled vine. Note: this is a representation that roughly works on 6 vines per 1,000 for sampling non-specific vines.

## Sampling green shoots

A minimum of 2 to 5 shoots per vine should be sampled from symptomatic vines. If collecting samples for general screening, collect from both symptomatic and asymptomatic vines. Use the bottom 200–300 mm of the shoot for the sample (Figure 2). Wrap shoots in paper towel and place them in a labelled ziplock bag. Collect the sample in the cool of the morning on days when temperatures are going to be above 28 °C. If sampling several blocks, store the samples in an esky with an ice brick to keep them cool. Either submit individual vine samples or a pooled block sample. Leaves may be removed if this is preferred by the laboratory. If submitting a pooled sample, label shoots from individual vines with the vine number for traceback if retesting is required.

## Sampling leaves and petioles

Sample 5 to 10 leaves with petioles intact from different shoots from the same vine. Collect samples from across both cordons of the vine. Sample the more mature leaves but avoid the shoot tip as there will be more virus load in the older leaves (Figure 2). Wrap the leaves in paper towel before storing them in a ziplock bag to maintain leaf integrity. Label the bag appropriately. Repeat this for all the vines being sampled. Sampling can be completed towards the end of the season when symptoms are more obvious. Do not sample leaves that are brown and dying. Either submit individual vine samples or a pooled block sample. Leaves may be removed if this is preferred by the laboratory. If submitting a pooled sample, label leaves from individual vines with the vine number using permanent marker.

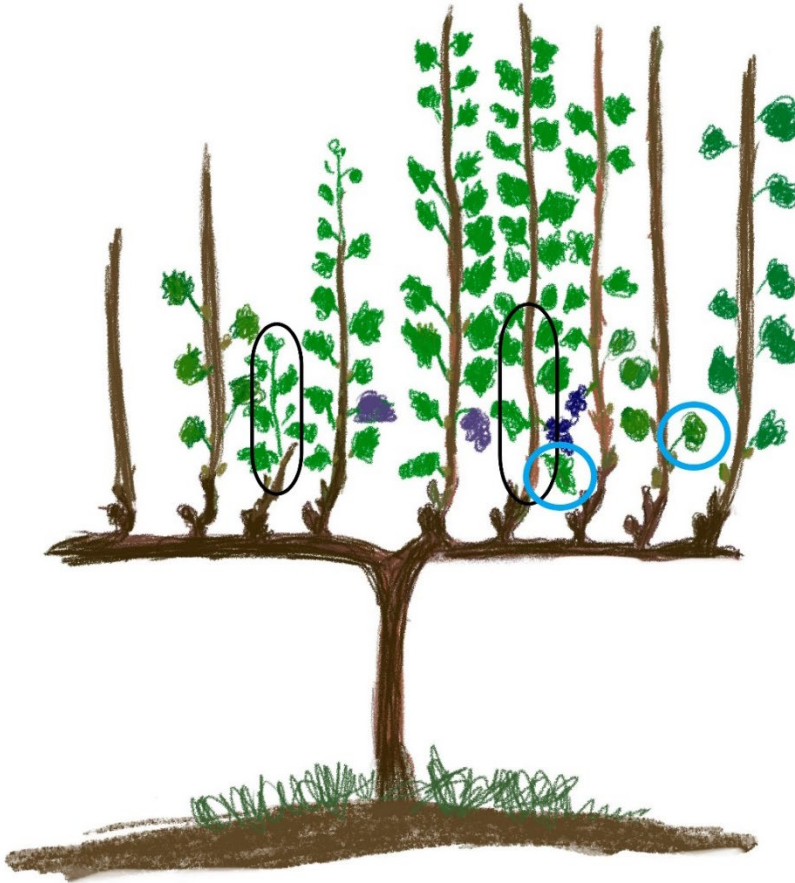


Figure 2. A diagram of a grapevine showing where to collect samples. Black ovals show where to sample canes and shoots (bottom 200–300 mm). Blue circles show where to pick the older basal leaves for virus testing. Samples should be taken from both cordon arms of the vine. Adapted from Iland et al. (2011).

## Packaging and storing samples

Ensure samples are stored in sealed bags and stored in the fridge until they are sent to the laboratory. Before shipping, double bag the samples and ensure they are labelled correctly. Make sure the required testing form is filled out with the necessary details (Appendix 1). Package the samples according to the laboratory's requirements. Avoid sending samples on Thursdays and Fridays if the delivery service cannot guarantee next-day delivery to the laboratory.

## How do I submit a sample?

Many laboratories can test grapevine viruses. If shipping samples interstate, ensure the correct paperwork is included for the laboratory to be able to accept the sample (Appendix 1). The [NSW DPI Plant Health Diagnostic Service](#) can test for grapevine red blotch virus and other grapevine viruses. Send samples using either a courier service or express/priority post. Contact the customer service team for courier service account details. Keep track of the sample and have a backup sample just in case it goes missing. Check with your preferred laboratory about whom to use if you are not sure.

Please call the laboratory to discuss how to submit your sample on 1800 675 623 or email: [laboratory.services@dpi.nsw.gov.au](mailto:laboratory.services@dpi.nsw.gov.au). Laboratory hours are 8:30 am to 4:30 pm Monday to Friday. Remember to package samples as per the laboratory's requirements.

## Sampling for grapevine red blotch virus and other viruses

Specimens can be sent by courier mail or delivered in person. The package must contain a sample submission form that can be downloaded [here](#) for NSW DPI Plant Health Diagnostic Service and be enclosed in a sealed plastic bag.

Send plant samples by courier to:

Plant Health Diagnostic Service  
EMAI, Woodbridge Road  
MENANGLE NSW 2568

or by Express Post to:

Plant Health Diagnostic Service  
Private Bag 4008  
NARELLAN NSW 2567.

## References

Iland P, Dry P, Proffit T and Tyerman S. 2011. *The Grapevine: from the science to the practice of growing vines for wine*. Patrick Iland Wine Promotions Pty Ltd.

Miles L, Byrne J, Gillet J and Miles T. 2019. Don't guess, get a test from MSU Plant & Pest Diagnostics, Michigan State University.

## Acknowledgements

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### Copyright and disclaimer statement

© State of New South Wales through Regional NSW [2022]. The information contained in this publication is based on knowledge and understanding at the time of writing [September 2022]. However, because of advances in knowledge, users are reminded of the need to ensure that the information upon which they rely is up to date and to check the currency of the information with the appropriate officer of the Regional NSW or the user's independent adviser.

# Appendix 1



Department of  
Primary Industries

## Plant Health Diagnostic Service Specimen Advice Form

Customer No:

Your Reference:

Quote No: (If applicable)

| SUBMITTER DETAILS Please note results will be report to the submitter's email address provided below  |                                   |   |                |
|---|-----------------------------------|---|----------------|
| Submitter name:   |                                   | Company/Clinic:   |                |
| Postal address:   |                                   | ABN:  |                |
|   |                                   | Phone:  |                |
| Email:  |                                   | Additional report (email):  |                |
| OWNER DETAILS (if different to submitter)   |                                   |   |                |
| Grower/Owner name:  |                                   | ABN:  |                |
| Property address:   |                                   |   |                |
| Postal address:   |                                   |   |                |
| TESTING REQUIRED - Testing times vary from days to weeks, depending on the complexity of the problem and nature of test   |                                   |   |                |
| A. Proceed with testing for a complete diagnosis  |                                   | OR Contact submitter to discuss testing requirements or testing costs |                |
| B. Include tests for ( <i>suspect disease or pathogen</i> )   |                                   | OR Test ONLY for:   |                |
| LLS & DPI USE ONLY  |                                   |   |                |
| District Surveillance:  |                                   | Yes   | No             |
| Charge to WBS/Project code:   |                                   |   |                |
| Collector's name:   | Date collected:                   | Sample locality   | Sample site:   |
| Samples type (e.g. soil, water or common name)  | Variety:                          | Genus:  | Species:       |
| Symptoms (e.g. leaf spot, dieback, wilt) OR see attached note   |                                   |   |                |
| Symptom distribution:<br>Scattered plants<br>Patches<br>Uniform over large area   | % of crop affected:               | Onset of problem  | Other factors: |
| GPS Coordinates: System type<br>WGS84<br>GDA94  | South (decimal degrees preferred) | East (decimal degrees preferred)                                      |                |
| FURTHER INFORMATION (please attach additional sheet if insufficient space provided)   |                                   |   |                |
|   |                                   |   |                |
| DECLARATION   |                                   |   |                |
| By ticking this box, I have read and agree to the NSW DPI Laboratory Services Terms and Conditions that can be accessed at <a href="http://www.dpi.nsw.gov.au">www.dpi.nsw.gov.au</a> or provided to you by contacting our Customer Service Unit. |                                   |   |                |
| By signing below, I declare that I am authorised to request analysis of the samples listed above  |                                   |   |                |
| Name:   | Signature:                        | Date:   |                |
| LAB USE ONLY  |                                   |   |                |
| QA  | D                                 | M   | IMP            |
|   | E                                 | NOTIFIABLE  | EXOTIC         |
|   |                                   | SURVEILLANCE  | OTHER          |
| Total samples received:   |                                   | Sample condition:   |                |