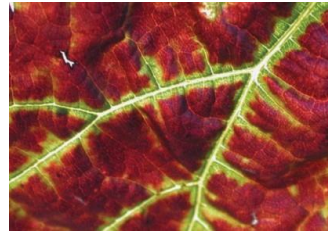




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LEAFROLL CONTROL STRATEGY

2. RECOGNIZING GRAPEVINE LEAFROLL DISEASE SYMPTOMS IN SOUTH AFRICA

2.2 White-berried cultivars:

In white-berried grapes the symptoms of grapevine leafroll disease are very mild and can often not be seen.

A few cultivars (Chardonnay, Cape Riesling, Semillion) will show mild yellowing or chlorotic mottling of interveinal areas of leaves (Fig. 1) which in some (e.g. Chardonnay) may progress to a downwards rolling of the leaf margins (Fig. 2).



Figure 1: Chlorotic spots on leaf of a white-berried *Vitis* cultivar infected with leafroll. (Image: E. Jooste, ARC-PPRI)



Figure 2: Leafroll disease on Chardonnay. Note the pronounced downward curl of the leaf margins. (Image: R. Carstens, ARC Infruitec-Nietvoorbij)

In general, if symptoms are observed on these cultivars the grapevines are already severely infected.

In some cultivars (Sauvignon blanc, Riesling) the disease never shows obvious symptoms and can be considered latent throughout the course of the disease.

In white-berried cultivars that show some symptoms, it is not known how long the latent period of the disease is, but this is likely to differ depending on the age of the grapevine when infected, whether the grapevine was infected via mealybugs or infected scion material or infected rootstock material, and various environmental conditions. However it is likely to be multiple seasons.

2.3 Rootstocks:

Rootstocks (e.g. *Vitis riparia*, *V. rupestris*, *V. berlandieri*, *V. champini*, and crosses thereof e.g. Richter 110, Richter 99, LN-33, 101-14 Mgt) do not show any symptoms of leafroll infection but can harbor the virus (GLRaV-3) (Fig. 3).



Figure 3: No symptoms displayed by Richter 99 rootstock here even though scion shows severe leafroll infection. (Image: K. Snyders, University of Pretoria)

The virus is generally in low concentration and/or erratically distributed in rootstock material.

The diseased nature of rootstocks is obvious once healthy new scion material is top-grafted (Fig. 4) onto rootstocks from an old, previously leafroll infected vineyard, and is a practice that should be avoided.



Figure 4: Expression of leafroll symptoms on scion top grafted onto rootstocks from an old vineyard. (Image: G. Pietersen, ARC-PPRI)

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