

Research area: VITICULTURE

Regional cluster: RIVERINA

What are the best management practices to control Silverleaf nightshade (*Solanum elaeagnifolium*) in Riverina vineyards?

Background

Many Riverina viticulturists are asking for tailored vineyard information on how to manage Silverleaf nightshade, which is one of New South Wales and Riverina's worst weeds. Once it is established, control is difficult, especially as interconnecting root systems can reach over two metres deep.

Cultivation breaks the roots into many small segments, spreading them through the vineyard. Root segments can travel large distances in soil attached to machinery.

Slashing is not an option for managing Silverleaf nightshade because, not only does the weed recover well after slashing even under dry conditions, but it can also form berries close to the ground where slashing is ineffective.

Why is it important?

To date, there is no registered herbicide that is able to eradicate a Silverleaf nightshade colony with a single application. Long-term management is required to significantly reduce seed numbers in the soil, involving three-to-five years of controlling seedlings and seed set. In addition, some growers have stopped using cultivation as a tool to manage Fleabane (*Conyza sp.*), fearing the spread of Silverleaf nightshade. This escalating reliance on herbicide use, specifically Glyphosate, increases the risk of weed resistance.

This project will carry out a survey of current methods and evaluate their effectiveness in the management of Silver nightshade in Riverina vineyards. Alternative strategies will be investigated, with the aim of developing an integrated approach to management of Silver nightshade.

What would success look like?

Success for this project is the identification and demonstration of a holistic management plan for Silverleaf nightshade in Riverina vineyards, including options for cover crops, alternative herbicides and methods of biocontrol. An important output from the project is a best-practice vineyard management plan for Silverleaf nightshade, outlining seasonal measures for prevention, control and eradication.

For further information and to develop an application please contact:

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