



Chapel Hill Winery: Kangarilla Vineyard creek line revegetation

Viticulturist:

Rachel Steer (and Ian Janssan) has been working on a creek line restoration project at the Kangarilla Vineyard over the last few years. A previous case study was included in the 'Enhancing Biodiversity in Vineyards' workshop notes and an update is presented here.



McLaren Vale Wine Region

Key observations

- What worked well?**
 - Spraying out large areas and planting tube stock in clusters.
 - Planting in winter rather than spring to allow more time for plants to establish.
 - Using grow guards to prevent damage from kangaroos.
 - Learning from previous years, which plants will grow successfully.
 - Large ash stumps need to be 'frilled' to ensure enough of the chemical gets into the cambium layer.
- Pitfalls to avoid**
 - Phalaris is far too competitive to plant trees and shrubs amongst without spraying. Control needs to be ongoing until plants are well established.
 - Kangaroo's cause a lot of damage if plants are not protected by guards.
 - Chain sawing grooves across large ash stumps and applying herbicide does not get enough into the cambium layer and regrowth will occur.

Case Study

Project: Removal of dominant weed species from the creek line and revegetating with local indigenous species to stop erosion (use the roots mass to bind the soil) and improve the water quality. The creek line flows through the middle of the vineyard and is within the Onkaparinga Catchment. It is ephemeral and is actively eroding. The pre-European vegetation association in this area was *Eucalyptus camadulensis* (Red Gum) in the riparian area and grassy woodland on the flats.

Update: Chapel Hill started controlling ash trees, phalaris and watsonia from the southern end of the creek, on the eastern side of the Kangarilla property in 2007. We are now working on our second three-year work plan in conjunction with the Adelaide and Mount Lofty Ranges NRM Board.

The watsonia control has been very successful with little regrowth in following years. The ash control has also been successful but there has been some regrowth from the cut stumps (**photo below**), which is proving very difficult to control. Hundreds of new saplings are being produced from seed that needs to be pulled when the creek line is damp or sprayed with Roundup Biactive. The phalaris is extremely dense and competitive and has also been difficult to control. Phalaris must be whipper snipped and allowed to regrow before spraying with Roundup Biactive.

Future: Each winter/spring between 600 and 1000 local indigenous plants are planted along the creek line in allocated zones. Rainfall during the last three years has been quite variable and the dry summer of 2008/09 caused a higher mortality rate than we were anticipating. The 2009, 2010 and 2011 plantings however have all done extremely well and are becoming a visual part of the landscape along the creek (**photo left**).



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