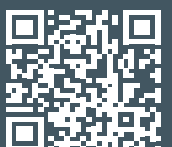




CASE STUDY

GROWING A BIO-HEDGE AND MAKING THERMAL, AEROBIC COMPOST TO BREW COMPOST TEA AT WINDSONG WINES, LANGHORNE CREEK, SA

By Heather Webster, Windsong Wines; Janet Klein and Dr Mary Retallack, Retallack Viticulture Pty Ltd



ESTABLISHING NATIVE INSECTARY PLANTS

Background

Windsong Wines is located at 370 Clements Road Langhorne Creek and consists of a total of 8.9 ha with 5.8 ha planted to Shiraz, Tempranillo, Savagnin, Prosecco, Nero d'Avola.

"The EcoVineyards concept is very popular with our wine buyers. We have many repeat customers who choose us because they love our wines, they appreciate our low chemical input regimes, they appreciate the extensive plantings of native vegetation, and they love vineyards that look 'Australian'."

Heather Webster, Windsong Wines

What were you hoping to achieve and why?

Our EcoVineyard project encompassed a number of aspects:

- **A. Biohedge:** of mixed medium storey species running the length of our vineyard to provide multi-purpose insectary benefits to the vineyard, provide a biodiversity trail around the perimeter of our property, increase biodiversity benefits to our local wildlife, act as a physical barrier deterring visitors from entering vineyard and to enhance our property aesthetics.
 - We also planted a small wallaby grass trial area close to the cellar door.
 - We extended our trial planting of native sandalwood trees for conservation and education of the species. We actively promote sandalwood conservation to cellar door visitors and neighbours.
- **B. Compost tea trial:** utilising information learnt in an EcoVineyards workshop, we built our own compost to brew compost tea and used it to ferment and apply compost tea to parts of our property to improve our soil microbial health and hence the health of our vines.



Figure 1: Preparation for making good quality thermal, aerobic compost for brewing compost tea at the field session hosted by Windsong Wines [Photo. Janet Klein].



Figure 2: Ensuring the compost materials are moistened as they are layered in the compost ring [Photo: Photo. Janet Klein].



Figure 3: Applying rockdust to the compost tea round [Photo: Photo. Janet Klein].



Figure 4: Compressing each layer as it is added to the compost ring [Photo: Photo. Janet Klein].



Figure 5: A completed compost tea ring, ready for microbes to start breaking down the materials [Photo: Photo. Janet Klein].

What did you do and when?

- **A. Biohedge:** The bio-hedge (bio-diversity and bio-security) was planted (with guards) in winter 2023.
- **B. Compost tea trial:** We built the compost in autumn 2024 using remnant green and brown plant material from the property, turning the compost once it reached temperature. We then left it to mature over winter 2024 and used it to ferment in a compost tea late spring 2024.



Figure 6: Multispecies biohedge around the perimeter of our property [Photos: Heather Webster].

If you changed your project, what was the reason for the change?

We did not alter our project, although should we continue with similar activities, having the capacity to water the young seedlings and to prevent rabbit damage would be significant improvements.

What worked well?

Our biohedge worked very well and our trial hedge planting was very successful. As seen in the photos (above and below) all three species trialled below showed great promise in forming a hedge either via density of growth or by prickles. All three species have been hedged and have responded well to trimming. Our initial plantings of *Bursaria* at the end of vineyard rows continue to perform well.

The predator perch is indeed used by raptors (mainly black shouldered hawks) but also Magpies and Little Ravens. Our established sandalwood trees grew brilliantly enabling a harvest of at least ten litres of seed. The conservation of sandalwood is a constant interest at the cellar door.



Figure 7: Biohedge pre and post trimming and Sandalwood nuts [Photo: Heather Webster].

Pitfalls to avoid?

Given our experience, rabbit eradication (and cats and foxes) needs to be a primary prerequisite for revegetation programs in Langhorne Creek given the number of our young plants removed by rabbits.

This affected our dam fence climbing plant species including *Hardenbergia violacea*, native lilac; *Billardiera cymosa*, appleberry, and *Clematis microphylla*, old man's beard.

Equally, keeping water up to the young seedlings is essential in a dry year such as 2024/25. The sandalwood germination of new plants was disappointing for this reason.

Highlights

The diversity of habitat offered by all our non-vine plants means increased bird species diversity and I believe we have no negative impacts from birds on our vines.



Figure 8: (clockwise from top) Native climbing screening plants establishing along the dam fence with the Ocloc predator perch in the background, *Goodenia ovata*, hop goodenia planted adjacent to the strainer post, river bottle brush planted adjacent to the strainer posts, Heather exhibiting her native grasses demonstration area [Photos. Janet Klein and Mary Retallack].

Plant list

| # | Scientific name | Common name | Number planted |
|-------|-------------------------------|---------------------------|----------------|
| 1 | <i>Acacia calamifolia</i> | wallowa | 5 |
| 2 | <i>Acacia dodonaefolia</i> | hop leaved wattle | 5 |
| 3 | <i>Acacia myrtifolia</i> , | myrtle wattle | 10 |
| 4 | <i>Acacia sclerophylla</i> | hard-leaf wattle | 5 |
| 5 | <i>Acacia spinescens</i> | spiny wattle | 10 |
| 6 | <i>Callistemon sieberi</i> | river bottlebrush | 5 |
| 7 | <i>Eucalyptus leptophylla</i> | slender-leaved red mallee | 5 |
| 8 | <i>Eucalyptus oleosa</i> | red mallee | 5 |
| 9 | <i>Senna artemisioides</i> | silver cassia | 5 |
| 10 | <i>Templetonia retusa</i> | cockies tongues | 5 |
| 11 | | saltbush | 10 |
| Total | | | 70 |

Costs

| Date | Item | Number of plants | EcoVineyards costs (ex GST) | Co-contribution (grant and landholder contribution) |
|------------|---|------------------|-----------------------------|---|
| 12/09/2024 | Impact Ecology - Microbat call analysis | | \$124 | |
| | Rabbit bait | | \$90 | |
| | Vineyard tasks | | \$300 | |
| | Plants | 40 | \$410 | |
| 20/06/2025 | Additional Plants - Second Nature Nursery | 30 | \$130 | |
| | EcoGrower contribution | | | \$3,000 |
| | Total | 70 | \$1,054 | \$3,000 |

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ACKNOWLEDGEMENT OF COUNTRY

EcoVineyards proudly acknowledges the Aboriginal and Torres Strait Islander Peoples, and their ongoing cultural and spiritual connection to this ancient land on which we work and live.

As the Traditional Custodians of this land, we recognise their wealth of ecological knowledge and the importance of caring for Country.

We pay our respects to elders past and present and extend this respect to all Aboriginal and Torres Strait Islander Peoples.



