

Case study

Coonawarra Wine Region

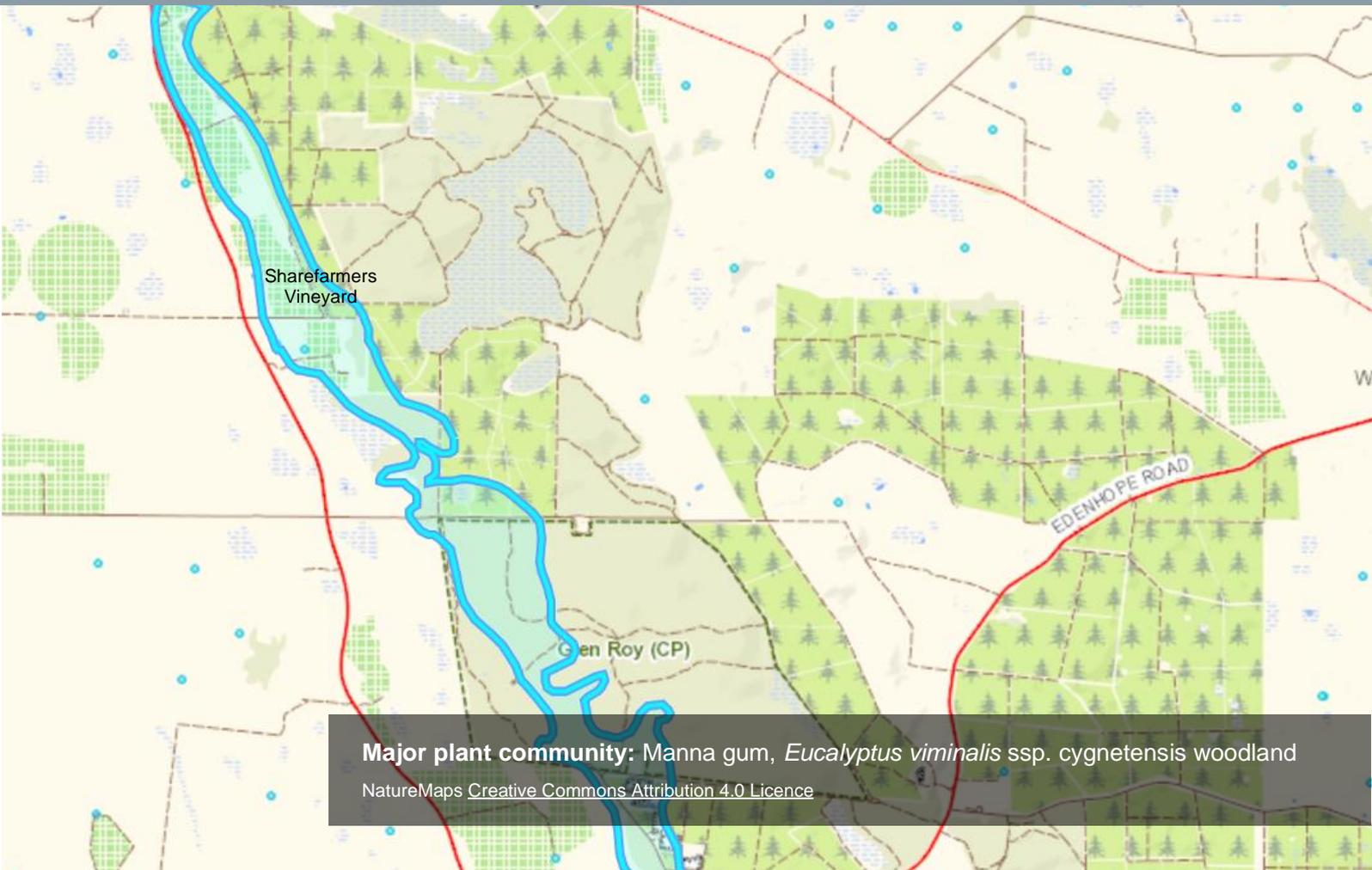
Sharefarmers Vineyard, Joanna, SA

EcoGrowers: Sally and Andrew Macleod

“This project has encouraged us to identify areas within our vineyard where we are able to plant native species for the benefit of not only the vineyard, but also to our farm as a whole. It has been rewarding to learn about the native species endemic to the area and then to plant them on our property and watch them grow. It has also been beneficial to broaden our knowledge of the relationships between plants and beneficial insect and bird species.”



October 2023



EcoGrowers: Sally and Andrew Macleod

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What worked well?

Order trees well ahead of time so the species required are available and you get them in mid to late winter/early spring – best time for planting in this area.

Pre-planting weed control is critical – begin two years in advance.

Plant spacing critical to ensure you can get a ride on lawn mower or tractor and slasher between the rows and trees.

Better to plant taller shrubs as opposed to ground covers as impossible to control weeds around the smaller species.

Plant areas where dripper irrigation is available to avoid hand watering.

Value personally of the project

This project has helped me become so much more aware of the native plant species common to the Coonawarra area of South Australia.

I have really enjoyed learning about the interaction between them and the beneficial native birds and insects of the area.

I have also really enjoyed the physical planting and nurturing of the trees and shrubs – it is such a 'feel good' project to be involved in.

The synergism between this project and the desire to become more environmentally sustainable is paramount to the success of agriculture going forward and I feel proud to be a minuscule part of this plan.

Progress (June 2021 to 2023):

What were you hoping to achieve and why?

The aim of the project was to establish an area of insectary plants between two blocks of grapevines in our Sharefarmers vineyard, using plant species native to the area.

We wanted to evaluate the growth of some of the suggested native plant species and in turn see if there was a decrease in insect pests in the vineyard due to a build-up of beneficials in the native insectary area.

What did you do and when?

The project began in June 2021. Sourcing the desired plant species was somewhat challenging as the project commenced after the best ordering time with suppliers was past. Plants were eventually sourced from Mimosa Farm Trees at Mount Gambier and State Flora SA.

After deciding where to plant the native insectary, a gridded area plan of which species were to be planted and where was drawn up. The aim was to have the taller species at the back of the area grading to shorter species at the front.

It was vital to obtain good weed control prior to planting. A two-pronged approach consisting of applications of knockdown herbicide and cultivation of the area to enhance weed germination was used. The area was cultivated, and rotary hoed prior to planting.

Planting took place in September 2021 which was later than desired. In future, planting in mid to late winter when soil moisture is plentiful would be more suitable. Jute matting was placed around each plant as a weed barrier and also to preserve moisture - this worked really well. All plants were protected with corflute tree guards.

Since planting, the area has been monitored for plant growth and survival, soil moisture, insect populations and weed control. Weeds have been the biggest issue. Consequently, the area has been mown as needed and knockdown herbicide has been applied around plants. The soil is prone to rapid drying out, so plants have been watered on a semi regular basis through both summers. Snail control has also been needed.



Clockwise from above: Pre-planting 12 September followed by planting of insectary plants on 22 September 2021; growth the following year on 27 September 2022 (Photos: Sally Macleod).

Above and below: Growth of the insectary plants from March 2023 to April 2023 (Photos: Sally Macleod)



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Which plants performed well on your site?

Generally, plant survival has been good with minimal losses. The best growing species have been clasping goodenia, silver mulga, common fringe myrtle, silky tea tree, woolly tea tree, pig face, twiggly daisy bush and yacka.

The lower profile ground cover type plants running postman, muntries and fairy fan flower have also grown well but suffered from weed competition.

Sweet bursaria was slow to establish and there were some deaths. Surviving plants are now growing well. Swamp bottlebrush, sticky hop bush and spiny-head mat-rush have been very slow growing with some deaths. All spreading eutaxia plants died. Dead plants have now been replaced with species which are growing well in the project area.

Future plans

Monitoring of this area will be ongoing until plants are better established. Replacement tube stocks will be planted during late winter. It is hoped plants will be well established so weed control becomes less of a problem going forward. In the interim, this will be the main maintenance task along with watering during summer.

To date, the trees and shrubs have not been well enough established to harbour enough beneficial insects to get a gauge on their benefit within the vineyard. The vineyard has been inundated with spiders this season! Monitoring of insect populations is ongoing in the vineyard, so any changes to the population, particularly around the native insectary area, will be recorded.

We have several other areas within our vineyards which would be suitable for native insectary planting. However, until we have a better handle on the benefits of this native insectary and are confident there is no increase in 'grape loving' birds, we will not be looking at planting any further areas within the vineyard. Other areas of our property, outside of the vineyard, are however being set aside for native tree lines.

Native grasses are also of interest in the vineyard. An area of direct seeding was planned within the native insectary, but planting did not proceed. This will be an area to pursue in the future.

Native plant list:

- *Bursaria spinosa*, sweet bursaria
- *Acacia argyrophylla*, silver mulga
- *Callistemon rugulosus*, swamp bottlebrush
- *Carpobrotus rossii*, native pigface
- *Calytrix tetragona*, common fringe myrtle
- *Daviesia brevifolia*, leafless bitter-pea
- *Dodonaea viscosa*, sticky hop bush
- *Eutaxia diffusa*, spreading eutaxia
- *Goodenia amplexans*, clasping goodenia
- *Grevillea lavandulacea*, lavender grevillea
- *Kennedia prostrata*, running postman
- *Kunzea pomifera*, muntries
- *Leptospermum myrsinoides*, silky tea tree
- *Leptospermum lanigerum*, woolly tea tree
- *Lomandra longifolia*, spiny-head mat-rush
- *Olearia ramulosa*, twiggly daisy bush
- *Scaevola aemula*, fairy fan flower
- *Xanthorrhoea spp.*, yacka



Expenses (cash and in-kind)

Name: AA & SC Macleod		Region: Coonawarra			
Date	Activity	Number of plants	Grant cash expenses (ex GST)	Additional cash co-contribution	In-kind time captured
9/07/2021	Herbicide application - Basta at 3.5L/ha			\$ 100	2 hrs
9/07/2021	Basta - \$14.52/L			\$ 51	
28/06/2021	Jute matting (EE Muir & Sons)		\$ 244		
29/06/2021	Purchase tube stock (180 plants x 2.50 ea) (Mimosa)	180	\$ 495		
30/07/2021	Purchase tube stock (70 plants x 4.00 ea) (State Flora)	70	\$ 280		
19/09/2021	Postage of tube stocks (State Flora)		\$ 60		
19/06/2021	Tree guards and stakes (150 guards x \$2.00 ea) (On hand)			\$ 300	
12/08/2021	Knock in posts for fence around site (Attwoods fencing)		\$ 528		
12/08/2021	Second hand CCA posts			\$ 100	
27/08/2021	Waratah Stock lock fencing wire		\$ 435		
28/08/2021	Cultivate site				2 hrs
15/08/2021	Rotary hoe site				1 hrs
22/09/2021	Planting time (2 people x 2 1/2 hours)				5 hrs
23/09/2021	Planting time and watering (2 people x 2 1/2 hours)				5 hrs
23/09/2021	Tree guards and stakes (Eucaleuca Native Services)		\$ 170		
28/09/2021	Tree guards and stakes (Eucaleuca Native Services)		\$ 130		
28/09/2021	Completed planting (2 people by 2 hours)				4 hrs
30/09/2021	Native perennial grasses sown on 2m * 40m				1 hrs
7/12/2021	Watering trees (2 people * 1 hour)				2 hrs

Date	Activity	Number of plants	Grant cash expenses (ex GST)	Additional cash co-contribution	In-kind time captured
26/12/2021	Hand weeding wallaby grass area				2 hrs
28/12/2021	Watering trees (2 people * 1 hour))				2 hrs
16/01/2022	Watering trees (2 people * 1 hour))				2 hrs
8/02/2022	Hand weeding				2 hrs
12/02/2022	Watering trees (2 people * 1 hour)				2 hrs
12/04/2022	Spraying Basta				1.5 hrs
2/05/2022	Erect fence (2 people - 1 hour)				2 hrs
20/06/2022	Purchase tube stock (73 plants at 2.75 each) Mimoso Farm Trees	73	\$ 201		
23/06/2022	Planting replacement trees (2 people * 1 hour)				2 hrs
24/06/2022	Snail bait application				0.5 hrs
28/06/2022	Purchase (40 plants at 2.50 each) Eucaleuca Native Services	40	\$ 100		
18/07/2022	Planting time (1 person 2 hours)				2 hrs
5/09/2022	Planting replacements and spraying around trees (1 person)				2 hrs
19/09/2022	Snail bait application				0.5 hrs
22/09/2022	Slashing/mowing/finishing fencing (spacers) (2 people * 3 hours)				6 hrs
27/09/2022	Mowing (1 person)				2 hrs
30/10/2022	Mowing (1 person)				4 hrs
2/01/2023	Slashing and mowing (1 person)				3.5 hrs
6/01/2023	Watering (2 people * 2 hours)				4 hrs
19/02/2023	Watering (2 people * 1 hours)				2 hrs
5/03/2023	Watering (2 people * 1 hours)				2 hrs
TOTAL		363	\$ 2,642	\$ 551	57 hrs

ECO VINEYARDS

GROWING RESILIENCE NATURALLY

Program partners



This project is supported by the Department of Agriculture, Water and the Environment, through funding from Australian Government's National Landcare Program.

Acknowledgement of country

The EcoVineyards program acknowledges Aboriginal people as the First Peoples and Nations of the lands and waters we live and work upon and we pay our respects to their Elders past, present, and emerging. We acknowledge and respect the deep spiritual connection and the relationship that Aboriginal and Torres Strait Islander people have to Country.

Disclaimer

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