

## Grower insights

### Ground covers

OAKRIDGE 

### Steven Faulkner, Oakridge Wines

*"Like us, soil biology don't like to eat the same thing all the time. If we want diversity in our soils, we need to provide them with diversity of foods, provided by multiple species growing and producing exudates for them to feast on.*

*"Build it and they will come". I have seen cover crops change vineyards for the better, bringing a new lease on life, fixing issues, and growing better wine grapes as a result."*



September 2023



Multispecies cover crop blend Gladysdale, Yarra Valley (Photo: Steven Faulkner)

Grower insights: Steven Faulkner, Oakridge Wines

Yarra Valley Wine Region



## Practical insights

### What works well?

Get the seed in early, give it the most time in the ground over winter, to be able to grow roots and foliage to be beneficial.

### Considerations

Look at what will work for you in your region. What works somewhere else might not work for you. Think of what you are trying to achieve, it doesn't all have to be done in year one.

### Pitfalls to avoid?

Don't plant too many species at the same time, 15 is not always better than 8 species etc.

## Tips

### When to sow

When the soil is still warm, a bit of moisture is favourable, but sow dry if there is rain coming. Start sowing at the end of March/April and finish by mid-May, for the best results.

### How to sow (including preparation)

I believe in ripping wheel tracks prior to sowing, that way the cultivation cleans up the row. In broadacre farming there are 'controlled traffic' lanes, and these areas are known to produce less yield due to compaction and considered a sacrifice for the good of the rest of the farm.

Every single vineyard row is a controlled traffic row, this compaction inhibits vine roots exploring the midrow. Let's treat the compaction, some of it will be too hard for deep rooted plants to penetrate. I use a power harrow with a seed box on top.

The method I use is:

Deep rip wheel tracks, then one pass of cultivation to kill mid row, then come back a week later to power harrow and sow the seed.

This is done as over that week, weed seeds and grass will have started to regrow. They are terminated with the cultivation, and this allows for better success of the cover crop. If we are going to the effort of sowing the seeds, we want to set it up for success.

Also, we are not growing crops to set a seed head, so why would we sow them in straight lines? Broadacre does this so each plant has enough area to itself to set a full a seed head. We are trying to colonize soil with roots, so we want the cover crop seeds to spread in as many parts of the soil as possible. I sow cover crops the whole width of the row (near the base of the vine), so their roots grow and in turn influence the vine's rhizosphere. Their roots release different exudates etc near the vine's roots, influencing the vine itself. This is a technique I have been using since 2008.

I don't understand only cover cropping the centre of a row, and still having the undervine completely dead, where is the benefit if any?



Photo above: Seed germination.

Photo left: Good soil structure and worms present, despite the use of cultivation during cover crop preparation (Photos: Steven Faulkner)



**Inset:** Yeomans plow used pre-seeding to deal with sub soil compaction, three tynes in a row is not optimal, ideally, they need to be offset; 2009 Sowing cover crop with a 1950's Connor Shea seeder, rows were rotary hoed first; seed bed prep (Photos: Steve Faulkner)

**Main photo:** Mixed species cover crop, two types of oats, field peas, radish, grasses (Photo: Steve Faulkner)



Clockwise: Clemens seeder; emerging cover crop; mature cover crop; mixing seed prior to sowing (Photos: Steven Faulkner)





**Clockwise:** Seeds starting to germinate; planting every second row (and alternating the following year); sowing up to the base of the vine; emerging multi-species cover crop (Photos: Steven Faulkner)





Main photo: Clover cover crop (Photo: Steve Faulkner)



Main photo: Undervine cover crop, Yarra Valley (Photo: Steve Faulkner)

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## Management

**Slashing v crimping:** This depends on where you are. In cool climates, winter is wet, and the cover crop rows are generally still soft, rolling can make it take much longer to dry these rows out, yet if it's a dry winter, rolling is the best option.

I don't like to side throw my cover crops. I believe in rolling/mulching them in the row in which they have grown, returning the nutrients back to the soil where the plants grew.

If you side throw green cover crops, they break down quickly and I believe is of very little use.

Mulching it in the row, creates a much better mulch that lasts longer due to the bulk and thickness that can be achieved.

**Terminating the crop (if needed):** I use mulching - one day maybe rolling, have done small rolling trials. This is a work in progress.



### What are your preferred multispecies mixes?

**Nematicides:** Radish, forage brassicas.

**Fixing nitrogen:** Faba beans might be better with just one or two other species to make it easier to get the desired rate as the seeds are very large. I have had success with clovers and vetch. Vetch can be very annoying if it gets undervine.

**Cereal crops for organic matter:** Rye corn and oats.

**Improving drainage on wet areas:** Radish, chicory.

**Drought hardy species:** Not really a thing for me yet. In warmer climates I think cereal cover crops should be rolled to conserve moisture.

**Remediating compacted areas:** Radish, chicory, and pre-sowing ripping.

**Where do you source your seed?** Nutrien



Photos above and right: Radish, faba bean seed and growing crop, nodulation on roots.  
Photo left: Cover crop rolled with mulcher turned off (Photos: Steven Faulkner).



Clockwise: Trialling rolling using a mulcher that's turned off; and the result in the midrow; remnant cereal mulch mid row; side throwing cover crop, resulting in an underwhelming undervine mulch (Photos: Steven Faulkner)





Oakridge, cover crop mulch (Photos: Steve Faulkner)



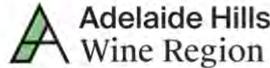
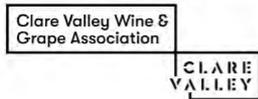
# ECO VINEYARDS

GROWING RESILIENCE NATURALLY

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