

## Grower insights Ground covers



Liz Riley and Jerome Scarborough, Scarborough Wine Co.

*“Ground cover is so important to us – it’s got so many benefits – access and water pumping in the wet, cooling in summer, biodiversity (flora and fauna), improving soil structure, nitrogen fixing and aesthetically pleasing!”*



October 2023



Multispecies pollinator blend, Hunter Valley (Photo: Liz Riley)





## Practical insights

### What works well?

Rain, it needs to come at the right time (and not too much)!

### When to sow

Timing really depends on the conditions at the time.

For example, if we are coming off drought, harvest or post-harvest rain, or have a wet outlook it impacts on decision making.

We aim for April-June to get the longest possible time for it to grow and set seed before being partially or fully cut back.



### Tips

#### What to sow

We've been running with commercial seed blends which have been massaged a bit seasonally to accommodate supply and seasonal conditions.

Different blends for different rows

- We use double row spray carts so have a dedicated traffic and non-trafficked row.
- We want the trafficked row to be able to provide access under wet and dry conditions and we're looking for it to die-off or become dormant when dry and to be able to pump water when wet, be cut back and regrow as needed to generate organic matter bulk and ideally to set more seed to regerminate after a dry period if it dies off.
- The seed mix planted in these rows is therefore a blend of ryes, fescues, medics, and clovers. This has been successfully established in most rows but the very wet conditions of winter 2022 impacted germination.
- We have seeded every fourth row to a pollinator blend of a variety brassicas plus vetch and clover. The sowing of every fourth row is to manage the seed costs and allows us to grow it for longer, given it can impact on the fans on the fungicide cart if it grows really well and deep into the season.
- The combination of the two different seed mixes adds 8 to 10 species to the vineyard ecosystem.
- We're also looking for vegetative cover (dead or alive) on the vineyard floor in periods of heat in the back end of the season to keep the floor and canopy cooler than exposed earth would.

Photo above: Smart radish *Raphanus sativus*

Photo left: Pollinator blend growing (Bee Ready Brassica/White Mustard Samurai) in a dry season with additional growth resulting where there is an irrigation leak (Photos: Liz Riley)





**Inset:** Vineyard seeder (Photo: Jerome Scarborough)

**Main photo:** Mixed species cover crop mix during germination (Photo: Liz Riley)









Clockwise: Snail medic and Bee Ready Brassica/White Mustard Samurai (Photos: Liz Riley)







Photo: SARDI Persian clover cover crop (Photo: Liz Riley)



## Management

Maintaining vegetative ground cover in the midrow is really important to us. We are keen to have a diversity of species that add to and attracts biodiversity to our vineyard ecosystem.

We are also looking for tap-roots that break up and reduce soil compaction in our periodic wet environment but are also resilient and can reseed coming off periods of drought.

It's about trying to get all the benefits with minimal risk – which can be tricky in a region with both weather extremes of wet and dry coming within the same season.

We're keen to explore low undervine crops but need to find the right species that don't grow up into the canopy (increasing disease pressure) and aren't competing for water under dry conditions.

**Slashing v crimping:** We've not got a crimper (it's on the luxury wish list) but did trial a unit a few years ago and we trialled tyres behind the ute this season – none worked well but we think it was as much to do with timing and the firmness of the stalks.

With fungiciding and other competing priorities we have been slashing it with a high cut to try and support some regrowth subject to the seasonal conditions. This season we slashed back half of the pollinator rows and this regrew, so we have been able to extend the flowering period (due to some unexpected rain) which was a big and unexpected win.



### What are your preferred multispecies mixes?

**Insectary species:** We see a greater diversity of insect species and numbers of insects in the vineyard with these planted and can literally hear them buzzing away. Ladybirds, hoverflies, dragonflies, damsel flies, aphids (food for ladybirds), brown lacewings, green lacewings, bees, wasps, ants etc.

**Nematicides:** I assume we are getting nematocidal properties, but we aren't cutting them back at early flowering to facilitate that, as we want the flowers – but there may be a small beneficial impact – who knows? The other big benefit from the brassicas is the root volume and its ability to penetrate into compacted soils. As they breakdown over time (1-2 years) they leave great 'holes' for water and organic matter to infiltrate to depth when we have big rain events.

**Fixing nitrogen:** We take it as a given that the legumes will provide some nitrogen fixing but it isn't calculated out or used as a substitute for formal nitrogen inputs.

**Remediating compacted areas:** We are achieving this with the Smart Radish brassica species in the pollinator blend – its ticking a few boxes!

**Where do you source your seed?** S&W Seeds via Ace Ohlsson



Photo left: Radish (Photos: Liz Riley).





Above: D S&W Seeds Pollinator Blend (Photo: Liz Riley)







Slashed cover crop grown in every second row (Photo: Liz Riley)





# ECO VINEYARDS

GROWING RESILIENCE NATURALLY

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Collated by Dr Mary Retallack

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