



## - HEALTHY SOILS PRODUCE HAPPY VINES -

**NAME:** Richard & Irene Bunn

**LOCATION:** Redmond, WA

**AVERAGE ANNUAL RAINFALL:** 800 mm

**ENTERPRISE:** Beef cattle and winery growing shiraz and cabernet sauvignon grapes

**PROPERTY SIZE:** 450 acre (182 ha)

**SOIL TYPE:** Ironstone gravel over clay

**FARMER  
PROFILE**



Ask anyone in the game what makes great wine and they'll tell you it's made in the vineyard." The quality of wine produced is determined by the way the vineyard is managed," Richard Bunn said.

Richard and wife Irene own and run the Bunn Vineyard and Winery at Redmond, 25 km north-west of Albany, which consists of 3 ha of shiraz and cabernet sauvignon vines producing dry grown fruit using biodynamic viticulture.

This practice excludes using synthetic fertilisers, pesticides, systemic fungicides and residual herbicides and produces around 2,000 cases of preservative free wine each vintage.

Since they've followed the biodynamic approach, the Bunn's have seen a significant improvement in their soil health, with tests showing increased levels of organic matter and fertility. Their vine fruit is outstanding

quality, disease free with a deep colour and flavour. This concentration enables the Bunn's to make high-quality preservative free wines, because the flavour improving factors - extract of tannin, colour compounds, phenols, alcohol, flavonoids and tartaric acid, also improve the wines' keeping ability.

The vineyard is surrounded by a fox-proof fence, allowing guinea fowl and ducks to wander free, fertilise and control pests. As well as farming beef cattle - running 110 breeding Angus cows, the Bunn's own a 80 ha blue gum property, planted to support the wine label from the lease income. They also run 105 shorthorn heifers mated to Angus bulls to graze on the grass beneath the trees.

The properties are in an area receiving an average annual rainfall of 800 mm with a main soil type of ironstone over clay with some sand over clay on the flats.



## THE WHAT ●●●

The Bunns' believe great wine starts in the vineyard with premium quality ripe fruit.

The practices implemented on the farm all stem from their mission statement of looking after the soil. Richard regularly uses biodynamic preparations and the Bunn's make and spread their own compost.

"The soil consists of mineral content and biology which both interact with the plant's root exudates," Richard said.

"Soil biological life is the interface between the root system and soluble nutrients that can get in to that system and in to the plant," he said.

"Adding to that, is the animal grazing on the pasture and you have an interacting system.

"We have soil tests that show total minerals and available minerals and amend any deficiencies with mineral fertilisers such as rock phosphate, magnesium carbonate or dolomite, gypsum or calcium sulphate and limestone calcium carbonate."

Where needed, micro-nutrients are purchased in soluble form, blended with sugar and seaweed solution and sprayed on the land. In this form, they are more likely to bind in the soil food web than to leach away.

The Bunns' don't use pesticides, fungicides or residual herbicides of any kind.

"Every pesticide, fungicide and herbicide ever known kills soil biology," Richard said, quoting professor of soil microbiology Elaine Ingham.

"No special equipment is necessary for what we are doing. It is more of an attitude and working with the desired outcome in mind."

Richard has researched the practice of successful growers, learning about the scientific work of Dr Arden Anderson, Professor Elaine Ingham, Dr Christine Jones, Joel Salatin, William Albrecht and Graham Sait.

"Dr Arden Anderson's agronomy lectures pointed to others such as the Albrecht Papers and Professor Elaine Ingham, a recognised soil scientist, who has recorded a series of four CDs entitled, "The Soil Food Web" which I listen to on my tractor," Richard said.

"Friends put me onto Joel Salatin and some core books such as "Grasp the Nettle" by Peter Proctor and



*Cow horn pit - the start of biodynamic preparations.*

"Nutrition Rules" by Graham Sait."

The vineyard's shiraz and cabernet sauvignon vines are cane pruned and dry grown in rocky laterite soil on north facing slopes. Cane pruning produces concentrated fruit of low yield and high quality.

Biodynamic preparations and natural inputs including farm-made composts, dolomite, rock phosphate and limestone, promote the vitality of the vines and greatly enhance soil biology. There is no leaching of chemicals into groundwater or waterways.

These methods enable a mineral rich and biologically active soil food web to nurture the vines which in turn produces healthy fruit in a clean environment.

"Growing wine grapes using biodynamic methods is consistent with having the highest respect for the soil, the crops and the people who share them," Richard said.

As there is no need for synthetic fertilisers, insecticides, fungicides or residual herbicides, the Bunns' allow ducks, chickens and guinea fowl to roam the vineyard, converting snails, grubs and beetles into plant available nutrients. Soil rich in organic matter sequesters atmospheric carbon dioxide, supports soil biodiversity and increases nutrient retention.

"Why would you use chemicals when you don't need the expense and there's a better way?" Richard said.

"It is our intention as custodians of the land, to leave it in a better condition for future generations than when we first started farming."

## THE WHY? ●●●



*Worm castings aerate and improve the soil's overall structure while providing beneficial nutrients to the vines.*

When Richard began growing wine grapes in 1997, he quickly realised the importance of quality produce.

"All wine literature pointed to the importance of quality fruit," Richard said.

"While attending seminars on agriculture and hearing Dr Arden Anderson speaking about soil chemistry and biology, he mentioned that some of the best farms he had ever seen were biodynamic."

In 2005, Richard attended a workshop at Cullen Wines in Margaret River where speaker John Priestly from Biodynamic Agriculture Australia introduced him to the concept of biodynamics.

"He grew oranges which had twice been voted the best in Australia, so I thought if I'm going to make wine then biodynamic practice will help me get the quality I need.

## THE FUTURE ●●●

Richard is keen to continue with biodynamic practices and encourage others to adopt some, or all of its principles.

He hopes to set up a biodynamic group in the Albany area which will enable farmers to help and support each other and continue to learn through workshops and others' experiences.

He's also keen to develop a cellar door facility at the vineyard property

which could also be used as a venue to host workshops and guest speakers.

"Workshops are important, because if you want to stimulate a different type of thinking, you first need established farmers to show their results for others to see first-hand.

"It must work financially and people considering change need to see how a transition can work for them."

Asked about the future for himself

"So we put some biodynamic preparations in our garden and after a short time noticed the soil had begun to soften due to the biological activity created by earthworms, bacteria and fungi. We then sprayed an application to part of a paddock which attracted all our sheep for days until they couldn't eat the soiled pasture.

"Then they grazed elsewhere, but returned to the biodynamic sprayed site to camp. Clearly the sheep detected a difference. This is the usual observation that we make with livestock after applying biodynamic preparations."

Richard is a firm believer in learning from others with experience. "If you're about to try a costly or risky management plan, it's good to ask someone with relevant experience. It can help you to think things through without the risk."

Richard is very passionate about looking after the health of his soil, especially the biology and believes healthy soils are the key to improved, sustainable production.

"In 1950, organic matter on agricultural land was on average 4.5 per cent; current levels are around 0.5 per cent.

"That's because all the spongy water absorbing ability of the soil has gone, so rainfall doesn't sink in and feed plants or replenish aquifers but sheds off, cutting away more topsoil as it goes. We lose soil resilience as we lose organic matter."

Soil tests show more than 10 per cent organic matter in the vineyard, equating to 50 tonnes of carbon in the top 10 cm per ha. "I am actually practicing all this, I'm doing it and the science backs it all up," Richard said.

and Irene, Richard responds, "You never stop learning.

"I'm waiting to see an example of rotational grazing by someone who attended a biodynamic workshop with a view to implementing it on our farm, this will be our next step.

"There are better ways of doing things. We can learn from mentors, there is innovation around, people can share experience and gain mutual benefit."



*"Growing wine grapes using biodynamic methods is consistent with having the highest respect for the soil, the crops and the people who share them."*  
- Richard Bunn, Redmond, WA, 2015 -

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For information on sustainable agricultural trials in WA please visit: [www.agtrialsites.com](http://www.agtrialsites.com).

#### ACKNOWLEDGEMENTS

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#### DESIGN & PHOTOGRAPHY

Peter Morris. Photograph of cow horn pit, courtesy of Irene Bunn.

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