



Organics & Biodynamics

Quality wines and oils begin with healthy plants that are able to fully express the soil and environment in which they grow. We believe that the use of organic and biodynamic techniques and philosophies enables plants to achieve this healthy, balanced state in nature.

Organics has been a founding principle of Seresin Estate since it began in 1992, initiated by owner Michael Seresin. After practicing organics for a number of years, it was a natural progression to advance to biodynamics. Our entire estate is farmed biodynamically; this encompasses not only vineyards but our olive groves, fruit trees, native vegetation, pastoral land and vegetable gardens.

Our organic practices on the estate and in the winery are certified with BioGro New Zealand. Our biodynamic practices are certified in the internationally recognised Demeter system.

Biodynamics

Biodynamics is a system and philosophy of farming that recognises the soil and entire farm as a living organism. It is based on a series of lectures given by Rudolf Steiner in 1924, which have evolved into a form of farming that is now widely accepted and practised throughout the world, covering all forms of agriculture.

The respect for and care of the soil plays a prominent role in biodynamics. The biodynamic preparations form the cornerstone of biodynamic activity, and create balance and health in our soils and plants.

Preparations 500 through 508 make use of cow manure, silica and small quantities of medicinal herbs to create this healthy balance, and connect the plants and the soil to the rhythms of the universe; earth, sun, moon and cosmos. All of the manure and herbs for these preparations are grown and collected from across our farm.

Through biodynamic practices our farm has become more self-sufficient. By supplying our needs from within our estate we are able to reinforce the identity of our land in our produce. The result is that our wines and olive oils are more expressive of our farm and have a unique sense of place.



Seresin.



Biodynamic Field Sprays (500-501)

Preparation 500 – Made by filling cow horns with cow manure and burying them over winter. 500 builds soil structure, makes humus, attracts earthworms and increases soil bacteria and mycorrhizal fungi activity. An extended network of mycorrhizal fungi encourages strong root growth, as this fungus forms a symbiotic relationship with the plants in a nutrient exchange. Plants release sugars, which the fungi exchange for minerals in the soil; creating strong plants with high natural resilience.

It is often commented that clover growth increases after applications of 500. Soil that has regular applications of 500 has a deep humus top soil, which increases the plants ability to source its own water, and reduces the need for irrigation.

Preparation 501 - Made from very finely ground quartz crystal (silica), which is buried inside a cow horn over summer. 501 enhances the plants' ability to perform photosynthesis more efficiently. It helps maintain the plants' sugar sap levels which stimulate soil fungi and bacterial activity around the root system; they in turn provide the plant with nutrients. 501 can reduce the humidity in the canopy, which is particularly helpful in countering the higher moisture levels often found around full moon. It creates plants with great resilience and reduces the effect of disease.

Preparations 500 and 501 are applied as field sprays by diluting a small amount into a large volume of water. The preparations are stirred in alternating directions for one hour, forming reversing vortices. This method of stirring fills the preparations with oxygen and allows the bacteria and fungi in the spray to become active and energised before being applied.

Biodynamic Compost Preparations (502 – 507)

The compost preparations are used together as a set when making compost, cow pat pits and teas. They are used in very small quantities – approximately 1 teaspoon of each is used to make 5m³ of compost, or one Cow Pat Pit. Their purpose is to help make nutrients available and balanced in the soil so plants can access them as required. The living preparations are protected in clay urns nestled into peat-filled wine barrels.

Preparation 502 - Made with yarrow flowers, (which are inserted into a stags' bladder, hung in the sun through summer, then buried over winter) 502 stimulates the release of potassium and sulphur from the soil, and strengthens plants against insect attack.

Preparation 503 - Made with chamomile flowers, (which is put in cow intestines and buried over winter) helps retain nitrogen, calcium and sulphur. It also increases the availability of manganese and boron as well as stimulating azotobacter activity.

Preparation 504 - Made with stinging nettle, (buried in a clay pot for one year) 504 aids chlorophyll formation and stimulates iron, potassium, calcium, magnesium and sulphur.

Preparation 505 - Made with oak bark, (which is held in the skull of a farmyard animal and submerged in water over winter) it protects against fungal diseases, and helps the plant access calcium and phosphorus.

Preparation 506 - Made with dandelions (held in a cows' mesentery, and buried over winter), this balances the potassium/silica levels and bacteria and fungi in the soil. This can improve flowering and helps with magnesium, boron and selenium soil activity.

Preparation 507 - Made with valerian flowers (which are crushed and fermented), 507 stimulates the phosphorus process. It attracts light and excites bacteria, creating warmth within the compost heap. It is also used as a spray in times where warmth is needed; for frost control and to support flowering and ripening.

Preparation 508 – Made by steeping fresh or dried equisetum leaves. This tea is applied separately across the estate as a spray. It is high in silica and prevents fungal growth and hardens plant against mildew infections.

Cow Pat Pits (CPP)

We have twenty-one pits which provide CPP for our vineyards. We collect manure from our own cows. The manure is mixed with basalt rock flour, finely ground eggshells from our chickens and hand stirred for an hour. This mix is then put into a Cow Pat Pit, where the compost preparations are inserted, and left to mature for several months.

The matured CPP is a great medium to distribute the preparations onto the land, and is so versatile that we apply it across the entire estate. Treated as a general tonic it is mixed with all nutrient sprays. We also include it in the Preparation 500 applications, as it is rich in beneficial soil micro-organisms it creates more plant available nutrients. Tests of the CPP show a remarkable transformation from the original cow manure. CPP is rich in beneficial fungi plus high levels of protozoa which help in nutrient recycling.



Compost

Good quality compost underpins organic and biodynamic principles. Making compost is a year round exercise that uses a wide range of our farm resources. Our compost is made to contain a diversity of organisms and textures that will replenish the land. We harvest our own hay, cut woodchips from willows and poplars that line our creeks and use grape wastes. Our small herd of cows provides manure - a valuable resource that, in a slurry form, glues the compost together. We also insert small amounts of the biodynamic preparations into each of our compost piles. The components are evenly layered in long heaps and then allowed to age. Temperatures begin to rise and sit around 60 degrees Celsius for six weeks before losing heat. The heaps are then turned to allow the heating process to begin again. This heating process kills pathogens and weed seeds. Compost can take up to a year to mature, when ready it is rich in humus, full of worms and very sweet smelling. We apply the compost by directly spreading it on the land to selected areas as well as over the entire estate in a ground spray.

Teas

We use several teas that enable us to provide nutrition to the vines and help them to build their own natural resistance to pests and diseases.

Seaweed Tea

We use seaweed tea made from fresh kelp grown in the Marlborough Sounds, and fermented using small amounts of our compost preparations. It is used as an ingredient in our sulphur sprays and nutritional sprays. It has a high mineral and micronutrient content.

Nettle Tea

We grow stinging nettle which we make into a tea and ferment using our compost preparations. This tea is high in trace elements and can help to increase the vines' resistance to pests and diseases.

Equisetum Tea

We make fermented equisetum tea, containing our compost preparations. It is high in silica which aids in photosynthesis and increases the plants' ability to resist fungal attacks.

Nutritional Sprays

Our nutritional sprays inoculate both plants and soil with beneficial micro-organisms which strengthens the health of our vines; resulting in a low incidence of disease. These sprays, which are applied across the estate several times a year, included tailored mixtures of our compost, CPP, teas and worm farm leachate. Other minerals, such as lime and basalt are added as required.

Weed Management

To manage weeds and grasses we use a variety of techniques, which vary depending on the site, crop, and time of season. These techniques include: mechanical weeders, mowers, weed eaters, under-vine cultivating, hand-weeding, and animal grazing.

Pruning Timing

The timing of our pruning is impacted by our observations of the effect of the sun and moon on the vines. We generally begin our pruning after the Winter Solstice, once the nutrients that accumulated in the prior seasons' growth have had time to move back down into the woody part of the vines and into the roots. We use a combination of spur and cane pruning across our blocks. This gives us the ability to naturally control yield, and maintain flavour profiles.

Animals

The estate is managed as a whole farm; and every animal we have has a purpose and brings its own unique energy to the land. Chickens provide the staff with eggs, manure for composting, eggshells for calcium, as well as weeding and insect control. Cows provide manure for our preparation 500, CPP's and composting as well as meat products for the staff. Sheep are used for keeping the grass down, leaf plucking the vines and as food for staff. And a few pet goats provide a bit of grass mowing and entertainment.

Handwork

Throughout the season we prune, weed, leaf pluck, shoot thin, fruit thin and harvest, all by hand. Our philosophy of having a hands-on approach in our farming and winemaking naturally means there are a lot more hands on the vines and olive trees.

Cover Crops

At Seresin our cover crops display great biodiversity with as many as 20 species visible at most times of the year. These include clover, dandelions, yarrow, chicory, yellow poppy, grasses, which all attract various beneficial insects and pollinators such as the Tasman wasp, Hoverflies and Lacewings.

Rotational mowing practices ensure that the habitats for insects are maintained. This longer pasture also provides food for our cows and sheep and provides increased competition for the vine, resulting in lower yields and intensified fruit character. Cover crops help to increase the nutrient availability in the soil, which leads to healthier plants.