

# Two Vineyards on the Hills of Lucca

- **Saverio Petrilli** (vigneron and Australian BD method adviser, Italy)

Every summer we have a meeting between all European farmers using the Australian Biodynamic method. In Italy we have an association that, thanks to the effort of Bridgette Olsen, who also translates Alex Podolinsky's conferences and books, is slowly growing. Due to the fact that Italy is overcrowded, our association is mainly based in central Italy, Emilia Romagna, Toscana and Lazio.

In 2007 the European meeting was held in Italy, in a secluded house, Colle Fobia, on top of a mountain in Garfagnana, the valley behind Lucca. The famous Italian hospitality together with great cuisine (Beppe and Gabriele, two of our best farmers, used to be chefs!) and wine helped farmers to overcome differences, nationalism and ego and to share knowledge and goodwill. On that occasion we got to know better Pierre Masson, agronomist of the French Agriculture Department until he met Alex Podolinsky, then a farmer for 20 years, and now that he is retired he makes BD preparations, trains farmers and consults. In Bourgogne he works with many viticulturists coordinated in groups. They meet twice a year on different farms, sharing knowledge, experiences, research and field trials. So since 2008 we have tried working in groups the same way.



Four groups were formed, one in Emilia Romagna, one in South Toscana and two in central Toscana. Later we decided to merge all Tuscan groups since we noticed that the more experienced BD growers were proceeding steady while the weaker one were not improving. By bringing all together, in fact the better becomes an easily accessible example. The spring meeting concentrates on soil development following the application of prepared 500 and different soil work, while the summer meeting analyses the results of field trials, different sprays, teas and the use of 501 on vegetation and fruit. We have also held a winter meeting where we shared trials on winemaking and some theoretical notions, together with good food and lots of wine!

In late July 2009 the meeting was held at Tenuta di Valgiano, the farm where I have worked since 1994, and Colle Verde another vineyard just 5 minutes away.

## TENUTA DI VALGIANO

**Description:** Tenuta di Valgiano is a 50 ha property on the hills north-east of Lucca, in northern Tuscany. The property was bought in 1994 by Moreno Petrini, and since the beginning the writer came to manage it. It was rather run down and it required great effort. Tenuta di Valgiano was a typical Tuscan *Fattoria* (Tuscan farm), cereals and stock in the plain, olives and vines on the hills. Slowly over the past 50 years the good land has been transformed into houses and factories, and we were left with only the hills. At the beginning, we had only 10 hectares of vines and 6 ha olives, but now, through acquisition or lease we manage almost 25 ha with vineyards, mostly spread on the surrounding hills (5 km away) but a block with 2.5 ha is almost an hour away (by tractor of course). The farm is now certified both for organic and Biodynamic - Demeter in Italy does not satisfy the European union rules and therefore an organic certification is required for export. So far we have never labelled our wines with organic or BD labels. We are also trying to keep alive the concept of *Fattoria*, raising some pigs (Cinta Senese, a wild, hairy breed that lives well in the bush), some beef cattle pasturing between olives and vines, bees and courtyard animals, chicken and rabbits.



*Villa, Tenuta di Valgiano*

**Climate:** Valgiano is squeezed between the Mediterranean sea and the Appenine range. That makes the climate unpredictable and variable. Usually very humid in late autumn until early spring and mostly dry from late May to September. Moderately cold in winter, sometimes may even snow for two or three days, seldom below 0°C, with temperatures reaching 30-35°C between late June and mid August, usually for only 10-15 days, but these crazy years after 2000 are proving difficult and we have sometimes up to 60 days over 30°C. Plenty of water underground, we have our own sources supplying the houses and cellar, but also water from the stream deviated in 1700 to cross the property and give life to some fountains and wash-tubs.

**Geology:** We make the best wine in the 10 ha surrounding the property between 200 and 300 metres above sea level. Soil is a calcareous marl with heavy clay, over which the stream has built a beautiful terrace

with acidic sandstone eroded from the mountain behind. The bottom clay and calcareous stones assure water and the body and longevity of the wines, the top sand rich in minerals of all kinds assures drainage and gives finesse and the “flavour sparkles” that makes it so drinkable. The other 15 ha are either made up of one or the other of the two soil types; calcareous clay or acidic sandstones, but although we blend those wines together the result is never the same as in the before mentioned 10 ha where nature has mixed them in such a wise way.

**Vineyards:** In the 10 ha surrounding the property the oldest vineyard dates to 1959. Production is too low and we plan to replant it in the near future. But we are still selecting these old varieties and clones and all recent vineyards have been planted with materials coming from there. All vines are planted on American rootstock, as it is forbidden to plant vines on own roots in Italy, (although I have made a small vineyard like that on my own personal field). Vine age is split between old and young giving a total average age of around 20 years.

Varieties are mixed in the old vines. To provide enough diversity to counterbalance the extremes of our climate, together with 70% Sangiovese many other varieties are planted: Syrah, Merlot, Canaiolo, Montepulciano, Barbera – when I grew the vines conventionally I had to harvest three times because there was more than three weeks between ripening of different varieties but since I have practised Biodynamics I can harvest all together in one single passage, the vineyard acting as **one organism** bringing together the date of maturation. I finally understood the principle of co-plantation. Early varieties guarantee warmth and maturity in a late, cold vintage, while late varieties supply enough acidity and freshness in early, warm vintages. I am now planting new vineyards following the old recipe!

All vineyards are on slopes, with south or south-east exposition, full sun all day since early morning. Only the 2.5 ha block at the opposite side of the valley is on flat land, with slightly northern exposition, planted with white grapes, sauvignon, chardonnay, pinot gris, pinot noir, which we blend with Vermentino, a Mediterranean varietal grown on our sunny slopes.

Prepared 500 is sprayed in autumn and spring as early as possible since spring is often already hot and dry. 501, given the humidity of our climate, up to 3 times per year in spring, before and after flowering, sometimes again in case of rainy, cloudy weeks or before harvest if necessary. Valgiano is a very humid area, the ten hectares with the best exposition are protected from downy mildew with skimmed milk, sprayed once a week or ten days when weather is dry. The rest with Bordeaux mixture - less than 3 kg of copper is used every year per hectare (less than half the quantity used in my organic time). Against powdery mildew, mainly powdered sulphur (with Bordeaux mixture some wettable sulphur is used as well).

June can be very humid when the clay soil slowly releases humidity under the intense summer sun, very seldom I have been able to stay under two sulphur sprays under such conditions.

**Cellar:** Valgiano has two government protection norms in place, one for the historical building and another for hydrogeological instability - to build a new modern cellar is very complicated and very expensive, we have therefore decided to use the old buildings and adapt to the situation, in any case we have kept as our priority the needs of our grapes, before cost and simplification considerations.

Since our wines are very tannic we have organized a system to avoid any pumping on must or grapes. Grape boxes are emptied on a conveyor belt which is also used for selection, grapes are de-stemmed and sent unbroken to the wooden and plastic bins for fermentation with two more conveyors. The first plunging is generally made with feet since full berries are too hard to plunge with the steel plunger used from the second day. Very seldom, a gentle pump over is needed for aeration, more often one gentle plunging a day is enough for colour and tannin extraction. The bins are placed under a roof in the open air with natural light. Natural night air cooling is very efficient to avoid an excessive increment of fermentation temperature. Sometimes, for example for early varieties in hot vintages, we have to use cooling plates, otherwise ferments stay naturally under 28°C.



*First sorting*

On the selection table we can be from 5 to 15 people depending on the quality and health of the vintage. With 25 ha the picking crew is too big to teach them to select in the vineyard. Maceration length varies from 7 to 18 days, depending on the maturity of tannins, after that, fresh wine is left in the tank for two days to settle and is then racked by gravity in French oak barrels (5 to 10% new) for malolactic fermentation. After malolactic (2-3



*Second sorting*



*First plunging*



*Second Plunging*

months) wine is assembled and left in the barrel again, In the past I had to rack the wine 4 to 5 times a year to avoid bad reduction, but since we have practised Biodynamics I rack the wine only once for blending, with considerable savings. The very light smell of reduction goes away easily. In September wine is racked in concrete tanks, making room for the new vintage. It

rests there over winter and is generally bottled in spring when it opens again. Vital wine needs respect of its own rhythms. When we have to bottle too early (for market reasons) we have to force the wine through air racking and sometimes clarifications (with our own eggwhite). It is a costly procedure both in energy and quality since the wine will never be as pure and elegant as the one that has been bottled when ready!

We use very little sulphur during all processing of grapes, sometimes nothing at all when it looks very healthy, but in our climatic conditions, before spring we always add it, otherwise volatile acidity increases, spoiling wine of its quality. Levels of sulphur are kept anyway to a minimum and after one year in the bottle will be around 40/50 mg/l total. It is the only preservative added and apart from some yeasts used if there are unfermented sugars, is the only other ingredient together with grapes.

## **COLLE VERDE**

**Description:** Colle Verde is an ancient property of the Guinigi family, a wealthy family from medieval Lucca, bought many years ago by the father of the actual owners. Piero Tartagni and Francesca Pardini started to manage it in 1989. They run 7 hectares of vines, 15 with olives on a total of 29. They also lease apartments for tourist, and are open for visits and cellar door sales 7 days a week.

At the beginning we were doing organic cultivation, but following the two very bad vintages of 1991 and 1992 they reverted to conventional agriculture, what is called integrated pest control, with a limited use of pesticides. Since 2001 we started again organic and, at the end of 2007, Biodynamic. They have no certification either organic or Biodynamic, they believe Biodynamic concerns essentially the relation between earth and the people who take care of it. Nothing to do with marketing.

**Geology:** Colle Verde is situated approx 10 km north-east of Lucca, on the slopes of the Mount Pizzorne, on heavy calcareous clayey soils. Between 80 and 200 metres above sea level, with south exposition.

**Vineyards:** Two parcels are still very old, from the sixties, all others were planted between 1991 and 1994. Old vines have mixed varietals, while new one has been planted mainly with Sangiovese, 1 ha of Syrah, 1.5 ha of Chardonnay and 0.5 ha of Trebbiano.

Soil is cultivated every second row with a mole plough in autumn, than in early spring a superficial cultivation to avoid excessive competition from grass both in the row and undervine. Prepared 500 is used in autumn and spring, 501 twice in spring. To prevent downy mildew they start with copper hydroxide, over flowering revert to copper oxychloride and end with Bordeaux mixture. Sulphur, both wettable and powdered, against powdery mildew. Equisetum is used in early spring on the *soil*

and in case of hail, together with propolis and copper. Sometimes milk whey has been used against powdery mildew. Vines are trimmed at the beginning of July, just before veraison. Very often a green harvest is necessary.

**Cellar:** Manually harvested grapes are left in a cool room overnight, then selected over a selection table, destemmed, and selected again on a vibrating table. Red wine is fermented with its own yeast, left in maceration between 7 to 15 days, sometimes tannins are added to hold colour, malolactic fermentation might be inoculated if it does not start alone. Whites are crushed and macerated overnight, pressed with a Vaslin, the juice protected with sulphur and low temperature, is decanted, racked and inoculated with commercial yeast no OGM, ferments in barriques and stainless steel.

**Meeting:** We started in Valgiano where we checked some field trials: Use of equisetum:

- Tea on ground around the first spring full moon, half a vineyard
- During season under powdery mildew pressure, (end of June) 3 rows for each trial: 1 – tea on leaves; 2 – tea on ground; 3 – D5 (homeopathic dilution) on leaves; 4 – D5 on ground
- Vineyard with 3 sprays of 501 and without.

Pierre Masson, coming from Burgundy and Switzerland, was impressed by the uncommonly dry and hot season. He suggested a more careful use of Equisetum and 501 in such conditions.

Some vineyards in fact looked quite stressed by the heat, to my look the problem was too much winter rain, over three months (with only one single week without rain) causing compaction. In February, during my usual soil tests I had seen compaction and lack of vitality everywhere to an extent unseen since Biodynamics. Then the sudden heat, cooking the surface and preventing soil life. A light superficial soil working would have been beneficial, but for economic reasons we have not been able to do it in busy springtime. Vines would have to wait until autumn.

About the use of Equisetum (horsetail) - in past years it caused evident troubles with powdery mildew, *increasing* vines susceptibility instead of protecting. This observation was casual but repeated over several years, that is why we decided to make a specific test. On correspondence with Frances Porter<sup>1</sup> she suggested so after considering that Casuarina, being a tree, lives already in the air while Equisetum lives on the ground, therefore might be more appropriate to be sprayed on ground. The vines sprayed in early spring on the ground seemed more resistant to powdery, no stronger attack of powdery mildew was noticed on our trials on the leaves, the only evidence was a little more heat stress. We will repeat trials again next year. The test with and without

501 was impressive; quite unexpectedly the vines suffering more from the heat were the ones without 501. Although this parcel has received prepared 500 and 501 for the past 3 years, in the part without 501, the leaves looked thicker and heavier, the canopy was denser and some leaves inside didn't have enough sunlight, shoots were still rather green. On the side with 501 leaves were lively and with a very efficient disposition, guaranteeing adequate sunlight for all, (I like to compare such leaves to men living with ambitions in a social system without impairing others, all working for the same purpose: the life of the plant, while conventional leaves usually compete with greed and selfishness, very like today's people) and a better turning woody of the shoots, but the really unexpected effect was that the west side showed definitely less heat stress than vines without 501.

In Colle Verde we started checking the self-made equipment for stirring and spraying the preparations. The stirrer is a simple machine made with a stainless steel tank. We thought the stirring bars to be a little too narrow and also the change is timed and not determined by the vortex. Piero made it like that because it was simpler and because he thought that changing the density of water it would anyway change constantly the force and therefore the speed of the machine, making it variable. He will anyway consider using a switch triggered by the vortex.

The sprayer is made using a tanker mounted on an old air compressor, a pump pushes the water to a car wiper moved by air pressure, the same nozzles are used for 500 or 501, tighten it for a fog spray. It sprays 500 very well, while for 501 we thought that two fixed nozzles would have a better coverage.

Some vineyards looked also quite tired because of the heat, even if soil had been tilled in early spring and again lightly in summer to avoid capillarity. All vines looked very healthy and we could really see the upright individualism of 501 in action.

Many questions were posed during the meeting even if this has been an easy vintage. After the losses of last year for downy mildew (60% between mildew and drought in Valgiano), this vintage has proved much easier, even though humidity in spring has been very high with up to 15 hours of wet leaves at night, downy mildew has not been a concern, and even powdery has been rather easy to control. It seemed that dew was coming from the top and while the leaves were wet, they kept the bunches dry. Last year dew seemed to come from the soil and it affected badly all early varieties but also late ones.

As Frances Porter pointed out last year in view of my struggling to learn different conditions and points of weakness of vineyards with such a difficult season, Nature has a good sense of Humour!

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<sup>1</sup> Bio-Dynamic Research Institute, Powelltown, Australia