

## Organic Viticulture in Europe

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For this paper, which gives an overview of the state of organic viticulture in Europe, several information sources were used: the country reports prepared by experts for the sixth international viticulture congress; the results of the EU-research project *Effects of the CAP reform and further development of organic agriculture*; the proceedings of viticulture congress at the German state research station Weinsberg in 1999.

### Statistical overview

So far no official statistical data on the current status of organic viticulture in Europe exist. Even though most countries in the European Union, the EU accession countries and the EFTA countries collate data on their land under organic management, figures on land use patterns are not always available. Table 1 was compiled with the available data material. The table shows that the share of organic vineyards of all vineyards is still small. The percentage of organic vineyards is – with the exception of Greece, Italy, Spain - smaller than the percentage of organic land of all agricultural land in the respective countries. This is particularly striking for Austria and Switzerland where only little more than 1 % of the vineyards are organic whereas the total organic land is around eight per cent of all agricultural land. It is also interesting to look at the shares organic vineyards have within the organically managed land. The Mediterranean countries have, compared the northern wine growing areas, high shares of vineyards. This reflects the general cropping pattern but also the fact that most southern countries are exporters of organic products; the main products being typical Mediterranean products, one of which is wine. From the articles of the authors for these proceedings it may be concluded that organic viticulture is growing in all European countries (table 1).

### Historical development and relevant organisations

The first activities in organic viticulture date back to the 1970s and beginning of the 1980s. In Germany in the 1970s, the first pioneers made great efforts to apply the basic principles of organic agriculture to viticulture. In Germany, for example, Stiftung Ökologie & Landbau (Foundation Ecology & Agriculture) organised the first meeting of organic wine producers from Germany, France and Switzerland in 1977. Standards for ecological grape and wine production were issued by regional organic producer groups in the years 1983 to 1985. This was a first step towards facilitating the declaration “from organic production” on the label. In 1985, the *Bundesverband Ökologischer Weinbau* (Federation Organic Viticulture), now *Ecovin*, gathering producers specialising in organic viticulture, was established in order to defend the interests of the organic wine growers. In Switzerland, the *Schweizerische Bioweinbauverein* was founded in 1989. In

Austria, private standards for organic wine production were established in 1990 by the producer association *Ernte-Verband*; in 1999 *Bio-Veritas*, a marketing association for organic quality wine was founded. Also in other countries specific organisations for organic producers were created – e.g. in France the national Federation for Organic Wine *FNIVB* (1998). In Central and Eastern Europe the beginnings of organic viticulture date back to the beginnings of the 1990s. In Hungary for instance *Altervitis*, the association of the organic wine producers was founded in 1992, today associated to *Bio-kultúra*. In the Czech Republic at the beginning of the 1990s *Altervin* was founded, uniting the organic wine producers, now merged with the countries biggest producers association *Pro Bio*.

Organic viticulture has clearly triggered many innovations in conventional viticulture. Many techniques which were developed by organic viticulture are applied by conventional wine growers. In Switzerland, where the political environment is particularly favourable towards organic production, the organic wine growers are watched curiously by their conventional counterparts (Tamm, 1999). Well managed farms show that organic viticulture is possible and as well as highly economical. Existing organic wine growers act as local centres of knowledge and generally are open to share their experiences with their colleagues.

### **Challenges in Production**

Cultivation techniques of the organic system include the creation of a stable soil structure, a high root density, a harmonious nutrition of the vine, a mix of green cover crops, and biodiversity measures around the vineyards (hedges etc.). With these measures an optimum balance between pest and predators is enhanced and diseases are reduced. Some major problems have however, remained for the organic wine growers.

In all European countries fungus diseases like powdery and downy mildew (*Uncinula necator* and *Plasmopara viticola*) and gray mould (*Botrytis cinera*) pose particular problems to organic wine growers. Research is urgently needed in order to find efficient copper substitutes. An already existing solution are the fungus resistant grape varieties.

### **Fungus Resistant Grape Varieties**

In most countries the organic wine growers use the same varieties as their conventional counterparts. Most of these varieties are highly susceptible to the fungus diseases mentioned above. According to many experts the only long-term solutions to the fungus problems are interspecific hybrids. In Switzerland, many organic wine growers use them already. The German *Ecovin* recommends the cultivation of these varieties in its standards, and it promotes less rigid laws regulating their cultivation - in Germany most of them may only be planted for experimental purposes. *Ecovin* also presses the state breeding stations to continue intensive work on these varieties. A lot of research into resistant varieties has been done in Central Eastern Europe. In the Czech Republic, almost all organic vineyards are planted with interspecific hybrids. It is expected that the area under organic management will increase substantially once these hybrids are included into the official variety list in 2001, even though, according to the Czech wine law only table wine may be produced from these grapes.

Several wine tastings for instance in Germany, Switzerland and Hungary (blind tastings) with traditional and fungus tolerant varieties have shown that the sensorial quality of the new varieties is as high as that of the traditional varieties and in some cases even higher.

The wine growers often fear that consumer acceptance of these new varieties might be too low, but the results of these tastings demonstrate that this will most likely not be the case.

### **Market shares / marketing structure**

Especially the Southern European countries produce organic wine mainly for export. In France for instance, 70 % of the organic wine is exported. Germany is the biggest market, followed by other Northern / Central European countries (Rousseau 1999). In most countries, wines are processed and marketed by the growers themselves. In Germany, France and Italy, however, some co-operatives who do the processing for their members have converted all or a part of their production. In Italy, a survey was carried out among organic wine growers, and it showed that 20 % of them were associated to a co-operative. (Zanoli & Santi, 1999). Organic wine is successfully promoted by the specialised organic wine growers associations, by the organic producer organisations and by the producers themselves. In many countries, organic wine producers have successfully taken part in “conventional” wine tastings, which has given a boost to the marketing of organic wine. In Italy, an organic wine contest has been established. Other promotional measures include leaflets, attractive internet sites and the presence at major wine fairs.

But why should consumers be interested in organic wine? Most companies – both European and overseas – use ‘low in sulphite’ as key-word in their promotion strategy. A recent Italian study has shown that, indeed, there is a statistically significant difference in sulphur dioxide contents of both red & white organic wines compared to a sample of comparable conventional wines (Zanoli et al., 1999); at the same time, sensorial analysis performed on a randomised panel of standard consumers (not wine experts) has shown that both red & white organic wines did not outperform the conventional sample (see appendix 1, Zanoli & Naspetti, 1999). In general, market research shows that European consumers prefer fruity and floral odour white wines and fruity odour, brilliant and rich colour red wine. Not surprisingly, recent Nielsen data demonstrate that the top-selling wines in supermarkets by grape variety are Chardonnay and Cabernet Sauvignon!

Another key-word is ‘environmental-friendly’, but this has probably a higher impact on North European consumers (more motivated by ecological goals) than on Mediterranean (more motivated by health related goals), on-going market research shows.

### **State Support**

In all EU-countries, but also in Switzerland and Liechtenstein as well as in some Central and Eastern European countries, organic viticulture is subsidised under the various agri-environment programmes. In Italy Germany, the state aid programmes under the EU’s agri-environment programmes differ substantially between the federal states; the amounts paid to the wine growers are between 500 and 750 Euro per hectare and year. These amounts cannot cover the extra costs involved in the organic farming system. Also, the differentiation between the subsidies for integrated and organic farming is far too small, and therefore the incentive for wine growers to convert is not great enough. The implementation of Agenda 2000 in Europe probably will not help in supporting the organic wine sector, due to the fact that money is allocated on a ‘fast-spending’ rule, and investments in wine-making and vineyards are not short-term in nature. Besides,

restrictions in increasing land area devoted to vineyards will penalise those organic wine producers which would like to increase their production due to higher market demand.

### **Certification and Regulations**

As the wine-making process is not defined under EU-regulation 2092/91, the term “organic wine” may not be used on the label. In Germany, it is allowed to state “wine from organic viticulture”. In France, Italy and Portugal, however, the label may only say “wine produced with organic grapes”. This fact is seen by the Portuguese and the French associations as a major obstacle for future market development. In Switzerland, the majority of organic wine is certified by BioSuisse, the major organic certifier in Switzerland (Bud label) requiring full-conversion. According to the Swiss organic law, partial conversions of organic vineyards are, however, permitted; this means that a wine grower can convert some of his wine production, whereas the rest is managed conventionally.

### **Main challenges**

Looking across the papers presented in these proceedings, several challenges need to be tackled in order to increase the organic vine area and attain growth rates similar to those of organic agriculture in general:

First, there are still no satisfactory solutions to various diseases and pests. Fungus diseases are a pan-European problem, and efficient copper replacements still need to be found. A solution to the fungus problems are the interspecific hybrids, for which further breeding efforts are urgently needed. Also state and EU-regulations hindering wine growers to plant these varieties and market the wine derived from their grapes need urgently to be changed.

Second, organic viticulture is not subsidised adequately in any European country. Organic wine growers need higher subsidies in order to compensate lower yields and the higher labour input. The differentiation between integrated farming should be greater in order to provide sufficient organic conversion incentives .

Third, the labelling of organic wine is still not satisfactory. It should be possible in all European countries to declare on the label that a wine stems from organic viticulture in order to strengthen consumer confidence. Integrated production methods are often referred to as “environmentally friendly” on the label, and partial vineyard conversion, which is allowed in Switzerland, does not help to build consumer confidence either because of the lack of a clear concept, and they should be phased out.

Finally, consumer preference for Chardonnay and Cabernet is a subtle challenge for European organic viticulture: Should organic producers follow the trends, and compete on the global market with ‘varietal’ (“cepage”) based wines, or defend the ‘protected origin’ (“terroir”) and quality of their many local grapes? It is not only a market based choice, of course, and not a matter for organic wine makers only, but this is a major choice in the future years. You can be sure that tastes and fashions will change, as we have seen a global shift in consumers preferences from white to red after some studies reported the possible positive health effects of red wine. Should organic wine producers help in protecting the biodiversity of the grapes, or should they follow the main waves of the market?

## References

- Altındışlı, Ahmet: Organic Viticulture In Turkey. In: Willer, Helga and Urs Meier (Eds.): Proceedings 6th International Congress Organic Viticulture. Bad Dürkheim, 2000
- Dessylas, Marios: Organic Viticulture in Greece. In: Willer, Helga and Urs Meier (Eds.): Proceedings 6th International Congress Organic Viticulture. Bad Dürkheim, 2000
- Firmino, Ana: Organic Viticulture in Portugal. In: Willer, Helga and Urs Meier (Eds.): Proceedings 6th International Congress Organic Viticulture. Bad Dürkheim, 2000
- Haeseli, Andi: Organic Viticulture in Switzerland. In: Willer, Helga and Urs Meier (Eds.): Proceedings 6th International Congress Organic Viticulture. Bad Dürkheim, 2000
- Jonis, Monique: Organic Viticulture in France. In: Willer, Helga and Urs Meier (Eds.): Proceedings 6th International Congress Organic Viticulture. Bad Dürkheim, 2000
- Köpfer, Paulin: Organic Viticulture in Germany. In: Willer, Helga and Urs Meier (Eds.): Proceedings 6th International Congress Organic Viticulture. Bad Dürkheim, 2000
- Niggli, Urs: Organic Farming in Switzerland. In: Steffi Graf / Helga Willer (Eds.): Organic Agriculture in Europe. Results of the Internet Project <http://www.organic-europe.net>, co-funded by the EU-Commission, General Directorate Agriculture (GD Agri), SÖL-Sonderausgabe 75, Stiftung Ökologie & Landbau (SÖL), Bad Dürkheim, Germany, 2000.
- Picazos, Joan and Angeles Parra: Organic Farming in Spain. In: Steffi Graf / Helga Willer (Eds.): Organic Agriculture in Europe. Results of the Internet Project <http://www.organic-europe.net>, Co-funded by the EU-Commission, General Directorate Agriculture (GD Agri), SÖL-Sonderausgabe 75, Stiftung Ökologie & Landbau (SÖL), Bad Dürkheim, Germany, 2000.
- Rousseau, Jacques (1999): Organic wine production in France- a fast increase. Paper held at the “Internationaler Erfahrungsaustausch zum ökologischen Weinbau” at the Staatliche Lehr- und Versuchsanstalt für Wein- und Obstbau Weinsberg, 1999, at [http://www.landwirtschaft-mlr.baden-wuerttemberg.de/la/lvwo/kongress/IEFA\\_Vortraege.htm](http://www.landwirtschaft-mlr.baden-wuerttemberg.de/la/lvwo/kongress/IEFA_Vortraege.htm)
- Sedlo, Jiri: Organic Viticulture in the Czech Republic. In: Willer, Helga and Urs Meier (Eds.): Proceedings 6th International Congress Organic Viticulture. Bad Dürkheim, 2000
- Smissen, Nicolette van der: Organic Farming in Greece. In: Steffi Graf / Helga Willer (Eds.): Organic Agriculture in Europe. Results of the Internet Project <http://www.organic-europe.net>, Co-funded by the EU-Commission, General Directorate Agriculture (GD Agri), SÖL-Sonderausgabe 75, Stiftung Ökologie & Landbau (SÖL), Bad Dürkheim, Germany, 2000.
- Tamm, Lucius (1999): Der biologische Rebbau in der Schweiz. Paper held at the “Internationaler Erfahrungsaustausch zum ökologischen Weinbau” at the Staatliche Lehr- und Versuchsanstalt für Wein- und Obstbau Weinsberg, 1999, at [http://www.landwirtschaft-mlr.baden-wuerttemberg.de/la/lvwo/kongress/IEFA\\_Vortraege.htm](http://www.landwirtschaft-mlr.baden-wuerttemberg.de/la/lvwo/kongress/IEFA_Vortraege.htm)
- Bazzocchi, C., Tellarini, Stefano and Raffaele Zanolli: Organic Viticulture in Italy. In: Willer, Helga and Urs Meier (Eds.): Proceedings 6th International Congress Organic Viticulture. Bad Dürkheim, 2000
- Zanolli, Raffaele and Paola Santi (1997): “Caratteristiche strutturali della filiera del vino biologico in Italia.” *Economia Agro-alimentare*, II (2).
- Zanolli, Raffaele and Simona Naspetti (1999): *Il vino bio. Valorizzazione e marketing*. AMAB, Senigallia, Italy.
- Zanolli, Raffaele, Potentini, Giuseppe and Simona Naspetti (1999): “Un buon bicchiere di vino bio. Il vino biologico marchigiano tra tradizione e mercato”, *Mediterraneo*, 3(11), Winter 1999/2000

## Appendix 1

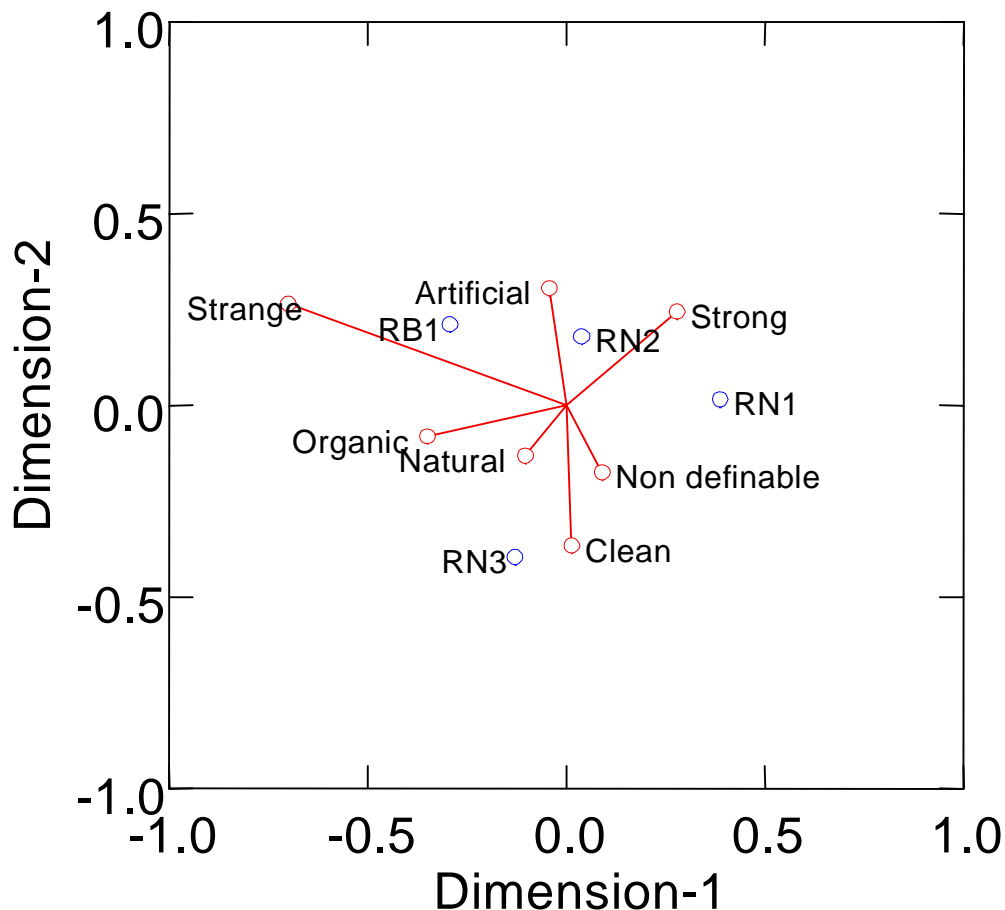
A Panel of 50 Italian random consumers (45% males, 55% females), with average level of education and age ranging from 15 to 60 years, elicited the relevant possible attributes of an organic wine to be:

- Organic
- Natural
- Strong
- Clean (colour, odour & taste)
- Strange (colour, odour & taste)
- Artificial (colour, odour & taste)

The most preferred wines were those Natural and Strong, not Artificial. The Organic, Clean and Strange attributes were not considered negative ones, but not so important in choosing a wine.

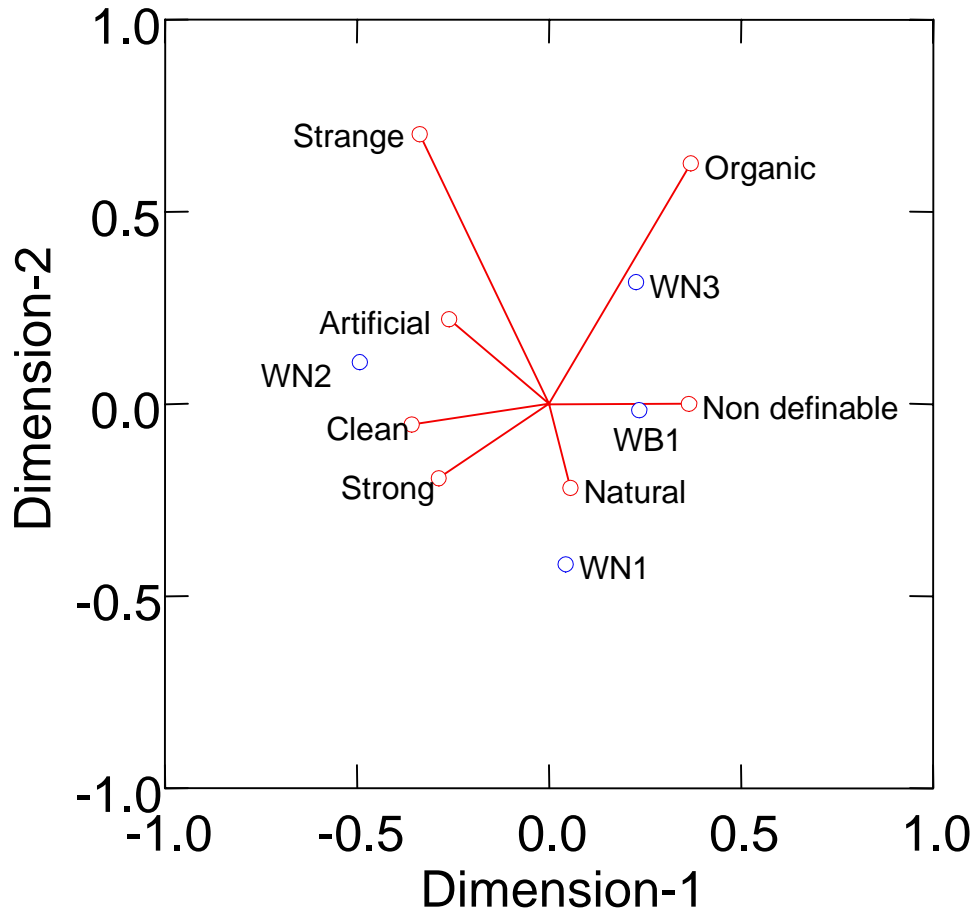
*This information is drawn from Zanoli & Naspetti, 1999.*

## Correspondence Plot



The organic red wine (Rosso Piceno Superiore) was considered strange and artificial, and definitely different from the non organic reds (all from the same varietal grape and vintage year). The most preferred wines were RN1 and RN3.

# Correspondence Plot



The organic white wine (Verdicchio) was considered non definable and somewhat natural. The most preferred Verdicchio was the non-organic WN1

**Table 1: Vineyards under Organic Management in the Countries of Europe** (This table is based on the figures provided by the authors of the articles in the conference proceedings).

Country	Organic vineyards (ha)	Conventional Vineyards (ha) <sup>1</sup>	Organic vineyards in % of all vineyards	Total area under organic management (ha) <sup>2</sup>	Organic vineyards in % of organic land
Austria <sup>3</sup>	564	52,000	1.1	287,900	0.2
Czech Republic <sup>4</sup>	25	13,000	0.2	71,620	0.04
France (1999) <sup>5</sup>	10,213	917,000	1.1	316,000	3
Georgia <sup>6</sup>	Ca. 100	85,000	0.1	-	
Germany (1999) <sup>7</sup>	1,349 <sup>8</sup>	105,000	1.3	383,572 <sup>9</sup>	0.4
Greece (1998) <sup>10</sup>	1,750	132,000	1.3	15,849	11
Hungary (1998) <sup>11</sup>	350	131,000	0.3	34,500	1.0
Italy (1999)	Ca. 48,000 –54,000 <sup>12</sup>	922,000	Ca. 5.2-5.9 %	958,687	Ca. 5 – 5.6 %
Portugal (1999) <sup>13</sup>	888	259,000	0.34	47,974	1.9
Spain (1999) <sup>14</sup>	21,130	1,224,000	1.7	352,164	6.0
Switzerland (1999) <sup>15</sup>	209	14,991	1.4	84,124	0.3
Turkey (1999)	1988,96 <sup>16</sup>	567,000	0,4		7.8



- <sup>1</sup> Figures for total hectares taken from „Deutsches Weinbau-Jahrbuch 1999“
- <sup>2</sup> According to SÖL 2000, for all countries figures end 1999, for Austria, Czech Republic, Greece 1998, see also [http://www.soel.de/inhalte/oekolandbau/statistik\\_europa.html](http://www.soel.de/inhalte/oekolandbau/statistik_europa.html)
- <sup>3</sup> Schinnerl, 2000
- <sup>4</sup> Sedlo, 2000
- <sup>5</sup> Observatoire Nationale De L’Agriculture Biologique, in Jonis, 2000
- <sup>6</sup> Tourmandize 2000
- <sup>7</sup> Köpfer, 2000
- <sup>8</sup> Only wine farms which are member of one of the nine German organic producer associations, united in Arbeitsgemeinschaft Ökologischer Landbau (AGÖL; <http://www.agoel.de>), per 1.1.2000
- <sup>9</sup> Only farms which are member of one of the nine German organic producer associations, united in Arbeitsgemeinschaft Ökologischer Landbau (AGÖL; <http://www.agoelde>)
- <sup>10</sup> Dessylas, 2000
- <sup>11</sup> Szöke, 2000
- <sup>12</sup> Bazzocchi/Tellarini/Zanoli, 2000, Final figures for 2000 were not available at the time of printing of these proceedings. 1998: 19,844 ha, 2,6 % of all Italian vineyards
- <sup>13</sup> Firmino, 2000
- <sup>14</sup> Ministero de Agricultura 2000, in Picazos / Parra, 2000
- <sup>15</sup> Haesli, 2000
- <sup>16</sup> Only vineyards for grapes for sultaninas, Altındışli 2000