



The terraced vineyards of Trentino

TRENTINO IS ONE of the most spectacular regions of Italy: terraced vineyards cloak the sides of steep hills and convey a sense of lushness, even on the hottest of summer days. Trentino is the southern, Italian-speaking half of Trentino-Alto Adige (the Alto Adige part to the north is mainly German-speaking). The regional capital is Trento. Vineyards are mainly located in the valley of the Adige river and on the hills to the east and west of the river. As a result, vineyard aspect is generally west or east. Most vineyards (80%) are on steep slopes at an elevation of 200 to 600 metres.

The total vineyard area of Trentino-Alto Adige is 13,700 hectares. Of the 9,000 hectares in Trentino, two thirds are red varieties and one third are white, but the proportion of the latter is increasing. Seventy percent of vineyards of Trentino are registered for Denominazione di Origine Controllato (DOC).

Despite the latitude and the relatively high altitude, summers tend to be hot. The wind, which blows only from the south or the north due to the local topography, does not appear to play a major role in regulation of climate. Only rainfall data is available for Trento (altitude 312 metres): 538 mm falls in the growing season (April to September) with an annual total of 915mm. Bolzano (altitude 290 metres, MJT = 22.4°C) in the Alto-Adige would have similar temperature conditions to Trento, 50 kilometres to the south: the closest Australian homoclimates to Bolzano based on Effective Heat Days (EHD) are Murrumbidgee, Jindera, Yass, Burrinjuck, Frogmore (NSW), Canberra (ACT), Heathcote, Bendigo (Vic.) (Richard Smart, pers. comm).

The main red varieties are Schiava (also known as Trollinger in Germany and Austria), Marzemino, Teroldego,

Lagrein, Cabernet Sauvignon and Merlot. The first four are local varieties and comprise approximately 75% of red winegrape production. Schiava is high yielding and produces low quality wine: it has poor colour and is mainly suited to rosé styles. Marzemino is a late ripening variety: the wine has good colour. Teroldego is not grown elsewhere in Italy. It is late ripening and should be cane pruned; wines have high acidity, good colour with an intense bouquet of ripe fruit, grass and cherries. Lagrein is grown exclusively in this region; it is vigorous, susceptible to fungal diseases, ripens late and requires warm sites to achieve adequate maturity. The wine has good colour and body but is often used for rosé styles (Mannini et al. 1997).

By comparison the local white varieties, e.g. Gargenega, Nosiola, have been supplanted by imports such as Chardonnay, Riesling and Sauvignon Blanc. Gargenega is a high yielding white variety and it is currently the fifth most-important variety in Italy for DOC wine. It is prone to excessive vigour, ripens mid- to late-season and the wines are typically bland when young, but with age can develop honey and almond characters (Mannini et al. 1997). As a result of recent plantings, 70% of white wine is now made from Chardonnay. Unlike some other regions in Italy, e.g. Emilia-Romagna, there does not appear to be any policy in Trentino-Alto Adige to encourage or maintain the local varieties. The area of Trento itself is highly specialised in the production of méthode champenoise sparkling wine. More than 75% of winegrape production is processed by co-operative wineries.

The upper yield limit for DOC wine is 12 tonnes/hectare for Chardonnay and 10 tonnes/hectare for all red varieties except

Teroldego which is permitted to yield up to 13 tonnes/hectare. These are said to be some of the highest yields permitted for DOC wines in Italy, perhaps because this is the only region where irrigation is permitted for DOC wines. Coincidentally the grape prices are also amongst the highest in Italy.

In Trentino-Alto Adige 90% of vineyards are irrigated due to the combination of shallow soil and use of permanent sward on the predominantly sloping sites. Even though rainfall during the growing season is relatively high (>500 mm), there is still some risk of water stress in the absence of irrigation. The most common method of irrigation is fixed overhead sprinklers.

The standard trellis is a pergola, either single (3 m rows) or double (6 m rows). Two types of pergola are used on slopes: the *pergola trentina* is most common. The *pergola semplice* is used on flat ground. The current recommendation to growers is a vertically shoot positioned trellis (VSP) with 1.5 m high trellis and 1.6 m row x 1.0 m vine spacing; a fruiting wire is located at 80 cm and there are three pairs of foliage wires. This trellis readily permits leaf and lateral shoot removal in the bunch zone. It is reported that 20 tonnes/hectare is achievable with this system. Mechanical harvesting is not widely used because most vineyards are on steep slopes and average vineyard size is small, i.e. 0.4 hectares. The main rootstocks are 5BB, SO4 and



The pergola trentina is the most common trellising system in Trentino.

420A. Most vineyards are cane pruned: in part this is due to the traditional use of varieties with low fruitfulness of basal nodes, e.g. Teroldego. Unlike France, DOC regulations do not specify trellis type.

There is an important viticultural and oenological research institute at San Michele all'Adige, located just to the north of Trento.

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References

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