Riesling rules in Rheingau

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VISITORS TO THE RHEINGAU may be disappointed by the landscape of the region: it has neither the spectacular scenery of the Mosel nor the beautiful villages of the Rheinpfalz. However, whatever it lacks in this regard is more than counterbalanced by the quality of its wines. The Rheingau is dominated by the variety Riesling. Nowhere else is Riesling able to ripen so far north with such consistency and with such quality. What are the special factors of the sites that permit this? It is all a consequence of the unique geography of the region.

From Switzerland the Rhine flows more or less in a northerly direction until it reaches the barrier of the Taunus mountains near Wiesbaden. There it makes a bend to the west and flows for about 30 km in a south-westerly direction until it makes another sharp bend at the Rüdesheimer Berg and resumes its path to the north-west. Ninety percent of the vineyards of the Rheingau are located on the slopes of the narrow strip of land between the Taunus mountains and the Rhine, extending from the suburbs of Wiesbaden to the Rüdesheimer Berg, and around the corner up to Lorchhausen for another 8 km. As a result, most vineyards are found on warm, south-facing slopes, with the exception of those facing south-west at Lorch and Assmannshausen. This favourable strip of land is only 1 km at its narrowest, and 4 km at its widest points. Ten per cent of the vineyard area of the Rheingau is located just to the east of Wiesbaden, near Hochheim on the northern side of the river Main.

Not only have the Taunus mountains influenced the path of the Rhine and thereby created the desirable south-facing slopes: they also provide some protection from the cold winds from the north and east. In addition, there is a rain-shadow, resulting in relatively low rainfall (333 mm in the growing season) and high sunshine hours for this latitude. In warm, dry seasons, vines growing on the well-drained soils may even become water stressed. The slopes also provide good air drainage thereby significantly reducing frost risk.

Vineyards near Geisenheim in Germany

Consequently, the risk of late frost is greatest close to the river. In many wine books much weight is placed upon the temperature-moderating effect of the Rhine and the reflection of light from the river. However, these factors are likely to be of limited benefit to ripening relative to the contribution of both slope and aspect. No vineyard is higher than 300 metres: higher than this it is too cold and too exposed for successful ripening. The average altitude of vineyards is 170 metres.

Climatic data for the region is collected at Geisenheim, the location of the famous wine school and research station. Geisenheim is 8 km east of the Rüdesheimer Berg. Some of the region's best vineyards are found between Geisenheim and Winkel, e.g. Geisenheimer Rothenberg, Geisenheimer Klaüsweg, Schloss Johannisberg and Johannisberger Klaus. Growing season day degrees and sunshine hours for Geisenheim are 1,225 and 1,333 respectively[1]. Leongatha and Drumborg in southern Victoria have similar values, but the Australian locations have a much more maritime climate: for example, CLT[2] of 9.3°C compared to 18.5 °C for Geisenheim.

Most vineyards are found on moderate to steep slopes with the steepest slopes at the western end of the region. Although the vineyards on the mid-slopes are said to produce the best quality wine due to a combination of climatic and soil factors, paradoxically some of the best vineyards are close to the river, e.g. Winkeler Jesuitengarten. At the top of

Terraced vineyards, Assmannshausen

the slope, soils are well-drained, being based on eroded quartzite and weathered slate. At the bottom of the slope the soils may be loam, loess, marl or sandy gravel with greater depth and fertility.

The first large vineyards were established in this region by the Cistercians in the 12th and 13th centuries, but the Romans were probably the first to cultivate winegrapes here. There are some large estates that have been in the same family for hundreds of years but the major part of the area is owned by many small growers. The vineyard area of the Rheingau (1999) is 3,130 ha (3% of the total area for Germany), almost exactly the same area as Padthaway in South Australia. Riesling dominates with 82% of the total area followed by Pinot Noir (8%) and Müller Thurgau (3%). Pinot Noir (= Spätburgunder) is mainly grown in one commune (Assmannshausen).

Terracing has been used on the steepest slopes for centuries to reduce the risk of erosion. Row × vine spacing is 1.3 to 1.5 m × 1.2 m. Vines are mainly cane-pruned and canes are usually arched rather than flat. Use of two canes with 15 nodes per cane is common. There is relatively little mechanical pruning. The standard trellis system has vertical shoot positioning (VSP) with two sets of moveable foliage wires. Shoot trimming/hedging is essential with this trellis type in combination with narrow rows: this is done on the top and sides of the canopy 2 to 3 times per season, starting just after flowering. For the traditional vineyard sites on gentle to steep slopes, the use of the VSP trellis results in moderately open canopies, particularly when combined with leaf removal and shoot thinning. Bunch thinning is done at the start of veraison: at this stage there is least effect on berry enlargement. The process requires 30 to 80 person hours per hectare. Hand harvesting (200 to 250 person hours per hectare) is still most common. Riesling is typically harvested from early to late October. The maximum permitted yield is 80 hl/ha but most growers will aim for 70 to 80 hl/ha (10–12 t/ha).

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REFERENCES

1. Gladstones, J.S. (1992) Viticulture and Environment. Winetitles.
2. Continentality (CLT) = Mean January temperature—mean July temperature (southern hemisphere) and Mean July temperature—mean January temperature (northern hemisphere).