Nebbiolo

Source
Nebbiolo is considered the premiere varietal of northwestern Italy. It is believed to have been cultivated in the Langhe district before the fourteenth century. The earliest documentation (1303) is provided in Pier de’ Crescenzi’s Ruralism Commodorum. A very late ripener, Nebbiolo is named for the fog (“nebbia”) that settles in the foothills during the late October harvest. In Italy, there are about 13,000 acres grown, with important plantings in the Piedmont region. There are also plantings of Nebbiolo in Australia, and in North and South America. In California, plantings are more prevalent in the Central Coast; they are scattered through the North Coast, Sierra foothills and the Central Valley.

Description
Clusters: medium to large; long cylindrical, compact; long peduncles.
Berries: medium round to short oval; purple but red-purple in sunlight.
Leaves: medium; deeply 5-lobed lobed with wide U-shaped petiolar sinus; lateral sinuses also deep; large apical lobe; sharp, multi-ranked teeth; moderately dense hair on lower leaf.
Shoot tips: felty with pink edges; young leaves yellow-green with bronze-red patches; end of shoots with many small leaves and relatively long internodes.

Growth and Soil Adaptability
Nebbiolo grows in a wide range of soils in Italy. In California, it is a very vigorous cultivar, and it performs best on shallower, less fertile sites. In all cases, Nebbiolo is a fussy grape for climate requirements; the most suitable is a warm, continental climate, with low ripening month mean temperatures (approximately 63ºF) and low temperature extremes. In California, frost-free sites are needed due to its early budbreak. The best sites should not be excessively hot, as Nebbiolo will shrivel in very hot temperatures. High-quality Nebbiolo vintages occur when the weather is dry during ripening. Nebbiolo is a sprawling, vigorous, and open vine with low to medium basal bud fertility. Canes are slender and long, with strong tendrils that attach readily to wire, making shoot positioning and pruning difficult.

Rootstocks
In Italy, 420A and Kober 5BB are used. In California, Teleki 5C and S04 are commonly used.

Clones
There are three principle groups of clones of Nebbiolo described in Italy: Lampia, Rosè, and Michet. The Michet clones are infected with grape fanleaf virus, and they are not registered or recommended for use. The
genetic profile of the Rosè group is different than Michet and Lampia. There is a great diversity of Nebbiolo clones available in Italy, and new clones are under development.

In California, certified Nebbiolo FPS selection 01 has been available for many years. Non-registered Nebbiolo FPS 02 (CVT 36), 03 (CVT 36), and 04 (CVT 230) are all from Torino, Italy. Nebbiolo Lampia FPS 01 from Torino is also registered. Nebbiolo FPS 07 (CN36) and FPS 08 (CVT 230), presently provisionally registered, should be available commercially in the near future.

Production

Vines are moderately productive, but the highest-quality wine occurs in a yield range of 3 to 5 tons per acre.

Harvest

Period: Nebbiolo is among the last varieties to ripen. In the North Coast, harvest occurs in mid- to late October.

Method: Harvest is primarily done by hand. Clusters are large and relatively easy to pick. With machine harvesting, a canopy shaker results in easy to medium harvest, with single berries and some cluster parts removed and medium juicing. Trunk shaking is easy to medium, with single berries, some cluster parts, and a few whole clusters removed. Juicing is light to medium.

Training and Pruning

Nebbiolo is vigorous, and its canes are long and trailing. It is often cane pruned due to low basal bud fertility. In warm districts spur pruning is effective. Canopy management consists of shoot positioning, top (and side) trimming, and sometimes leaf removal. Vines are usually cluster thinned.

Leaves

Medium; deeply 5-lobed lobed with wide U-shaped petiolar sinus; lateral sinuses also deep; large apical lobe; sharp, multi-ranked teeth; moderately dense hair on lower leaf.
Trellising and Canopy Management
Vertical-shoot-positioned systems are widely used in both Italy and California. In Italy, vine density is 1,300 to 2,000 vines per acre, and the Guyot training system is used with one single cane of 10 to 12 buds per vine or 8 to 10 buds if virus presence reduces vigor. In California, vineyards are often planted 8 by 7 feet using VSP systems. A fruiting wire is set 30 to 40 inches high. Two moveable sets of foliage wires are used. Some growers are also experimenting with divided canopy systems as a way to control vigor and produce balanced vines.

Insect and Disease Problems
Nebbiolo is sensitive to powdery mildew. It has low susceptibility to bunch rot.

Other Cultural Characteristics
Nebbiolo is vigorous and sprawling, and it requires extra attention in shoot positioning.

Winey Use
Nebbiolo is notoriously difficult to grow and make into fine wine outside of its home region of Piedmont. Even so, Nebbiolo-based wines, acid and astringent in youth, evolve with maturation into some of the most well-structured, longest living, and richly scented wines. Historically, Nebbiolo’s relatively high acids, pronounced tannins, and long cool fermentations (up to two months in wooden vats) meant that the wine would need cellaring for several years before being considered ready to drink. Today, shorter fermentations with less time on the skins plus the use of small oak barrels for aging have made Nebbiolo a more satisfying wine. The wines have large amounts of tannins, but color often is lacking. Controlling crop load and fermentation temperatures seems to help develop better wine color.

— Glenn McGourty