

# New York's Food and Life Sciences Bulletin

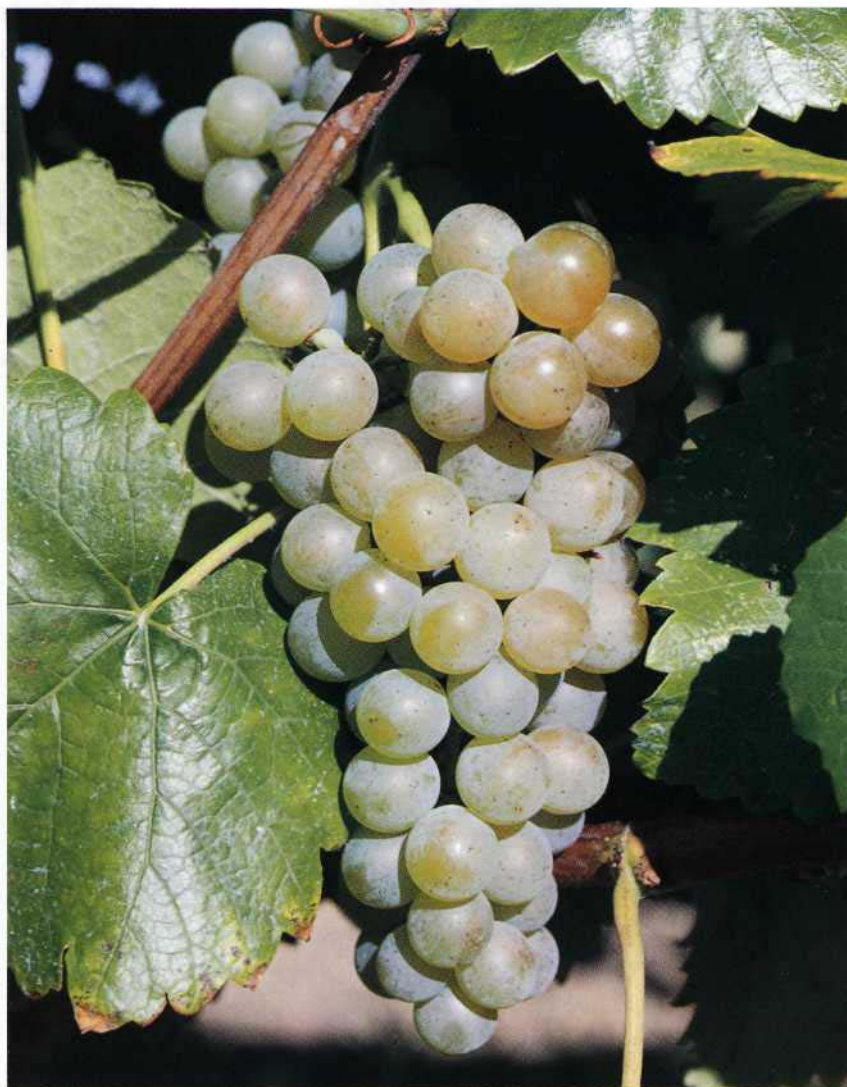
New York State Agricultural Experiment Station, Geneva, a Division of the New York State College of Agriculture and Life Sciences, A Statutory College of the State University, at Cornell University

## 'Traminette' Grape

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'Traminette' is a late mid-season white wine grape which produces wine with pronounced varietal character likened to one of its parents, 'Gewürztraminer'.

'Traminette' is distinguished by its superior wine quality combined with good productivity, partial resistance to several fungal diseases, and cold hardiness superior to its acclaimed parent, 'Gewürztraminer'. It is the fifth wine grape cultivar to be named by the New York State Agricultural Experiment Station and follows the release of 'Cayuga White' (Einset and Robinson, 1972), 'Horizon' (Reisch et al., 1983), 'Melody' (Reisch et al., 1986), and 'Chardone' (Reisch et al., 1991).

*Fruit cluster of 'Traminette' at full*

## Origin

'Traminette' resulted from the cross, Joannes Seyve 23.416 x 'Gewurztraminer'. This cross was made in 1965 by H.C. Barrett, then of the University of Illinois, with the intention of producing a large clustered table grape with the flavor of 'Gewurztraminer'. Seed from the cross were sent to Cornell's grape breeding program where they were planted in 1968. Fruit were first observed in 1971 and the original vine was propagated in 1974 under the number NY65.533.13. The vine was initially described as a vigorous and productive green grape with moderately loose clusters.

## Description

Own-rooted vines grown in phylloxera (*Daktulosphaira vitifoliae* Fitch.) infested soils are productive and moderately vigorous. Annual cane pruning weights averaged 1.3 lb./vine over a 4-year period in a replicated trial at Dresden, NY (Table 1). Vines of 'Cayuga White' were more productive, with higher pruning and cluster weights. At this trial, vines of 'Traminette' were planted one year later than the rest, and had to overcome compacted soil conditions. In addition, potassium deficiency was a problem; even growth and yield of 'Cayuga White' was considered to be low, in comparison with commercial yields obtained at nearby sites. In a trial at Fredonia, NY (Table 1), on a deep gravelly loam soil, pruning weights of three vines of 'Traminette' were comparable to control 'Melody' vines, and fruit yields were equivalent to 'Melody', approximating 7.3 tons/acre at 605 vines/acre. At Geneva, NY, on heavier, less fertile soils, vines have been adequately productive, averaging 16.1 lb./vine (4.9 tons/acre) during five years (Table 2).

'Traminette' vines are moderately winter hardy at Geneva, and while bud hardiness is good, trunk injury is occasionally a problem, especially on heavier soils.

'Traminette' is considerably hardier than 'Gewurztraminer' and about as hardy as many cultivars of similar background, such as 'Seyval', 'Vidal blanc', 'Cayuga White', and 'Aurore'. Primary bud survival was measured in January, 1981, following very cold weather in December, 1980. Vines of 'Traminette' had 63% bud survival, comparable to 'De Chaunac' (70%), and better than 'Aurore' (20%), 'Melody' (23%), 'Seyval' (22%), and 'Concord' (26%). In January, 1987, differential thermal analysis (DTA, Pool et al., 1990) was used to determine the temperature at which 50% of the primary buds were killed (LT 50). LT 50 for 'Traminette' was -15.3 °F, -10.3 °F for 'Cayuga White', -10.7 °F for both 'Chardonel' and 'Melody', and -13.9 °F for 'Concord'. Trunks of 'Traminette' are susceptible to damage from low temperatures which may cause trunk splitting or provoke crown gall disease. After eight years at Dresden, NY, under commercial conditions, one of 15 (winter tender) 'Riesling' vines had trunk damage and 11 were dead, while three of 15 'Traminette' vines had trunk damage and none had died. In this same trial, vines of 'Cayuga White', 'Horizon', 'Aurore' and 'Concord' had no trunk damage while one of 15 vines of 'Vidal blanc' had trunk damage.

Flowers of 'Traminette' are perfect and self-fertile, blooming at mid-season following late bud-break. Clusters are shouldered, moderately loose, and medium in size (0.24 to 0.29 lb.). Vines average 1.7 clusters/shoot. Very little crop is borne on lateral shoots and cluster thinning is rarely necessary. The amber berries are medium sized (1.52 g/ berry) and spherical.

'Traminette' ripens between 1 Oct. and 15 Oct. in New York. Juice soluble solids are usually higher and pH is usually lower than for 'Cayuga White' (Table 3). The balance between sugar, acidity and pH is excellent. These data indicate that 'Traminette' can accumulate satisfactory

Location/Year	Cultivar	n	Pruning weight (lb./vine)	lb./cluster	Fruit yield lb./vine
Fredonia, NY	Traminette	3	3.5	0.29	24.0
1989-93	Melody	18	4.0	0.29	22.0
Dresden, NY	Traminette	15	1.3	0.24	7.9
1980-83	Cayuga White	15	1.5	0.40	17.0
n = number of vines					

**Table 2.** Viticultural production data for 'Traminette' vines grown near Geneva, New York.

Year	n	lb./cluster	Fruit yield lb./vine
1987	25	0.20	9.9
1988	16	0.29	22.0
1990	10	0.37	20.9
1991	16	0.29	13.0
1995	16	0.26	14.1
n = number of vines			

amounts of sugar while maintaining sufficient acidity and a low pH. It does not lose acidity as quickly during ripening as does 'Cayuga White'. Wines, which were first made in 1972, have been described as distinctively spicy and fragrant, much like the 'Gewiirztraminer' parent. The wine has good body and no noticeable flavors characteristic of interspecific hybrid grapes. Skin contact for 12 to 48 hours (40 ° to 50 °F) helps to enhance the desirable spicy, floral aromas. Excessive bitterness due to prolonged skin contact has not been observed. Wines may be finished dry or semi-dry depending on preferred style. When the grape is fully

ripe and when processed with some skin contact, the aromas of 'Traminette' are very similar to those of 'Gewiirztraminer'. 'Traminette' wine differs from 'Gewiirztraminer' in structure and mouthfeel; it does not have the strong fresh ground spice flavors with phenolic bitterness as is characteristic of very ripe 'Gewiirztraminer'. On the other hand, it does not get the bitter taste that 'Gewiirztraminer' may develop. 'Traminette' also maintains a lower, more favorable, wine pH.

Foliage and fruit are moderately resistant to powdery mildew (*Uncinula necator* [Schw.] Burr.), black rot (*Guignardia bidwellii* [Ellis] Viala & Ravaz) and Botrytis bunch rot (*Botrytis cinerea* Pers.). Foliage is susceptible to downy mildew (*Plasmopara viticola* [Berk. and Curt.] Berl. & de Toni) which can be controlled by standard commercial practices. Rupestris stem pitting virus has been found to occur in vines of 'Traminette'. It is not known whether stem pitting has a negative effect on vine growth (D. Gonsalves, personal communication); infected vines in New York trials have been observed to be as productive as adjacent uninfected vines (H. Amberg, personal communication).

Seven grower/cooperators were surveyed and five recommended the release of 'Traminette'. Two growers, one in Georgia and one in Maryland, indicated that growth was weak. Vines grafted on C. 3309 in Michigan State University trials were overly vigorous, with low productivity, excessive winter damage and crown gall (S. Howell

**Table 3.** Juice soluble solids, wine pH and acidity for 'Traminette', 'Cayuga White', and 'Melody' grown at two New York locations.

Cultivar	Years	Soluble Solids («Brix)			Total Acidity (g/L) <sup>z</sup>			pH		
		Ave.	Min.	Max.	Ave.	Min.	Max.	Ave.	Min.	Max.
<b>Location - Geneva</b>										
Traminette <sup>v</sup>	1972-95	20.1	17.1	23.0	10.1	6.3	12.8	2.96	2.80	3.20
Cayuga White <sup>x</sup>	1975-86	18.9	14.3	22.4	7.9	5.5	11.0	3.26	3.00	3.33
<b>Location - Fredonia</b>										
Traminette	1990-93	19.7	17.9	23.4	10.0	5.0	15.0	3.10	2.90	3.20
Melody	1990-93	20.4	19.7	21.3	10.0	6.0	11.0	3.10	2.90	3.10

x As tartaric acid

y Wine data for 'Traminette' - Soluble solids data based on 23 years (1972-75, 1977-95); pH data based on 11 years (1982-86, 1988-89, 1991, 1993-95); total acidity based on 19 years (1972-75, 1977-82, 1984, 1986-89, 1991, 1993-95).

v Wine data for 'Cayuga White' - Soluble solids data based on 10 years (1975-1983 and 1986); pH data based on 2 years (82,83); total acidity based on 7 years (1976, 77, 79-82, and 86).

and D. Miller, Michigan State University, personal communication). Therefore, on fertile soils, grafting of 'Traminette' is not recommended. In Missouri, vines were moderately vigorous with good productivity (M. Walsh, Southwest Missouri State University, personal communication). In New York, three growers have indicated satisfaction with viticultural and enological traits of 'Traminette'. It is suited to sites with average length growing seasons and little to moderate cold stress. 'Traminette' is an alternative for those wishing cold tolerance and disease resistance superior to 'Gewurztraminer', along with wine resembling 'Gewürztraminer'.

### Availability

Cornell University will not apply for a plant patent on 'Traminette'. Nursery requests for cuttings may be addressed to B. Reisch. Vines will be available for sale in 1997 from Grafted Grapevine Nursery (2399 Wheat Road, Clifton Springs, NY, 14432), Double A Vineyards (10275 Christy Road, Fredonia, NY, 14063), and Evergreen Nursery (17 Southwinds Circle Suite No. 7, Washington, MO, 63090).

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