

'Frontenac gris'



Iowa State University

Synonyms: MN 1187 (2, 4).

Pedigree: According to the University of Minnesota (1, 4), 'Frontenac gris' was originally identified as a single bud sport cane found growing on a 'Frontenac' vine at the University of Minnesota Horticultural Research Center. 'Frontenac' was originally derived from a cross between the French hybrid cultivar 'Landot 4511' and the University of Minnesota *Vitis riparia* selection #89, found growing wild near Jordan, Minnesota (1).

Origin: The single sport cane of 'Frontenac' was first observed by Peter Hemstad at the University of Minnesota in 1992; plants were propagated from this cane and have all produced gray rather than black fruit (2).

Introduction: 2003 (2).

Type: Interspecific hybrid (including *V. vinifera* and *V. riparia*) (5).

Color: Gray

Berry: The berries have been described as round; small to medium (average berry weight is 1.13 g/berry); grayish amber with a waxy bloom and clear juice. Berry shelling and splitting have not been problems (4).

Cluster: The clusters of 'Frontenac gris' are loose and medium in size (averaging 131 g/cluster and 18 cm (7 in) in length); and are conical with a small shoulder (4).

Viticultural Characteristics: 'Frontenac gris' vines are considered to have moderately high vigor with a slightly upright and open growth habit (4). Several training systems have been used for 'Frontenac', including high bilateral cordon, vertical shoot positioning (VSP), and Geneva Double Curtain (GDC) and the University of Minnesota (4) feels 'Frontenac gris' should perform similarly in these systems. They also report that bud break and bloom occur early to midseason and as it is typical for shoots to produce three clusters, cluster thinning may be needed, especially on young vines.

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Disease/Pests: As observed at the University of Minnesota (2, 4) research vineyards, ‘Frontenac gris’ is found to be moderately susceptible to powdery mildew and foliar phylloxera; has low to moderate susceptibility to black rot and very low susceptibility to downy mildew and bunch rot (including *Botrytis*). Crown gall has not been reported and ‘Frontenac gris’ seems to be quite tolerant of the adverse effects of 2,4-d drift (4).

Wine Quality and Characteristics: ‘Frontenac gris’ wines have been reported to have good body and pleasant aromas, with very little of the herbaceous qualities associated with *V. riparia* and many interspecific grape hybrids. “Foxy” aromas characteristic of *V. labrusca* have not been detected either (3).

The University of Minnesota (3) indicated that ‘Frontenac gris’ has shown the potential to be produced in a variety of styles. Its bronze skin lends color to the juice, resulting in wines typically ranging from pale gold to rich amber. They describe the wines as intensely fruity, exhibiting dominant peach and tropical fruit flavors, especially pineapple, and hints of honey. They add that the fruity palate and high acidity make ‘Frontenac gris’ an excellent candidate for semi-sweet to dessert wines; it has also shown well as a dry to off-dry table wine.

Average harvest chemistry data from the University of Minnesota’s Horticultural Research Vineyard (2003-2005) (3), shows sugar levels have been high, averaging 26.0° Brix (but can reach 28° Brix), acid levels have been high at 14g/liter and pH has been low at 3.0. They state that due to these high levels of in both sugar and acidity, ‘Frontenac gris’ wines often require leaving residual sugar in order to produce a well balanced wine in northern climates.

Season: ‘Frontenac gris’ ripens in Midseason (average harvest date Sept. 27 in east central Minnesota) (2, 4).

Cold Hardiness: Very hardy to at least -35° F (4).

Use: Wine

Notes: ‘Frontenac gris’ should be a useful variety in other cold climate viticulture areas (USDA plant hardiness zones 4 and 5) of the eastern U.S. and Canada where ‘Frontenac’ has already become established (2).

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Literature Cited:

1. Frontenac Grape. University of Minnesota Cold hardy grapes.
<http://www.grapes.umn.edu/frontenac/viticulture.html> (Prepared by Jim Luby and Peter Hemstad).
2. 'Frontenac gris' Grape. University of Minnesota Cold Hardy Grapes. *On:*
<http://www.grapes.umn.edu/gris/index.html> (Prepared by Jim Luby and Peter Hemstad).
3. 'Frontenac gris' Wine. University of Minnesota Cold Hardy Grapes. *On:*
<http://www.grapes.umn.edu/gris/enology.html> (Prepared by Anna Katharine Mansfield).
4. Luby J. and P. Hemstad. 2006. A grapevine named 'Frontenac gris'. U.S. Plant Patent No. PP16,478.
5. National Grape Registry (NGR) website: <http://ngr.ucdavis.edu/>. Supported by University of California Agriculture and Natural Resources, Services, and National Clonal Germplasm Repository of the USDA Agricultural Research Service.