



**NE1020 – Coordinated Wine Grape Variety Evaluations in the Eastern USA
Massachusetts Layout at UMass Cold Spring Orchard, Belchertown MA**

Woods

<i>Schisandra chinensis</i> vines								
Chambourcin	<i>Reisling</i>	Vidal	St Croix	Frontenac	<i>Corot Noir</i>	<i>La Crescent</i>	<i>Noiret</i>	<i>Marquette</i>
<i>La Crescent</i>	Chambourcin	<i>Reisling</i>	<i>Marquette</i>	<i>Corot Noir</i>	<i>Noiret</i>	St Croix	Frontenac	Vidal
Vidal	<i>Marquette</i>	<i>La Crescent</i>	<i>Reisling</i>	St Croix	Chambourcin	<i>Noiret</i>	<i>Corot Noir</i>	Frontenac
Frontenac	<i>Corot Noir</i>	<i>Noiret</i>	<i>Marquette</i>	<i>Reisling</i>	<i>La Crescent</i>	Vidal	St Croix	Chambourcin
<i>Noiret</i>	Frontenac	<i>Corot Noir</i>	<i>La Crescent</i>	<i>Marquette</i>	<i>Reisling</i>	Chambourcin	Vidal	St Croix
<i>Corot Noir</i>	St Croix	Chambourcin	Vidal	Frontenac	<i>Marquette</i>	<i>Reisling</i>	<i>La Crescent</i>	<i>Noiret</i>
<i>Marquette</i>	<i>Noiret</i>	Frontenac	St Croix	Vidal	<i>Corot Noir</i>	Chambourcin	<i>Reisling</i>	<i>La Crescent</i>
St Croix	<i>La Crescent</i>	Vidal	Chambourcin	<i>Noiret</i>	Frontenac	<i>Marquette</i>	<i>Corot Noir</i>	<i>Reisling</i>
Table Grapes (Mars)								
Table Grapes (Marquis)								
Table Grapes (Vanessa)								

Open Field

Core Varieties – Chambourcin (101-14), Frontenac, St. Croix, Vidal (101-14)
Additional Varieties – Corot Noir, La Crescent, Marquette, Noiret (101-14), Reisling

2008

- Vines planted in 3 vine panels in a randomized complete block design; grow tubes used, removed mid-summer.
- Row spacing is 10', vine spacing is 8'.
- Trellis constructed using pt wood posts and high tensile wire; mid wire at 3', high wire at 6' to accommodate VSP or High Cordon training systems.
- Trellis end posts at 60° angle, secured w/ anchor wires.
- Soil type – Scituate Fine Sandy Loam and Ridgebury Fine Sandy Loam

2009

- Vines pruned to appropriate system (high cordon; VSP for Riesling) in winter.
- Standard weed, insect, disease management program used.
- Hard fescue sod middles seeded in early summer 2009



2010

- Vines pruned in dormant season (no pruning weights taken until 2011).
- Standard weed, insect, disease management program used.
- Row middles mowed as needed
- Partial harvest with Harvest date, Brix, pH, and TA recorded.
- Fruit distributed to cooperating wineries for test fermentations.

2011

- Vines pruned in dormant season, pruning weight data collected.
- Bud survival, budbreak, bloom and veraison date collected.
- Standard weed, insect, disease management program used.
- Row middles mowed as needed
- Fruit harvested and harvest data collected.
- Fruit distributed to cooperating wineries for test fermentations.

2012

- Vines pruned in dormant season, pruning weight data collected (see data table).
- Bud survival, budbreak, bloom and veraison date collected (see data table).
- Standard weed, insect, disease management program used.
- Row middles mowed as needed
- Fruit harvested and harvest data collected (see data table).
- Fruit distributed to cooperating wineries for test fermentations.

Workshops:

March 26, 2012: Cold Climate Wine Grape Pruning Workshop – S. Schloemann, UMass (35)

April, 17, 2012: UMass Extension Fruit Program Twilight Meeting – S. Schloemann, UMass (35)

April 19, 2012: UMass Stockbridge School of Agriculture Pruning Class – S. Schloemann, UMass (35)

June 7, 2012: Understanding the Nuts & Bolts of Spray Programs for Growing Grapes in the Northeast – W. Wilcox, Cornell (50)

July 16, 2012: MFGA Summer Meeting; Overview of Cold Climate Winegrape Culture and Cold Climate Winegrape Cultivar Review – S. Schloemann, UMass (100)

Grants:

• **Northern Grapes:** *Integrating viticulture, winemaking, and marketing of new cold-hardy cultivars supporting new and growing rural wineries*, Martinson, T., et al, USDA- SCRI, \$ 3,417

• **Improved grape and wine quality in a challenging environment:** *An eastern US model for sustainability and economic vitality*. Wolf, A., et al, USDA-SCRI, \$MA

Web Resources:

Schloemann, S. G., UMass [New England Wine Grape Grower's Resource Center](#). Comprehensive website with production, pest management, and industry resources for cold climate wine-grape growers in New England. Meeting announcements and other calendar events are posted here and UMass Grape Notes Newsletters are archived here.

Schloemann, S. G., UMass [New England Grape Notes](#) is a periodic electronic newsletter published during the growing season with approximately 10 issues annually, distributed throughout New England. Each issue contains seasonally relevant information on grape production, insect and disease management, harvest parameters, upcoming meetings, and related topics. Information about all types of production including IPM, organic, and conventional management is provided.



NE1020 Summary 2011

NE1020 trial located at UMass Cold Spring Orchard Research and Education Center, Belchertown, MA.



Table 1. Growth and development benchmarks for 9 wine grape cultivars.

Cultivar	Pruning weights	% Primary Bud Survival*	Date of Budbreak	Date of bloom	Date of veraison	Harvest Date
<i>Chambourcin</i>	1.35	71%	May 15	June 11	Aug 12	Oct 4
<i>Corot Noir</i>	1.09	82%	May 15	June 15	Aug 8	Oct 1
<i>Frontenac</i>	1.26	95%	May 10	June 14	Aug 8	Sept 22
<i>LaCrescent</i>	1.56	94%	May 10	June 9	Aug 1	Sept 19
<i>Marquette</i>	1.68	97%	May 10	June 9	Aug 1	Sept 14
<i>Noiret</i>	2.70	79%	May 15	June 15	Aug 8	Sept 28
<i>Riesling</i>	0.85	69%	May 18	June 15	Aug 15	--
<i>St. Croix</i>	2.56	75%	May 15	June 11	Aug 12	Sept 15
<i>Vidal</i>	1.88	88%	May 15	June 15	Aug 15	Oct 8

*Three pencil-diameter canes collected from each panel (8 reps) of wine grape cultivars (24 canes per cultivar); Canes were held for 24-48 hrs at room temperature to allow oxidation to occur in damaged tissue; Five basal node buds on each cane were assessed by slicing buds cross-wise to view the primary bud using the Cornell University [protocol](#); A tally of dead primary buds was recorded for each cultivar and divided by the total number of buds assessed per cultivar to determine percent primary bud mortality.

Table 2. Yield and fruit/juice characteristics for 9 wine grape cultivars.

Cultivar	Avg. Yield/Plant (lbs)	Avg. Cluster Wt (lbs)	Avg. Brix	Avg. pH	TA
<i>Chambourcin</i>	14.8	0.39	17.2		1.60
<i>Corot Noir</i>	18.2	0.37	17.0	3.51	1.50
<i>Frontenac</i>	16.3	0.31	20.6	2.93	1.58
<i>LaCrescent</i>	15.5	0.23	21.2	2.65	1.50
<i>Marquette</i>	14.3	0.26	18.2	2.95	1.22
<i>Noiret</i>	17.5	0.36	19.3	3.38	1.19
<i>Riesling</i>	--	--	--	--	--
<i>St. Croix</i>	16.8	0.24	16.3	N/A	1.00
<i>Vidal</i>	15.5	0.33	18.8		1.34

Presentations & Field Days:

- 1/28/11 - *Pruning Grapes*, Western Mass Master Gardeners Assoc.
- 3/12/11 - *Growing Grapes in New England*, MassAggie Seminar
- 4/2/11 - *Growing Grapes in New England*, Western Mass Master Gardeners Assoc.
- 4/6/11 - *Pruning Grapes*, [Farm School](#) Lab
- 4/14/11 - *Pruning Grapes*, UMass PlSoilIn 235 class/lab
- 5/17/11 - *Cold Climate Grape Production - walking tour*, UMass Fruit Team Spring Twilight
- 6/8/11 - *Canopy Management for Cold Climate Grape Production*, Mass Farm Winery Assoc./UMass Fruit Team

GRANTS:

Northern Grapes: Integrating viticulture, winemaking, and marketing of new cold-hardy cultivars supporting new and growing rural wineries, Martinson, T., et al, USDA- SCRI, \$ 3,417, 9/1/11 – 8/31/12.