

## SARE Farmer/Grower Grant – Interim report FNE03-466

Evaluating new, extra-hardy grape cultivars in Vermont.

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### Goals

- The purpose of this project is to test a series of new, extra-hardy grape cultivars for their suitability in Vermont's Champlain valley, and other areas with similar climates. Because of the time necessary to establish a vineyard and harvest fruit, the project lasts three years.

### Vineyard condition

- We now have about three acres planted to vineyard. The vast majority of these vines are the new grape cultivars being tested in this project. Most of the cuttings put on excellent growth this year, and should bear a small crop of grapes next year, and a significant crop the following year. This meets the expectations for this project.

- Cultivars in the trial:

Frontenac	Sabrevois	LaCrescent
Louise Swenson	Prairie Star	Somerset Seedless
LaCrosse	St Pepin	Swenson White
St Croix	Marechal Foch	Landot Noir
Shannon	Alpenglow	Swenson Red
Leon Millot	ES 6-16-30	ES 7-11-22
ES 8-2-43	ES 10-18-30	Beta

### Cooperators

- The cooperators Peter Hemstad and Tom Plocher supplied me with cuttings of the cultivars to be tested, as well as advice on rooting and growing them. Plocher also supplied another group of cuttings during the winter (2003-2004) following the first growing season. So there will be further results from even more grape cultivars than was first proposed in this project.

### Activities

- I rooted the cuttings on bottom heat, and planted them out in prepared beds with black plastic mulch and drip irrigation. I put a bamboo stake by each plant, and trained and tied up the new growth. I established grass sod in the aisles between the grape rows. I installed a trellis with posts and wire.

### Accomplishments

- For the most part, the cuttings put on excellent growth, far beyond the usual for first year cuttings. Four to eight feet of total shoot growth was common. This was a result of fertile soil, excellent weed control, and irrigation as needed. This strong early growth promises good results as the vines mature and bear fruit over the next two years of the project.

#### Growing conditions

- It was a good growing season with nearly 2600 GDD 50F. There was no spring frost damage, the leaves were killed by a fall frost on October 19. Most vines were sprayed three times during the summer, and once for Japanese Beetles. There was some powdery mildew and downy mildew that showed up late in the growing season, so I know that I need to spray more carefully next year.
- We had a severe hail storm on July 24, 2003. This shredded leaves and wounded the vines. I applied a fungicide after the storm, and the vines recovered quickly, and continued to grow. The severe cold in January, 2004 included two stretches of three days each when the temperature stayed below zero F, and bottomed out twice at minus 19 F. These cultivars are known to be hardy to these temperatures, but it is a well-accepted observation that first year plants are less hardy than more mature vines. So there may be some damage to buds and wood.

#### Economic findings

- These are my actual costs for materials to establish a vineyard (except the cost of the vines; see note):

#### COST TO ESTABLISH VINEYARD, NEW HAVEN, VT 2003

Per 450 foot row

Item	Unit	Price	Number	Cost
Wire	foot	\$ 0.013	900	\$ 11.70
End post	each	\$ 15.00	2	\$ 30.00
Line post	each	\$ 5.00	16	\$ 80.00
Wirelock	each	\$ 1.44	4	\$ 5.76
Earth anchor	each	\$ 5.65	2	\$ 11.30
Gripple	each	\$ 0.95	4	\$ 3.80
Concrete	bag	\$ 5.00	1	\$ 5.00
Bamboo	each	\$ 0.18	56	\$ 10.08
Plastic mulch	foot	\$ 0.025	450	\$ 11.25
Drip tube	foot	\$ 0.028	450	\$ 12.60
Grass seed	pound	\$ 1.25	15	\$ 18.75
Vines	each	\$ 3.50	56	\$ 196.00

Total per 450 foot row \$ 396.24

Rows per acre

10

Cost per acre

\$ 3,962.40

Notes: Shorter rows would increase per acre cost because the end assemblies are the most expensive part

I did not purchase vines, but rather used cuttings donated by cooperators

This does not include labor, machine expense, soil amendments.

I used a two wire trellis. Some trellis designs use more wire.

### Outreach

- We hosted a workshop here on August 31, 2003 sponsored by NOFA-VT. About 25 people attended who seemed enthusiastic about grape growing. The Cooperative Extension agent for fruit in Northeastern New York, Kevin Iungerman, also attended.
- A small group of about a half-dozen commercial grape growers, The Vermont Grape Growers Association, met here twice during the summer.

### Results, future steps

- The early results seem to indicate that these grape cultivars will thrive in our climate. We will continue to observe their adaptation, and develop approaches to training, pest management, fruit thinning, and winemaking.

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