

Workshop Title: Growing Organic Grapes

Speaker(s) & their titles: Bruce Ewert, L'Acadie Vineyards

#### Executive Summary:

Bruce has previous experience growing wine grapes in British Columbia. At L'Acadie Vineyards (located in the Gaspereau Valley, NS) he currently has 10 acres of L'Acadie blanche grapes, and makes sparkling wines. Some of his reasons for growing organically include providing good stewardship of land; avoidance of unnecessary chemicals; the soil expresses itself better in wine when grapes are grown organically, particularly the mineral content of soil; and sometimes carcinogenic chemicals can leak into non-organic wines, posing a risk to health. Bruce picks most of his grapes by hand and processes them in large and small basket presses.

#### Notes

##### Pre-planting:

- It takes about 2 years to get land ready before it's ready to plant. Turn over soil to get rid of weeds, harrow, lime (Bruce recommends a 5.8 – 6.0 pH). For a cover crop Bruce used Courtney tall fescue grass as it's low nitrogen using, plus he mulched
- Obtain vine cuttings in late winter (Feb-March) from dormant vines. Propagate from those cuttings to create new plants.

##### Propagating:

- In a greenhouse: take a cutting and plant in peat moss, ameliorated with a seedling mixture of alfalfa + bone meal, in peat pots. Water daily, and the cutting will eventually leaf out and grow roots (April). By June it's ready to plant in the vineyard

##### Planting:

- Use a machine (subsoiler) to rip soil 1-1/2 ft down. The vines can then be planted in the loosened soil at spacing of 3-4 ft. Bruce kept his cover crop between the planted rows.
- Row spacing has to be wide enough to let a tractor through, so you must figure out the width of your tractor before you plant. Bruce has 10 ft row spacing, with 3-4 ft vine spacing. Give more space for a more vigorous vine

##### Growing Strategies:

- Grapes don't like to have wet roots. In wet soils one can use drainage tiles to improve the drainage of the soil. Wine growers should seek well-drained soil if possible, with minerals such as slate. Remember, as an organic grower, one is heavily relying on the soil

##### Irrigation:

- Heavier soil can withstand drought better, but lighter soil can't and irrigation is often a

necessity. Bruce used drip irrigation for first few years

#### Weed Control:

- must mulch very well first few years. Can use black mulch. Bruce used sawdust in his first year, and added manure under the sawdust to minimize loss of nutrients from the decomposition of the sawdust. This gave him a reasonably good yield
- now uses a living mulch – white clover. Simply ripped out the clover where he needed to plant new vines. But on a sloped farm, clover might not give a tractor enough traction

#### Trellising:

- can't use pressure-treated posts if you are organic (they are arsenic based and hard to dispose of). Bruce used galvanized metal posts (\$8-10 each) which are durable and worth the cost, won't need replacing after a few years. End posts are hemlock, square posts (4x4, 10ft long). Also can use cedar posts if you don't have rocky soil

#### Site Selection for Growing Grapes:

- Heat units: important to consider when looking for a site. Nova Scotia gets about 1000 heat units per year. The minimum for grapes is 800 heat units per year
- Frost free days: need at least 180 per year (6 months). Fall and spring frosts limits what you can grow, and the varieties you can plant
- Winter temperatures: -30°C gives substantial winter kill, -20°C gives a little bit of winter kill
- Slope: need to have cold air drainage in cooler climates to avoid a frost bucket
- Water drainage: need well drained soil, or use drainage tiles if you have wet soil
- Soil: rocky is good, sandy is ok. Keep in mind different soils have different characteristics and will affect the taste of your grapes

#### Art of Winemaking:

- L'Acadie is a producer and processor
- Winemaking is the perfect marriage of art and science
- Too much art: science (in the form of microorganisms) may overtake and ruin the wine
- Too much science: technically correct wine with no character or complexity may result

#### Diseases in Vineyards:

- Powdery and downy mildew: problematic in moist climates like the Maritimes. Grow grapes that are resistant to mildews, like the L'Acadie grapes. Compost teas can also be used to combat mildew, by using a high-fungal compost in a teabag, putting it in boiling water (1000 L tank), and spraying the black liquid onto the leaves to inoculate them.
- Black rot: use potassium bicarbonate and sulfur to combat it
- Botrytis: no real organic remedies for it. But by having a healthy canopy with good air circulation, and clean vines can really help to prevent it

#### Sulfites:

- are produced naturally by yeast, and so are naturally contained in wines. In organic wines the sulfate level is half of the conventional level. Organic producers are allowed to add it, but try to minimize their use. This means one must have very clean fruit and processing areas in order to minimize the necessity of sulfate.