

Great Lakes Fruit, Vegetable & Farm Market EXPO

December 9-11, 2008

DeVo Place Convention Center, Grand Rapids, MI



Wine Grapes

Tuesday morning 9:00 am

Where: Grand Gallery (lower level) Room D

Recertification credits: 1 (1C, PRIV OR COMM CORE)

CCA Credits: PM(0.5) CM(1.0)

Moderator: Mark Longstroth, SW Michigan District Fruit Educator, MSU Extension

9:00 a.m. Training Programs for the Wine Grape Industry

- Linda Jones, Michigan Grape and Wine Industry Council

9:20 a.m. Rootstock Choice for Fine Wine Production

- Jim Wolpert, Viticulture and Enology Dept., Univ. of California - Davis

10:00 a.m. Canopy Management in Pinot Noir

- Paolo Sabbatini, Horticulture Dept., MSU

10:20 a.m. Fruit Rots in Wine Grapes

- Tom Zabadal, SWMREC, MSU Extension
 - Paolo Sabbatini, Horticulture Dept., MSU
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TRAINING PROGRAMS FOR THE MICHIGAN WINE INDUSTRY

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Skills development is an important consideration in economic development. If Michigan's wine industry is to grow at an accelerated pace, we must enhance training opportunities for people already in the industry and particularly for those considering careers in the industry.

Wine Grape and Wine Industries are complex businesses

- Small business skills
- Agricultural skills
- Beverage alcohol industry
- Tourism

Sources of Training and Professional Development

- Develop a hobby into a business over time
- On the job training
- Learn from observing and interacting with peers and competitors
- Local Chambers of Commerce, Convention and Visitors Bureaus etc.
- Trade Associations
- Trade Journals
- Suppliers and Allied industries (banks, insurance brokers, packaging suppliers, yeast manufacturers)
- Community Colleges
 - Credit and non-credit courses (writing a marketing plans, financial management of a business)
- Universities
 - Michigan State University Extension programs (eg. Product Center, Vit Extension programs)
 - Michigan State University Research programs
 - Michigan State University Educational programs
- Meetings and conferences

Recent activity in moving towards increased capacity for Training and Professional Development in the Michigan wine industry:

- Dr. Paolo Sabbatini hired by MSU as a viticulturist in Jan 2007
 - extension component to his position.

Paul Jenkins (MSc.) was hired by MSU in 2008 with part of his duties assigned to coordinating enology extension programs for the industry, and other responsibilities for small fruit education programs (including grapes).

Dr. Tom Zabadal (MSU) held a Vineyard Establishment Conference in March 2008 and is planning a Winery Establishment Conference for February 2009.

Expanded programming at Great Lakes Expo, NW Orchard and Vineyard Show, SW Horticulture Days, Viticulture Field Days – non-credit education

Wine Industry Annual Meeting

Institute of Agriculture Technology (MSU) looking to expand Plant Science programming in partnership with Michigan community colleges

VESTA Program
– Viticulture and Enology Science and Technology Alliance

www.vesta-usa.org

Based at Missouri State University

Series of courses developed to provide on-line learning opportunities in Viticulture and Enology. Most have a practicum component that can be completed near the student's home location. Can be taken as stand alone learning opportunities for continuing education or can be combined with General Education courses at community colleges to offer accreditation – certificates or associates degrees.

Introduction to Viticulture and Vineyard Establishment
Integrated Pest Management
Midwest Vineyard Management
Soils for Viticulture
Introduction to Enology
Winery Sanitation
Winery Equipment Operation
Intermediate Enology
Cellar Operations Technology
Sensory Evaluation
Wine and Must Analysis

Cost of each course is \$200 - \$400.

The goal here in Michigan will be to partner with community colleges in the wine regions and integrate MSU extension programs with these practicum experiences.

For more information, contact Linda Jones 517 373-9789 jonesL9@michigan.gov or Tom Smith (MSU, Institute of Agricultural Technology) 517 355-0234 smitht48@msu.edu

ROOTSTOCK CHOICE FOR FINE WINE PRODUCTION

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Rootstock choice is an important but difficult decision. It is important because once the decision is made, of course, it is impossible to change without removing the vineyard. It is difficult because of the dizzying array of factors to consider. Rootstock choice is made in concert with other long-term vineyard design decisions, such as row and vine spacing, trellis type and scion cultivar. This article will attempt to discuss some of these complications with the goal of giving growers food for thought.

The considerations for selecting rootstocks can be grouped into five general areas.

Soil. A site analysis will show the soil type and its characteristics. Issues of concern are pH, salinity, poor drainage (waterlogging), drought and variability. Fortunately in California our soils are, generally speaking, within a pH range that is adjustable prior to planting, are not excessively saline and are not prone to waterlogging. Rootstocks are reported to have varying adaptability to these conditions but a grower must rely on data from other states or regions, or support local research, if these conditions exist. California is prone to drought and rootstocks such as 110 Richter, 1103 Paulsen and 140 Ruggeri have been imported and released for this purpose. Even with the availability of drip irrigation, water supplies are not always reliable or plentiful and growers keep an eye to ensuring that vineyards can withstand even temporary episodes of water stress.

With the advent of soil measuring devices (electro-conductivity, ground penetrating radar, soil probes) growers are able to get a much better idea of how much soil variability is present at a site. Even in California's valley floor soils variability is much greater than was anticipated. Changes in soil type and depth can occur very abruptly and frequently, even in small blocks. Growers do try to create their irrigation blocks to match the soil type as closely as possible but farming efficiency limits the number and minimum size of blocks. It is safe to say that a vineyard solution has not yet been found to address this concern but as we have recognized that this condition is more widespread than first thought, it is now clear that research is needed.

Pests and Diseases. In California, phylloxera is nearly ubiquitous so the need for good phylloxera resistance is a given. However, rootstock pest problems do not stop there. Many of our vineyards are second and even third generation of grapes following grapes. Nematode problems develop over this long timeframe but solutions such as soil fumigation are rapidly being taken off the table. Rootstocks are a sustainable and environmentally sound alternative but until recently we have not had durable and broadly resistant choices. There are no rootstocks that resist all species of nematodes so a site specific assessment of which nematode species are present will drive the choice. Soil fungi are worthy of attention but usually do not pose limitations.

Nursery. One of the forgotten aspects to rootstock choice is availability. Many growers have studied the literature and extension recommendations and settled on a rootstock only to find that it is not available. Once a grower has narrowed down the possibilities it is prudent to contact nurseries to get a preliminary idea of the supplies of each. A grower should be aware that some rootstocks do not benchgraft well (e.g. 420A Mgt) but are able to be field-budded perfectly fine when supplied with good rootings.

Scion. An important part of rootstock choice is what scion it will be grafted to. Provided one has options after the considerations above, the general rule-of-thumb is that growth of lower vigor cultivars is boosted with higher vigor rootstocks while growth of high vigor scions is moderated by low to moderate rootstocks. This is not always true, of course, and more is said about this relationship in the following section. Some rootstocks influence fruitset and this must be taken into account. A classical example is Rupestris St. George, a rootstock that reduces berry number per cluster. This is a positive effect when grafting tight-clustered cultivars where reduced fruitset will reduce rot potential. However, where poor-setting cultivars, or clones of cultivars, are used St George should be avoided. Rootstocks have been implicated or suggested in a host of other attributes related to grape flavor and wine sensory characteristics, but this is largely uncharted water. One can easily imagine that a rootstock imparting high vigor to a scion cultivar would result in, say, shade-induced pyrazines (herbaceousness) to wines. This is not a rootstocks effect *per se* but, rather, an indirect effect; shade caused by any other factor would have the same effect.

Balance. Finally, we arrive at a need to integrate rootstocks into vineyard design. This is no simple matter. We usually have insufficient data to be confident of our choices but, nevertheless, this step must be deliberated. As was mentioned above, rootstock vigor usually contrasts with scion vigor with the aim of creating a moderate growth. However, if a close-spaced vineyard is desired, for whatever reason, then a rootstock choice would be limited to lower vigor than normal, even for a low vigor scion. If a wide-spaced vineyard is anticipated, especially if it was to be a divided canopy, then a higher vigor rootstock would be chosen even for a high vigor scion. Growers in California are adjusting vine spacing in concert with their rootstock choice and site conditions but in the end are crossing their fingers and hoping that the resulting growth will be manageable. Conversely, when rootstock choice is driven by site factors towards one particular stock, adaptations may have to be made to vineyard design that are not a grower's inclination.

Importantly, consideration must be given what market niche a vineyard block is intended for. When desired final quality is high, California growers will tend to "dial down" rootstock growth and, conversely, when aiming for "value wines" will tend to "dial up" rootstock growth.

In conclusion, rootstock choice is important but difficult and involves many factors some of which are beyond the control of the grower. Nevertheless, site, pests, nursery availability, scion and balance should be weighed. In addition, consideration should be given to including a row or two of two other rootstocks that were under consideration. This may prove to be informative when future plantings are being planned.