Title of Project: Selecting Appropriate Training Systems and Levels of Crop

Control: Adapting Current Technologies to Meet the Specific Conditions of Michigan Winegrape Production

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Objectives:
General- This has been an area of emphasis since we were encouraged to pursue the direction by industry leaders in the mid-1970's.

Specific- At SWMREC several efforts have been concluded in 2003. This 2002 report will be the next to last report for Chambourcin, Pinot noir and Chardonnay. It will also result in major modification of efforts on Cabernet Franc @ SWMREC and Riesling at Fenn Valley Vineyards. Also included were efforts on Vignoles and Vidal blanc at SWMREC. Those vines suffered complete crop loss in 2002.

1) Chambourcin- Compare High Head (Umbrella Kniffen) and High Cordon (Hudson River Umbrella, HRU) at 3-cropping levels.

2) Chardonnay and Pinot noir- F or 2-clones of Chardonnay and 3-clones of P. noir grown for sparkling wine, compare Low Head (Modified Guyot, VSP) and Low Cordon (VSP cordon).

3) Cabernet Franc- This has 6-training systems: Modified Guyot, VSP Cordon, HRU, Scott-Henry, Mid-Wire Sylvoz, and Fan. As sub-plots (for a split-plot statistical design) 4-shoot densities were employed.

4) Riesling- This plot contains 3-clones, trained to Scott-Henry, Modified Guyot, VSP Cordon, and Mid-wire Sylvoz.

Results:
1) Chambourcin- 2002 was the 11 th year of the effort. In 9 of those the better yield was on High Head Trained vines when both were pruned to the same nodes/unit pruning weight. Pruning in the range of the study suggested that 10 nodes/ Ib of prunings was adequate. It must be noted that vine vigor was low in this plot and we propose that Chambourcin be considered for grafting to a vigor inducing rootstock (5-BB?) to improve yield as has been shown for Seyval.

2) P. noir and Chardonnay Sparkling clones- VSP Cordon was superior to Modified Guyot.

3) Cabernet Franc- Data to date suggest that yields were ranked as follows for the training systems: Scott-Henry>Sylvoz>VSP Cordon>Fan>HRU>Guyot, but the range of difference was small. Yield increased as shoot density increased. This plot will be a major component of the 2003-04 proposed effort concerning Training systems/Canopy Density on levels of methoxypyrazines.

4) Riesling Clones- Training: No differences could be observed among the training systems (Sylvoz, VSP Cordon and Modified Guyot). Clones 21 and 198 were consistently more productive than 110. This plot will be modified in 2003-04 to eliminate the Training component and to put forward a Proposal with increased emphasis on Clone differences and specific evaluation on the terpenoid compounds which provide varietal character for Riesling.

Communication: In 2000 we published "Selecting the Optimum Training System for Grapevines in Michigan. This is available (16 pages complete with diagrams of the systems) for $1.50. I have spoken and written a paper "Selecting an Appropriate Trellis/Training System Based on Specific Variety Characteristics". That was in Arkansas. That was 8-pages and is available for $1.00. I have not been requested to speak on the topic in Michigan. The point of those publications is that we can employ straight-forward vine characteristics to project a successful training choice. Thus, in the future we can avoid the necessity of setting-up 5 to 7-year experiments to define acceptable training for varieties which we lack previous experience.

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