

MINUTES

NE1020: MULTI-STATE EVALUATION OF WINEGRAPE CULTIVARS AND CLONES

2005 ANNUAL MEETING

Wednesday, May 25, 2005, 9am-5pm

Founder's Board Room, Beuhler Alumni and Visitors Center, UC Davis

PRESENT: Mike Anderson, Alan Bakalinsky, John Barnard, Lorraine Berkett, Tom Bewick, Bruce Bordelon, Imed Dami, Paul Domoto, Anne Fennell, Bev Ferguson, Deborah Golino, Ed Hellman, Thomas Henick-Kling, Steven Lerch, Jim Luby, William Nail, Susan Nelson-Kluk, Bob Pool, Paul Read, Sue Sim, Sara Spayd, Krista Shellie, Tony Wolf, Jim Wolpert

AGENDA ITEMS:

Welcome And Introductions

Co-chair Deborah Golino welcomed the group and asked members to introduce themselves. She explained that she is a one-year co-chair and host for the group working with co-chair Bob Pool.

The Purpose and Operation of Multi-state Projects

Bruce McPherson said that multi-state groups are common and have existed for a while. The NE1020 project has a national scope despite being administratively headquartered in the northeast. He emphasized the importance and potential of this project for information and team-sharing around the country. He explained that funding will vary depending on the policies of each participants land grant university. Land grant universities treat CSREES funding differently. In some cases, the funds are transferred in a transparent manner, credited from accounts based on percentage of time allocated. This requires members to have filled out Appendix E and be official participants, although others may commit time if approved.

NGWI and Funding for NE1020 Participants

Tom Bewick encouraged the members to review what other multi-state groups have done, and to discuss the way the evaluations will be done as well as which cultivars to compare. He stressed that as long as protocols match, researchers can compare data across the country and it will be suitable for many publications. He suggested that the Viticulture Consortium (VC) might prove a long term source of funds for this work. He recommended VC East and VC West scientists meet and submit one joint proposal with sub-budgets and standardized methods rather than various separate proposals with differing methods. Collaborative activities are best for answering the question, "Why aren't people working together?" Dr. Bewick stressed the importance of the impact statement; analysing the impacts not just the activity. Discussion followed about whether a group such as themselves would write the proposal, without consensus.

Dr. Bewick spoke about the Specialty Crops Competitiveness Act and its effects on increasing NGWI activity. He discussed coordinating plans from different specialty crops, and how industry-based strategic plans allow members to go to the states and

request funds. He also mentioned the need for clean planting stock and the possibility that a National Clean Plant Network would be proposed for the next farm bill.

Reports from Members on Existing Related Trials

Bob Pool reported that he and his assistant, Steven Lerch, were restructuring the *vinifera* program at Cornell University. He has worked on evaluating *vinifera* clones and sees interest in developing the program. One group is working in the north by Lake Champlain with others in Quebec and Vermont, looking at fully hardy varieties; other programs include Bruce Reisch's breeding program and Alice Wise on Long Island.

Thomas Henick-Kling spoke of trials in different sites, including Rieslings in the Finger Lakes area and other grower trials.

Sara Spayd of Washington State University discussed her work evaluating new varieties including rootstocks. They now have 90 varieties/clones in the new foundation blocks. She was interested in the elimination of crown gall from rootstocks, clonal evaluations, and "emerging" varieties.

Paul Domoto related his challenges at Iowa State University in establishing grapevine trials, having three consecutive early October freezes. He circulated a handout "Iowa Annual Report of Cooperative Regional Project, NE-1020-2005" which described two current studies; cultivar by management, and a wine grape cultivar trial. Some issues of interest are cold hardiness, soil pH and central Iowa soils with high organic matter.

Tony Wolf circulated a project progress report entitled, "Wine grape cultivar, clone, and training system evaluations." Virginia Tech began clonal evaluations in 1987, and is interested in clones that are well-adapted for specific locations – issues include cold or humid areas, high vigor and long seasons. He cited a need for wine evaluation including sensory evaluation and standards to compare wines of other states.

Paul Read provided a handout describing the University of Nebraska viticulture program research. He has put "watchdog" weather stations in 14 vineyard sites and is trying to map the state for "terroir adaptability zones" to advise potential growers about clones that are better adapted for their varying and often difficult conditions. Fifteen pests are monitored by trapping, with the Asian lady beetle an emerging problem. Grape production is small but growing, and the benefits most the rural communities, creating jobs and tourism.

Alan Bakalinsky of Oregon State University said that the Oregon growers are interested in cultivar and clonal trials, and that current evaluations are in cooperation with growers.

Krista Shellie brought a handout with details of the USDA-ARS work in Idaho. Cultural practices are similar to eastern Washington, with cold, aridity and high soil pH some of the limitations. A varietal vineyard has been established and she anticipates more work on clonal differences and enology.

Mike Anderson spoke of his work with Jim Wolpert at the University of California, Davis. There are fewer climate problems, but marketing is increasingly important. He has several clonal trials that will be visited on the fieldtrip Thursday, May 25, 2005. The clonal trials use virus-free material with very few exceptions. Running a multi-year clonal trial and trying to stay current with the available clones and industry interest has been challenging.

Jim Luby brought a handout on the University of Minnesota winegrape breeding and evaluation activities. They have been looking at germplasm and assessing the value for breeding. Initial screening for cold-hardiness, disease, herbicide and pest resistance has been followed by vineyard evaluations for phenology and fruit quality and small vinifications.

Anne Fennell spoke of her work at South Dakota State University with hybrids and advanced selections. Trials are in three locations with different climates and conditions.

There has been much interest from growers, as this is a growing industry with eight wineries and increased tourism opportunities.

Ed Hellman of Texas A&M University spoke about grape growing in Texas varying between the east and west regions, making multiple sites important there. Rootstocks are of interest due to phylloxera and nematodes in different areas. *Vinifera*, especially Bordeaux varieties, are primarily grown and they are looking for better-adapted varieties including Italian, Portuguese, Spanish and Greek.

Bruce Bordelon of Purdue University brought a handout describing his grape cultivar trials planted since 1992 at three Indiana sites. Hybrids, *vinifera*, imports and advanced selections have been added as they became available. There is a winemaking/enology group at Purdue. The focus is on identifying cultivars with excellent wine qualities that are adapted to Midwest conditions.

Imed Dami spoke of his work at Ohio State University with *vinifera*, New York hybrids and European selections. Cold hardiness is a main factor, and although *labrusca* for juice has dominated the industry, there is more interest in wine grapes now, particularly Italian varieties and clones. They have winemaking facilities.

There was general discussion about the role of exploration for new cultivars in these projects. It takes years, and there are quarantine, funding and trademark issues. There are nurseries with European partners that have facilitated the more rapid entry of new cultivars into the United States; it is possible the group could approach them about adding additional cultivars to their programs. The key to making this work is getting imports through quarantine and distributing material as quickly as possible. Good communication within the NE-1020 group should be helpful in facilitating this.

Experimental Design

Bob Pool led a general discussion about project factors, including the experimental design and replication. In order to make wine, it was suggested that a minimum of 100 lbs. of white grapes or 200 lbs. of red grapes would be needed. Transportation and winemaking abilities of individual research centers were other issues. Pooling resources was suggested, and using climate zones to avoid duplicating trials in very similar regions. An initial project will be to identify subregions. No decisions were made at this time.

Deborah Golino reviewed the packet of information handed out to participants and the meeting broke for lunch. Tony Wolf led the meeting when it reconvened following lunch.

General planning discussion resumed with the suggestion that there would not be a single plan that suited every area, and some groupings might be based on geography and climate, *vinifera* vs. hybrid, or hardiness. The issue was raised of how to bring existing trials into the project. Other multi-state projects have additional projects and report on these separately from the standard projects. It was decided to look at the ideal for new plantings and design them with a statistical base, and then see which existing projects could be brought in.

The concept of core plantings – indicator varieties that would be grown in all trials – was discussed. Other varieties and clones would be added to suit local interest. The list was narrowed down to one variety for each combination of hardiness and season length:

	LONG SEASON	SHORT SEASON
WARM	Cabernet Sauvignon 8	Merlot 3
COLD	Cabernet franc 1	Pinot noir 13

VERY COLD

Frontenac

St. Croix

This list was accepted and it was agreed that at least one row would be planted at each trial, with more if the location permits (2-6 clones per trial). These would be planted according to future protocols. A sheet was passed around for participants to indicate whether they are willing to put in plantings by 2007.

It was decided to group the states by similar hardiness zones for organizing subcommittees and plantings as follows:

WARM: CO, MD, PA, VA, CA, OR, WA, ID, MO, TX, OH, NE, NY, CT

COLD: MD, OR, CA, VA, WA, ID, IN, PA, CO, CT, NY, NE, OH, TX, MO, IA

V. COLD: CT, NY, NE, IN, IA, VT, MN, SD

Researchers would consider whether they want to put in multiple plantings if they would also be planted in similar sites, and how important it would be to duplicate the efforts. It was also mentioned that some clones are not available as certified or clean stock and they may have to use the best available nursery stock, which may have virus or other disease.

Methodology

There was general consensus to standardize, but the overriding principle was to use standard industry-accepted practices. Some of the issues discussed were:

- Cultivars from single "source."

- 24 vines in 6 reps

- 6' x 10' ±1' spacing

- C3309 rootstock for *vinifera*

- Training VSP for *vinifera*, HC double-trunked for hybrids

Other issues discussed include: canopy management, setting crop yields, shoot thinning, hedging, irrigation, and fertility including petiole analysis and preplant fertilizing. Hilling and pest management were considered local options. Tony Wolf will make a crop model and set target yield to distribute; it can be adjusted as needed in future years.

Data Collection

In addition to a narrative describing the vineyard management practices during the trials, data will be collected. There was discussion but no consensus on the specifics. Some of the items discussed were: temperature (Tony Wolf will check NWS standard height), total rainfall, solar radiation, soil temperature, climate, phenology, pruning weight, and shoot count. Bud necrosis and post-winter assessments were discussed for areas where cold-hardiness is a factor. Observational data will be taken for pests and diseases.

The differences in *vinifera* and hybrid cultural practices were considered and the merits of mixing them in randomized design weighed against their differing cultural methods. It was generally felt that since the *vinifera* and hybrid varieties won't be directly compared, it would make disease management and training simpler to have separate blocks.

Harvest parameters were considered as well as sampling by single berries or clusters. Sara Spayd offered to write and distribute her sampling procedure for juice analysis.

Enology and Fermentation

The goal is targeted at 200 lbs. fruit to make 80 liter fermentations. These would be in 100 liter stainless steel cans using a standard fermentation. Thomas Henick-Kling has a fermentation protocol. Winemaking methods for white wines and different regions were discussed and will be more specifically defined later, although there was agreement that the core group of cultivars should be fermented using the same method. The possibility was raised of shipping grapes if the research site did not have winemaking facilities. Evaluation of wine was also brought up. Jim Wolpert offered to look into having chemical analysis and sensory evaluation done, mentioning that there is a sensory scientist at UC Davis.

Existing Plantings

Most participants have existing plantings, and individual states with projects can report results. These experiences are expected to help in the decisions that will be made for NE-1020 projects as the researchers compare notes. It was suggested that the NE-1020 funding request should be proposed in its entirety but not include other unfunded existing projects. There was further discussion on how to submit this proposal and how to coordinate proposals and reports for related existing projects, whether funded or not. There was general agreement that, as much as possible, existing projects will try to match methodology and transition into it.

Clone Evaluation

The clone group could be separate from the variety group, and not every state is interested in the same clones. Subcommittees of those interested in the same clones are needed for clonal evaluations and working out the details.

Election of Officers

It was agreed that Deborah Golino and Bob Pool will serve as sustaining Co-Chairs until November 1, 2005. Beginning November 1, 2005, the officers will be:

Chair: Jim Wolpert

Host : Tony Wolf

Vice-chair: Sara Spayd

Secretary: Ed Hellman

Date for Next Meeting

The next annual meeting date has been set for **November 2-3, 2005 at the Virginia Research Facility**. This will be a 2-day meeting, with the business meeting on Wednesday, November 2 and a local event Thursday, November 3. Tony Wolf graciously offered to host the meeting and will send out materials to review and comment on before that date.

Recorded and submitted by:

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