

MINUTES

NE-1020: Multi-State Evaluation of Winegrape Varieties and Clones

2005 Planning Meeting

November 2-3, 2005

AHS Jr. Agricultural Research and Extension Center
Virginia Tech University, Winchester, VA

PRESENT: Alan Bakalinsky, Tom Bewick, Bruce Bordelon, Terence Bradshaw, Horst Caspari, Mark Chien, Peter Cousins, Paul Domoto, Matthew Fidelibus, Joe Fiola, Deborah Golino, Ed Hellman, Thomas Henick-Kling, Nancy Irelan, Kaan Kurtural, Steve Lerch, Anna Katherine Mansfield, Daniel Marcum, Bill Nail, Krista Shellie, Sara Spayd, Ed Stover, Keith Striegler, Fritz Westover, Tony Wolf, Jim Wolpert, Bruce Zoecklein

AGENDA ITEMS:

2 November

Welcome and Introductions

Chair Jim Wolpert opened the meeting and Tony Wolf welcomed the group to Virginia. Tony introduced Fritz Westover and provided a brief overview of the AHS Ag. Research and Extension Center. Jim Wolpert asked members to introduce themselves.

Recap of the inaugural meeting in Davis

Deborah Golino prepared an article on NE-1020 that will appear in upcoming issues of the FPS newsletter and the National Grape and Wine Initiative newsletter.

Report on Multi-state Projects and Federal Funding

Tom Bewick stated that Bruce McPheron was unable to attend this meeting because of an overseas commitment. Tom Bewick reiterated the intent of the multi-state project approach to encourage and facilitate coordinated efforts. The NIMMS system was described and its use encouraged. The NIMMS website provides links to all projects; the NE-1020 website is found at: <http://nimss.umd.edu/homepages/home.cfm?trackID=4034>

Tom Bewick provided an update on the federal budget. The conference report came out last week with a favorable budget for CSREES: 12-13% increase. There was a slight increase in Hatch funding. The Hatch formula funding system remains intact for now. The issue of shifting to a competitive grants system is likely to resurface. CSREES has developed a draft plan to implement conversion from formula-based to a competitive grants program. The Draft Plan is on CSREES website and members were encouraged to

review the plan and submit comments. Extension (Smith-Lever) budget received a good increase. There is potential for Smith-Lever to move to a competitive grants program if Hatch does so. Viticulture Consortium funding is stable: \$1.875 M divided equally east-west.

Viticulture Consortium Proposals

Tom Bewick reported that the Viticulture Consortium (VC) Directors are comfortable with the suggestion that NE-1020 should prepare 2 proposals: one for existing variety trials and one for new trials. Deborah Golino proposed that existing variety evaluation projects continue to be submitted individually for the 2006 RFP, and PI's with continuing projects should describe how their project will implement the NE-1020 standardized protocol as much as possible. Deborah Golina suggested that NE-1020 should focus on proposals for new projects; one to VC east, one to VC west. It would be appropriate for the 2006 proposals request funds for planning and plant material propagation.

Tom Bewick stated that continuing projects should show that they are progressing toward adoption of NE-1020 protocol. PI's must recognize that these projects cannot continue to be funded long-term through VC without adopting NE-1020 protocol. Tom Bewick will communicate this to VC Directors and thence to guidance committees.

NE-1020 should develop a 4-5 year plan showing budget request for current year and expectations for later years so VC can plan ahead. Tom suggested that proposals would be much stronger if state grower associations commit some matching dollars.

Tony Wolf expressed concern about continuing support for existing variety evaluation projects. Tom recommended that existing projects be incorporated into NE-1020 proposals as a transitional step to phasing in new variety testing programs of NE-1020. Deborah reiterated that we don't want to lose the value of existing trials so intent is to support for a while, but will probably not favorably consider proposals outside NE-1020. Tom suggested that scientists submitting proposals outside NE-1020 be encouraged to join the NE-1020 program.

Review and Approval of Minutes

Some member did not receive minutes prior to the meeting so the minutes were copied and distributed. Discussion and approval of minutes was deferred until Thursday.

A question was raised regarding the ability to invite others that are not official state representatives to NE-1020. Tom Bewick responded that yes, participation in NE-1020 is open to others, including ARS and industry, but each state can have only one voting official representative.

Thomas Henick-Kling brought up a possible typographical error in 25-May minutes which state that Pinot noir 13 is the core variety for cool climate; perhaps we intended PN

113. Deborah stated that it was stated correctly as PN 13 because it is the most commonly grown clone in California. And more importantly, PN 113 is not available as certified ENTAV. The final selection of PN clone can be decided later after consultation with industry.

Joe Fiola raised a concern about starting with highest quality plant material and crown gall-free vines. Deborah Golino stated that crown-gall free vines are not currently available and not doable in a short time frame. Deborah does not anticipate the clean vine program submitting a proposal for crown gall cleanup, but perhaps the eastern group can do so.

Keith Striegler suggested planning on a series of plantings as clean plant material becomes available or new varieties are released from breeding programs. Tom Bewick noted that the NE 23 apple trial used this approach to accommodate new plant materials.

NGWI update by Nancy Irelan

Nancy briefly described the history and objectives of the National Grape and Wine Initiative. NGWI is working to expand support for increased grape and grape products research and extension, and developing more funding support. NGWI is very active on Capital Hill and is working closely with CSREES, ARS to strengthen ties with federal government.

NGWI is working with AVF and Viticulture Consortium to realign research priorities and RFP. AVF is moving toward a more national scope in research priorities and funding projects, and using a national proposal review process. Clean plant material on a national level is a very high priority for NGWI and industry is very supportive of the NE-1020 program.

Jeannie Bremer has been hired as Director for administrative support with funding provided by CSREES. The NGWI website is online (<http://ngwi.org>). In addition to information about the organization, the website will be posting announcements of relevant funding opportunities.

Planting Plans for 2006-07 Season

1. Existing cultivar and clone plantings

A draft protocol from Tony Wolf was distributed and discussed with regard to applicability to existing trials.

A suggestion was made that each trial have a description of training system specifics and canopy characteristics. Discussion ensued over standardizing yields for varieties. Consensus was that cropping levels should be adjusted as appropriate for varieties and local conditions. Pest management practices should be reported, including: materials, rates, phenology. Report irrigation, fertilizer, and other inputs.

Proposed and agreed that measurements will be made and reported in metric system.

General evaluation metrics (Proposed minimum standards)

Plant performance

- Vine size
 - cane mass per linear length of row or canopy basis (divided canopies)
 - *Added* cane density (canes/meter): counting only “good” shoots (>25cm length). Adjust shoot density to some standard range.
 - How do we account for lost mass from summer pruned laterals? Suggestion: summer pruning is reported with data, but do not measure.
- Fruitfulness: crop per node or crop per linear length of row or canopy
- Other components of yield
 - From protocol
- Phenology (*change 50% to 80% for all parameters*: bud break, bloom, veraison, harvest). Discussion over how to define standards: bud break out of all population of flower buds. Similar for bloom, veraison on fruit retained for harvested.
- Derive crop to pruning weight ratios
- Fall acclimation, cold hardiness and field survival (Optional)
 - Periderm: Total # nodes, nodes with periderm, calculate %, sample whole vines; ignore lateral shoots
 - Controlled freezing evaluation: monthly Dec-Feb. (minimum), Oct.-March (preferred) Use 3°C freezing rate. Well-matured nodes that could be retained out to node position 10.
 - Percent primary bud kill (with subtraction of bud necrosis in fall – requires an early assessment in addition to later assessment). Preferred 60-100 buds.
 - Notes on observations on vascular damage, canes, cordons and trunk kill. May be able to use new cold hardy publication as a standard reference for testing protocol.
- Pest tolerance – descriptive observational notes and/or quantitative measures or rating system. Use standard local pest management program.
- Abiotic stress – Descriptive observational notes.
- Vine nutrition – tissue analysis (optional)
Nutrition Subcommittee: Matt, Horst, Krista

Meteorological Data: Need to standardize parameters and perhaps instruments.

Meteorology Subcommittee was created (Tony Wolf, Alan Bakalinski, Horst Caspari, Kaan Kurtural, Greg Jones). Committee will develop minimum required measurements and protocols and select heat summation models.

- Temperature, hourly data
- Rainfall (off-station, nearest weather station) Skybit may provide interpretative measure.
- Heat summation calculated based on models
- GPS coordinates of test sites

Fruit Composition

- Fruit sampling protocol: 100-berry samples per treatment, per replication
- Measure Brix, pH, TA
- Process at harvest (within 2 days)

Potential processing protocol:

(white grapes) Combined must sample at crush

(red wine grapes) Use blender technique outlined by Sara Spayd.

Processing methods have large influence on TA, pH, Brix so protocol must be standardized.

Existing processing protocols were accepted with understanding that we have 5 years before new trials will be harvested. Refinements to protocol will continue.

Proposal for New Trials

Participants were queried for anticipated new trials in 2007. Tentative indications are that eighteen states will develop a total of 32 trials in 2007. Participating states with number of trials in parentheses: VT(1), NY(2), MD(2), CT(2), MO(2), CO(2), NC(2), TX(1), IA(1), IN(2), KY(2), OR(2), ID(2), OH(2), CA(3), NE(1), PA(2), SD(1).

Each location will plant at least 2 core varieties for chosen “thermal” classification: Warm, Cold, Very Cold. Tony suggested that all core vines should be propagated and planted the same year in all appropriate locations for best comparison purposes. A single source for each core variety is necessary; single source for all core varieties is ideal. Overall goal should be to reduce the number of nurseries involved.

May be possible to obtain Warm and Cold core varieties from a single nursery for planting in 2007. This is preferred. Very Cold core varieties could come from a single eastern nursery. Order 5,000 vines per core variety to be prepared by nursery during winter 2007 for planting.

Deborah suggested that planning proposals should speak in generalities about trial plans and be specific about preparing plant materials for planting, finding propagators, refining continued planning and refining protocols. Tom Bewick added that what we are trying to do with VC is unique and supportive, but cannot provide all of the costs of this project.

Each state should come up with a commitment from industry or other outside source to provide half of the project cost as matching dollars to VC proposal.

Ed Stover reported on germplasm repository program to clean up the *Vitis* collection. He requested that NE-1020 participants review the list of accessions and identify top 40-50 priority accessions for clean up. These could be evaluated in later rounds of trials for NE-1020.

3 November

Jim Wolpert reviewed the action items for today and future.

1. Current trials: No change from previous years. PI's submit to VC-E or VC-W
2. Planning proposal – Order and purchase of plant materials
3. Coordinate/prioritize plots & materials
4. Confirm Subcommittees
 - a. Meteorology: Tony Wolf (Chair), Alan Bakalinki, Horst Caspari, Kaan Kurtural; Greg Jones will be invited to participate
 - b. Juice analysis: Bruce Zoecklein (Chair), Sara Spayd, Bruce Bordelon, Thomas Henick-Kling
 - c. Vine nutrition: Matt Fidelibus (Chair), Horst Caspari, Krista Shellie; Joan Davenport and Terry Bates will be invited
5. Next Steps: location, host, secretary
6. Reports/minutes: one report from each state

Jim Wolpert suggested that we develop a matrix of what varieties or at least number of varieties (“slots”) within each trial so we know the total number of vines to purchase. Compromise will be necessary, not all can be funded. Participants listed their desired varieties for trial and Tony Wolf recorded the complete list of varieties.

Mark Chien emphasized that we should all consider how we can share variety performance information from nearby trials and avoid similar testing if we can reasonably share information. It should be possible to split variety lists between two similar sites and share performance data.

Bruce Bordelon raised concern over the significant gap in original standards between cold and very cold categories. Bruce pointed out the need for a group of moderately cold hardy varieties, such as French Hybrids. It was proposed and agreed to add a 4th category. Chambourcin, Traminette, and Vidal blanc were discussed as potential core varieties.

The Variety Categories were modified and core varieties confirmed:

Warm: Cabernet Sauvignon, Merlot

Cool: Cabernet Franc, Pinot noir

Cold: Chambourcin, Vidal blanc
Very Cold: St. Croix, Frontenac

Keith Striegler noted that we should be testing new hybrids from NY and MN programs so we can have performance data in advance of release of new varieties.

Tony Wolf suggested that trials could utilize “revolving slots” to enable removal of under-performing varieties and replant the slot with a new variety. Concern was expressed over statistical analysis in such a situation.

Proposal coordinators were identified – Jim Wolpert for VC-W; Tony Wolf and Keith Striegler for VC-E. A deadline was set for 1 December for participants to notify the proposal coordinator of the number of slots needed for each trial, the Variety Category (thermal group), and the planned planting year.

Tom Bewick explained that VC-E funding of a NE-1020 project would use same procedure currently used for all VC-E grants; Cornell is the administrative coordinator and will sub-contract with each PI.

Tom reminded the group that we will need to find other sources of funding to match with VC. Deborah Golino suggested that perhaps we should state in the RFP that if a PI cannot match at least 50%, the trial should be scaled back in size or variety evaluation information should be obtained from other locations. Deborah suggested that the VC could pay for plants in the first year, but matching dollars will be required in subsequent years to demonstrate commitment to following through with the trial.

Tom stated that NGWI and AVF should be considered as potential future sources of funding due to recognition of variety evaluation as high priority by industry. Nancy Ireland interjected that industry feels it is important to develop prioritized regional wish lists of new plant material.

Tony Wolf provided an estimate of annual operating costs for a research vineyard as \$3,000 per acre.

A cost estimate for production of experimental wines was given as \$500 per 5 gal. Carboy, not including sensory analysis.

Clean Plant Network

Deborah Golino described the objectives of the Clean Plant Network. The hope is to get a special project grant through APHIS, ARS, CSREES, or some other federal agency. The recent FPS newsletter has an article on the program. NGWI has identified this as a very high priority.

Ed Stover reported that the NPGS will fingerprint the entire grape collection in next 18 months. Results may reveal that we already have a lot of the varieties that we want to import. Once varieties are identified they can be cleaned.

Existing Trials Revisited

Deborah encouraged all PI's of existing trials to note within their proposals that they are participating in NE-1020 and adopting protocols appropriately. A suggestion was made to develop a boilerplate paragraph for all continuing proposals describing participation in NE-1020.

New Trial Protocol Revisited

A discussion took place on the location of new trials at Experiment Stations versus cooperating commercial vineyards. Keith Striegler noted that advanced selections and new varieties from breeding programs often have non-propagation agreements, which probably necessitates that testing be done on Experiment Stations. Tom Bewick added a concern over sensitivity of new variety information; breeders have a difficult time getting a plant patent if information has been widely published. It was agreed that NE-1020 should encourage grape breeders to attend our next meeting to provide insight on how to incorporate advanced selection testing into NE-1020 trials.

It was suggested that we make a recommendation on soil conditions, especially drainage in our trial site selection criterion.

The choice of a standard rootstock was discussed. The previous choice C-3309 is probably not appropriate for all locations. Other possible standard rootstocks were discussed including 5C. Self-rooted will be necessary for varieties in the Very Cold group. It was agreed that protocol should allow some flexibility in rootstock choice based on local conditions.

A similar discussion ensued regarding the universal appropriateness of VSP as the standard training system. Again it was agreed that some flexibility in training system should be allowed.

The group approved the practice of exceeding the standard number of vines per replication. It was noted that more vines are probably necessary to obtain an adequate quantity of fruit for experimental wines.

The group affirmed a commitment to conform as closely as possible to standard protocol, while recognizing the need for some exceptions to conform to local best practices.

Jim Wolpert proposed that the next meeting devote significant time to discuss standard protocol and how to accommodate exceptions.

Jim reiterated the need to share variety performance data with comparable locations to conserve slots for testing more varieties. Try to coordinate with other similar sites but don't feel confined.

Tom Bewick noted that the NE-1020 project has been approved to 2017 so there will be opportunities for change over time and additional trials.

Tom Bewick informed subcommittee chairs that he has conference call phone numbers available for subcommittees to conference for NE-1020 business.

The next annual meeting will be hosted in North Carolina by incoming Chair Sara Spayd. The tentative dates are 7-8 November, 2006.

An interim mid-year meeting was proposed to speed finalization of protocol and other business. Tom Bewick noted that the project cannot hold two official annual meetings in the same fiscal year. An unofficial work session was proposed for June in conjunction with the ASEV meeting in Sacramento.

Jim Wolpert requested clarification on this year's reporting requirements. Existing trials should not be reported under NE-1020. States should identify official representative to NE-1020 and provide a brief description on what new trials will be established and the number of varieties.

Election of secretary for 2006-2007: Horst Caspari.

Action item: Jim Wolpert will contact ASEV about scheduling an NE-1020 work session during the meeting in Sacramento.

Action item: Jim will contact all official representatives requesting reports (via e-mail) by the June meeting.

Committee acknowledged and thanked the efforts of Jim Wolpert, Tony Wolf, Deborah Golino, Sara Spayd, and Tom Bewick.

Meeting adjourned 12:04pm