

CSU Enology Program, Menke 2008 Summary: 01/02/2008 to 02/28/2009

Position: *Stephen Menke, CSU Assoc. Prof. of Enology & CWIDB Colorado Statewide Enologist*

Position Charge: 60% Teaching/Outreach/Extension, 30% Research, 10% Departmental Service

Program Responsibilities: Initiate and perform duties of new Enology Program, including: 1) developing cooperative outreach infrastructure for the CO wine industry, such that an interactive industry development process is enhanced among entities in industry, university, and state government; 2) performing educational and technical services to improve interactive dialogue, industry brand enhancement, wine quality assessment methods, wine quality, winery start-up success, winery business efficiency, and wine marketing success; 3) developing necessary research capacity and perform research to enhance knowledge of sensory and chemical characteristics of wines grown in various locations in CO, including terroir effects of cultivar, soil, climate, altitude and horticultural practices; 4) teaching enology courses in HLA and aiding in initiating enology internships between students and mentoring wineries; 5) providing CO wine industry perspective and knowledge nationally to peers, professional and industry organizations, and governmental entities.

Publications and Media Reports

-No peer-reviewed publications in 2008, one manuscript in progress

-6 PowerPoint presentations and 4 informational handouts for educational seminars [See attached jump drive, file folder *Menke 2008 Addendum A*, for electronic copies of 10 files]

Academic

-*Task*: Teach HORT 277 and HORT 477, as part of required coursework for HLA concentration in Viticulture and Enology

-*Progress*: 1) developed final course content for and taught HORT 277, Enology I, Spring 2008, to 8 students; 2) developed final course content for and am teaching HORT 477, Enology II, Spring 2009, to 13 students

Research (started or planned)

-*Task*: Infrastructure for wine research and monitoring laboratory not fully in place and cooperators needed

-*Progress*: 1) \$25K and \$27+K of CDA and \$25K of RMAVV start-up funds prioritized for laboratory upgrade and research capability; 2) invested \$12,000 of CSU and departmental start-up money on general laboratory upgrade and experimental winemaking equipment; 3) have used \$52,000 to purchase GC-MS components, w/CDA and RMAVV funds, for sensory and chemical wine and grape analysis; 4) co-submitted, with Ramesh Pokharel, \$20K proposal for

shared laboratory upgrade to molecular biology capabilities → not funded; 5) explored possibilities and entered discussions for participation in private, non-profit Colorado research and marketing foundation for wine, food, and agri-tourism → non-profit in process of legal formation; 6) initiated contacts with 5 CSU colleagues, 3 of them in HLA, → 2 collaborative pilot studies to be initiated in summer 2009

-Task: Many Grand Valley wineries report and preliminary station data indicate that high K⁺ levels in must and wine are a source of concern for pH and wine stability over time. What are sources of K⁺ in these musts and wines?

-Progress: 1) Collected pilot samples to look at K⁺ levels in Syrah in leaves and grapes during véraison, in must, in juice, and in wine after fermentation skin contact → sample data analysis pending

-Task: Indicators of ripeness, maturity, and flavor optimization in grapes appear to often be asynchronous in many Colorado grapes and wines. Need to develop grape sensory evaluation index for CO wines

-Progress: 1) Did background survey of research data for juice chemical composition for Colorado varieties and locations and determined need to do preliminary experiment with grape sensory evaluation index for one variety and several locations, to enable correlation index to guide further experimentation; 2) am designing 2009 experiment to assess sensory properties of several CO locations for Riesling and Syrah

Outreach

-Task: Assess current state of Colorado wine industry, including determination of: history, motivation, current operation status, plans for future operations, needs from CSU outreach, and sensory quality of wines both pre-bottling and post-bottling

-Progress: 1) ([See attached jump drive, file folder *Menke 2008 Addendum B*, file “*Summary of 2008 Site Assessments of Colorado Wineries*”]):

-Task: Use the CSU Enology position as a communication node for interactions and planning among stakeholders from CSU/state and national industry and academic entities/Colorado Wine Industry Development Board (CWIDB) in Colorado Department of Agriculture/media/wine consumers

-Progress: Cohesion and cooperation and recognition among stakeholders greatly enhanced as a result of the following contacts: 1) Industry planning and research collaboration progress meetings w/CSU stakeholders (eight meetings); 2) Planning and progress meetings w/industry stakeholders (eighteen meetings); 3) media contacts resulting in media publication about the Colorado wine industry and CSU enology program (ten); 4) representing CSU at national extension/industry/academic planning meetings (two meetings); 5) representing CSU at national

industry/academic meetings, by presenting technical talks and giving training sessions (seven talks and one training session)

-Task: Colorado Wine Quality Assurance program not functioning

-Progress: 1) Presented a quality assessment plan I developed in Pennsylvania and could be used here; 2a) refined methodology, developed by me, for hybrid evaluation system for wine sensory quality assurance; 2b) gathered further statistical proof of data methodology at panelist training session (10 people) and statistical data on commercial wine quality evaluation by hybrid panel (47 wines evaluated), at sessions directed by me and co-operators at Penn State University; 3) CWIDB and Colorado Association for Viticulture and Enology (CAVE), the main CO wine industry entity, have approved a pilot of this quality assessment plan for 2009 (See attached folder *Menke 2008 Addendum C*); 4) have scheduled industry training of panelists, in Spring/Summer 2009, in quantitative descriptive analysis techniques, to serve on Colorado Wine Quality Assurance testing panel; 5) will convene trained Colorado Wine Quality Assurance testing panel late 2009 or early 2010, to evaluate CO commercial wines

-Task: Enhance ability of industry stakeholders to achieve wine quality, winery business success, and industry reputation: 1)

-Progress: Held technical workshops, training sessions, and quality assurance evaluation: 1) co-organized and co-taught, with Dr. Larsen, two “Winemaker’s Microscopy” seminars on use of microscope for identification of microbiological spoilage organisms in wine, at Rogers Mesa station on June 11th for 6 people and at station at Orchard Mesa on June 13th for 9 people; 2) organized and held multi-speaker workshop (4 CSU speakers, 1 U. of Nebraska speaker, 1 NE industry speaker), on building a new base for hybrid vines and wineries in non-traditional Colorado winegrowing regions, titled “New Frontiers for Colorado’s Wine Industry”, for 47 attendees from industry and public 4) organized regional Winemakers Roundtables, intended to be localized forums for industry to critique their own wines and methodologies and as a communication nexus for these local groups among themselves and with the CSU Enology Program, with 2 meetings already held in Ft. Collins and Hotchkiss, and future meetings scheduled at Ft. Collins, Orchard Mesa, Cortez, and Canyon City.

-Task: Perform problem-solving outreach

-Progress: 1) average about 20 emails and 6 phone calls and 2 face-to-face calls/week for advice or solutions for technical winemaking; 2) site visits involve 4-5 technical issues per visit; 3) marketing and promotion aid, involving intensive sessions with 4 wineries and occasional spot advice on product niche placement and inventory control, especially with older wines; 4) more than a dozen interviews and articles, most with Fresh Ideas, some on own