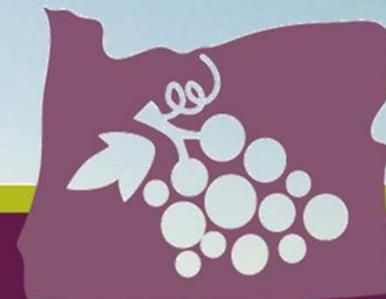


Oregon *Wine* Research Institute



2012 Harvest Newsletter



OSU
Oregon State
UNIVERSITY

College of
Agricultural Sciences

Photo Courtesy of D. Gabriel

OSU's Woodhall Vineyard



Photo courtesy of P. Skinkis

The 2012 season is one of the best in recent years. The season had a great start in late April, and despite rain occurring during bloom in the earliest sites, fruit set was moderate across the state. Seasonal heat unit accumulation was several hundred units higher in all regions compared to last year.



Photo courtesy of P. Skinkis

The 2012 season was one of the driest in recent years with only 0.6-0.7" rainfall from July through September in the Willamette Valley and eastern Oregon, 0.9" in Hood River, and 0.07" in Medford. This allowed some moderation of vine growth late season in dry-farmed vineyards across the Willamette Valley. While irrigation is commonplace in eastern and southern areas of the state, the Willamette Valley utilized more irrigation in high density vineyards and those on more shallow soils within the Willamette Valley.



Photo courtesy of P. Skinkis

The favorable weather from July through the first half of October allowed adequate time for fruit development and ripening before fall rains began. Most producers were able to obtain more favorable Brix levels this year compared to 2010 and 2011.



Photo Courtesy of D. Gabriel

Morgan Curtis, MS student in Dr. Patty Skinkis' lab, helps collect fruit samples in a leaf removal trial conducted at OSU's Woodhall Vineyard near Alpine, OR.



Photo Courtesy of D. Gabriel

Two exchange students from Mexico joined Dr. Michael Qian's lab for the fall this year. They experienced their first grape harvest and are conducting important flavor chemistry work on the fruit this fall with other members of the Qian Lab.



Photo Courtesy of P. Skinkis



Photo Courtesy of P. Skinkis

Photo Courtesy of D. Gabriel

Dr. Patty Skinkis and her team was out in force this harvest, gathering yield data and cluster samples across seven research trials in commercial vineyards from the Dundee Hills down to the Illinois Valley. Harvest in rain presents particular challenges and practical innovations are developed to get the job done, rain or shine.



Photo Courtesy of P. Skinkis

Photo Courtesy of P. Skinkis

Alison Reeve, MS student in Dr. Patty Skinkis' lab, weighs and separates fruit for chemical analysis from a study at Stoller Family Estate Vineyard investigating the impact of vine vigor and crop level on vine balance, fruit and wine quality. Remaining fruit was used for small lot wine production. Wines were produced by collaborators, Leti Catoira-Rice and Rob Schultz of Stoller Family Estate Vineyard.



Photo courtesy of Leti Catoira Rice



Viticulture research does not end in the field. Alejandra Navarrete (left) and Alison Reeve (right) remove collect data on cluster size, weight and architecture for various trials in Dr. Skinkis' Viticulture Lab.

Tedious counts of berries per cluster are important to understanding changes in fruit set, berry size, and physiology as related to various studies from nutrition to crop thinning.





Photo courtesy of P. Skinkis

Drastic canopy differences can be seen in a N-P-K nutrition trial this season. The research team includes Drs. Paul Schreiner, Patty Skinkis, James Osborne, Michael Qian, and Jungmin Lee, all of the OWRI. They are investigating the nutritional impacts from vine physiology to wine quality.



Fruit from the N-P-K nutrition trial was made into small lots of wine that allow researchers to understand the role of nutrition along the entire production spectrum. Alejandra Navarrete, MS student (left), monitor production of all 44 wines!



Photos courtesy of A. Navarrete



Photo Courtesy of D. Gabriel

On a cold and rainy Friday, Amanda Vondras, doctoral student in Dr. Laurent Deluc's lab, gathers clusters for her research focusing on the genetic mechanisms that lead to synchronous berry ripening.

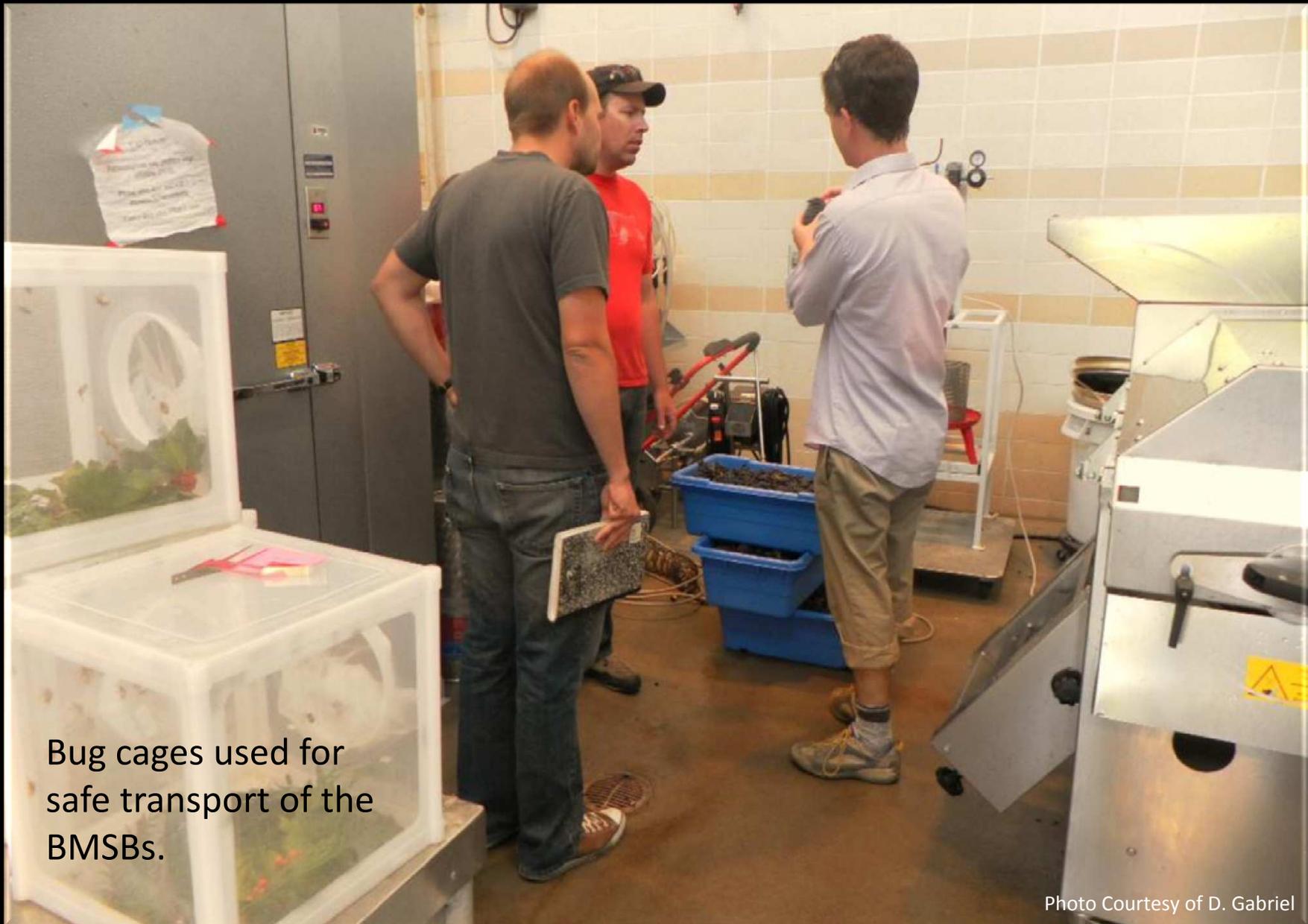


Photo Courtesy of P. Skinkis



Photo Courtesy of D. Gabriel

To track individual berry ripening, members of the Deluc lab tag the pedicels of berries with thread (left) and paint (right) to differentiate between the stages of berry ripening.



Bug cages used for safe transport of the BMSBs.

Photo Courtesy of D. Gabriel

Grapes infested with the Brown Marmorated Stink Bug (BMSB) were used in research investigating the impact of stink bugs in wine. Entomologists, Chris Hedstrom and Dr. Nik Wiman of Dr. Vaughn Walton's lab, discuss the project with Bentley Chappell, a student in Dr. James Osborne's lab.



Photos Courtesy of D. Gabriel



Enologists at OSU, Dr. Elizabeth Tomasino and Dr. James Osborne work with student Bentley Chappell to load grapes into buckets for the crushing and destemming process.



Photo Courtesy of D. Gabriel

The crushed and destemmed grapes ready to be inoculated for primary fermentation with BSY yeast. After destemming and crushing, the grapes were placed in cold soak for 5 days, and primary fermentation took about 12 days. The grapes were punched down once a day through fermentation.



Photos Courtesy of S. Laverty

Dr. James Osborne gives members of the OSU Vitis Club a tour of the Pilot winery. While there, he takes the time to punch down some research wine.





Photo Courtesy of D. Gabriel

After primary fermentation, the grapes are ready to be pressed. Dr. James Osborne and Dr. Elizabeth Tomasino prepare the Willmes bladder press for use.



Photo Courtesy of D. Gabriel

A bladder press consists of a large cylinder, closed at each end, into which the fruit is loaded. To press the grapes, a large bladder expands and pushes the grapes against the sides. The juice then flows out through small openings in the cylinder. The cylinder rotates during the process to help homogenize the pressure that is placed on the grapes.



Photos courtesy of D. Gabriel

Chris Hedstrom, Dr. Vaughn Walton's lab, funnels the pressed wine into carboys where it will undergo malolactic fermentation at the OSU research winery. Eventually, this wine will be used for sensory analysis.

OSU Woodhall Vineyard

A place where research and education meet.



Photo Courtesy of D. Gabriel

Ryan Wilkinson, horticulture student at OSU, served as the fourth student in the Viticulture & Enology Program history to serve in the important role of student vineyard manager.



Photo Courtesy of S. Laverty

Ryan helped coordinate student efforts at this research and teaching facility during 2012. He is joined by fellow students, John Yeo (left) and Bentley Chappell (right).



Photo Courtesy of S. Laverty

Members of the Vitis Club, an OSU Viticulture & Enology Program student organization, harvest Pinot noir grapes at OSU's Woodhall Vineyard. The grapes they picked were processed and used in various research trials.

*Wishing you a safe and happy Holiday Season from the
Oregon Wine Research Institute!*



Photo Courtesy of Lynn Ketchum

OWRI Team Members from back to front and left to right: Paul Schreiner-Research Plant Pathologist-USDA/ARS, Laurent Deluc-Assistant Professor, Horticulture-OSU, Walt Mahaffee-Research Plant Pathologist-USDA-ARS, Michael Qian-Professor, Food Science and Technology- OSU, Patty Skinkis, Assistant Professor, Viticulture and Extension Specialist, Horticulture-OSU, Bill Baggess-Interim Director-OSU, James Osborne, Associate Professor, Food Science and Technology-OSU, Elizabeth Tomasino, Assistant Professor, Food Science and Technology-OSU, Vaughn Walton-Associate Professor, Extension Entomologist, Horticulture-OSU, Danielle Gabriel-Program Administrator-OSU. Not Pictured: Gabriel Balint- Extension Horticulturist, SOREC/OSU, Clive Kaiser-Extension Horticulturist, Umatilla County Extension-OSU and Bob Martin-Research Leader, Research Plant Pathologist, USDA-ARS

Photos from
various sources

Text by
Danielle Gabriel
& Dr. Patty
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