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2015 - 2016 Calendar of Coming Events

December 14  Pest Management Strategic Plan for Wine Grapes. OSU Researchers in viticulture will be meeting with industry representatives and producers from around the state to get feedback on what the most critical insect and disease pests are in each region. By tracking this information the wine grape industry will be able to apply grant monies to the most critical issues. These pest management strategic plans also help EPA to better understand what products are being used and what new products are needed to aid in evaluation of pesticides for new registration. The meeting for Southern Oregon producers will be held in the Josephine County Extension office at 215 Ringette Street in Grants Pass on Monday December 14 from 1pm-3pm. Any wine grape industry person is encouraged to attend.

January 13-15  Western Orchard Pest and Disease Management Conference. This is the premier conference in the western regions of the country for researchers and industry to share strategies and research results for controlling orchard pests. The conference will be held at the Hilton in downtown Portland. Visit the following link for details and registration. http://www.tfrec.wsu.edu/pages/wopdmc/Home. As in other years, there will be separate presentation tracks for insect pests and diseases.

January 21-22  Oregon Tempranillo Celebration. The program is intended to bring Tempranillo wine grape producers from across the state together to discuss terroir factors affecting the production of this Spanish wine grape varietal in Oregon. The seminars include research seminars and technical wine tastings. The event will be held at the Ashland Hills Hotel in Ashland Oregon. The cost of the membership is $100. Check the web page below for more details. Contact the Oregon Tempranillo Alliance c/o Les Martin/Treasurer, 541-846-6800, 11777 Hwy 238, Jacksonville, OR 97530 for registration. http://www.greatnorthwestwine.com/event/oregon-tempranillo-celebration/

January 21  Nut Growers Society Winter Meeting. The meeting will take place at the CH2M HILL Alumni Center and LaSells Stewart Center on the Oregon State University campus. If you have not been to this venue, it is in Corvallis, right across 26th Street from Reser Stadium. There is a lot on the agenda including information about growing, marketing, and supply and demand. Please check link for details. http://www.oregonhazelnuts.org/growers-corner/grower-news-events/winter-meetings-summer-tour/

January 29  Fruit Tree Pruning Session. This class is open to the public and will be held at the Master Gardeners Discovery Garden near River Forks Park from 1pm-4pm. The class will cover the basics of pruning peaches, plums, cherries, apples, pears, and figs. Please come to the class prepared to do hands on learning. Bring a loppers and a hand saw. Dress for the outdoors in late January. This class will have online registration coming in January. Just mark it on your calendar now and register online after the holidays in January. This will be the first class for our new online registration system that we will start using in 2016.

This publication will be made available in accessible formats upon request. Please call 541-672-4461 for information. If you have a physical disability that requires special considerations in order for you to attend an event, please notify the office at 541-672-4461 no later than 2 weeks prior to event date.
Irrigation Efficiency for 2016

With the El Nino weather pattern looking pretty strongly in place for the winter of 2015-2016, that means we may not get as much rain and snow fall in the mountains in Western Oregon as we would like. In El Nino years Oregon tends to get less rainfall than average and when we get moisture it typically will be delivered with warmer rainfall systems. Another winter with a lack of snowfall should encourage growers to start thinking about steps to take for a potentially drier future. Planning ahead for the 2016 growing season will be important. This topic was addressed in a recent article in Wines and Vines magazine by Glenn McGourty, UC Extension winegrowing advisor for Lake and Mendocino counties. His comments were aimed at grape growers but are relevant for all of irrigated agriculture.

1. When designing irrigation systems for vineyards (or orchards), plan for the capability to have differential watering to give you more flexibility if you have variability in soil types.
2. Use water efficient rootstocks. Those are most often more vigorous. It is usually easier to devigorate vines than to make them grow well without water.
3. On soils with low vigor potential, space vines closer together, anticipating that they are going to be smaller.
4. Anticipate dry years by matching your vine canopy size to available water resources. Count bud numbers and increase or decrease them based on rainfall and projected water supplies.
5. When water is limited, ration your water to apply it judiciously at critical growth stages: before bud break, before bloom, at veraison, and try to save some to apply late to prevent dehydration before reaching critical harvesting criteria.
6. Keep your irrigation system in top condition. Avoid leaks, keep filters working well, and emitters running at top efficiency and uniformity.

Bee Vectoring Technologies, New Ideas in Agriculture

Agricultural researchers have been working on an interesting new approach to crop protection that would harness bees to deliver non-toxic crop protectants to flowers of fruit and vegetable crops. This concept of crop protection turns the typical spray program on its head. Producers would not be spraying their crops with protectants, instead they would place trays of a powdery material at the exits of bee hives that the bees would crawl through. The powder would contain the bio-controls and stick to the bees when they are exiting the hive. The products delivered in this fashion would potentially allow growers to minimize environmentally damaging products that drift off target.

This type of program will of course only work when producers are using bio-controls, products designed to enhance the natural defense mechanisms of plants, or products that are natural enemies to a pathogen of the crop. Bio-controls can also be fungi or bacteria that attack insect pests that visit a plant to feed. Many companies are already making large investments in this technology that will be used initially in the organic pest control industry. The fact that over 70% of world food crops are reliant upon bees to pollinate makes this type of technology a very interesting growth area for future pest control systems.

Advise Young People that Agriculture is a Top Job Growth Area

A report from Purdue University and the USDA estimated that about 60,000 jobs are set to open up in agriculture, food, and natural resource sectors each year for the next five years. I have been sharing for years with high school students that agriculture is a great career choice, but this job estimate surprised me. The jobs that this study is talking about not only include production agriculture, but all the high tech support that is necessary for our modern ag industry.

The number of people now working on farms in the U.S. make up less than 1% of our population. The majority of positions working in agriculture in the future will mostly be high tech and involve science and technology degrees. One of the problems the American agriculture industry is now facing is that there are not enough qualified graduates to fill all the jobs opening up. Young people in general do not know anything about agriculture because their families and communities are so removed. The USDA is estimating that two job openings will soon exist for each graduate in the agriculture and natural resource industries. The USDA is concerned that the shortage of qualified candidates for jobs in agriculture could lead to food production problems during the next twenty years as the world population continues to grow. The USDA is encouraging land grant universities and Extension to advise students in all locations to the excellent career opportunities in agriculture. However, a difficult perception that is not easy to overcome is that jobs in agriculture will be boring and limited in scope in our exciting high tech world.

Here are a few examples of what types of interesting research is going on that young people could be involved with in future careers. Today I read about the expanding role that drones will play in monitoring crop health through infrared photography. Drones will also apply the majority of pesticides in the future, greatly reducing potential exposure to people and the environment. An earlier article in the HortNews talked about how bio-control agents will be delivered by bees to flowering plants to control pests. There
are new soil monitoring devices being developed that can analyze the amount of CO2 coming off of soil to tell you how healthy your soil is biologically. With water resources in the western U.S. often scarce, greater attention will focus on making water delivery systems more efficient and making plant water stress monitoring more transparent.

When I talk with young people about these types of high tech careers in agriculture they are surprised and often very interested. Please help me spread the word to young people in our area about the nearly limitless possibilities to have a great career in agriculture. If you have students contact you with more questions about careers in agriculture, send them along to talk with me and I will help them find contacts at OSU or other universities that have relevant programs.

Agricultural Chemical Collection Event

A free agricultural chemical collection event will take place in Grants Pass on March 4, 2016 and in Medford on March 5, 2016. The events are for small and large farms or farm contractors who have agricultural pesticides and or containers for disposal. Anyone who wishes to dispose of agricultural chemicals at this event will need to pre-register and make an appointment. Growers from Douglas County are welcome to participate.

Details can be found on the Jackson Soil & Water Conservation District website: [www.jswcd.org](http://www.jswcd.org). For more information contact: Amy Sager Patton, Hydrogeologist Patton Environmental LLC. 541-690-9983 email: pattonenv@gmail.com

Dramatic Increase in Viral Diseases in 2015

The dramatic drought of the past few years, especially in California, has alerted producers and researchers to closely evaluate their crop problems. Growers have observed that vegetable crops have been getting a number of viruses that have not been an issue before. This has been especially evident in the coastal valleys that are surrounded by foothills, pastures, and other lands that are covered with weeds and native plants. In the dry hills and pasture land are plants infected with viral diseases. Large numbers of insects, typically aphids and thrips, were also present in these dry surrounding areas during winter. With the poor winter rains these non-crop areas dried up early in 2015, pushing insects down out of the hills to the irrigated crop areas. Along with these insects have come the viral diseases that have persisted throughout the entire growing season of 2015.

A number of the viral diseases have been identified. Lettuce crops were hit with cucumber mosaic virus, alfalfa mosaic virus, and turnip mosaic virus. The symptoms caused were extensive yellowing with leaf deformities and stunted growth. Spinach crops were also hit with cucumber mosaic virus and impatiens necrotic spot virus. The symptoms were yellowing and twisted growth. Beets and Swiss chard also suffered from the same problem. Brussel sprouts and cauliflower also were hit by the cucumber mosaic virus causing strange leaf distortions and mangled growing points.

The reason I am sharing this with you is that we are having some of the same weather pattern changes that California is having. If you are producing vegetable crops and have seen some odd growth habits or growth distortions, let me know so I can come out to your fields to evaluate the situation. When weather changes, so often do the plant pathogens, insect populations, and other pests.

Cover Crop Research on Decomposition Rate & Nutrient Release

Cover crop research in Maryland with the university and the USDA-ARS examined mixtures of two cover crop materials, ryegrass and hairy vetch in order to learn more about the rate of decomposition and the persistence of the mulch material.

It is already known that cereal rye decomposes slowly and provides long lasting mulch. However, microbes trying to decompose the coarse material tie up nitrogen for following crops. The hairy vetch decomposes faster and will provide available nitrogen more quickly, but doesn't provide any mulch cover for weed control.

Researchers set out to evaluate what the best proportion of each of these materials would be. A second question was also being evaluated, how would the rate of decomposition change when adding poultry manure to the cover crops before cultivating fields?

Research results showed that in fields where more hairy vetch was sown with the cereal ryegrass, the rate of decomposition did increase. In fields where more cereal ryegrass was sown, the rate of decomposition decreased as expected. When poultry manure was added to the cover crop fields, the rate of decomposition increased dramatically, but only in fields where over 50% of the field mix was cereal ryegrass.

The method of applying the poultry litter also played a role in how fast the cover crop decomposed and released nitrogen. When the litter was applied on the surface and mixed with the cover crop residues, the rate of decomposition and nitrogen release increased. However when the poultry manure was spread on and plowed under the surface of the soil, the rate of decomposition did not increase.

This research points out how managing the mix of cover crop materials, the application of manures or not, and the type of incorporation of materials will allow growers to customize cover crop use for their specific needs.
To find local Extension information & news . . . Douglas County/OSU Extension Web Site:
http://extension.oregonstate.edu/douglas/

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