

Central Oregon Agriculture

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MAY/JUNE 2016

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Central Oregon Forage Field Day Tour

The Central Oregon Hay Growers' Association, OSU Extension Service (Crook, Deschutes and Jefferson Counties and Warm Springs), and Central Oregon Ag Research Center will be holding a Forage Field Day Tour on May 10, 2016.

9:00 am	COARC, 850 NW Dogwood Lane, Madras Orchardgrass Clipping Height/Simulated MiG Trial (1st year)
10:00 am	Jeff Whitaker Farm, Trial at 2285 SW Iris Ln., Culver, OR Nitrogen Rate Effect on Timothy Hay and Use of Greenseeker (2nd year) LESA Pivot in a Wheat Field
11:30 am	Danny Clark Farm, 8407 NW 31st Street, Terrebonne, OR Potassium Rate Effect on Alfalfa Hay (3rd year) Lime and Potassium Effect on Alfalfa Hay (2nd year)
Noon	No Host Lunch at Restaurant of Your Choice
2:00 pm	Steve Wheeler Farm, 18565 Couch Market Road, Bend—West & South of Tumalo Tilled and Non-tilled Lime Rate Effect on Incremental Depth Soil pH and Mixed Grass Species Hay (2nd year)
3:00 pm	McGinnis Ranch, 64990 Collins Rd, Bend—West & South of Tumalo Potassium Source and Rate Effect on Mixed Grass Species Hay (3rd year) Nitrogen Rate Effect on Mixed Grass Species Hay (2nd year)

For more information and to RSVP, contact Mylen Bohle at OSU Crook County Extension Office 541-447-6228.

Mylen Bohle

Oregon Forage and Grassland Council Annual Meeting and Seminar & Tour

The OFGC Annual Meeting and Seminar will be held on Thursday, May 12, 2016 at the James E. Oldfield Animal Teaching Facility on the OSU Corvallis Campus (address is 3521 SW West Campus Way). Annual Meeting starts at 9:00 am. Some of the highlights for the day include "Pasture for Pollinators"; a "Pasture Walk"; "Stockpiled Forage for Getting through the Summer Slump" tour. Registration: OFGC Members \$15, Non-members \$25, Students \$10.

<http://www.oregonforage.org/events/>

Mylen Bohle

Central Oregon Wine and Grape Growers' Association Meeting

The Central Oregon Wine and Grape Growers' Association (COWGGA) Dinner Meeting will hold their next meeting on May 18 at the Wind River Banquet Room (Order from Pumphouse menu).

6:00-7:00 pm	Social Hour and Dinner (no-host). (Attendees may bring a bottle of wine for educational purposes)
7:00-7:30 pm	Travelogue and PowerPoint show of some of the Lake Bromont wine region of Quebec, Canada (SE of Montreal) by Mylen and Diane Bohle.
7:30-8:00 pm	Round Table Discussion "Growing Central Oregon's Wine Industry".

Directors are: Dan Tippy, Dina Barker, Robert Sowers, and Kerry Damon. Questions COWGGA, contact Kerry Damon at 54-280-6243. <http://www.centraloregonwine.com/>.

Mylen Bohle

Central Oregon Agriculture is a bi-monthly newsletter produced by the Central Oregon Extension offices and the Central Oregon Agricultural Research Center (COARC). The intent of this newsletter is to extend agricultural research-based information, to solve problems, develop leadership and manage resources wisely. Please direct comments and changes to the mailing list of your local County office.

- ◆ Mylen Bohle, Editor, (541) 447-6228
- ◆ Kim Herber, Ag Newsletter Coordinator, (541) 447-6228

Central Oregon County Extension Offices (all area codes are 541)

Crook County Extension Service - Phone 447-6228,
498 SE Lynn Blvd., Prineville, OR 97754

Deschutes County Extension Service - Phone 548-6088,
3893 SW Airport Way, Redmond, OR 97756

Jefferson County Extension Service - Phone 475-7107,
850 Dogwood Lane., Madras, OR 97741

Warm Springs Indian Reservation - Phone 553-3238,
1110 Wasco St., PO Box 430, Warm Springs, OR 97761

Central Oregon Agricultural Research Center

- ◆ Carol Tollefson, Director, 475-7107
- Madras Site - Phone 475-7107, 850 Dogwood Lane, 97741
- Powell Butte Site - 8215 SW Hwy. 126, 97753

Extension Service & Experiment Station Web Sites

Crook County: <http://extension.oregonstate.edu/crook>
Deschutes County: <http://extension.oregonstate.edu/deschutes>
Jefferson County: <http://extension.oregonstate.edu/jefferson>
Central Oregon Agricultural Research Center:
<http://loreregonstate.edu/dept/coarc/index.php>

Central Oregon Agricultural Extension Service Staff

- ◆ Dana Martin, Regional Administrator, 548-6088
- ◆ Mylen Bohle, Crops, Cereals, Hay, Pasture and Irrigation, 447-6228
- ◆ Marvin Butler, Research
- ◆ Tim Deboodt, Range Resources and Livestock, 447-6228
- ◆ Amy Jo Detweiler, Horticulture, 548-6088
- ◆ Scott Duggan, Livestock, 553-3238
- ◆ Jeremiah Dung, Plant Pathology, 475-7107
- ◆ Tracy Wilson, Soil Health and Plant Nutrition, 475-7107
- ◆ Toni Stephan, Horticulture and Small Farms Instructor, 548-6088
- ◆ Nicole Strong, Forestry, 548-6088
- ◆ Carol Tollefson, 475-7107

The above individuals are devoted to extending agricultural information to producers. Many of the individuals, in addition to agriculture, have assignments in research, 4-H Youth, administration and community resource education. Often it is appropriate to mention brand names of some commercial products; however, they are used only for the purpose of information. Extension does not guarantee or warrant the standard of the product, or does it imply approval of the product to the exclusion of others.

Youth Tractor Safety Training—June 13-15, 2016

Tractor Safety Training and Certification course sponsored by the OSU Extension Service. Training will include classroom work, homework and tractor driving. This is for youth ages 14-17, who are interested in summer employment opportunities in the upcoming agricultural season. Farmers who employ minors are required to hire those who have completed and passed a tractor safety training program. The deadline to register is June 1, 2016. The training will be held at Central Oregon Agricultural Research Center (COARC) in Madras. Register at the link provided: https://apps.ideal-logic.com/osuextension?key=F3T0-25VWY_K9KH-5PTF_2d94947d For more information please contact Jon Gandy at 541-475-3808. Jon Gandy

OSU Range Field Day—Tuesday, June 28, 2016

Come and join us at this year's OSU Range Field Day. The program will highlight the Camp Creek Paired Watershed and 22 years of studies looking at the hydro-logic connections between western juniper and watershed health. Water yield, the impact of tree canopy interception on precipitation and vegetation-ground water interactions will be discussed. The program will begin at Brothers' School, Brothers, Oregon. Registration begins at 8:30 a.m. with the program to begin at 9:00 a.m. with the day ending by 4:30 p.m. Bring a lunch and a pair of good hiking shoes. OSU Range Field Day is sponsored by the OSU Department of Animal and Rangeland Sciences, OSU Eastern Oregon Ag. Research Center (Burns and Union) and the USDA Ag Research Service (Burns). For more information contact Tim Deboodt, OSU Crook County Extension, 541-447-6228. Tim Deboodt

“Cars, Not Cows, Are the Main Source for Greenhouse Emissions”

This is a very interesting article in the Farmer Stockman (April 29, 2016). The article was written based on the white paper “Livestock's Contributions to Climate Change: Facts and Fiction” written by Frank Mitloehner, Professor and Air Quality Specialist, Department of Animal Science, UC Davis. This white paper, defines the role animal agriculture and other sectors of society play in their respective contribution of greenhouse gases, as the societal concerns grow to seek a sustainable global future.

<http://farmprogress.com/story-cars-cows-are-main-source-greenhouse-gas-emissions-25-140671>

Mylon Bohle

2016 High Desert Educational Agriculture Tours

High Desert EATs have five themed farm tours in Jefferson County:

Flowers, Herbs and Vegetables, May 21, 2016, 9am – 2pm

Water, June 11, 2016, 9am – 1pm

Beverages, June 25, 2016, 8:30am – 1:30pm

Seeds & Pollinators, July 9, 2016, 9am – 12pm

Field Crops, August 13, 2016, 9am – 12pm

Each tour has 3-5 farm or agriculture business visits where tour members learn from the farmers directly. Tours last between 4 and 5 hours. On the first tour, Flowers, Herbs and Vegetables, tour members will be able to purchase fresh, seasonal produce and locally made products. An iced cooler will be on board the shuttle van for to keep your purchases chilled throughout the tour. A locally sourced lunch is included in the registration price for the Beverages and Seeds & Pollinators tours. We suggest a minimum age of 21 for the Beverages tour.

Shuttle van service is included in the registration price for each tour and is hosted by local 4-H students who will provide history and commentary about agriculture in the area between the farm visits. Earth2O is providing water on board. Register for tours on line: <http://hdffa.org/events> or via Facebook: High Desert EATS. Katie Ralls

Water Hemlock

If you are a farmer it is a sure sign of spring when you see irrigation water in the canals. It is the time of year when irrigation systems are started and livestock are eagerly looking for green grass after the long winter. Green grass typically emerges early in the spring along irrigation ditch banks due to easy access to water. Unfortunately, water hemlock is also one of the first plants to emerge early in the spring and grows amongst the grasses on the banks of central Oregon irrigation ditches and canals.

Often described as the most deadly plant in North America, water hemlock is a member of the parsley/carrot family and can be mistaken for the edible water parsnip. The dark green, lance shaped leaves of water hemlock are easily identifiable, along with the bulb like white rootstalk that contains hollow chambers and a very poisonous liquid that has a strong carrot-like odor. This deadly liquid is found principally in the tubers or roots, but is also present in the leaves, stems, and immature seeds. If the tuber is cut or broken, it exudes a highly poisonous brown or straw-colored liquid. This liquid is deadly as animals have been poisoned when water hemlock roots were trampled in the water releasing the toxic liquid and killing animals that drank the contaminated water. All parts of the plant, including the seeds, are toxic with the roots being the most deadly part of the plant. Typically, when livestock graze water hemlock; the whole plant is pulled out of the soil due to the wet conditions along the ditch banks and it is eaten root and all, especially with cattle. This is always fatal. Most livestock deaths are cattle, but all livestock species and humans are vulnerable. It only takes a piece the size of a walnut to kill a 1,200 pound cow.

Symptoms typically appear in as little as 15 minutes or up to six hours after the plant is ingested, depending on how much of the plant and what part is eaten. Death can occur at any time. Fortunately, animals tend to avoid this plant when other forage is available, but they will consume it when pastures grasses are short and grazing is poor. Consumption and poisoning may also occur when hemlock is present in green chop, silage, or hay. Even when it is mature and dried out, it still possesses toxins.

The best way to avoid livestock losses from water hemlock poisoning is to eliminate it. If eradication is not complete, then areas known to be infested with water hemlock, especially in the early spring, need to be strictly avoided by using fencing or by moving livestock to other pastures. Similarly, it is critical when cleaning ditches or clearing land to avoid exposing the toxic roots of water hemlock, which then can be more easily ingested by livestock. To eliminate water hemlock, pulling by hand is very effective when the soil is moist. Be careful to pull the entire plant, including all roots and dispose in a garbage bag, and haul to the proper waste management facility. Burning hemlock that has been pulled may be hazardous, as the smoke may contain toxins that could cause severe illness and even death.

Water hemlock plants require caution when handling. Be sure to wear appropriate gloves as contact dermatitis is possible. If you contact the plant (especially the root) with your hand and then touch your eyes or mouth, you can become ill. For more information, contact your local weed control authority or OSU Extension for specific recommendations.

*This article is condensed. For the entire article and literature cited please contact: Scott Duggan, Deschutes County Extension office at 541-548-6088 or by email: scott.duggan@oregonstate.edu.

Scott Duggan

USDA UNVEILS NEW 'URBAN AGRICULTURE TOOLKIT' FOR URBAN FARMERS AND AGRI-BUSINESS ENTREPRENEURS

<http://www.usda.gov/wps/portal/usda/usdahome?contentidonly=true&contentid=2016/04/0099.xml>

The USDA has released a tool kit to assist urban farmers in starting a farm business. This has a lot of information that will also help any farmer in considering what it takes to start or manage a farm operation. Read the introduction from the USDA below.

“Small community gardens, urban farms that span several city blocks, and intensive indoor hydroponic or aquaculture facilities are all examples of urban agriculture. This fast-growing phenomenon has the potential to nourish the health and social fabric of communities and create economic opportunities for farmers and neighborhoods. But it also comes with a unique set of challenges and opportunities.

Urban farmers, federal and city government agencies, and local organizations around the country have developed a variety of tools to help address those challenges and assist the growth of agriculture in cities. This toolkit makes these resources available to anyone interested in participating in urban farming.

The toolkit lays out the common operational elements that most urban farmers must consider as they start up or grow their operations. It also contains a special section on resources for developing indoor growing operations, such as aquaponics facilities. For each element, the toolkit identifies technical and financial resources that have been developed by federal, state, and local partners. While some of the elements require local-level solutions (e.g. zoning), federal programs and services can support a variety of activities related to urban farming.”

I recommend this as a place to get answers to many management considerations even if you are not in an urban area.

Toni Stephan

Pasture and Grazing Management Field Day

Deschutes County SWCD, NRCS, and OSU Extension Service will be holding Pasture and Grazing Tours throughout the Spring through the Fall. The tours will start at 6:00 p.m. and conclude at dusk. The pasture will be our laboratory and our focus will be all things related to pasture and grazing management during each month of the year. Tammy Harty and Jan Roofner, Deschutes County SWCD, Mylen Bohle & Scott Duggan, OSU Extension Service, and Tom Bennett, Nicole Kovach, and Karlie Wyman, NRCS, will be participating, as their schedules allow.

Agenda and Discussion Highlights:

- + Introductions
- + Producer goals for the Pasture
- + Demonstration of Pasture Stick
- + Dig Plants & Look at Roots
- + Identify Pasture Plants (grass, legume, and forb species)
- + How do the Animals Graze
- + Soil Testing and Pasture Fertility
- + Soil Survey
- + Grazing Management and Plant Heights
- + Irrigation Management
- + SWCD & NRCS Programs
- + Pasture and Grazing Inventory Exercises
- + And Any Other Questions

Date and Locations:

- May 23 Cuvla Dudley Farm, 5680 SW Quarry Rd, Redmond
- June 21 Dancing Cow Farm, 2853 NE Johnson Creed Rd, Prineville
- July TBA Details will be in July/August CO Ag Newsletter
- August TBA
- September TBA
- October TBA

Please RSVP to Tammy Harty, Deschutes Soil and Water Conservation Service, at Ph: (541) 815-0203 or email: tammyharty@msn.com.

Mylen Bohle, Tammy Harty, and Scott Duggan

Agrimet Crop Water Use Program

The following table summarizes the crop water use or evapo-transpiration (ET) to date (May 5, 2015) for some of the irrigated crops grown in Central Oregon. For much more detailed information on these and other crops, one can log on to the Agrimet site at: <http://www.usbr.gov/pn/agrimet/>. There is general information about the program, weather data, crop water use information, graphs, maps, news, relevant links, and other information. You can follow the crop water use for these sites and other locations. The green up date or emergence date, canopy closing date, daily water use (ET), 7 day predicted use, and 14 day predicted use, are just some of the information you will find. Start-up dates may be different for each site for each crop. Agrimet is working in partnership with WSU to incorporate Agrimet data into WSU's Irrigation Scheduler. To customize crop consumptive water use specific to your field or fields go to <http://weather.wsu.edu/is/>.

Table. Accumulation summary of Crop Water Use or evapotranspiration (ET) to date (May 2, 2016) for Madras, Powell Butte, Christmas Valley, and Bend, OR Agrimet weather stations.

Crop	2016 Madras 2440 ft. (in)	2016 Powell Butte 3180 ft. (in)	2016 Bend Agrimet 3650 ft. (in)	2016 Christmas Valley 4360 ft. (in)
ETr	11.9	9.6	7.8	9.4
Alfalfa Peak	7.6	5.9	4.9	4.8
Alfalfa Mean	7.0	5.5	4.6	4.8
Pasture	5.6	4.9	3.4	4.7
Grass Hay Mean	8.7	7.5	5.5	--
Grass Hay Peak	8.6	7.5	5.5	--
Lawn	7.1	6.1	4.3	5.8
Winter Grain	10.3	8.0	6.5	7.3
Spring Grain *	2.4	2.0	1.7	
Spring Grain *	0.9	0.7	0.6	
Spring Grain *	--	--	---	
Kentucky bluegrass	8.0	6.9		

*Each site may have a different emergence date

Mylen Bohle

Irrigation 101

If you want some tips on irrigation management, go to <http://extension.oregonstate.edu/crook/irrigation>

If you would like more information on any of these ideas, or cost share programs, please contact your local OSU County Extension Service office, NRCS, or SWCD or Wy'East Rep, or Energy Trust Rep, or contact Mylen at 541-447-6228.

Mylen Bohle

Growing Degrees Update

If you are curious, this is how crop year 2016 compares to previous years, up to May 1... The following table shows a comparison of accumulated growing degrees back to 2008 for some central Oregon locations (Agrimet weather stations). Three different base temperatures are used: 32 degrees F for cereals and T-sum, 41 degrees F for alfalfa and grass growth, and 50 degrees F for grapes, soybeans, and corn growth. Comparison of day length: Madras > Powell Butte > Bend > Christmas Valley. <http://uspest.org/OR/index.html> is the web site.

Table. Accumulated growing degree comparison for 32, 41, and 50 degrees F base temperatures (“growing dds” is calculation method) as of May 1, for years 2016 to 2008 for Christmas Valley, Bend, Powell Butte, and Madras, Oregon.

Year	Christmas Valley			Bend			Powell Butte			Madras		
	32	41	50	32	41	50	32	41	50	32	41	50
2016	<u>1,281</u>	<u>745</u>	<u>363</u>	<u>1,407</u>	<u>754</u>	<u>357</u>	<u>1,441</u>	<u>805</u>	<u>375</u>	<u>1,561</u>	<u>876</u>	<u>412</u>
2015	1,432	871	423	1,522	848	391	1,563	900	421	1,505	848	394
2014	1,262	711	294	1,282	679	284	1,269	714	375	1,225	659	285
2013	1,050	566	251	1,227	622	249	1,200	621	245	1,232	623	250
2012	1,112	567	229	1,146	558	213	1,248	644	262	1,262	650	269
2011	868	401	106	993	446	118	1,041	493	137	1,165	578	174
2010	1031	483	176	1098	502	159	1,222	596	206	1,261	610	200
2009	986	507	187	1019	500	190	1,061	536	211	1,075	538	208
2008	888	439	163	929	449	157	983	477	164	1,048	526	169

(Growing degree calculation uses “growing dds” method) (32 degrees column is revised from previous years)

2016 T-Sum (degrees F) N Fertilization Dates in Central Oregon. (“Simple average” calculation is used to calculate for gdds, which is different from the above table.)

	Christmas Valley	Bend	Powell Butte	Madras
Grass Pasture* (360 dds)	February 24	February 16	February 15	February 15
Grass Hay (720 dds)	March 30	March 23	March 19	March 17

*if earlier pasture forage production is desired... With the loss of Ammonium Nitrate fertilizer, we are left to fertilize with Urea. Coated urea is needed to apply, which will lessen the volatilization of N, if we know we can't irrigate in a timely fashion. But, the time between application time and when irrigation water is available over the last few years, is greater than 30 days (the coating is only good for 30 days). Or we take a chance and depend upon rain to leach the N into the soil, but a small shower may increase volatilization before enough water is applied.

Mylen Bohle

NAFA Kicks Off First-Ever Alfalfa Checkoff Program

The National Alfalfa & Forage Alliance (NAFA) announces the creation of the first-ever *U.S. Alfalfa Farmer Research Initiative (aka Alfalfa Checkoff Program)*, a farmer-funded investment in alfalfa-related research to help drive innovation and profitability in the alfalfa industry. “Until now, alfalfa was the only major crop without a farmer-funded checkoff program,” said Beth Nelson, NAFA President. “That needed to change in order for alfalfa to remain competitive with other cropping choices.” The NAFA board of directors voted unanimously to begin a national checkoff program to facilitate a farmer-funded research program to advance industry research. The *U.S. Alfalfa Farmer Research Initiative*, implemented voluntarily by seed brand, will be assessed at the rate of \$1/bag of alfalfa seed. One-hundred percent of the checkoff funds will be used to support public research into alfalfa and alfalfa forage systems. More information at NAFA web site www.alfalfa.org or go directly to: <http://alfalfa.org/Alfalfa%20Checkoff%20Website.pdf>. This is some great news for alfalfa research, but still falls tremendously short of the amount that wheat, corn, and soybean research is funded through USDA.

Mylen Bohle

Crook County Crooked River Open Pastures

Free farm tours & rotating farmers market, Saturdays this summer from 10:00 am to 2:00 pm at the following locations:

May 7	Dancing Cow Farm & Prineville Lavender	July 16	Dancing Cow Farm
May 21	DD Ranch	August 6	Brasada Ranch
June 4	Wine Down Ranch	August 20	Prineville Community Garden
June 18	Windy Acres Dairy	September 17	Bluestone Gardens
July 2	Good Bike Co.		

Find farm addresses and more information in the 2016 Food & Farm directory or visit www.hdfffa.org

Mylen Bohle

Calendar

May

- 10 Central Oregon Forage Field Day. COARC, Madras (see article)
- 11 UC Grain and Forage Field Day. Davis, CA. Agenda at <http://alfalfa.ucdavis.edu>.
- 12 Oregon Forage and Grassland Council Annual Meeting and Forage Seminar. Corvallis, 9:00 am
<http://www.oregonforage.org/events/>
- 21 Barley Day, Corvallis, OR. 9:00 am – 5:00 pm <http://barleyworld.org/> \$35-\$50 for tickets
- 18 C. O. Wine and Grape Growers Association. 6:00 pm Wind River Banquet Room. Terrebonne (see article)
- 19 North Willamette Valley Field Day. TBA nicole.anderson@oregonstate.edu
- 23 Pasture and Grazing Management Field Day. (see article)
- 25 Hyslop Farm Field Day, Corvallis. 8:00 am. daniel.curry@oregonstate.edu

June

- 1 Tractor Safety Training Application Deadline (see article)
- 2 South Willamette Field Day. clare.sullivan@oregonstate.edu
- 6 Hermiston Wheat Field Day. ken.frost@oregonstate.edu
- 7 Pendleton - CBARC Field Day. mary.corps@oregonstate.edu
- 14 Pendleton- Ruggs Wheat Tour. mike.flowers@oregonstate.edu
- 15 Moro-CBARC Field Day. Moro. mary.corps@oregonstate.edu
- 13-15 C.O. Tractor Safety Training, Redmond. (see article)
- 20 Malheur County/Parma ID Cropping Systems Field Day. william.buhrig@oregonstate.edu
- 21 Pasture and Grazing Management Field Day. (see article)
- 28 COARC Wheat Field Day. Madras. katie.ralls@oregonstate.edu
- 28 OSU Range Field Day. Brothers. (see article) Tim Deboodt @ 541-447-6228

We are sending out a 1 page Ag e-Newsletter (updated calendar & pertinent short articles) every two weeks to those clientele with email addresses. Please contact your local county Extension office with your email address. If you would like to get all newsletters by email, please contact your Extension office.

CENTRAL OREGON AGRICULTURE
OSU/DESCHUTES COUNTY EXTENSION SERVICE
3893 SW AIRPORT WAY
REDMOND, OR 97756