

# Central Oregon Agriculture

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JULY/AUGUST 2017

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## Pasture and Grazing Management Field Day

Deschutes County SWCD, NRCS, and OSU Extension Service continue their Pasture and Grazing Field Days (see schedule below). The pasture field day 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. Tammy Harty and Jan Roofner, Deschutes County SWCD; Mylen Bohle & Scott Duggan, OSU Extension Service; and Tom Bennett, Nicholle 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, Results of simulated grazing trial at Madras, 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/Grazing Inventory Score Sheet Exercise, And Any Other Questions... We will focus a little more time on irrigation systems. We will look at a water driven pivot irrigating pasture, an in ground sprinkler system in a pasture, and a hand line systems being used for pasture and hay.

### Field Day Schedule and Sites

July 20 Loren and Peggy Kellogg, 285 SW 59th St., Redmond, OR  
September TBA

Please RSVP to Tammy Harty, Deschutes Soil and Water Conservation Service, at Ph: (541) 815-0203 or email [managerdswcd@outlook.com](mailto:managerdswcd@outlook.com)

Mylen Bohle, Tammy Harty, and Scott Duggan

## C.R.O.P. Crook County Farm Tours

The Crooked River Open Pastures (C.R.O.P.) events are held each summer in Crook County. These events provide opportunities to experience the farm and ranch life in Central Oregon. HOFFA along with a dedicated group of farmers and community members in Crook County are offering these FREE farm tours and rotating Farmer's Market throughout the summer. Each farm host will have vendors from 10am to 2pm and will offer free tours and other family friendly activities.

### 2017 Tour Dates:

- July 8 Bluestone Gardens—Goats, cows, piglets oh my! Experience a diversified farm.
- July 22 Just 1 Acre—This farm specialized in lotions and soaps made with products straight from the farm.
- August 5 Farm to Table Community Dinner
- August 19 Good Bike Co.—Saddle up for this pop-up farmers market. Purchase locally grown, raised and crafted food from Crook County farmers.
- September 16 Dancing Cow Farm & Prineville Lavender—Find serenity in a lavender field or find out what a pig's nose feels like. Come tour these beautiful farms in all their Autumnal Glory!
- September 30 Auntie Beans—Find autumnal abundance at Auntie Beans, a diversified vegetable and beef farm. Come wrap up a bountiful CROP season with us.

Visit the High Desert Food & Farm Alliance event page at

<http://www.hdfffa.org/agriculture/farm-tours-c-r-o-p/> for more information.

Jess Weiland  
High Desert Food and Farm Alliance

**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.

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(all area codes are 541)

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**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://oregonstate.edu/dept/coarc/index.php>

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- ◆ Tracy Wilson, Soil Health and Plant Nutrition, 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.

## 24th Annual High Desert Garden Tour

OSU Extension Service & OSU Master Gardeners™ present the 24th Annual High Desert Garden Tour

Saturday, July 22nd, 2017  
9:00 a.m. - 4:00 p.m.

**Thank you to our generous sponsors!**

Aspen Ridge Tree Farm  
Coastal Farm  
Deschutes Recycling  
High Desert Farms  
Shoe Inn  
Worthy Garden Club

**Tickets Available at these Sponsor Locations July 6th:**

Moonfire and Sun Garden Center  
OSU Extension Service  
Schultz Farm and Garden  
Strictly Organic Coffee Company  
Whistle Stop Farm & Flowers  
Worthy Brewing Company

**For more information,  
call the OSU Extension Service**

**541-548-6088 or go to our website: <http://extension.oregonstate.edu/deschutes/highdesertgardentour>**

Amy Jo Detweiler

## What is Hay Worth?

Wondering what the price of hay is whether you are buying or selling? Especially if you are raising and selling hay, you may want to get in on the weekly call from USDA Market News Service, Portland, Oregon. The C.O. hay market report can be freely accessed at the home page: [http://www.ams.usda.gov/mnreports/ml\\_gr313.txt](http://www.ams.usda.gov/mnreports/ml_gr313.txt), or if you want to go directly to the page to check on all of the different state markets, go to this web site: <https://www.ams.usda.gov/market-news/hay-reports>

Once you are signed up to participate in the hay market report if you would like to contribute to the report, someone from the office will call (or you can call) and inquire if you have sold hay, number of tons, for what price, what the quality is, etc. This information is then compiled weekly and put up on the Internet report and also published in the Capital Press. The idea is if both seller and buyer know the market, then a true, free, and fair market exists for all concerned. It also works if you want to buy hay and you are wondering where the market is at, when looking for hay to purchase.

Contact Information: USDA Market News Service, Portland, OR

[Portland.LGMN@ams.usda.gov](mailto:Portland.LGMN@ams.usda.gov)  
Phone number is 503-326-2237  
24 hour grain price information 503-326-2022  
[www.ams.usda.gov/mnreports/ML\\_GR313.txt](http://www.ams.usda.gov/mnreports/ML_GR313.txt)  
[www.ams.usda.gov/lsmarketnews](http://www.ams.usda.gov/lsmarketnews)

Mylen Bohle

## Crook County Soil and Water Conservation District

Monthly meetings  
Every 3rd Monday of the month  
9:00 am OSU Crook County Extension office

## Irrigation Systems

The following acronyms are considered to be some of the Best Management Practices for pivots and linear's presently. Following are the definitions of the acronym and water use efficiency (WUE) of the system for new to poor condition.

Acronym	Definition	Water Use Efficiency (%)		
		New Condition	Fair Condition	Poor Condition
MESA	Mid elevation spray application	80	85	70
LEPA	Low energy precision application	90	85	75
LESA	Low elevation spray application	90	85	75
LPIC	Low pressure in-canopy	95	90	80
<i>PMDI</i>	<i>Precision Mobile Drip Irrigation</i>	98		
SDI	Subsurface drip irrigation	100		

From low pressure center pivot sprinkler irrigation systems. TWDB report 362 (2004).

There are about 20 new LESA/LEPA converted or new pivots in the Central Oregon area. As of early Spring, there were 40 applications for LESA/LEPA pivot conversions in Harney County. Everyone that is trying them seems to be very pleased with their operation. For those who can make the switch to these new systems, there is great water and energy savings potential to be captured.

There is more advantage to get those nozzles as close to the soil as possible. There are a couple of pivots, presently, that have their nozzles 8-12 inches off the ground. In one field the nozzles drag in a certain area of the field. There has not been any problem seen in that field. With nozzles as close to the soil as possible, and along with the advantages of using less water and less energy (on average about 20% each), there could be other great benefits to be gained.

Those other possible real benefits are: By not watering the vast majority of the canopy, there should be less disease problems for the plants; and there should be less lodging if most of the water is hitting the ground and not the foliage. We "should" see less scald and rust in grass hay, less stripe rust or other foliar diseases on wheat. Would a drier canopy of wheat not be as conducive to Cereal Leaf Beetle? (Do not know at this point.)

Last year, a field in Christmas Valley had triticale that was 6-9 inches taller in the LESA span with no lodging; the MESA spans all lodged because of water on the canopy foliage. This year a new field of Timothy that went 5.25 ton/acre, had no lodging after the last irrigation (a rain storm did lodge the field just before harvest).

Some of the systems being converted locally, I think are giving up some efficiency savings in both water and energy, by not dropping those nozzles down to 8-12 inches. But if using a pivot for pasture the nozzles do need to be above the cross fencing (or you fence with the pivot). And what do the animals do with low hanging nozzles?

Pivots on fields that are sloped too much, LESA/LEPA systems may not work in that situation (runoff and soil erosion could be a problem). PMDI systems could be the answer in that situation. One PMDI span in Harney County that is in a level field, had the highest yielding alfalfa compared to the LESA spans in 6 different pivots.

Research is still needed for certain chemigation and fertigation situations to document how well it can work, or not work.

Check with your local irrigation equipment dealer and/or power company to see what it would cost to convert. Energy Trust and Wy'East work with the power companies and have different cost share programs. Make sure you check with them before purchasing any hardware. (More information on Central Oregon Energy Efficiency Programs can be found at:

<https://newcoic.files.wordpress.com/2012/08/energy-efficiency-programs-in-central-oregon.pdf> )

Check out this link on a soon to be published PNW bulletin on LESA/LEPA Pivots: [http://extension.oregonstate.edu/crook/sites/default/files/lepa-lesa\\_in\\_the\\_pnw.pdf](http://extension.oregonstate.edu/crook/sites/default/files/lepa-lesa_in_the_pnw.pdf)

Mylen Bohle

## Crop Enterprise Budgets

Enterprise budgets for alfalfa and grass hay production, along with wheat budgets were updated, locally in the spring of 2015. While they are still in draft form or are preliminary; they are available. Zach Flegel did an OSU senior class internship with Crook County Extension Spring quarter and did the background work for us to put together these budgets. Anybody that is interested can contact Mylen at the Crook County Extension Office. We would also be interested in your feedback on the budgets as well.

Mylen Bohle

## Alfalfa Diseases and Rotations

We are seeing more Clover Root Curculio damage on alfalfa roots in recent years. And from that, we are seeing more problems with Alfalfa Mosaic Virus, and Fusarium Wilt, among other diseases, and indirectly, are reducing yields and causing stand loss. Perhaps, we have gotten away from good crop rotation between plantings of alfalfa. With the larvae chewing on the root systems, this opens the plant up to many diseases. Following is a link to an U. of I. Extension publication on Clover Root Curculio.

<http://www.extension.uidaho.edu/forage/Fact%20Sheets/clover%20root%20curculio.pdf>

Mysten Bohle

## Community Orchard Project

Whether you have one apple tree or several, at some point you've likely harvested more apples than you know what to do with, right? You are not alone! Local apple grower CJ Johnson is assessing interest in forming a community-based orchard model with both backyard and larger growers. One goal would be to create a completely locally-sourced hard cider, and help people process their apples in a more cost effective manner. If you are interested in collaborating with apple growers throughout the Central Oregon area, please contact CJ Johnson: [cjj.cell@gmail.com](mailto:cjj.cell@gmail.com)

Claire Sullivan

## Algae In Stockwater

Livestock producers should be aware of the potential hazard to livestock, watering from reservoirs and stock ponds. Blue Green Algae blooms have been reported throughout eastern Oregon with associated livestock poisoning from the algae toxin. Due to the past few years of drought many of our pastures and watersheds have increased manure / nutrient loads. With our abundance of moisture this winter and spring, much of that nutrient load has been transported into our tanks, ponds and reservoirs. Increased nutrient loads are food for algae and increase the concentration of algae in these water bodies. Compounding the nutrient loading, the other interesting issue is many of us in Eastern Oregon have experienced huge fluctuations in temperature. These fluctuations cause algae suspended deeper in the water to rise to the surface thus triggering a bloom.

If you expect livestock poisoning from stockwater/algae blooms, you should immediately remove the livestock from the area and prevent their access to that water source. Contact your veterinarian for further remedies. Click [here](#) for more information.

Tim Deboodt

## Central Oregon County Fair Dates

Jefferson County—July 26-29, 2017

Deschutes County—August 2-6, 2017

Crook County—August 9-12, 2017



## Forage Research in Central Oregon

Present Central Oregon forage research projects in cooperation with OSU Extension Service and the COARC, which are partially funded by Central Oregon Hay Growers Association include:

- + Nitrogen Rate Effect on 3-Cut Orchardgrass Hay (Developing a Greenseeker Prediction Model), Terrebonne
- + Tilled-in and Non-Tilled Lime Rate Effect on incremental Soil pH and Grass Hay Yield, Tumalo
- + Phosphorus Rate and Timing Effect on Orchardgrass Hay, Prineville

Organic Alfalfa Fertility Trial I (18 treatments) and Organic Alfalfa Fertility Trial II (12 treatments) field work was completed in 2015, at Fort Rock. These trials are being partially funded by North Lake County SWCD and Lake County Hay and Forage Association, Oregon Forage and Livestock Research and Extension Endowment along with larger grants from Oregon Dairy Farmers Association, Oregon Beef Council, and others. More funding is being sought to complete all of the quality and nutrient lab tests, of which 2015 samples (4<sup>th</sup> year and 3<sup>rd</sup> year of two trials) are being processed at the lab presently.

An Orchardgrass Clipping Height (Simulated MiG) trial at COARC, Madras site, was initiated in 2016, funded by an Ag Research Foundation grant.

A Selenium rate effect on Selenium uptake in 3-cut Orchardgrass hay trial was initiated at Terrebonne, along with related trials at Union, and Roseberg this spring. An Ag Research Foundation grant is funding this 2 year trial

Local agribusinesses, including Midstate Fertilizer, Helena Chemical, C.O. Agronomy, High Desert Organix, Wilbur Ellis Co., and Pratum Co-op are providing the fertilizer materials for these trials.

More producer members are needed to join/invest/participate in the Central Oregon Hay Growers' Association, of which 35% (\$35 of \$100) of their membership dues are specifically earmarked to help fund these local forage research trials. (They could use a couple hundred more members, easily.)

Mysten Bohle, Tracy Wilson, Scott Duggan, and Claire Sullivan

## Future Farm Expo

August 15-17, 2017

Pendleton, Oregon

This year at the expo.....

- Mobile Farming Apps Mature
- Ag Drones Go Beyond Line-of-Sight
- Farm Automation re-Imagined
- Digital Irrigation Efficiency
- Precision Ranching with Drones
- Trade Show and Outside Demos



3 days of Ag Tech programs, demos and events.

For more information click [here](#).

[www.futurefarmexpo.tech](http://www.futurefarmexpo.tech)

### Growing Degrees Update

If you are curious, this is how crop year 2017 compares to previous years, up to May 1....The following table shows a comparison of accumulated growing degrees (from January 1 to May 1) back to 2007 for some Central Oregon locations (Argimet 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 2017 to 2007 for Christmas Valley, Bend, Powell Butte, and Madras, Oregon.

Year	Christmas Valley 4360'			Bend 3650'			Powell Butte 3199'			Madras 2440'		
	Base Temperatures in Degees F											
	<u>32</u>	<u>41</u>	<u>50</u>	<u>32</u>	<u>41</u>	<u>50</u>	<u>32</u>	<u>41</u>	<u>50</u>	<u>32</u>	<u>41</u>	<u>50</u>
2017	943	469	170	970	435	134	1,040	508	170	1,040	510	182
2016	1,281	745	363	1,407	754	357	1,441	805	375	1,561	876	412
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	302	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
2007	1,118	650	310	1,218	658	291	1,223	671	304	1,274	709	314

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

2017 T-Sum (degrees F) N Fertilization Dates in Central Oregon. (“Simple average” calculations is used to calculate for gdds, which is different from the above table.)

	Christmas Valley 4360 feet	Bend 3650 feet	Powell Butte 3199 feet	Madras 2440 feet
Grass Pasture* (360 dds)	March 23	March 20	March 15	March 16
Grass Hay+ (720 dds)	May 3	April 22	April 19	April 16

\*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, has been/is greater than 30 days (the coating is only good for 30 days). Or we take a chance and depend upon rain (want a 1/2 inch) to leach the N into the soil or a small shower may increase volatilization before enough water is applied. + For grass hay with rates of 100 lb/ac N or higher, this timing seems to work better.

Mylen Bohle

**If you would rather get this newsletter ONLY by email, please contact the Crook County Extension office at 541-447-6228. We will be glad to switch you over to EMAIL. And then you will receive the one page bi-weekly Ag e-News as well.**

# Calendar 2017

## July

- 6 Tumalo Irrigation District Meeting
- 7 Swalley Irrigation District Meeting
- 8 CROP, Bluestone Natural Farms
- 10 Central Oregon Irrigation District Meeting
- 20 Pasture and Grazing Management Field Day. (see article)
- 22 CROP, Just 1 Acre
- 26-29 Jefferson County Fair & Rodeo

## August

- 2-6 Deschutes County Fair & Rodeo
- 5 CROP, Long Table Community Dinner
- 9-12 Crook County Fair
- 19 CROP, Good Bike Co.

## September

- 16 CROP, Dancing Cow Farm & Prineville Lavender
- 30 CROP, Auntie Bean's Farm

CENTRAL OREGON AGRICULTURE  
OSU/DESCHUTES COUNTY EXTENSION SERVICE  
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REDMOND, OR 97756