Oregon State University Small Farms Program

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OSU Extension Service Small Farms Program

Garry Stephenson Extension Small Farms Specialist Corvallis, OR 97331

Lauren Gwin Extension Food Systems Specialist Corvallis, OR 97331

Nick Andrews

Clackamas & Washington Counties, 15210 NE Miley Rd, Aurora, OR 97002, 503-678-1264

Melissa Fery

Benton, Linn, & Lane Counties, 4077 SW Research Way, Corvallis, OR 97333, 541-766-6750

Amy Garrett

Benton, Linn, & Polk Counties, 4077 SW Research Way, Corvallis, OR 97333, 541-766-6750

Maud Powell

Jackson & Josephine Counties, 569 Hanley Rd, Central Point, OR 97502, 541-776-7371

Sara Runke

Douglas County, 1134 SE Douglas Ave., Roseburg, Oregon 97470, 541-236-3049

Heather Stoven

Yamhill County, 2050 NE Lafayette Ave, McMinnville, OR 97128, 503-678-1264

Toni Stephen

Central Oregon, 3893 SW Airport Way, Redmond, OR 97755, 541-548-6088 x 7959

Chrissy Lucas

Small Farms Program Assistant, 4077 SW Research Way, Corvallis, OR 97333, 541-766-3556

Heidi Noordijk

Program Assistant, Clackamas & Washington Counties, 15210 NE Miley Rd, Aurora, OR 97002, 503-678-1264

Rachel Suits

Program Assistant, Hood River County, 2990 Experiment Station Dr, Hood River, OR 97031, 541-386-3343

Cover Photo:

Veronica Romanesco soon after head initiation. See Croptime: Scheduling Vegetables with Degree-day Models page 11.

Photo by Heidi Noordijk

Oregon Small Farm News Layout by: Chrissy Lucas

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USDA Does Switcheroo with Grass Fed Label Standard

In 2007, after years Lof false starts and a lot of public input, USDA's Agricultural Marketing Service (AMS) published a definition of "grassfed" for ruminant animals. The definition was meant to clear up consumer confusion about what "grassfed" on meat labels actually meant: that the lifetime feed be 100% grass and



grass-based forage. USDA's Food Safety and Inspection Service (FSIS) was supposed to use that definition when approving meat label claims.

Last week, AMS announced that it was withdrawing the grassfed definition, claiming that defining such terms wasn't really its job after all. The agency will no longer offer their grass fed label standard or the naturally raised label standard for meat products. From now on, USDA-FSIS will oversee the definition as part of its job to approve label claims. Producers will develop their own grass fed standard and use voluntary USDA-Certified or USDA¬ Verified programs to verify compliance with the standards they've developed.

However, it isn't entirely clear how that will play out (and if the "100%" part will hold), so we will continue to track the issue and post updates on our Small Farms Facebook page.

For more information, read the USDA Notice of Withdrawal (http://www.ams.usda.gov/content/notice-withdrawal-livestock-and-meat-marketing-claims) and this press release by the National Sustainable Agriculture Coalition (http://sustainableagriculture.net/blog/release-usda-revokes-grass-fed-label-standard/).

2016 Oregon Small Farms Conference

Full Conference Schedule and Session Descriptions

Registration is open at http://smallfarms.oregonstate. edu/sfc. \$45 per person (include materials and refreshments) until February 1st, 2016. The registration fee will increase to \$65 per person. \$100 at the door fee if space is available.

7:30 am - 9:00 am Registration & Refreshments 9:00 am - 9:20 am Plenary Session

9:20 am to 9:40 am - Break

Concurrent Sessions

9:40 am to 11:00 am - Session One

What Makes Money? Practical ways to track expenses & revenue to evaluate what crops are profitable. *Presenter: Chris Blanchard, Purple Pitchfork*

Exploring the Small Farm Dream: This session introduces prospective farmers to some of the many considerations when starting a small farm business. Instructors will cover how to assess soil quality and understand water rights; conduct initial market research; and consider how lifestyle and financial goals play into enterprise selection. Investigating these topics may produce more questions than answers, but are extremely important to anyone new to farming. *Presenters: Rachel Suits, OSU Extension Service Small Farms Program; Maud Powell, OSU Extension Service Small Farms Program*

Haymaking on the Westside: In this session we'll discuss how you can make high quality grass hay in four days or less, even between those spring storm fronts. We'll go over the steps needed and the equipment essential to achieve successful hay production on the westside of Oregon and Washington. We'll also talk about what can be done if the hay has been rained on to salvage as much quality as possible. *Presenter:* Steven Fransen, Forage Crops Specialist, Washington State University

Food Safety for Small Farms: New Rules, Good Practices: All farms, large and small, must find ways to incorporate food safety into daily practice – from on-farm production through point of sale – to satisfy new laws and evolving market requirements. In this

session, a diversified produce farmer who sells into a variety of direct and specialty wholesale markets will share his experiences and offer strategies and tips. We'll also hear from the Oregon Department of Agriculture about how the final Food Safety Modernization Act (FSMA) produce and preventive controls rules apply to small farms selling into local and regional markets, as well as market-based certifications like GAP. Bring your questions: we'll save plenty of time for Q&A and discussion. *Presenter: Mike Simington, Simington Gardens; Oregon Department of Agriculture*

Introducing Croptime: Vegetable Crop Schedule with Degree-Days: Calendar-day maturity information provided in seed catalogs is very approximate and varies depending on your location and planting date. Degreedays are derived from temperature over time, and can more accurately predict development of plants, insects and diseases. We are developing a crop-scheduling tool that uses degree-days to predict vegetable and weed development. In the first of this two-part workshop we will introduce degree-day models, explain our research, and describe how you could use Croptime to schedule plantings, predict harvest dates and improve weed and nitrogen management on your farm. Presenters: Nick Andrews, Len Coop, Heidi Noordijk, Aaron Heinrich, and Dan Sullivan, OSU Extension and OSU Integrated Plant Protection Center

Growing without Irrigation: Interested in learning more about how to grow fruits and vegetables with little or no water in the Pacific Northwest? This session will cover site selection, dry farming tools and techniques for orchard and row crops, and the power of seed-saving in dry farmed systems. Learn about the OSU Small Farms Dry Farming Demonstration and Participatory Research Project led by Amy Garrett. Jacques Neukom, known for his dry farmed peaches and melons in Northern California, will share his experience producing a variety of crops using dry farming techniques all season long in a climate with long dry hot summers. Steve Peters will tell the story of the 'Dark Star' Zucchini developed with Dr. John Navazio and Bill Reynolds for dry farmed systems and how seed-saving can be a powerful tool for

dry farmers. Presenters: Jacques Neukom, Neukom Family Farm; Steve Peters, Seed Revolution Now & Organic Seed Alliance; Amy Garrett, OSU Extension Service Small Farms Program

An Introduction to Growing Specialty Cut Flowers: Cut Flower Production as a Part of Whole Farms

Systems: Flowers play an integral part in whole and sustainable farming operations, providing habitat for pollinators, diversifying production, and bringing the possibility of new markets to your business plan. Shannon will share her experiences with integrating flower production into the farming system at Stone Barns Center for Food and Agriculture in Pocantico Hills, NY. She is currently collaborating with seed companies to develop climate specific cut flower varieties that meet the needs of her farm and will discuss how this practice can be adopted in the Pacific Northwest. This presentation is for farmers with all levels of flower production experience. *Presenters: Shannon Algiere, Flower and Herb Manager, Stone Barns Center for Food and Agriculture, Pocantico Hills, NY*

Producing and Selling Value Added Foods in Oregon

With the passage of the Farm-Direct Bill and Value-Added Bill, and the Bakery Bill, new in January 2016, comes the need for education and training for Market Managers who are considering allowing these products to be sold at their markets. What products qualify for the exemption and which ones don't? How do you know? What about food safety? What are some best practices for "managing" small producers selling their products in the market to ensure that the products are safe? *Presenters: Kelly Streit, OSU Extension Family & Community Health, Clackamas County; Will Fargo, Food Safety Specialist, Oregon Department of Agriculture*

Fisiología Vegetal

Instructora: Luisa Santamaría, Profesora de botánica y patológica de las plantas, Oregon State University

What am I worth? - Northwest Farm Credit Service Small Group: Learn about balance sheet basics and then build your own balance sheet! Bring your farm information to this session and walk away with a greater understanding of the balance sheet as well as a great start on a balance sheet for your operation. This small group session is intended to provide more personalized

discussion by participants. *This session is limited to ten participants*.

11:00 am to 11:20 am - Break

11:20 am to 12:30 pm - Session Two

How Should I Sell? Evaluating Market Channels

Being a sustainable farmer is more than the farming methods you use, it also means ensuring you can stay in business regardless of your marketing outlet. This workshop session will help you evaluate marketing channels and navigate pricing strategies to meet your customer needs and your farm's bottom line. *Presenter: Chris Blanchard, Purple Pitchfork*

Specialty Food Market Opportunities for Small

Farmers: Anthony Boutard (Ayers Creek Farm) and Paul Fuller (Sweet Creek Foods, a family—owned food manufacturer) will help small farmers explore the opportunities and challenges of turning their farm- produced ingredients into specialty food products. Farmers may choose to do the processing themselves, work with a co-packer such as Paul, or sell the ingredients to a food manufacturer. Rob King (University of Minnesota) and Larry Lev (OSU) will also share results from new national research on how small and mid-scale farmers can become suppliers to specialty food manufacturers.

The Sins of Overgrazing: Most pasture and grazing seminars focus on the positive aspects of good management strategies. We'll end this session with an uplifting spin, but let's also get to the inferno and truly discuss the sins of overgrazing pastures and recognizing the negative impacts mismanagement has on the desirable plants, soil quality, the environment, future production and quality potentials. Overgrazing can occur at any time during the year and the result will cost you money and frustration! *Presenter: Steven Fransen, Forage Crops Specialist, Washington State University*

Farm to School: Opportunitities, Updates and Input

Are schools a viable market for your products? Learn about recent legislative changes that have increased funding for schools purchasing Oregon-grown products, entry points for small farms, and resources available

to help you get started selling to schools in your community. You'll hear from small farms that have had success selling to schools and learn what tactics they've used to make it efficient and profitable. Bring your questions, experiences, and needs to this session so farm to school leaders can learn more about how small farms can engage in this market. Presenters: Amy Gilroy, Farm to School Program Manager Oregon Department of Agriculture Megan Kemple, Oregon State Lead, National Farm to School Network; Mike Hessel, Red Hat Melons

Using Croptime: Vegetable Crop Scheduling with Degree-Days: In the second part of this workshop you will practice using Croptime by working through crop planning scenarios. Please attend part one for introductory information. Space is limited as the second workshop is in a computer lab, you may be asked to share computer stations. Presenters: Nick Andrews, OSU Extension Service Small Farms Program, Len Coop, OSU Integrated Plant Protection Center; Heidi Noordijk, OSU Extension Service Small Farms Program

Smart Marketing: Effective and Thrifty Methods to More Customers (and more money): Understanding what works to attract customers, utilizing your knowledge for thrifty and successful methods of promotion. Avoiding the many ways there are to waste time and money on promotion. Getting customers to talk about you and tell your story. Practical ways to increase your sales, customer base, and get more money into farmers hands (and the market budget).

Presenter: Mark Wall, Thriving Markets

Innovative Approaches to Catching and Storing

Water on your Farm: Are you navigating limited water supply on your farm? Learn from multiple case studies and examples about innovative approaches to catching and storing water on your farm. Andrew Millison will share the fundamentals of key line water storage and present multiple examples of keyline systems on farms all over the world (Australia, Saudia Arabia, Mexico, Midwestern U.S., and Oregon), and talk about his recent experience in working with a Oregon landowner to apply for and receive water rights. Pat Shenk will tell about his experience farming a variety of fruits and vegetables without water rights for the past 30 years and his adaptations to a drier climate including rainwater collection, organic matter addition, and

variety selection. Bogdan Caceu will describe how he has been able to farm with very limited available groundwater, in part by installing water storage capacity with federal funding from USDA-NRCS under the EQIP program; how he is working to significantly expand this storage with state funding from the Water Supply Development Account administered by the Oregon Water Resources Department; and how he managed to obtain a comprehensive water rights permit that covers all aspects of water appropriation, storage, and use for irrigation. *Presenters: Andrew Millison, Permaculture Rising; Pat Shenk, Canaan Hill Farm; Bogdan Caceu, La Creole Orchards*

Business Planning and Marketing for Cut Flower Farmers: A panel of Pacific Northwest cut flower producers and distributors will discuss the many business considerations and marketing decisions that must be addressed when growing and selling flowers. Topics to be discussed include planning for profitability, potential wholesale and retail markets, managing diverse distribution channels, and more. *Presenters: Diane Szukovathy, Jello Mold Farm, Mt. Vernon, WA and Board Chair of the Seattle Wholesale Growers Market; Molly Sadowsky, Manager, Seattle Wholesale Grower's Market; Joan Thorndike, Le Mera Gardens, Ashland*

Cultivo de Cobertura

Instructor: Nathan Harkleroad, Agriculture and Land-based Training Association (ALBA)

Who really needs to have a plan? - Northwest Farm Credit Service Small Group: Learn about what a business plan is and why it is important for successful operations to have one. Work through a basic business plan outline discussing each component and addressing operational risk management including production, market and financial concerns. If you have a business plan, bring it to this class for some one on one constructive feedback. This small group session is intended to provide more personalized discussion by participants. This session is limited to ten participants.

12:30 pm to 2:00 pm - Lunch - Ballroom of the CH2M Hill Alumni Center. Additional outside seating will also be available.

2:00 pm to 3:20 or 4:00 pm - Session Three

Should I Buy a Tractor? Investment Analysis for the Small Farm: Chris will talk about investment analysis for the small farm. Tanya Murray will give a short presentation on the Cost Study Project. *Presenter: Chris Blanchard, Purple Pitchfork; Tanya Murray, Oregon Tilth*

CSA Innovations: Increase Sales and Keep
Your CSA Hip and Relevant - Having trouble
recruiting, retaining, or satisfying your CSA
membership? This workshop will present innovative
strategies for increasing and retaining members.
Presenters will explain how to partner with
organizations and businesses and deliver CSA shares to
employees at workplaces, to clients at fitness centers,
to patients at health clinics, to congregation members
at places of worship, and more. In addition, presenters
will showcase a new Open Source CSA app designed
to increase member satisfaction and retention. Walk
away with strategies, toolkits and FREE app technology
that will help your CSA thrive in 2016 and beyond.

Presenters: Bryan Allen, Zenger Farm; Becky Brown, iWrite

Animal Husbandry in Practice: A Conversation With Farmers: Good animal husbandry practices are essential to all livestock operations. Rising interest in humanely raised meat and poultry has increased market opportunities for farmers and ranchers who can meet the rigorous requirements of market-based certifications. In this session, we'll have a conversation with two multispecies farms – one small, one mid-scale – about their husbandry practices. The director of Animal Welfare Approved will moderate the conversation and explain the goals and approach of his program. *Presenters:* Andrew Gunther, Animal Welfare Approved; Laura and Robin Sage, Red Bird Acres; herdsman, Pacific Natural Foods.

"You Finally Hired a Farmhand: Now What? How to Train and Manage Employees." Ready to hire your first farm employee? Wondering how to be an effective manager or crew leader? In this session, you'll learn strategies and tips from experienced farmers and then get out of your seats to try what you've learned. We'll cover training techniques, how to give feedback, what to delegate (or not), how to keep employees motivated through the season, and more. *Presenter: Carolina Lees, Corvus Landing Farms*

Record Keeping for Organics: Tips, Tricks, & Questions Answered: Do you find yourself worrying about your upcoming organic inspection because your records aren't organized? Or are you thinking about transitioning to organic but feeling apprehensive due to all the paperwork? The aim of this session is to help producers understand what records are required for applying for organic certification, and to share "sound and sensible" record keeping practices that producers can implement in order to demonstrate organic compliance to inspectors and certifiers. Drew Katz from Oregon Tilth along with an IOIA organic inspector and a certified organic producer will be on hand to provide record keeping tips, tricks and best practices, as well as answer your questions related to record keeping for organic certification. Presenters: Drew Katz and Sarah Brown, Oregon Tilth

Healthy Soil and You: Managing the Living Ecosystem Beneath Your Feet - Healthy soil is essential for the production of healthy crops and pasture. In this workshop you will learn about the key physical and biological components of healthy soil. Through a combination of short presentations, demonstrations, and hands-on activities you will learn how to identify soil health indicators and management principles you can use to improve soil health on your farm. Cory Owens is the NRCS's State Soil Scientist and Soil Health Coordinator based out of Portland. She leads the technical soil services program across the state including helping farmers, ranchers, and foresters learn how a healthy soil can help them. *Presenter: Cory Owens, NRCS*

Beyond the Annual Field: Successful Strategies for Growing and Selling Cut Flowers in the PNW Shoulder Season- The panelists are veteran Pacific Northwest flower farmers with many years of collective experience growing flowers in our Northwest climate. Early spring and late fall can be some of the most profitable times for flower farmers, and these growers will share tips on varieties to grow and techniques to use that will increase your shoulder season know-how and inspire you to develop your skills beyond the annual field. Presenters: Tony and Denise Gaetz, Bare Mountain Farm; Vivian Larsen, Everyday Flowers; Kendra Neveln, Glennwood Farms

Double Up Food Bucks: Oregon's Part in a National **Movement -** Modeled on successful programs across the country, Double Up Food Bucks is the first statewide incentive program in Oregon to be rolled out with a uniform design, central administration, and local implementation. Learn more about Double Up's launch in 2016, hear from farmers market managers taking part in the 2016 winter pilot, and how Oregon fits into other national and statewide SNAP match movements around the country. This workshop will discuss the history and strategies of current projects, and look into the future of nutrition incentive programs in Oregon. Presenter: Katie Furia, Oregon Double Up Food Bucks Program Manager, Farmers Market Fund

We'll provide conference attendees who plan to attend this event (who are over 21) with three drink tickets. That's right, you can try three samples of cider, honeywine, beer or wine compliments of the Small Farms Conference! For those who wish to try additional beverages, drink tickets will be available to purchase so be sure to bring cash. Alcohol vendors will also be selling bottles on site if you wish to take home a new favorite drink.

Register online at http://smallfarms.oregonstate.edu/sfc

Can I even get a loan? -**Northwest Farm Credit** Service Small Group: Learn about what loan programs are available through Northwest Farm Credit Services. Walk through an overview of the loan application process and what to expect. Bring your balance sheet and income statement and apply them to benchmark ratios. Walk away with an understanding of how your operation stacks up against potential loan requirements. This small group session is intended to provide more personalized discussion by participants. This session is limited to ten participants.

3:20/4:00 pm to 5:00 pm - Think with a Drink **Networking Session** After the third conference session with speakers, and checking

wraps up this year, spend time debriefing with friends, talking out vendor tables while enjoying an array of samples from local Corvallis beverage makers!



February 20, 2016 - OSU Small Farms Conference

- Growing Without Irrigation Amy Garrett (OSU), Jacques Neukom (Neukom Family Farm), Steve Peters (Seed Revolution Now and Organic Seed Alliance)
- Innovative Approaches to Catching and Storing Water Andrew Millison (OSU and Permaculture Rising), Bogdan Caceu (La Creole Orchard), Pat Shenk (Canaan Hill Farm)

March 2016

• Navigating Water Law and Restrictions in Oregon (train-the-trainer for agricultural professionals) - Mike McCord (Oregon Water Master)

June 2, 2016

• Water, Soil and Carbon for Every Farm with Keyline Design: Learning from the world's driest inhabited continent and it's drought solutions - Australian Permaculture Consultant, Darren Doherty (Regrarians Ltd.)

August 2016

• Dry Farming Field Days - Oak Creek Center for Urban Horticulture in Corvallis, NWREC in Aurora, and SOREC in Central Point

First four sessions will be video-recorded and made available on the OSU Small Farms website

For more information visit:

http://smallfarms.oregonstate.edu/wmws

Want to Identify Crop Specific Costs of Production for Your Farm? Join the 2016 Cost Study Project and Make It Happen!

By: Tanya Murray, OSU Small Farms Program; Organic Education Specialist, Oregon Tilth

Want to have a better sense of what it really costs to grow your crops? Join the 2016 Cost Study Project, which begins its second season this March (see below for more info).

Crop enterprise budgets are widely recognized as a useful tool for determining breakeven prices, identifying crops that are making money (and crops that aren't), and identifying changes that can be made to operations or crop mix to improve profitability. Labor costs can make up as much as 65-70% of production costs for small acreage vegetable producers . This makes tracking the time it takes to perform the various activities that go into growing each crop crucial for developing farm specific enterprise budgets.

Many farmers recognize the value of developing farm specific enterprise budgets, but tracking labor can be onerous, especially for highly diversified operations. This work often takes a backseat to the day-to-day work of running the farm, yet it's essential for making informed business decisions.

In 2015 the OSU Small Farms Program launched the Cost Study Cohort Pilot Project to test an approach for capturing the information needed to determine farm specific costs of production. We designed this approach with the primary objective to make the process achievable. Farmers in the North Willamette Valley, Southern Oregon, and on the North Coast participated in this project. This project is part of our larger efforts to develop tools and trainings focused on farm viability. Our long-term goal is to develop an online learning module that supports farmers with determining production costs and can be facilitated by agriculture professionals across the country.

The approach we tested focused on conducting time studies on the various activities that go into producing crops. We tried to identify the fewest number of



Greenhouse seeding time studies Photo by T. Murray.

time studies needed to develop useful estimates for production costs. Instead of setting out to do all the necessary time studies at once, we encouraged farmers to limit their focus to one "activity area" on the farm at a time. For example, we started out with time studies in the greenhouse, and then moved to looking at the time it takes to prepare beds for planting, followed by time studies on seeding and planting. Time studies for each "activity area" were communicated via a monthly webinar that we envisioned would double as a forum for farmer members to give input and

troubleshoot any challenges they anticipated. Farmers were also provided with worksheets that mapped out the time studies and could be adapted to fit individual operations.

In December, farmers got back together to use the time studies they had collected (along with some educated estimates) and determine the costs of production for one crop. Break-even prices needed to cover costs of production were identified. Farmers were also able to see what activities contribute most to costs and to compare their costs with other farms and different production systems.

For one group of farmers, this exercise highlighted how investing time to weed an onion crop can really pay off in higher yields and labor cost savings during post-harvest handling.

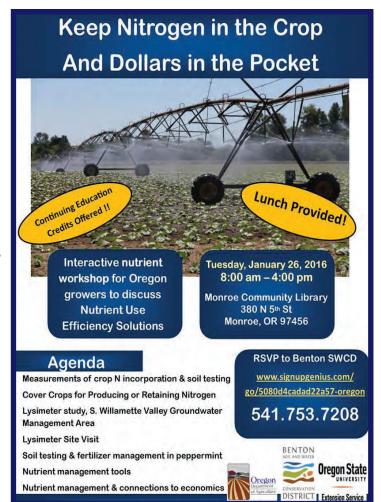
We received great input from the participating farmers on what worked and what didn't about the approach we piloted. One farmer found that ultimately the time it takes to do the time studies is minimal and can be easily incorporated into the workday. Other farmers pointed out that after they worked through the exercise of calculating their costs for one crop, they had a far better understanding of what they will track next season.

We are also changing things that didn't work. For example, the webinars had low participation, so we will now identify and provide instructions for all the time studies at the beginning, before the season is underway. We'll also be working to identify more ways to support farmers with getting their time studies done, e.g., strategies for incorporating the time studies into the workday, creating more accountability, and more regular check-ins.

The 2016 Cost Study Project will kick off with a full day orientation in early March. We'll use the orientation session to map out all the time studies for the season and identify ways to insure they get done. We plan to offer orientations in a few different geographic locations that will be determined by farmer interest. There is no cost for participating in this project.

If you are interested in learning more and/or being part of the 2016 Cost Study Cohort Project please contact Tanya Murray at tanya@tilth.org.

¹Fearless Farm Finance: Farm Financial Management Demystified. Padgham, J. Dietmann, P., Chase. C., Blanchard, C. Midwest Organic Sustainable Education Service. 2012 In 2015, we launched a project to develop new hands-on and classroombased educational programs and demonstration projects that support the long-term environmental and financial viability of small-scale, organic and sustainable farms and ranches. The project, which is funded by the National Institute for Food and Agriculture, is part of our ongoing partnership with Oregon Tilth. Since 2009, OSU and Tilth have worked together to advance organic and sustainable farming, with a focus on beginning farmer and rancher training. Our new project takes this work to a whole new level. Our shared goal is not simply to support the launch of new farms but to keep farmers farming, past the beginning years and into the future.



Northwest Farm Credit's New Programs for Beginning Farmers

By: Andrea Krahmer, Relationship Manager/AVP, Northwest Farm Credit Services

Northwest Farm Credit Services is a financial cooperative that supports agriculture and rural communities with reliable, consistent credit and financial services, today and tomorrow. Northwest FCS is part of the 100-year-old Farm Credit System, a nationwide network of borrower-owned lending institutions and the largest single provider of credit to American agriculture. We serve our customers through 45 branch offices located throughout the Northwest.

We know financing can be difficult to find for someone entering agriculture for the first time, and even for the young producer who grew up in a farming family. To help, we offer AgVision®, our nationally recognized program available to young, beginning and small

producers with at least one of the following characteristics: 35 years of age or younger, 10 years or less agricultural experience OR annual gross farm production of less than \$250,000. Through the AgVision program, we continually look for ways to address the challenges of a young or beginning producer. Whether it's planning for conventional agriculture production, striving to create a direct-to-consumer local food market or developing a small-scale and sustainable operation, helping customers start and grow their own businesses is an integral part of our cooperative mission. AgVision offers competitive interest rates with possible loan fee reductions as well as knowledgeable staff who can help you every step of the way. Learn more about our AgVision program here: https://www.northwestfcs.com/Services/ Young-Beginning

Our unique RateWise program rewards young, beginning and small producers for continuing their management education with interest rate reductions on new loans and operating lines of credit. Participants earn credits for seminars and workshops they attend. Educational programs eligible for RateWise credits include sessions hosted by Northwest FCS' Business Management Center; programs hosted by universities and extension offices; industry groups; the Farm Service Agency; and approved programs hosted by other resources to improve producers' management and production skills. Read more about our RateWise program and register here: https://www.northwestfcs.com/Services/Young-Beginning/RateWise-Program

Northwest FCS is proud to be a Diamond-level sponsor of the OSU Small Farms Conference on Feb. 20, 2016.

Growing Farms Hybrid is designed for beginning farmers in their first 5 years of business.

Come and learn how to navigate the biological, financial and human aspects of small-scale farming. This course is a mix of online, classroom and on-farm learning.





Growing Farms

Successful Whole Farm Management

Dates: Tuesdays - February 9, February 23, March 15 and March 29, 5:30 to 8:30pm, plus Saturday, March 5 all day farm field trip.

Location: OSU Extension Annex, 2990 Experiment Station Dr. Hood River

Tuition: \$295 (need-based scholarships available)

Tuition Includes registration to the Small Farms Conference in Corvallis on Saturday, February 20



Information & registration at smallfarms.oregonstate.edu or contact rachel.suits @oregonstate.edu (541) 386-3343 ext.38257

Croptime: Scheduling Vegetables with Degree-Day Models

By: Nick Andrews & Heidi Noordijk, Small Farms Program, Oregon State University & Len Coop, Integrated Plant Protection Center, Oregon State University

ndothermic "warm blooded" organisms like birds and mammals maintain relatively constant body temperatures, so their metabolic reactions and development rates are fairly consistent over time. However, body temperatures of ectothermic "cold blooded" organisms (i.e. plants, insects, fungi and bacteria) are close to ambient temperature, so their rates of metabolism and development rates are strongly influenced by the temperature of their environment. Several other factors like moisture, competition (i.e. crop spacing and weed density) and pest damage can influence crop development rates, but time and temperature (degree-days) can often predict maturity more accurately than just time (calendar days). We've all seen crops grow quickly when temperatures are optimal, and slowly or not at all when it's too cold or too hot.

Oregon State University (OSU) Extension and the OSU Integrated Plant Protection Center are working with seed companies and local farmers to develop a degree-day scheduling website for vegetable growers. Croptime (http://smallfarms.oregonstate.edu/croptime) will predict harvest dates for vegetable varieties chosen by collaborating growers and seed companies (see Table 1). Ed Peachey and Aaron Heinrich (OSU Extension) are also developing some weed models that will predict when viable seeds are set. Growers will be able to use this information to reduce weed seed rain in vegetable rotations. Dan Sullivan (OSU Extension) is explaining how thermal time can improve our understanding of the nitrogen cycle. The OSU team hopes to put at least 50 variety specific models and

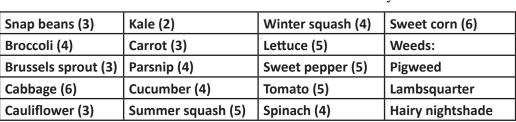


Table 1. Vegetables and weeds being modeled (anticipated number of varieties in parenthesis).

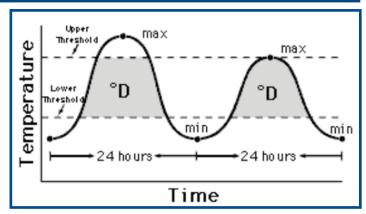


Figure 1. Sine curves can be used to estimate daily degree-day accumulation with daily minimum and maximum temperatures, from www.ipm.ucdavis.edu/WEATHER/ddconcepts.html.

three weed models online by late 2016, but some crops will need more research before the models are ready.

Degree-days

Around 1730 René A. F. de Réamur first used mean daily air temperatures to predict plant development. Since then biologists have been improving crop models. Figure 1 illustrates how sine curves can estimate degree-day accumulation between a lower threshold (the temperature below which the organism does not develop) and upper threshold (the temperature above which the organism does not develop). The volume of the shaded area represents the degree-days accumulated on those two days. For example, Jubilee sweet corn has lower and upper thresholds of 50°F and 86°F respectively, and requires 1539 degree-days to reach fresh market harvest. On a cool spring day with a low of 44°F and a high of 62°F, Jubilee will accumulate only 6 degree-days, on a warm summer day with a low of 60°F and a high of 85°F, about 22

degree-days are gained.
Visit this UC Davis site for a more in-depth discussion of degree-day concepts:
www.ipm.ucdavis.edu/wearher/ddconcepts.
html.



To use the Croptime calculator: follow these steps in figure 2:

- 1. Choose a reliable local weather station in the map
- 2. Select the "CROPTIME models" category
- 3. Select the model for the crop and variety you are growing
- 4. Enter up to four successive planting dates
- Choose full or condensed output. Full output shows DD accumulation every day from first planting to last harvest, condensed output only shows dates when a phenological event occurs (i.e. flowering or maturity)
- 6. Hit "Click here" to generate model output
- 7. Scroll down the output sheet to see predicted harvest dates based on your planting dates (not shown).

Figure 2. The Croptime input screen, also see sidebar. Here the Ag Weathernet station in Aurora is selected (magenta pin) to predict harvest of Arcadia broccoli transplanted on April 1, May 1, June 1 and July 1, 2015.

Using degree-days

Orchardists regularly use degree-days to predict insect pest phenology (i.e. codling moth and filbert worm) and disease risk (i.e. apple scab and fireblight). Some degree-day models have been developed for vegetable crops and pests, but fresh market vegetable growers normally rely on calendar days to maturity provided in most seed catalogs. Frank Morton, owner of Wild Garden Seed in Philomath, Oregon breeds vegetables and sells organic seed. Frank explains, "The normal 'days to maturity' varietal information available in most seed catalogs is not useful to farmers, except in a vague relative sense. If seed breeders and catalogs could provide a degree-day index for their vegetable varieties, farmers would be able to more accurately model their crop delivery schedules in years of unusual weather patterns or extremes."

David Brown from Mustard Seed Farms in St. Paul, Oregon is perhaps the only fresh market vegetable grower in Oregon who already uses degree-days to schedule crops. He has developed his own degree-day models for broccoli and some other crops. "I have used degree days for over 20 years to schedule successive plantings of vegetables... more information based on some research would be helpful in refining my schedules and maybe even using the information for more crops." Our goal is to make reasonably accurate vegetable degree-day models accessible to more vegetable growers.

Using Croptime

In the spring of 2016, growers will be able to use the first Croptime models to schedule plantings and predict harvest dates to plan a consistent supply. We have developed a new Google maps interface to make it easier to select the best nearby weather station (figure 2). Up to four planting dates can be entered at a time.

Growers can use models to plan successive crops or predict harvest dates for full season crops in the spring. During the season producers can run models again to access more up-to-date and accurate harvest predictions. Bob Egger from the Pumpkin Patch on Sauvie Island, OR, explained how a steady flow of crops like cabbage could benefit his farm. "When we have a couple weeks of wet weather in spring we could use Croptime to choose varieties we might not be

familiar with but would help keep our production up. The big buyers don't waste time with you if you don't have the right product available at the right time."

The Croptime site uses actual weather data up to the day before a model is run, then 5-day forecasts followed by 30-year average temperatures. Tanya Murray previously with Sauvie Island Organics near Portland, Oregon planned each week's CSA share carefully. "The dramatically different weather we have had this spring and last makes it hard to know what to expect. Croptime will help our farm use degree-days to predict maturity." Len Coop (OSII Integrated

maturity." Len Coop (OSU Integrated Plant Protection Center) is improving the accuracy of long term forecasts by converting the output of NOAA weather models to degree-days.

Arcadia broccoli reportedly takes 63-94 days to mature depending on the seed catalog referenced. The preliminary Croptime model predicts 66-103 days between transplant and maturity from 2011-2015 at the North Willamette Research & Extension Center in Aurora, OR. Days to maturity vary with planting time and year (figure 3). Early spring planted Arcadia broccoli takes 20-30 days longer to mature than mid-summer plantings. Development also progresses more slowly in cooler years (2011-2012) than warmer years (2013-

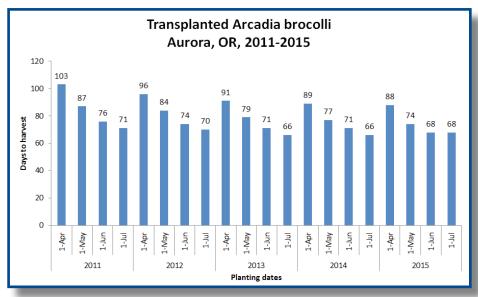


Figure 3. Days to first harvest of transplanted Arcadia broccoli vary with planting time and year.

2015). Crops planted one month apart matured 14-26 days apart (not shown). Croptime models are being developed in irrigated Willamette Valley fields. In some regions and cropping systems, environmental factors not well tested here may be more important (i.e. moisture, day-length or upper thresholds).

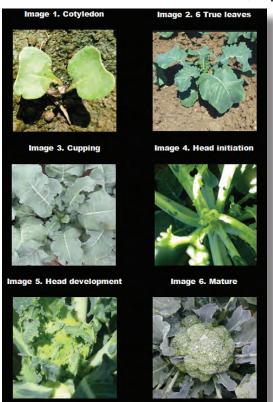


Figure 4. Photos of important growth stages help to improve the accuracy of data collected for Croptime model development.



Figure 5. This cauliflower head is less than ½" in diameter soon after head initiation in late August. Veronica is a summer variety requiring little to no vernalization.

Developing new models

We hope to continue developing degree-days models over time, and would like to include new models for winter vegetables and possibly cover crops. Since vegetable varieties change regularly we hope to eventually work with others to collect field data and develop models. We are also developing a Vegetable Growth Stage Guide and standard protocols to improve consistency of field observations (figures 4-6).



Figure 6. Early flowering marks the end of broccoli harvest.

Croptime includes cool season

crops like cabbage and spinach, and warm season crops like peppers and winter squash. Cool season crops have cooler lower and upper thresholds (i.e. 32°F and 70°F for broccoli). Warm season crops have warmer thresholds (i.e. 52°F lower threshold for sweet pepper); it normally doesn't get hot enough in the Willamette Valley to identify upper thresholds for warm season crops. One data set consists of crop development observations at one location and planting date. Models require at least eight to ten data sets for each crop to verify threshold temperatures in the literature. Then four to five data sets are often enough to estimate the number of degree-days to maturity for each subsequent variety of the same crop, as long as threshold temperatures are the same for different varieties of the crop. So far preliminary thresholds have been identified for broccoli, sweet pepper, cucumber, winter squash and sweet corn.

2015 data is now being incorporated into these models.

Crop development observations were made under a variety of production methods such as organic, conventional, black plastic, bare ground, direct seeded and transplanted crops. Separate models may be needed for some of these

nitrogen information will add to our understanding of nitrogen cycling in organically managed soils. We hope the website will help growers and produce distributors improve efficiency, profitability and sustainability.

practices. One day we may

be able to adjust models to

plastic mulch.

account for some factors such

as the warming effect of black

Vegetable degree-day models

can be a more accurate crop

calendar days. Producers and

buyers using Croptime may be

able improve the consistency of

supply, and plan harvest crews

and marketing activities more

accurately. The weed models may help reduce weed seed

rain in crop rotations, and the

scheduling method than

You can learn how to use the new system at the first Croptime workshop at the North Willamette Research & Extension Center on Feb 11th from 10:00-2:30 (email Heidi.noordijk@oregonstate.edu to register). We are also offering a double session at the OSU Small Farms Conference on Feb 20th in Corvallis.

Acknowledgments

Croptime is funded by WSARE Research & Education award number SW12-037, additional funding from Clackamas Extension Innovation Fund. Photos by Heidi Noordijk.



Upcoming Croptime Workshops

OSU Small Farms Conference

February 20, 2016

Session One: Introducing Croptime: Vegetable Crop Scheduling with Degree-Days Session Two: Using Croptime: Vegetable Crop Scheduling with Degree-Days

Registration: www.smallfarms.oregonstate.edu/sfc

CROPTIME Farmer Training

February 11, 2016 from 10:00 am to 2:30 pm North Willamette Research and Extension Center

15210 NE Miley Rd, Aurora, OR 97002

Registration: Contact Heidi Noordijk: heidi.noordijk@oregonstate.edu or 971-801-0392

Porcine Epidemic Diarrhea Virus (PEDV) in Oregon

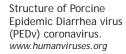
Porcine Epidemic Diarrhea Virus (PEDv) has been detected on a farm in Clackamas County. The Oregon Department of Agriculture and the Oregon State University Veterinary Diagnostic Center have confirmed the case.

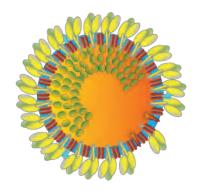
PEDv is a viral disease that causes severe diarrhea and vomiting in pigs. The virus largely affects young piglets and has a mortality rate as high as 100 percent. While the disease is deadly in pigs, it is not transmissible to other species of animals or to humans and does not affect food safety.

PEDv first appeared in Europe in 1971, but was not seen in the US until its sudden appearance in April 2013. Since then, PEDv has spread rapidly throughout most of the country. The disease is highly contagious with infected animals showing sudden onset of diarrhea and vomiting followed by rapid dehydration. The virus is transmitted by the fecal-oral route and spreads easily in manure and by manure-contaminated objects (fomites) such as trailers, equipment, boots, and clothing. Virus can survive for several weeks in damp manure and cold weather dramatically increases virus survival.

There are two commercially available vaccines. The Harris Vaccine Company markets iPED(virus subunit) under a conditional license from the USDA. Zoetis also has a PEDv vaccine (killed virus). These vaccines are to be used in pregnant gilts and sows, NOT baby pigs. The concept involves stimulating the maternal immunity that is passed to the newborn pigs when they suckle colostrum. This may provide protection for the piglets for a few weeks. The initial vaccination should be at 5 and 2 weeks pre-farrowing then 2 weeks prefarrowing for subsequent litters. It appears the vaccine is most effective for sows that have been previously exposed to PEDv rather than naïve, non-exposed females. Vaccination should only be viewed as an aid in prevention of disease and not a substitute for excellent biosecurity.







Nucleocapsid protein (N)



Envelope small memberane pentamer (E)



Membrane protein (M)



Spike glycoprotein trimer (S)



Since the introduction of the disease in the U.S., it is estimated that 7-8 million piglets have died nationwide resulting in multiple millions of dollars lost. The national PEDv outbreak has subsided, however, the disease is still in circulation and poses a constant threat to swine producers.

The infected premises in Clackamas county has been quarantined and the epidemiologic investigation is ongoing. Pork producers are encouraged to maintain strict biosecurity and take precautions to reduce exposure to other pigs. Owners are encouraged to contact their veterinarian for assistance with diagnosis, vaccination, disinfection, and other PEDv mitigation details. The Veterinary Diagnostic Laboratory at Oregon State University can provide diagnostic testing for PEDv: http://vetmed.oregonstate.edu/pedv-tgev. 😭

Prepared by:

Dr. Brad R. LeaMaster, State Veterinarian, Oregon Department of Agriculture

Dr. Charles Estill, Extension Veterinarian, Oregon State University Dr. Jerry Heidel, Director, OSU Diagnostic Laboratory Gene J. Pirelli, Extension Swine Specialist, Oregon State University

Porcine Epidemic Diarrhea Virus (PEDV) What Is It?

Background: PEDV is caused by a virus (Coronavirus) that is related to transmissible gastroenteritis (TGE) virus.

- PEDV only infects pigs (NOT humans or other livestock).
- PEDV was first confirmed in the U.S. on May 17, 2013. Clinical signs: In previously naive herds, PEDV is similar to TGE and includes: » Severe diarrhea in pigs of all ages » Vomiting » High mortality - almost 100% in preweaned pigs

Diagnosis: Requires sample submissions to a diagnostic laboratory (contact your veterinarian).

Transmission: Oral contact with contaminated feces. The most common materials or items that can be contaminated by feces from infected pigs include trucks, boots, clothing, feed and feed trucks or other fomites.

Incubation period: (time from exposure to clinical signs) 12-24 hours Shedding: (amount of time animals can infect others) Up to 3 to 4 weeks

Immunity/Protection: No cross-protection with between TGE and PEDV even though both are Coronaviruses.

- Maternal protection through colostrum from previously exposed sows can be quite effective.
- Sow immunity after infection appears to last at least 6-7 months. More research is needed in this area.
- Vaccines for PEDV are currently available to help boost sow immunity. Treatment: Supportive care through hydration. Provide clean, dry, draftfree environment with access to high-quality drinking water (electrolytes may be beneficial).

Prevention: Limit cross contamination with any suspected pigs's feces.

• Clearly define and communicate a Line of Separation which marks the separation between

- your facility, transport vehicles or the outside / inside of your production site.
- Contact your veterinarian and enhance biosecurity procedures.
- Sanitation of barns, equipment and transportation vehicles is very important; they should be clean, disinfected and dried.
- Several disinfectants have been demonstrated to effectively inactivate PEDV, such as glutaraldehyde/ quaternary ammonium, accelerated hydrogen peroxide, formalin, sodium carbonate, lipid solvents, and strong iodophors in phosphoric acid.

For more information in English and Spanish go to: http://www.pork.org/pork-checkoff-research/pedv/pedv-resources/

This information was extracted from materials provided by the National Pork Board.



Jackson County's Ban on Genetically Engineered Crops Will Stand

Federal Court Approves Settlement

In May, 2014, residents of Jackson County voted to ban the production of genetically engineered (GE) crops in the county by a 66% margin. The ballot initiative resulted from a group of farmers and citizens who were concerned about GE pollen affecting the burgeoning organic seed industry in Southern Oregon.

In 2015, the law was challenged by two GE alfalfa farmers, who claimed that the new law violated Oregon's Right to Farm Law. However, in May, Federal Magistrate Mark D. Clarke rejected that challenge and ruled in favor of those defending the law, the Our Family Farms Coalition (OFFC), Center for Food Safety (CFS), and Jackson County. The GE alfalfa growers continue to claim that the law would constitute an un-Constitutional taking if they were required to remove their GE alfalfa crop that is a perennial.

In December, an Oregon Federal Magistrate approved a settlement that will allow Jackson County Oregon's voter-approved law prohibiting cultivation of genetically engineered crops to stand.

"This is really an important victory since it creates the potential for farmers growing traditional crops in Jackson County to thrive without the fear of contamination by GMOs," said Elise Higley, the executive director of OFFC. "It is great to know that the will of the 66 percent of our county's voters that passed this measure will be given effect."

"Today's settlement protects Jackson County's ordinance from any appeal, and in so doing is another important victory for farmers and the environment," said George Kimbrell, CFS Senior Attorney and counsel in the case. "GE-Free Zones like Jackson County are important to the future of our food because they allow farmers to grow traditional and organic crops without risk of transgenic contamination. U.S. farmers and consumers have a right to say no to

Monsanto's damaging and pesticide-driven business model."

Under the proposed settlement, OFFC and CFS agreed not to bring an enforcement action requiring growers to remove their perennial GE alfalfa crop if they had planted it before the Jackson County ban took effect. Those growers, in turn, would agree to take specific measures to prevent the spread of GE alfalfa to neighboring farms, not plant any new GE alfalfa and switch their fields out of GE alfalfa at the end of their current crops useful life (not to exceed 8 years.) While the settlement was supported by farmers who would continue to be impacted by the phase-out period for GE alfalfa they said the impacts on their operations highlight why claims that GE cultivation could co-exist with traditional crops are without merit.

"It is very good that Jackson County's ban on GE crops will stand, but even under the settlement we will have a reminder about the impacts of GE contamination and that co-existence between GE and traditional crops is not possible," says Jackson County farmer David Salch who farms near a Jackson County field where GE alfalfa is grown. "Even though I support the settlement as the best available option, our farm, our customers, and our neighbors will pay the price of not being able to raise GE-free honey due to the nearby GE alfalfa until they decide to remove it in 5 to 8 years."

OFFC and CFS were jointly represented by legal counsel from CFS and the Earthrise Law Center. "This case is important in that it makes clear that farmers growing traditional crops have the right to adopt local laws to protect their crops against GE contamination," said attorney Lia Comerford with the Earthrise Law Center. "This has always been a David and Goliath battle and we are very pleased Jackson County's ban on GE crops will stand."

Finger Lakes Meat Project: Bringing Back the Meat Locker

By: Kathryn Quanbeck, Program Manager, Niche Meat Processor Assistance Network

The Finger Lakes Meat
Project (FLMP)
is a regional
initiative in New
York State to
grow the freezer
trade (sales of
meat in bulk
quantities such



as whole, half, and quarter animals) to benefit livestock farmers and consumers. The Project, led by Cornell Cooperative Extension, consists of educational efforts, an online directory of farms called <u>The Meat Suite</u>, and two community freezers in Central NY called The Meat Locker.

The Niche Meat Processor Assistance Network, based at OSU in the Center for Small Farms and Community Food Systems, recently hosted a webinar about the project, featuring Matt LeRoux of Cornell Cooperative Extension. Matt told us how the FLMP got started and described its value to local farms.

The initial inspiration for the FLMP was a survey of regional producers and consumers. Consumers were

asked if they bought local meat (why or why not) and if they bought in bulk (quarters, halves, and wholes). Producers were asked if they sold meat in bulk. If yes, what would they need to sell more, and if no, why not?

Consumers cited two primary barriers to buying local meat:

- High price: Local meat is more expensive;
- Hard to find, limited availability: Local meat is not convenient.

Producers cited two primary barriers to more bulk sales:

- Customer knowledge: customers don't know/ don't understand the cuts they will get when they buy in bulk, they don't know how to cook all of the cuts, and so on;
- Access to processing: access to USDA-inspected processing – required for by-the-cut sales but not bulk sales – is limited.

Both producers and consumers reported that customers often found it challenging to store meat purchased in bulk. They also had trouble "finding each other": consumers had trouble finding local farms to buy from, and producers were struggling to find new customers.

These survey results led to the formation of the Finger Lakes Meat Project. The goals of the FLMP are to educate consumers about buying local meats, help producers and consumers find one another, alleviate storage issues for consumers, and assist producers with marketing and sales. The project has four components:

- 1. Consumer educational events
- 2. An online directory of farms, MeatSuite.com





FLMP Meat Locker Courtesy of Matt LeRoux, CCE

- 3. Rentable freezer space for consumers, the Meat Lockers
- 4. Marketing training & price calculation assistance for farmers

It's important to note that producers selling in bulk are selling whole or shares of live animals, before slaughter. This type of sale allows for the use of custom-exempt processing facilities: producers do not have to use USDA-inspected processing facilities if the end consumer owns the live animal (or a portion thereof).

For more on custom-exempt and bulk sales in Oregon, read this FAQ about using custom-exempt slaughter and processing facilities in Oregon. This is beneficial to producers and consumers as there are far more custom-exempt than USDA-inspected processing facilities, both here and around the U.S.

The beauty of the freezer trade is that it is *the* best market channel for both small-scale producers *and* individual consumers: producers sell the entire carcass at a premium (no managing inventory or dealing with unloved cuts), and consumers get the best price per pound, often even lower than grocery store prices.

The meat locker component of the FLMP has been very popular. The meat locker is great for those who don't have room for a chest freezer or can't afford one, allowing apartment dwellers, college students and others who might not typically be bulk buyers to participate in the freezer trade.

The Ithaca, NY locker location has been open for a year and a half and already all spaces are rented out. The locker is a 10x14 walk-in freezer with space for 65 bins (two bin sizes are available: 18 & 25 gal.). Spaces rent for \$3 to \$8/month. The locker is open by appointment for drop-off: all meat is inventoried and checked in by staff. The locker is also open three hours a week for meat pick-up. Again, staff inventory and check out the meat. Only staff can enter the locker, and when it is not manned the locker is locked and alarmed.

A project like the FLMP could be of great benefit to producers and consumers here in Oregon. If you are interested in learning more about how you can start a project like this in your region, contact us at nmpan@oregonstate.edu. We'll help you get started.

New to NMPAN? NMPAN is a network and info hub for people and organizations who want small meat processors to thrive. We offer tools and information for small processors and the farmers, marketers, and meat buyers who depend on them. Learn more about NMPAN and join our listserv at http://www.nichemeatprocessing.org

Join us for our next NMPAN webinar, "Plant in a Box: A Solution for USDA-Inspected Poultry Processing?"

When: Feb. 25 at 10am PST

More info: http://articles.extension.org/pages/73434/plant-in-a-box:-a-solution-for-usda-inspected-poultry-processing

"Plant in a Box" (PIB), created by David Schafer of Featherman, aims to be a turnkey answer for those looking to process chickens, turkeys, and other poultry under USDA inspection. The PIB unit is built into a recycled shipping container and comes ready to go: the operator only needs to provide a site pad, water, power, and a plan for effluent.

On this webinar, we'll hear from John Smith of Maple Wind Farm in Vermont, the first farm in the country to own and operate a PIB. Smith will tell us how they got started, successes, challenges, and surprises along the way, and plans for the future.



A new and exciting event is coming to Polk County! February 27 & 28, 2016 at the Polk County Fairgrounds

Vendor space is available for \$40 for the two day event. The Ag Fest will contain a Farmer's Bounty Market, giving Saturday Market and Local Farm vendors a place to sell their food, livestock and hand-crafted products in the winter. The show is early enough in the season for folks to purchase their early stock, diversify existing stock, place orders and make connections with local vendors for future purchases. Applications are due by 12/31/2015, Vendor confirmations will be sent by 1/15/2016.

Application are available at: www.mvwagfest.com
 Email: mvww.mvwagfest.com
 Join us on Facebook!

https://www.facebook.com/Mid-Valley-Winter-Ag-Fest-Farmers-Bounty-Market-125454587810394/?ref=br_tf

We are excited to offer you an opportunity to be a vendor at the upcoming Mid-Valley Winter Ag Fest. The Ag Fest will be held in the heart of Polk County at the Polk County Fairgrounds & Event Center and the Polk County Museum, February 27th and 28th 2016. The Mid-Valley Winter Ag Fest has two goals: to promote local farm commerce and provide an exciting environment that is fun and educational for kids.

Proceeds from this event will Benefit Polk County 4-H and F.F.A.

This event is being extensively advertised through out the region. This includes various print media (Capital Press, Statesman Journal, Itemizer Observer, Take Root Magazine and Willamette Valley Life), KYKN, and online. We have an active Facebook page and will be placing targets ads and boosts during the show.

Using Sacrifice Areas to Protect Pastures

By: Dr. Susan Kerr, WSU NW Regional Livestock and Dairy Extension Specialist

A h, winter. In our corner of the world, that means it is mud season. Just because it is muddy out there doesn't mean your animals have to be knee-deep in it for the next six months. By creating a designated place for them to spend the winter, you will reduce soil compaction, protect water quality, promote forage health, reduce long-term feeding costs, and reduce livestock health issues. Let's investigate how and why.

Mud = Stress

We've all driven past animals that look like they are swimming in mud. Mud is a stressor for livestock, especially youngstock: they are perpetually cold and wet, and energy is sapped from them as they expend more calories just to stay warm. Mud can be a source of infection as well, be it mastitis, navels, or hooves. Livestock can even experience soft tissue or joint injuries as they struggle to move through deep mud.

Why Sacrifice Areas?

Is mud inevitable in our area? NO, as depicted in numerous "before and after" photo series. As is usually the case, wise planning and thorough preparation can minimize or eliminate this problem. The use of sacrifice areas confines livestock to areas that have

been prepared for concentrated livestock impact for an extended time, protecting more sensitive areas from negative effects of livestock activity. Animal impact at inappropriate times can damage soil profiles and health, creating irregular "pugged" areas (Photo 1), compaction, and death of desired plants (Photo 2).

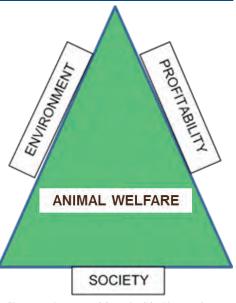


Figure 1. Aspects of Sustainable Livestock Production. Lack of attention to any of these four topics eventually results in the demise of the operation.

Siting Sacrifice Areas

What areas make the best sacrifice areas? The top of inclined land, sandy or rocky areas, and naturally dry or well-drained areas make good choices, as long as they are safe for livestock. These same areas can make

Material	Effectiveness*	Cost	Comments
Hog fuel (coarse mix of wood products)	+	++	Decomposes as it absorbs nitrogen from animal wastes. Needs annual replenishment. Can be used on top of fabric, gravel, concrete, and/or sand. Manure removal difficult. Availability varies. Inspect for potentially-harmful contents such as metal debris and toxic plants. Use a layer twice as deep as expected mud depth.
Sand	++	++	Not recommended for livestock feeding areas (especially horses). Manure removal easy on small scale, difficult on large scale.
Gravel	+++	+++	Use a layer twice as deep as expected mud depth. Manure removal somewhat easy on small scale, difficult on large scale. Many gravel sizes available, including lower-cost pit run.
Geotextile fabrics	+++++	++++	Similar to weed barrier cloth. Used as base under footing material. Permits water to permeate and keeps footing layer separated from underlying soil area, extending footing life.
Recycled concrete	+++++	+	Used concrete ground into gravel-sized pieces. Can set-up with water and be similar to concrete, allowing manure scraping. Much less cost than poured concrete. Semi-permeable.
Concrete	++++	+++++	Long-term solution with little maintenance required, but routine manure removal necessary. Bedding required for animal comfort. Best for market livestock vs. breeding stock due to potential effects on feet and legs. Must have plan to handle water run-off.

Table 1. Comparison of various sacrifice area footing options.

^{*}Effectiveness defined as relative ability to retain soil, allow water permeation vs. run-off, and keep area dry for livestock.



Photo 1. "Pugging" resulting from livestock impact on wet soils.

good temporary winter exercise areas if the soil is frozen or at least not sodden and susceptible to damage from livestock hooves. Sacrifice areas should not be located in low spots, flood-prone areas, wetlands, or near ponds or waterways. They should also include shelter adequate for the number of animals in the sacrifice area.

The best sacrifice area would have adequate forage cover 365 days of the year, which would promote soil retention and reduce water run-off. Prolonged animal impact on a confined area make this difficult, however, hence the need for special groundcover and footing materials.

What Materials Are Needed?

Certain kinds of footing material should be brought in if the sacrifice area you have chosen could become muddy due to prolonged animal impact. The most common options are compared and contrasted in Table 1. Other materials may be available in different locales and relative prices may vary. Regardless, acceptable footing material should allow excellent drainage while remaining dry itself, be readily available and inexpensive, allow safe movement, and create no risk to livestock.

Further Considerations

How much space is required for a sacrifice area? This question earns the famous "it depends" response. The size of a sacrifice area depends on the number of animals to be contained and their ages and activity



Photo 2. Close-up of pugged soil. Note prevalence of weeds vs. grass in this heavily compacted and damaged area.

levels. Younger animals will typically be more active and need adequate space to display normal behavior; they may damage fences or injure themselves if the sacrifice area is too small. Recommended outdoor space requirements for various livestock species under different management systems are available from multiple sources, such as the referenced MidWest Plan Service.

The ability of sacrifice areas to protect water quality will be greatly enhanced by the use of vegetative "buffer zones" around the livestock confinement area. This vegetation will slow the rate of water passage over soil and help retain more nutrients.

Additional Uses of Sacrifice Areas

Once established, sacrifice areas can be used for other purposes:

- Containing livestock in non-grassy areas to reduce intake of parasite larvae
- Allowing time for pasture re-growth to at least 6" before regrazing during "summer slump"
- Temporarily isolating animals in heat, injured, or with other reasons to be confined and separated from herd
- Dry-lotting horses that overeat if allowed to consume pasture ad lib
- Shelter during inclement weather

Drain the Rain

Installing gutters and downspouts can direct thousands

Aspect	Benefits of Sacrifice Areas
Environment	Water quality protected via reduced run-off containing animal wastes and soil particles
	Rainwater is diverted from sacrifice area, so any run-off water is cleaner
	Soil profile protected from pugging and compaction
	More plant growth on protected pastures retains more nutrients on property
Finances	 Reduced soil damage that can affect plant health and forage yields, so better production and less need for purchased feed
	Animals are warmer and drier, which reduces maintenance nutrient requirements and feed costs
	Soil is retained and valuable agricultural land is not lost
	Can increase the number of animals that can graze on healthier pastures
	• Animals can be fed according to activity levels and weather, which uses feed budget more effectively
Society	Improved appearance of agricultural properties
	Improved opinion of livestock production and producers
Animal Welfare	Animals are warmer and drier and experience less cold stress
	Fewer injuries and illnesses related to mud and poor sanitation

Table 2. Positive effects of sacrifice area use on all aspects of sustainable livestock production.

of gallons of clean rainwater away from sacrifice areas and into more appropriate areas such as vacant pasture, ponds, streams, or wetlands. Water can also be captured in rain barrels and used elsewhere on the property. Reducing the amount of water entering a sacrifice area reduces the drainage challenge to this area and reduces contamination of run-off with animal wastes. Drains, swales, and berms can divert water away from buildings or perpetually-wet areas and toward areas with better drainage or water-storing capacity, increasing the effectiveness and lifespan of the footing material used.

Keep It Safe

Special attention must be paid to sacrifice area fencing because animals will be contained for an extended time. Fencing should be visibly intimidating and include at least one electric wire so animals respect it. The sacrifice area must pose no threat to animals, such as junk, poisonous plants, holes, garbage, farm equipment, etc. Animals in sacrifice areas—especially horses—still need exercise. Horses can be ridden or lunged, and all species can be turned out on hard-frozen ground when plants are dormant. When it is time for spring turn-out, slowly increase grazing time (10 to 30 minutes initially, slowly adding more each

day) to prevent gastrointestinal problems. As always, never graze dormant or growing forage below 3" or next spring's energy reserves will be gone and pasture regrowth dramatically diminished.

What Are the Benefits of Sacrifice Areas?

As detailed in Table 2 and depicted visually in Figure 1, confining animals to sacrifice areas addresses all four aspects of sustainable livestock production: attention to environmental, financial, societal, and animal welfare issues.

Help Them Help You

Your Conservation District and/or Natural Resources Conservation District have cost-sharing programs that can help you create sacrifice areas. Funding may be available for gutters, drains, swales, sacrifice area footing, fencing, off-site watering, rain barrels, berms, or other best practices that create and support an effective sacrifice area.

Additional Reading

Creating & Using a Sacrifice Area for Horses: Your Start to Good Pasture Management! Alayne Blickle, Horses for Clean Water

www.skagitcd.org/sites/default/files/publications/flyers/

Horses%20for%20 Clean%20Water%20 SACRIFICE%20 AREAS%20TIPS2010.pdf

Heavy Use Areas for Livestock, Skagit Conservation District www.skagitcd.org/sites/ default/files/publications/ flyers/Heavy%20Use%20 Area%20Protection.pdf

Sacrifice Areas, Snohomish Conservation District: www.nwesc.org/Articles/ SacrificeArea.pdf

Reduce Mud & Keep Water Clean: Sacrifice Areas, WSU Clark Co. Extension Living on the Land Series http://ext100.wsu.edu/ clark/wp-content/uploads/ sites/7/2014/02/sacrificeareas.pdf

Creating a Sacrifice Area, King Conservation District. www.kingcd.org/ pub_mud_cre.htm

MidWest Plan Service: Livestock Operations https://www-mwps. sws.iastate.edu/catalog/ livestock-operations

Oregon Agritourism Network Meeting

The <u>Oregon Agritourism Network</u> is a growing working group of farmers, ranchers, tour operators, agencies and associations with expertise and interest in developing Oregon as a premier travel destination for authentic agritourism experiences.

These events are open to anyone interested in cultivating Oregon's agritourism potential and developing this segment of the tourism industry.

Network meetings rotate across Oregon to engage stakeholders from every corner of the state – you are invited to attend one, or all of them. Light refreshments and beverages will be provided. We invite you to join us this February in Corvallis for the 2016 Winter meeting.

At this meeting, we'll have discussion around relevant opportunities and industry organization updates, the reveal of the agritourism marketing toolkit, action team updates, discussion around major challenges directly from producers and resource sharing for agritourism opportunities and business development.

WHERE: Alumni Center Ballroom | Oregon State University | 725 SW 26th Street, Corvallis, Ore. 97331

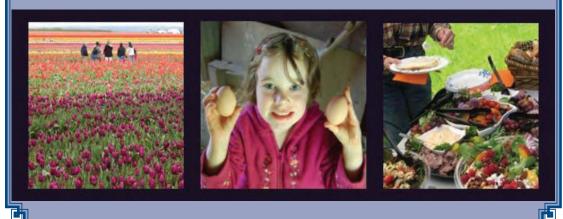
WHEN: Friday, Feb. 19, 2016 | 1:00-5:00 p.m.

RSVP: In advance online

The <u>Oregon State University Small Farms Conference</u> is taking place in Corvallis the following day, Saturday, Feb. 20, 2016

Want more information about Oregon Agritourism Network Meeting?

If you have additional questions or comments about Oregon Agritourism Network Meeting, please contact Alexa Carey, Destination Development Specialist with Travel Oregon at Alexa@TravelOregon.com or (971)717-6178.



What Do You Need to Know About FDA's New FSMA rules?

By: Sophia Kruszewski, Policy Specialist, National Sustainable Agriculture Coalition

The U.S. Food and Drug Administration (FDA) recently finalized two major rules - known informally as the "Produce Rule" and the Preventive Controls or "Facilities Rule" - under the Food Safety Modernization Act (FSMA). These rules were the subject of significant grassroots advocacy from the sustainable agriculture community during the drafting or "rulemaking" stage, which resulted in a number of important changes in the final rules. As we enter FSMA's implementation phase, this article lays out some of the main issues in the rules for farmers.

The information below is only an overview, intended to alert you to the rules' key issues and point you toward more information specific to your operation. Both NSAC and OSU will have resources available to help you navigate the rules in more detail, and more information will be coming from USDA, FDA, and others to help farmers understand and adapt to new requirements.

What is the Produce Rule?

The Produce Rule sets standards for "covered farms" that are growing, harvesting, packing, and holding "covered produce." Not all farms will be subject to the new Produce Rule; some will be exempt from all requirements, some may be eligible for modified requirements, and all covered farms have at least two years (if not three or four) to come into compliance.

Exempt Farms

A "covered farm" has more than \$25,000 in gross annual produce sales, averaged across a rolling three-year period and adjusted for inflation. So, farms with \$25,000 or less in annual gross produce sales (based on a rolling average of three years' worth of sales and adjusted for inflation), are exempt from the rule. This is often called the "de minimis" exemption.

Produce means fruits and vegetables, and includes mushrooms, sprouts, peanuts, tree nuts, and herbs. Food grains primarily grown and processed for use as meal, flour, baked goods, cereals or oils (*e.g.* barley,

dent- or flint-corn, sorghum, oats, rice, rye, wheat, flax seed, rapeseed) are not considered produce. Produce is "covered" by the rule if it is usually consumed raw. FDA has developed a non-exhaustive list of covered produce, and an exhaustive list of produce "rarely consumed raw" and therefore not covered by the rule. In general, you should assume your produce is covered unless you only grow produce on the "rarely consumed raw" list (see the list links in the Resource section). If you only grow produce on FDA's "rarely consumed raw" list, then this rule doesn't apply to you, because it isn't considered "covered" produce. If you only grow grain, this rule doesn't apply to you because grain isn't "produce." If, however, you grow both grains and covered produce, or both covered and not-covered produce, then these requirements would apply to your covered produce.

In addition to the de minimis exemption and the exemption for produce rarely consumed raw, there are also exemptions for produce that is:

- 1. Grown only for personal or on-farm consumption;
- 2. Not a raw agricultural product (*e.g.* has been processed in which case the Facilities Rule may apply); or
- 3. Destined for commercial processing.

However, certain assurances and disclosures are required if claiming the exemption for commercial processing.

So, if you grow, harvest, pack, or hold produce usually consumed raw and not destined for commercial processing, and you exceed the \$25,000 produce sales threshold, then you are not exempt. However, you may not have to comply with the full Produce Rule if you are "qualified exempt" as explained below.

Qualified Exempt Farms

Farms that exceed \$25,000 in produce sales may be eligible for modified requirements as "qualified

exempt" farms depending on their size and market channels. To qualify, you must have:

- 1. Less than \$500,000 in <u>all food</u> sales (not just produce) based on an average of the previous three years and adjusted for inflation; and
- 2. Sales to "qualified end users" exceeding sales to all other purchasers.

A <u>qualified end user</u> is the consumer (an individual, not a business), or a restaurant or retail food establishment located either in the same state or same tribal reservation, or not more than 275 miles from the farm. So you can do some wholesale, as long as those sales don't exceed your direct sales.

If you meet these criteria, then you're eligible for modified requirements, which include maintaining records of your status (how much you sell, who you sell it to) and providing your farm's name and complete business address on a label or sign at the point of sale. Qualified exempt farms should also be familiar with the process by which FDA might withdraw or reinstate a qualified exemption.

Covered Farms

Farms exceeding \$25,000 in produce sales that are not qualified exempt are "covered farms" and must comply with the full Produce Rule, which includes standards for: employee qualifications and training; worker health and hygiene; water used during growing, harvesting, packing, and holding; biological soil amendments of animal origin (like manure and compost); wild and domesticated animals; equipment and buildings; and post-harvest activities, like packing and holding.

Before getting into detail, it's important to note that the rules tend to explain *what* the standard is, but they don't necessarily explain *how* to meet the standard. The "how" may vary from farm to farm, and the rules attempt to provide flexibility for farms to do what's appropriate for their operation. More detailed information will be coming later from FDA through guidance documents to explain what is intended and required under various components of the rule.

Some existing training programs may also be able to fill in the detail needed to understand exactly what to do. These training programs are likely to be modified – and new training projects likely to be developed – to explain the new FSMA requirements in manners tailored to a wide variety of agricultural operations. Look to your local sustainable agriculture association or University Extension for more information on food safety training.

This article only focuses on a few key requirements related to training, agricultural water, and biological soil amendments.

Training Requirements

There are specific training requirements for farm employees and supervisors, including that at least one "supervisor or responsible party" for your farm take a food safety training course at least equivalent to an FDA-recognized standardized curriculum.

FDA is currently working with the Produce Safety Alliance (PSA) to develop a standardized curriculum; however, you are not required to take the PSA training course as long as the training you take covers the FSMA requirements. FDA also plans to support the development of standardized curricula tailored toward local foods producers and Tribal producers. Therefore, you may wish to wait on taking a "FSMA training" until more options become available in the coming months and years better suited to your operation.

Agricultural Water

In addition to general requirements regarding monitoring and maintaining the quality of your water supply and distribution systems, the rule sets specific microbial water quality standards and testing requirements for two categories of water:

- (1) Water used in harvest and post-harvest activities, and sprout irrigation water; and
- (2) Water used during growing that is <u>likely or intended to contact covered produce</u>. This means the standard doesn't apply to irrigation methods where the water isn't intended or likely to contact produce (*i.e.* drip irrigation of tomatoes).

For harvest and post-harvest water, the microbial

standard is no detectable generic *E. coli* per 100mL, and untreated surface water cannot be used for these purposes.

For irrigation water, the standard is much more complicated. The big take-away is that you can still use water that exceeds the microbial standard as long as you wait a period of time (in days) to allow for the natural reduction in generic *E. coli* to bring you within the threshold. You calculate the necessary number of days by determining your water quality profile and applying what's called a "die-off rate."

FDA has provided a die-off rate of 0.5 log reduction per day, which assumes a roughly 67% reduction in generic *E. coli* on the surface of the crop each day due to natural causes (*e.g.* sunlight, moisture, temperature). You do not have to test to verify that the die-off rate is accurate, as long as you keep records of your calculation and the length of time you waited between irrigation and harvest.

However, if it would take more than 4 days for the microbial die-off to bring you below the microbial standard, then you cannot irrigate covered produce with that water unless you switch to an irrigation method where the water is unlikely to contact the harvestable portion of the crop, or you treat the water.

If this confuses you, you aren't alone. It's a complicated concept, and FDA intends to provide guidance and tools to help farmers calculate the water quality profile and the appropriate number of days that they need to wait between the end of irrigation and harvest.

Testing Frequencies

Testing requirements follow a three-tiered approach:

(1) Start by calculating your baseline water quality profile based on a certain number of samples (4 for groundwater, 20 for surface water – collected over a period of 2-4 years). That profile tells you if you exceed the threshold, and whether you need to take some action before using that water (*i.e.* wait a number of days between irrigation and harvest; switch irrigation methods; or treat the water);

- (2) Take annual samples (1 for groundwater, 5 for surface water) to verify your baseline.
- (3) Use the 5 new samples and the previous three years' 15 samples on a rolling basis to recalculate the baseline and determine if any changes in use are needed.

Again, it's complicated. But all farms have at least 4 years to come into compliance with these requirements, giving time for additional information, training, and technical assistance to become available, including research that may support alternative standards and testing frequencies based on regional variations or other factors.

When do you need to be in compliance?

As mentioned above, all farms have at least two years to come into compliance, and smaller operations have as many as three or four years. These are all based on gross annual produce sales, based on a rolling three-year average:

- (1) No more than \$250,000 ("very small business"): four years January 2020.
- (2) No more than \$500,000 ("small business"): three years January 2019.
- (3) More than \$500,000: two years January 2018.

For the water standard requirements related to taking samples and calculating your water profile, you have two additional years to comply.

Biological Soil Amendments of Animal Origin

The rule establishes handling, storage, transportation, and application requirements for animal manure – raw or composted – or other animal-based amendments (like fish emulsion).

A major change in the final rule is that the compost application standards are now essentially aligned with the National Organic Program (NOP) requirements: no restrictions, as long as the manure has been properly composted. For untreated manure applied in a manner where there is some potential for contact after application, FDA deferred finalizing the application interval while they conduct research and

a risk assessment to justify an appropriate application interval; they will re-propose that interval sometime in the next 5-10 years. This decision resulted from significant comments from farmers and others regarding potential conflict with the NOP, and the lack of a robust scientific justification, for the originally proposed 9-month application interval.

As FDA develops this interval, certified organic

As FDA develops this interval, certified organic farmers are expected to continue following the NOP standards regarding the application of raw manure (90-120 days, depending on the application method), and others may also choose to follow the same standard as a prudent interim measure.

Records

Many growers are probably already satisfying many of these requirements. The biggest change is likely the water testing and the recordkeeping requirements. In addition to the sales records needed to justify your status, there are record requirements for many of the rule's standards. Now is a good time to start thinking about or seeking information on good systems for keeping track of your records in the least burdensome way.

Preventive Controls Rule for Facilities

As mentioned above, the Facilities Rule may also apply to some farms in certain circumstances, whether or not they are also subject to the Produce Rule. Whether the Facilities Rule applies to you is largely determined by FDA's definition of "farm." This definition includes both primary production farms and secondary activities farms (like a farmer cooperative aggregating produce for distribution not located on a farm), and some limited processing activities, like drying herbs or packaging/labeling products.

If you meet FDA's definition of "farm," then this rule doesn't apply to you. If you do not – you are chopping or peeling produce; milling flour; making jam – then you may be considered a "farm mixed-type facility" that is required to register with FDA as a facility and is subject to the rule. However, you could still be exempt as a "retail food establishment" if the majority of your sales are direct to consumers through farm stands, CSAs, farmer markets, or other direct marketing platforms.

Even if you are not exempt as a farm or a retail food establishment, you may not have to follow the full requirements if you have less than \$1 million in food sales and/or are only doing on-farm value-added processing considered "low risk" (*e.g.* making maple syrup, milling flour).

FDA is currently working on a guidance document focused on which activities fit within the "farm" definition and which do not to aid farmers in understanding whether this rule applies to them.

NSAC also has a flow chart that walks farmers through questions to determine whether this rule (or the Produce Rule) applies.

Now what?

Remember: you have time to figure out whether and to what extent these rules apply to you. The goal of this overview is to give you an idea of what's required, and what additional questions you need answered. I'm sure there are still many. NSAC, FDA, USDA, OSU and others will be providing information and resources for training and technical assistance in the coming months, so stay tuned, stay engaged, and check out the FSMA Resources section for more information.

FSMA Resources

FDA Produce Rule: bit.ly/ProduceRule

FDA Facilities Rule: bit.ly/FacilityRule

NSAC FSMA Center: sustainableagriculture.

net/FSMA

NSAC Produce Rule Analysis: bit.ly/

nsacproduce

NSAC Facilities Rule Analysis: bit.ly/

nsacpcrule

List of covered produce: bit.ly/usuallyraw

List of exempt produce: bit.ly/rarelyraw

Low risk processing: bit.ly/lowriskprocessing

OSU Small Farms Program FSMA page: http://smallfarms.oregonstate.edu/fsma

It's Just around the Corner: The next Living on a Few Acres Conference...." maybe a little less, maybe a little more" Will Be Here Before You Know It.

By: Toni Stephan, Small Farms Program, Oregon State University

Notice we have added a tag line to the name of the conference. This is because we really believe that this conference is not only for the small acreage owner but for those who live on less or more than a few acres but have a similar mind set. This one day conference is set for March 12, 2016 and will be held at the Deschutes County Fairgrounds in Redmond, Oregon.

This year, in order to provide you with a better learning experience we are trying to have a few more hands on classes; how about going for a hike in the woods while learning about native trees from the experts or practicing proper application techniques for those chemicals you use or having the chance to make yummy vinegars, getting the chance to set up a raised bed for a garden, pin the meat cut on the livestock of your choice and maybe even more activities.

For people who are on acreage or even dream of it we will have plenty of classes that will help you be more successful managing your chores. There will be a full line of irrigation classes, business and zoning classes, livestock and forage along with food and fruit production classes.

We are always looking for sponsors and vendors too. If you have a business or know of a business that would like to sponsor the conference or be a vendor we would love to hear from you. Maybe you have a personal desire to sponsor this event, your sponsorship is always welcome. You can get a sponsor or vendor form linked here http://extension.oregonstate.edu/deschutes/living-few-acres-conference-0

If you do any of these things or even want to: grow your own food, raise a chicken or a few fowl, own livestock or horses, grow hay or pasture, preserve food or manage your property, this conference is for you. Look for registration to open around the end of January (check the website above). Check out all the classes, register and come join us. Tell your friends too, conferences are more fun when shared with someone else! If you have any questions please contact Toni at toni.stephan@oregonstate.edu, 541-548-6088.

Mid-Valley Food Summit Connects Growers, Buyers and Eaters

A healthy community begins with a healthy food system. The first-annual Mid-Valley Food Summit on February 6 will connect food growers, processors, buyers, gardeners and eaters in a daylong event presented by Marion-Polk Food Share.

The summit will feature several notable local speakers, including a keynote presentation and learning activity from Lauren Gwin, Associate Director of the OSU Center for Small Farms and Community Food Systems. Break-out session topics will include linking local food buyers and sellers, discussing food access and security, building local food hubs, educating children about agriculture and learning about issues related to farm workers.

"This is a great event for learning about the exciting things that are growing in our local food movement," said lan Dixon-McDonald, Vice President of Programs at Marion-Polk Food Share. "We live in such a vibrant agricultural area, but many of our neighbors do not have access to some of our rich local resources. This event is meant to strengthen our food system and make it accessible to everyone."

The Mid-Valley Food Summit is at Willamette University Putnam University Center and is open to everyone. Tickets are \$15, with a select number of scholarship tickets available. The ticket price includes a lunch made with local food.

Please visit www.MarionPolkFoodShare.org/Programs/MidValleyFoodSummit for more information and to purchase tickets.

The event is presented in partnership with Willamette University, Oregon Food Bank, Fresh n' Local Foods, Minto Island Growers and OSU Extension.

Farmer, Entrepreneur, Soil Scientist, Mechanic, Vet...That's you!

By: Christine Anderson Brekken, Applied Economics, OSU Small Farms Program

We know farmers wear many hats. Tell us about them! OSU's School of Public Policy and Applied Economics Department are involved in a USDA-funded, national survey to learn how farmers choose their production and marketing practices and the barriers they face.

Early results from the <u>survey</u> confirm that farmers have to be canny entrepreneurs, whether they market at local, regional, and/or national scales. Respondents have been farming for 5 years on average, although one of you has been farming since 1847—we bet that's how long the farm has been in the family! Speaking of age, respondents are evenly distributed from young adults up to age 64.

Only 10% of respondents are certified organic, but a large number are no-spray or use organic practices but without being certified. Your motivations are personal: 93% said that they choose production practices because they align with your values. Many also are motivated by higher profits, but only 20% have changed practices specifically for marketing opportunities. You seek advice and support from fellow farmers and university extension services (for example, the OSU Small Farms Program). We'd love to delve deeper into this dynamic.

If you've already taken the survey, many thanks! If you still haven't, we'd love to hear from you.

The project is a partnership between OSU, University of Vermont, and City University of New York.

Take the anonymous survey here:

http://oregonstate.qualtrics.com/SE/?SID=SV_ehzbTopIBErUDHf

Oregon Farm to School Summit

Farmers and ranchers are wanted at the Oregon Farm to School Summit Friday, Feb 5th, 2016
At the Oregon Garden in Silverton, Oregon.

Please join us for a day of workshops, resource sharing, and networking focused farm to school topics including local food procurement and farm to school education programs. There will be a special workshop track for farmers and producers including workshops on Selling to Schools, Food Safety (for Farm to School), and Effective Farm Field Trips.

The event will provide training in selling to schools and engaging with farm to school education, connect local producers to school food buyers, build skills and connections, share resources, and provide inspiration.

Full scholarships and travel reimbursement are available for farmers and producers! For registration plus information about agendas, scholarships, travel reimbursements, lodging, and more, please see:

http://www.upstreampublichealth.org/summits-2016

Questions? Contact megan@lanefood.org or 541-344-4329



Calendar

January

26 - Nutrient Management Workshop: Keeping Nitrogen in the Crop and Dollars in the Pocket

Interactive, one-day nitrogen workshop for Oregon Growers on nutrient management solutions This year long series will begin with a tour and continue through the year. Monroe, OR. For more information contact Benton Soil and Water Conservation District 541-753-7208 *FREE*

February

1 - Local Food Connection

Connects local farmers, ranchers, fishermen, food processors and area food buyers (chefs, grocery stores, restaurants, and distributors), creating business opportunities that support and sustain our local food supply system. 8:30 AM - 4:00 PM. Lane Community College, Eugene, OR. Contact: 541-359-8987 or localfood@cascadepacific.org \$35

6 - Mid Valley Food Summit

Learn about local food efforts in Marion & Polk counties and engage in the exciting collaborative plans to improve the Mid-Willamette Valley food system. 8:30 AM - 3:45 PM Willamette University - Putnam University Center, Salem, OR. Contact: 503-581-3855 or astickel@marionpolkfoodshare.org \$15

19 - Oregon Agritourism Network Meeting

Working group of farmers, ranchers, tour operators, agencies and associations with expertise and interest in developing Oregon as a premier travel destination for authentic agritourism experiences. Network meetings rotate across Oregon to engage stakeholders from every corner of the state. 1:00 Pm -5:00 PM. Alumni Center Ballroom, Oregon State University, 725 SW 26th Street, Corvallis, OR. Contact Alexa Carey, Destination Development Specialist with Travel Oregon at Alexa@TravelOregon.com or (971)717-6178

20 - Oregon State University Small Farms Conference

A daylong event geared toward farmers, agricultural professionals, food policy advocates, students and managers of farmers markets. Thirty educational sessions are offered on a variety of topics relevant to the Oregon small farmers and include a track in Spanish. Speakers include farmers, OSU Extension faculty, agribusiness, and more. More information on the conference website http://smallfarms. oregonstate.edu/sfc 541-766-3556 or smallfarmsprogram@oregonstate.edu \$45 per person until Feb 1st

Want to add your event to our calendar then please submit your information at http://calendar.oregonstate.edu/advanced/list/extension-smallfarms/ "Click the Submit an event button." Events have to be approved and will not immediately post. If you have questions please contact Chrissy Lucas at Chrissy.Lucas@oregonstate.edu or 541-766-3556