



Oregon Small Farm News

Oregon State University Small Farms Program

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Cover Photo:

Mechanical Cultivation Field Day
2018. See article on page 7
Photo by Garry Stephenson.

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SAVE THE DATE! 2019 OSU Small Farms Conference is Saturday, February 23rd, 2019

Another great OSU Small Farms Conference is on the horizon. Save Saturday February 23rd 2019.

Featured Speakers include:


Karen "Mimo" Davis and Miranda Duschack - Urban Buds, City Grown Flowers

Ellen Polishuk - Farmer, consultant and author of Start Your Farm

Josh Volk - Farmer, consultant and author of Compact Farms

As always, the OSU Small Farms Conference will feature:

- Educational sessions in English and Spanish on farming and the food system
- Exhibits by over 50 organizations
- The best locally sourced lunch you can get in February
- Networking and local beer and wine tasting during Think with a Drink

Session descriptions, registration, and more information will be available in late December 2018 at <http://extension.oregonstate.edu/smallfarms> 



A Farmer Should Not Be In Regular Pain! A look at the risk of Musculoskeletal Disorders and how the science of ergonomics can help

By: Teagan Moran, Small Farms Program, Oregon State University Extension Service

I was inspired to write this article after having an emotional conversation with a very young farmer (not even 30 years old) who had to leave their job and farming all together due to disabling back pain associated with a musculoskeletal disorder (MSD). They had worked a position that required long repetitive tasks, at the time they had not known about the danger of (MSDs) associated with their job or the ergonomic practices that could have prevented them.



Do you feel the aches and pains everyday?
Photo by Shutterstock Images

This farmer is not alone; work related (MSDs) are the leading cause of disability across industries, and farmers are at particularly high risk (Walker-Bone and Palmer, 2002). MSDs are injuries and disorders that affect the human body's movement or musculoskeletal system (i.e. muscles, tendons, ligaments, nerves, discs, blood vessels, etc.). MSDs are caused by prolonged exposure to physical stresses such as repetition, forceful exertions, kneeling, lifting, squatting, bending, vibrations and twisting (NIOSH, 1997). When a worker is exposed to these physical stresses, they begin to fatigue. When fatigue continues past the body's ability to recover, then they develop a musculoskeletal imbalance. If that imbalance continues and the body still doesn't recover, then the musculoskeletal disorder develops.

Now, you may be thinking - the physical stresses listed sound just like a job description for most farm labor. Even as I sit to write this I am nursing a tweaked shoulder from a particularly vigorous weed whacking venture on my farm. The good news, as reported by the National Institute for Occupational Safety and Health, is that MSDs are preventable, there are tangible steps we can take to reduce the risk of MSDs on the farm and ergonomics plays a leading role.

What is ergonomics?

You may have heard about an ergonomic car seat or keyboard, but there is more to it than the design of products. Ergonomics is an applied science that aims to learn about human abilities and limitations. It applies those ergonomic principles to design workplaces, equipment, and systems so that they fit the people who use them. Ergonomics aims to reduce stress on the body while increasing efficiency and comfort in the workplace. Specialists in the science of ergonomics have demonstrated that there are simple and cost effective solutions that can have significant impact on the health of farm workers overall (Sestos, Module VIII).

Why should we care?

Pain should not be a regular part of a farmer's job. The impact of MSDs (which can develop slowly over time) can result in permanent or long-term disability, lifelong pain, and significant loss of income. For small farms where labor may be on the shoulders of only one or two people – this can destroy the farm business.

What is stopping us?

It is important to acknowledge the barriers to implementing ergonomic strategies on farms. Some

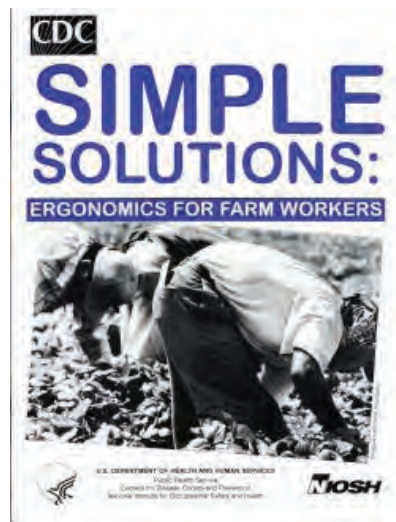
barriers are related to the belief that the pain is just 'part and parcel' of the job. Sometimes there is even pride in those sore muscles at the end of the day. This attitude is a dangerous one, because it tends to gloss over the seriousness of MSDs and deprioritizes the solutions that could make farm work safer (Baron, et al. 2001). Many farming practices have been passed down through generations, and changing habits related to 'how things get done' is difficult or is viewed as an inconvenience. Additionally, even acknowledging the presence of injury and symptoms can be a barrier. Symptoms are often ignored until they interfere with one's ability to perform their job and by then the MSD has taken root. As a farmer myself, I must admit that I often take better care of my pruners than my own hands. When profit margins are slim, speed can take precedence over safety - I have been guilty of feeling shame when I slow down, even if it is to protect my body. To counter some of these barriers we need to talk about the seriousness, cumulative impact, and causes of MSDs and that farmer focused ergonomics offer one way towards safer farm work. The cost associated with these changes should be viewed in relation to what can be saved in the long run, the farmer's health and farm viability.

What can be done?

Small changes on a daily basis can have a big impact. Multidisciplinary teams of researchers and extension staff across the country have collaborated to develop intervention and prevention programs with ergonomic approaches. More research is needed as the science of ergonomics is actually quite young, but we now have some practical alternatives and affordable strategies to counter the 'back breaking' norm. For a comprehensive list of these strategies including the guidelines shared below check out [Simple Solutions for Farm Workers](#) published by the U.S. Department of Human Health – Center for Disease Control and Prevention.

Prevention Strategies:

Modifying tasks, changing routines, and finding the right equipment/tool (or modifying a tool) for the job can all help prevent MSDs. If tools and work stations are ergonomically designed – meaning designed so



that they meet the physical capabilities of the worker, then injuries are prevented as a natural result of less repetition, improved posture and reducing the force used by the body.

- Posture has a huge impact. Limit or eliminate the

need for stooped work: Alternate with one knee, Redesign the job to avoid if possible, Break up the job with other tasks, Move into opposite positions. There is strategy of 'Reversal' – where you reverse the position you are in – even if just for 10 seconds to allow your body to recover and reset. So if you are stooped over then you stand up and stretch back to reverse the action.

- Reduce long exposure to vibration or the need to be in one position. To do so prioritize task rotation as much as possible. Standing causes legs to swell (more than walking), changing from standing to walking and back again is recommended.
- Allow a tool to do the work and make sure the tool fits the body. What is a good fit?
 - A tool that supports good posture, such as one with a long enough handle so that you limit the need to stoop.
 - If a tool requires force, the user should be able to grip all the way around the handle having thumb and forefinger overlap. Handle diameter should range from 1-3/8" for small hands to 2-1/8" for large hands, with an average of 1-3/4".
 - Well-designed tools will have handles 4" or 5" long, slip resistant material on the handle and a spring to keep the tool open (reducing the need for additional force).
 - For standing work there is a recommended work station height (wash stations, pack tables, etc) for men this is typically


40" to 43" for light work and 36" to 39" for heavy work; for women this is typically 37" to 39" for light work and 33" to 35" for heavy work.

- Consider tires and suspension on tractors/trucks to limit vibrations and impact on the body. Invest in motor vehicle seats with good seat positioning and lumbar support.
- Limit twisting and reaching. For example; be aware of where harvest containers are in relation to the body. Items should be within 17 inches of the worker's body. Avoid placing needed tools or other items above shoulder height.
- When harvesting from or pruning trees, adequate ladder heights have a big impact.
- Take short breaks every 30 minutes and sit down when possible; sitting down, even for short periods of time reduces the strain on lower back and legs.
- Lifting:
 - Keep lifts between hand level and shoulder level. Avoid lifts from the floor or over shoulder level.
 - Provide handles on containers.
 - Redesign loads so they can be lifted close to the body.
 - Provide dollies, pallet trucks, or utility carts for objects that have to be carried more than a few feet. Provide roller conveyors for bags or boxes of vegetables or chemicals that are handled often. This will reduce the amount of lifting.
 - Keep bag or box weight below 50 pounds.

For more details on these strategies, MSDS, and on farm system design recommendations see:

* Simple Solutions for Farm Workers (NIOSH, Center for Disease Control and Prevention 2001)

* Preventing Musculoskeletal Disorders (OSHA Ergonomics)

* Easy Ergonomics: A Guide to Selecting Non-Powered Hand Tools (Center for Disease Control and Prevention) 

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2019 Hybrid Course

Growing Farms hybrid course is designed for beginning specialty crop & livestock farmers in their first 5 years of business.

Students will develop a whole farm plan. Resource binder is included. Course consists of six on-line modules, 3 classroom sessions, and a field trip.

2019 Hybrid Class Dates & Location

Tuesdays, 6:00-8:30pm

Jan 22, Feb 5, Feb 19 (all day tour), Mar 5

Marion-Polk Food Share's Youth Farm
Winema Place NE, Salem, OR

Cost & Registration Details

\$295 per person

\$75 farm partner discount

Registration for OSU Small Farms
Conference (2/23) is included

Additional scholarships may be available

Contact: Victoria Binning

503-373-3774 or

victoria.binning@oregonstate.edu

OSU Mechanical Cultivation Field Day a Major Success!

By: Clare Sullivan, Heidi Noordijk and Nick Andrews, Small Farms Program, Oregon State University Extension Service

Weed management consistently ranks as a high priority topic for organic vegetable growers, and yet most are not taking full advantage of the best cultivation tools available. When properly used, precision cultivation tools can quickly pay for themselves in labor savings. We received a two-year mini-grant from the USDA Western Sustainable Agriculture Research and Education program (WSARE) to conduct educational outreach on mechanical cultivation, including field days and barn day workshops.

On August 16th, 2018 the first OSU Mechanical Cultivation Field Day was held at the OSU Vegetable Research Farm in Corvallis. The day-long event was attended by over 100 people, of which the large majority were farmers. The goal of the event was to increase the mechanical cultivation knowledge base of vegetable farmers, and provide a platform for farmer and equipment supplier exchange of ideas and opportunities.



Finger weeder (above) and Electric tractor (left).

Overwhelmingly, participants had very positive experiences: 95% said they gained new information to improve weed management in their crops, 91% planned on adopting one of the practices shown, and 87% said they planned to use new cultivation equipment on their farm. On a scale of 1-5 in terms of how useful the field day was, average participant response was 4.6 for demonstrations, 4.2 for exhibitor booths, and 4.1 for the presentations. Photos provided by Clare Sullivan



This year's event focused on in-row mechanical cultivation, and equipment dealers traveled from Ohio (Tilmor), Pennsylvania (KULT-Kress) and California (Sutton Ag and Solectrac) to demonstrate tools in bean and lettuce crops. The cultivation equipment included finger weeders, basket weeders, precision-tine harrows, and a grower-designed cultivation setup. A mechanical transplanter and electric cultivating tractor were also demonstrated. Eric Gallandt, a weed ecologist from the University of Maine, delivered the keynote presentation on weed seed and seedling management. Sam Hitchcock-Tilton (KULT-Kress) gave a capnote presentation in the field,

reviewing the tools on display. Participants also visited exhibitor booths of the visiting companies and local equipment suppliers. A delicious lunch was provided by OSU Catering, and the day ended with ice cream topped with haskap berry sauce (provided by Shinji Kawai, OSU).

A second Cultivation Field Day will be held next

summer in the Willamette Valley, and a toolbar set-up barn day is planned for Deschutes County. A project webpage will be developed to house cultivation resources, videos, and vendor links.

The capital press published this article about the event: <https://smallagpress.com/osu-field-day-highlights-mechanical-cultivation-tools/> 



Dairy Goat Day

2018

If you are an experienced goat person or hope to be, this event is for you!

TIME: 8:00am — 4:30pm

DATE: Saturday November 3rd

Pleasant Hill High School

REGISTER NOW AT

smallfarms.oregonstate.edu/south-valley/events

Or Contact:

541-766-3553

Teagan.moran@oregonstate.edu



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Workshop Topics:



Cheese Making for the Home Dairy

Pasture Management

Livestock Guardian Animals

Common Diseases in Goats

Managing Internal Parasites

1,2,3's of Milking

Raising Goats for Meat

Getting Started with Milk Certification

Herbal Nutrition and Health

Cost: \$25/Person or \$40 for two people from the same farm

Oregon Community Food Systems by the Numbers

A new fact sheet series from OSU Extension

By: Lauren Gwin, Associate Director, Center for Small Farms & Community Food Systems

What are the numbers telling us about our food system?

OSU Extension faculty have launched a new fact sheet series exploring local food system data and analysis. The new series responds to requests from the Oregon Community Food Systems Network and is a new addition to the CFS Indicators Project, an ongoing partnership with OCFSN.

The first issue, *“12% of Oregon’s farmers markets are in areas with low income and low access to supermarkets,”* examines the location of Oregon’s farmers markets and areas of the state classified as places with low income and low access to food. 600,000 Oregonians – 14% of the state’s population – live in areas with low income and low access, and at least 12 of the state’s farmers markets are also located in these areas.

“Farmers markets provide one way to access healthy food choices,” said lead author Mallory Rahe,

Extension Community Economist. “The Oregon Farmers Market Association is currently seeking funding to pilot programs that will strengthen the business viability of market vendors in these areas. OFMA’s need to understand the overlap between existing markets and low income areas with limited access to grocery stores was our motivation for this first publication.”

Future fact sheets will focus on similar timely and relevant questions, driven by questions from communities and food system organizations. “We look forward to partnering with additional groups and regions on future issues,” Rahe says.

“Oregon Community Food Systems by the Numbers” is a partnership between the OSU Center for Small Farms & Community Food Systems and Rural Communities Explorer.

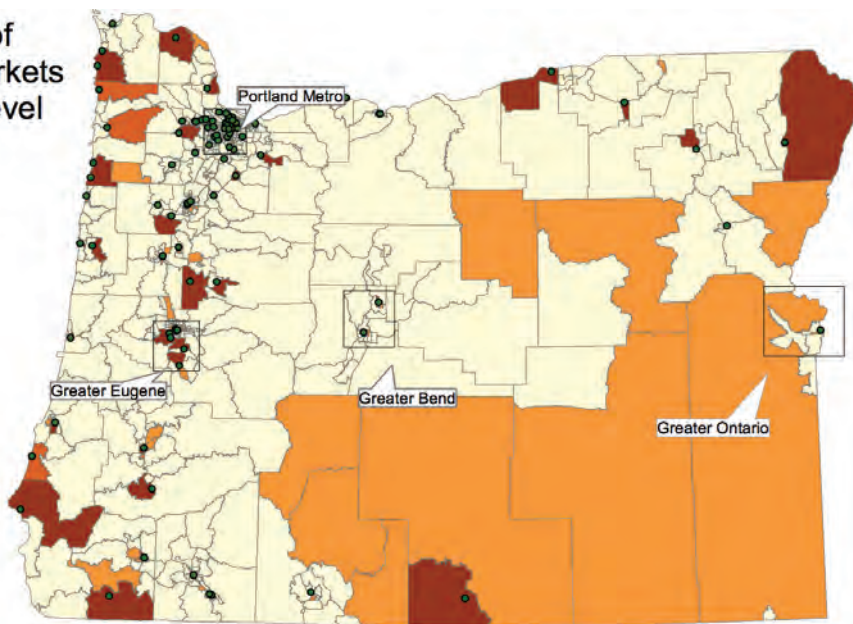
Access the fact sheet here: <https://catalog.extension.oregonstate.edu/em9215>

Visual Representation of LI/LA* and Farmers Markets at the Census Tracts Level in Oregon

*Low income and low access tract using vehicle access or low income and low access tract measured at 20 miles

Legend

- Farmers’ Markets
- Has FM(s), Not LI/LA
- No FM(s), Is LI/LA
- Has FM(s), Is LI/LA
- No FM(s), Not LI/LA



Contact Mallory Rahe (Mallory.rahe@oregonstate.edu) or Lauren Gwin (Lauren.gwin@oregonstate.edu) with ideas or questions for future analyses.

Image from OSU Extension Rural Communities Explorer

Explore similar data for your local food and agricultural sector on the Rural Communities Explorer website: <http://oe.oregonexplorer.info/rural/CommunitiesReporter/>

Learn about the CFS Indicators Project: <https://centerforsmallfarms.oregonstate.edu/communityfoodsystems>

Learn about the Oregon Community Food Systems Network: <http://ocfsn.net/>

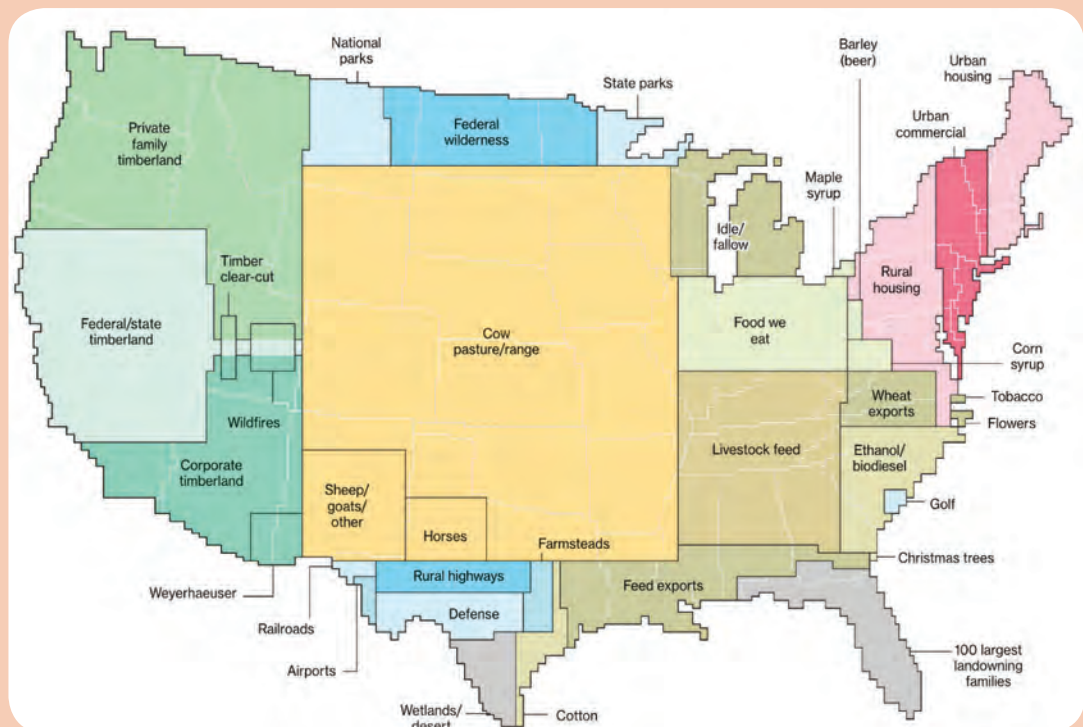
Bloomberg Illustrates How America Uses Its Land

Bloomberg News authors Dave Merrill and Lauren Leatherby have pieced together a striking illustration of how America uses its land to create wealth. Focusing on the 48 contiguous states and using data from the U.S. Department of Agriculture and other government agencies, they divided the U.S. into six major types of land: Pasture and range, forest, cropland, special use (national parks, wildlife areas, highways, railroads and military bases), urban, and miscellaneous (cemeteries, golf courses, marshes, deserts and other areas of “low economic value”). The findings are thought provoking.

Some highlights:

- Cropland accounts for about one fifth of land (391.5 million acres) of which over 127 million acres produce livestock feed, and another 38 million acres produce ethanol. The authors estimate that only 77.3 million acres produces food we eat in the U.S.
- More than one third of land (654 million acres) is rangeland or pasture used for grazing. When combined with cropland used to produce livestock feed, the authors calculate that over 40% of land is used in some manner for livestock.
- Unprotected forest and timberland accounts for one quarter of land (538.6 million acres).
- Urban areas account for just 3.6% of land (69.4 million acres).
- National parks account for 29 million acres while defense accounts for 25 million acres. Golf courses account for 2 million acres.

The full article is here: <https://www.bloomberg.com/graphics/2018-us-land-use/>



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SHAWN LINHAN PHOTOGRAPHY

Grafting is a Biological Disease Management Strategy

By: Carol Miles, Vegetable Horticulturist, Washington State University

Grafting is an age-old technique used in plant propagation to combine two plants so that one plant provides a desirable rootstock and the other provides desirable fruit characteristics (Fig. 1). While most people are familiar with grafting of fruit trees, grapes, roses and many other fruit and ornamental plants, they may not know that the first record of vegetable grafting was written 1500 years ago in Korea. Grafted watermelon newly transplanted into the field; the top of the grafted plant is called the scion and the bottom is the rootstock.



Figure 1: Grafted watermelon newly transplanted into the field; the top of the grafted plant is called the scion and the bottom is the rootstock.
Photo by: Carol Miles

seed companies introduced vegetable grafting to greenhouse vegetable growers in Europe, and those growers transferred vegetable grafting to Canada in the 1990s. Only recently has vegetable grafting been used by commercial growers in the U.S. The U.S. has been slow to adopt vegetable grafting because many U.S. farmers rely on chemicals for disease management, and the number of plants needed by farmers in the U.S. is far greater than in other regions of the world due to the large farm size in the U.S., and hence the transplant expense is greater.

Growers can graft their own vegetable transplants, but should follow guides for grafting and healing to ensure success. Guides for grafting eggplant, tomato and watermelon can be found at Washington State University, <http://vegetables.wsu.edu/graftingVegetables.html#information>, and are also available in Spanish. Seedlings are grafted when they have 1-2 true leaves, and a double edged, thin razor blade is used to cut the plants. For eggplant and tomato, the splice grafting method is used, and is rapid and simple to learn. The rootstock and the scion are both cut at a 45° angle about ½-1 inch

Grafting is used for vegetable production for three primary reasons: 1) to control soil-borne diseases, 2) to overcome salinity issues, and 3) to increase crop vigor under temperature stress. In addition, depending on rootstocks, grafted vegetables can be more tolerant of saturated soils, droughty conditions, and cold soil conditions. Grafted watermelon have been used on a commercial scale in Japan since the 1930s and grafted tomato since the 1960s. Israel started using grafted vegetables in the 1950s and 1960s. In the 1980s and 1990s, Japanese



Figure 2. Splice grafting method that is used for eggplant and tomato.
Photo by: Carol Miles



Figure 3. One-cotyledon grafting method that is used for watermelon: rootstock (left) is cut such that one cotyledon and the apical meristem is removed, the scion (center) is cut below the cotyledons, and the two plants are clipped together (right).
Photos by Carol Miles

below the cotyledons, a grafting clip is placed on the rootstock, and the scion is slipped into the clip (Fig. 2). For watermelon, the one-cotyledon splice method is used, and takes more time and effort. The rootstock is cut at a 60° angle such that one cotyledon and the apical meristem is removed (Fig 3). To prevent rootstock regrowth, the meristem bud at the base of the remaining cotyledon is removed by swiping the edge of the blade back and forth over the bud tissue. The scion is cut at a 60° angle below both cotyledons, and the two plants are clipped together.

Place grafted plants immediately into a healing chamber where humidity is 80-95% and light is limited by heavy shade cloth. Healing can be carried out in a low tunnel or in a healing chamber placed on a bench in

Figure 4. Healing grafted eggplant in a low tunnel on a bench in a greenhouse on a commercial small farm in California (right) and in a bench-top healing chamber at WSU Mount Vernon NWREC (below).
Photos by Carol Miles



the greenhouse (Fig. 4), just be sure to keep temperature within the healing chamber at 70-73 °F for watermelon and 70-80 °F for eggplant and tomato. Survival of grafted watermelon tends to be lower and less reliable than for other grafted vegetable crops, and watermelon tend to require greater care up to 1 week after grafting. In a study at Washington State University, survival of grafted tomato was 98% following grafting, eggplant was 86%, and watermelon ranged from 51% to 80% (Johnson and Miles, 2011).

Survival of grafted watermelon tends to be lower than for other grafted vegetable crops due to the susceptibility of the plant to desiccation following the grafting procedure. To minimize water stress after grafting, plants are covered with shade cloth for up to 1 week to reduce transpiration.



Figure 5. Grafted watermelon (left) and non-grafted watermelon (right) on 12 September in a field impacted by verticillium wilt at WSU Mount Vernon NWREC. Photos by Carol Miles

Grafting has been shown to be effective against several soil-borne diseases, including fusarium wilt, verticillium wilt, bacterial wilt, southern blight, and also root-knot nematodes. It is important to note that grafted vegetables do not have increased resistance to foliar pathogens. Also, grafting does not appear

Figure 6. Verticillium wilt appears as wilting of leaves, and on watermelon one vine at a time on a plant will be affected (left); yellow v-shaped chlorosis extend from the leaf tip, as shown on eggplant (right).


Photos by Carol Miles



to have an impact on yield when there is no stress. For example, research studies with heirloom tomato at Washington State University showed grafting provided no benefit when planted in a high tunnel or a field with a low to moderate level of verticillium wilt (up to 25 colony forming units per g of soil) as tomatoes have genetic resistance, even many heirloom varieties.

In Washington and Oregon, verticillium wilt affects watermelon and eggplant production, and research carried out by Washington State University has shown that grafting can provide effective control (Fig. 5). Symptoms of verticillium wilt include wilting of leaves, and a single vine or branch on a plant will wilt, and v-shaped yellow chlorosis on leaves (Fig. 6). Grafting tends to be cost-effective when soil levels of *Verticillium dahliae*, the pathogen that causes verticillium wilt, are greater than 5 colony forming units (cfu) per gram of soil. The Oregon State University Plant Clinic/Extension Plant Pathology Laboratory in Hermiston can test soil samples for *V. dahliae*, contact the laboratory for more information, <http://plant-clinic.bpp.oregonstate.edu/services-and-fees/>.

Although grafting holds promise as a disease management strategy especially for watermelon and eggplant producers in Washington and Oregon, use is limited due in part to the cost of grafted transplants. Increased production costs related to grafting include extra seed and greenhouse facilities needed to grow rootstock seedlings, skilled labor needed for grafting, and special facilities required for successful healing of the grafted plants (Dabirian and Miles, 2017). Growers can purchase grafted transplants, see <http://www.vegetablegrafting.org/resources/suppliers/> for a list of commercial suppliers in North America.

For those interested in teaching vegetable grafting, Washington State University has developed a guide to hosting a grafting workshop, see <http://www.vegetablegrafting.org/?s=grafting+manual&x=0&y=0>. 

For more information:

Grafting manual <http://www.vegetablegrafting.org/?s=grafting+manual&x=0&y=0>

[org/?s=grafting+manual&x=0&y=0](http://www.vegetablegrafting.org/?s=grafting+manual&x=0&y=0)

Guide to hosting a vegetable grafting workshop
http://vegetables.wsu.edu/Grafting_Training_Information_Packet.pdf

Washington State University vegetable grafting research, publications and guides <http://vegetables.wsu.edu/graftingVegetables.html>

- [Grafting Supplies](#) WSU fact sheet.
- [Vegetable Grafting: The Healing Chamber](#). WSU Extension Fact Sheet FS051E 3 pages. Published October 2011, reviewed July 2016.
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- [Vegetable Grafting: Eggplant and Tomato](#). WSU Extension Fact Sheet FS052E 4 pages. Published October 2011.
- [Injerto de Verduras: Berenjenas y Tomates](#). Hoja informativa de la Universidad Estatal de Washington FS052ES. 4 páginas. Publicado Agosto 2013.
- [Non-grafted and Grafted Seedless Watermelon Transplants: Comparative Economic Feasibility Analysis](#). Washington State University Extension publication TB08E, 14 pages. A guide for evaluating the physical and financial requirements and economic feasibility of growing seedless watermelon transplants, both non-grafted and grafted, in a greenhouse, as well as using grafted transplants to produce seedless watermelon in Washington. Published May 2016.

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- Dabirian, S. and C. Miles. 2017. Antitranspirant application increases grafting success of watermelon. HortTech 27:494-501 doi: 10.21273/HORTTECH03739-17
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Communities, Food, Resilience

On September 5, OSU Extension and the College of Agricultural Sciences cohosted “Communities, Food, Resilience,” as part of OSU’s 150th anniversary celebration. The main event was in Portland, and it was also shown at 14 different livestream events around the state.

Lauren Gwin, OSU Center for Small Farms & Community Food Systems, moderated the event and recruited three dynamic speakers to challenge OSU as Oregon’s public land grant university, to make a big change: from “we feed the world” to “we support the empowerment of the world to feed itself.”

- Speakers: David Lewis, Ethnohistory Research; Shorlette Ammons, Center for Environmental Farming Systems at North Carolina State University; and Stephanie Grutzmacher, OSU College of Public Health & Human Sciences. Learn more about them here: <http://blogs.oregonstate.edu/foodresilience/>.
- Recording of the event: <https://oregonstate.app.box.com/s/9r35veh8qttkvj4bi6cltwns0oq3tzkv>
- Recommended reading, including The Deeper Challenge of Change: The Role of Land Grant Universities in Assessing and Ending Structural Racism in the US Food System: <http://blogs.oregonstate.edu/foodresilience/recommended-reading/>

The Center’s partnership with the Oregon Community Food Systems Network was a major inspiration for the event. 

New from SARE: Improve Resilience and Stability With Farmers’ Guide to Business Structures

Selecting the right business entity for your farm is like building the foundation of a house. Without the right foundation, the house will falter. Choosing an appropriate business structure encourages you to follow good business practices in accounting and decision-making, and it protects your personal assets should your farm get into financial trouble. SARE’s newest book, Farmers’ Guide to Business Structures, provides practical tools to help you choose the best business entity for your operation.

Farmers’ Guide to Business Structures describes the fundamentals of sole proprietorships, general partnerships, limited liability companies and C, S and B corporations in straightforward language. The pros and cons of nonprofit and cooperative business models are addressed, and the guide includes checklists, sample operating agreements and bylaws to help farmers draft organizing documents.

Order or download (free) here: <https://www.sare.org/Learning-Center/Books/Farmers-Guide-to-Business-Structures>

Videos, Podcasts and Posters from SARE’s Our Farms, Our Future Conference

The Our Farms, Our Future Conference was held by SARE and NCAT/ATTRA in April of 2018. The three-day event featured over 35 different breakout sessions, bringing close to 110 speakers together to share their diverse ideas about the future of sustainable agriculture. Now, all of the conference materials are online and available for free to the public to allow everyone access to the resources and perspectives shared at the event.

You may:

- Browse the plenary session videos to listen as USDA leaders, agribusiness professionals and farmers discuss what their organizations are doing to create a sustainable future.
- View the 60 breakout session videos covering topics ranging from soil health to the social impacts of sustainable agriculture.
- Learn from emerging researchers and scientists about their work in the fast-paced Sustainability in 180 Seconds program.
- Listen to the Our Farms, Our Future Podcast Series recorded at the conference, featuring new episodes every two weeks.

To view all the above, go here: <https://www.sare.org/Events/> and look for Our Farms, Our Future.



Septic and Well Management Class

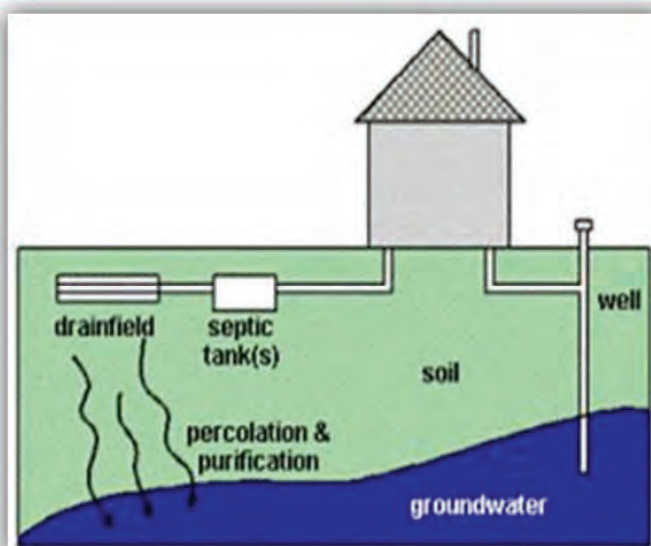
OCTOBER 23

Two Locations - Same Date - Registration is not required

Presentation By

CHRISSY LUCAS, OSU Extension Service

Small Farms/Ground Water Quality Outreach Program Coordinator



Two Locations in Yamhill County

Tuesday, October 23

1 - 3 PM

West Valley Community Campus

266 SE Washington St

Willamina, Oregon 97396

6 - 8 PM

Chemeketa Community College

McMinnville Campus

288 NE Norton Lane,

McMinnville, OR 97128

- Classes will focus on basics for rural well water and septic maintenance.
- **FREE Nitrate Screening:** If you would like your water tested, bring a **clean jar of water** (*before any softeners or treatment*).

Questions? Contact Heather

Email heather.stoven@oregonstate.edu or

Phone 503-434-7517



**YAMHILL SOIL & WATER
CONSERVATION DISTRICT**



**Oregon State University
Extension Service**



**Greater Yamhill
Watershed Council**

Ecotrust is Hosting a Four-State “Ag of the Middle” Business Accelerator Program. Designed for Farmers, Ranchers, and Fishers

— The 2018 cohort kicks off NOVEMBER 7-8th, 2018! [Apply online](#) by October 5th —

Know a small rancher, farmer, or fishers in far Northern California, Oregon, Washington or Alaska who'd like support growing their business? [Ecotrust](#), a regional nonprofit based in Portland, together with a network of supporting organizations across the region, is hosting a new program to help food producers scale up and reach financial stability.

Producer-centered, the program will offer resources, expertise and networks to help get wind at the backs of small food producers – including farmers, ranchers, fishers, and value-added processors – who are keen to grow while maintaining their commitment to their community, regional markets, and restorative production practices.

This is a two-year, hands-on, capacity-building and business development program. It is designed to cultivate an active cohort of successful, independent, mid-sized farmers, fishers, and ranchers who are growing and harvesting food products, while selling into domestic markets. The goal is a modern-day “ag of the middle” sector that can supply mainstream regional markets with products raised in ways good for land, soil, water, people, and animals.

The curriculum will cover three key areas: business structure and taxation, credit and finance, and market development. To best meet the needs of working farmers, fishers, and ranchers, the core program trainings will be conducted remotely in online group sessions and in team-based offline work through the 2018 -2019 winter months. Curriculum for this program is being developed in partnership with Poppy Davis of C2C Consulting and other highly skilled trainers. The program will begin with a hands-on, in-person gathering in Portland, OR on Nov. 7th & 8th. Beyond initial training sessions, this opportunity

includes an option to participate in a key [local food show](#), and to interact with Portland's newest food hub, the [Redd on Salmon Street](#). Activities for the first year of training will culminate in late February, 2019 with a second in-person gathering in Corvallis, Oregon. Participants will develop lasting connections with peers, and learn as much from each other as they will from the formal curriculum provided.

Participants will graduate from the program with their business, land, and other assets appropriately structured to limit liability and facilitate growth and succession. Participants will be provided with the tools and network connections to put the right mechanisms in place to secure appropriate credit, and develop or enhance key value propositions and branding to reach clarified target markets.

It is free to apply and all interested parties are encouraged to do so. Applicants accepted into the program will need to pay one-time \$125 registration fee, and are responsible for expenditures related to travel and lodging to attend two-in person gatherings in November, 2018 and February 2019. Limited scholarships are available (see application for details). Applicants should be adequately prepared to travel to Portland, Oregon on Nov. 6th, for in-person cohort gathering Nov. 7th-8th. Announcements of application acceptance will be made on October 23rd.

Eligible participants are farmers, ranchers, fishers, and related value-added enterprises. The program is intended to support small to midsize producers of food items important to human nutrition. Preference may be given to producers and harvesters who have:

- A demonstrated commitment to their community, building soil health, clean water, healthy ecosystems, sustainable harvesting practices, and other restorative production practices.
- For fishers, those working, landing, and

processing in a remote/rural community(ies) with a population(s) of less than 25,000.

- For farmers and ranchers, those working with priority products such as whole and minimally processed grains, legumes, and rotational crops, as well as grass-finished beef, pastured pork, and other differentiated proteins.
- Producers meeting the USDA definition of “socially disadvantaged.”

Oregon on Nov. 6th, for the in-person cohort gathering.

- Nov. 7 & 8, in-person convening in Portland, Oregon.

To learn more and apply: Please follow this link for the full application. To learn more, please contact Aaron Vargas at avargas@ecotrust.org or call 503-467-0785 with any questions or for more information.

Application Timeline:

- Sept. 14, application period opens.
- Oct. 5th, application submission deadline.
- Oct. 23, announcements of application acceptance will be made. Applicants should be adequately prepared to travel to Portland,

— The 2018 cohort kicks off NOVEMBER 7th, 2018!

Apply online by October 5th — 

Are you managing your farm business? Or is your farm business managing you?

The OSU Small Farms Program is teaming up with Chemeketa Community College's Agribusiness Management Program to offer a business management class tailored to the needs of small farmers. This three-hour workshop will focus on what every business needs to be sustainable: good records and how to keep them.

This workshop will be hosted at Chemeketa Community College's Eola Campus, 215 Doaks Ferry Rd NW, Salem, OR, 97304, on November 1, from 2:00-5:00pm. Doors open at 1:30pm. The workshop is \$15 per participant. Snacks and drinks will be provided.

To register for the workshop, visit <https://smallfarms.oregonstate.edu/mid-valley/events>

For inquiries, contact Victoria Binning at OSU Extension Service in Marion County at 503-373-3774



NMPAN Turns 10!

By: Rebecca Thistlethwaite, NMPAN Program Manager

“Too often, very small processors feel like they’re alone out here; like no one else understands and lives our challenges. It’s a rough business to make work; it can be a highly stressful business, economically and bureaucracy-wise. NMPAN matters because it shows that together we do have a voice. It shows us that other people are living the same thing.”

– farmer/processor

The Niche Meat Processor Assistance Network is celebrating its 10th birthday.

NMPAN is a national network focused on the long-term viability of the small and mid-sized processors who are essential to the local and regional meat and poultry sectors. By connecting processors, producers, other supply chain actors, and support entities like agencies, NGOs, universities, and funders, NMPAN facilitates peer-to-peer learning, problem solving, and innovative approaches to difficult challenges.

NMPAN was created in 2008 by Lauren Gwin and Arion Thiboumery, to connect people around the country who were struggling with “the processing problem.” At the time, Thiboumery was at Iowa State University, working with small processors, and Gwin had just finished her graduate research at UC Berkeley on barriers to scaling up sustainable meat production.

“Farmers and ranchers all over the country were telling me that processing was their biggest bottleneck in getting meat to market,” Gwin said. “But Arion knew from processors that they didn’t have enough steady business to be profitable, let alone add new space or services.” People were trying to solve this problem in different ways,” she added, “but there was so much wheel reinvention. I’m against that. So we started NMPAN.”



NMPAN co-founders Arion Thiboumery and Lauren Gwin at a meat processing conference in 2009. Photo provided by NMPAN

NMPAN is a Cooperative Extension-based network, initially launched at Iowa State University and then moved to Oregon State University in 2009, where it is now housed in the Center for Small Farms & Community Food Systems. Gwin is NMPAN Director, and Thiboumery now runs his own processing plant, Vermont Packinghouse.

As part of our 10 year anniversary, NMPAN conducted an extensive evaluation of our impacts to date and the future of our work. We compiled what we learned into a short Executive Summary and a more detailed Full Report. Both are on the NMPAN website at: <http://www.nichemeatprocessing.org/ten-years-of-service>

The primary takeaway from the assessment is that NMPAN has built a successful and useful community. Members and stakeholders feel satisfied and empowered by their participation. They believe the organization has achieved its original goals of building a national community and a developing a respected, robust resource hub.

“Every time we had a crisis... having NMPAN as a resource is amazing.” – grass-fed beef producer and aggregator


Respondents say relationships and easy access to knowledge are the most valued benefits of the network, and the 1,200-member listserv, website, and webinars are its most used tools.

NMPAN’s biggest challenge however, is that demand for its services exceeds current capacity. Many members would like to see the organization expand so that it can do more things for more people.

Following up on the results of the evaluation, NMPAN is laying out its goals for the next 10 years which include:

- Continue to be the hub that connects niche meat supply chain actors
- Provide more peer-reviewed information in a multitude of formats
- Facilitate peer-to-peer learning
- Be a central resource for policy-makers and engage membership in policy-making
- Continuously evaluate and adapt to stay current
- Provide for the sustainability of the organization

“When we ran our own processing facility NMPAN was totally completely invaluable in terms of learning the ropes getting questions answered and how we should work with FSIS on how to solve common problems. I think it’s fair to say we could not have opened our own processing plant and been successful without it.” –processor and retail butcher.

Learn more about NMPAN and join the conversation: www.nichemeatprocessing.org. 

Farm Direct at Five Years: An Early Assessment of Oregon’s Farm-focused Cottage Food Law

New research from the Center for Small Farms & Community Food Systems

Oregon’s Farm Direct Marketing Law (FDML) is 5 years old! The law allows farms to make some low-risk, value-added products, such as pickles and jams, from farm-grown ingredients and sell them direct to consumers, without extra food licensing. We traveled to farmers markets around the state, interviewed farmers and farmers market managers, and found that farmers are selling a variety of value-added products with no foodborne illness linked to FDML products.

Interviewees described multiple benefits resulting from the law, such as increased farm income, market season extension, reduced processing costs, test marketing opportunities, and benefits to rural communities that don’t have commercial kitchens and want access to more healthy food options. The main challenge was getting information about the rules: which products can be made and how they can be sold. Oregon’s FDML is a unique take on a cottage food law, which have been increasing in popularity in US states recent years, and seems to be achieving its intended goals.

Read the paper here (open access – no subscription needed):

Lauren Gwin, Christy Anderson Brekken, and Lindsay Trant, “Farm Direct at Five Years: An Early Assessment of Oregon’s Farm-focused Cottage Food Law.” In Journal of Agriculture, Food Systems, and Community Development. <https://doi.org/10.5304/jafscd.2018.083.005>.

Welcome, Lauren Johnson!

New OCFSN staff housed at OSU

We are pleased to welcome Lauren Johnson as the new Member Services Coordinator for the Oregon Community Food Systems Network. Lauren is a RARE/AmeriCorps volunteer and will be based out of the OSU Center for Small Farms & Community Food Systems for her year of service with OCFSN.

In her own words:

“I got a bachelor’s degree in English Literature, but my heart was always with food and farming, so I often explored those themes in my research. After college, I spent the winter farming in Costa Rica, and then came to Oregon for a RARE (Resource Assistance for Rural Environments) AmeriCorps service position in Wallowa County in 2014. My job was to engage with different facets of the County’s local food system, from health care to farmers markets to schools to community gardening programs.

“During that year, I had the opportunity to attend the Oregon Community Food System Network’s first annual convening. I remember feeling so energized being surrounded by all these incredible people and organizations working at the forefront of community food systems development. Not only were they implementing what was then fairly new and innovative programming to support community food systems, but they were also engaged in a difficult conversation about how to make that work more impactful.

“During my graduate degree in Environmental Studies at the University of Montana, I interned with OCFSN’s Policy and Advocacy Working Group because I believe in what they’re doing so strongly. Now, I’m so excited to be working full time with these 53 organizations, spread throughout Oregon and engaged with every facet of this state’s food system. It’s pretty incredible to get the bird’s eye view of community food systems in my daily work.”

Thanks, Lauren, and welcome.



About OCFSN

The Oregon Community Food Systems Network brings people and organizations together to broaden understanding of issues, build relationships and trust, develop common purpose, and create collective capacity to realize our shared vision:

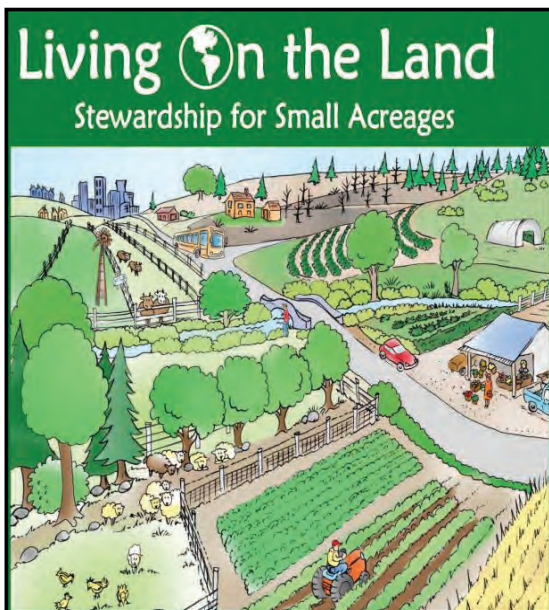
All Oregonians thrive with healthy affordable foods from an environmentally and economically resilient regional food system.

OCFSN’s core values are:

- **Connection:** Eating is an everyday act that connects us to the people and the land that produce our food. Our “food system” is a reflection of the quality and strength of those relationships.
- **Inclusivity and Empowerment:** People who are most impacted by inequities in our food system must be involved in identifying and implementing solutions.
- **Nourishment:** Healthy food and a healthy environment nourish the body. Quality farm and food system jobs nourish families and communities. Our network nourishes our commitment and capacity to make positive change.

OCFSN launched in 2015 and now has 53 member organizations – statewide, multi-county, and local – that serve diverse communities around the state, including farmers, ranchers, and local food system stakeholders, including communities of color, low income populations, and rural communities.

To learn more about OCFSN and how to join and support our work, visit <http://ocfsn.net/>.



Living on the Land

Living on the Land is a class series for landowners new to managing small-scale livestock farms. There are 4 classes in the series. This program is sponsored by the OSU Extension Service Small Farms program and Linn Soil & Water Conservation District.



Oregon State University
Extension Service

Location:
ZCJB Hall
38704 N. Main Street
Scio, OR 97374

Tuition \$25/person for class series.

Scholarships available, contact Teagan:

Email: Teagan.moran@oregonstate.edu Phone: 541-766-3553



October 4 – Weed Management

- Learn about management strategies for common weeds on your land.

October 11 – Soil Health & Water Resources

- Learn the basics of planning for natural resource management, including soil health and water resources.

October 18 – Pasture & Grazing Management

- Make the most of your pasture by learning how grass plants grow, rotational grazing, nutrient and winter-time management.

October 25 – Mud, Manure and Composting

- Consider ways to deal with mud accumulation in the winter and how to handle manure resources through composting and land application.

6-8PM

**LIGHT
REFRESHMENTS
PROVIDED**

REGISTER at: <http://smallfarms.oregonstate.edu/south-valley/events>

or Call (541) 766-3553

Oregon State University Extension Service prohibits discrimination in all its programs, services, activities, and materials on the basis of race, color, national origin, religion, sex, gender identity (including gender expression), sexual orientation, disability, age, marital status, familial/parental status, income derived from a public assistance program, political beliefs, genetic information, veteran's status, reprisal or retaliation for prior civil rights activity. (Not all prohibited bases apply to all programs.)

Calendar



October

4, 11, 18, 25 - Living on the Land
a class series for landowners new to managing small-scale livestock farms. Weed Management, Soil Health & Water Resources, Pasture & Grazing Management, and Mud, Manure and Composting. ZCBJ Hall 38704 N. Main Street, Scio, OR. Email Teagan.moran@oregonstate.edu or 541-766-3553. **\$25 per person**

23 - Rural Living Basics (Class repeated twice on the same day at different times and locations)
Classes will focus on basics for rural well water and septic maintenance. Free Nitrate Screening: If you would like your water tested, bring a clean jar of water (before any treatment). 1:00 PM-3:00 PM. West Valley Community Campus 266 SE Washington St, Willamina, OR or at 6:00 PM-8:00 PM. Chemeketa Community College McMinnville Campus, 288 NE Norton Lane, McMinnville, OR. Contact heather.stoven@oregonstate.edu or 503-434-7517 with questions. **FREE**

29 - Season Extension with Low Tunnels
New workshop on low tunnel season extension for strawberries! Workshop includes a demonstration on how to build, use, and compare the different options and prices for commercial use of this system. Great option for

early and late strawberry production and other vegetable crops. 1:00 PM -3:00PM. NWREC, 15210 NE Miley Rd, Aurora. Contact: Victoria. binning@oregonstate.edu **FEE**

November

7, 14, 28 - Exploring the Small Farm Dream

Are you considering launching a small farm enterprise, but are not sure where to start? Whether you are dreaming of raising sheep, growing berries, or selling heirloom vegetables, this class series will give you the tools to start making that dream come true. In this three-session course you will learn about current opportunities in small-scale agriculture, explore objectives, assess personal and financial resources, conduct preliminary market research, and develop an action plan to guide your next steps. 6:00 PM - 8:30 PM. RCC Belt Building 24353 Redwood Highway Kerby, OR. Contact: 541-476-6613 (x106) Sara.Runkel@oregonstate.edu **\$60/person or \$75 for two farm business partners. Register: <https://bit.ly/jocosmallfarms>**

Check our online calendar at for the most up to date events <http://smallfarms.oregonstate.edu> or at <http://extension.oregonstate.edu/smallfarms>

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