

Oregon

Winter 2014

Small Farm News

Oregon State University Small Farms Program



In This Issue:

OSU Creates New Center for Small Farms and Community Food Systems	2
Michael Ableman—Keynote Speaker for 2014 OSU Oregon Small Farms Conference	4
SFC Hoedown	8
Small-Scale Poultry Processing: Mobile & Modular	9
The Competitive Advantages of "Food from Somewhere"	10
Fodder for Forage: Fact, Folly, Fable or Fabulous?	11
New Food Safety Rules: What's Next	19
Cornell Meat Locker Pilot Project	20
Grow the Coast 2013	21
Calendar	22

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Cover Photo:

Fodder for Forage, see
page 12

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OSU Creates New Center for Small Farms and Community Food Systems

By: Garry Stephenson, Small Farms Program, Oregon State University

Oregon State University has launched a new center that aims to strengthen small farms and community food systems. OSU's Center for Small Farms and Community Food Systems is an outgrowth of the OSU Extension Service's Small Farms program. It expands the program's work with small farms production and marketing to provide a platform for collaboration across OSU and Oregon, which will help the Center support farmers and build strong local and regional food systems.




The Center for Small Farms and Community Food Systems was established to expand OSU's leadership in this area, integrating outreach and extension with teaching and applied research. The Center reaches across OSU and Oregon to engage with public and private sector partners to develop and deliver programs that achieve our goals: successful, resilient small farms, robust community food systems, and students with high "food IQ."

The OSU Small Farms Program is nationally recognized for extension and applied research. For more than 15 years, the Program has broken new ground, with beginning farmer education; whole farm management; women's farming networks; annual small farms conference; small acreage stewardship; organic farming research; and market channel research. Through these initiatives, the Program has helped build strong local food systems in Oregon.

The Center broadens and deepens this work, building on this success in four specific ways:

1. Expand the Extension Small Farms Program by adding new field faculty around Oregon. This is a key goal.
2. Act as a hub and catalyst at OSU for innovative, cross-disciplinary research and outreach relevant to small farms and community food systems.
3. Enhance engagement with Oregon's growing network of statewide and community-based food and farming non-profits. These organizations help shape Center priorities and strengthen our long-term mutual capacity.
4. Offer college courses that use a "connecting field to campus" approach to train the next generation of farmers, consumers, scientists, and community leaders.

The OSU Extension Small Farms Program has always been about more than just small farms. We have always understood that for small farms to be successful, there needs to be consumers who are both willing and able to buy local food, businesses that want to sell it, and policy that supports it. These are all part of a successful and sustainable local food economy. Establishing the center allows us to take this work to the next level. Rural and urban communities in Oregon are engaging with their food systems around issues of human health, long-term community economic development and access to healthy food for all Oregonians. This effort puts OSU on the map as explicitly valuing a food systems approach.

We are building a 21st century Center: lean, entrepreneurial, and sustainably funded. A crucial ingredient to adding more Extension Small Farms positions in areas of Oregon that are currently not served is through private donations. Help us build an endowment to expand our work. Contact: Jack Holpuch, OSU Foundation, 541-737-9636. 



Local Food Connection

Linking Farmers, Ranchers and Food Buyers
Wednesday
January 29th, 2014

Independence Civic Center
555 S. Main St
Independence, OR 97351

Hosted by

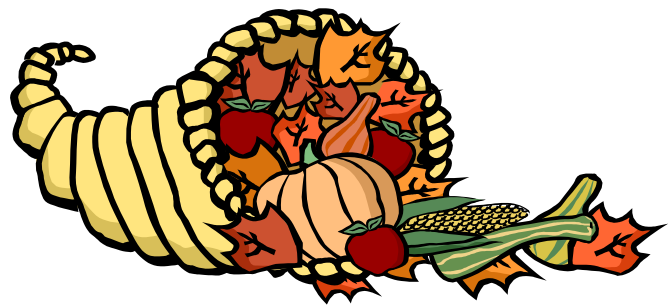
Oregon State **OSU** Extension
UNIVERSITY Service



Independence Oregon

<http://smallfarms.oregonstate.edu/southvalley/events>

59th ANNUAL NORTH WILLAMETTE HORTICULTURE SOCIETY MEETING



Jan. 14th ~ Organic Crops Section

Jan. 15th ~ Vegetable Section

Jan. 16th ~ Berry Section

Clackamas County Fairgrounds
694 NE 4th Ave
Canby, Oregon

*Program & registration information
available at theNWS website:*

<http://nwhortsoc.com>

Michael Ableman—Keynote Speaker for 2014 OSU Oregon Small Farms Conference

Michael Ableman will be the keynote speaker for the 2014 OSU Small Farms Conference, February 22nd in Corvallis, Oregon. He is a well-known farmer, author, photographer and practitioner of sustainable agriculture and proponent of regional food systems. He

has written several books and lectures extensively on food, culture, and sustainability worldwide. Ableman operates Foxglove Farm on Salt Spring Island in British Columbia with his wife and two sons.

Foxglove Farm is located on one of the original homesteads on Salt Spring Island, surrounded by hundreds of acres of protected forest and agricultural fields. The farm produces berries, melons, roots, a wide range of annual vegetables, as well as orchards of peach, plum, apple, pear, quince, persimmon, fig, chestnut, and cherry. The farm also has a small flock of laying hens, produces grains and legumes, and hay and pasture.

Ableman's first book, *From the Good Earth: A Celebration of Growing Food Around the World*, was inspired by witnessing remnants of traditional farming in China. As a result, he traveled around the world documenting other farming cultures. *From The Good Earth* was one of the first books to visually document the dramatic changes taking place in food and agriculture worldwide.

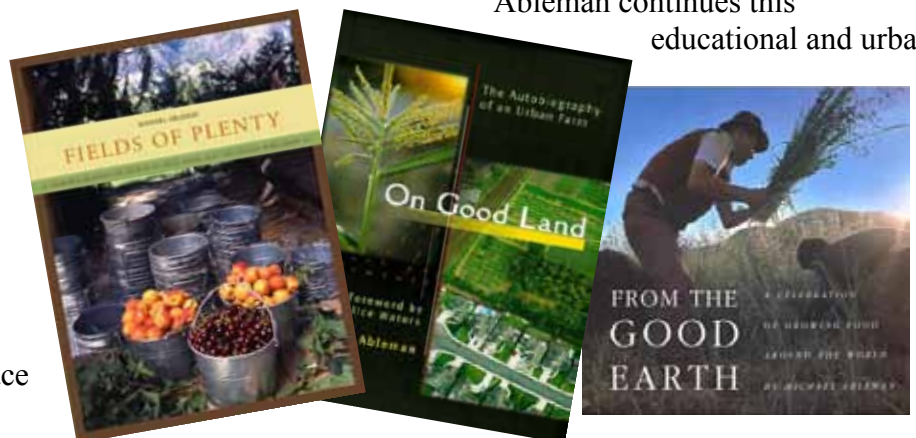



His second book, *On Good Land: The Autobiography of an Urban Farm*, is the emblematic story of his fight to preserve a piece of what was once some of the richest farmland in the world. The book is graced with lush photographs and argues articulately for farmland preservation and provides a blueprint for a farm that thrives in cooperation with its surrounding community.

Ableman's third book, *Fields of Plenty: A Farmer's Journey in Search of Real Food and the People Who Grow It*, chronicles his travels across the U.S. seeking out innovative and committed farmers to reveal how the fruits of those who till the soil go beyond taste. His odyssey takes him to farmers who are trying to answer questions of sustenance philosophically and, most importantly, in practice. Illustrated with photographs of the land and the people who work it, this beautifully written memoir reveals the power of food as a personal and cultural force.

Ableman is the founder and former executive director of the Center for Urban Agriculture at Fairview Gardens, a non-profit organization based on one of the oldest and most diverse organic farms in southern California. At its peak the farm served as an important community and education center and a national model for small scale and urban agriculture. Under Ableman's leadership the farm was saved from development and preserved under one of the earliest and most unique active agricultural conservation easements of its type in the country.

Ableman continues this educational and urban



agriculture work through the Centre for Arts, Ecology & Agriculture, an educational feature of Foxglove Farm and Sole Food Street Farms in Vancouver, BC. The Centre was established to demonstrate and interpret the connections between farming, land stewardship, food, and community well being and to model the economic possibilities for small and medium scale sustainable agricultural and forestry projects through public programs, classes, and events. Sole Food Street Farms transforms vacant urban land into street farms that grow artisan quality fruits and vegetables available at farmer's markets, local restaurants and retail outlets. Its mission is to empower individuals with limited resources by providing jobs and agricultural training in a supportive community of farmers and food lovers. 

Below is an overview of the conference, held in Corvallis on February 22, 2014

For more information about the Oregon Small Farms Conference and to register go to:
<http://smallfarms.oregonstate.edu/SFC>

CONFERENCE SCHEDULE

7:30am Registration and Refreshments
9:00 am Morning Session

Keynote: Michael Ableman

10:00 am to 10:30 am - Break

Concurrent Sessions

Session 1: 10:00 am to 11:55 am

Advanced Farmers' Markets: New Ideas for a New Era

Many farmer's markets are well established and have moved beyond some of the struggles which plague newer markets. This is an enviable position. How does the market's role in the community change once it is firmly established? How does the market's mission and goals evolve over time? What challenges are these advanced markets facing? Join us to learn from a panel of innovative and successful market managers. *Oregon Farmer' Market Association*

Community Food Systems 101

Across Oregon, rural and urban communities are working to change the food system. They want access to healthy food for all, sustainable farming practices, equity from farm

to plate, and local economic development. In this session, you'll learn about community food system efforts across the state, with an in-depth look at two regions, the rural, isolated North Coast and the more urban Mid-Willamette Valley. Panelists will highlight the vital role of small farms in remaking food systems.

Farm Stands: Selling by the Roadside

Before there were farmer markets, there were farm stands. Selling fresh, local produce from the bed of a pickup has been an accepted form of direct marketing for decades. But what if you want to have a permanent building, sell other farm's products or have liability concerns? Land zoning, food safety rules and other regulations can make the details of opening a farm stand overwhelming. In this session learn how to get started and the steps you'll need to take if you're considering a farm stand as part of your marketing plan. *Rachel Ashley and Elias Silvernail, Rainshine Family Farm, Corvallis, OR and Chris Bentley, Senior Planner, Benton County, OR, Moderators: Melissa Fery, Oregon State University Extension Small Farms*

Tool Care and Sharpening

Quality tools increase farm efficiency, but to save the maximum amount of time and money, there are some things to keep in mind as you work with your tools. How ergonomic are your tools? Are you working too hard? How about keeping your tools sharp? This program will discuss choosing tools, maintaining them and some interesting new tool ideas. *Lowell Cordas, Lowell's Tools*

Grain Quality and Storage for Small-Scale Producers

Learn about producing a high quality grain crop on a small scale. Includes information on grain storage.

Soil Quality and Visual Soil Assessment

Learn ways to assess your soil health. Soil organic matter improves soil function and crop performance, and is a foundation of organic and ecological farming. Laboratory analyses and visual assessment can provide insight into the overall health of your soil. Nick and Teresa will discuss key principles of soil health management and demonstrate some techniques you can use to evaluate the health status of your soil. *Nick Andrews, OSU Small Farms Extension Horticulturist; Teresa Matteson, Benton Soil and Water Conservation District*

Selecting Small Fruit Varieties for the Small Farm

Flavor, pest resistance, yield, harvest time and post-harvest quality are several factors farmers take into consideration when selecting berry cultivars. Chad Finn is Oregon's berry breeder and will give us an insight on all the fabulous berries

that are available to Oregon farmers. *Chad Finn, Research Geneticist/Berry Breeder, USDA-ARS*

Cómo Hablar con un Oficial e Préstamo

Una presentación sólida de su situación financiera a su prestamista le ayudará a tener una mejor comprensión de las necesidades de su operación. Solicitar un préstamo puede ser desafiante y potencialmente poco desconocido, tomando medidas para prepararse y estar bien organizado para esa reunión inicial con su prestamista es la clave

11:55 am to 1:15 pm - Lunch

Session 2: 1:15 pm to 2:30 pm

A Healthy Farmers' Market: Manager and Board Relations

A board of directors serves an essential role in many steps of farmers' market development, ranging from operational support for emerging markets to strategic direction for more sophisticated organizations. However, the effectiveness of a board's work is founded on relationships, especially with the market manager and other staff. Within the market organization, trust, communication, commitment and other elements of a healthy relationship are key. A panel composed of a market manager, board member and non-profit management expert will share methods for building a dynamic culture of engagement to help markets flourish. *Oregon Farmer's Market Association*

Selling Direct to SNAP Recipients: Strategies for Success

There is a growing demand among SNAP participants to use their benefits to buy direct from farmers. But who is your typical SNAP shopper? What are their challenges and needs, and how do you best respond to them? How can you communicate value? How do you keep them coming back to your booth or farm stand? Learn what you can do to make sure SNAP shoppers enjoy their shopping experience and keep them coming back for more. Increase your sales while helping low income shoppers access healthy foods. *Kelly Streit, MS, RD, OSU Extension Family, Community Health*

Schools & Hospitals: Good Markets for Small Farms?

Farm-to-school and farm-to-institution are two promising and growing markets for local food, but are they a good fit for small farms? In this session, you'll learn from farmers and their school and hospital customers about how they successfully work together. In one case, the farm sells directly to a school. In the other, multiple farms are collaborating to sell to a hospital. *Grass Kickin' Farms; Hood River Organics; Paul Hickman, MCMC Hospital*

Talking with a Loan Officer

Solid presentation of your financial position to your lender will assist with a better understanding of operational needs. Applying for a loan may be challenging and potentially unfamiliar, taking steps to prepare and be well organized for that initial meeting with a lender is key

Growing Quinoa in the Pacific Northwest

Join Kevin Murphy, WSU researcher and plant breeder and Frank Morton, a local grower, as they share about current quinoa research projects in this region. There will be information about the best varieties suited for our marginal growing conditions, best management practices for production and marketing options for quinoa growers and sellers. *Kevin Murphy, Washington State University; Frank Morton, Wild Garden Seeds Moderators: Amy Garrett and Melissa Fery, Oregon State University Extension Small Farms*

Setting Your Sights on Controlling Parasites

With growing concern about the development of dewormer resistance in small ruminants, sheep and goat producers must learn to emphasize non-chemical means of internal parasite control if they want a sustainable enterprise. This workshop will highlight both traditional and innovative approaches to decreasing dependence on chemical dewormers while monitoring animal health. *Dr. Susan Kerr, County Director, WSU Klickitat County Extension*

Continuing the Conversation with Michael Ableman

A informal session with our keynote speaker Michael Ableman.

Producción Orgánica Alrededor del Mundo

Esta sesión examinará distintos sistemas de producción en África, Asia, Europa y las Américas, enfocándose principalmente en manejo de nutrientes, control de plagas y otras técnicas innovadoras que varias fincas orgánicas han adoptado para adaptarse a las necesidades de un sistemacomercial sostenible. *Javier Fernández-Salvador, OSU Horticulture Graduate Student*

Break: 2:30 pm to 2:45 pm

Session 3: 2:45 pm to 4:00 pm

Farmers' Market Integrity: Preserving & Growing Trust

Farm direct farmers' markets face special challenges. Farmers' market customers expect to buy food directly from a local farm where it was produced. However, geography, growing conditions, and market regulations vary throughout the state. What is market integrity and what can you do to protect it? A diverse panel of market stakeholders will

discuss the concept of market integrity, why it is so valuable, and how to cultivate and preserve it. *Oregon Farmer's Market Association*

Farmers and the Affordable Care Act: New Health Insurance Options for Farmers

Many farm families work off-farm jobs for health insurance, pay high costs for plans or risk being uninsured. With the Affordable Care Act, farmers — like other small businesses — may have better access and options for health insurance, which may create new opportunities on-farm. In this session, a panel of farmers will discuss how they're using the new law to benefit their businesses. A CoverOregon representative will provide an overview and answer questions. **Eric Lambert, Small Acreage Program Coordinator, WSU Clark County Extension, Cover Oregon representative**

Financing Your Farm

Are you looking to purchase land or finance improvements for your existing farm? If so, come learn about traditional and creative options for financing your farm operation. Panelists will cover traditional bank lending, Farm Service Agency down payment assistance and other programs, the state's new Beginning Farmer and Rancher Loan Program - "Aggie Bonds", and innovative ways people and communities are investing in local farms. **Jared Gardner, Friends of Family Farms Consultant; Bob Perry, Farm Service Agency; Nikki Underwood, TLC Credit Union; Amy Pearl, Spring Board Innovation and Slow Money NW**

Transition to Organic 101

For some small farms a transition to certified organic production can be a big challenge that ultimately brings big rewards. Three speakers will discuss motivations for seeking certification, the economics of transition, what new support programs are available to address common difficulties, and the certification process. **Sarah Brown, Oregon Tilth & USDA-NRCS West National Tech Support Center; Tim Delbridge, University of Minnesota; Callyn Kircher, Oregon Tilth**

Horse Powered Farming

Is farming with draft horses right for you? Integrating horses into a working farm can be rewarding in many ways including cultivating the patience required when relying primarily on animal power. From how to get started with horses and equipment to setting efficiency expectations, this session will include stories and lessons from two small Oregon farms. **Walt Bernard, Ruby and Amber's Organic Oasis. Moderator: Melissa Fery and Amy Garrett, Oregon State University Extension Small Farms**

You've GOT to be Kidding (or Lambing)!

Get ready for lambing and kidding with this overview of normal and abnormal birthing. Learn what you'll need to be prepared, signs of trouble, and how and when to assist. Basic neonatal care will be addressed as well. **Dr. Susan Kerr, County Director, WSU Klickitat County Extension**

Fruit Tree Pruning and Training Systems

Proper training and pruning of fruit trees provides a strong tree framework that will support fruit production. Jeff Olsen will cover the principles of pruning including fruit tree terminology, growth and development. Learn how pruning and training of fruit trees can increase fruit quality, reduce disease pressure and make harvesting more pleasant. **Jeff Olsen OSU Extension Horticulturalist**

Criterios para la Aprobación de Insumos a ser Usados en Agricultura Orgánica

Esta sesión pretende explicar lo que un insumo necesita para ser compatible con los estándares orgánicos del Departamento de Agricultura de los Estados Unidos (USDA). Adicionalmente se indicará donde se pueden encontrar insumos (como los fertilizantes y productos para el control de plagas) que estén aprobados para ser usados en fincas orgánicas, y como identificar materiales sospechosos. **Ana Negrete, Product Review Coordinator, Organic Materials Review Institute (OMRI)**

Break: 4:00 pm to 4:15 pm

Capnote: 4:15 pm to 5:30 pm

Small Farm Profitability: A reality check on the risks and challenges of making a living on a small farm and some positive advice for finding success.

For more information and to register go to:
<http://smallfarms.oregonstate.edu/SFC>

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SFC Hoedown

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Saturday February 22, 2014

local food, BEER, music, square dancing + more!

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Small-Scale Poultry Processing: Mobile & Modular

Two new resources can help small farms with poultry processing

By: Lauren Gwin, Small Farms Program, Oregon State University

The Mobile Poultry Slaughterhouse, by Ali Berlow, founder of the Island Grown Initiative (and a long-time NMPAN member). This book is a well-written, thoughtful, and practical manual for building a humane and economical mobile poultry processing unit, based on Ali's experience getting one up and running on Martha's Vineyard, MA. (NSAC's article about the book: http://sustainableagriculture.net/blog/mobile-poultry-slaughterhouse/?utm_source=roundup&utm_medium=email).

http://sustainableagriculture.net/blog/mobile-poultry-slaughterhouse/?utm_source=roundup&utm_medium=email

Learn more about the Island Grown mobile unit (and 4 others) here: <http://www.extension.org/pages/62879/mobile-poultry-processing-units:-reports-from-the-field>

Poultry Plant in a Box

A new, modular approach to small-scale, inspected poultry processing is here: the first Plant in a Box (PIB), designed by Featherman's David Schafer, is now up and running at Maple Wind Farm, in Vermont. PIB, built in a shipping container, is a self-contained facility designed to operate not only under USDA inspection but FDA inspection (e.g., to make chicken soup). Potential capacity is 200 birds/hour with 2 operators; more people and additional chilling storage can up it to 1000 birds daily.

Maple Wind is currently operating under Vermont state inspection

and plans to transition to USDA. Their local food co-op chipped in \$20,000 to be paid back in product over 5 years.

More on PIB: <https://www.facebook.com/pages/Plant-In-A-Box/139642009567820> YouTube video: <http://www.youtube.com/watch?v=FC4amKn7L10>. 



Soil School

Saturday, April 5 8 am - 2 pm

Lewis & Clark College

For gardeners and small farm owners!

Featuring:

Dr. Doug Tallamy, University of Delaware, author of
Bringing Nature Home

Dr. Scott Burns, PSU Chair of Geology

James "Dr. Soil" Cassidy, OSU Soil Instructor

Register by clicking "Events" at www.wmswcd.org

Cost: \$30 single/\$50 double

Learn about soil structure and composition, analyze and interpret your own soil sample, and get your hands dirty taking soil tests and learning about native plant habitats.



The Competitive Advantages of “Food from Somewhere”

By: Larry Lev, Applied Economics, Oregon State University

Think about the clothing you are wearing right now – you may remember some of the brand names and the stores or web sites that sold them to you but are much less likely to know where and by whom most items were produced. These aspects just aren’t that important to most people. Apparently we are content to wear “clothes from nowhere”.

Food is a different story for an increasing number of consumers. While in the U. S. the local food movement has been the primary means to know where your food comes from, it isn’t the only one. Consider the 1999 actions of a farmer named Jose Bove who was arrested for protesting at a McDonald’s construction site in southern France. Bove was NOT protesting American exports to France but rather what he felt was something much worse – the “absolute uniformity” of the ingredients and food that resulted in what he memorably called “food from nowhere”.

In fact, a complex trade dispute that restricted U. S. imports of Roquefort cheese from this region of France spurred Bove, a sheep producer, to action. Bove was and is a spirited supporter of “locality” products (foods produced and processed in a specific place). Cheeses are often marketed based on the relationship between product characteristics and product origin, wines even more so. “Locality products” is a bit obscure as a name but it is the best I can do and will be used for the rest of this article.

While Roquefort cheese shipped here and Oregon Pinot Noir wines sold in Chicago are clearly different from local lamb, cukes, and cider, the two categories of goods share many common characteristics. In his 2008 keynote address at the OSU Small Farm Conference, farmer-philosopher Fred Kirschenmann focused on “memory, romance and trust” as key elements of “social capital” (fancy language but Fred is a philosopher) that farmers own and can apply to the products they sell: *“Memory is when a customer eats a product and says, ‘Wow, I want that again.’ Romance is the story behind the food’s production. Trust creates*

an opportunity to form a relationship between the consumer and the producer.” (Kirschenmann, 2008 OSU Small Farm Conference Presentation)

Foods from nowhere lack these three characteristics. While these foods do come from some place, it isn’t profitable to keep track of and market the origin. Production and distribution are located to maximize efficiency which in most case results in minimizing the total cost to the consumer.

Since foods from somewhere often can’t compete based on price, they need to attract consumers by following the different course proposed by Kirschenmann. Consumers need to be convinced to search out and purchase food from somewhere based on value.

Both local and locality products can make this case but it requires hard work and often significant cooperation. Farmers and their partners such as retailers, institutions, and restaurants, who sell local products, need to be relentless in identifying the local area (farms should ask for labeling and encourage the partners to keep track of local sales data). The First Alternative Cooperative in Corvallis does an excellent job in defining its “local 6” region (six counties) and in labeling products from this restricted area (<http://firstalt.coop/community/local-6-program/>). Some farm stands and farmers markets mistakenly believe that all of their customers understand their sourcing rules and skip this step. The most successful local products still must also meet the “memory” standard – if they aren’t really good many consumers will ignore them.

The bar is set even higher for locality products from small and mid-sized farms. Why bother to ship origin-identified products over long distances unless they are excellent? The longer supply chain generally requires greater cooperation among growers to produce sufficient quantity and more partnerships with processors and distributors to get the product all the way to consumers. Locality products can meet the

“romance” and “trust” standards but only if all the partners work together.

Oregon and U. S. producers, with the exception of the wine industry, have been much more focused on local than on locality. Going forward producers who opt out of “food from nowhere” market channels should examine both options. Really making progress in expanding the success of locality products will require carefully considering the lessons to be learned

from farmers and processors in Europe. The American Origin Production Association is one group that has begun to take on that task:

http://www.origin-gi.com/index.php?option=com_content&view=article&id=273&Itemid=30&lang=en

In the mean time, figure out where your shirt was produced and consider how Oregonians can/should move toward producing and consuming more food from somewhere. *✍*

A banner for organic training featuring a close-up of golden wheat stalks on the left. The text "ORGANIC TRAINING" is in large, bold, yellow-green letters, with "for agricultural professionals" in smaller white letters below it. A dark blue arrow points from the text towards the right, containing a list of training dates and locations.

ORGANIC TRAINING

for agricultural professionals

January 7-8	Salem
January 23-24	Medford
January 27-28	Pendleton
January 30-31	Redmond

Register Today

For questions or registration information, contact Ben Bowell, Organic Conservation Specialist, Benjamin.Bowell@por.usda.gov, (503) 580-4767



Training Agenda:

Implementation of nutrient management (590); cover crops (340); buffers on organic operations

NRCS pest management assistance for organic operations

Resources on working with transitioning producers

Soil Health

A farm field visit and case study

Earn NRCS Job Approval Authority (JAA) for Inventory and Evaluation for 340 and 590

These trainings are a collaborative effort between USDA NRCS, Oregon Tilth, Northwest Center for Alternatives to Pesticides, NCAT-ATTRA, and Oregon State University with funding provided by the Western Sustainable Agriculture Research and Education Program (WSARE).

Fodder for Forage: *Fact, Folly, Fable or Fabulous?*

By Dr. Susan Kerr, WSU Northwest Regional Livestock and Dairy Extension Specialist; Lorrie Conway, Conway Family Farms; Ashley Conway, WSU Animal Science Graduate Student

If you wait long enough, everything old becomes new again. Lately, it seems you can't open a livestock magazine without seeing an article about fodder. The actual definition of fodder is simply "food fed to livestock". Current discussion about fodder focuses on feeding spouted grain (usually barley) to livestock and poultry.

Feeding sprouted grain to livestock is hardly a new concept. In the 1800s, European dairy farmers fed sprouted grains to their cows during winter to maintain milk production and improve fertility. Similar methods were probably practiced centuries before that.

Why is there so much talk about fodder lately? What are the benefits, detriments, challenges and costs to producing and feeding fodder? Shaun and Lorrie Conway of Conway Family Farm have been growing and feeding hydroponic fodder to the livestock on their five-acre farm in Camas, WA for about nine months.

During a recent interview, Lorrie addressed many questions about their experience with fodder; this article is a product of that interview. It is the authors' hope that interested readers will use

this information to make sound decisions about incorporating fodder into their livestock feeding operations.

Susan Kerr (SK): Why did you start growing and feeding fodder?

Lorrie Conway (LC): To create some independence from relying on outside feed sources, to save costs, to be able to feed our animals fresh "pasture" daily and to create a more sustainable farm on limited land base.

SK: How much time do you spend on a daily basis harvesting fodder and caring for your fodder system?

LC: We are only feeding fodder once a day because of limited time. Cleaning, seeding, harvesting and feeding takes approximately 20-30 minutes per day for our flock/herd of about 30 sheep and goats.

SK: What equipment and facilities do you need?

LC: Our system is in a heated greenhouse. You could use any type of shelter, garage, basement or room where you can control the temperature and humidity. Our system is constructed using a metal racking system and 12' X 9" hydroponic flood and drain trays. We



Right: The entire system in greenhouse. Left: Eight days of production. four trays per row, two trays per day. Photos by Dr. Susan Kerr

have equipped our system with an automatic watering system and timer to ensure the sprouted seeds stay moist. We purchased a complete system from a dealer, but you could make your own.



Above: Seeds in their soaking bags. Photo by Dr. Susan Kerr

SK: Would you recommend

make-your-own systems or purchasing commercial systems?

LC: I think we would have made many mistakes if we built our own system right off the bat. It certainly wouldn't be difficult to build, but I think we would have failed to leave enough working space between trays and perhaps would not have set it up as efficiently. The system we purchased provided virtually everything we needed to get up and going. Because we were not familiar with hydroponic growing systems, this proved to be a huge time saver for us. Could you figure out how to do it on your own and save some money? Absolutely. Does the commercial system make it easy to get up and running quickly? Absolutely. It really depends on what your goal is.

SK: What seeds are you using, where do you get them and how do you handle them?

LC: We use feed barley. We hope to explore other types of sprouts in the future, but due to accessibility and cost, we



Right: Seeding on Day 0. Photo by Ashley Conway

have only used barley so far. We get the seed from the mill that supplies us with our grain rations.

We did try one bag of seed barley which was REALLY expensive and didn't notice much difference in germination. If you use seed barley, you have to be sure not to use treated seed for fodder. The least expensive approach might be to purchase feed barley



Above: Day 3. Photo by Dr. Susan Kerr



SK: What challenges you have encountered?

LC: The biggest problem has been with controlling mold. It has been very difficult to control or adjust the humidity in the greenhouse environment. This became especially difficult during the summer months when we experienced longer stretches of really warm days. We have installed manual and automatic fans to help with humidity and air circulation. There is a “dead” corner that is always a challenge to regulate and the growth there is less than optimal.

Another challenge has been purely the logistics and additional work involved. This is a just-in-time inventory system. You can’t skip a day or eight days later you won’t have any fodder. This approach isn’t for everyone.

As a small woman, is difficult to seed, harvest and clean the racks because of height—the racks are stacked closely for maximum space efficiency. We considered dropping the space between the trays to get the top racks lower, but then you have reduced your working space between trays, which you really need. We are trying to address this issue.

Initially we had some problems with uneven growth and sour sprouts on the end where the system didn’t drain well. We adjusted the racks to improve drainage and installed shelf boards under the trays to minimize tray sag.

directly from a producer if you live near one and they are set up for storage and sales. We realize our seed cost is high because we are paying a premium for convenience due to purchasing a few 80# bags vs. several tons at one time, but we just don’t have storage for or machinery to move one-ton totes.

We soak nine pounds of barley per tray in untreated water for 8 hours before spreading out in trays. We only provide water after that, no additional nutrients.

SK: What are the growing conditions and requirements?

LC: We have found the ideal growing conditions to be 60-65°F and 60-75% humidity. The sprouts grow more slowly below that range and we battle mold issues at higher temperature and humidity.



Harvesting on Day 8. Photo by Ashley Conway



Meals on wheels: fodder rolls in wheelbarrow ready to be fed. Photo by Ashley Conway



Happy fodder feeders.
Photo by Ashley Conway

With the recent cold snap in the weather, we are running really slowly on growth. The greenhouse heater has been working overtime, but we are about three days behind on our normal growth cycle.

SK: How do you feed fodder to your goats and sheep?

LC: This is a very wet feed, so it can be challenging to harvest, transport and feed. One roll (one-half of a tray) weighs about 26 pounds and we feed two complete trays per feeding to our sheep and goats combined. The sprout mats simply roll up during harvesting and are transported in a wagon a short distance to the barns where the animals are fed. We roll the fodder out in their hay bunks; the sheep seem to eat it just as they would graze grass. They consume the entire mat including sprouted roots. The goats have been a bit more challenging--goats will be goats and the fodder feed is fun for them to eat. They like to flip it around and play with it rather than just eating it. We have to tear it into small pieces for the goats to minimize waste. We think a trough system would be more effective than the bunker-style feeder for the goats so we are developing one.



Six inches of "pasture" ready to eat. Photo by Dr. Susan Kerr

SK: In your experience, what are the benefits and limitations of feeding fodder?

LC: The main benefit for us is being able to be more in control of our feed source. We are still reliant on a seed source and we still augment with dry feed (alfalfa and grass), but we have reduced our dependence on outside feed sources by approximately one third.

Additionally, we are able to feed beautiful fresh grass every day. The animals love it and seem to maintain well on it. Because we've only been doing this about nine months, we won't have worked through all the financial aspects until we complete this winter season, but it appears to be a cost savings of about one third as well.

SK: What financial analyses can you share at this point?

LC: It looks like we are running about \$103/ton of fodder as fed, which includes seven years depreciation on the hydroponic system, but does not include depreciation on the greenhouse. I anticipate that number could go up as high as \$110/ton by the end of the winter due to energy costs to heat the greenhouse with electricity and propane.

Table 1. Determining Fodder Production Costs

Factor	Example costs per ton of fodder as fed	Your costs
Seed~	\$76.15	
Labor*	\$45	
Fuel and energy**	\$30	
Water	\$10	
Depreciation on fodder system* (7 yr.)	\$16.23	
Depreciation on greenhouse or sprouting room** (20 yr.)	\$6.30	
Equipment (scales, wheelbarrows, seed spreaders, buckets, fans, stepladder, etc., 7 yr. depreciation)	\$0.25	
Total cost per ton of fodder, as fed	\$183.93	

~Seed costs can vary greatly depending on market fluctuations, source, amount purchased and custom orders

*Obtaining seed, seeding, harvesting, feeding, cleaning

**Heating sprouting room, fuel to obtain seed and feed livestock

+Fodder systems can range from \$3,000 to \$15,000 or more

++Greenhouses can range from \$500 to \$10,000 or more

SK: Are you pleased with your system? Is it accomplishing what you wanted it to do?

LC: We knew this would augment our feeding program, not replace it. Yes, the system is creating a wonderful fresh augmentation to the animals' diets. Everything we read indicated this would provide an equivalent nutritional value as dairy quality alfalfa hay; however, our does have decreased in milk production. At this point we aren't convinced the fodder provides the same level of milk production efficiency as good dairy quality alfalfa hay does, but then again, there is the question of availability and cost. With the reduced cost of fodder, we can afford to lose a bit in production



Day 7, almost ready for harvest.
Photo by Dr. Susan Kerr

Table 2. Chemical analyses of two different seven-day-old samples of spouted barley and one sample of first cutting alfalfa hay. As fed values in left cell and dry matter values in right cell for each component.

	Nutritional Analysis															
	% Dry matter		% Water		% Crude Protein		% Acid Detergent Fiber		% Neutral Detergent Fiber		Estimated % Total Digestible Nutrients		Net Energy of lactation (mcals/lb)		RFV*	
Fodder sample 1	16.23	100	83.77	0	1.68	10.38	1.54	9.46	3.79	23.34	12.71	78.29	0.13	0.82	n/a	324.95
Fodder sample 2	13.85	100	86.15	0	1.93	13.92	2.19	15.83	4.56	32.91	10.55	76.19	0.11	0.79	n/a	216.43
1 st cutting alfalfa hay	85.60	100	14.40	0	19.8	23.20	27	31.50	31.1	36.40	55.60	64.90	0.57	0.67	n/a	164.40

*Relative feed value (RFV) helps compare the energy value of different forages. It reflects digestibility and potential intake. The standard of 100 is mature alfalfa in full bloom

and still stay profitable. I can't say we have all the bugs worked out or our feeding program perfected yet. I feel we are still in the infancy stages of this process, but I do think the overall, this is a good option for our particular operation. It isn't for everyone. It is work! It would be a tremendous amount of work if you had a large number of animals, but it is also good feed and it is very gratifying being able to grow that for our animals--an option we have never had on such a tiny farm.

SK: What are your recommendations for producers interested in doing fodder?

LC: I would suggest "over-buying" or "over-building" your system—build in more capacity than you think you will need. Production varies depending on time of year and weather. Most of the rates of production we read about were yields from ideal conditions. From what we are experiencing, maintaining ideal conditions year around can be challenging.

I would also suggest visiting a farm that is using a hydroponic system and discuss the challenges and benefits. Take a good look at the system and decide if it is something you would like to build. I think many

of these systems are still in the early stages of being perfected, so they are changing rapidly based on users' feedback. Make certain you are willing to work with whatever you decide to put in to perfect it for your operation. I don't think these systems will work the same for everyone so make sure you educate yourself and don't have unrealistic expectations.

I will say it is the most remarkable thing in the world to get the system up and going and literally to be able to watch the grass grow! I would also suggest working with a ruminant nutritionist to make certain you have formulated a feeding plan that uses fodder as an augmentation. The animals still require roughage, so I wouldn't suggest this is going to be a complete diet replacement.

SK: Before deciding to invest in fodder system, it is essential to put pencil to paper and determine your costs. Table 1 below is useful for determining production costs; an example is included. Individual farm costs could be significantly higher or lower than the example shown depending on fodder system purchased, cost of seed, energy costs, cost of greenhouse and whether or not labor costs are incorporated.

Forage	As fed water	Dry matter	Dry matter per ton as fed	As fed amount needed for one ton of dry matter*	Cost per ton as fed	Cost of one ton of dry matter**
Home grown fodder	85.0%	15.0%	300 lb.	13,340	\$183.93	\$,1226.81
Purchased alfalfa hay	14.4%	85.6%	1,712 lb.	2,336	\$225.00	\$ 262.80

*(2,000 lbs. ÷ DM lbs. per ton as fed) x 2,000 lbs.

** (2,000 lbs. ÷ DM lbs. per ton as fed) x cost per pound as fed

To compare the cost of home grown, as-fed fodder and purchased hay as forage sources, it is necessary to make them comparable on a dry basis because water

contains no additional nutrients and we can provide it more inexpensively directly. In other words, we may have grown a ton of fodder, but most of the weight is water. Table 2 below shows the nutritional content of two different samples of seven-day sprouted barley fodder and one alfalfa hay sample—note the high water content of the as-fed fodder.

We'll use the average of the two fodder sample moisture contents (85%) for our calculations. To compare this with as fed 14.4% moisture hay, we'll convert them both to a 100% dry matter basis, factor in the cost per ton as fed and extrapolate the cost to one ton of dry matter:

Conclusions

Sprouted grain fodder systems are not new to livestock production systems, but rising feed costs, reduced agricultural land, demand for organic forage and other factors have caused them to become popular again. Start-up costs, labor, production challenges and economics make them of dubious application for most livestock operations. However, present an opportunity for selected producers to gain control over some aspects of their forage needs and ensure a steady and consistent supply of highly-digestible forage. Organic producers, those on limited acreage, those with insufficient forage storage capacity and those with too little or too much precipitation to make good hay may benefit from fodder systems. Feeding fodder to animals on dry lots may also help break internal parasite cycles when pasture management best practices are not possible. However, it is crucial that producers interested

in fodder systems understand the labor, difficulties and actual cost of production involved before committing valuable resources to such systems. *Z*

More Reading

www.sheepandgoat.com/articles/hydrofodder.html

www.qcl.farmonline.com.au/files/48/20/01/000012048/Hydroponicfodder.pdf

www.agmardt.org.nz/downloads/AIG%20%28Grant%201122%29%20Merino%20NZ%20-%20Hydroponic%20Fodder%20Production.pdf

http://lib.dr.iastate.edu/cgi/viewcontent.cgi?article=1829&context=ans_airair



Education Days

January 25 & 26, 2014

OSU Campus • Corvallis, Oregon

Jan. 25 - 9:00 am - 4:30 pm

Jan. 26 - 8:00 am - 4:00 pm



The Oregon Cheese Guild proudly presents a two day advanced cheese technology class, featuring international cheesemaker Ivan Larcher.

Content Day 1
First half of day one devoted to semi hard style cheese (*Reblochon or Saint Nectaire*)

- Theoretical presentation of cheeses
- Parameters to control
- Targets
- Equipment and defects associated with each

Second half of day one devoted to controls in yield production

- Definitions of cheese making yields
- identification of losses in creamery (global, proteins, fat)
- Remedies

Special guest on Day One, Frank Barcellos from Oregon Department of Agriculture, Food Safety Division. Frank will discuss new regulations for artisan cheese makers and the production of Greek yogurt in an artisan facility.

Content Day 2
Production of soft cheeses: traditional vs stabilized

- Advantages vs disadvantages
- Targets
- Equipment
- Problems associated with each production

Registration Fees

Both Days:	
\$150.00 - OCG Member	\$250.00 - Non-Member
Day One (Jan. 25) only:	
\$75.00 - OCG Member	\$125.00 - Non-Member

To register
oregonstate.edu/foodsci/oregon-cheese-guild-education-days

For more information contact
Dr. Lisbeth Goddik | 541.737.8322 | lisbeth.goddik@oregonstate.edu



New Food Safety Rules: What's Next?


By: Laurin Gwin, Oregon State University

By the time the U.S. Food and Drug Administration (FDA) closed the public comment period on November 22, thousands of farmers, food and farming organizations, public agencies, consumers, and many others – including your OSU Small Farms Program – had weighed in on two controversial proposed rules that will change the face of farming and food production. The produce rule and the preventive controls rule, written to implement the Food Safety Modernization Act passed in 2011, captured national attention and concern. We've covered FSMA and those two rules in past issues of OSFN.

So what's next? FDA will review all of the comments submitted and then decide how best to revise the rules. The agency had originally intended to issue final rules after one round of public comment. However, given the extent of the revisions needed to these very complex

rules, FDA now faces strong pressure to issue revised draft rules for another round of public comment. As the National Association of State Departments of Agriculture has argued, FSMA represents an enormous shift in food safety regulation: to assure that the final rules are effective and workable for all parties, this effort must not be unduly rushed.

At this point, we're waiting as the rulemaking gears turn. But we will keep you posted, in future issues of Oregon Small Farm News, on our Facebook page, and on our FSMA page, as the process unfolds.

Go to our FSMA page, to read the comments submitted by the Small Farm Program, the National Sustainable Agriculture Coalition, and the Oregon Department of Agriculture. 



Growing Farms



Sustainable Small Farm Management Workshop Series

The Small Farms Program presents Growing Farms. This 7-week course teaches beginning farmers how to navigate the biological, financial and human aspects of farming.

February 26 to April 2
Wednesdays from 4:30 – 9:00pm

For more information:
smallfarms.oregonstate.edu/growing-farms-workshop-series







Agricultural Composting Resources & Education Series

April 24 and May 1
Thursdays from 8:30am - 5:00pm

For more information:
<http://smallfarms.oregonstate.edu/ag-compost-workshop>



**Join us for these upcoming events
at the North Willamette Research and Extension Center in Aurora
Contact heidi.noordijk@oregonstate.edu for more information**

Cornell Meat Locker Pilot Project

By: Lauren Gwin, Small Farms Program,
Oregon State University

No home freezer? No problem. This month, the Meat Locker Pilot Project, a project of Cornell Co-op Extension in Tompkins County, NY, installed the first of two walk-in freezers planned for downtown sites in Ithaca and Corning, NY, that consumers can rent to store their bulk meat purchase. Units will be large enough to hold an average quarter of beef, and will rent for \$3 to \$5 per month. Each site will have 50 units. Consumers purchase bulk meat directly from producers who will have it cut, wrapped, frozen and delivered to the consumer's locker for storage. Numbered units have a key lock and will be open during certain hours each week (like a CSA pick-up) with access to the units provided by a Meat Locker Manager during pick-up hours. Locker locations are accessible to consumers on foot, by bicycle, bus and car.

The Meat Locker Pilot Project, funded in part with a USDA grant, complements an existing meat marketing website, www.meatsuite.com, developed by Cornell last year. This searchable directory of Central New York farms lets consumers find farms that sell meats in bulk. *z*

More info:

<http://ccetompkins.org/meatlocker>

[https://www.facebook.com/](https://www.facebook.com/MeatLockerPilotProject)

MeatLockerPilotProject

Matt LeRoux, Marketing Specialist: (607) 272-2292 ext. 195 or email mnl28@cornell.edu.



From the Ground Up Farming Program

OSU Extension Service, the Small Business Development Center and Lane Community College are teaming up to offer classes designed for beginning farmers and others interested in expanding their knowledge about agriculture opportunities on a small-scale.

The classes will be held at the Lane Community College campus at 4000 East 30th Avenue, Building 17 in Eugene each month from 6:00-9:00pm, Each class costs \$35.

Jan. 8 - Raising Sheep and Goats

Feb. 12 - Small-Scale Poultry Production

Mar. 12 - Growing Berries and Grapes

Apr. 9 - Growing Vegetables

May 14 - Marketing and Processing Your Farm Products

Jun. 4 - Diagnosing Plant Problems

To learn more about each of the classes read the *class descriptions* available at <http://smallfarms.oregonstate.edu/south-valley/events>

To register call Lane Community College's Small Business Development Center at (541) 463-6200.



Grow the Coast 2013

By: Kristin Frost Albrecht

North Coast Food Web & OSU Extension Clatsop County, Family and Community Health

New, beginning, and experienced farmers, gardeners, anti-hunger advocates, 4-H students, a flock of chickens, medicinal mushrooms, tractors, buckets of soil and delicious local food came together for the Second Annual “Grow the Coast” conference on Saturday, November 23rd at the Seaside Civic and Event Center in Seaside, Oregon. The event was kicked off by keynote speakers, Susannah Morgan, CEO of Oregon Food Bank, and Garry Stephenson and Lauren Gwin of the OSU Small Farms and Community Food Systems Center, who spoke to the importance of small farms and resilient food systems as a solution to addressing the key roots of hunger and as the foundation for healthy communities.

Over 250 participants came from 13 counties in Oregon and Washington to participate in 18 workshops over 3 concurrent sessions, taught by 48 presenters to learn new skills and gain the latest information in regards to food, farming and community resilience.

At the popular “Raising Poultry in Small Flocks & What chicken for me?” session, it was standing room only with Poultry expert Jim Hermes leading a riveting and interactive session on chicken biology and poultry breeds, and ending with local 4-Hers and their cooing chickens fielding questions from the enthusiastic audience.


The coast’s cool, wet, growing climate had attendees crowding into the sessions “Mushroom Cultivation in your backyard” and “Growing Medicinal Mushrooms” with mushroom cultivators, Jordan Weiss of “Jordan’s Mushrooms” and Maria Farinacci of “Fungi for All” presenting to packed session rooms and eager future cultivators.

Sam Angima, OSU Regional Administrator led a “Coastal Farms Needs Assessment” session, listening to local farmers discuss the special challenges they face in agricultural production on the coast and then facilitating a group conversation on possible solutions towards making coastal farms more viable.

“Ornamental Crops on the Coast” speakers represented different ends of the production scale with Patrick Zweifel discussing his transition from dairy farming in Tillamook into the thriving international flower and bulb business “Oregon Coastal Flowers” and Beth Holland presenting on her small organic landscaping business and nursery in Cannon Beach.

Other sessions included “Take your recipe to Market” with farmer Anne Berblinger, OSU Open Campus’ Emily Henry and Chef Alan Joynson outlining the process of taking a good recipe from the idea phase to an actual product. Chip Bubl, presented “Managing insect and disease pests in vegetables in a Maritime Climate” to an avid following of coastal farmers and OSU Master Gardeners in a room where laughter was continuously heard.

Lunch was catered by the Accidental Catering Company a division of event organizer, North Coast Food Web, featuring locally produced food and plenty of time for GTC participants to network and check out the tractor and implement display. GTC attendees also included coastal chefs who gathered for a lunchtime roundtable with farmers to plan a “Farmer/Chef” event in the upcoming year while across the room, Friends of Family Farmer’s Nellie McAdams facilitated a roundtable discussion on “Barriers and Opportunities for Farming on the North Coast”.

Grow the Coast 2013 was a collaborative project of North Coast Food Web, Food Roots, Clatsop County Extension Service and OSU Extension statewide with funding support from the Meyer Memorial Trust and Northwest Health Foundation. Workshop offerings, descriptions, presenter bios and photos, can be viewed at the Grow the Coast web page at: <http://northcoastfoodweb.org/growthecoast/> 

Calendar



January

8 - Small-Scale Sheep and Goat Production

Inventory the resources needed to successfully raise sheep and goats, including state and local ordinances, acreage, fencing, infrastructure and equipment. Learn how to select and receive animals and general ruminant nutrition, health and reproduction. 4000 E. 30th Avenue, Building 17, Eugene, OR 6:00 PM - 9:00 PM. LCC Small Business Development Center by calling (541) 463-6200. **\$35**

21 - Small Farm Workshop

Learn more about cover crops, implements, tool bars, soil health and pasture management. Valley View Tractor and Equipment, 2610 E. Hancock Street, Newberg, OR. 4:00 PM - 7:45 PM. 503-554-8179 or info@valleyviewtractor.com **\$20**

28 - Learn About Raising Pigs

If you are new to raising pigs or planning to get started soon, this is the class for you. Basic health topics including vaccinations, diseases to be aware of, feeding and nutrition. There will be plenty of time built in specifically for addressing your questions, so don't miss this opportunity to get the answers you've been looking for. 4077 SW Research Way, Corvallis, OR. 6:30 PM - 9:00 PM. For more information contact Chrissy Lucas at 541-766-3556. **\$5**

29 - Local Food Connection

The purpose of this event is to connect food producers- farmers, ranchers, and fishermen- with buyers from grocery stores, restaurants and institutions through workshops and networking sessions. This is a venue for creating new food business partnerships, learning about emerging market opportunities, and exploring local food issues. The focus for the Independence Local Food Connection will be wholesale marketing channels. 555 S. Main St, Independence, OR. For more information contact Chrissy Lucas at 541-766-3556. **\$15**

February

12 - Small-Scale Poultry Production

Learn the ins and outs of raising chickens, turkeys and other poultry. This class is designed for those interested in raising poultry for eggs or for meat. Dr. Jim Hermes will cover topics including hatching eggs, brooding and raising chicks, poultry nutrition, flock & bird health, breeds of poultry, and housing for poultry. 4000 E. 30th Avenue, Building 17, Eugene, OR 6:00 PM - 9:00 PM. LCC Small Business Development Center by calling (541) 463-6200. **\$35**

22 - 2014 OSU Oregon Small Farms Conference

See details on page.....
\$45 per person

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