



The Smallholding

Smallholding (n) 1. A piece of land and its adjacent living quarters for the smallholder and stabling for farm animals, on a smaller scale, usually under 50 acres. 2. A means of achieving self-sufficiency with the ability to supplement income by selling excess produce and meat.

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Crop Pollinating Native Bees: Insects Working on the Farm

—Mace Vaughn

Farmers need insect pollinators to produce many different types of marketable fruits and vegetables. These include apples, almonds, berries, cherries, cucumber, melons, squash, sunflower and watermelon, to name just a few. In fact, worldwide, animal pollinators are required for over 70 percent of crop species. In the United States, this produce and indirect products, such as milk derived from dairy cows fed on alfalfa, represents about 30 percent of the foods and beverages we consume. Even self-pollinating crops such as tomatoes, peppers and eggplants, often produce more, larger, or higher-quality fruit when cross-pollinated by insects.

Today, the European honey bee usually gets credit for providing this service; however, recent research is demonstrating that our native bees also are important pollinators, responsible for an estimated \$3 billion in produce each year in the U.S.

Honey bees form the cornerstone of agricultural pollination in the U.S. and will continue to do so for many years to come. Due to declines in the bee keeping industry however, honey bee colonies can be in short supply or expensive when most needed. For

example, during California's almond bloom in spring 2007, growers rented honey bee hives for up to \$150 a piece, almost three times the average price of just two years before. Various problems, especially



parasites, diseases, and the recent Colony Collapse Disorder, are likely to further discourage bee keeping and this rising trend in price is likely to continue.

Native bees may be able to take some of the burden off honey bees, and in a few cases replace honey bees altogether. Wild-living native bees already occur on most farms, contribute to current crop yields, and can provide an insurance policy for farmers' pollination needs. Their value is clearly illustrated by Prof. Claire Kremen (UC Berkeley) and her research team in California's Central Valley, who have found over 50 species of na-

tive, unmanaged bees providing pollination services to three different crops. In fact, when there is enough habitat on or near a farm, native bees provided all of the pollination needed by certain crops, even

those with heavy pollination demands such as watermelon. On the east coast, over 80 different species of native bee have been documented to pollinate berry crops, and new research demonstrates that native bees adequately pollinate 90% of the watermelon farms studied in New Jersey and Pennsylvania.

In addition, native bees have recently been demonstrated to do some things that honey bees cannot accomplish. For example, native bees can significantly increase cherry tomato production. It is well known that tomatoes receive enough self-pollination just by wind to produce satisfactory yields. It also is known that tomato flowers do not attract honey bees because no nectar is produced and the pollen is hidden deep inside pores in the anthers. Many native bees,

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Spring Update from the Small Farms Program



What a winter! We've been busy—workshops, classes, farm tours, grant writing, small group coordination and conferences! We held a four-week class for twelve farm businesses in Grants Pass in January called “Exploring the Small Farm Dream.”

We had a group of sixteen farmers all of whom were planning their small farm businesses. It was great fun and a lot of success—some figured out an action plan, others decided on keeping their farm businesses small and others changed directions all together.

In February and March, we held a small-scale orcharding class and a pollinator conservation workshop. Participants at the orcharding class learned the nuts and bolts of orchard management as well as some basics in marketing and organic production. 60 people attended our pollinator conservation workshop, which was a collaboration between OSU, the Integrated Plant Protection Center and the Xerces Society. It was a great workshop full of information on native bee management, hedgerows and beetle banks and integrated pest management. We hope to offer this workshop again next year.

We've been spending a lot of time with our League of Women Farmers group, which you can read more about on page four. We've also been working with local growers looking at the costs and benefits of establishing hops on small farms. You can read about that below.

Grant writing season is upon us! Maud submitted a grant to the Western Risk Management Education Center for assistance in designing two four-week classes on intern and labor management for 2009. Melissa and Maud both worked with the statewide Small Farms team on developing a grant to hold another small farm business planning class in 2009 in five regions across the state, including southwest Oregon. We are also developing a few grant proposals to develop our three acres at the research station. Ideas include hops variety trials, organic seed trials and cover cropping trials. If you have any ideas for our experimental plots, please let us know. Maud is also working with our retired agronomist, John Youngen, to design forage demo plots here at the station. Stay tuned for more information on that.

As we move into spring, we have plenty of excellent classes and workshops planned. We are also available for any questions that come up as we move into full-on farming season and the weeds start growing. Happy spring! ☘ -Mel&M

Hops Interest Group

-Melissa Mattherson

OSU Extension Small Farms and THRIVE have been working with growers and breweries to organize marketing and production information related to growing hops in the Rogue Valley. This region, particularly the Grants Pass area, used to be a major producer of hops, but with market consolidation, instability and costs of production, many farms got out of growing hops on a commercial scale. The ghost yards of the hops industry are a testament to this region's productivity. Currently, with a global shortage of hops occurring, brewers are paying double and triple prices per pound on hops. This has led the microbrewers in the region to seek hops from local growers. Coincidentally, many growers had also approached OSU wondering about hops produc-

tion and where they could find more information. Since then, potential growers of hops have been meeting with OSU and THRIVE to investigate the challenges and possibilities of small-scale hops production. In February, we held a meeting connecting local microbreweries (Caldera, Walkabout, Wild River, Standing Stone and Southern Oregon) with local growers to talk about prices, varieties and brewing processes. Many of the brewers agreed that they were very interested in purchasing local hops and said they would offer solid prices to local growers. They also were excited about changing their labels to promote local hops growers.

In addition, the growers have identified a number of barriers in regards to

hops production including the high cost of investment (about \$7,000—\$10,000/acre), drying difficulties and timing as well as harvesting and the availability of popular varieties and rhizomes. After a number of meetings and thoughtful consideration, many of the growers decided to trial a few popular hops varieties (Cascade, Centennial, Chinook, etc.) on each of their farms and then compare the results of the trials with each other at the end of the season. Depending on the results, individual growers will make a decision as to whether they will invest in developing hops as a viable crop on their farm. Besides trialing five varieties on my own farm, OSU Extension is looking into putting in a few hops plants at the experiment station. Stay tuned for more info! ☘

Farm Profile: Blue Fox Farm

—Maud Powell

Blue Fox Farm, a diversified organic vegetable operation in Southern Oregon's Applegate Valley showcases a number of characteristics of today's successful small farms: extended family partnerships, enterprise diversity, innovative marketing, and an interest



Chris Jagger plants potatoes with school children at Blue Fox Farm.

in production improvement through research.

As the cost of agricultural lands in Oregon has skyrocketed in the past decade, land acquisition has become out of reach for many young farmers. Increasingly, young farmers are looking to family members or community partnerships to help secure agricultural property. Blue Fox Farm is a great example of this new emerging family agricultural partnership. The farm is a collaboration of several family members: Dick and Bobby Kuegler, who helped purchase the property in 2003, and their two daughters, Melanie and Valerie, along with their husbands, Chris Jagger and David Kennedy. The two daughters and their families live on the farm, while their parents live in nearby Jacksonville. This partnership provides one example of the revitalization of family farms in Oregon and collaboration between generations.

Melanie and her husband Chris Jagger

operate the produce component of Blue Fox Farm, while Valerie and David bottom line the animal husbandry program. Chris and Melanie grow six acres of vegetables, using succession planting, greenhouses for season extension, and a comprehensive soil fertility program that includes cover cropping, green manures and crop rotation. Chris and Melanie have worked tirelessly since 2003 to both steward the extended family property and to establish a successful farm business. They have developed working relationships with a number of local chefs and retailers, delivering consistent, high quality produce 45 weeks out of the year. They also have a strong presence at the Ashland and Grants Pass growers markets, and run a small Community Supported Agriculture Program. Valerie and David raise Icelandic sheep, Oberhasli dairy goats and ducks. Animal waste is composted and used to increase soil fertility throughout the property.

After the birth of their first child, Demian last September, Chris and Melanie designed a new Community Supported Agriculture (CSA) model that they believe will work better for their family. Instead of selling CSA shares, they are offering "Blue Fox Bucks" (BFB) to their customers. Customers can buy BFBs at the beginning of the season, thus providing Chris and Melanie the capital needed to purchase seeds and soil amendments, and then use them at the Blue Fox Farm market stands through the season. The new system will save Chris and Melanie the time and labor needed to pack individual CSA boxes and give their customers more choice. Concerns about cash flow, customer satisfaction and balancing farm and family resulted in the creation of a new form of direct marketing. This type of innovative and dynamic marketing is necessary for the success of small farms today.

Chris and Melanie's interest in sustainable agriculture extends beyond commercial production into the realm of university-based research. Blue Fox represented one of eleven organic farms that participated in OSU's OSPUD program. They found out about OSPUD at the Brienbush Farmer-to-Farmer gathering three years ago, where they met some of the OSU faculty involved with the program and some of the other participating farmers. OSPUD, funded by a Western SARE grant, was a participatory research project that linked growers with OSU faculty in an effort to

improve potato production methods. Chris and Melanie had grown potatoes for years, but felt they could still learn a great deal about potato production. They were also curious about what it

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Blue Fox Farm's abundant market booth.

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League of Women Farmers

—Melissa Mathewson

The League of Women Farmers began in October of 2007 and has been meeting now for six months. And the group keeps growing!

A colleague of mine (Melissa Fery) and I had this idea to start a statewide women's agricultural network based on various models from the East coast. After holding an exploratory session at the

2007 Farm Direct Marketing conference, we both decided to start regionally, instead of statewide. In October of last year, Maud and I invited about thirty women farmers from the Rogue Valley to

our introductory meeting. Around fourteen women attended the first meeting and came up with a six-month schedule of activities and tours.

The basic design, thus far, has been to alternate between potluck discussions at OSU Extension and farm tours. We have toured Runnymede Farm in Rogue River, Wolf Gulch Farm in

Little Applegate and Barking Moon Farm in Applegate. We have also discussed the philosophy of farming and balancing families and farm as well as marketing with Wendy Siporen from THRIVE and Laura Barton from the Oregon Department of Agriculture. We have also eaten good food together, much of it produced on



League of Women Farmers tour of Barking Moon Farm, March 2008.

many of the farms. Our next meeting we will talk about weeds and weed management on small farms.

The group has grown quite a bit as more women come to the meetings and engage with other women farmers.

The *Capital Press* featured the group on the Small Acreage page in the newspaper on March 21st. Many of the women farmers are finding great value in getting together once a month to share their stories, successes and challenges of farming. It is also a wonderful social outlet for women as many of us work on the farm and

rarely see each other throughout the season. New ideas are being generated at each meeting and it is foreseeable that new ventures and relationships will be created from this group including possible cooperative marketing ventures, trading of agricultural products as well as research projects and educational workshops.

The group membership is very informal and new members are joining every month. At some point, the group could become more formal by electing a president and other officers as well as collecting dues to pay for expenses. At this point, OSU Extension has been facilitating the group by helping to organize guest speakers, farm tours and announcements to the group. All in all, I am astonished by the amount of women farmers in the Rogue Valley and the creativity and dedication each has to their own farm as well as to the whole of agriculture in this region. I am encouraged by this community and look forward to its continued growth and success. If you are interested in coming to a meeting or tour, email us and you can get on our list of women farmers!☼

Stephen Jones Visit to the Rogue Valley

—Maud Powell

When Annie Hoy, Outreach Director of the Ashland Food Cooperative heard Stephen Jones address the Provender Alliance's Annual Educational Conference last October, she was inspired not only to invite him to speak in Southern Oregon, but also to give his wheat breeder's program a \$1,000 fellowship on behalf of the Coop.

Jones is a professor in the Washington State University's Crop and Soil Sciences Department and an outspoken advocate of farmer-driven plant breeding. His research focuses on improving winter wheat varieties for traditional and organic systems, using wild

species as sources of genes for disease resistance, end-use quality and adaptability. He uses evolutionary/participatory breeding, which involves getting variation into a farmer's field much sooner in the breeding process. This method of breeding also relies heavily on farmer participation.

Hoy describes Jones's program as "fierce." She goes on to say that "he's putting his heart into protecting not only the integrity of organic, but also preserving the genetic heritage of the wheat growing regions of the Pacific Northwest. What's more, he's helping farmers stay on the land, adapting to

climate change, economic change, and social change. What touches me most is his work with the children of current growers, who he inspires to keep the farm going. This is how he helps to preserve a way of life. He does all this while resisting pressure from corporate entities that would gladly fund him while tainting his program with unproven and unsafe biotechnology. He is one of my heroes."

The Ashland Food Cooperative, THRIVE and OSU Extension Small Farms are sponsoring the lecture on May 17th. See page seven for more information.☼

News & Resources

- SARE Issues 'Clean Energy Farming' Bulletin**
<http://www.sare.org/publications/energy.htm>
 Sustainable Agriculture Research and Education has issued a new publication, "Clean Energy Farming: Cutting Costs, Improving Efficiencies, Harnessing Renewables." The free publication is available online or in print, and features innovative SARE-funded research and examples of farmers who are improving energy efficiency while saving money. These growers and ranchers are implementing farming practices that save energy, protect natural resources, and produce and use renewable fuels.
- The **1st Organic Research Symposium** was co-hosted by the Organic Farming Research Foundation and MOSES February 21-23, in conjunction with The Upper Midwest Organic Farming Conference. The full set of research summaries from the symposium is now available online from OFRF online in PDF at www.ofrf.org. Topics addressed include weed management in organic systems, organic livestock, vegetable and fruit production, soils, pest management, and economics of organic systems.
- Sustainable Poultry Website**
www.sustainablepoultry.ncat.org/
 A great resource that includes information on production, genetics, feeding, health & welfare, processing, marketing, entrepreneurship, projects and images. Also includes power point presentations on various topics. Check out this great resource for small-scale poultry farmers.

Local CSAs Join Forces to Raise Awareness about Local Food

As interest in local food consumption has taken hold during the last few years, the Community Supported Agriculture (CSA) model of farming has gained increasing popularity. CSA farming aims to deepen relationships between producers and consumers. Most CSA members buy a "share" of the farms produce, and then receive a weekly box of fruits and vegetables.

This year, with the support of Thrive and OSU Small Farms, five local CSAs have formed the Rogue Valley CSA Alliance. Thrive, a non-profit organization actively working to build a healthy, local economy with independently owned businesses, promotes CSAs through its annual publication, the *Rogue Flavor*.

Farms participating in the Alliance are: Fry Family Farm, the Siskiyou Sustainable Cooperative, Barking Moon Farm, Eagle Mill Farm and Dunbar Farm. The Alliance was formed to both raise awareness about the concept of CSAs and also to offer consumers information about opportunities to participate in local CSAs.

"One of the best aspects of this group is the diversity of CSA programs it

represents" explains Tom Powell, coordinator of the Siskiyou Sustainable Cooperative. "Each of us has features that stand apart from the others from home delivery to kid's education programs to our cooperative ap-



A typical CSA box from the Siskiyou Coop CSA.

proach, so we aren't competing directly."

At this point, the primary purpose of the Alliance is to market CSAs collaboratively. The group plans to set up information booths at the Ashland, Grants Pass and Medford growers

markets once a month during the spring with brochures and fact sheets about CSAs. Michael Donovan and David Mostue of Dunbar Farms have agreed to design and print a brochure for the Alliance that lists contact information for each of the farms.

In addition Wendy Siporen, director of Thrive, has organized two free events designed to educate local residents about CSAs in the area—one at the Roxy Ann Winery in Medford on April 3rd at 7 pm, the other at the Chai Hut in Ashland on April 10th at 7 pm. A short film on CSAs will be shown and there will be an opportunity to hear from each CSA farmer as well. Discussion will follow.

Suzi Fry of Fry Family Farms describes the alliance as "just one example of a conversation that needs to take place between everyone with agricultural interest in Southern Oregon. We all want to preserve the rural lifestyle and keep money and jobs in our local area. We are joining forces with each other and Thrive to let people know that local food is available to them and that CSAs are a great way to access that." ☀

Crop Pollinating Native Bees continued from page 1

however, are able to vibrate the tomato anthers in just the right way to dislodge this pollen. In so doing, they significantly increase cross pollination between plants. The result is that fruit set can go up by almost 50 percent and fruit weight is nearly doubled when these flowers are visited by na-



tive bees compared to wind alone.

In another example, Dr. Sarah Greenleaf (UC Davis) demonstrated that native bees cause honey bees to move more often between male and female rows of sunflowers in hybrid seed operations. The result is an increase in cross-pollination and a doubling of sunflower seed yields.

Establishing a healthy population of native bees on your land

The abundance of native bees depends upon both suitable habitat near a field and careful farm management. Farms close to natural or wild habitat already may be visited by significant populations of native bees. If growers want to increase populations of these wild bees on their land, three resources must be in place: nesting sites, a variety of flowering plants that provide pollen and nectar and a refuge from insecticides. All of these resources can occur in small patches or in marginal areas across a farm, such as around farm ponds, fence-rows, or field margins.

Ensuring adequate nest sites is an easy thing to do. Be on the look out, and try to protect native bee nests already

established on your property. Ground nesting bees (these are different from yellow jacket wasps) often occur in well-drained, somewhat bare, sandy loam soils that are not tilled year-after-year. Tunnel-nesting bees use holes in old snags or the center of pithy twigs. You can also make artificial nest sites for native bees by boring holes in lumber or creating patches of bare soil with sparse vegetation.

Providing forage areas may be as simple as leaving weedy borders or allowing cover crops to bloom. Growing patches of native flowers also helps to attract valuable pollinators. Ideally, a farm should always have something in bloom, from early in the spring until the fall. These flowers can include the crops themselves or adjacent plants. If nothing else, forage patches should include flowers that bloom before and after the crop for which you most need pollination. Many of our native bees are active as adults for only about five weeks, longer than the typical bloom period for the varieties of crops in the field. Because of this, the bees on a piece of land will only reproduce successfully and be there when your crop requires them, if they can find flowers before and after a crop is in bloom.

Finally, if pesticides – even those approved for organic operations – must be used, growers can still reduce their impacts on pollinators in simple ways. For example, apply pesticides just after dark when bees are no longer visiting the field (pest insects often remain on the crop during the night) and never apply insecticides to plants in bloom, even weeds that grow around field margins. Switch to pesticides that are less toxic to bees and adopt appropriate integrated pest management practices for selected crops.

A more productive and sustainable future

We all desire the most efficient, cost-effective and reliable pollination strat-

egy. Our native bees can be an important part of this strategy and, with a small effort on the part of growers, may improve the reliability and effectiveness of pollination for a variety of crops. Farmers can provide a haven

Resources for More Information

- ***Reduce Bee Poisoning*** — PNW Extension Publication extension.oregonstate.edu
- ***Farming for Bees*** — Xerces Society www.xerces.org/
- ***Bees—Helping Farmers with Their Crops***—NRCS Publication www.nrcs.usda.gov/news/thisweek/2006/101106/techtip101106.html

for native bees that will result in greater crop yields and lower costs for renting pollinators, and will provide an insurance policy when honey bees are scarce. These same habitat enhancements can also support honey bees and other beneficial insects, shade irrigation ditches and streams, conserve water and reduce erosion, buffer winds and beautify your farm. By “growing” these wild bees in addition to your crops, you will support sustainable agriculture and help native bee populations, as well as the native and crop plants they service!

For more information

The Xerces Society for Invertebrate Conservation publishes *Farming for Bees: Guidelines for Providing Native Bee Habitat on Farms*. This and other materials are available at our website www.xerces.org (follow the links to “pollinator conservation”). Xerces also produces *The Pollinator Conservation Handbook*.

Mace Vaughan is the Conservation Director, Entomologist/Educator at the Xerces Society for Invertebrate Conservation.

Calendar of Events

- **Monday, April 14th, 5:00—8:00 p.m., League of Women Farmers Potluck & Discussion, Free**
Location: OSU Extension Library, 569 Hanley Road, Central Point. Call Melissa or Maud for more info at 776-7371.
 Discussion on weeds and weed management.
- **Thursday, May 8th, 1:00 p.m.—5:00 p.m., Raising Alpacas on Small Acreage, \$5**
Location: OSU Extension Grants Pass, 215 Ringuette St., Grants Pass To register, contact Lorena Becker at 476-6613.
 Learn about the advantages of raising alpacas on small acreages and why they can be profitable for small farms. Field visit to Adorabella Farm to see huacaya and suri alpacas.
- **Friday, May 17th, 7:00 p.m., Breeding Wheat in the Public Interest, Stephen Jones, Free**
Location: OSU Extension Auditorium, 569 Hanley Road, Central Point. Call Melissa for more info at 776-7371.
 Stephen Jones from Washington State University will give a lecture on breeding in the public interest, which improves strains, empowers farmers and creates ripple effects in the community including cleaner water, air, and more nutritional food.
- **Saturday, June 28th, 9:00 a.m.—3:00 p.m., Introduction to Biodynamic Agriculture, \$25**
Location: OSU Extension Grants Pass, 215 Ringuette St., Grants Pass To register, contact Lorena Becker at 476-6613.
 This class will introduce participants to the nuts and bolts of biodynamic farming. Class instructors will cover the philosophy of biodynamics, methods of making compost and field preparations, and ways to incorporate biodynamics into your farm or garden operation. Field visit to Seven Seeds Farm included. Lunch included.
- **Saturday, June 28th, Pulling Together Initiative Weed Day, Free**
Location: Hawthorne Park and various other locations around Jackson County. For more information, call Bob Budesza at 326-2549.
 Event will have educational booths, weed pulling, picnic lunch and other activities.

Blue Fox Farm profile continued from page 3



The potatoes at Blue Fox Farm.

would be like to work with a university and whether or not they would actually benefit from working with OSU.

The couple was pleased with the management and operation of OSPUD. During an initial project meeting, the participants identified three areas of

potato production to focus on: nutrient management, insect pest control (specifically wireworm and flea beetles) and disease control (late blight). The group met periodically over a two year period, during which time OSU faculty conducted research on each of the farms.

In terms of nutrient management, the OSPUD team explored the premise that it is unnecessary and therefore wasteful to add nitrogen to potato plants every year. Indeed, potatoes plants that received no additional nitrogen during the project yielded about the same as the plants that did.

The group meetings were informative and also fun. “We sampled lots of

different potato varieties,” explained Chris. “So many, in fact, that they all started to taste the same, except to the real potato connoisseurs.” Chris described OSU faculty members as “our peers, rather than academics who were trying to force information down our throats.” The couple also enjoyed networking and sharing information with the other producers involved with OSPUD. While the number of small farms is increasing in the Rogue Valley every year, there are limited opportunities for experienced producers to work on collaborative research projects.

Chris and Melanie see the value in deepening their understanding of crop production through both university-based research and information sharing between farmers. Their interest in crop improvement is yet another reason why Blue Fox Farm has been so successful. To learn more about the farm, you can read Chris’s blog at <http://bluefoxorganics.com>. ☀

Newsletter of the SW Oregon Small Farms Program.

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