

Summer 2011

Oregon Small Farm News

Oregon State University Small Farms Program

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Agritourism Turned into Agri-education

One farmer's calling to teach kids about local food

By: Melissa Fery, Small Farms Program, Oregon State University

When working farms offer activities and educational events to draw in the public there is anticipation the commercial venture will supply supplemental income to the traditional growing, harvesting and selling of crops. We call that agritourism. But when a farm purposely adsorbs the expense of hosting up to 50 educational field trips each year in order to provide opportunity for youth to see where food comes from, and get a small taste of farm life, Cynthia Kapple calls that “agri-education”.



Midway Farms Highway 20 between Corvallis and Albany.
Photo provided by Melissa Fery

Cynthia started Midway Farms in 1998, primarily as a subsistence farm for her family. In 2000, a potting bench turned into a self-serve roadside stand to sell excess produce grown on the farm. By 2008, the farm's classic gambrel style red barn was converted into a store-front to sell produce and goods grown by Cynthia and other local farmers.

Located midway between Corvallis and Albany on Highway 20, Midway Farms has a classic looking roadside farm store and offers some unique products. In addition to marketing local, seasonal fresh produce, shoppers can find artisan cheeses, gluten-free snacks, custom grown flowers, dried herbs and teas, and other value added products. The farming system is described as “going beyond organic” to enhance the biodiversity of the land. A recent agritourism study completed by University of California Cooperative Extension focused on farm enterprises like these. The study found that nearly two-thirds of California farms with agritourism components plan to diversify their offerings or expand them over the next five years. The primary reason given is to increase profitability.

Cynthia Kapple is constantly thinking of creative ways to diversify the agritourism opportunities on the farm, such as offering three, one week Farm Experience Day Camps in the summer and hosting all-inclusive themed birthday



Cynthia Kapple visits with a Midway Farms customer.
Photo by Melissa Fery

parties on the farm. These activities provide revenue for the farm and helps offset the costs of farm tours which she freely gives. Cynthia says her “calling is sharing with kids that when it comes to buying food they have options beyond fast food.”

Grade school through university level classes visit the farm to learn about the farming life. They get to touch, smell and taste products from the farm. Cynthia does not charge any fees to public schools, home school groups and any other youth group seeking a farm experience.

Cynthia feels there is a disconnection between kids and what they know about farms and where food is actually produced. “There are kids who visit my farm who can’t tell the difference between a chick and a duck,” Cynthia said. She is pushing a message that there are healthier food choices than fast food restaurants provide. She knows that her young visitors might not be able to change their lifestyle now, but one day they will be decision makers and may remember their day on the farm. Perhaps then, they will choose fresh, local food.

Currently, agri-education activities have not increased direct sales from the farm. That’s probably because visitors don’t hear a sales pitch. “The kids don’t even realize there is stuff for sale here. That’s not the point,” explains Cynthia.

The UC study also addressed this type of public-service, “The most common agritourism activity (51%) was hosting school field trips, with only 17% charging a fee. With the exception of weddings, overnight stays, horse or wagon rides, and fishing or hunting, fewer than half of agritourism operators charged a fee, underscoring the public-service, educational and marketing/outreach nature of these activities.”

As for Midway Farms and the Kapple family, they are also exploring fun new income streams that will permit them to share their farm with others. On August 6, 2011 from 6 to 11 p.m., there will be a Wine and Cheese Tasting evening with live music on the farm. Guests are invited to stroll through the gardens, enjoy local foods and music. This is a 21 years and older event and you can learn more about this event and others on the web at <http://midwayfarmsoregon.com/>

Midway Farms also participates in the Willamette River Country Trail, which is a collaborative marketing opportunity and part of the Oregon Country Trail system. Cynthia says, “It is great to experience the true sense of community I feel working with the other members of the Oregon Country Trails.” There are thirteen trails in Oregon, all supported by groups of business owners and aimed at providing tourism to enhance rural economics. A list of trails is available on-line at <http://www.oregoncountrytrails.com/>

To read the entire agritourism study completed by University of California Cooperative Extension go to their website at <http://californiaagriculture.ucanr.org/> 



Grafting Vegetables - Is it worth the trouble? Many growers say yes.

By: Amy Garrett, Small Farms Program, Oregon State University

Grafting vegetables has largely been limited to hydroponic systems in the U.S. although in recent years has become more popular in the field. Vegetable grafting is similar to grafting of fruits trees in the way that the rootstock is selected for vigor and disease-resistance, and the scion is selected for fruit quality and taste. The history of grafted vegetable production is rooted in Asia in the 1920's. Today in Japan more than 90% of the watermelons, oriental melons, greenhouse cucumbers, tomato, and eggplant crops are grafted before being transplanted to the field or greenhouse.

Increasingly, grafted vegetables have received more attention as growers and researchers spread the word about the positive impacts including significant yield increase, disease resistance, and increased plant vigor. These benefits have already had a significant impact in sustainable agriculture.

Locally, Gathering Together Farm (GTF) in Philomath, Oregon started grafting their tomatoes several years ago. Based upon favorable results GTF has transitioned to most of their tomatoes being grafted. They have also begun to graft peppers, eggplant, and melons onto more vigorous, disease-resistant root stocks. Log House Plants in Cottage Grove, and Territorial Seed Company quickly sold out the majority of their grafted tomatoes marketed to home gardeners this year.

The main benefit of grafted vegetables is avoidance of soil-borne disease, especially in intensive vegetable



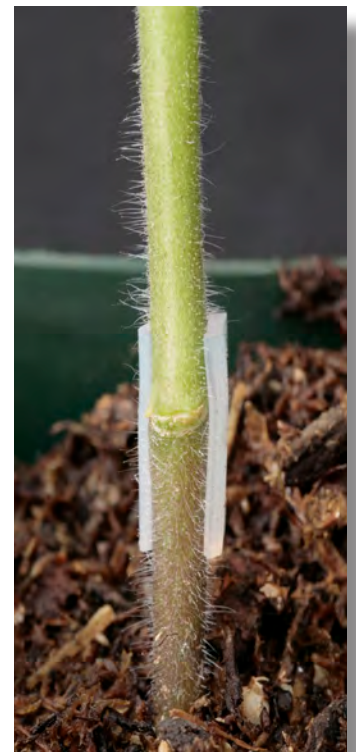
Jolene at GTF in hoop houses with grafted tomatoes.
Photo provided by Amy Garrett

growing operations where rotations may be difficult to implement. Grafting promotes increased plant vigor, and many growers see yield increases to 50% or more.

Growers find great economic benefit in using grafted plants for high-value, low-yielding crops like heirloom tomatoes. According to Jolene at GTF, one of the reasons they started grafting was “to actually make money on heirlooms”. Despite the huge expense of the root stock seed (as much as fifty cents per seed for tomato rootstock) growers find that the

investment pays off. GTF overseeds the rootstock by 20 percent to account for uneven germination and the average 90 percent success rate. In addition to the cost of seed, there is the initial investment of setup, the labor-intensive act of grafting itself and the fact that you are putting all this effort into an annual. Andrew Mefferd with Johnny's Selected Seeds says, “What's harder: grafting tomato plants or tilling up 50 percent more ground?” That is one of the questions each grower must answer for him or herself.

Grafted tomatoes are planted out into the field two to four weeks later, but growers have found that they bear fruit much longer. The most popular rootstocks thus far have been Maxifort and Beaufort, which are available through Johnny's Selected Seeds. A new rootstock called



Grafted tomato.
Photo provided by Log House Plants

'Emperador' has been released through Johnny's. It is similar to Maxifort and Beaufort, and offers an option to growers that don't want to buy from Monsanto-owned De Ruiter.

This season, you still may be able to purchase grafted tomatoes from one of the suppliers listed below. For more detailed information on grafting tomatoes and other vegetables refer to the resources and links below.

Resources

- *Grafting Tomatoes for Organic Open Field and High Tunnel Production Webinar*
In this webinar, David Francis of Ohio State University shared research findings and experience from an integrated organic program (IOP) project that has been addressing the use of grafting for organic systems. Find out more: www.extension.org/pages/25443
- The USDA Integrated Organic Program helped to fund grafted tomato research at Ohio State University, University of Minnesota, and North Carolina State University. Find out more: <http://oardc.osu.edu/graftingtomato>
- Sources for purchasing grafted tomatoes and other grafted vegetable plants:
 - loghouseplants.com
 - territorialseed.com
 - portlandnursery.com
- For more articles on grafting tomatoes check out: www.growingformarket.com 

New: Basics of Organic Seed Production

An on-line tutorial on the basics of organic seed production produced by Pacific Northwest experts is now available. The course covers the fundamentals of seed production for onions, beets and chard, brassicas, carrots, and wet seeded crops. It also covers climatic requirements for seed crops, important diseases, and seed quality. The course is designed to be appropriate for individuals with a basic knowledge of seed saving and organic production. Those who are seeking basic seed saving information may wish to read Organic Seed Alliance's Seed Saving Guide for Farmers and Gardeners (<http://www.seedalliance.org/download-form-1/>).

The Basics of Organic Seed Production is broken into a series of modules each covering one main topic followed by additional resources. It was created by Organic Seed Alliance through a grant from Western SARE. It is based on materials from organic seed intensive workshops held as part of the 2011 Organicology conference. Modules for the course include:

- *What seed crops grow in your climate?*
- *Onion Seed Production*
- *Beet and Chard Production*
- *Brassica Seed Production*
- *Carrot Seed Production*
- *Lettuce Seed Production*
- *Wet Seeded Crop Production*
- *Seed-borne Diseases*
- *Seed Quality*
- *Other References, Resources, and Links*

The course is free and located on the national eXtension website at: <http://campus.extension.org/course/view.php?id=377>



New Poultry Processing Options in Oregon

By: Lauren Gwin, Department of Agricultural & Resource Economics, Oregon State University

You may have heard about “the chicken bill,” passed by the Oregon legislature and signed by the governor on May 19th, 2011. All the details are not yet worked out, but this new law should give very small poultry growers more options for processing and selling their poultry of any type.

What the new law says

HB2872 allows a person to process and sell up to 1000 poultry per year without being licensed by the Oregon Department of Agriculture (ODA) as a slaughter or processing establishment. The poultry must be raised by you, from eggs or from chicks you buy when they are no more than two weeks old. You can only sell these birds direct to end consumers, from your farm. Restaurants may want to buy “direct” from you, but they are not end consumers; restaurants must buy from licensed processors.

However, “no license” does not mean “no rules.” If you want to process and sell poultry under this law, you’ll still have to follow federal, state, and local (city/county) laws and regulations around sanitation during processing, disposal of wastewater and offal (which could be through composting), recordkeeping, and even location (county zoning rules still apply). The OSU Small Farm Program is working with ODA on a simple guidebook that explains the rules, some of which remain to be resolved in ODA’s rulemaking process for the new law.



People who followed the bill’s progress – in favor or in opposition – may be surprised to learn that the new law does not actually exempt a processor from all license requirements. The statute itself

states that ORS (Oregon Revised Statutes) 619.026 still holds: establishments, including all equipment, “shall be kept in a clean, healthful, and sanitary condition.” At the bare minimum, this means equipment is cleaned at least daily; meat and meat products are securely protected from flies, dust, dirt, or other contamination; people doing the processing have clean clothes; and organic waste matter is removed daily.

The statute also confirms ODA’s authority (ORS 619.046) to make additional rules. ODA will determine what “securely protected” looks like in practice. You *probably* won’t have to build a processing facility that meets all the state building and sanitation requirements (e.g. four walls, floor and roof, no open windows, etc.). It is not yet clear whether farmers’ market sales will be allowed. These items will be worked out during rulemaking.

Why a new law?

The original intent of HB2872 was to allow very small scale poultry producers to process small numbers of their own birds for direct, on-farm sales without spending a lot of money on a “bricks and mortar” processing facility that would meet state licensing requirements (again: four walls, floor, roof, no open windows, etc.).

Until very recently, state regulators interpreted federal poultry processing regulations very narrowly: to raise and sell poultry, you had to process it under USDA-inspection or in your own state licensed facility (operating under the producer-grower 20,000 bird/year limit federal exemption). Even USDA inspected plants are required to have a state license, but here I use “state licensed” to refer to plants that are operating under one of the federal exemptions from continuous, bird-by-bird inspection. They are inspected at least annually by ODA inspectors for compliance with building/sanitation requirements.


That narrow interpretation was too tight for many would-be small-scale poultry marketers to squeeze

through. Building a state licensed facility hardly makes economic sense for a grower who raises and sells a few hundred or even 1000 birds per year. USDA inspected processing on a fee-for-service basis for independent growers is virtually non-existent in Oregon. Scio Poultry bravely struggled through the long and difficult process to become USDA inspected, only to find that not many growers were willing to pay the actual cost of inspected processing; for that reason and others they dropped inspection earlier this year.

By the time HB2872 was first taken up by the Oregon legislature, ODA came to accept a new interpretation of federal law. A grower can take her poultry to a state-licensed processor, who buys the birds, processes them, then sells them back to the grower, who is then acting as a distributor and can sell them on to her customers.

We won't get into all the details here, but suffice it to say, HB2872 has become somewhat less critical. Yet it will probably be useful to producers who are still far away from even state-licensed poultry processors. For more on the complexities of federal poultry processing exemptions: <http://www.extension.org/pages/33350/poultry-processing-regulations-and-exemptions>

Next steps

ODA will likely begin the rulemaking process this summer. We'll write about the results – and tell you when the Small Farms Guidebook to Small-Scale Poultry Processing is available – in a future issue of Small Farm News. 

USDA REVISES RECOMMENDED COOKING TEMPERATURE FOR ALL WHOLE CUTS OF MEAT, INCLUDING PORK, TO 145 °F

The U.S. Department of Agriculture (USDA) is updating its recommendation for safely cooking pork, steaks, roasts, and chops. USDA recommends cooking all whole cuts of meat to 145°F as measured with a food thermometer placed in the thickest part of the meat, then allowing the meat to rest for three minutes before carving or consuming.

This change does not apply to ground meats, including ground beef, veal, lamb, and pork, which should be cooked to 160°F and do not require a rest time before consumption. The safe cooking temperature for all poultry products, including ground chicken and turkey, remains 165°F.

A single temperature for all whole cuts of meat and uniform 3 minute stand time it will be much easier for consumers to remember and result in safer food preparation. Now there will only be 3 numbers to remember: 145 for whole meats, 160 for ground meats and 165 for all poultry.

The Department is adding a three-minute rest time as part of its cooking recommendations. Cooking raw pork, steaks, roasts, and chops to 145 °F with the addition of a three-minute rest time will result in a product that is both microbiologically safe and at its best quality.

A rest time is the amount of time the product remains at the final temperature, after it has been removed from a grill, oven, or other heat source. During the three minutes after meat is removed from the heat source, its temperature remains constant or continues to rise, which destroys pathogens. USDA's Food Safety and Inspection Service (FSIS) has determined that it is just as safe to cook cuts of pork to 145°F with a three minute rest time as it is to cook them to 160°F, the previously recommended temperature, with no rest time.

Appearance of Cooked Pork

The new cooking recommendations clarify long-held perceptions about cooking pork. Historically, consumers have viewed the color pink in pork to be a sign of undercooked meat. If raw pork is cooked to 145 °F and allowed to rest for three minutes, it may still be pink but is safe to eat. The pink color can be due to the cooking method, added ingredients, or other factors. As always, cured pork (e.g., cured ham and cured pork chops) will remain pink after cooking.

For more information about raw pork, including storage information, see fact sheet at www.fsis.usda.gov/Fact_Sheets/

Pork_From_Farm_to_Table. Consumers can also "Ask Karen," FSIS' virtual food safety representative, at AskKaren.gov or m.AskKaren.gov (Mobile Ask Karen) on your smartphone. Mobile Ask Karen is a web-based app that makes "Karen" more accessible and adaptable to today's on-the-go lifestyle. Now, Americans can take Karen with them – in the grocery store aisle, outside to the grill – anywhere you need information on food preparation or food safety tips. Just like using Ask Karen from a desktop or laptop computer, consumers can search for nearly 1,500 answers by topic or by product.

Growing Agripreneurs: A Farmer Incubator Program & Partnership

By: Melissa Matthewson, Small Farms Program, Oregon State University

The Southern Oregon Farmer Incubator program is a collaborative of organizations working to train new and beginning farmers. The collaboration among THRIVE, Rogue Farm Corps, Oregon State University Extension, and the Friends of Family Farmers has created a three-year training program with various components. One of these components is a new project launched at the Southern Oregon Research & Extension Center (SOREC) this spring called *Growing Agripreneurs*. This project is funded by the Oregon Department of Agriculture's Specialty Crop Program and run by the OSU Small Farms Program. In essence, *Growing Agripreneurs* consists of a one-acre teaching farm located at SOREC with a cohort of nine beginning farmers who are working and learning how to design and manage a new farm business. The focus is on the production of horticultural crops, but other topics related to all agricultural enterprises like recordkeeping, crop planning and organic certification also have been included.

Part-time farm manager, Shaina Bronstein, owner of Walker Creek Farm, manages the one-acre plot which has been split quadrants for demonstration, teaching and ease of management. The plot mostly has been fallow for several years, so cover crops and grains have been planted to build soil fertility. Wheat



Shaina Bronstein, Farm Manager teaching about soil fertility.
Photo by Melissa Matthewson

and barley each are growing on a ¼ acre and will be harvested by mid-summer. Two types of cover crops are growing as well—an oat and pea mix, clover. Hops, strawberries, and raspberries have been planted. There are plans to include herbs and other perennials. Annual vegetables and flowers are growing on two quadrants such as eggplants, melons, and squash. At this time, the produce generated from the plot will be donated to local food banks and pantries.

The plot is under organic management with the intent of applying for certification in the coming year. Because the plot is located at SOREC, the farm manager has access to equipment and other farming resources through the research and extension branch station. During this pilot year of the program, we are learning what it takes to run a teaching farm and have identified a number of improvements to be implemented next year including construction of a proper greenhouse, a secured irrigation line, and timed irrigation.

The cohort is a diverse set of participants ranging in age and experience. Most of them live in the Ashland and Medford area. One participant currently grows vegetables for a retreat center outside Ashland; another has inherited land that he wants to develop into a vegetable farm. Yet another participant installs



Participants Aluna and Alec check out equipment and tractors in the barn.
Photo by Melissa Matthewson

gardens for urban residents; another is farming an urban plot in Medford. Another participant runs a successful creamery, but has acreage he is interested in developing into a farm. All have at most a few years of limited experience farming and hope to develop sustainable and profitable farms. Shaina Bronstein says, "Students are observing the components that go into building a small farming enterprise, from planning to implementation. They are getting hands-on time working in the field. The small setting allows for in-depth discussions about each participant's farming goals. They can focus on identifying and building the specific skills required for their individual situations."



Participant Jesse learns to make soil mix.
Photo by Melissa Matthewson

The nine participants must volunteer two hours a week on the teaching farm and work alongside the farm manager, which allows ample opportunity for the individual. Volunteering on the farm gives participants pride in the work and the farm as well as learn how to grow on a scale that could lead to a commercial enterprise. The participants also receive one-on-one attention from Extension faculty and the farm manager. In addition to the volunteer hours, there are monthly skill building sessions that go deeper into topics such as cultivation, irrigation, and greenhouse seeding. Each participant keeps a notebook and notes observations during farm walks.

An additional five classes through the growing season will include the basics of horticulture, irrigation, pest management, equipment, and soil fertility. For these classes, OSU Extension faculty provide resources and education, recruiting other Extension and agricultural professionals to enrich the learning

experience. Participants also are able to attend farm tours and classes held by Rogue Farm Corps. Many of them will have access to a produce subsidy program and an online farmers' market as outlets for their produce. Both of those programs are administered by THRIVE. These are the many ways that we are working with other organizations to build a comprehensive beginning farmer program for southern Oregon.

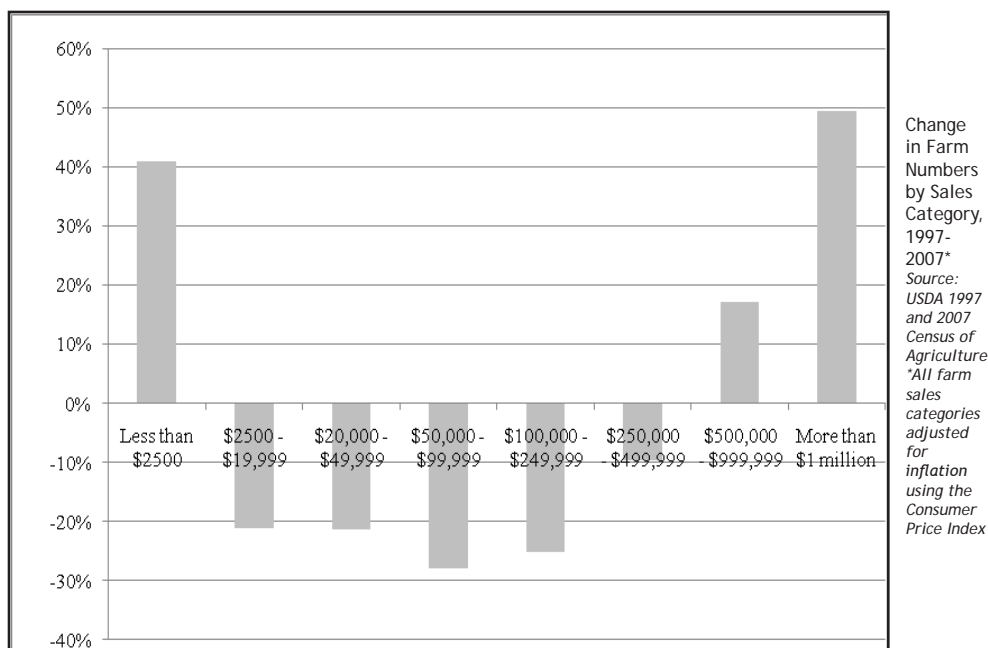
We hope to continue expanding the farm over time, add acreage and livestock. Currently, the project is limited by having access to capital and grant funds to run and expand the farm. We hope to erect a greenhouse this winter and add more classes during the 2012 growing season. If you are interested in being a part of the program or have questions, please contact Maud Powell - Maud.Powell@oregonstate.edu or Melissa Matthewson - Melissa.Matthewson@oregonstate.edu at the Southern Oregon Research & Extension Center. *✍*



Big Farms Are Becoming More Dominant

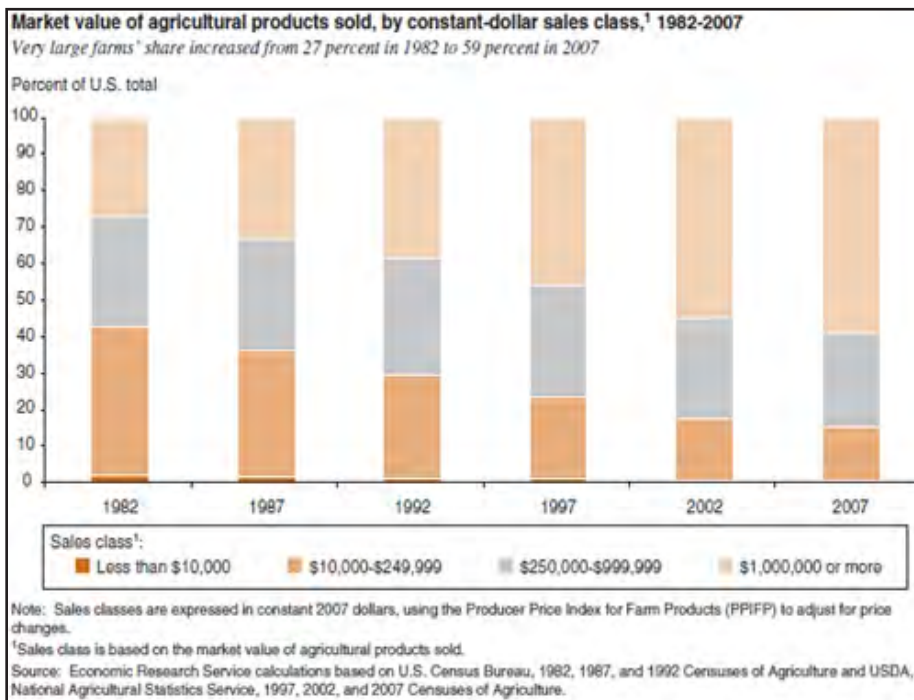
By: Larry Lev, Extension Economist, OSU Department of Agricultural & Resource Economics

Although the resurgence in interest in local and regional food systems has received a lot of media coverage, the dominant trend in U. S. agriculture at the farm level has been towards greater concentration. Here are two graphs that tell much of that story. The first graph shows the percentage change in the number of farms in different sales categories for the period 1997 to 2007. The graph clearly shows that the number of farms with sales in the broad range between \$2500 and \$500,000 decreased while the number of very small farms (those with less than \$2500 in annual sales) and large farms (those with more than \$500,000 in annual sales) increased.



The second graph is for a 25 year period (1982-2007) and provides the data needed to complete the story. This graph shows the percentage of total U.S. farm sales received by different size categories

of farms. The smallest category of farms here are those with sales below \$10,000 annually. Although 60% of all U.S. farms are in this category, their total sales represent only about 1% of all farm sales (the category itself is not visible in the graph except for 1982). Two trends are very visible in the graph -- (1) the percentage of total sales received by farms in the \$10,000 to \$249,999 category declined substantially over this period and (2) the percentage of sales received by farms with annual sales above \$1 million more than doubled from 27% in 1982 to 59% in 2007. In 2007, the largest 1.8% of all U.S. farms received 59% of the sales revenue.



The “disappearing middle” of American agriculture is a major concern for some observers. This web site <http://www.agofthemiddle.org/>, is dedicated to providing additional information about the problems these farms face and proposed strategies for addressing the situation. 2

Protecting Water Quality at Agricultural Composting Facilities

By: Nick Andrews, Small Farms Program, Oregon State University

Anyone who has composted at a medium to large scale (i.e. more than 100 tons per year) in a wet climate knows that leachate is easy to produce and can be difficult to manage. Saturated compost becomes anaerobic and is difficult to use, and the leachate can contaminate water. OSU Extension, experienced agricultural composters, leading composting consultants and Oregon Departments of Agriculture (ODA) and Environmental Quality (DEQ)

are collaborating on a new project to promote high quality composting on farms in Oregon and to protect water quality at agricultural composting facilities. In 2009 the DEQ implemented new rules for composting in Oregon, including agricultural composting operations processing more than 100 tons of vegetative or manure feedstock or more than 20 tons of mortality and other proteinaceous waste per year. The main drivers for these new regulations were the increasing potential to compost a larger portion of organic wastes produced in Oregon, and the need for adequate environmental standards to protect water from resulting leachate.

In response to these new regulations, OSU Extension is leading a project to promote good composting practices on farms, and to identify cost-effective methods that farmers can use to protect water quality near their composting facilities. OSU Extension and composting consultants will conduct an anonymous survey of agricultural composters to study the challenges posed by agricultural composters. We will also publish resources with information about agricultural composting and protection of water quality near agricultural composting facilities. We will offer at least one workshop addressing agricultural composting and water quality, and a tour of agricultural composting facilities. The project website is under development



Figure 1. Leachate is easily produced at composting facilities especially during wet weather. It has a high biological oxygen demand and should be kept out of surface and ground water. Photo provided by Nick Andrews


at: <http://smallfarms.oregonstate.edu/compost-and-water-quality>. Please contact Nick if you are interested in participating.

The new DEQ rules require that farms composting more than 100 tons of vegetative or manure feedstock or more than 20 tons of mortality and other proteinaceous waste per year from their farm

or from off-farm sources must submit an application to DEQ for a composting facility site screening, including land-use compatibility statement (LUCS) signed by the local planning authority. Composting is generally recognized as an agricultural activity when done in conjunction with a farm-use, so it is expected that a farm composting operation will easily obtain a favorable planning decision on the LUCS. DEQ screens agricultural composting sites to assess the risks posed to surface water and ground water, and the potential for odor problems. If your operation is expected to pose a low risk, you will receive a registration permit and report the volume of non-agricultural waste composted annually. This approval is good for 10 years; there is a one-time registration fee of \$150. If your operation is expected to pose a high risk, you will be required complete a more detailed DEQ approved compost plan, receive an individual composting facility permit and report the volume of non-agricultural wastes composted annually. Higher risk operations pay, in addition to the screening fee, a one-time plan review fee and an annual compliance fee. During the screening process, DEQ will work with farm composting operations to help reduce the risk posed by the facility. Criteria used by DEQ to screen composting facilities are listed in the sidebar.

There are several steps farmers can take to prevent leachate generation, to manage leachate, and protect water quality. Choose a site for composting that is less likely to contaminate water or create odor problems. Heavier soils with slower infiltration rates (i.e. silty clay loam) are preferred because the risk of leaching is lower than on excessively well drained sandy soils. Avoid sites with shallow aquifers, a high seasonal water table, or sites that are likely to flood. Fields with drainage tiles are more likely to transport leachate to surface water if drainage water is not treated. Whenever possible prevent stormwater run-off from mixing with compost piles and leachate. If compost piles can be actively managed to stabilize the feedstock before winter rains arrive, leachate will be minimized. In many cases it is a good idea to leave piles undisturbed during the winter so that they can be covered and protected from heavy rain. Covered or not, composting material should be consolidated to reduce the surface area exposed to precipitation. Tall piles with steep sides are often better able to absorb moderate amounts of rain. The shallow edges of compost piles, and relatively small piles of compost can produce more leachate. A good C/N ratio (i.e. 25-40/1), good moisture content (40-60%), and good porosity will promote thermophilic composting. The heat of composting in a well-managed compost pile evaporates water and may reduce leachate generation. In some situations it is possible to build a slightly drier compost pile that can absorb moderate rainfall before becoming saturated and generating leachate. When leachate is produced, it must be well managed so that it doesn't contaminate water. If the compost is on an impermeable pad, or the site is graded or has a slight natural slope, filter strips or bioswales on the downhill side or slope can help to disperse leachate across a larger surface area and allow it to infiltrate. Collected leachate can also be land applied at agronomic rates. Direct injection of leachate below the surface is not usually recommended, and requires additional regulatory oversight.

In addition, leachate that is allowed to pool and stagnate on the site can be a primary source of odor. A well-graded site and adequate management including appropriate dispersal of leachate can significantly reduce odor potential.

The water protection strategies that make sense at a specific site vary depending on site characteristics, the types and volume of feedstock handled, rainfall patterns, and other management considerations. By late 2012 new composting and water quality guides will be published and available online. Many of the partners in this project also teach an agricultural composting workshop at OSU's North Willamette Research and Extension Center. Information about the Agricultural Composting Resources and Education Series is available at: <http://smallfarms.oregonstate.edu/ag-compost-workshop>. 

Screening criteria used by DEQ to assess environmental risk and the potential for odor problems

Surface water criteria:

- Site topography, slope, directional flow patterns
- The location of, and distance to surface water in the drainage area of the composting facility
- All drainage channels, ditches, and any other water conveyances leading from the composting facility to surface water
- Precipitation, evaporation, soil types, infiltration and soil permeability ratings
- Operational history regarding runoff from the site
- Current or planned stormwater management facilities, structures, features and their specifications
- Site design or operations that keep stormwater separate from composting operations
- Infiltration and/or detention basin capacities
- Feedstock types, conditions and volumes
- Site-specific leachate composition data (if available)
- The compliance history of the facility

Groundwater criteria:

- Soil types and permeabilities
- Likely net (i.e., post evapotranspiration) volume and infiltration rate of leachate-affected water
- Nature of contaminants based on feedstock types, composting methods and operation, and likely concentrations of contaminants
- Proximity to surface water (to evaluate the potential for contaminants to enter surface waters via groundwater)
- Depth of the aquifer used locally as a drinking water source and whether confined or unconfined
- Aquifer yield
- Proximity of site to water supply wells
- Availability of municipally supplied drinking water
- Current or proposed methods of managing stormwater and leachate
- Method of composting operations
- Compliance history

Odor criteria:

- Feedstock types
- Composting method
- Site remoteness or proximity to residences
- Frequency and nature of complaints over operational history
- Causes of odors and/or complaints
- Responses to complaints
- Local geomorphology and climate data (wind and weather).

Calendar



July

20 - Farmscaping for Predators, Parasitic Wasps, and Native Bees on an Oregon Hop Farm

Learn about the latest in integrated management approaches to pests in a large commodity production field, state-of-the-art integrated hop production practices as well as take a detailed, hands-on, look into the identification, biology, and ecology, of native bees and beneficial insects and the on-farm habitat that supports them. Goschie Farms, Silverton, OR. 1:00 PM - 5:00 PM. For more information or to register contact Gwendolyn Ellen at 541-737-6272 or gwendolyn@science.oregonstate.edu. **Free**

29 - Producing Berry Crops on Your Small Farm

Presentation and discussion with Dr. Bernadine Strik, OSU Extension Berry Crops Professor, of which berry crop cultivars are best suited to fresh and processed markets; site requirements, pre-planting preparation; cultural systems for optimal yield and quality; and most common production problems. Blueberries, raspberries, and strawberries will be highlighted. OSU Extension Service, Grants Pass, OR. 2:00 PM - 5:00 PM. For more information contact Tracy Harding: 541-776-7371 ext 208 or tracy.harding@oregonstate.edu. **\$30**

September

17 - Natural Resource School

Over 30 educational seminars and tours on a variety of topics available throughout the day! Corvallis, OR. 8:00 AM - 5:00 PM. For more information visit <http://extension.oregonstate.edu/benton/NRSchool> or contact Chrissy.Lucas@oregonstate.edu or 541-766-6750.

Early Bird Registration \$40.00 until August 19th. Regular Registration is \$50.00 and we reserve the right to close registration on September 6th

October

25 to 27 - Practical Introduction to Cheese Making

OSU Campus, Corvallis, OR. For more information contact Lisbeth Goddik at lisbeth.goddik@oregonstate.edu or 541-737-8322. \$

November

3 - To Pasteurize or Not to Pasteurize

A French perspective on the great cheese debate. Portland, OR. For more information contact Lisbeth Goddik at lisbeth.goddik@oregonstate.edu or 541-737-8322. \$

Visit <http://smallfarms.oregonstate.edu> for more upcoming events!

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