

3504

Federal Register
DEPARTMENT OF HEALTH AND HUMAN SERVICES
Food and Drug Administration

issues under the Paperwork Reduction Act of 1995 must be submitted to the Office of Regulatory Affairs, Office of Management and Budget (OMB) (see the "Paperwork Reduction Act of 1995" section of this document).

Electronic Submissions

Submit electronic comments in the following way:
 • Federal eRulemaking Portal: <http://www.regulations.gov>. Follow the instructions for submitting comments.

Written Submissions

Submit written submissions in the following ways:
 • Mail/Hand delivery/Courier (for paper or CD-ROM submissions):
 Division of Dockets Management (HFA-305), Food and Drug Administration, 5630 Fishers Lane, rm. 1061, Rockville, MD 20852.
 Instructions: All submissions received must include the Agency name and Regulatory Information Number RIN 0910-AG35 for this rulemaking. All comments received may be posted without change to <http://www.regulations.gov>, including any personal information on submitting comments, see the "Comments" heading of this document.

Docket: For access to the docket to read background documents or comments received, go to <http://www.regulations.gov> and insert the docket number(s), found in brackets in the heading of this document, into the "Search" box and follow the prompts and/or go to the Division of Dockets Management, 5630 Fishers Lane, rm. 1061, Rockville, MD 20852.

FOR FURTHER INFORMATION CONTACT:
 Samir Assar, Center for Food Safety and Applied Nutrition (HFS-317), Food and Drug Administration, 5100 Paint Branch Pkwy., College Park, MD 20740, 240-402-1636.

Table of Contents

- Executive Summary
- Proposed Rule
- I. Introduction
- A. Contamination Hazards
- B. Contamination With Microbiological or Radiological Hazards
- II. Efforts To Address Hazards
- A. Inspections and Investigations
- B. Guidance Documents and Letters to Industry
- C. Produce Safety Action Plan
- D. Public Hearings
- E. Partnerships and Collaborations

Executive Summary

The FDA Food Safety Modernization Act (FSMA) (Pub. L. 111-353) requires FDA to publish a notice of proposed rulemaking to establish

Standards for the Growing, Harvesting, Packing, and Holding of Produce for Human Consumption
 AGENCY: Food and Drug Administration
 ACTION: Proposed rule.

SUMMARY: To minimize the risk of serious adverse health consequences or death from consumption of contaminated produce, the Food and Drug Administration (FDA) is proposing standards for the safe growing, harvesting, packing, and holding of produce for human consumption. FDA is proposing these standards as part of our Modernization Act (FSMA). These standards would not apply to produce that is rarely consumed raw, produce for personal or on-farm consumption, or produce that is not a raw agricultural commodity. In addition, produce that receives commercial processing that adequately reduces the presence of microorganisms of public health significance would be eligible for exemption from the requirements of this rule. The proposed rule would set forth health consequences or death, including those reasonably necessary to prevent the introduction of known or reasonably foreseeable biological hazards into or onto produce and to provide reasonable assurances that the produce is not adulterated on account of such hazards. We expect that the proposed rule consumption of produce associated with the illness associated with the adulteration of produce. Submit comments on the proposed rule by May 16, 2013. Submit comments on the Paperwork Reduction Act of 1995 by May 15, 2013 (see the "Paperwork Reduction Act of 1995" section of this notice). You may submit comments, by Docket No. FDA-2011-N-0910-AG35, by any of the methods, except that information collection

- F. Current Industry Practices
- G. 2010 Federal Register Notice of Preliminary Stakeholder Consultation
- H. White House Food Safety Working Group
- I. Other Related Issues
- III. Legal Authority
- A. Section 105 of FSMA and Section of the FD&C Act
- B. Other Provisions of the FD&C Act
- C. The Public Health Service Act
- D. Legal Authority for Records Requirements
- E. Intrastate Activities
- F. Relevance of Section 415 of the FD&C Act to "Farm" Definition and Related Definitions
- IV. Regulatory Approach
- A. Qualitative Assessment of Risk
- B. Focus on Biological Hazards
- C. Consideration of Differing Risk of Different Commodities and Practices
- D. Framework of the Rule
- E. Farm-specific Food Safety Plans
- F. Consistency With Codex Guidelines
- G. Product Testing as a Strategy to Control Pathogens
- I. Effective Dates
- K. Compliance Dates
- V. The Proposal
- A. Subpart A—General Provisions
- B. Subpart B—Standards Directed to Personnel Qualifications and Training
- C. Subpart C—Standards Directed to Health and Hygiene
- D. Subpart D—Standards Directed to Agricultural Water
- E. Subpart E—Standards Directed to Biological Soil Amendments of Animal Origin and Human Waste
- F. Subpart F—Standards Directed to Domesticated and Wild Animals
- G. Reserved
- H. Reserved
- I. Subpart I—Standards Directed to Growing, Harvesting, Packing and Holding Activities
- J. Subpart J—Standards Directed to Equipment, Tools, Buildings, and Sanitation
- K. Subpart K—Standards Directed to Sprouts
- L. Subpart L—Standards Directed to M. Subpart M—Standards Directed to N. Subpart N—Analytical Methods
- O. Subpart O—Requirements Applying to Records That You Must Establish and Keep
- P. Subpart P—Variances
- Q. Subpart Q—Compliance and Enforcement
- R. Subpart R—Withdrawal of Qualified Exemption
- VI. Preliminary Regulatory Impact Analysis
- VII. Analysis Of Environmental Impact
- VIII. Federalism
- IX. Comments
- X. References

In This Issue:

Time to Speak Up
 About Food Safety
 Rules - 2

Continued on pg. 2

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Cover Photo:

The Food Safety
Modernization Act will
have significant impacts
on farmers and food
processors. November
15th is the deadline for
comments.

Oregon Small Farm News Layout by:
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Time to Speak Up about Food Safety Rules

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

Okay, folks. It's time.

As the cover of this issue of *Oregon Small Farm News* suggests, it's time for all of us to put the Food Safety Modernization Act front and center.

You have until **November 15** to tell the U.S. Food and Drug Administration what you think about how they have proposed to implement the most significant overhaul of food safety legislation since the 1930s.

Two rules need your attention: the produce rule and the preventive controls rule.

Who should comment?

All of us! Not just the farmers and food processors directly affected by the rule but restaurants, retailers, food service buyers, distributors, and eaters – pretty much anyone who wants to keep fresh, local food available in our communities.

What's FSMA again?

The Food Safety Modernization Act, passed by Congress in 2011, gives the FDA broad new powers to prevent food safety problems, detect and respond to food safety issues, and improve the safety of imported foods. FSMA authorizes FDA

**Step by step
instructions for
submitting comments
are posted [here](#).**

In This Issue continued from the cover:

FSMA Comments from the OSFP	5
Mark Your Calendars for 2014 Small Farms Conference	6
Working Together: Value-based Food Supply Chain Case Studies	7
Southern Oregon Seed Growers Form Association	9
From the Ground Up Farming Program	10
Seed Remnants of a Willamette Valley Tomato Industry: Saving seed, passing it on, and being present	11
Calculating Livestock Winter Hay Needs	12
New Small Farm Report: History and Architecture of Benton County Grange Halls	14
Small Farm School 2013 Recap	15
Reflecting on a First-Year Farm Incubator	16
Calendar	23

to write, implement, and enforce new regulations for farmers who grow fresh produce and for certain facilities that process fresh produce for people to eat.

Food safety is everyone's responsibility and must be assured by all farms and food businesses, regardless of size. "Small" doesn't automatically mean "safe." Yet food safety practices can and should be risk-appropriate and recognize that food safety can be adequately assured in short, local and regional supply chains through clear traceability from farm to fork. Food safety practices should co-exist – not conflict – with sustainable and organic farming practices and on-farm conservation. The Food Safety Modernization Act recognized all of this, to some degree, through the Tester Amendment.

However, the rules that FDA has proposed for farms and facilities neglect these important principles. As written, the rules will create unnecessary economic hardship and unfairly burden the farms and small processors that are the heart of our vibrant local and regional food systems.

The Small Farms Program will submit comments on both rules. You can read our comments on the proposed produce rule on p. 5 of this issue.

At press time, we were still finalizing our comments on the preventive controls rule, but [you can read our draft comments on our website](#) to learn our specific concerns. One of our big concerns is how the rule will affect farms that process and sell value-added foods under [Oregon's Farm Direct law](#). We are working with the Oregon Department of Agriculture to figure this out and comment to FDA accordingly.

"I'll be exempt. Why should I comment?"

Short answer: the rules will affect you, too, directly or indirectly.

Longer answer: In theory, many small farms that sell mostly into local marketing channels should qualify for an exemption (and the very smallest farms aren't covered by FSMA at all). That's because, as noted earlier, the Act required the rules to be risk-appropriate.

Exempt farms aren't entirely off the hook: they still have to comply with FSMA traceability requirements. Exempt food facilities still have to prove they comply with state or local requirements – as noted above, we are concerned about the effect of this requirement on farms processing and selling food under Farm Direct. But even farms that think they qualify for an exemption should weigh in on the draft rules. Why? Two reasons.

First, the way the rules are written makes it unclear whether FDA will actually honor the exemptions. The income thresholds and the process by which farms can lose exemptions are two key pieces of the proposed rules that FDA must fix and clarify. (Read our comments for the details.)

Second, depending on your target markets, some wholesale buyers may decide they want a level playing field for all their suppliers and will require exempt farms to comply with the FSMA rules and standards anyway. Exempt farms should therefore care about what the final FSMA rules look like.

What now?

Step 1: Educate yourself on the issues. Some good places to start:

- [FDA FSMA fact sheets](#) (scroll down to "About Proposed Rules")
- [National Sustainable Agriculture Coalition FSMA issue briefs](#)

On the [Small Farm Program FSMA webpage](#), you can download and read:

- Small Farm Program Comments on the Produce Rule
- Small Farm Program Draft Comments on the Preventive Controls Rule
- Past OSFN articles about FSMA
- Oregon Department of Agriculture Draft Comments on the Produce Rule

Visit the [Oregon Small Farm Program Facebook page](#) to read commentaries we've posted about the draft rules.

Step 2: Think about how you will be affected by the proposed rules. How will they change how you farm,


process, sell, buy, and eat fresh produce? Are you concerned about those changes? Why? And – this is important – how should FDA rewrite its rules to address your concerns? FDA needs us to propose alternatives.

Step 3: Write it down in a letter to FDA, and submit it online, at regulations.gov. If you comment on both rules – the produce rule and the preventive controls rule – write two separate letters, as you must submit

comments on them separately.

Make sure your letter includes the correct docket numbers:

- Produce rule: FDA-2011-N-0921
- Preventive Controls Rule: FDA-2011-N-0920

Step by step instructions for submitting comments through regulations.gov are posted here: <http://sustainableagriculture.net/fsma/speak-out-today/>. 

The 6 Most Important FSMA Commenting Do's and Don'ts

DO:

- **DO COMMENT!** – Even if you don't feel like an expert, even if you are busy, even if you feel like you don't have time to tackle all of the issues in the rules, your voice matters. And FDA is required to read every comment. Comment on whatever you can, however you can, before the Nov. 15 deadline. Comments are our #1 MOST IMPORTANT way to improve these rules.
- **DO SHARE YOUR PERSONAL AND PROFESSIONAL STORY** – Your perspective is valuable. Include specific examples, professional experiences, and any data or research you have on hand to make your point. You bring a critical perspective to this conversation, and FDA wants to hear directly from you.
- **DO HAVE A CLEAR "ASK" FOR FDA** – It's not always enough to say, "these rules are no good." Your comment will be most helpful if it also includes a specific request for how and why the rules need to change, about a specific issue or the overall importance of ensuring both safe food and thriving family farms.

DON'T:

- **DON'T BE RUDE OR UNPROFESSIONAL** – Remember that all comments will become part of the public record and will be read by FDA officials; a well-considered, thoughtful comment that includes specific examples and details – while still conveying your strong feelings about the issue! – will be weighed more heavily in FDA's review and be more likely to impact the rules for the better.
- **DON'T COPY SOMEONE ELSE'S COMMENT EXACTLY OR SUBMIT PROXY LETTERS** – FDA seeks individual comments. Copies, proxy letters, and petitions are helpful (and better than nothing) but much less so. You **can** make the same or similar points as another person, but you need to add your own perspective as much as possible.
- **DON'T ASSUME OTHERS ARE SPEAKING UP FOR YOU** – People and organizations around the country are mobilizing around FSMA, **but your voice matters**: Comment today.

OSU Small Farms Program Comments to FDA



Extension Small Farms Program

107 Crop Science Building, Oregon State University, Corvallis, Oregon 97331-3601
T 541-737-5833 | <http://smallfarms.oregonstate.edu>

October 2, 2013

Division of Dockets Management (HFA-305)
Food and Drug Administration
5639 Fishers Lane, rm. 1061
Rockville, MD 20852

Docket No. FDA-2011-N-0921
Regulatory Information Number RIN 0910-AG35

Thank you for the opportunity to comment on the proposed rule for produce safety. We appreciate the extension of the comment period to allow more farmers to engage in the comment process.

The Oregon State University Extension Small Farms Program provides education and technical assistance to small, sustainable farmers and ranchers in Oregon. Our state has a vibrant small-scale, sustainable agriculture sector, with innovative farm and food businesses providing high quality food into local and regional markets.

We recognize the importance of food safety practices for all farms, regardless of size. We appreciate that the Food Safety Modernization Act explicitly requires FDA not to take a “one size fits all” approach to food safety but to take a risk-appropriate approach. We also appreciate that the Act explicitly requires that the rules not conflict with the National Organic Program or conservation practices. In our comments, we discuss our concerns about areas of the draft rule that appear to contradict these intentions and requirements of the Act and/or create unnecessary economic hardship for small-scale, local farmers and food systems.

Agricultural Water

The farmers we work with are deeply concerned that the proposed agricultural water standards will impose significant costs on them for testing, treatment, and maintenance but are (a) based on inadequate (or no) science and (b) will not actually reduce food-borne illness.

No Clear Scientific Basis

First, as FDA itself has acknowledged, there is no clear scientific basis for using the U.S. Environmental Protection Agency (EPA) Recreational Water standards. Scientific research has shown, on the contrary, that generic E.coli is a poor indicator of water quality.

Before FDA imposes potentially cost-prohibitive requirements on farms – especially the many small to mid-sized farms that will not qualify for an exemption – the Agency must assure that its standards are scientifically justified.

continued on page 17....

Mark Your Calendar!

For the 2014 Oregon Small Farm Conference

February 22nd

On the Oregon State University Campus

Will Include These Workshop Sessions:

- Small Scale Grains—3 full sessions—Grain production, pest management and marketing. Includes quinoa.
- Navigating Regulations for Agritourism
- Hand Tools: Ergonomics, maintenance and care
- Degree day models to support small scale crop production
- Health Insurance for farmers
- Veterans Entering Farming
- Update on Food Safety Modernization Act
- Many more!

Plus an extraordinary keynote session!

Lunch from local farms—the best conference lunch around

Registration will open be open by Jan. 1, 2014 at

<http://smallfarms.oregonstate.edu>

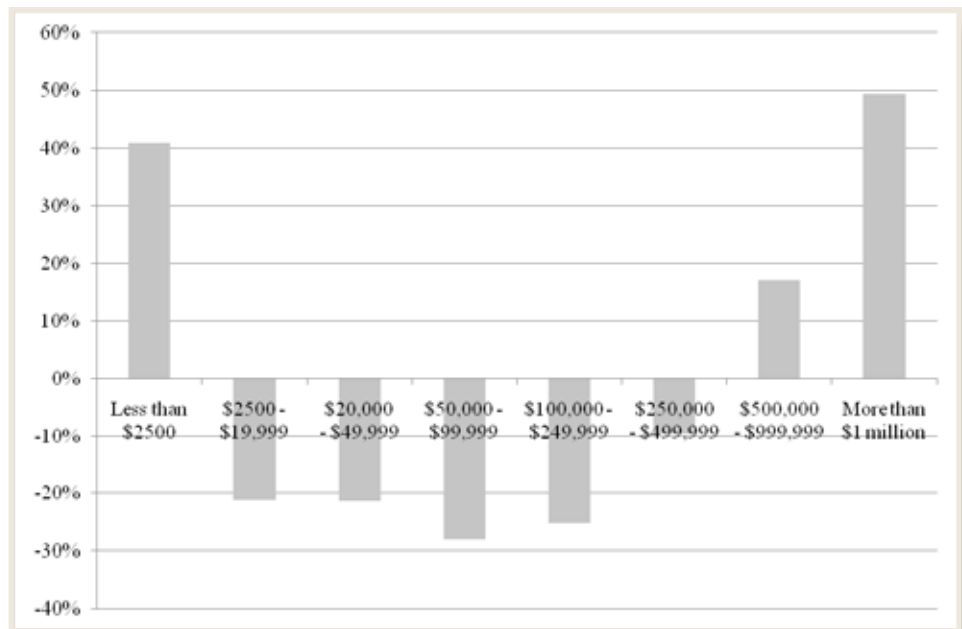
For updates on the Small Farms Conference and other up to the minute news, like us on Facebook-- <https://www.facebook.com/pages/Oregon-State-University-Small-Farms-Program/174466132601811?sk=wall>

Working Together: Values-based Food Supply Chain Case Studies

By: Larry Lev, Department of Applied Economics, Oregon State University

Small and mid-sized farms struggle mightily to stay in business and, as this figure shows, many in recent years have exited agriculture.

In general, small and mid-sized farms have difficulty in competing in the increasingly globalized agricultural markets for generic commodities. While some of these farms have found success by selling through local and direct markets, many others produce too much, raise unsuitable products, or are located too far from these direct marketing opportunities.



A set of nine case studies (<http://www.cias.wisc.edu/aotm-case-studies/>) presents “values-based food supply chains” as additional alternative strategies for small and medium-sized farms to consider. Figuring out how to work together with other producers and with supply chain partners is not simple, but some have succeeded. Each case study is provided in both a two-page and long version and provides insights on the opportunities, requirements, and challenges of these diverse examples.

Values-based food supply chains are business alliances formed between small and midsize farms/ranches and their supply chain partners to distribute significant volumes of high-quality, differentiated food products and share the rewards equitably. Farmers and ranchers function as strategic partners rather than easily replaced input suppliers. All participants in these alliances recognize that their success requires significant interdependence, collaboration and mutual support. These supply chains attach importance to both the values embedded in the production of the food products AND the values that characterize the business relationships.

Change in Farm Numbers by Sales Category, 1997-2007*
Source: USDA 1997 and 2007 Census of Agriculture *
All farm sales categories adjusted for inflation using the Consumer Price Index

The cases demonstrate that there is no one-size fits all approach to values-based food supply chain construction. There are, however commonalities. One key element in each of these cases is that the farmers are able to obtain higher and more stable prices by marketing differentiated, high-quality food produced with an authentic farming story, delivered through transparent supply chains that customers can trust. Regional supermarkets, restaurants, public and private institutional buyers and individual consumers have demonstrated an eagerness to buy these distinctive products. A second common element is that all of the supply chains rely on business models and organizational structures that achieve the necessary volumes of high-quality, differentiated food by aggregating product from multiple farms or ranches. That is, scale is achieved through collective action rather than by increasing the size of individual farms.

The cases

Country Natural Beef - www.countrynaturalbeef.com
A cooperative of more than 80 ranch families centered

in the Northwest that produces and markets natural beef products.

Organic Valley - www.organicvalley.coop

A national farmer cooperative with more than 1,600 member farms that produces and distributes dairy and other products.

Red Tomato - redtomato.org

A dual-purpose, non-profit organization that markets sustainably grown fruits and vegetables from around 40 farms in the Northeast and consults on regional food system development across the country.

Shepherd's Grain - www.shepherdsgrain.com

A limited liability company in the Northwest that markets high-end wheat flour grown sustainably by more than 40 Columbia Plateau producers.

Co-op Partners Warehouse -

www.cooppartners.coop

A certified organic wholesale produce distribution warehouse, owned by a consumer cooperative, that buys products from small and midsize farms and serves 160 retail stores, food service businesses and buying clubs throughout the Upper Midwest.

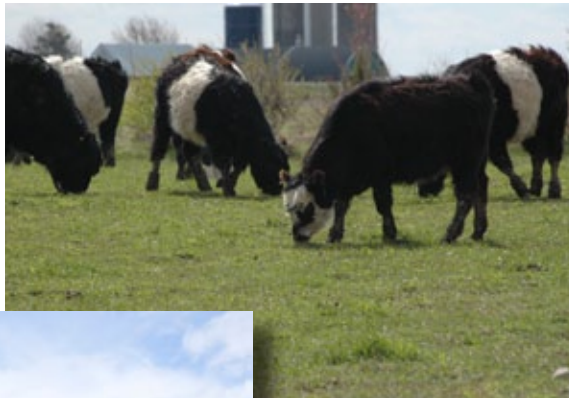
Full Circle Farm - www.fullcirclefarm.com

A farm-to-table delivery service in the Northwest that produces and aggregates organic produce from around 100 West Coast farmer partners and delivers food boxes to over 15,500 households located from California to Alaska.

Good Earth Farms - www.goodearthfarms.com

A multi-farm, internet sales enterprise that aggregates organic, pasture-raised meat products from six Wisconsin farms and delivers frozen meat to customers throughout the U.S. via overnight delivery.

Home Grown Wisconsin - A cooperative, multi-farm food marketing enterprise that sourced fruits and vegetables from more than 20 organic farms for restaurant and CSA customers in the Chicago metropolitan area. (Home Grown Wisconsin closed its business operations in 2009; the case study highlights the difficult challenges that often must be overcome by values-based food supply chains).



Above: Good Earth Farms pasture-raised beef. To the Left: Idaho's Bounty Cooperatives farmers. Photos provided by Larry Lev.


Idaho's Bounty - www.idahosbounty.org

A producer and consumer cooperative serving over 80 farms that provides distribution and marketing services for sales to retail outlets and individual consumers.



Challenges in developing values-based food supply chains: As documented in the case studies, the significant challenges that

must be addressed and overcome include:

- Finding appropriate partners and developing mechanisms for supply chain decision-making, transparency and trust;
- Determining effective strategies for product differentiation, branding and regional identity;
- Defining appropriate methods for pricing products based on understanding the costs of production and other factors;
- Developing, monitoring and documenting consistent environmental standards throughout the supply chain;
- Maintaining original farm identity and/or brand throughout the supply chain;
- Surviving and thriving in diverse economic and climatic conditions;
- Developing new leaders to take over when the founders step down. 

Southern Oregon Seed Growers Form Association

By: Maud Powell, Small Farms Program, Oregon State University

Southern Oregon boasts an excellent climate for growing vegetable and flower seeds. The hot summers and relatively low precipitation during the fall allow seed crops enough time and heat to fully ripen and dry down. During the past decade, the number of small-scale, specialty crop seed growers has more than tripled in the region. This past spring, some seed growers of Jackson and Josephine Counties formed the Southern Oregon Seed Growers Association (SOSGA). The mission of SOSGA is to support the production and improvement of quality agricultural seed in Jackson and Josephine counties of southwestern Oregon.

In practical terms, the purpose of SOSGA, which is a non-profit association, is to provide an organizational body for seed growers and seed companies to share and coordinate seed plot locations on a crop- by-crop basis. Timely, transparent communication between growers promotes high genetic purity in the region's burgeoning commercial seed sector, and the information gathered will factor directly into individual members' decision making and business planning processes.

SOSGA supports local, high-integrity seed production. Seed growers in any region share a common need: timely access to reliable information on the whereabouts of crop pollen, whether insect-borne or carried on the wind. Biologically speaking, crops of the same species can cross-pollinate; the offspring thus in some way come to reflect their parentage, that is, both the pollen parent and the receiving plant on which the seed fills. Of concern to seed growers, pollen from one location on the landscape may travel beyond that site and affect, usually detrimentally, the genetic purity of other nearby seed fields of the crop. The result of opaque, or non-existent, communication can result in lower quality seed and potentially misleading information for distributors and

farmers downstream, and loss of the value of the seed grower's crop.


Regional seed producer organizations in the Willamette and Skagit valleys have already begun "pinning" programs in response to this seed quality dilemma. SOSGA is modeled after these associations. This fall, SOSGA launched its own platform for the promotion and protection of seed quality, beginning with the growers and the spatial relations between pollen sites across our landscape.

Facilitated processes of "pinning" (i.e. placing pins in) detailed maps and GIS tools have been introduced as a means to accurately plot seasonal information, both geographic and botanical, so that local growers are equipped to make sound business decisions and investments and keep seed quality high. Cooperative regional pinning supports a goal shared by all specialty seed growers: the spatial isolation of related seed crops at distances adequate to ensure maximal seed integrity and quality.



Southern Oregon's Wolf Gulch Farm. Provided by Maud Powell

Growers began meeting early in spring 2013 at the Southern Oregon Research and Extension Center to begin discussing isolation practices and the possibility of inaugurating a new organization. On June 26th, the prospective members ratified the association's proposed bylaws, agreed collectively to incorporate as a 501(c)(5) under Oregon state law, and approved a Board of Directors.

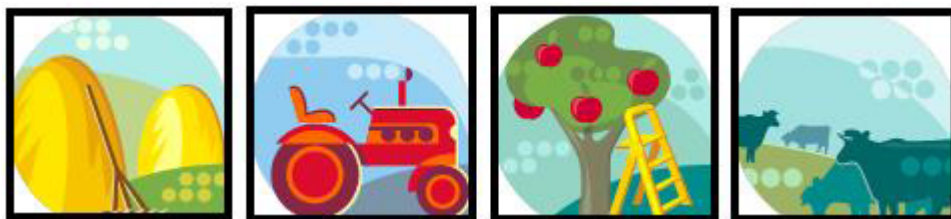
Pinning maps for pollen year 2013 will be available to dues paying members this year. SOSGA will host its inaugural annual members meeting and the valley's first full-season pinning procedure in the middle of February 2014. SOSGA is now open to member applications from Rogue seed growers at www.sosga.info and solicits the participation of all stakeholders in the local seed system at various levels of membership. The association and its members invite interested parties to contact the Board about how they can support high quality seed growing in southern Oregon. 

Organic Sandy

Organic Sandy is a food hub. They operate a local foods market and delivery service in Sandy, Or.

They believe in "community supported agriculture" where farmers and the community know, support and nourish one another. They offer farmers a stable market, fair prices.

They are planning for a Winter harvest and 2014 season. They are looking for growing farms interested in expanding their farms. If interested contact them at OrganicSandyProduce@gmail.com



From the Ground Up Farming Program

OSU Extension Service, the Small Business Development Center and Lane Community College are teaming up to offer a 9-part class series 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, Room 310 in Eugene each month from 6:00-9:00pm, beginning in November. Participants may register for the entire series which costs \$150 or an individual class for \$25 each.

Nov. 13 - The Buzz about Bees

Nov. 20 - Exploring the Small Farm Dream

Dec. 11 - All about Fruit Trees

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

To register for the entire series for the discounted price of \$150, call Lane Community College's Small Business Development Center at (541) 463-6200.

To register for individual classes visit <http://smallfarms.oregonstate.edu/south-valley/events>



Seed Remnants of a Willamette Valley Tomato Industry: Saving seed, passing it on, & being present

By: Jeannie Berg, Your Hometown Harvests

"I cannot come to the banquet, don't bother me now. I have married a wife. I have bought me a cow. I have fields and commitments that cost a pretty sum. Don't bother me now I cannot come." Old Sunday school song

As a child, I understood that old Sunday school song to mean that if I got too focused on the tasks at hand I'd miss the good stuff. So when Jim Stephens said hello to me while I was rushing through my favorite bakery, Lion's Share in Independence, during the height of planting season it would have been natural to wave hello and rush on. But the lure of the "banquet" meant I stayed for a chat. I'm so glad I did. During our conversation about farming Jim told me he had some tomato seeds I might be interested in. He proceeded to tell me about a tomato that some very old friends of his had grown for their entire lives, one they called the "Jory" tomato. The 'Jory' tomato had purportedly filled both the fields and canneries of the Willamette Valley during the very early 1900s. It's reported to be prolific, well adapted to our summers and tasty.

We assume based on the era and the parts of the valley the 'Jory' was known to have grown, in the Mt Angel area and other parts of Marion and Polk counties that it was probably dry farmed. As a small farmer who grows lots of heirloom tomatoes, many dry farmed, I was more than a little intrigued. Jim promised to leave some seeds in a package at the bakery we both frequent.

Several days later the package arrived. It included a 'Jory' tomato can label that Jim, a label collector, had found, a note and one of those precious tiny envelopes of seeds. It was so tiny but it felt so heavy. It contains the work of 90, or more, years of seed saving. Those seeds hold potential genetic material precious to us who farm here and try to do it with less water and to those who want really good tomatoes. It conjures up the vision of women in their 90's saving their best tomatoes, carefully preparing and storing the seeds,

having done that their entire lives.


Jim's learned a little more about these

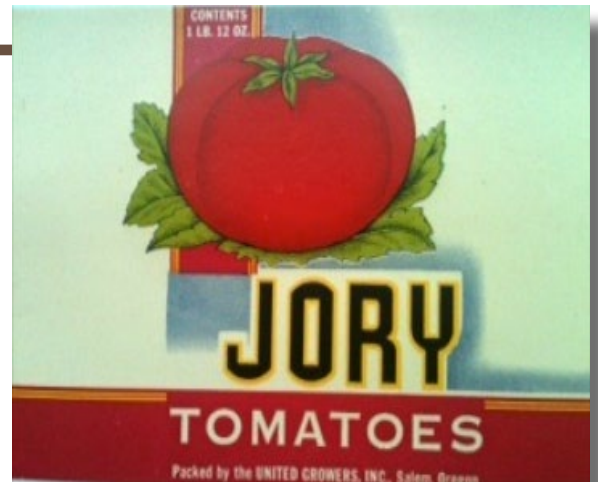
tomatoes since. They

also grow very well on the Washington coast and they probably originated in Portugal. The cannery called "United Growers Inc." in Salem involved the Jory family and called many of their products "Jory." They were around at least into the 1950's. I love looking at a tomato label that proudly states, "grown and packed in the Willamette Valley", as if tomatoes from here were renowned.

Of course, we know our valley tomatoes can be tasty but growing them on a scale and efficiently enough for canning seems like a fools errand here. So maybe that's what this tomato can teach us. Growing good tasting tomatoes to scale can be done, it has been done. It's our assignment to look back while we look ahead and figure out how.

It seems to me that heirloom seeds of real value don't come down the generations without time for storytelling because in the story are the keys to their potential.

So my winter assignments are to put 'Jory' seeds into the hands of a few of my favorite small farmers and seed savers and see if I can find out more about these tomatoes. There are 80 and 90 year olds to call. There is a box of letters in the Oregon Historical Society archives to read. There is a greenhouse to ready for next years tomatoes. There are "banquets" not to miss. 



'Jory' tomato label from the early 1900s.
Photo by Jeannie Berg

Calculating Livestock Winter Hay Needs

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

Livestock producers can often realize feed cost savings by purchasing their entire winter hay supply at one time. Obtaining an entire feeding season supply from a new hay crop certainly beats underestimating needs and having to cobble together purchases of more hay in late winter, when demand may outstrip supply and quality may be variable. There are four critical aspects of large hay purchases: knowledge of how much to purchase, adequate storage capacity, ability to work with the hay producer's schedule and capital to make the purchase.

A few simple calculations can help livestock producers estimate how much hay they will need to get them through the winter. Estimates are based on livestock body weights, number of head to feed and days to be fed. Feeding records from each farm should help producers know how many days they may need to feed hay. Hay may have to be fed from October through March, perhaps even April. "But there is still plenty of green grass in October and again in March!" you may say. True. However, it is to your pasture's long-term health and productivity for grazing to cease in the fall and not start too early in the spring; more details about this will be included in a future article.

Table 1 below includes estimates of daily dry matter intake (DMI) as a percent of body weight of various livestock species. Animals do not have DMI requirements. They do have requirements for the amount of water, protein, energy, vitamins and minerals needed for maintenance, various rates of gain and other forms of production. These nutrients must

Species	DMI as % of Body Weight
Goat	2 to 6
Beef cattle	1 to 3
Dairy cattle	3 to 4.5
Horse	1.5 to 3
Sheep	2 to 5
Hogs*	4 to 6

* For hogs, up to 10% of the total ration dry matter can be forage.

Table 1. Dry matter intake as percent of body weight of livestock species.
Provided by Dr. Susan Kerr

"fit" into the amount of food an animal can physically consume. DMI rates are estimates of how much dry matter (water component subtracted) an animal can consume in one day.



Photo by: David Shankbone, http://upload.wikimedia.org/wikipedia/commons/thumb/8/8e/Grass_hay_by_David_Shankbone.jpg

As a rule of thumb, as an animal matures and its weight increases, its DMI as a percent of body weight decreases. Other factors affect DMI as well. For example, less digestible high fiber diets fill the capacity of the digestive tract more quickly, limiting additional intake; more digestible and higher energy feeds are processed more quickly, leaving room for additional feed intake and resulting in higher production, as well.

Let's say we want to calculate how much hay to purchase as the foundation for a ration for an 1,100# beef cow for a 6 month (182 day) feeding period. We'll assume average quality grass hay, average weather conditions and no lactation during the feeding period. Using a moderate DMI of 2% of body weight, we can estimate her daily DMI as 22# of hay (24.2# as fed, adding back in 10% water weight for hay). Multiplying this daily intake times the number of days in the feeding period, we get 4404# (2.2 tons) of hay needed for this one animal. Multiply this number times the number of animals needing to be fed and you have the total amount of hay required for the winter feeding period. Depending on your feeding system, you will also need to figure in an additional 10 to 50% as hay

waste. Chemical analysis of the hay being fed would be a valuable source of information and help guide feeding decisions.

If you are able to stockpile forage on pasture or hayfields and the ground is


frozen, you may be able to do some winter grazing and reduce your hay feeding days. Only do so if you will be grazing dormant plants and animal impact will not be deleterious to pasture plants, soil and water. Bear in mind that this stockpiled forage will be very low quality and provide mostly fiber; energy, protein, vitamin and mineral supplementation will be required.

Back to our 1,100# beef cow: after we gave her the calculated 24.2# of average quality grass hay, free choice water and free choice trace mineral salt each day, we would monitor her for evidence that her nutritional requirements were being met (see inset box). Some animals may need additional nutrients to maintain the desired degree of body condition. Sometimes these added nutrients can be provided simply by offering more hay, but other times these animals may need more concentrated forms of nutrients, especially if they are already at their maximum DMI capacity. Assuming this animal was bred, we would also have to gradually increase her nutrients in the last three months of pregnancy to meet her increased nutritional requirements. Cold weather will require an increase in nutrients to meet increased maintenance requirements, as well.

Evidence of a Balance Diet

- Alertness
- Good appetite
- Bright eyes
- Thick and glossy hair coat
- No diarrhea or constipation
- No eye or nose discharge
- No lameness or cracked hooves
- Regular rumination and cud chewing (ruminants)
- Optional activity (walking, playing, sleeping, etc.)
- Weight gain as appropriate
- Normal reproductive functions
- Body condition in target range (moderate; not excessively fat or thin)

Diets based on low protein forages (crude protein below 8%) benefit from protein supplementation because rumen microbial populations are able to flourish and digest dietary fiber more effectively. Intake of less palatable high-fiber diets such as mature hay, straw and corn stalks can be increased by providing commercial supplements formulated with a highly-palatable molasses base.

Judicious livestock feeding is an art. It requires regular assessment of animal health, body condition, performance and feed costs, with adjustments and gradual changes made as necessary. Keeping feed costs manageable is a huge challenge for livestock producers, but securing winter hay supplies well in advance of the feeding period is one opportunity to realize some feed cost savings. 

Managing Internal Parasites in Small Ruminants Workshop

Parasite control is one of the limiting factors for profitable and sustainable small ruminant production and is a constant threat to animal health. During this workshop, Dr. Charles Estill will give a presentation about parasite life cycles and management techniques with emphasis on preventative management methods. Dr. Susan Kerr from Washington State University will teach participants how to perform fecal egg counts using microscopes and provide certification training for the FAMACHA system of barberpole worm monitoring. Participants are encouraged to bring fresh manure samples from parasitized sheep or goats.

Saturday, November 2, 2013 - 4:00 to 8:00 p.m.

Oldfield Teaching and Research Facility, 3521 Campus Way (corner of 35th St. and Campus Way) on the OSU Campus in Corvallis, Oregon 97331

\$35 registration per person to cover the cost of the workshop including FAMACHA certification and card.

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


For more information call OSU Extension Service Small Farms in Benton County at (541) 766-3556.

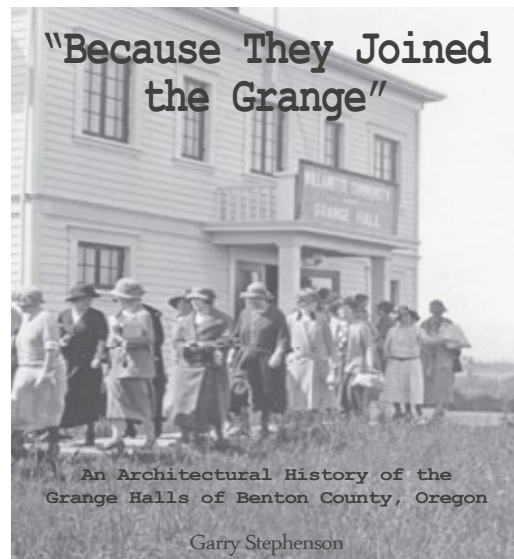


New Small Farms Report: *History and Architecture of Benton County Grange Halls*

By Garry Stephenson, Small Farms Program, Oregon State University

In some areas of Oregon and around the U.S. young farmers are revitalizing grange halls. For example, the Mary's River Grange near Philomath, Oregon stands as an example of a hall rescued from closing. It is again a focal point of the community, hosting a variety of events for young and less-than-young farmers and others. Because of this renewed interest in grange halls, it is a good time to pull this paper out of the archives.

Originally written as a research paper for a graduate course on historic rural agriculture, *Because They Joined the Grange* contains brief histories, often oral, of the six grange halls of Benton County, Oregon. Included are photographs and other resources such as original drawings collected over 30 years ago. 



Oregon State UNIVERSITY **OSU** Extension Service



OSU Beef Quality Assurance

Certification Workshops/Trainings

What is BQA?

- ✓ Nationally coordinated, state implemented program
- ✓ Provides common sense husbandry techniques, along with accepted scientific knowledge to raise cattle under optimum management and environmental conditions

Who Should Participate?

- ✓ All cattle producers
- ✓ All cattle producers in need of recertification (recommended every 3 years)

Why Should You Participate?

- ✓ Upholds consumer confidence in valuable beef products
- ✓ Protects the beef industry from additional and burdensome regulation
- ✓ Demonstrates commitment to food safety and quality
- ✓ Enhances herd profitability through better management
- ✓ Safeguards the public image of the beef industry
- ✓ Improves sale value of marketed beef cattle

How to Participate?

- ✓ **WORKSHOPS:** Offered in Oregon throughout the year, with focus on cow-calf production systems. These are 3-h trainings followed by the certification exam. A workbook is provided. Certificates are mailed to participants within 2 weeks after the workshop. For more information about upcoming trainings, please visit <http://beefcattle.ans.oregonstate.edu/html/extension/>
- ✓ **ONLINE TRAINING:** Available at <https://www.animalcaretraining.org>, under the "Training Offerings" link. Click on "Beef Quality Assurance (BQA) & Beef Cattle Care" link, and have access to BQA trainings focused on cow-calf, stocker, or feedlot systems. Cost is \$ 25.00 per participant.

For more information, please contact Reinaldo Cooke (541-573-4083 or reinaldo.cooke@oregonstate.edu)

EC 628, A Guide to Collecting Soil Samples for Farms & Gardens Is Online!

A Guide to Collecting Soil Samples for Farms and Gardens

By Garry Stephenson



Fall is a great time to be thinking about your soil. Whether you are planting a cover crop, preparing to lime your pasture or plan next spring's rotations, this time of year is perfect for sampling your soil and having it analyzed.

A Guide to Collecting Soil Samples for Farms and Gardens, an OSU Extension publication has recently been revised and is worth reading. You can download the free 5 page document at <http://ir.library.oregonstate.edu/xmlui/bitstream/handle/1957/42799/ec628.pdf>

Small Farm School 2013 Recap

By: Heidi Noordijk, Small Farms Program, Oregon State University

Eager learners, experienced speakers, local food, animals, tractors and bees kept things buzzing during the Second Annual Small Farm School

on a sunny Saturday at Clackamas Community College in Oregon City. The space in and around Clairmont Hall was filled with over 260 voices discussing the many aspects of small-scale farming in the Willamette Valley.

Participants travelled from 13 Oregon counties and Washington State to soak up new skills for managing their land. Over 60% of attendees were either beginning farmers selling products for less than 5 years or non-commercial landowners. Thirty-two workshops were offered over four concurrent sessions taught by experienced farmers, Extension agents, conservationists, and other agricultural professionals.

Popular workshop tracks included berry, vegetable and poultry production, cattle husbandry, tractor implement use, and on-farm veterinary care. Finding land, assessing farm resources and permits and licenses were high demand classes for new farmers last year and a big hit again this year.



Above: Wynn Matthews (left) instructs a participant on how to safely attach the PTO driveline between the mower and tractor.

Right: Alpaca along with sheep, goats, cows and a horse were used for demonstration during the on-farm veterinary workshop.

Below: Observing the hive during the honeybee biology and bee keeping basics workshop.

Photos provided by Heidi Noordijk




Just outside Clairmont Hall sheep, cows, chickens, alpacas, goats, and a horse were penned up in the shade for the veterinary care classes. At the other end of the grounds tractor operation workshops gave participants the chance to operate tractors and use implements. An afternoon session out at Coleman Ranch in Molalla gave students the opportunity to learn proper handling of cattle along with on-farm veterinary care. Workshop offerings, descriptions, photos, and handouts can be viewed on the Small Farm School webpage at [http://](http://smallfarms.oregonstate.edu/small-farm-school)

smallfarms.oregonstate.edu/small-farm-school.

The lunch break, featuring local products, gave people a chance to digest information from the

morning sessions and opportunities to network and visit exhibitors from farm supply stores and non-profit agencies. This year also featured an Ask the Expert area with specialists on hand to discuss specific questions on organic certification, water rights, CSA information, food networks, weather information, new farmer financing, bee keeping and plant problems with participants.

Small Farm School was presented by Oregon State University in cooperation with Clackamas County Soil and Water Conservation District and Clackamas Community College. Mark you calendars for the 2014 Small Farm School on Saturday, September 6th. 

Reflecting On a First-Year Farm Incubator

By: Rowan Steele, Farm Incubator Manager, rowan@emswcd.org / 503.935.5355

Much went right this inaugural season for the *Headwaters Incubator Program* (HIP), beginning with the five new farm businesses and future stewards being cultivated at Headwaters Farm. These farms were able to successfully grow vegetables, cut flowers, and raise bees in a developing program

with a rapidly changing farmscape. The late start to the season—farmers weren't notified that they were in the program until March!—proved no hindrance to their ability to grow quality produce or maintain a positive outlook on their future farm prospects.

From a conservation standpoint, the first HIP season could only be viewed as a success. Soil fertility has been improved immensely through the use of cover crops, riparian buffers have been established, drainage has improved through reduced compaction, policies have been adopted to encourage drip irrigation, and pollinator habitat has been developed. Incubator farmers are also being assisted in the development of their own nutrient management plans to ensure that fertilizers are applied in the correct quantities and at optimal times of the growing season.

Infrastructure and equipment available to HIP farmers has changed greatly over the course of the season as the site has been adapted to meet beginning farmer establishment goals. For example, at the onset, outside of their own personal tools, farmers had relatively few options for weed management at their disposal. Now, at the culmination of the first growing season, farmers can rent access to a BCS walk-behind tractor, flame weeder, wheel hoe, or



Headwaters Incubator farmer Tatyana Puzur of Happy Moment Farm and her grandson harvest potatoes for the Lents International Farmers Market.

select from a myriad of hand tools. Other developments this year include irrigation improvements, a propagation house with germination chamber, a wash station and walk-in cooler, and a new barn for storage and other farm operations. As farm development wraps up, HIP can now offer new farm businesses a full suite of tools for success.

No season can be without its own set of challenges, especially for a young program with lofty goals. The major issue this year was the unexpected prevalence of Canada thistle across the farm. A key objective for

next year will be to use timed cultivations to exhaust the underground rhizome network and set the stage for future management of this noxious weed. Much attention will also be paid to ensuring no more thistle goes to seed.

Moving forward, HIP will continue to add new farmers to the four-year program and put more land into agriculture. If this inaugural season is any indication, there is much to be excited about as the program and Headwaters Farm continue to evolve into an effective launching pad for local new farm businesses. *z*

For more information on HIP or to apply for the 2014 growing season, please visit emswcd.org/farm-incubator.

Headwaters Farm Incubator Program

Cultivating Farms and Future Stewards



Are you a farmer without land?

Do you have farm skills and goals, but lack the capital to get your business off the ground?

Headwaters Farm Incubator Program will begin accepting applications for the 2014 growing season on October 1st!

To apply or learn more about the program, visit: emswcd.org/farm-incubator



For questions, contact:
Rowan Steele
Farm Incubator Manager

503.935.5355
rowan@emswcd.org

OSU Small Farms Program Comments to the FDA

....continued from Page 5

Testing Frequencies

In addition, FDA has not provided scientific justification for the proposed testing frequencies, particularly for the weekly testing for farms using certain sources. We recommend that water testing frequency requirements be decreased to once every four months for groundwater and once every six weeks for surface water sources. After two or four years of data collection at those frequencies (two years for groundwater and four years for surface water), farms should be allowed to set a testing frequency that reflects the risk at that farm. Farms should be required to keep records that demonstrate and support their specific risk assessment and testing frequency. In addition, farms should not be required to test irrigation water outside the irrigation season.

Systems Approach to Water Quality

Second, many farmers have little control over their irrigation water supply but are being asked to shoulder the responsibility and cost. In public meetings, FDA has responded to this concern by saying it does not have jurisdiction over irrigation districts, only farmers.

We recommend that FDA coordinate with federal, state, and local regulatory agencies with jurisdiction over irrigation districts and other water suppliers to assure that water quality is being adequately managed system-wide.

In addition, FDA should, in the produce rule, allow a regional approach to water quality testing, to let irrigation districts and other water service providers (a) determine optimum sampling locations throughout the system to monitor water quality, and (b) submit to FDA testing plans for their systems with a requirement to report water quality issues to system users. Such an approach is likely to be more effective than farm-by-farm water testing in situations where water is delivered by an irrigation district or other water service provider.

Treatment

If farmers must rely on treatment, it will likely lead to a significant increase in application of chlorine and other antimicrobial agents. We are deeply concerned about the impact of these chemicals on groundwater and surface water quality, soil health, beneficial microbial organisms in both water and soil, and human health, especially for farmworkers. Large-scale use of chlorine will also cause corrosive damage to farm equipment and may reduce the effect of biological pesticides. This issue must be addressed in the environmental impact statement (EIS) process that FDA began this fall – and without which, the draft rules must not be finalized. Ultimately, FDA's water standards should not require large-scale chemical treatments and chlorination. Farmers will need access to affordable non-chlorine alternatives for irrigation water treatment.

In addition, FDA should assess the relative value of chlorinating an irrigation source over a period of months versus only chlorine-treating water within 2-4 weeks of harvest versus only using chlorine treatment during post-harvest washing and handling. Such an assessment may require additional scientific research.

Compliance Timeline

Long lead times that FDA has proposed for implementation and enforcement are necessary not only for farmers but for much-needed scientific research to be done and translated into practical applications.

Scope

The scope of the water standards should not be broader to include water that does not directly contact produce.

Standards into Guidance with Stakeholder Involvement

Finally, FDA has made it clear since issuance of these draft rules that it invites science-based alternatives to this water standard. This approach is welcome. However, the standards as written should not be included in the final rules. We tentatively agree with proposals to put much of the water standards, including the actual metrics, into guidance instead of rules, though we are concerned that this will offer far less opportunity for public scrutiny and input in the future. We strongly encourage FDA to establish a process to involve stakeholders – including small and mid-sized farmers – in writing and revising such guidance as new science is available.

Biological Soil Amendments of Animal Origin

The proposed manure and compost standards conflict with National Organic Program regulations, contrary to the Act. The standards are more restrictive than the NOP – and therefore more burdensome to farmers – in two specific ways:

1. The NOP allows the application of raw manure 3-4 months before harvest depending on the risk of soil contact; the draft produce rule requires 9 months;
2. The NOP does not require an interval before applying composted manure (minimizing contact with produce), but the draft produce rule requires a 45 day interval.

In both cases, FDA should amend the rule to match NOP regulations, which rest on a solid scientific foundation. For example, the NOP time and temperature standards for applying compost with no harvest interval are based on research that informed EPA's Title 40 standards for biosolids. A great deal of evidence shows that composting is a robust PFRP (process to further reduce pathogens).

Research into effective pre-harvest intervals is not entirely conclusive, but peer-refereed research tentatively supports 3-4 month harvest intervals for uncomposted manure, for example:

- Baloda, S.B., L. Christensen and S. Trajcevska (2001). Persistence of a *Salmonella enterica* serovar Typhimurium DT12 clone in a piggery and in agricultural soil amended with *Salmonella*-contaminated slurry. *Applied Environmental Microbiology* 67:2859-2862.
- Ingham, S.C., M.A. Fanslau, R.A. Engel, J.R. Breuer, J.E. Breuer, T.H. Wright, J.K. Reith-Rozelle and Jun Zhu (2005). Evaluation of fertilization-to-planting and fertilization-to-harvest intervals for safe use of noncomposted bovine manure in Wisconsin vegetable production. *Journal of Food Production*, 68(6):1134-1142.
- Tannock, G.W. and J.M.B. Smith (1972). Studies on the survival of *Salmonella typhimurium* and *Salmonella bovis-morbificans* on soil and sheep feces. *Research in Veterinary Science* 13:150-153.

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- Van Donsel, D.J., E.E. Geldreich and N.A. Clarke (1967), Seasonal variations in survival of indicator bacteria in soil and their contribution to storm-water pollution. *Applied Microbiology* 15:1362-1370.

To our knowledge, there are no documented cases of foodborne illness linked to manure used as a soil amendment 3-4 months before harvest. The fact that this practice is quite common in organic fruit and vegetable production, as regulated by the USDA National Organic Program implemented in 2001, is strong evidence that it should be allowed under FSMA.

The draft standards as written will also likely increase the use of synthetic fertilizers, for which there is no interval; this is likely to lead to declines in soil health and water quality due to nitrogen and phosphorus runoff. In Oregon and other states with wet winters, 9 month pre-harvest intervals will also encourage application of raw manure in the fall when the risk of nutrient leaching over winter months is high. This leaching would contaminate water with nutrients and pathogens, thereby increasing the risk of foodborne illness from irrigation water, as well as eutrophication of U.S. waterways.

Alternatives to Certain Requirements

We appreciate that FDA has proposed to allow alternatives to specific requirements, (water testing and treatment, composting treatment, and application intervals for certain soil amendments) under some conditions, as long as farmers can present scientific evidence that these alternatives work. The Agency says it will accept scientific data and information “developed by you,” the farmer, but FDA should be more specific about what type of evidence it will accept. The agency has done this to some degree in its fact sheets but must also provide clarification in the rule itself.

Qualified Exemptions

The Tester-Hagen amendments to the Act require that the rules be risk-appropriate and recognize that food safety can be adequately assured in short, local and regional supply chains through clear traceability from farm to fork. However, the treatment of exemptions in the draft rule combined with FDA comments in public meetings (e.g., Eugene, OR, April 17, 2013) have together led many small farms and farm advocates to conclude that FDA may not honor the Act’s exemptions in practice. We hope the Agency will clarify in the rule, in public meetings, and in informational materials its intention to honor the exemptions as the Act requires.

We have two main concerns about the current language related to qualified exemptions: the income thresholds and the process by which farms may lose exemptions.

Income thresholds

Income thresholds for qualified exempt status for farms are based on the value of all food produced, including animal feed, not just food covered by the rule. For example, if dairy or small grain farmers want to grow and sell a very small amount of produce at a roadside stand during the summer months, their total “food” income may exceed the threshold, even if their produce

sales are small in volume and direct to consumer. This should be changed so that the income threshold is based only on food covered by the rule.

We also wish to point out that the \$500,000 gross income threshold does not account for the low net income associated with produce farming. Vegetables and fruits may yield high gross income but have high production costs, resulting in low net income. \$1 million would be a more reasonable threshold for farms that would otherwise qualify for an exemption because they sell primarily to local and regional qualified end users.

Losing and Regaining Exemptions, i.e., “Withdrawal of Modified Requirements”

The draft rule lacks critical information about how qualified exempt farms might lose and regain their exemptions. The draft rule states that qualified exempt farms can lose their exemptions and be required to comply with all requirements if FDA finds:

1. A direct link to an active investigation of an outbreak, or
2. Material conduct or conditions: If FDA “determines it is necessary to protect public health and prevent or mitigate a foodborne illness outbreak based on conduct or conditions associated with a qualified facility/farm that are material to the safety of food produced or manufactured, processed, packed, or held at such facility or farm.”

We do not suggest that farms that are causing real foodborne illness should be allowed to continue doing so without penalty, including the loss of a qualified exemption. However, much about the language above is still unclear, and we ask that FDA provide additional detail on the following:

1. What actual conditions will trigger a withdrawal (loss of exemption)? FDA should define “material,” “associated,” and “direct link.”
2. Can exemptions be withdrawn for all farms growing an entire category of produce, even for farms not involved in an outbreak or “material conditions”?
3. What is the withdrawal process? FDA should provide detail on the timeline and farmer notification requirements.
4. Can exemptions be regained? Under what conditions?

In addition, both the exemptions and the additional information requested above should remain in the final rule as the law requires and not be relegated to guidance.

Finally, we are concerned that some small and mid-scale farms selling primarily into local and regional markets will not qualify for the exemptions because the definition of a qualified end user does not include local produce brokers who connect farms with local markets. Oregon has many small and mid-sized, diversified produce farms that sell to local and regional retailers and restaurants through a produce broker. These farms meet the spirit of the qualified exemptions – short supply chains backed by clear traceability – but will be excluded from them, at a high cost.

Additional Comments

Clarification and consistent definitions are needed in many areas of the draft rule, to help farmers and mixed-type facilities understand which rules and standards apply to them:

- Clear, consistent definitions of “farm” v. “facility”;
- Clear, consistent definitions of “small” and “very small” for farms and facilities;
- Clarity about how the two draft rules interact.

Wooden bins for produce harvesting: FDA should clarify in the rule that wooden bins are acceptable for produce harvesting and the initial stages of food processing. The rule should state that bins must be kept clean or that bins and storage containers should be stored and handled so as to limit microbial contamination. The rule as written would require wooden bins to be replaced with plastic bins. The cost to do this far outweighs potential food safety risks associated with wooden bins. Wooden bins can last up to 40 years, while far more expensive plastic bins may last only five to seven years.

Training and capacity building to help farms and facilities comply with the rule will be critical. The Act recognizes this, for example, by authorizing a new competitive grants training program. However, USDA has not yet provided funding for it. FDA will need to find resources to fund training and capacity building done by university cooperative extension, state departments of agriculture, and other entities that will provide local outreach and training.

In addition, the lack of scientific basis for many parts of the proposed rule makes it clear that a great deal of research is still needed on how best, and most cost-effectively, to assure food safety on farm. FDA should provide support for the research necessary to provide a strong scientific basis for the rules it promulgates under FSMA.

Economic impact analysis: FDA was required to analyze the economic impact of the rule on farms and facilities. However, that analysis contains insufficient consideration of the economic impact on local and regional food systems (e.g., CSA, food hubs, farm-to-school/institution, and other innovative marketing channels).

Conservation practices are acknowledged as valuable (in the Act itself and the Preamble to the draft rule), but they are not explicitly protected in the actual rule. We are concerned that the proposed language in the rule regarding animal intrusion will discourage producers from maintaining wildlife habitat. Reducing habitat near streams and along fields is very likely to jeopardize efforts to protect and restore threatened and endangered fish and wildlife populations. The removal of streamside vegetation is also likely to reduce water quality by removing shade and filtration for pollutants in runoff.

We are glad that FDA has initiated the EIS process and will be watching to make sure that the EIS adequately addresses this issue. FDA should also include explicit language in the produce rule – not just the preamble – to assure farmers that conservation buffers, wildlife habitat, and other co-management practices to protect wildlife habitat and biodiversity are not prohibited.

Another draft rule is needed.

Given the extent of the revisions FDA will have to make to the proposed rule, we strongly agree with the National Association of State Departments of Agriculture that FDA must publish another set of draft rules for public comment. As they note, “food safety will be better advanced by getting the rules right,” and taking the time needed to establish “a workable federal, state and local integrated food-safety system.” This effort is too consequential to be unduly rushed.

Thank you for the opportunity to comment.

Sincerely,



Lauren Gwin, Ph.D.
Assistant Professor
Extension Food Systems Specialist



Nick Andrews, M.S.
Senior Instructor
Extension Small Farms Faculty



Chip Bubl, M.S.
Associate Professor
Extension Horticulture Faculty



Garry Stephenson, Ph.D.
Professor
Director, Small Farms Program

Calendar



October

24 - What To Do With My Small Farm?

This introductory class for aspiring farmers covers basic information such as how to determine your water rights and soil type; how to navigate land use regulations; and what to consider when choosing an enterprise or business structure. The class is designed to help landowners determine the first steps in deciding what to do with their property. Jackson County Extension Office. 5:00 PM - 8:00 PM. To register contact 541-776-7371, ext. 208. **\$ Fee**

26 - Get the Most Out of Your Water: Pond Design and More

This class will cover small pond design, required storage volumes based on crop water requirements and livestock use, storage tanks for irrigation and stock water, rainwater catchment systems and design, solar pumping to and from ponds and tanks, water rights, grey water systems, regulations and permits related to water storage and use. Jackson County Extension Office. 8:30 AM - 3:00 PM. To register contact 541-776-7371, ext. 208. **\$ Fee**

November

2 - Managing Internal Parasites in Small Ruminants

Dr. Charles Estill will give a

presentation about parasite life cycles and management techniques with emphasis on preventative management methods. Dr. Susan Kerr from Washington State University will teach participants how to perform fecal egg counts using microscopes and provide certification training for the FAMACHA system of barberpole worm monitoring. Oldfield Teaching and Research Facility, 3521 Campus Way, Corvallis, OR. 4:00 PM - 8:00 PM. For more information contact Chrissy Lucas at 541-766-3556. **\$35**

11, 18, 25 - Exploring the Small Farm Dream

This three-session course provides an excellent framework to help new farmers assess their skills and interests, learn the realities of farm business ownership, and become connected to local resources. The aim is to help those thinking about small-scale commercial farming learn what it will take to start and manage a farm business, and decide whether that is something they really want to pursue. Jackson County Extension Office. 5:00 PM - 8:00 PM. To register contact 541-776-7371, ext. 208. **\$50 per person or \$ 75 couple**

<http://smallfarms.oregonstate.edu/advanced/list/extension-smallfarms/>
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