The 2016 NOFA Summer Conference will take place August 12-14 at the University of Massachusetts, Amherst. Mark your calendars for this unique experience, with three days of workshops on a wide range of topics for adults, teens, and children.

Australian soil scientist, Dr. Christine Jones, will deliver one of this year’s keynote addresses. Dr. Jones’ work focuses on the use of appropriate agricultural practices to sequester carbon and develop organic matter in soils. Her message is appropriate for anyone who raises food, for those who focus on conserving our natural resources, and for climate activists.

Our other keynoter will be Leah Penniman of Soul Fire Farm in Petersburg, NY. Leah has worked with the Food Project in Boston, MA, co-founded Youth Grow in Worcester, MA, and has worked with farmers in Ghana and Haiti. With her husband Jonah Vitale-Wolff, Leah started Soul Fire Farm as a family farm for themselves, their two kids, and their larger family and community. They use it to explore the ways in which the sacred connection to land creates a powerful vessel for social change and personal transformation, growth, and healing. Look for a more in-depth interview with both Dr. Jones and Ms. Penniman in the Spring Issue of The Natural Farmer. To find out more about the conference, visit www.nofasummerconference.org.

Jason Valcourt Hired as Summer Conference Coordinator

We welcomed Jason Valcourt as the new Summer Conference Coordinator this November. Jason lives with his wife Angela in Hope, RI where he manages the organic farm at The Good Earth Organic Gardening Center. He has been growing vegetables organically for seven years, has a background in non-profit and event management, and has a passion for helping people find educational opportunities from which they can thrive. He is also a folk musician and songwriter, a dedicated Buddhist meditation practitioner and teacher, and enjoys an occasional round of frisbee golf.

Call for Workshops – Deadline February 15, 2016

Each year the NOFA Summer Conference recruits creative and enthusiastic presenters for workshops for adults, teens, and children. This year the deadline for workshop proposals is February 15, 2016 – a few weeks earlier than previous years. The call for workshop proposals can be found at www.nofasummerconference.org.

The conference features workshops for adults on a full range of topics including organic farming, gardening, land care, draft animals, homesteading, sustainability, nutrition, food politics, activism, education and more. If you would like to submit a workshop proposal or be put on the list to be personally reminded about the call for workshops, contact Jason by email at Jason@nofamass.org.

There will be a Children’s Conference (ages 2-12) and a Teen Conference (ages 13-17), which explore many themes in common with the adult workshops in a manner that are appropriate for each age. If you want to submit a proposal for either Conference, contact Valerie Walton by email at aallspice@aol.com or phone at (978) 689-0716.

The sooner you submit your proposal, the better. We encourage you to submit your workshop proposal by the end of 2015. Most of the decisions on accepting workshop proposals will be made by the workshop proposal deadline of February 15.

All workshop presenters receive free conference registration and a $50 honorarium for presenting a 90 minute workshop.

Inside This Issue: Supplement on Worms
Letters to the Editor

To the editor:

The growing momentum of the campaign to raise the minimum wage presents those of us who are farming with a serious challenge. How are we going to respond?

Low wage workers’ demands for raises are getting serious consideration. The Labor Board in NY supports raising the wage for fast food workers to $15 over the next 6 years. If the minimum wage had kept up with inflation, the $1.60 of 1968 would be $10.96 today.

$15 an hour looks good - as a wage for us farmers, though as employers it puts a lot of strain on our businesses. The question we need to ask is – how do we turn this into an opportunity? Can we inspire a campaign to raise prices for farm products so that we can act in solidarity with other food workers in stead of joining the Farm Bureau litany – “this will wreck farming in NYS”?

It’s hard to make the finances work on a family scale farm. I know this well from my 30-some years of experience. And I know how hard it is for us to tell our customers how tight our budgets are. But if we want our movement to have the strength to replace the industrial food system, we farmers need to work as allies with all the other food workers from seed to table. All of us food workers add up to 17% of the entire work force. We all need domestic fair trade and it will take the whole sustainable agriculture movement and all the supportive foodies to get us there. So let’s raise our voices in solidarity with other food system workers — and demand a new economics based on the below Principle of Fairness that is fundamental to organic agriculture all over the world.

Elizabeth Henderson
(I will send you the long version of this letter if you email me at elizabethhenderson13@gmail.com)

THE PRINCIPLE OF FAIRNESS

Organic Agriculture should build on relationships that ensure fairness with regard to

• the common environment and
• life opportunities.

Fairness is characterized by equity, respect, justice and stewardship of the shared world, both among people and in their relations to other living beings. This principle emphasizes that those involved in Organic Agriculture should conduct human relationships in a manner that ensures fairness at all levels and to all parties - farmers, workers, processors, distributors, traders and the general public. Organic Agriculture should provide everyone involved with a good quality of life, and contribute to food sovereignty and reduction of poverty. It aims to produce a sufficient supply of good quality food and other products.

This principle insists that animals should be provided with the conditions and opportunities of life that accord with their physiology, natural behavior and well-being.

Natural and environmental resources that are used for production and consumption should be managed in a way that is socially and ecologically just and should be held in trust for future generations. Fairness requires systems of production, distribution and trade that are open and equitable and account for real environmental and social costs.
Dear Jack and Julie

I would like to write a brief response and add a correction to Karl North’s article “Biochar: a Critical View Through the Ecosystemic Lens”.

I have not been following biochar as closely as most of those who published articles in the Biochar supplement in the last issue of The Natural Farmer (Fall 2015). However, prior to starting our own organic vegetable farm in Rhode Island a few years ago, I was a post-doctoral researcher in Professor Lehmann’s group at Cornell University, where my research focus was using life cycle assessment to analyze biochar systems in both developing and developed countries.

I fully appreciate Karl North’s ecosystemic lens approach to looking at biochar, as when I was in that field, I found myself feeling as if the popular hype around biochar was putting it on a pedestal as almost a “silver bullet” for climate change, agriculture, energy, and even waste management issues. Unfortunately, when the public gets excited about a possible solution, they seem to overlook the fact that there may already be better (and more easily obtainable) alternatives available. My main fear while in the biochar field was that biochar systems were likely to be implemented as a “band-aid” approach to remedy unsustainable processes, rather than addressing the root cause of the problem. For example, take pyrolyzing large volumes of poultry manure from factory farms in order to deal with the waste and be able to increase the number of birds per “farm”, and rewarding the factory farms for this novel solution to their excessive waste, rather than just eliminating the factory farms and having more sustainable poultry farms where birds can actually free range and the amount of manure is appropriate for the amount of land.

That being said, I do believe that there are scenarios where biochar could be beneficial on multiple levels, some of those being what Karl North refers to as “Niche uses for biochar”, such as in developing countries with clean-burning pyrolytic cookstoves. For more information on biochar studies for smallholder farmers in developing countries, please see here: http://documents.worldbank.org/curated/en/2014/06/19705161/biochar-systems-smallholder-developing-countries-leveraging-current-knowledge-exploring-future-potential-climate-smart-agriculture. I also feel that it is beneficial for farmers and gardeners to try new methods to improve their own soils, and biochar may be the route that some explore. Experimenting with biochar in soils is valuable to add to the collective knowledge, however I do advise that people who do so please pay attention to how it is produced, as emissions from backyard pyrolysis/charcoal making are likely to not be clean burning unless care is taken.

Finally, I would like to address Karl North’s comment on our publication, “Life cycle assessment of biochar systems: Estimating the energetic, economic, and climate change potential” (K. Roberts, B. Gloy, S. Joseph, N. Scott and J. Lehmann, 2010, Environmental Science and Technology 44: 827–833). The figure from our 2010 publication that is included in his article is Figure 1a) from the 2010 paper, and is not intended to be a carbon balance, but rather only depicts the system boundaries for the scenarios analyzed for the energy, greenhouse gas, and economic life cycle assessment. The carbon in the feedstock (as Karl North estimates at 40%) that is emitted during the pyrolysis process and syngas combustion is actually calculated to be 55% of the feedstock carbon, which is illustrated more clearly in the biomass carbon balance schematic in Figure S1 of the Supporting Information of that same publication (shown below). Meanwhile, 9% is estimated to be released as labile carbon in the short term, and 36% remains as stable carbon in the biochar (and in the soil) for the long term, with the mean residence time estimated to be 1000 years.

-- Kelli Roberts, Roots Farm, Tiverton, RI

The full article and supporting information for the 2010 publication can be found for free here: http://www.css.cornell.edu/faculty/lehmann/publ/ES&T%2044,%20827-833,%202010%20Roberts.pdf and http://www.css.cornell.edu/faculty/lehmann/publ/ES&T%2044,%20827-833,%202010%20supporting%20online%20Roberts.pdf, respectively.
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FDA Releases Final Produce Rule

On November 13 the FDA released the final Produce Safety rule based on the Food Safety Modernization Act. A discussion by Interstate NOFA Policy Coordinator Steve Gilman of the other rule enforcing the act, the Preventive Controls rule, is in this issue. But the Produce rule is too new. Readers interested in learning more about it may go to the FDA website http://www.fda.gov/FoodGuidanceRegulation/FSMA/ and learn more about both rules. source: FDA website release, Nov. 13, 2015

Organic Farmers Asked to Weigh in on National Organic Survey

Several organic farming organizations, concerned that organic farmers lack a strong presence to ensure that their viewpoint, needs and concerns are represented in the national arena, have been discussing building such an effective and clear voice through an Organic Farmers’ Alliance. To ensure they are going about this in the right way, and to make certain this direction is desired by organic farmers and ranchers, they want your feedback! They are asking organic farmers to complete a short 10 minute survey (http://bit.ly/organicsurvey) to tell them your thoughts about a national effort to organize organic farmers and present a united voice in the national arena, have been discussing building such an effective and clear voice through an Organic Farmers’ Alliance.

GMO Backlash Threatens Beet Farmers

beets share all of U.S. sugar deliveries - which represent total demand to major users and customers - fell to less than 41 percent of the U.S. total of 11.8 million tons (10.7 million tonnes) in the last fiscal year, a record low, down from 47 percent of 10.4 million tons in the 2008 crop year, the year the biotech seeds were introduced on a commercial scale, according to U.S. government data dating from 1992. Though it’s not clear that the erosion in demand comes from reaction against GMO food, industry sources said the trend is beginning to pressure the beet industry.

Companies including Hershey Co, Chipotle Mexican Grill Inc, Unilever Plc subsidiary Ben & Jerry’s Homemade Inc and General Mills Inc have pledged to ditch GMO ingredients in some products, bowing to customer pressure. It’s easy to see why beet farmers made the switch to biotech. Within two years of the seed’s launch in 2008, they were used in almost every U.S. beet farm, boosting yields to record highs and slashing herbicide costs. For most beet farmers, returning to conventional seeds is inconceivable. “If we had to go back to conventional seeds, our cooperative couldn’t survive,” said Rebecca Larson, an agronomist with Western Sugar Cooperative in Denver.

U.S. Lawsuits Build Against Monsanto Over Alleged Roundup Cancer Link

Personal injury law firms around the United States are lining up plaintiffs for what they say could be “mass tort” actions against agrichemical giant Monsanto Co that claim the company’s Roundup herbicide has caused cancer in farm workers and others exposed to the chemical. The latest lawsuit would filed Wednesday in Delaware Superior Court by three law firms representing three plaintiffs.

The lawsuit is similar to others filed last month in New York and California accusing Monsanto of long knowing that the main ingredient in Roundup, glyphosate, was hazardous to human health. Monsanto “led a prolonged campaign of misinformation to convince government agencies, farmers and the general population that Roundup was safe,” the lawsuit states. The litigation follows the World Health Organization’s declaration in March that there was sufficient evidence to classify glyphosate as “probably carcinogenic to humans.” “We can prove that Monsanto knew about the dangers of glyphosate,” said Michael McDittiv, whose Colorado-based law firm is putting together cases for 50 individuals. “There are a lot of studies showing glyphosate causes these cancers.” The firm held town hall gatherings in August in Kansas, Missouri, Iowa and Nebraska seeking clients.

source: Reuters, Oct. 15, 2015

US Court of Appeals Tough on GMO Labeling Challengers

The labels that Vermont is requiring on food products containing genetically engineered ingredients next July don’t seem unnecessarily scary to 2nd U.S. Circuit Court of Appeals Judge Gerald Lynch. If anything, the state’s labeling language would appear as benign as noting that a coloring was used, he said. “It seems to me there is nothing controversial if a product contains red dye #2” and that is disclosed on the ingredient label, Lynch said. “That’s a fact.”

The hearing Oct. 8 in a packed 17th-floor courtroom in Manhattan was supposed to last just 24 minutes, but went on for about an hour. Attorneys representing the Grocery Manufacturers Association argued that the GMO labels to be required by Vermont under the law it passed in 2014 imply a safety risk and constitute compelled speech, a violation of the First Amendment. The food industry group is appealing an April decision by a federal judge in Vermont to reject its effort to block the law from going into effect.

What Lynch and the two other judges on the panel ultimately decide could weigh on states as they consider passing their own labeling rules. (News Notes, continued on page A-7)
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By agreeing that an injunction should be allowed, the appeals court would keep the Vermont law from going into effect until the First Amendment lawsuit is resolved, a process that is likely to take several years. It would also buy time for the industry to convince Congress to pass a law pre-empting state GMO-labeling efforts.

Judge Susan Carney seemed to back the state’s argument, noting that concerns over the environmental effects of GE crop production is “an interest that has been expressed by many people—why isn’t concern about risk enough” to justify action by lawmakers? she asked. However, even if the state’s environmental concerns merit action, the judges raised questions about whether labeling was the best way to address them.

While a warning on cigarette packages can directly improve public health by encouraging people not to smoke, there is less of a link between consumers in Vermont avoiding products with GMO ingredients and declining pesticide use, Lynch said, adding that the law seems to address secondary risks. Glyphosate use is not going to stop because some consumers in “one small state” can more easily make the switch to conventional products, Lynch said. “That’s not going to change the agribusiness model.”

source: Oct 9, 2015 Email from Center for Food Safety

Monsanto Drops 2,600 Jobs, Posts 4Q Loss

Monsanto Co. said on October 7 that it will eliminate 2,600 jobs as part of a cost-saving plan designed to deal with falling sales of its biotech seeds and herbicides, which pushed its quarterly losses deeper into the red. The job cuts will reduce the company’s 22,500-employee workforce of by about 12 percent over the next two years.

The St. Louis-based agricultural giant predicts the move will generate between $275 million and $300 million in annual savings by the end of fiscal 2017. The cost of the reorganization—which will streamline sales, R&D and other departments—is estimated at $850 million to $900 million. Monsanto’s last round of layoffs came in June 2009, when the company slashed 900 jobs. CEO Hugh Grant pointed to the negative impact of foreign exchange rates as well as falling crop prices that have squeezed farmers.

Monsanto has struggled in recent quarters to deal with slumping corn prices in the U.S., which have reduced demand for its best-selling product: genetically-enhanced corn seeds. Farmers are shifting more acres to other crops due to a surplus of corn from last year’s harvest. Even with that shift, 2015 is expected to bring the third-largest corn harvest on record, squashing prices and limiting farmers’ profits. Monsanto’s biotech seeds have genetically engineered traits that help farmers increase their crop yield, despite their higher costs. Monsanto announced the lay-offs as it reported a $495 million loss for its fiscal fourth quarter.

source: Associated Press; Oct. 8, 2015

Organic Sales Continue to Grow

On Sep 17, the U.S. Department of Agriculture’s National Agricultural Statistics Service (NASS) released the results of the 2014 Organic Survey, which show that 14,093 certified and exempt organic farms in the United States sold a total of $5.5 billion in organic products in 2014, up 72 percent since 2008.

The top 10 states in sales accounted for 78 percent of U.S. organic sales in 2014, with California leading the nation with $2.2 billion. Additionally, the industry shows potential for growth in production as approximately 5,300 organic producers (39 percent) report that they intend to increase organic production in the United States over the next five years. Another 688 farms with no current organic production are in the process of transitioning to organic agriculture production.

The selection of organic products sold by U.S. farms in 2014 was diverse, from dairy and proteins, to fruits, vegetables and grains. The top five commodities in organic sales were:

- Milk, $1.08 billion
- Eggs, $420 million
- Broiler chickens, $372 million
- Lettuce, $264 million
- Apples, $250 million

The vast majority of organic agricultural products sold in 2014 were sold close to the farm. According to the report, the first point of sale for 80 percent of all U.S. organic products was less than 500 miles from the farm, compared to 74 percent in 2008. Of the sales of organic products in 2014:

- 46 percent were sold within 100 miles
- 34 percent were sold 101-499 miles
- 18 percent were sold 500 or more miles
- 2 percent were sold internationally

Additionally, 63 percent of U.S. organic farms reported selling products to wholesale markets. These sales accounted for 78 percent of U.S. organic farm sales. Wholesale markets, such as buyers for supermarkets, processors, distributors, packers and cooperatives, were serving as the marketing channel of choice for U.S. organic farmers to get organic agriculture products to customers.

source: USDA NASS release, Sep. 17, 2015

Represent NOFA with the Domestic Fair Trade Association or the Agricultural Justice Project Board

The NOFA Interstate Council seeks one active NOFA member who would like to serve as NOFA’s representative to the Domestic Fair Trade Association (DFTA). This is the DFTA mission statement: “Promote and protect the integrity of domestic fair trade principles and practices through education, marketing, advocacy and endorsement.” Serving as a NOFA delegate means making a commitment to become familiar with DFTA principles, to attend the annual meeting in Philadelphia, PA, January 8 – 10, 2016, to take an active role in a DFTA committee for the coming year, and to report regularly to the NOFA Interstate Council.

The IC also seeks a NOFA member from any state chapter who would like to start shadowing Liz Henderson’s work as representative to the Agricultural Justice Project (AJP) Board in preparation for replacing her. Learn more about AJP at www.agriculturaljusticeproject.org and read the standards and policies. Liz would be happy to answer any questions. Work would involve joining some AJP monthly board calls and eventually attending semi-annual joint staff-board meetings.

If interested, kindly send an email to Elizabeth Henderson (elizabthhenderson13@gmail.com) or call her 585-764-8471. Please provide information about who you are, where you live, your membership in a NOFA Chapter, and your thoughts and understanding of domestic fair trade.

source: Elizabeth Henderson Email, Sep. 18, 2015

Farm Credit East Supports Organic Dairy Farm Expansion

How do you build a dairy farm from the ground up in just a few months? That ambition might seem improbable, unless you’re Dan Brown. Dan grew up on the family farm, tending and milking cows alongside his father. In fact, he might tell you milk runs through his veins.

However, when the dairy was sold, Dan left the farm in search of other pursuits. Only to be lured back by his love for the dairy business a short time later. But with the barn in severe disrepair and no cattle, he had much work to do.

When the time came to re-build, Dan called the lender he knew would understand the potential — along with the challenges. “We were really starting from scratch,” said Dan. With the help of Farm Credit East, Dan and his wife Marcy were able to build a new barn and acquire a new herd. And just three months later, they shipped their first load of milk.

With help from Farm Credit East, the Browns have been able to expand their facilities and have gone from a flat milking parlor to a robotic and organic operation. “Everyone who works with us is knowledgeable enough to understand our creative vision,” explained Brown. “Our partnership with them makes our business possible now and into the future.”

The family farm is now a 52-cow organic dairy operation ready to enter the local foods movement. “Farm Credit East is allowing us to build something our children can grow into someday. Thanks to their efforts, we are realizing our dreams.”
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Part I: The Preventative Controls Rule governing food processing facilities

by Steve Gilman
Interstate NOFA Policy Coordinator

After an intense three-year legislative process formulating the Food Safety Modernization Act (FSMA) began in Congress in 2009, followed by an unusual two full rounds of public comment correcting the Food and Drug Administration’s (FDA) controversial proposed rules, the final Preventative Controls Rule regulating food facilities was issued in late-September, 2015.

At this writing, still to come in mid-November is the final FSMA Produce Rule regulating on-farm food safety. Among the hundreds of pages, the most contentious issues to pay attention to will be the agricultural water quality standards and testing frequencies; the interval between manure and compost application and harvest; extent of record-keeping requirements and reinstatement of farmers’ qualified exemption. There’ll also be a finalized implementation schedule. Depending on how farm and processing operations are classified, compliance deadlines will be phased in over the next 5 years. On a parallel track is the development of provisions for requisite food safety training for farmers.

The final FSMA rules also give more tools to FDA to regulate large scale food manufacturers. In the past, for example, FDA could only urge processors to carefully avoid the unintended presence of allergens in foods but any product recalls were purely voluntary. Now the industry is required to avoid the unintended presence of allergens in foods through a series of specific preventive controls – and if they don’t follow these mandates the food will be considered adulterated and misbranded by the FDA. Notably, food corporations are now subject to new enforcement metrics where FDA has full authority to mandate recalls for unsafe food.

All in all, the nationally orchestrated actions against potential one-size-fits-all food safety regulations affecting family-scale farmers and small food businesses have had a significant impact on FDA's rule-making process. Thanks in good part to the comment campaigns led by the food safety team at the National Sustainable Agriculture Coalition (NSAC) where NOFA is a founding member – FDA's proposed food facility rules that were first issued in 2013 and revamped in 2014 have been significantly modified for the better.

However, farmers and food businesses alike must recognize that the final FSMA Rules usher in a new food safety paradigm where every level of the food system will be beholden to a new regulatory landscape once implementation is complete. Small-scale farmers who fall under certain exemptions might find themselves needing to fulfill supplier training and audit requirements if they sign up with aggregators, such as food hubs, for example. And for liability concerns larger food businesses such as supermarkets are instituting further metrics for supplier verification and food safety compliance.

Re-definitions for farms and food facilities

One of the major shifts for the farm vs. food facility classification has to do with FDA’s rewriting the metrics that were hastily put forth in the Bioterrorism Act of 2002. Under those regulatory definitions some farmers were surprised to find that even though farming activities were generally exempted from government oversight, parts of their operations put them in the facilities category, requiring FDA registration for traceability purposes and subjecting their farms to regular inspection. Thanks to the comment feedback these requirements have now been appreciably modified and clarified. Depending on their scale, however, farms will be fully subject to the further Produce Rule regulations coming up in mid-November.

Generally speaking, businesses are a facility if they manufacture, process, pack, or hold food for consumption. The expanded farm exemption classification now includes “primary production farms” and “secondary activities farms,” reflecting modern expanded ownership and management structures. Also key to the farm exemption is sole involvement with raw agricultural commodities, or RACs.

As explained by the NSAC team:

“A primary production farm is: An operation under one management in one general (but not necessarily contiguous) physical location devoted to the growing of crops, the harvesting of crops, the raising of animals (including seafood), or any combination of these activities.

These farms can also do activities within the definition of “harvesting,” “packing,” and “holding” as well as some activities considered processing/manufacturing, but that do not change the raw agricultural product into a processed food.

A secondary activities farm is:

An operation, not located on a primary production farm, devoted to harvesting (such as hulling or shelling), packing, and/or holding of raw agricultural commodities (RACs). However, this definition only applies if the primary production farm(s) that grows, harvests, and/or raises the majority of the raw agricultural commodities harvested, packaged, and/or held by the secondary activities farm owns, or jointly owns, a majority interest in the secondary activities farm.

Secondary activities farms can do the same packing and holding and manufacturing/processing activities that primary production farms can do without losing their exemption.

‘So if you are doing activities that fall within the definitions of harvesting, packing, or holding — and you’re doing them on your farm – then you are a primary production farm. And that’s true whether the farm is under an owner-operator, is rented, or is cooperatively or otherwise jointly owned. As long as...
Mixed-type Facilities

Some smaller-scale farms that engage in a degree of food manufacturing and processing activities may fall into a middle ground “mixed-type facility” category where even though they fall under the Preventative Controls Rule and have to register with FDA – they still are not subject to the full requirements of the Rule.

But thanks to an amendment added to FSMA by Senator Bernie Sanders of Vermont, small and very small businesses (under 500 employees or averaging under $1 million a year) – and “qualified facilities” that are involved in certain low risk on-farm processing operations also do not have to comply with the full facility requirements. Here again FDA has extensive lists of allowable low-risk activities, including a wide variation of low pH foods, baked goods, popcorn, jellies, dehydrating herbs and so on. Qualified facilities are required to identify potential hazards as well as to keep records documenting their status and sales records to maintain their compliance with this part of the Rule.

The NSAC team analyzes these exemptions and requirements in Part II:
http://sustainableagriculture.net/blog/pc-rule-analysis-part-2/

Requirements for Non-Exempt Facilities

The heart of the full facility definition is centered on the HARPC approach – “Hazard Analysis and Risk-Based Preventative Controls” based on a plan that is written and documented by a qualified individual who has successfully completed FDA sanctioned training. Still unclear at this time is whether an individual’s job experience fulfills the bulk of the training requirements. The facility’s food safety plan must analyze all hazards; document their preventative controls mechanisms; establish a written recall plan and identify their program of approving food chain suppliers (including audits).

Farms Regulated as “Approved Suppliers”

Even though the full facility definitions do not affect farmers directly, these auditing requirements circle back to impact qualified farms and facilities as “approved suppliers”. Once again the extent of the supplier verification requirements depend on the scales of both the aggregator and the farmer – but in general all facilities must identify any hazards requiring preventative controls from their suppliers. And the suppliers must undergo some form of an approval process that may include onsite audits, sampling of raw materials and reviews of a farm’s past food safety performance and compliance.

However, if the supplier is a smaller qualified facility or an exempt or qualified exempt farm under the Produce Rule, then the considerations regarding supplier performance can be limited to just the supplier’s compliance history and further measures such as third-party audits are not required.

FSMA is not the only food safety verification system in the marketplace, of course. To protect themselves from liability, larger scale food businesses including supermarkets also have their own supplier certification requirements, including variations of audit-based GAPs (Good Agricultural Practices) metrics where farmers have to pay to successfully fulfill training course requirements and inspections to become an accepted supplier.

For further details regarding supplier verification metrics and compliance timelines see Part III of NSAC’s “Am I Affected” is here:
http://sustainableagriculture.net/blog/pc-rule-analysis-part-3/
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by Lou Johns

Robin Sue Ostfeld, mother, wife, organic farmer, agricultural research collaborator, constant reader, and orchid lover, died the morning of August 26th on the farm she and her husband, Llywolaf Johns, established in Lodi, New York nearly 30 years ago. Blue Heron Farm has become an institution in the Finger Lakes and beyond. Their produce, plants and flowers are enjoyed at the Ithaca Farmers Market; Greenstar Co-op; many local restaurants as well as Park Slope Food Co-op and Angelica Kitchen in New York City. Robin, a woman of incisive wit and conviction, was loved by those who knew her—friends, customers, colleagues, and co-workers alike. She worked tirelessly on the farm, performing the daily tasks required by the season, and handled the business of the farm with an abundance of insight, generosity and creativity. Blue Heron Farm will continue to operate under the leadership of Lou and the current farm manager, Zachary Kaplan-Moss, supported by a committed crew of workers. Robin, she was my partner, my lover, my friend, my beauty queen. She was nearly perfect, she took care of me, she washed my clothes, she taught me to brush my teeth, she took me on vacations, she loved her dogs, she loved family, probably in that order. She put up with me, she didn’t like messes, but made a few and always cleaned them up. She was an extraordinary farmer, an original environmentalist, strictly organic, she wanted the world to be better.

She loved plants, mostly raspberries, she found the seeds for your flowers, your tomatoes, your lettuce, and on and on, she bought the seeds, she bought the potting mix and the flats, she started all of them in her greenhouse and germination chamber in the dead of winter. I kept the fire to keep them warm.

She scheduled all the plantings for the greenhouses and the fields, pages and pages of it, for nearly thirty years, she planted your spinach, your beets, your ru-tabagas, she helped with everything, she smiled a lot. She sold it all, to her friends and customers here at the Farmers’ Market, to Green Star, and Park Slope Food Coop, and to our friends and chefs at local restaurants. She ran the business, I helped, and many others got to share the experience.

She was good at it, just didn’t care much for the bookkeeping end of things, but she did it none the less, she liked counting money.

We worked a lot, we didn’t take enough breaks, we thought there would be more later.

She was nice to people, and loved to gossip, she was nice to me, I could have been nicer.

She was a mentor to many, she was a standard setter for all of us, she always demanded the best, including our behavior, and she was fiercely competitive.

She made every one work hard, along side her.

She was mostly self taught, a voracious reader, fiction was her preferred realm, her window to the world and a distraction from it.

She was the most wonderful mother to our two daughters, even after losing her first at age 15, I held her hand a lot, and she mine.

Robin didn’t do sick very well, there was no announcing her illness, don’t take offense if she kept it from you, she was hopeful for a long time and stoic for the rest.

She was marvelous, we will miss her.

-- Lou Johns

(more on Robin Ostfeld on page A-15)
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Robin had no truck with artifice. Unless a particular sheen came from the sun or from natural iridescence, it was tawdry.

Mascara, eye liner, high heeled shoes, bras with push-up cups…These were so much male-inspired frippery, designed to distort and contempt women, to make them into some male notion of the feminine ideal. So although she wanted her blue jeans to fit, they were Dickies or LL Bean or Duluth Trading Company, rather than something chic or anything made through the agency of abusive or unfair labor.

Robin would get mad if you were an enemy of planet Earth. Or if you couldn’t support strict gun laws or abortion rights. If you didn’t understand the evil legacy of rich, conquering white guys and their behavior with regard to OTHERS, she would be friendly, but NOT your true companion. If you couldn’t embrace global efforts to feed the hungry or to work for human rights, you would not be Robin’s brother or sister. If you were mean to your dog or negligent with regard to your cat, Robin’s friendship would not be yours.

This was not due to upbringing, although we were taught proper human values in our household. It was not due to religious training, although Reform Judaism rocks.

It was due to her natural propensity to do good and right. Robin, the person who was constantly self-correcting, was also constantly aiming for wisdom, for discernment and for kindness. If she fell short, I didn’t notice. These attributes were her sun and she grew towards it. Robin, the one who was good at growing.

Robin was no wonder-working wise woman or paragon of perfection. She had her addictions. She overdosed on Fiction, as you’ve heard. Orchids. She needed to mainline Phalenopsis and Oncidium on a frighteningly frequent basis. To a lesser extent rex begonias. Perhaps oxalis. Nero Wolfe consulted Robin Ostfeld when his prize orchids lankshined, just so you know…

Berries were a lifelong temptation for Robin. Her first sentence was, Daddy, pick a berry. On the Blue Heron Farm Facebook Page, you’ll see pornographic berry photos and even an explicit pic, yes, a selfie, of Robin’s palm cradling some plump strawberries.

When Robin was dying, she continued to think of ways in which we siblings might ease the mind of our mother, who suffers from Alzheimer’s. She emailed my brother Rick and me a link to an NPR Science Friday article called Tapping the power in Musical Memory. The article is about a documentary which looks at the effects of music on people living with dementias. In the film, Oliver Sacks and Dan Cohen explain how music acts as a conduit to memory. Robin then investigated the kinds of music our mother would most like and pushed us to move the project along. At a time when most people would simply have focused on themselves, Robin was thinking about our mother, whose memory is limited to a 30-second loop. We will move on this music project, I promise.

Rick and I both think that we have not been good enough older siblings to Robin. We loved her. We admired her, but we counted on more time and didn’t want to think about running out of time. We hope that the intensity of our love made a mark on her because she made her mark on us.

We loved her. We admired her, but we counted on more time and didn’t want to think about running out of time. We hope that the intensity of our love made a mark on her because she made her mark on us.

Lou-of-the-healing-hands. You might have the best hands on the planet. Your hands loved her, they soothed her, they massaged her, they held your babies, they swatted her in play, brought out something in Robin that otherwise would have gone unseen. Lou-of-the-healing-hands.

Okay so Robin had a minor crush on Jon Stewart. Don’t all of us?

Lou, you weren’t threatened, were you?

It is fine to say we will fight cancer, but all most of us can do, who are not scientists who study cancer, is to clean things and grow things the right way in the right places, like Robin did. Robin recycled, composted, re-used, re-purposed, watered, fed, weeded. Lou goes around doing the same and picking up trash wherever he sees it! These are things we ordinary people can do to be like Robin, to grow this new globe on which we all take our one spin. Robin’s one spin was too short, we’re angry about its brevity, but she sowed seeds, made the ground green this one globe on which we all take our one spin. Robin’s one spin was too short, we’re angry about its brevity, but she sowed seeds, made the ground green this one globe on which we all take our one spin.
This is pretty much the definitive text on vermicomposting. Besides giving readers the full story of the history, biology, and agronomic uses of vermicompost, it has compiled all the new and cutting edge work done within the last few years on worms and microbiology, heavy metals, pharmaceuticals, earthworm protein, and the suppression by vermicompost of plant pathogens, arthropods, parasitic nematodes and other pests. It also surveys the state of vermicomposting in North America, Spain, the UK, New Zealand, India, the Philippines, Indonesia, Hong Kong, Mexico, Cuba, China, Belarus, Russia and the Ukraine.

Like so many in this world of worms, the editors thank Mary Applehof for her foundational work bringing attention to the capacity of earthworms to break down organic wastes. Beginning with a workshop in 1979 and followed by the 1982 publication of “Worms Eat My Garbage”, until her untimely death in 2005 she worked tirelessly with researchers to better understand the many roles that earthworms play in our ecology.
In the initial chapter Edwards points out that 50% to 60% of the world’s wastes currently sent to landfills are organic and could be used as plant nutrients if composted. Current those wastes are composted by thermophilic means in order to destroy pathogens and the resulting compost does not result in a biologically alive material. An alternative is vermicomposting or using species of epigeic worms to break down these wastes.

Although this process has been through its ups and downs (including a period of promotion in the late part of the 20th century that included some fraudulent pyramid schemes) the high quality of compost produced by worms, which can be used for high end horticultural and agricultural production, and the added benefit of having worms to sell for composting or a high-protein animal feed, makes this attractive financially.

In Chapter 6, “The Microbiology of Composting”, author Jorge Dominguez explains that vermicomposting is really a two-stage process. In the active stage the worms processing the waste by grinding it in their gizzards, mixing it with sugars, mucus, and excretory substances, homogenizing it, and exposing it to the many microbes in their guts and the enzymes they produce. Stage two is one of maturation, where the earthworms move off toward fresher layers of waste and microbes take over the process of decomposition. Interestingly, earthworm activity seems to greatly decrease bacterial growth, but not so for fungal growth. Passage through the gut of earthworms reduced the population of coliform bacteria by 98% relative to that in fresh pig slurry.

Clive Edwards and Cindy Salter devote Chapter 11 to a discussion of Vermicompost extracts or “teas”. The simplest versions of these teas are made simply by soaking the material in water for several days, or longer. More recently composters have begun stirring or introducing air into the solution to encourage the proliferation of aerobic microorganisms in the teas and to reduce the growth of anaerobic ones. Shortly after adoption of the National Organic Program the National Organic Standards Board appointed a Compost Tea Task Force to study such tea as a manure based compost. They determined that compost made without additives can be applied without restriction (by the 90/120 day pre-harvest interval), and that even if additives have been used the tea can be used without restriction if tested to meet the EPA recreational water-quality guidelines for fecal contamination. Given vermicompost’s ability to drastically reduce the count of coliform bacteria, this is often quite feasible.

Another important aspect of vermicompost for organic growers is its capacity to suppress plant pathogens. In Chapter 12 Allison L. H. Jack discusses this ability in some detail and gives a couple of dozen studies and specific examples of this effect. But its suppressive capacity in potting soil seems to be related to the feedstock used, the potting medium, the pathosystem, the temperature, and the presence of synthetic fertilizers.

Overall, Vermiculture Technology is an essential resource for anyone making or using worm compost. It helps the reader to understand the amazing qualities of worms and their potential for returning fertility to our soils at the same time as reducing one of the most vexing problems of western civilization – disposal of our growing mounds of organic waste.

( Book Reviews continue on page A-19)
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Table 3.1a Comparison of Some Aspects of the Biology of the Vermicomposting Species

<table>
<thead>
<tr>
<th></th>
<th>Eisenia fetida</th>
<th>Eisenia andrei</th>
<th>Red</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Color</strong></td>
<td>Brown and buff bands</td>
<td></td>
<td>Red</td>
</tr>
<tr>
<td><strong>Size of adult earthworms</strong></td>
<td>4-8 mm x 50-100 mm</td>
<td>4-8 mm x 50-100 mm</td>
<td>4-8 mm x 50-100 mm</td>
</tr>
<tr>
<td><strong>Mean weight of adults</strong></td>
<td>0.55 g (0.01 oz)</td>
<td>0.55 g (0.01 oz)</td>
<td>0.55 g (0.01 oz)</td>
</tr>
<tr>
<td><strong>Time to maturity (days)</strong></td>
<td>28-30</td>
<td>21-28</td>
<td>21-28</td>
</tr>
<tr>
<td><strong>Number of cocoons day⁻¹</strong></td>
<td>0.35-0.5</td>
<td>0.35-0.5</td>
<td>0.35-0.5</td>
</tr>
<tr>
<td><strong>Mean size of cocoons</strong></td>
<td>4.55 mm x 2.82 mm</td>
<td>4.8 mm x 2.82 mm</td>
<td>4.8 mm x 2.82 mm</td>
</tr>
<tr>
<td><strong>Incubation time (days)</strong></td>
<td>18-26</td>
<td>18-26</td>
<td>18-26</td>
</tr>
<tr>
<td><strong>Hatching viability (%)</strong></td>
<td>73-80</td>
<td>72</td>
<td>72</td>
</tr>
<tr>
<td><strong>Number of worms cocoons⁻¹</strong></td>
<td>2.5-3.8</td>
<td>2.5-3.8</td>
<td>2.5-3.8</td>
</tr>
<tr>
<td><strong>Self-fertilization</strong></td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td><strong>Life cycle (days)</strong></td>
<td>45-61</td>
<td>45-61</td>
<td>45-61</td>
</tr>
<tr>
<td><strong>Limits and optimal T° C</strong></td>
<td>29°C (85°F)</td>
<td>29°C (85°F)</td>
<td>29°C (85°F)</td>
</tr>
<tr>
<td><strong>Limits and optimal moisture</strong></td>
<td>80%–85% (70%–90%)</td>
<td>80%–85% (70%–90%)</td>
<td>80%–85% (70%–90%)</td>
</tr>
</tbody>
</table>

Drawida nepalensis | Eudrilus eugeniae

<table>
<thead>
<tr>
<th></th>
<th>Drawida nepalensis</th>
<th>Eudrilus eugeniae</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Color</strong></td>
<td>Reddish brown</td>
<td>Reddish brown</td>
</tr>
<tr>
<td><strong>Size of adult earthworms</strong></td>
<td>0.37 g (0.02 oz)</td>
<td>0.43 g (0.02 oz)</td>
</tr>
<tr>
<td><strong>Mean weight of adults</strong></td>
<td>0.83 g (0.02 oz)</td>
<td>0.95 g (0.02 oz)</td>
</tr>
<tr>
<td><strong>Number of cocoons day⁻¹</strong></td>
<td>0.15</td>
<td>0.43-0.51</td>
</tr>
<tr>
<td><strong>Mean size of cocoons</strong></td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td><strong>Incubation time (days)</strong></td>
<td>24</td>
<td>12-16</td>
</tr>
<tr>
<td><strong>Hatching viability (%)</strong></td>
<td>75-88</td>
<td>75-88</td>
</tr>
<tr>
<td><strong>Number of worms cocoons⁻¹</strong></td>
<td>1.93</td>
<td>2-2.7</td>
</tr>
<tr>
<td><strong>Self-fertilization</strong></td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td><strong>Life cycle (days)</strong></td>
<td>100-120</td>
<td>50-70</td>
</tr>
<tr>
<td><strong>Limits and optimal temperature</strong></td>
<td>—</td>
<td>25°C (77°F–80°F)</td>
</tr>
<tr>
<td><strong>Limits and optimal moisture</strong></td>
<td>—</td>
<td>80% (70%–80%)</td>
</tr>
</tbody>
</table>

Tables from “Vermicomposting Technology” compare worm species

(Book Reviews continue on page A-21)
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He operates a 240-cow organic dairy near Burlington, Washington where cows milk mainly on pasture and grass hay, along with hydroponic barley fodder instead of grain.

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harvested by machine, dried with an industrial kiln, pelletized, packaged, and shipped east, or simply picked from a vine off the façade of a building, dried in a Panini press, and steeped in a wort for homebrew. It’s simply a matter of what the grower seeks to accomplish.

An obvious undercurrent throughout the book is the authors’ emphasis on growing in the northeast region. Although Laura and Dietrich admit that “virtually all the country’s commercial hop production happens in the northwest”, farmers and hobbyists located in the northeast receive tons of encouragement with an optimism that until now occurred seldom in the hop growing discourses. That being said, research on growing hops in New England is still adolescent. Even in light of the observations by the Cornell Extension Program and University of Vermont (two very integral resources), there still remains a rather slim body of literature. And while the state universities of Washington and Oregon produce immense amounts of writing, their concerns are tailored in accordance to their climate and conditions. The northwest region, for instance, hasn’t much of an issue with downy mildew or Japanese Beetle infestations—rather, they’re much more concerned with Powdery mildew, or pests like the California prionus beetle. So hop farming in the northeast is somewhat of a frontier, where managing problems related to soil and moisture is still developing, particularly when a grower seeks to be organic. Books like the *The Hop Grower’s Handbook* are crucial in synthesizing the regional information from which farmers and hobbyists can learn.

A couple things should be taken away from this reading, however. One, hops were once grown widely in the northeast. In the 1840’s, New York had roughly 40,000 acres of cultivated hop growth. The reason hops were brought to places like Yakima Valley (WA) is, yes, in part because of the downy mildew and the farmers’ inability to manage it, but also because of the Prohibition era, where laws—such as the Jones Act—transformed homebrewing into a felony. Secondly, growing in the northeast still requires protection and management against downy—your biggest threat. Should you wish to grow hops, however, choose the aroma hops. They contain more oils, helping defend the plant from developing fungi and parasites. In fact, Laura and Dietrich allude to an interesting observation of how, in humid climates, aroma hops will learn to develop more essential oil, thus increasing their immune system and overall survivability. To any brewer, this is great news, since oils just so happen to be a great guarantor of flavors and aromas.
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