Farmers, breeders collaborate on new organic sweet corn

By Kristina Hubbard

Seven years ago, Minnesota farmer Martin Diffley decided that sweet corn offerings in his seed catalogues weren’t cutting it. He had noticed a decline in vigor in most of the sugary enhanced sweet corn varieties available, and needed a variety that performed well under organic conditions. He also was looking for a variety that tolerated the cool soils typical of spring in Minnesota.

He approached John Navazio, Organic Seed Alliance’s senior scientist at the time, who connected Diffley with University of Wisconsin–Madison sweet corn breeder Bill Tracy. Tracy was already selecting for cool soil emergence in sweet corn, and a collaborative plant-breeding project emerged.

Over the years, this breeding team, which also included University of Wisconsin-Madison graduate students Jared Zystro (now with Organic Seed Alliance) and Adrienne Shelton, worked together to select for early plant vigor, disease resistance, good flavor, high yield, and large ears. The result is a new sweet corn variety called “Who Gets Kissed?”—the first release in a series of open-pollinated sweet corn varieties developed in partnership between the University of Wisconsin-Madison, Organic Seed Alliance, and organic farmers.

“Our approach to plant breeding is what sets ‘Who Gets Kissed?’ apart from other sweet corn varieties in the marketplace,” said Micaela Colley, executive director of Organic Seed Alliance. “‘Who Gets Kissed?’ was not only bred under organic farming conditions, but organic farmers were equal partners in the breeding effort.”

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Welcome to the January | February 2015 issue of Organic Broadcaster. This issue features articles on value-added opportunities for farmers, the MOSES Conference, and contributions to our monthly newsletter. Enjoy the content and continue to support MOSES by donating to our programs.

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Notes from the Executive Director’s Desk

Happy New Year and warm winter greetings! Winter is a time of rejuvenation on the farm. Seed catalogs cover my kitchen table, and I find such joy in reading them and dreaming about new cover crops and vegetable varieties to grow come spring. I can’t wait to try the Diffeyes’ new sweet corn, “Who Gets Kissed?”, described on the cover of this issue.

This issue also features three articles on value-added opportunities for farmers: one about creating value-added products under “cottage food” laws; one on what farmers think of the USDA grant program and how it’s helping them expand their operations; and, one about getting a value-added product into stores. Value-added products are a great way for farmers to “grow” their income, and these stories provide good advice for those heading down that path.

While all the stories in this issue are worth reading, I found Doc Holliday’s article on offering self-selecting minerals for livestock to be just the thing I needed to convince my husband to build mixed mineral feeders for our livestock. We have a small herd of cattle and raise a few hogs (along with meat and egg birds). Doc Holliday has given us the guidance we need to move forward.

As you rejuventate this winter, consider taking in a conference or two—find them all listed on page 23. Conferences and other educational opportunities also are listed in our Community Calendar on the MOSES website (mosesorganic.org) under “Events.” Of course, I hope you’ll join us at the MOSES Organic Farming Conference Feb. 26-28 in La Crosse. It’s a great gathering of the organic community, and I’d love to see you there.

All of us in the MOSES office are working like busy bees to make this an outstanding conference. We’ve made lots of changes to ease crowding. General sessions are in the afternoon, and morning workshops are starting at staggered times to make it easier to navigate hallways. We continue to improve A/V in workshops so you can hear and see better—workshop rooms are bigger than past years to better accommodate everyone.

The MOSES Conference would not be the event it is without the support of our sponsors—all are listed at mosesorganic.org/conference/sponsors. Our amazing presenters—85 total—also have our undying appreciation. A huge thanks to these amazing sponsors and presenters!

I look forward to seeing you—in plaid, of course—at the 26th MOSES Conference. Feel free to contact me with questions or ideas. You are the heart of the organic farming movement, and I want to hear from you.

— Faye Jones, MOSES Executive Director
At the recent National Organic Standards Board meeting, Miles McEvoy, the National Organic Program (NOP) Deputy Administrator, noted during his presentation that the NOP will be releasing new guidance in the coming year on how pesticide drift will be viewed within the NOP regulatory requirements. While many of us might think this is a straightforward topic, it is not.

Some farmers think that since drift application of a prohibited substance is not the fault of the organic farmer, a farmer-friendly way of approaching this issue would be to allow the final crop to be sold as organic. Others propose that the final crop be tested and if shown to have less than 5% of the EPA allowance for that pesticide, it could be sold as organic.

I would argue that these viewpoints are not the direction the NOP should take when considering guidance on pesticide drift. At the fall 2014 meeting of the National Organic Standards Board, my public testimony focused on this topic. I passionately requested that any NOP guidance on this issue be proposed, not final, so the organic community nationwide could provide their opinions on this important issue.

Pesticide drift is handled typically state by state, with various oversight agencies and laws determining responsibility and compensation. Here in the Upper Midwest, most states require pesticide applicators to keep their materials on their side of the property line. The reality is, it’s difficult for organic farmers to receive compensation under the current laws here. Pesticide drift in this area is rampant. We only notice it when it hits an organic farm, though. Non-organic neighboring farms don’t find the drift to be a problem because they’re using the same chemicals.

It is not just organic farmers who suffer from unwanted incursions of toxic materials onto their land—homeowners’ lawns, fruit trees and gardens can be affected, too. These landowners have the right to obtain compensation if their property is damaged. Organic farmers should have the same rights.

In my work for MOSES, I receive numerous calls each year from organic farmers who have suffered from unwanted incursions of toxic agricultural chemicals onto their organic land. In all of these cases, there is no question that pesticide drift has occurred, but there is disagreement on what type of compensation should be given, or if there should be any compensation. The farmer may have to destroy an entire crop due to the fact that an unregistered material was applied to that crop, or may suffer the loss of the organic premium due to the removal of the crop’s organic status. In addition, there is a possibility that the land itself would be decertified from organic production for one, two or three years.

The incursion of unwanted toxic materials on organic land does more than just hurt the bottom line of the organic farmer; it sets back the progress these farmers are continually making in developing a healthy ecosystem, upon which they rely to produce abundant and healthy crops.

These organic farmers feel they should be reimbursed for their losses. But, it is not just about the loss of their income; they want a financial penalty placed on violators to discourage this problem from occurring to them and other organic farmers in the future.

Beyond this, it is not just about the money. In the Upper Midwest, organic farm fields are an oasis of life in a sea of sterilized or degraded land. The buffer zones and riparian areas around organic fields have diverse plants, shrubs and trees, providing habitat and food sources for threatened amphibians, birds, butterflies, pollinators, and mammalian wildlife.

Through organic practices, organic farmers continually improve the critically important soil food web, encouraging a healthy and robust diversity of soil biological life. The incursion of unwanted toxic materials on organic land does more than just hurt the bottom line of the organic farmer; it sets back the progress these farmers are continually making in developing a healthy ecosystem, upon which they rely to produce abundant and healthy crops.

Organic farmers have told me that they can see, to the row, where the drift event occurred numerous years before. The weed species growing in those areas are different and typically more problematic than the areas where there had not been drift. The soil texture is less friable and has less water-holding capacity due to reduced soil biological life. The crop vigor and health is also diminished for more than one year.

In a 2013 pesticide drift case, the Supreme Court of Minnesota took away the rights of an organic certification agency to deny certification of a field and crop that had pesticide drift. In 2014, when drift occurred again on that farm, the certification agency did not decertify that field and crop. The organic farmer is currently appealing that decision to the NOP, stating that they do not feel that the crop nor the field, should be approved as organic. In my experience with farmers who have had a pesticide drift issue, not one of them would welcome the opportunity to sell as organic a crop they know to be grown on contaminated land.

With the continued approval of more types of herbicide-resistant GMO crops, including 2,4-D/glyphosate-resistant corn and soybeans, I believe there will be more, not fewer, instances of drift. We must address this issue. We have a federal law which oversees and promotes the organic label. It should also provide strong and consistent protection nationwide of organic agricultural production.

Organic farmers want the NOP to provide a strong platform from which they can make a case to those who will chemically trespass on their organic land. Economic compensation is the right of the organic farmer. It is unfortunate that organic farmers currently cannot also receive compensation for the pain and suffering caused by seeing the land they have nurtured so carefully be despoiled.

Harriet Behar is an organic farmer and a MOSES Organic Specialist. She serves on state and national committees, providing the organic farmer perspective.
Ask A MOSES SPECIALIST

“Is it possible to find out how many certified organic operations are in my state?”

Answer by Joe Pedretti

The place to start your search is the MOSES website: mosesorganic.org/find-a-farm. Here are a few of the resources listed there:

The USDA maintains a national list of certified organic operations under “List of Certified Operations” at apps.ams.usda.gov/nop. You can search by state, products, and many other parameters. This is the only list that has certified farms all in one place. Every certification agency also has a list of their certified operations on their website, but since multiple certifiers operate in many areas of the country, it is difficult to determine the total number of certified operations in a state by searching these lists.


You can find a lot of information about organic production, including state and county data, from the last Farm Census (2012). See www.agcensus.usda.gov/Publications/2012.

The University of Wisconsin did a report in 2012 that has specific data for the state, including a map with the locations of organic farms and processors. It’s online at www.cias.wisc.edu/wp-content/uploads/2012/02/arg12finalnew-lowres021612.pdf.

The Minnesota Department of Agriculture also has a good webpage dedicated to organic agriculture in that state. See www.mda.state.mn.us/organic.

“I am considering organic certification, but I am concerned that the recordkeeping will be too difficult. Any suggestions?”

Answer by Harriet Behar

In my many years of organic inspection, the most profitable and productive organic farmers were those who also kept good records. The documentation you keep need not be burdensome, and should be considered part of running your operation. The historical reference these records provide is one of the most valuable management tools on your farm, helping you repeat successes and avoid repeating costly errors. Your records will give you answers to questions such as: Which crop rotation results in lowered weed or plant disease pressure? Can you see a production increase where you purchased and applied an expensive fertility input? Which seed varieties did best in your soils and climate? Did you over produce a specific crop and not have enough of another?

For vegetable growers, keeping track of the timing of succession plantings and their harvest dates is very useful. By keeping track of your activities, inputs, harvests and sales, you will be able to have this information at your fingertips when making decisions year to year. You are not required to keep records in a specific way. You can use a calendar by the door, a spiral book in your pickup truck, or your smart phone. The documentation must be easily understood by your organic inspector, though. So if you use code words, tell the inspector what they mean.

The records need not be excessively detailed. Every time you feed a bale of hay, you do not need to write that down. You should document how much hay you make and have on hand in the fall, and periodically take an inventory so you can track how much you are feeding. This way, if you need to buy more organic hay, you can plan ahead and probably get a better price now rather than waiting until early spring when the availability and market is tighter. This will also help the organic inspector track that you have sufficient organic forage for your organic livestock.

For items you purchase, make sure they are approved by your organic certification agency before you buy and apply them. Keep labels and invoices for all inputs and seeds as a useful reference for the future. They also happen to be part of the organic audit trail.

There are numerous computer programs you can search for on the internet to help you with your recordkeeping. ATTRA (attra.ncat.org) has recordkeeping forms on their website and many organic certification agencies also provide templates to help you with maintaining your activities and inputs from year to year.
Let your animals balance their mineral requirements

Before domestication, cattle lived a lifestyle similar to that of bison in the early American West. Many different plants with different nutritional diversity and mineral profiles were available. Free to roam over wide, naturally fertile areas, the animals could seek out plants that met their nutrient requirements. Mineral needs could be fine-tuned by consuming naturally occurring salt or mineral licks. Specific imbalances of soil in one area would be offset by excesses or adequacy of the same element in other areas. Thus, over a period of time they could seek out and obtain balanced minerals and nutrition.

It’s a lot different today. Several changes have negatively influenced the expression of our animal’s inherent nutritional wisdom.

- Varying degrees of confinement restrict nutritional diversity.
- Contamination of our soils, crops and feeds with toxic GMOs, insecticides and herbicides, such as glyphosate, interferes with mineral adsorption.
- Dairy cattle have been genetically modified to produce at levels never intended by nature, creating a higher nutritional demand than natural cows, resulting in over or under production resulting in rations that contain excess protein and minerals.

Feed testing is, of course, a necessary part of our present day computer-generated nutritional science. Unfortunately, nutritionists often rely totally on lab results and overlook the fact that the biological attributes of a feed are more meaningful at predicting the productive response of animals. It is one thing to know what’s in a feed, but quite another to gauge interactions between the chemical composition of the feed with the metabolic capabilities—digestion, utilization and assimilation—of the animal being fed.

The success of the modern dairy industry in achieving high production is offset by its dismal record of animal health and longevity. Most dairy cows do not live long enough to complete two lactations and 50 percent calve with either an infectious disease or a metabolic disorder such as ketosis and clinical or subclinical milk fever.

Many feed analyses do measure mineral content, but as a practical matter most nutritionists add a one-bag-fits-all trace mineral package to the ration without regard for any excesses or imbalances thus created. Either excesses or deficiencies can have serious metabolic side-effects. For example, high iron ties up copper, cobalt, manganese and zinc, which are all essential to immune response. Excess calcium in a ration will increase consumption of phosphorus if available. (See Mineral Wheel.)

There is great variation in mineral concentration in soils in different areas of the country. Given the fact that all soils differ in their mineral content and that no two animals have the same needs, it is a difficult task to correct mineral imbalances.

Today, imbalances—deficiencies or excesses—of major, minor and trace minerals are one of the major factors underlying reduced animal health, production and reproduction.

Dr. Linus Pauling, the only person to ever win two unshared Nobel prizes, has been quoted as saying, “You can trace every disease and every infection to a mineral deficiency from uniquely yoked energy fields.”

The solution to many of these problems is to provide a source of individual, self-selected, free-choice, cafeteria-style minerals and again allow the animals to exercise their inherent nutritional wisdom to balance their mineral needs.

Years ago my introduction to this concept occurred when a good client called me because his dairy heifers were calving early and although the calf dam heifers would often die. He also complained that his cows consumed an inordinate amount of minerals. He decided to try a “cafeteria” mineral program in which each mineral was fed separately. His cows paid little attention as he was putting the separate minerals into the feeder until he carried a bag of zinc trace mineral mix into his cow lot. The cows tore the bag from his arms, chewed the bag open and ate the entire contents.

Within a week after the mineral change, mineral consumption returned to normal and his remaining heifers calved normally. Apparently, his forage was deficient in zinc or perhaps high in zinc antagonists. His mineral mix was high in calcium with only small amounts of zinc. Their quest for zinc compelled them to over-eat the mixed mineral. Excess calcium interferes with zinc absorption. Every mouthful they took increased the imbalance and escalated their need for zinc. Inevitably, metabolic problems began in the most vulnerable group—young, growing heifers in the last stages of pregnancy. Finally they just gave up and checked out—all for want of a few grams of zinc.

Anyone who doubts that cattle can make valid nutritional choices needs to watch cows graze in a mixed pasture. They do not just mow grass like a lawn mower, but pick and choose each mouthful. They avoid eating the bright green grass surrounding “cow pies” in the pasture and will search the fence-rows for weeds that concentrate various essential trace minerals. Given proper forage choices, they will balance their nutritional needs during each feeding period.

Eating dirt, chewing on wood, licking or drinking from urine puddles or other abnormal appetites are attempts to secure some vital element or attain some nutritive balance that is not otherwise present in their diet. These behaviors should be considered a warning signal that something is amiss in the ration. Some consider it normal because it is so common. And it may be “normal” in the sense that it is a compensatory behavior for animals forced to subsist on a mineral-deficient or imbalanced ration.

Milk fever is another good example of the effects of a poorly designed mineral program. Postparturient hypocalcemia is not a disease; it’s the clinical expression of a mineral imbalance at a period of physiological stress. While the final expression of milk fever is caused by low blood calcium, the predisposing cause is high calcium/low phosphorus in the ration or sources of phosphorus that are relatively unavailable. If the calcium-phosphorus ratio is 1.1, or even higher in calcium, during the dry cow period and especially in the last three weeks before calving, there is a relative deficiency of phosphorus. To compensate for this deficit, the body sets up to reject calcium and to absorb phosphorus. After calving, it takes 72 hours for the metabolism to readjust to absorb adequate amounts of calcium. The entire circulatory system of a dairy cow contains only 3.5 to 5 grams of calcium. At calving, the sudden increased demand for calcium—20 to 30 grams—as cows synthesize colostrum and begin milk production depletes calcium faster than it can be replenished from other body reserves resulting in varying degrees of hypocalcemia.
Sweet Corn — from page 1

Monsanto. Their control reflects the highly consolidated seed industry, one that puts shareholder profits before the independence of farmers.

Because “Who Gets Kissed?” is open-pollinated, it is possible to save and maintain the seed, which generally is not feasible with hybrids. This variety also isn’t sold with restrictive intellectual property protections attached to it, such as a utility patent. In fact, farmers are encouraged to select, save, and re-plant the best seed from their harvests. In so doing, they will be adapting the variety to their own regional climates, farming practices, and market needs.

Most of the sweet corn varieties in the marketplace that demonstrate similar traits are hybrids,” said Adrienne Shelton, a University of Wisconsin-Madison graduate student who worked on the project as a student of Tracy’s. “Hybrids are developed to be genetically uniform, where the ears are the same color and same size, and they mature at the same time. ‘Who Gets Kissed?’ has similar traits, but was developed for organic growers who appreciate a more diverse, open-pollinated sweet corn, and who may want to save seed and start their own participatory plant-breeding project.”

The variety’s name is based on a game played at corn husking bees – a historic community event that coupled husking corn with fun activities, such as dancing. Corn was much more genetically diverse back then, and when a person found an ear with all red kernels, known as a “pokeberry ear,” they could choose one person among the group to kiss.

“Who Gets Kissed?” has yellow and white kernels. It yields well, tolerates cool soils, and is resistant to common rust and corn smut. The variety also demonstrates superior flavor and sweetness. It’s now available through High Mowing Organic Seeds.

Tom Stearns, founder of High Mowing Organic Seeds, is excited about both the variety and the unique partnership that developed it.

“This new sweet corn variety is an example of the amazing results that can be achieved in open-pollinated and collaborative breeding, where the consumer, farmer, breeder, seed grower, and all other stakeholders are involved,” Stearns said. “Innovative varieties with a dynamic process like this connect the dots and foster a deeper engagement in developing the food system of the future.”

Participatory plant breeding, where farmers and formal breeders collaborate on farm-based breeding projects to improve agricultural crops, is an efficient model that emphasizes shared benefits. This decentralized model of breeding has resulted in more high-quality organic seed and more farmers gaining skills for developing their own varieties. As another example, next year Organic Seed Alliance will release “Abundant Bloomsdale” spinach, a variety bred in partnership with eight organic farms. The variety has excellent flavor and texture, and will soon be offered through a number of companies that sell organic seed.

Development of “Who Gets Kissed?” sweet corn was funded in part by the Organic Farming Research Foundation and USDA’s Organic Research and Extension Initiative (OREI). Organic plant breeding currently relies heavily on federal funding through the OREI program. While extremely valuable for advancing organic plant breeding in the public sector, the reliance on one program—especially a program that funds organic research broadly, not just plant breeding—means these cutting-edge breeding projects are vulnerable.

Funding for public plant breeding was discussed at length at the 2014 Summit on Seeds and Breeds for 21st Century Agriculture held earlier this year in Washington, DC. The monumental summit was hosted by the Rural Advancement Foundation International and brought together public and private plant breeders, seed and food companies, and farmers and policy advocates for presentations and discussion on how best to improve our nation’s public plant breeding infrastructure. The proceedings include urgent recommendations for reinvigorating public research that delivers regionally adapted and diverse seed options to farmers. (Read the full proceedings at rafiusa.org/programs/just-foods/2014-seeds-breeds-summit.)

Among the recommendations is the need to create a new federal program that funds the development of new plant varieties to fill existing gaps, including for organic agriculture. The main objective of this program would be to deliver regionally adapted varieties held in the public domain, and the program would encourage projects that emphasize participatory plant breeding, such as the one that brought us “Who Gets Kissed?” sweet corn.

Beth Rasgorshek is an organic seed producer and owner of Canyons Bounty Farm in Nampa, Idaho. She says farmers play a crucial role in building our nation’s seed supply for modern agriculture to expand, thrive, and meet new agricultural challenges.

“Organic farmers need more options in seed that’s adapted to organic conditions and to their local climates and markets,” Rasgorshek explained. “Our public land grant universities need adequate funding and staffing to carry out the critical work of engaging organic farmers in participatory plant breeding projects. I, for one, would jump on an opportunity like this tomorrow.”

To receive updates on participatory plant breeding projects, including the release of other new plant varieties bred in partnership with organic farmers, join Organic Seed Alliance’s quarterly newsletter at www.seedalliance.org.

Kristina Hubbard works for the Organic Seed Alliance.

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Bill Tracy with the University of Wisconsin-Madison:

Photo by Organic Seed Alliance
Book shows how to boost beneficial insect populations on the farm
By Andrew Dunham

My first introduction to the Xerces Society was at the MOSES Organic Farming Conference a few years ago when I attended an Organic University session with Eric Lee-Mader, who co-directs the Xerces Pollinator Program. The course made quite an impression on me and has directly impacted our farm in many ways.

As a result of what I learned, we have installed two beetle banks, added brush piles in the middle of a hedgerow in our hay field, managed cover crops to provide pollen, and planted pollinator gardens near our packing shed. If you are not familiar, the Xerces Society is a nonprofit organization that protects wildlife through the conservation of invertebrates and their habitat. The Xerces book, Attracting Native Pollinators, has proven to be very useful to us as we have added pollinator habitat. The Xerces Society’s new book, Farming with Native Beneficial Insects, furthers their mission by providing accessible information for farmers and land managers to increase the numbers of beneficial insects on our farms.

Understanding the ecology of a particular farm is one key to managing it organically. One of the shortfalls in many integrated pest management plans is that much of the focus is just on pest insects and the damage they do to crops. Farming with Native Beneficial Insects makes the case why beneficial insects should be a higher priority for farmers—organic and conventional alike. The argument is made that we should focus on the needs of our beneficial insect partners as much as we focus on the pest species.

The approach of using beneficial insects to control pests is known as conservation biocontrol; one of the most familiar examples is the use of purchased lady beetles to control aphids. Farming with Native Beneficial Insects provides practical information on how to improve beneficial insect habitat on our farms. The “how to” sections of the book provide clear instruction for getting started with different types of habitat, ranging from native field borders to hedgerows. There are numerous seed and species lists for the different types of habitat, with region-specific recommendations that make the book useful across the United States. These lists are presented clearly in tables for quick reference and are accompanied by color photographs of many of the flowers, trees, and shrubs listed. The different types of beneficial insect habitat are also well photographed, with many pictures taken during installation. If you are interested in adding a beneficial insect feature on your farm, this book is a great place to start looking for information. By following the installation photos and recommended plants, you could begin creating your own beetle bank as soon as the frost leaves the ground next spring.

Everything in agriculture needs at least a little nurturing, and beneficial insect habitat does require some maintenance, which the book explains. The beetle banks we installed on our farm did require weeding in the first few years. We have also float-mowed the beetle banks early in the season, because they are comprised of warm-season bunch grasses which are late to grow in the spring, allowing some weed control without harming the beetles. We also have to be very careful about applying organically approved pesticides in adjacent fields so as not to harm the very insects we planted the habitat for. The book describes many common management methods, including burning, weeding, and disking.

Many beneficial insects are familiar to us as insect pest eaters, such as the praying mantids. Others may not appear to be beneficial, such as predatory stink bugs. Color pictures and descriptions in the section titled “Common Beneficial Insects and Their Kin” add to the value of the publication by acting as a guide book, organized by families. This allows readers to narrow the identification, setting them up to better utilize help from experts at their local extension office.

A section titled “Plants for Conservation Biocontrol” also contains full color photographs and descriptions of many plants commonly used in beneficial insect habitat plantings. Fortunately, many of the plants that provide good pollinator habitat also provide food and shelter for other beneficials.

Organic agriculture and native beneficials are a natural fit, as adding beneficial insect habitat is an extension of many of the things we already do in organic agriculture such as cover cropping, using buffer strips along conventional field boundaries, and building soils. There are many examples in the book that a farm of any scale or level of sophistication could implement to improve habitat.

Farming with Native Beneficial Insects belongs in every farmer’s library, as a reference and a guide for how to improve beneficial insect habitat on the farm. Fencerow-to-fencerow farming really limits possibilities for beneficial insects, but some simple adjustments, such as adding habitat diversity, flower diversity, and some undisturbed places on a property can truly make beneficial insects an integral part of a farming operation.

Andrew Dunham farms at Grinnell Heritage Farm in Grinnell, Iowa.

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raising a thousand acres of wheat, and it was a good year, you could break even.

From this experience I learned three things:
First, if you were only breaking even, farming is not working economically. Even recently the average farmer in the U.S. was only netting $17,000 from on-farm work.

Second, no one knew the answer to my question, so I needed to find the answer. In 1972, working with Ecology Action and using time, motion and system skills, I tried to find out if it was possible to raise all the money for the average income in the United States on a small acreage. The answer is yes, on a half-acre or less, it is possible to raise all year food and income in a reasonable amount of time. I am now able to say that quantitatively.

Third, if I was going to discover the answer, it was “Tag, I’m it!”

Globally, there may be as little as 30 years of farmable soil left. We have been depleting the soil for many years. The most exciting thing to me, which has been proven with research on our first site, is that we were able to build up one to one-and-a-half inches of farmable soil in only 8.5 years. It normally takes 500 years to build up an inch of farmable soil, or 3,000 years to build the six inches needed for farming. With our method, it can be done in as little as 50 years. In the mean-time, you can get reasonable yields and reduced resource consumption.

We have found that biologically intensive production methods have the capacity to produce two to six times the yield while reducing purchased inputs by half or down to zero. This system only uses 6 percent of the energy per pound of food compared to conventional systems, only 33 percent of the water per pound of grain, and 12 percent of the water per pound of vegetables. In an increasingly water-scarce world, this is fantastic.

One of the themes of Ecology Action is creating abundance from scarcity. Why not create a won-

derful way of life for the farmer? Many farmers believe that we need to double the amount of humus in it. This means double the mineral and water-holding capacity. If you nurture the biological diversity of the microbes in the compost by varying the components, you create a pharmacy in your soil. Healthy plants with a balanced amino acid profile, are much more resistant to insects and diseases. Good compost can make this possible.

The third element is close spacing. We put our plants so close together that their leaves touch when they are mature. With deep soil preparation and compost, you can plant up to four times the usual number of plants in a given area. No matter what crop you use, the productivity per area is greatly enhanced.

The fourth element is companion planting. We put plants together that have symbiotic relationships. This is a nuance; it does not take the place of good soil.

The fifth element is the recipe for planting. 60 percent of the crops are carbon and calorie crops. These are grains, seeds and some nuts, which produce a tremendous amount of biomass for compost and a significant number of calories per unit of area and time.

The sixth element is the remaining 40 percent of crops. 30 percent are special high-calorie producing root crops. Does bed you use, these produce a large amount of calories per area and time. These crops are potatoes, sweet potatoes, sadisy, leeks, Jerusalem artichokes, garlic and parsnips. The remaining 10 percent are a diversification of crops and soft fruit crops.

The seventh element is open-pollinated seeds. Open-pollinated seeds produce the best yields using BIOINTENSIVE methods. You don’t need special seeds when you have a biologically living soil.

This is a whole system. You need to use all the elements to make it work.

How do you recommend farmers learn more about BIOINTENSIVE production?

To learn more, I recommend that farmers go to the Ecology Action websites: growbiointensive.org and bountifulgardens.org.

The two-family farm concept, where, through careful crop selection, planning and managing, you allow each family to take a month’s vacation in the middle of the summer, which is impossible to do under normal circumstances. How you do this is all about how you design the crop choices, timing and marketing strategies.

Another thing we will cover is the question of farming communities. These communities can be land trusts, with anywhere from 10 to 100 families. They can take advantage of economies of scale because they can purchase what they need as a group. They can also develop a crop insurance program by contributing 5 percent or more of each farmer’s income annually into a crop insurance fund. At the same time, each farm can be small—family-sized.

We will look at year-round greenhouse produc-
tion and at early growing approaches. A farmer in California planted zucchini six weeks sooner than anyone else, harvested and marketed for six weeks and then took nine months off. He was able to do this by marketing earlier than anyone else and scaling his production. Don’t work harder, work smarter. A lot of people think BIOINTENSIVE is work-intensive. It is really skill-intensive, and we will explore why that is.

What are your biggest concerns for the future of agriculture in the United States?

Our soil depletion rate. It has slowed down a little bit, but we need to be building it, not deplet-
ing it at a significant rate. Also our soil organic matter has been cut almost in half during the last 40 years. We can reverse that trend. I am also interested in closed-system, sustainable soil fertilizer farming. Most farmers currently need to import a lot of minerals and organic matter from the out-
side—from other soils, which means we are deplet-
ing those soils. We don’t need to do this. We want to learn how to minimize that challenge. We need to create the farming of the future now, and we can do by practicing techniques that are based on millennia-old successful, sustainable approaches—ones from 4,000 years ago in China, and ones from 2,000 years ago in Greece, and 1,000 years ago in Guat-
atemala—and other farming practices from areas such as northern Iran 10,000 years ago, and the Philippines about 6 millennia in the past. A few of these cultures were able to produce all of their caloric needs in a fraction of the time we use. We can benefit from many of these sustainable practices now.

What is your vision for the future? What do we need to do to get there?

My goal is to catalyze demonstration models of new practical farming approaches. I am particu-
larly interested in encouraging farm communities that bring together all of the elements of biological food-growing and good farm living. We can make them meaningful for us today, for producing more food with less water and less resource con-
sumption—with more time for fun.

Joe Pedretti is a MOSES Organic Specialist.
Multyear crop rotations are a central tenet of organic crop production, and for good reason. Maintaining crop diversity harnesses ecology to build soil, disrupt pests and improve the overall sustainability of cropping systems. In organic grain production systems small grains—such as oats, wheat, rye, barley, and triticale—are typically part of the rotation.

Adding small grains to extend a crop rotation also improves soil. Increases in the variety of root types and root depths in the soil help to build soil organic matter (SOM). Over time, increasing SOM makes soils more resilient to drought and floods. In the long-term, soil-building practices such as this could also play a role in climate change mitigation through the sequestration of carbon in soil.

Extending the crop rotation can help to break up pest and disease cycles. Matt Liebman and colleagues at Iowa State University have been conducting research on extended crop rotations at ISU’s Marsden Farm in Boone County, Iowa. In Practical Farmers of Iowa’s recent Farminar, Liebman reported on the side-by-side comparison of 2-, 3-, and 4-year crop rotations. The study documented significant reductions in the occurrence and severity of soybean sudden death syndrome, one of the most important soybean diseases in the Midwest, in the 3- and 4-year rotation compared to continuous row crops. The archived Farminar is available at bit.ly/CropFarminar.

Planting a winter-seeded small grain in low lying areas or on heavy soils that typically are wet when spring field work usually would be done can help to keep the tractor out of the field when the chance for compaction is greatest. Often, even spring-seeded small grains, such as oats, allow a farmer to get in the field in March before spring rains saturate the field. May showers nurture the crop rather than prevent planting.

Small grains also help spread out the work-load over the season. Planting and harvest both happen ahead of the row crop calendar, with planting in March or April and harvest typically in late July.

Small grains help to break up weed life cycles well, especially those adapted to a corn-soybean system. The dense seeding populations, over a million seeds per acre, will effectively crowd out many warm season weeds. Additionally, mid-summer harvest of small grains will cut many weeds before they set seed. Where weed pressure still persists, small grains offer avenues for active management to further suppress weed pressure.

Farmers who have tried to grow small grains for the first time report a steep learning curve. The number of acres in small grains has declined over time, so many farmers do not even have neighbors to talk to about how to successfully grow small grains.

With this in mind, Practical Farmers of Iowa has been working with successful small grains producers—both certified organic and conventional—to document and share strategies to help other farmers interesting in bringing small grains into their rotation.

One farmer that is helping with this project is Tom Frantzen, a familiar face to many in the MOSES community. Tom runs an organic family farm, along with his wife, Irene, and son, James, near New Hampton, Iowa. Tom and Irene were named the 2009 MOSES Organic Farmers of the Year. Practical Farmers also awarded the Frantzen family with the 2011 Sustainable Agriculture Achievement Award.

The Frantzen Farm looks much like a traditional Iowa family farm with several hundred acres managed under a cropping plan that integrates the production of both crops and livestock. Diversified crop rotations of grain and forage facilitates the movement of beef cows around the farm, while grain and straw production provides for hogs raised in a deep-bedded hoop house system.

There are two rotations on the Frantzen Farm: corn-soybean-small grains-hay-pasture and corn-soybean-small grain-bay. "If you took the small grains out of our farm, I wouldn't know how to make it work," Tom said.

"We maintain the crop rotation we have, and enjoy the economic stability we have, because we don't pick the package apart. The overall package age gives us the stability," he explained.

**Practical Tips**

Establishing a good stand is critical and starts with preparing the field. "Seed bed preparation is essential, try to get the ground as level as possible," Tom said. Soybean ground can be disked or cultivated just ahead of small grains planting. For corn ground more tillage might be needed, depending on location, to incorporate the residue and to get the ground level.

“There are times we have to grow small grains following corn, but they are much easier to establish after soybeans. The reason is two-fold, you need that seed bed, for starters," Tom explained. "Seed-soil contact is essential. Then, with heavy corn stalk resids the competition for nitrogen can be a recipe for small grains failure.”

Small grains have always been a part of the farm; early on Tom grew oats and later barley. Today the Frantzen’s rarely grow a single small grain alone, opting rather to plant succotash, a mix of several small grains. Their succotash mix consists of oats, barley and wheat along with an under seeding that includes red clover, alfalfa, timothy, orchard grass and brome grass.

Succotash will typically yield more pounds per acre than if each small grain were planted separately. Planting a diverse mixture is a good way to mitigate risk, Tom added. “If one crop is poor due to environmental conditions then often another thrives so overall the yield is still good.”

While seed separators can be used to parse some succotash mixes after harvest—for example wheat and oats works well—the Frantzen’s can readily capitalize on the mixture because they are feeding livestock. "The best market is feeding it on the farm," Tom said with a smile.

Succotash typically provides a better feed value than straight oats, with more pounds and more protein. Whichever grain thrives in a given year, the Frantzen’s can adjust the feed rations accordingly. Chopping the small grain succotash for silage allows the Frantzen’s another option with high feed value for their livestock.

Small grains are flexible. “It’s all part of our integrated management on the farm,” Tom explained. “Every year we’ll take a look at the small grain crop in late June or early July and identify places in the field with weed issues and name it giant ragweed—and where there is weed pressure we get out the chopper.” They bag
Incidence of clinical hypocalcemia in U.S. dairy herds averaged 5.2 percent while the prevalence of subclinical hypocalcemia is about 25 percent in first lactation animals and almost 50 percent in second and higher lactations. In both cases the associated reduction in immune function combined with reduced smooth muscle function caused other disorders such as dystocia, uterine prolapse, ketosis, metritis, mastitis, and DAs."

The major benefit of a cafeteria-style mineral program is that it not only allows the animal to satisfy mineral deficiencies of the present ration, but also allows the animal to consume additional minerals, as necessary, to satisfy tissue deficiencies caused by previously unbalanced rations. This results in the temporary consumption, at times, of some minerals in amounts that are considered by some to be more than the needs of a given ration.

Scientific research has proven time and again that various mineral deficiencies within the physiological system or the animal are the ones that in reality prevent the animal from producing and or reproducing at optimum. Mineral deficiency affects animal performance shortly after mineral deprivation, but it may take several months before clinical signs of the deficiency become apparent. During that lag time productivity suffers.

If you just want to experiment and give your cows a chance to participate in their own mineral formulation, provide separate free-choice sources of these 6 items:

- Plain white salt
- Kelp
- Bentonite clay
- Bicarbonate of soda
- A basic mixed mineral with 2:1 Ca:P ratio
- A basic mixed mineral with 1:2 Ca:P ratio

The separate sources of Ca and P allow them to adjust the critical Calcium/Phosphorus ratio, which affects the absorption and utilization of all other mineral elements. (See Mineral Wheel.)

Cows with rumen acidosis will prefer bicarb or bentonite. If they lack trace minerals they may eat a lot of kelp. If kelp consumption remains high you may want to provide separate sources of some of the trace minerals such as zinc, copper, iodine and sulfur. There are commercial companies that provide a broad range of separate free-choice minerals and trace minerals.

The bottom line is that we should use our nutritional knowledge to formulate dairy rations, but also rely on the nutritional wisdom of animals to fine-tune their individual mineral needs. It doesn’t hurt to have two opinions: one from your nutritionist’s computer and one from the real experts—your cows. I will leave to you to decide which one is the most reliable.

Richard Holliday is Senior Veterinary Consultant for the Organic Division of Advanced Biological Concepts®. He has been promoting organic agriculture and holistic veterinary medicine for over 40 years.

Small Grains — from page 9

the chopped grain and weeds and use it as silage to be fed to weaned calves. "Chopping silage allows us to target the areas with the greatest weed pressure and cut the giant ragweed before seed heads form." Later, Tom harvests the remaining mature small grains by windrowing and a pick-up head combine. Both operations serve to sever weeds before they spread.

Small grains in the bin then serve as feed for both cows and hogs. The Frantzens recently conducted a feeding trial to compare corn-finished versus small grain-finished pork at a PFI field day at Story City Locker in Story City, Iowa. While the jury was split on taste preference, everyone agreed the different grains did give the most unique characteristics. There is no doubt small grains can be part of high quality meat production.

For those without livestock needs, other markets do exist. Throughout the years Tom has marketed small grains to Grain Millers Inc. and other buyers in the area. Midwest small grains face the challenge of meeting quality standards that can be hard to achieve in humid climates, but it can be done.

As part of Practical Farmers of Iowa’s small grains project, our weekly winter Farminar series will focus on small grains in the month of February. Farminars are every Tuesday evening from 7 to 8:30 p.m., and are open to anyone. The topics for February’s sessions include: choosing a rye variety and spring stand assessment, field and planter preparation for fall- and spring-seeded small grains, oat variety performance, and more. The topics and dates are listed online at practicalfarmers.org/farminars.

Drake Larsen works for Practical Farmers of Iowa.
Research identifies potato varieties that do well on Midwest organic farms  

By Ruth Genger

The potato is an important staple food—globally the fourth largest food crop after maize, wheat and rice. For many of us, potatoes are also a beloved comfort food. Since potatoes regularly make the Environmental Working Groups “Dirty Dozen” list (it is of the most pesticide-contaminated fruits and vegetables), organic potatoes are in high demand by savvy consumers.

For organic growers, variety choice is an important decision—varieties differ in productivity under organic conditions, in tolerance of environmental stresses, pests, and diseases, in storability, and in taste. However, most potato breeding efforts are focused on conventional production methods with high fertilizer and pesticide inputs, and variety recommendations rarely are specific for organic production. Increasing numbers of sources exist for organically grown seed potatoes, but it can still be difficult to find seed for heirloom varieties. The cost of shipping seed potatoes from producers in other regions to the Midwest can be considerable. There is a need for increased availability of Midwestern potato varieties suited to organic production.

I’ve been involved in ongoing research through the University of Wisconsin-Madison on organic seed potato production and variety selection since 2007. Our research team includes Doug House, Shelley Jansky, and Amy Charkowski.

Our long-term research goals are to breed and select potato varieties that perform well in the Midwest under organic management, and to increase the availability of organically grown high quality seed potatoes in the Midwest. To reach these goals, we work with a network of Midwest organic farms engaged in participatory on-farm potato variety trials and trials of seed potato production. We also trial potato varieties and seed potato production methods on organically managed land at the West Madison Agricultural Research Station. In this article, I describe our previous and ongoing organic variety trials.

Since the quality of seed potatoes can have a huge effect on crop health and productivity, I have also described the seed potato production process, and some approaches we are taking to support increased organic seed potato production and organic potato breeding in the Midwest.

Trials of Commercially Available Varieties

In the two years since I last wrote for the Organic Broadcaster, our research team has continued potato variety trials with the goal of finding varieties suited to organic farms in the Upper Midwest. Our previous research (reported in the July/August 2012 Broadcaster) focused on varieties that were commercially available, with trials at six Wisconsin organic farms and on organic research station land. Trials identified several productive varieties, including Chieftain, Reddaile, Red Maria, and Dark Red Norland (red varieties), Satina and Keuka Gold (yellow varieties), Langlade and Kennebec (white varieties), Red Thumb and Papa Cake (red fingers)ling), Austrian Crescent (yellow fingering) and Adirondack Blue and Caribe (specialty varieties).

In general, we found that varieties that thrived and yielded well under organic management showed good row closure (a measure of vine vigor, and a characteristic that tends to suppress weeds) and tolerance for hopperburn (leaf damage caused by potato leafhopper). Tuber defects, including defects due to disease, contributed to yield loss. On average, across all farms and varieties, 24 percent of the total harvest was culled due to tuber defects in 2011, and 38 percent in 2012. Increased losses in 2012 were partly due to increased tuber shape defects – these commonly occur when plants are stressed during tuber bulking, as occurred in the very dry and hot conditions of 2012. In both 2011 and 2012, tuber defect diseases contributed significantly to tuber culling. In particular, common scab (caused by Streptomyces scabies), silver scurf (caused by Helminthosporium solani) and black scurf (caused by Rhizoctonia solani) were problematic. Varieties differed for the level of damage caused by these diseases. Detailed trial results are available on our project website: organicpotato.wisc.edu.

The results of these trials gave us insight into characteristics that are most valuable in potato varieties for organic production—early vine vigor and canopy closure, leafhopper tolerance, and resistance to tuber defect diseases. Based on trial results, we began crossing varieties likely to be good parents for new potato varieties developed for organic production. Selected progeny from these crosses were entered in our 2014 trials at the West Madison Agricultural Research Station, and we will continue to evaluate them there and on organic farms.

Trials of Heirloom Varieties

More recently, we have focused on heirloom and specialty potatoes from the Seed Savers Exchange (SSE) potato collection. The SSE potato collection contains more than 500 potato varieties, including many heirlooms unavailable from any other source. This collection is an underutilized resource for organic growers as a source of parental material to breed for organic conditions.

Unfortunately, many of the SSE variety stocks are infected with potato viruses that impact their growth and productivity. We began collaborating in 2010 with SSE to eradicate potato viruses and other pathogens from selected varieties in their potato collection. The varieties we chose for curative treatment had been reported by SSE members or potato researchers to have useful traits, such as disease resistance or excellent taste. We have now cured 72 heirloom potato varieties of viral pathogens, allowing us to evaluate disease-free stocks of these varieties.

In 2013, we evaluated 24 SSE potato varieties in cooperation with 26 organic farm and garden partners. Each farm grew a subset of the 24 trial varieties, in comparison to the best-yielding commercial varieties for each market class from the 2010-2012 trials. All 24 varieties were also grown in replicated trials at the West Madison Agricultural Research Station.

Several heirloom varieties yielded as well or better than check varieties. Of these, Early Banan (red) out-yielded Dark Red Norland at 5 of 6 on-farm trials; Purple Valley (pigmented flesh) out-yielded Adirondack Blue at six of six on-farm trials; and Australian Crawlers out-yielded Langlade at four of six on-farm trials. Yield results are included with the online version of this story. Search “potato research” at mosesorganic.org.
Cottage food laws allow producers to create, sell value-added products

By Lisa Kivirist and John Ivanko

Whether you operate your farm as a CSA or sell at farmers’ markets, transforming a bumper crop of tomatoes or cucumbers into value-added jars of sausas and pickles can boost your bottom line, extend your cash flow year round and diversify your farm income.

To turn your tomatoes into sauce or your strawberries into jam, you don’t necessarily need to rent a commercial kitchen or hire a co-packer. Forty-two states and counting now give the green light to farmers and entrepreneurs who want to launch certain types of food businesses out of their home kitchens with little regulatory oversight or expense—just good recipes, commitment, and enough know-how to turn fresh ingredients into sought-after treats for the local community.

“Cottage food laws,” as they’re commonly called, allow you to sell certain food products made in your home to customers in your community. By certain foods, the laws mean various “non-hazardous” food items, often defined as those that are high-acid like pickles or low-moisture like breads. Depending on the state, some laws also permit the sale of other non-hazardous items like dried herb mixes or chocolates.

Follow Your State’s Law

Your first stop to size up your prospects for a value-added enterprise is your state’s Department of Agriculture, the agency usually responsible for administering the law. There are four key questions you need answered in your state’s cottage food law before you get started:

• What products can you sell?
• Where can you sell your products?
• How much can you sell of your products?
• How can you legally sell in your state, the fun part begins: deciding what you can make that will be sold, and how you can use ingredients you grow on your farm.

We were surprised at the Monroe Holiday Farmers’ Market in Wisconsin when we sold out of our pints of pickled pumpkin, much more than our traditional pickles and sauerkraut. Interestingly, more than half of the jars sold were to be given as gifts. The buyers themselves might not have even necessarily liked the pickled pumpkin taste (we were sampling), but folks immediately knew someone who would like that distinct flavor and purchased jars as unique gifts.

To Market, to Market

While beyond the scope of this article, the many facets of marketing will be essential to the success of your value-added product. So much so that a whole section of our Homemade for Sale book (see sidebar) is devoted to just that, going into the nuances of market niches, target markets and positioning, echoed in what we call the “7 Ps” of marketing: product, price, promotion, place (distribution), people, partnerships and purpose. The most effective marketing efforts are those that combine all seven elements into one cohesive, integrated and clear plan that can be effectively implemented.

Getting the stores just right for your pumpkin cookies may involve plenty of trial and error, mixing and matching and lots of tasting. Besides taste and flavor, you’ll want consistency for your recipes. Once you have a recipe and a way to turn your farm abundance into a value-added product, it’s time to test it, since we’re talking about something perishable, a criteria that includes: freshness, texture, shelf life (fresh, day old, best eaten fresh, longer term), labor involved, waste, space needs, speed of preparation and consistency.

Finally, you should test it in the marketplace with an informal feasibility study that examines all aspects of your marketing and considers your competition, if any, as well. The feasibility study may involve evaluating taste, pricing, portion size, packaging and labeling. Once you know your product—your customers—are the ones telling you what they want, what benefits they perceive, what problem is being solved, or what needs are being met with your product.

“We were blown away by the diversity and quality of products at the Feast Festival and Trade Show,” said Jan Joannides with Renewing the Countryside, one of the organizers of the event held in Rochester, Minn. “We had over 100 products, from salsas to corn relish, sweet pickled jalapenos to cashew brittle. Some of these products started on a small, low-cost, start-up scale in home kitchens under cottage food laws before packers got involved or commercial incubators were leased.” The Feast Festival and Trade Show (www.local-feast.org) is slated to return to Rochester in late 2015.

The key to turning a value-added product into your farm business mix is to balance cost inputs—including time working in the kitchen—with what you charge. Remember to add in cost of the jars, labels and other packaging.

The reality for most farms, particularly if you are doing canned items, is your processing needs to be done during the peak busiest seasonal time in the fields. This can lead to some long nights over the stove. The good news is, these canned products can serve as stored inventory for the following year.

“I make various sausas, pickles, and jams from whatever I have in abundance under Wisconsin’s cottage food law known as the ‘Pickle Bill,’ which also allows me to effectively use up seconds or produce that isn’t quite up to quality level for our CSA,” explained Erin Schneider of Hilltop Community Farm in LaValle, Wis. “The summer heat extends into the evening hours as heaps of chopped peppers await the sausas pot, but I enjoy the process of canning. Then I’m fully stocked for winter farmers’ markets, where I find folks like to buy these kind of products as food gifts.”

The new cottage food laws make home kitchen enterprises the next hot small business trend, accessible to anyone with a passion for food. So turn your state fair ribbon-winning strawberry rhubarb pie or family-favorite pickles into an enjoyable value-added business.
Producers agree VAPG application process worth effort

By Audrey Atwell

Applesauce, tea, and maple syrup are among the goodies growers are making with the help of the USDA's Value-Added Producer Grants (VAPG) program. The program awards funds to producers who want to grow their businesses by turning raw commodities into value-added products, expand marketing opportunities, or develop new uses for existing products. The application process takes a lot of time and thought, but grant recipients say it’s time well spent.

“While the VAPG is an extremely detailed competitive application, the process of completing it requires applicants to really think through the objectives and vision of what they want to accomplish,” said Dan Cornelius with the Intertribal Agricultural Council, based in Wisconsin. “That process by itself almost makes the application worth the effort.”

Cornelius is working with the recently established Intertribal Maple Syrup Producers Cooperative on a feasibility study to see what the market potential is for tribal maple syrup production. The cooperative just received a $35,000 grant to help fund this study, which has a total project price tag of $70,000. The VAPG program requires 1:1 matching funds, which can include “sweat equity.” The cooperative is using in-kind staff time along with funds from the Shakerpee Mdewakanton Sioux Community to meet the matching funds requirement.

In 2014, the VAPG program provided $25 million worth of grants to 247 producers. The 2014 Farm Bill includes a lump sum of $63 million in mandatory VAPG funding over the life of the bill (2014-2018). Congress also appropriates additional annual discretionary funding for the program. The USDA uses both mandatory and discretionary amounts to fund the program each year. Funding and application dates for 2015 hadn’t been announced when this issue of the Organic Broadcaster went to press.

“I’ve heard the earliest it could be released is January,” said Deirdre Birmingham, Grants Advisor at Michael Fields Agricultural Institute. “But we’ve heard that before, and then it is released in July.” Birmingham advises producers not to wait for the 2015 application period to open before starting an application.

“Start now using the last set of application materials. The rules stay the same far more than they change,” she explained. “People need lots of lead time, and winter is the best time to work on these.”

Birmingham knows firsthand how much work goes into a VAPG application. She applied and received a grant several years ago to expand her farm’s cider operation. She said the application can take weeks to complete. “Quite a bit of information is needed,” she added.

Through Michael Fields, Birmingham provides counseling and grant-writing help to growers working on VAPG and other federal grant applications. She helps applicants choose the appropriate grant program and makes sure they meet the eligibility requirements. She also reviews, critiques and edits grant proposals, works with applicants by phone and email.

Dan Kelly, Blue Hen Orchard in Missouri, called her “a true cyber mentor.” He said he appreciated the help she gave him on his 2014 VAPG application after his prior year’s application was turned down. He’s using his $60,998 grant to process organic apples into applesauce, baby food, apple fruit leather, hard cider, apple butter, syrup, vinegars, and dried apples.

“Applying for grants is quite a challenge,” Kelly said. He said the application process helped him clarify what he wanted to do to expand his operation. “For me, the VAPG became a business plan. I was amazed that by working through my project to expand my markets, my vision became clearer.”

Birmingham agrees. “It really makes you think through your value-added business,” she explained. “Who doesn’t need to do more of that? You gather information, make contacts, and organize your thinking and your planning—all that is beneficial.”

Jane Hawley Stevens of Four Elements Organic Herbs, a certified organic farm near Baraboo, Wis., found the VAPG application process helped her plan out the details necessary to repackage and market her herbal tea in bags.

Jane Hawley Stevens is using a Value-Added Producer Grant to process these bags of herbs into boxes of tea bags.

Photo by Four Elements Organic Herbs

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As cottage food entrepreneurs turning their organically grown fruits, vegetables and herbs into value-added pickles, sauerkraut, pickled pumpkin, relish and shrub, Lisa Kivirist and John Herrko could not find a book or comprehensive resource to help their micro-enterprise. So, they did their own research, and poured their experience into Homemade for Sale, the first authoritative guide to launching a food business from your home kitchen. It covers the following:

• Product development and testing
• Organizing your kitchen
• Marketing and developing your niche
• Packaging and labeling
• Advertising and public relations
• Structuring your business
• Bookkeeping for your enterprise
• Managing liability, risk and government regulations
• Scaling up or staying small

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As cottage food entrepreneurs turning their organically grown fruits, vegetables and herbs into value-added pickles, sauerkraut, pickled pumpkin, relish and shrub, Lisa Kivirist and John Herrko could not find a book or comprehensive resource to help their micro-enterprise. So, they did their own research, and poured their experience into Homemade for Sale, the first authoritative guide to launching a food business from your home kitchen. It covers the following:

• Product development and testing
• Organizing your kitchen
• Marketing and developing your niche
• Packaging and labeling
• Advertising and public relations
• Structuring your business
• Bookkeeping for your enterprise
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• Scaling up or staying small

Jane Hawley Stevens is using a Value-Added Producer Grant to process these bags of herbs into boxes of tea bags.

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Photo by Four Elements Organic Herbs
Experts share tips for placing value-added products in stores

By Kelli Boylen

You have a great product and you think you are ready to market it on a larger scale. Now what? Getting products to expanded markets was the focus of a panel discussion at the Feast Festival and Tradeshow held in Rochester, Minn. in November. Panelists included Sally Witham from Classic Provisions, Rhys Williams from Co-op Partners Warehouse, Dana Rogers who is an independent sales representative and broker, and, Nick McCann of Iowa Food Hub. They offered many suggestions to help farmers put their products into buyers’ hands.

Rogers suggested selling your product first at a farmers’ market, and then contacting local grocery stores to carry your product so you get direct feedback from consumers. “Get your product out there in front of people and continue to refine it,” she explained. “Build sales this way first.”

Witham emphasized the need for concrete feedback from current customers; distributors want to know that your products are tried and true, she added.

She pointed out that foodmakers also need to be prepared to take on the huge responsibility of ensuring their product is safe. It can be a good idea to have your product lab tested before marketing on a large scale, she added. Some universities, such as the University of Kansas, offer these services.

Once your product is selling well locally, it’s easier to expand your market. Rogers suggested working with a broker to get your product into grocery stores. “Brokers can help identify a list of stores interested in carrying a product,” she explained. A broker is an independent sales person or company providing sales and support for a number of brands or products.

Armed with a list of interested stores, you have a better chance of landing a distributor, Rogers said. A distributor obtains products from foodmakers, stores them in their warehouses, and fills orders and makes deliveries to stores.

Generally, a supermarket or natural foods store will place weekly orders with a distributor. “We get things from one place to another and can help to establish sales,” Williams with Co-op Partners Warehouse said.

“If you think your product is ready for a distributor, make sure it is unique,” Rogers said. “Go to the store and look at the shelf and ask yourself, ‘If I were a person deciding what to buy if there are 30 different types of that product on the shelf, why would someone pay more for my product?’

Why should your product take another item from the shelf? There are no empty holes on the shelf waiting for your product,” she added. Unique features to consider focusing on may include being local, being organic, supporting a not-for-profit group or supporting pollinators.

Some distributors and brokers can help people get their products ready to market. Witham said her company, Classic Provisions, can help get two-year grant over the past three years—she applied for an extension in 2013 to complete the terms of her grant. She said she had to do “a lot of banking” to make sure she had a line of credit to pay her share of the matching grant.

“I’m spending a lot of money to make this work,” she explained. “It’s a real challenge, but it has definitely been the right thing to do. But, it is still way more work than I thought it would be.” As she looks to the future, she’s hopeful the grant has given her “enough wind under my sales so I can fly.”

Audrey Alwell is MOSES’ Communications Director and Managing Editor of the Organic Broadcaster.

VAPG Resources

- The USDA’s Office of Rural Development manages the Value-Added Producer Grants program. Information is available online at www.rurdev.usda.gov/bcp_vapg.html, or through local USDA offices.
- Michael Fields Agricultural Institute offers free grant-writing help. The institute also conducts workshops in Wisconsin to provide grant-writing tips. See michaelfields.org/grant-advising-resources or call 608-219-4279 for a workshop schedule. To join Grants Advisor Deirdre Bir- mingham’s email list and receive notice when the 2015 VAPG application period opens, email deirdreb4@gmail.com.
- The National Sustainable Agriculture Society has an extensive website about the VAPG program at sustainableagriculture.net/publications/grass-rootsguide/local-food-systems-rural-develop-ment/value-added-producer-grants.
- Farmers’ Guide to Applying for Value-Added Producer Grant Funding, a seven-page resource guide created by the National Sustainable Agriculture Society, is available through the MOSES website at mosesorganic.org/wp-content/uploads/Farming/VAPG-Guide.
Second-career farmers offer advice to others entering field

By Jody Padgham

Shoppers at People's Food Co-op in Rochester, Minn. quickly snap up locally grown sweet potatoes produced by Sandy and Lonny Dietz at Whitewater Gardens Farm in Altura, Minn. As they enjoy the bounty, customers support a family that didn’t start out in farming, but now thrives on the fruits of a diversified vegetable operation.

“We are very lucky in being able to do what we love,” Sandy Dietz said. “I hear about a lot of people that are working at a job they hate—for the paycheck, health insurance, or to get a good retirement. And then, when they get to retirement, they are so stressed they can’t enjoy it.” Lonny Dietz agreed. “We are here for such a short time, we are grateful to be spending it doing something we love.”

Lonny and Sandy both left professional jobs—Sandy working for the Farm Service Agency, Lonny in the automotive industry—to follow their hearts and become full-time farmers. Although neither grew up on a farm, they decided to take a chance, and in 1996 Sandy quit her job to stay home on the farm with their 2-year-old children, Lonny and Winona, Minn. in 1990.

“I wasn't happy working in the heat, the rain, the snowstorms. It won't be for everyone.” The Dietzes have seen many interns and employees come on the farm with “a fairytale picture” of what they are getting into. And, Lonny cautioned, “Just having a lot of money doesn’t mean you’ll succeed at farming.”

Taking new things on gradually, learning and growing as you go, is key. “You need to explore as you go,” Lonny explained. “For the Dietzes, this meant having Sandy full-time on the farm first, with Lonny joining her evenings and weekends. They figured that if Sandy could bring in $5,000 in vegetable sales, that would cover the costs of her leaving her job since many expenses associated with off-farm work, such as childcare and vehicle expenses, would no longer be needed once she was on the farm. Sandy’s income in those developing years helped them pay the bills as the business was growing, and allowed them to try new things and make the invariable mistakes that came along.”

By 2001, they felt ready for Lonny to take the plunge and leave his town job, too. “My 10-year-old nephew died of cancer, and I realized that I needed to be home more to be with my family.” Sandy at that point was away for 12 hours each day, and could no longer stand missing the sporting events and dance rehearsals. They were able to adjust for the loss of his income, and have gradually expanded and diversified production.

Starting out in farming is generally hard work with low pay, but adds other value to your life. “Our employees probably take home more money than we do,” Lonny laughed, but he then listed several intangibles the family has gained. The farm owns and pays for many things, such as the truck and land, and even though the Dietzes’ personal draw was only $24,000 last year, their grocery bill is almost nil and their quality of life very high. “There are some sacrifices. There are a lot of things people may routinely spend money on that we don’t have, but we don’t need them and don’t miss them,” he added.

The three Dietz children felt the peer pressure of not having some of the things their friends had growing up, but now that they are on their own and off the farm, they appreciate the quality of their farm upbringing, Sandy said. “I see the impact of the farm in many of their life choices,” she added. Both Dietzes have stories to tell about the value of the farmers’ market as a social training ground for the children. “They learned a whole lot more about dealing with people at the market than they did in school. And, their strong work ethic makes them very employable,” Lonny added.

Lonny and Sandy continue to refine their operation and invest in improvements to expand the business and increase income. Their ideal goal for their personal draw from the farm is $40,000, but Sandy pointed out that they are purposely staying small so they can both still work the farm and not have to become full-time personnel managers. “We are aiming for that sweet spot where we can make a comfortable living but not have to manage a lot of people.”

Learn From Others

Sandy said she was blessed in finding neighbors with similar interests and more experience to act as “unofficial mentors” in the early days. “We had to learn it ourselves,” Sandy said. “I learned so much from their choices,” she said. “I wasn't shy in calling and asking questions.” Sandy also found other vendors at the farmers’ market to be really helpful. “Organic and sustainable farmers generally love to share what they know,” Lonny added. “Don’t be afraid to talk to people. We’ve learned more from other farmers than all the consultants we’ve talked to.”

And, they mention how important gatherings such as the MOSES Organic Farming Conference have been. “The MOSES Conference is a huge piece of our success,” Sandy said. “It is an important time for building our energy and networking.” They wish the MOSES Farmer-to-Famer Internship Program had been around when they started, and recommend it as a great program for new farmers.

Lonny mentioned that successful farming means developing a large knowledge base, and being able to manage a lot of things. “Like bookkeeping,” they cried in unison. Learning about growing conditions, understanding cover crops, soil management, insect control, marketing, and advertising are on the list as well. “When you're small like us, you don’t have the resources to hire a lot of outside expertise, and so we’ve generally had to learn it ourselves,” Sandy said. “I don’t think of this as a negative, just as a complexity of the job they took on which can be underrated by those considering farming.”

Lonny pointed out that when they bought their farm, they weren’t sure they’d actually be farming.
Proof Positive — from page 11

In 2014, we evaluated 60 SSE varieties in cooperation with 35 organic farm and garden partners. Again, each farm grew a subset of trial varieties, and all varieties were grown in replicated trials at the West Madison Agricultural Research Station. Data compilation from these trials and upcoming will be presented at a workshop titled “Organic Potatoes: From Starts to Storage” at the 2015 MOSES Organic Farming Conference.

Seed Potato Production

As we find heirloom and other rare varieties with potential for organic production, the importance of a locally responsive seed system becomes more apparent. After all, identifying good varieties doesn’t help farmers if no seed is available. Seed production in potatoes differs from most other vegetables since potatoes are vegetatively propagated—from seed tubers, rather than true seed. Potatoes can produce fruit containing true seeds, and you can collect the seeds much like tomato seeds and start new plants (don’t eat the fruit though— it is toxic). However, since potatoes do not breed true, tubers are planted instead, ensuring that the variety identity and characteristics are maintained. Since potato tubers are swollen underground stems, tubers are essentially stem cuttings from the mother plant.

The disadvantage of vegetative propagation is that many pathogens can be carried in the cuttings—which are the tubers (e.g. potato), rhizomes (e.g. hops) or slips (e.g. sweet potato). If the parent plant is infected with a pathogen, the tubers are likely to carry the same infection, and some infections can seriously affect yields and quality.

Viral pathogens are the most common problem in production of quality seed potatoes, but some bacterial pathogens can also be serious (e.g. Clavibacter michiganensis ssp. sepedonicus, the cause of bacterial ring rot). In commercial production of seed potatoes, tuber-borne diseases are managed by excluding pathogens at the early stages, inspecting for disease symptoms, and testing for pathogens.

The commercial seed potato system (see box) starts with plants that are tested for a comprehensive panel of pathogens, guaranteed to be disease-free, and grown in tissue culture. When transferred to a protected greenhouse environment, the plants produce small disease-free tubers—“minitubers”—which are planted in the field the following year to produce the first generation of seed potatoes.

The seed potato crop is inspected for disease symptoms during the growing season and at harvest, and a post-harvest sample is grown in the winter (in greenhouses or tropical climates) to find those diseases that cannot be detected except in the “daughter” plants. The crop must be below stringent thresholds for viral, bacterial, fungal and other diseases in order to be replanted as a seed crop (“foundation seed”) or sold as seed to a production farmer (“certified seed”).

Ideally, seed potato farms are isolated from large-scale potato production, to avoid disease spread. In isolated areas, seed crops can generally be replanted for 3-7 years before the pathogen load is too high for certification. Host disease can spread rapidly in crops grown near large-scale commercial plantings, since aphids spread viral pathogens, and other pathogens—such as late blight—are wind-spread. High pathogen load in a seed crop can result in crop failure.

Trials under Organic Management

Our early trials of organic seed potato production focused on field grown “foundation seed” planted on Wisconsin organic farms—six in 2007 and two (plus two organic research station sites) in 2008. We found that the majority of seedlots met standards for certified seed (90 percent in 2007 and 85 percent in 2008) and for foundation seed (70 percent in 2007 and 62 percent in 2008). Two sites were in the Central Sands of Wisconsin, surrounded by large-scale potato production; excluding these sites from the data increases the success rate, as would be expected.

These observations suggest that seed potato production is feasible on many organic farms in Wisconsin, especially those more isolated from large-scale potato production. More recently, we have focused on seed potato production from greenhouse-produced (and disease-free) minitubers, trialing drip-irrigated plasticulture and straw-mulched production systems that have shown good productivity on organic research station land. These systems will get a real-world check with on-farm trials in 2015 and 2016 that will include an economic analysis.

Breeding for Organic Production

New varieties of potato are found by cross-rearing existing varieties and selecting amongst the progeny. The selection environment matters—the most likely path to varieties suited to organic production is to test them on organic farms.

In the coming year, we will be providing training on crossing potato varieties to interested farmers, and also providing them with true potato seed (TPS) from our crosses of varieties that performed well in previous organic trials. Tom Wagner, legendarily independent potato breeder (tatermetseed.com) kindly provided us with true potato seed for 68 potato breeding populations, which are also available for trialing on Midwest organic farms. Participating farmers will evaluate the progeny of these crosses, select tubers from promising lines, and evaluate these lines in subsequent years. We are hopeful that, by initiating on-farm selection at the earliest possible point in variety development, we will find potato varieties that are adapted to organic production systems with good early vigor, tolerance to environmental and pest stresses, and robust yields—tasty, too!

The potato is a genetically complex crop. As a “highly heterozygous autotetraploid” (what a mouthful!), it contains four copies of each chromosome and has a great amount of variation between genes on different chromosomes. One result of this complexity is that crosses between different potato varieties can result in a wide range of plant and tuber types. We look forward to seeing the new combinations of shape, color and taste that may emerge from this collaboration between potatoes, farmers and researchers—and we especially look forward to sharing them with you!

To learn more about our ongoing potato trials, see labs.russell.wisc.edu/organic-seed-potato.

Ruth Genger is a researcher at the University of Wisconsin-Madison, Department of Plant Pathology. She has been conducting on-farm research into organic seed potato production and variety selection since 2007. She welcomes questions from farmers via email at rkgenger@wisc.edu.

Genger and Doug Rouse will present the workshop “Organic Potatoes: From Starts to Storage” at the 2015 MOSES conference during the Saturday 2-4 session.

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Value of good recordkeeping shows at tax time

By Andy McCarty

As a farmer, you are faced with a greater number of uncertainties than most business owners. While you have the everyday challenges related to employee management, time utilization, equipment malfunctions, etc., you also face issues out of your control such as government legislation (or lack there of), commodity pricing, input costs and the weather. With all of these uncertainties, monthly bookkeeping and review of your financial position is easy to overlook.

This can leave you scrambling to get everything together for your tax preparer this time of year. The result could be a tax return that has very little usable data for you to analyze your financial position to make decisions that impact the financial well-being of your farm. Let’s review the usefulness of well-maintained records and the options you have available to make bookkeeping easier.

Loan Applications

The ability to obtain credit is largely based on your past financial performance and projected ability to repay the debt. Tax returns are often used as the source of past performance information. However, tax returns often do not reflect the true cash flow of the business. Good records that show sources and uses of cash, plus an accurate balance sheet, can be valuable tools for obtaining credit. In addition, good year-to-date records can show current performance and how you’ve made steps to improve your operations, which can help in obtaining new credit that may have been previously denied.

Once you’ve obtained a loan from a financial institution, they will most likely require you to fill out an annual “book value” balance sheet showing your assets and liabilities as of the end of each year. Your records will likely produce a “tax basis” balance sheet. Adjustments for appreciated items and book versus tax depreciation can be easily made to prepare your book value balance sheet. Obviously, for this to be successful, accurate records are a must.

Benchmarking

Have you ever wondered how your farm compares to other similar farms in the area? Comparing financial data and ratios of similar-sized farms is a great way to spot strengths and weaknesses. This assessment can lead to both financial and non-financial improvements on your farm, many of which may make the difference between struggling financially and being successful.

How do you find the financial data of other farms? In many cases, you can find financial ratios on the internet. You can also search for a consultant who specializes in farming and has a client base of comparable farms. Often times these consultants can provide insight into your operations in a way you have never thought about before. Your tax preparer would also be a good source of information, assuming you are using a tax preparer that specializes in the farming industry. Data can vary significantly by region, so look for benchmarks for farms that are in your region and of a similar size with a similar production base for comparison.

The University of Minnesota “FinBin Farm Financial Database” is a great place for organic farmers to find benchmarks. Go to www.finbin.umn.edu and click on “generate a benchmark report.” You can select “Organic” in the “special sorts items to include” and then select other options that fit your farm size and type.

I often see a good example of benchmarking in the dairy industry. Many consultants and others who do benchmarking break down the income statement of the dairy farm using hundreds of variables to determine how your farm compares to other dairy farms. For example, if labor costs per hundredweight of their dairy are considerably higher than similar dairy farms, it means higher wages are being paid, or more employees per pound of production than average. Labor is just an example; nearly every item on the income statement can be assessed using benchmarking to compare results with other similar farms in your region. Benchmarking only works if you are using accurate, up-to-date records to complete your calculations.

Capital Purchases

Many farmers think purchasing equipment at the end of the year helps to reduce their taxes. Though tax savings are attractive, oftentimes this is an emotional decision and the financial result may not be the best outcome for your farm. Facilities expansion and equipment purchase or lease decisions should be made by estimating your return on investment from the purchase. Sometimes this return is financial, as in increased yields or cost savings, and sometimes it is non-financial, such as in time savings. Either way, the result needs to be compared to the options you have available to make bookkeeping easier.

Financial Projections

Recognizing upcoming financial difficulties for your farm can alter current decision making. When times are good, it is easy to look at year-end tax estimates and focus on spending as much as possible to eliminate your tax liability. However, spending your money now means putting yourself at risk if times get tough.

Running a projection for your farm by altering your revenue and input costs projections can lead to an idea of how financially stable your farm is. For example, if revenues fall by 20 percent and input costs remain stable or increase, would you be able to pay your operating costs and cover loan payments? How does adjusting for these variables affect your loan covenants? And what does that mean for your interest rate or the rights of your lender to demand payment?

Running accurate historical records will give you good data to better project the future. Accurate projections allow you to make adjustments before you are forced into a bad situation. It may even make the difference when it comes to your farm’s survival during a tough economic stretch.

All of the above reasons for accurate records point to one overall theme – risk management. Risk can be an IRS audit, economic downturn, or purchase decision involving loan covenants. Having accurate records helps to limit all of them. I hope that by decreasing risk you also experience a decrease in stress. In the end, having up-to-date and accurate records allows you to focus more of your time and energy on your farm.

Andy McCarty is a certified public accountant and tax consultant with Badgerland Financial, a Farm Credit System institution that provides financial products and services for agriculture and rural Wisconsin.

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Advice — from page 15

or what kind of farming they’d do. They ended up buying a farm that had been severely mistreated in conventional production, with very poor soil. “An agronomist friend dug a pit, and we found a 2-inch layer of hardpan 8 inches down, with the plant roots all stopped right there,” Lonny sighed. Even with the land in Conservation Reserve Program (CRP) grassland for 10 years, there was no movement, marketing for a product needs to keep moving as there is always a new product wanting to squeeze onto store shelves. She encouraged the use of in-store demos and continued advertising.

Small-scale producers often start off being their own sales rep, but as their business expands, they may not have the time to do the marketing themselves and not be large enough to hire their own sales person. That is where a broker can come into the picture. “Smaller scale producers wear so many hats— they can’t do everything,” Rogers said. “Brokers can handle sales for you.”

Brokers can represent many manufacturers at a time, making it more efficient for a store to meet with a broker than individual foodmakers. Brokers are typically paid by retainer or by a contract based on a percentage of sales. Witham explained, “When new products are ready for market and have all the pieces ready to go, and they are looking at a really good response, a broker can look at the potential of it and say ‘yes, you will make money and I will represent you, the retailer will make money, the store will make money and it’s all going to work,’” Rogers added.

“The manufacturers themselves are their best salesman and they know the stories behind the products,” Williams said. “But if they want to be successful they really have to hustle. It takes a lot to get it done.”

Another avenue to explore when you think you’re ready for larger scale distribution is to work with a consultant. Todd Hoekstra of Launch Consulting (not part of the Feast panel) explained the pur-poses of consultants is to assist foodmakers with the organization, compliance and preparation of their product through to the grocery retailer’s shelf. Hoekstra said consultants can help with things such as basic cost accounting, packaging selection and sourcing, graphic design guidance and re-sources, labeling and label printing. FDA nutritional compliance and licensing, UPC generation and contract produc-tion resources. They can also help with choosing distributor partners, presenting your product to a grocery manager or buyer and understanding promotional activity at retail.

He agreed that focusing on what makes a product unique is the best way to make it stand out. “Also, depending on the item, it’s better to go to market with at least two products,” such as two different flavors of sauce, he said. “One single packaged unit by itself can get lost on the shelf.”

Some distributors also offer cross-docking programs that allow farmers to sell directly to stores with the distributor handling transportation for a fee. This can be a helpful way for foodmakers to get their products on store shelves and become established before they contract with a distributor.

Sandy and Lonny feel that they have gained a lot by working with a great set of advisors—their banker, their accountant and their soils consultant. “It can take a while to find the right people,” Lonny said, pointing out that the previous banker they worked with wasn’t nearly as helpful. But, they kept looking around and found a banker that has innovative ideas and is willing to understand their business and help them think things though. “But, be careful,” he cautioned. “You can get too much advice, and get confused by all the messages, spend a lot of money. There are a lot of ways to do things.”

The Dietzes were excited that in 2010 they’ve started with the Riverland Community College Farm Business Management program, which gives them a farm financial advisor who visits their farm a few times a year. This has been very helpful in their understanding how to assess investments and returns, they said.

The Dietzes are passionate about their goals of being innovative farmers with a focus on quality and a good example to their community. They prefer to sell within 50 miles of the farm. It is important to them that the people around them understand how food is grown. Over time they have decided to focus on a few major crops that they can do very well, and to expand into four(s) season production so they take some of the work and financial pressure off of the summer season. They hope to bring an educational element onto the farm in the coming years.

They attribute a lot of their success to doing background research to lead them into new things. For example, four years ago they put up a large, innovative greenhouse which is partially heated by a geothermal system. “We did two years of research before we put the greenhouse up,” Lonny explained. “Although they’re still excited about the opportunities the greenhouse has brought, there have been a lot of surprises and challenges with the huge project. We probably should have done more two years of research,” he laughed. “This has been an expensive research project, but I think it will eventually pay off. I recommend you look into things deeply before you jump.”

“We get pressure from the bank and FSA to go back to off-farm jobs, but if I devote that 6 to 8 hours a day at $10 to $15 per hour toward building the farm business, I can generate a much better return,” Lonny concluded. “I see a lot of farmers leaving the farm to become janitors, etc. If they spent that time learning how to do things that aren’t their natural strengths, like how to work with people, they’d be better off in the long run.”

Lonny also pointed out that starting a farm is like starting any business, with all of the stresses and challenges. “We took on a big financial responsibility in 2010 with the greenhouse, at a time when many other businesses failed. It means a lot that we are still here,” he is very excited about what they have learned about utilizing the greenhouse, and sees the crops they produce there getting better and better each year as their understanding of the management deepens. “We’ll be the first in the area covering our greenhouse with bubble wrap,” he laughed.

Sandy concluded that full-time farming can at times be very stressful and frustrating, but that they wouldn’t choose anything else. “Starting up farming can be very scary, and you need to be careful, but if you are really passionate about it, and do your research, you should go for it—it can be totally worth it. It has been for us.”

Visit Whitewater Gardens Farm on Facebook. Lonny and Sandy will present the workshop “What Matters Most: Leaving the Paycheck Behind” at the 2015 MOSES Conference.

Jody Padgham is MOSES’ Financial Director and Associate Editor of the Organic Broadcaster.

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Jody Padgham is MOSES’ Financial Director and Associate Editor of the Organic Broadcaster.
Take holistic approach to poultry welfare in organic system

By Anna Bassett and Jennifer L. Burton, DVM

Good animal welfare is an integral part of organic livestock management. As with soil health and other aspects of organic production, animal welfare is most successfully achieved not by correcting problems piecemeal, but by taking a holistic view: aligning management and environment with the natural tendencies of animals that are a good genetic fit for your organic system. Consumers buy organic food for a range of reasons. While health benefits and a desire to support environmentally friendly farming top the list, consumers in one survey ranked animal welfare the 4th most important indicator of ethical food production. Another survey found that over a third of consumers placed welfare among the top three reasons they buy organic food. Many respondents in these studies said welfare was more important than flavor, sustainability, environmental impact, or antibiotic use. Since consumer demand and willingness to pay have a bearing on different models and costs of production, we will consider consumers as part of the whole system in which welfare options are weighed.

Consumers who buy organic poultry meat and eggs care about welfare, and they expect the birds that produce these products to have been raised in high welfare systems. Several studies on consumer perceptions of organic poultry production show that the expectations include:

- Birds can engage in natural behaviors.
- Birds have access to sunlight and an outdoor vegetated area.
- Birds are healthy and comfortable.

Natural Behaviors

More than simply satisfying a consumer demand for “natural” products, engagement of poultry in innate behaviors is associated with improved welfare outcomes. It reduces injurious social interactions and stress, thereby increasing net production as well as welfare. Nearly 5% of consumers support regulation requiring enough space for natural behavior.

Recent research has demonstrated that tightly stocked broilers have an increased risk of Salmo nella infection due to reduced immune response from the stress of overcrowding. As the indoor space allowance approaches 1.5 square feet per bird, these effects can be significantly reduced. Laying hens, which interact socially, need at least 1.75 square feet per bird indoors. Overcrowding increases the risk of negative behaviors such as feather pecking.

One researcher noted that “at high stocking density, birds may learn that they cannot avoid being pecked.” This exacerbates stress and immune depression, as well as injury.

Chickens originate from jungle fowl of southern Asia and, regardless of the cross breeding and hybridization of the species, their behavior remains pretty much the same. For a chicken to be free from fear and distress it needs to be able to get up on a perch where it feels “safe.” Research has shown that perching enables subordinate hens to avoid dominant birds and escape unwanted feather pecking or aggression, and gives all birds an opportunity to roost at night. Perching behavior also increases leg bone strength, an advantage in hens that are skeletal weakly from continual egg laying. However, it has been suggested that falling from or colliding with aerial perches may cause keel bone fractures. Further research has demonstrated that well designed perches (not too close together, not too high, not too many in the house) can mitigate the risk of keel bone fractures. Providing low perches in the rearing phase allows birds to become accustomed to using them without injury.

Chickens’ jungle fowl ancestors spent most of their time actively foraging and feeding in a natural woodland habitat. Manipulable litter and forage materials provide an outlet for these behaviors, and reduce the risk of feather pecking. Given the opportunity, hens also tend to engage in regular dust bathing, another key natural behavior that allows the hen to maintain her plumage condition.

Hens have been shown to choose access to nesting areas over access to food. Because hens may compete with each other for nest access, providing enough nests is important to allow for natural behavior and to stem aggression.

Outdoor Access

Outdoor access is important for chickens to fulfill their natural behaviors—wild birds will spend up to 50 percent of their day in exploratory behavior, foraging and searching for food. Research has shown that the greater the proportion of the flock that uses the outdoor area, the lower the risk of negative behaviors such as feather pecking. Outdoor access is also a key consumer expectation of organic management.

While wide-open spaces such as pastures with short grass do not provide a habitat that encourages birds to go outside, providing some cover on the range may improve range utilization. Researchers have found that a simple artificial structure like a roofed box with sand in the hen run improved the distribution of the hens such that they were more prepared to venture further from the house. Other studies found that best use of the hen run was associated with cover, trees or hedges in the range area and these studies also demonstrated the risk of feather pecking was reduced and feather damage was minimal when use of the outdoor run was stimulated by provision of natural (trees, hedges, shrubs) and artificial cover.

Based on the exploratory and social behaviors described above, utilization of outdoor space by a significant portion of the flock in a manner that significantly improves welfare is unlikely at space allowances less than 1.5 square feet per bird. In general, the larger the flock the smaller the portion of birds that go outside. It has been shown that laying hens in larger groups (over 1,000 birds) do not use nesting boxes, but laying hens in smaller groups (up to 500 birds) and that the hens in larger groups tend to remain close to the poultry house. Rearing also plays a role in outdoor space utilization—the earlier pallets are introduced to the range, the more they use the outdoor area later in life.

When given the opportunity, chickens, like other birds, will engage in sunbathing—lying with their wings spread as part of natural parasite control or to absorb vitamin D. It may seem obvious, but research has shown that full sunbathing behavior is only shown in direct sunlight and not in artificial light. Other studies have looked at natural and artificial light and their effects on bird behavior and welfare. While provision of natural light per se may not guarantee better welfare, it has been demonstrated that the quality and intensity of natural light can meet the birds’ needs better than artificial light.

Health and Comfort

Flock mortality rates are one measure of welfare, and European research has shown that mortality of free-ranging birds can vary enormously, but generally exceeds that of indoor meat and layer systems. Studies have identified E. coli, infectious bronchitis, coccidiosis and brachyspira as main disease causes of mortality; predation can also play a large role.

Continued use of the same range areas, particularly when these become denuded, can increase the risk of parasites such as coccidia and gastrointestinal worms affecting the flock. Well-managed pastures where vegetation is maintained and birds are regularly rotated to fresh ground will reduce the problem.

The risk of zoonotic disease is not strictly a welfare issue. Health is a key driver for consumer purchase of organic products, and more than 75 percent of consumers surveyed by the University of Nebraska believe food safety is largely dependent on animal care. Campylobacter infections associated with the consumption of poultry products increased in recent years.

Mosesorganic.org | 715-778-5775 | 19
MOSES bids farewell to board member, Organic Specialists

MOSES said goodbye and thank you in November to Margaret Smith, whose term on the MOSES Board of Directors ended after more than eight years of service. Margaret joined the board in March 2006 and served three terms, the maximum allowed by the bylaws. She was vice president of the board for the past two years, and has been a tireless advocate for MOSES and organic farming. She currently serves as an advisor to the Iowa Organic Association.

Margaret and her husband, Doug Alert, manage a 950-acre organic farm in Iowa with row crops and small grains, cattle, pigs and sheep. Margaret also works for Iowa State University Extension.

“Margaret has been wise, steady and always willing to take on whatever needed to be done,” said Faye Jones, MOSES Executive Director. “Her skills as a facilitator and ability to listen were a great asset to MOSES. We will miss her on the board.”

Organic Specialists Joe Pedretti and Angie Sullivan recently left MOSES for new positions. Angie is working for the Wisconsin Department of Trade and Consumer Protection (DATCP) as an Agriculture Program Specialist. Joe resigned at the end of the year to become the Marketing and Communications Manager for the Midwest Organic Services Association (MOSA). Joe had worked for MOSA years ago as an inspector. The MOSA office is just a few miles from his farm.

“We wish both of them well in their new roles,” Faye said. “We’re pleased that they’ll continue to have an impact on organic farming.”

MOSES has an opening for an Organic Specialist to work out of the Spring Valley, Wis. office. (See mosesorganic.org and click on “Join Our Team.”) John Strumaker, formerly with NRCS, is joining our staff temporarily June 1 through the 2015 MOSES Organic Farming Conference to help coordinate workshops.

Poultry Welfare — from page 19

years and several studies show higher prevalence of Campylobacter in organic broiler flocks than in conventional indoor flocks.

These challenges highlight the importance of a holistic approach to health and welfare. Other health-supporting aspects of organic management such as high-quality feed and low-stress social environment are crucial to maximize the benefits of providing birds with outdoor access.

Feather pecking remains a primary welfare concern for laying hens. Unlike cannibalism, feather pecking is regarded as redirected foraging behavior and not aggression. It is worse in the absence of manipulable material such as litter or forage, and may also be exacerbated by feed deficiencies. Rearing conditions (particularly early access to manipulable material and early introduction to outdoor areas) and various forms of environmental enrichment may help alleviate this problem. Cannibalism may ensue if injurious feather pecking is allowed to progress unchecked; prevention and timely intervention reduce this risk, as does ensuring that the diet is properly balanced for amino acids, minerals and salt.

Beak trimming was instituted in conventional layer production to mitigate severe negative effects associated with pecking and cannibalism. A 2010 review by the American Veterinary Medical Association determined that beak trimming is acutely painful and reduces feeding and grooming effectiveness. Consumer awareness of this and displeasure with the cutting of beaks continues to increase. It may be wise to anticipate increased restrictions on this procedure, as a ban on beak trimming is proposed for 2016 in some European countries.

When beak trimming is used to avoid feather pecking, chronic pain due to neuroma formation can be minimized if no more than 1/3 of the beak (measured from beak tip to nostrils) is removed, and the procedure is performed early—ideally on the first day of life, and not over 10 days of age. Reductions in feeding and grooming effectiveness cannot be avoided, but are minimized when the beak is trimmed evenly. Research suggests that infrared beak trimming tools may yield better outcomes than other cutting devices.

In light of the unavoidable negative welfare impacts of beak trimming, the potential for increased restrictions, and consumer preference, a focus on management of the birds to reduce feather pecking and thus the need to beak trim could provide the best welfare and the most flexibility in organic production.

Genetics and Organic Systems

The importance of animal selection in holistic health and welfare cannot be overstated. Genet- ics influence growth rates, immune function, and social behavior. Genetic selection of chickens for a better growth rate has led to modification of several behaviors. Birds developed for conventional intensive production tend to stay indoors even when given the opportunity to forage.

Slower growing strains have been shown to have strong foraging behavior and spend a lot of time outdoors.

A review of research concludes that slow-growing broiler strains show greater benefit from an organic rearing system and are better able to cope with the restrictions of an organic diet. Slow-growing broiler genotypes have demonstrated lower requirements for proteins than fast-growing genotypes. Finally, even under organic conditions, fast-growing birds can suffer from leg abnormalities and lameness, with high culling and mortality rates similar to conventional birds.

In the welfare of organic poultry depends on a number of interrelated factors including animal selection, rearing conditions, size and arrangement of housing and outdoor areas. A comprehensive understanding of relationships between behavior and welfare, and of how management factors can influence behavior, may help identify the best options for those wishing to address a specific welfare concern. Organic production inherently considers interactions between complex systems, and management for excellent welfare is a natural fit for the organic approach to meat and egg production.

Anna Bassett is the Lead Technical Advisor for Animal Welfare Approved, a food label for meat and dairy prod- ucts that come from farm animals raised to the highest animal welfare and environmental standards. Jen- nifer L. Burton, DVM, is an Animal Care Specialist with Organic Valley/ CROPP Cooperative.

New MOSES Store

MOSES has a new online store with farming-related books, audio recordings from past workshops at the MOSES Organic Farming Conference, and no-spray signs (see below). The secure site is mosesorganic.net. Farmers who don’t have Internet access may call the MOSES office at 715-778-5775 to request forms for ordering books and workshop audio recordings. Purchases from the new store support MOSES’ programs and services that promote organic and sustainable farming.

No-Spray Signs

MOSES sells 18” x 24” UV-resistant, corrugated plastic signs farmers can post on fence lines to discourage pesticide/herbicide spraying of organic fields. A new, bright orange sign is now available in addition to a limited amount of the previous “No Toxic Spray” signs. Signs are $5 each, $8 for five or more. See at mosesorganic.net/ product-category/signs. Farmers without internet access can call the MOSES office at 715-778-5775 to order.

Research Symposium

The Organic Agriculture Research Symposium (OARS) will take place Feb. 25 and 26 in LaCrosse, Wis., just prior to the MOSES Organic Farming Conference. Sponsored by the University of Wisconsin Center for Integrated Agriculture Systems and Department of Agronomy, the USDA Organic Research and Education Initiative, The Organic Center, and Ceres, the symposium brings together researchers from around the world to discuss results from current and on-going research. Chuck Benbrook of Washington State University will be the keynote speaker. A limited number of stipends are available to support the attendance of farmers and students. For more information, visit the OARS website at www.cias.wisc.edu/oars.

Funding Bill

In mid-December, Congress passed a bill that funds several programs that impact organic and sustainable farmers. The National Organic Program and the National Organic Transitions Program were funded at the same amount as last year. Funding for the Agriculture and Food Research Initiative (AFRI) was increased, including language which directs dollars towards publically available, non-GMO plant and animal breeding. A new program under AFRI was also instituted, providing $2.5 million dollars for training farmers and handlers on the new Food Safety Modernization Act (FSMA). Organic producers (not just those who sell 100% organic products), are now exempt from paying into non-organic commodity check-off programs. This is the first step in the possible development of an organic check-off. Organic certification cost share was not changed, and will be in effect for 2015. The bill included cuts to two NRCs programs (CSP and EQIP), and funding to increase the pace of GMO crop approval. The GIPSA law, passed a few years ago to protect the rights of farmers who contract their production with others, was gutted and a provision was removed that prevents companies from retaliating against farmers who express displeasure with the way they have been treated.

Organic Farming Videos

The Organic Farmer’s Agency for Relationship Marketing (OFARM) with support from the Ceres Trust has created a video series explaining why organic farming is best for the environment, communities, and people. All eight videos are available at organictherealnatural.com. MOSES Board President Carmen Fernholz and the 2013 MOSES Organic Farmer of the Year, Charles Johnson, are among the farmers featured.

Guide to Government Ag Programs

Building Sustainable Farms, Ranches and Communities, an 86-page guide to accessing government programs, has been updated with programs in the 2014 Farm Bill. The guide lists 63 sources for information, technical help and funding. It also includes basics on designing successful grant applications. It was published by the Michael Fields Agricultural Institute, National Center for Appropriate Technology, and National Sustainable Agriculture Coalition, with support from SARE and other USDA agencies. See www.sare.org.

Perennial Crop Research

Research done by Trees Forever and the Leo Pold Center for Sustainable Agriculture shows promise for several agroforestry crops suitable for Iowa soils and climate. The study examined costs for establishment, labor, maintenance, as well as expected yields and income over a period of 20 years. The results favor aronia berries, Christmas trees, chestnuts and elderberries.


Jerry Brunetti

Jerry Brunetti, nationally recognized leader in organic and sustainable farming and nutritional healing, passed away Dec. 20, 2014, Jerry, pictured here at the MOSES Organic Field Day in 2010, founded Agri-Dynamics in 1998. Jerry was a big fan of Susan Werner. He presented a workshop on livestock health at the 1999 MOSES Organic Farming Conference and was a familiar face for many years as both an exhibitor and sponsor. He was a crusader spreading the word about the benefits of organic and ecologically responsible farming. He will be sorely missed by all who knew him.

Staff

See the green organic sign at moesorganic.net. Contact us at 715-778-5775 or via the website at www.moesorganic.net.
Survey of Organic Farmers
Researchers at the Leopold Center for Sustainable Agriculture (Iowa State University) are conducting a survey of organic farmers about what motivates them to farm organically. The results will shed light on the role of organic farmers in sustainable development. Survey responses will be confidential; only summary findings will be shared. The survey takes about 15 minutes to complete. It is available online at bit.ly/SCCTyRy or as a Word document that can be requested from the researchers: Priyanka Jayashankar (priyanka@iastate.edu) or Howard VanAuken (vanauken@iastate.edu). The survey will be open until Jan. 30, 2015.

DriftWatch Registry
DriftWatch®, a free service to help organic growers and beekeepers identify fields they want to protect from pesticide spraying, is accepting new sites for 2015 and validating current sites and apiaries. DriftWatch was developed several years ago by Purdue University and is now operated by FieldWatch, Inc., a nonprofit created by Purdue. DriftWatch maps out fields applicators should avoid and contacts applicators with map updates. The service is available in Minnesota, Wisconsin, Michigan, Indiana, Illinois, Missouri, Kansas, Nebraska, Colorado, Delaware, Montana, New Mexico, and Saskatchewan. See www.fieldwatch.com.

Farmers in Iowa, North Dakota, and South Dakota can register fields/hives through their state ag departments.

Strawberry Production Resource

Local Food Regulations Guide
The Minnesota Institute for Sustainable Agriculture just published “A Guide to Regulations for Local Food Entrepreneurs.” The guide simplifies the regulatory framework for food businesses, and describes the reasons behind the local food movement. The 54-page book also highlights businesses that are finding innovative ways to bring unique foods to their communities. See www.misa.umn.edu.

Stray Voltage Guide
Iowa State University has created a 28-page guide to help farmers discover and resolve stray voltage concerns on livestock farms. The guide addresses causes of stray voltage, farm wiring, biosecurity protocols, and testing procedures. See www.iowastrayvoltageguide.com.

Midwest Organic & Sustainable Education Service
Organic Specialist Wanted
We have an opening for an Organic Specialist in our Spring Valley, Wis. office to answer farmers’ questions about organic and sustainable farming practices and the organic certification process. Join our team and make a difference in the way America farms!
Deadline to apply: Jan. 15.
See full job details at: mosesorganic.org Click on Join Our Team!

National Organic Grain and Feedstuffs - Bi-Weekly

<table>
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<th>Price 2 Weeks Ago</th>
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<td>11.82</td>
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<td>12.57</td>
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Prices are trending mostly steady on all organic grains. Market activity is slow to moderate for all organic grains. Demand for organic durum wheat is moderate to good while demand for all other organic grains remains light to moderate. Most industry conversations and concerns involve limited storage, transportation challenges and associated costs, moisture levels and test weights, drying costs, quality issues, and harvest yields.

Cultivating Opportunities
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EQUIPMENT

16’ enclosed trailer, modified as refrigerator with A/C unit, insulation, coolant. 2.5’x16” ball hitch. Solid trailer. S3000. Milwaukee, WI. Contact Tony: (414) 651-8679.

For Sale: 3 pt hitch; 2-man operated seeded or pumpkin planter, new improved, can be used with other seeds, $385.00. Glenbeulah, WI. Don Schroeder. 920-526-3510.

LIVESTOCK


FORAGES


Certified Organic Alfalfa. All hay/baleage is tested. Priced per RFV point. Call 218-289-4683 for more info. Organic Baleage grass/clover. Various cuttings, no rain, tested, price according to quality minus the moisture. We can deliver. Call David at 920-284-2177, Wausau, WI.


Certified organic alfalfa and orchardgrass, 3X3X6.4 bales of 1 – 4 cuttings with 8 – 6 layers of plastic film on cut hay. SE South Dakota, 605-999-2010. 3X3X6.4 bales of 1 – 4 cuttings with 8 – 6 layers of bales, organic hay, round bales, dry and silage. For sale:


GRAINS

Non-GMO oats, wheat, barley, rye feed mix (un-treated/cleaned) suitable for all livestock, 5125 ton semi loads available. S307-373-3161 or 803-522-3547.

For Sale: Cert. organic small grain screenings, $2.50 per 32 lb. bushel weight. Albert Lea Seed, 1-800-352-5247.

OPPORTUNITIES

The Cage Free Company. We are looking for a few producers that are detail oriented and have an interest in producing Free Range Eggs. We offer an income opportunity of up to $130,000.00 per flock. Call or email John Brunquell, 414-704-1344 or jbrunquell@eegginnovations.com.

ORGANIC FARMER/FARM MANAGER – Join the most interesting and lucrative farming sector in the country today – Organic Farming. Ostfriesland Farms owns and operates 300 acres of prime farmland in Central Illinois. We are looking for an industrious, self-starter to help farm and manage all aspects of our growing organic row crop farm operation. The successful candidate will have an Ag (or related) degree, good working knowledge of farm machinery, an interest in learning about organic farming, and work well without supervision. This is an exciting opportunity for the right candidate. We offer a competitive salary, bonus, profit-sharing, & benefits. Get in on this ground floor position. Send your resume to: Ostfriesland Farms 39W973 Crosscreek Ln, St Charles IL 60175 or acxowxhr@gmail.com.

FARMS/LAND

For Sale: 54.5 acres, 40 tillable, no pesticides or herbicides, 3 bedroom house, good barn, swimming pool, adjoins former Boy Scout camp, near Buchanan, Mi. E. Crane, 312-641-6777.

Looking for Organic Farmer to Farm 80 Acres in Webster County, IA. Farm not certified Organic. Transitioning to Organic. Landowner open to new ideas. Email Karin at scotthydoggie@gmail.com.

For Sale: 247 acre certified organic dairy farm with 9 year established on-farm organic food store/business. We’ve emphasized our own organic, pastured meats (beef, meat chickens, turkeys, lamb), dairy and eggs and other purchased organic whole foods with over 500 active (and growing) memberships. We’re willing to work with the right person(s) initially for 1-2 years if desired to help transition. Large, well-kept farm house, barn and outbuildings included. www.grasswayorganics.com. New Holstein, WI, kwcrqag1980@yahoo.com.

For Sale: “Tiny house.” Your interns never have to live in your house again! Portable housing (build on a trailer frame with wheels) for your summer or temporary help. Move it around as needed. 10’ x 12’ size looks bigger inside due to sleeping loft and Skylights. The inside is wired, so just plug in for electricity. Small refrigerator, sink, gas stove, gas marine heater and sofa sleeper included. Call 920-894-4201 or e-mail kwcrqag1980@yahoo.com for pictures. New Holstein, WI.

MISCELLANEOUS

Bovine Basics- composted cow manure Anaerobi- cally digested cow manure and fully composted cow manure available in bulk, totes and bags. For more information contact Ed Rudberg at 952-212-6576 or ed@bovinебasics.com and see our website at http://www.bovinебasics.com.

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For Sale: Organic Onion Plants, Sedona, Redwing, Candy, Gladstone, yellow and red Cipollini, and leeks. Other varieties available upon request. $6 per 100, certified by MOSES. Glen, 563-379-3951 or giftfresh@gmail.com.

Education: Online/hybrid courses in Sustainable/Urban Agriculture starting January 20 at Trinton College. In district tuition of $270 per credit hour for online courses plus fees no matter where your home address is located. Spring online courses include Sustainable Agroecology, Urban Agricultural Issues, and many more! www.triton.edu/horticulture. For more information contact: Benjamin Newton, 708-779-4943, benjaminnewton@triton.edu.

For Sale: ORGANIC FISH FERTILIZER 15-1-1, 100% dry water soluble, 5-7 times more nutritious than liquid fish. Will not clog drip irrigation. 1 lb or 55 lb packaging, can be shipped UPS. Frommelt Ag Service, Greeley, IA, 563-920-3674.

Winter Farming Conferences

Illinois Specialty Crops, Agritourism, and Organic Conference
Jan. 7-9 | Springfield, Ill.

Minnesota Organic Conference
Jan. 9-10 | St. Cloud, Minn.

GrassWorks Grazing Conference
Jan. 15-17 | Wisconsin Dells, Wis.

35th Annual EcoFarm Conference
Jan. 21-14 | Pacific Grove, Calif.

36th Annual NPSAS Winter Conference
Jan. 22-24 | Aberdeen, S.D.

SFA Annual Conference
Feb. 14 | St. Joseph, Minn.

Iowa Cover Crops Conference
Feb. 17-18 | West Des Moines, Iowa

MOSES Organic Farming Conference
Feb. 26-28 | La Crosse, Wis.

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Signature: _____________________________

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MOSES Organic Farming Conference
Feb. 26-28 | La Crosse, Wis.
Class: Rutabaga Riches—Farm Finances for Farmers
Jan. 8-9 | Rockton, Ill.
Two authors of the book Fearless Farm Finances, Chris Blanchard and Paul Dietmann, will teach farmers how to gather, understand, and use financial information to improve profits. Information will be easy to understand—the goal is to get farmers comfortable working with financial tools that don’t require a lot of time to manage.

Introduction to Biodynamics
Jan. 9 | 7 p.m. | Free | Minneapolis, Minn.
Theory and practical knowledge of biodynamic agriculture will be harvested through lecture, practice, artistic movement and sharing. Biodynamically-based nutrition increases health, thinking, and understanding. The series of workshops is open to gardeners of all levels. The course will take place at 4315 Xerces Ave. S, Minneapolis, Minn.

Wisconsin School for Beginning Market Growers
Jan. 9-11 | $323 | Madison, Wis.
UW-Madison CIAS brings you a three-day workshop for anyone planning to start a fresh market vegetable farm. Participants will learn about fertility management, greenhouse use, season extension, pest management and equipment needs, and get real-world perspectives on the financial and quality-of-life realities of running a small-scale farm.
bit.ly/1z1ewJQ

Establishing a Perennial Farm Economy
Jan. 10 | 8:30 a.m.-5 p.m. | $500 | Amery, Wis.
Join Hungry Turtle Farm as they explore the opportunities and challenges of working with perennial fruits, nuts, vegetables and animals. They will delve deeply into specific crops, succession planning, farm design and business plans, providing a set of tools to evaluate which crops might fit into your current or future farm.
bit.ly/1znfDGu

Growing a Hops Business
Jan. 17 | St. Paul, Minn.
Jan. 25 | Wisconsin Dells, Wis.
Eau Claire-based Grow More Hops, LLC offers this seminar for Midwest growers who want to meet craft brewers’ increasing demand for locally grown hops.
growmorehops.com

Farm Commons Webinars
Free | 12 p.m. Central | farmcommons.org/webinars
Jan. 19 | Farmland Leases Built to Last: Content and Legal Context
Jan. 20 | Food Safety Liability and Regulations
Feb. 24 | Going In-Depth with CSA Farm Law
Mar. 2 | Getting Farm Work Done Legally with Interns, Apprentices, and Volunteers

Sustainable & Urban Agriculture Courses
Jan. 21 | Triton College
Online hybrid courses in Sustainable/Urban Agriculture. In-district tuition of $108 per credit hour for online courses plus fees no matter your home address. Spring online courses include Sustainable Agroecology, Urban Agricultural Issues, and many more.
bit.ly/1vzmmmt

See more on the Community Calendar under Events at mooseorganic.org.

Webinar: Managing Bad Stink Bugs with Good Jem
Feb. 22 | 1 p.m. Central | Free
Join eOrganic for a webinar on managing stink bugs using the pinned soldier bug, by Yong-Lak Park of West Virginia University. The efficacy and utilization of the pinned soldier bug as a natural biological control agent will be presented and discussed.
bib.ly/1xaAjpG

Webinar: Post-Harvest Handling, Food Safety and GAPs Compliance
Jan. 24 | 12:30 p.m. | $50 | Amery, Wis.
Hungry Turtle Learning Center presents a workshop with Chris Blanchard, farmer and consultant, on practical food safety, how to develop a written food safety plan, and how to set up record keeping systems that support business processes rather than existing outside of the system.
bib.ly/1wnH0LG

Consortium Cropping Seminar
Jan. 27 | 5 p.m. | Sycamore, Ill.
Feb. 4 | 5:30 | Matteson, Ill.
Feb. 18 | 5:00 | Muncie, Ind.
Champaign County Soil and Water Conservation District hosts these events with tips to improve productivity on your farm. Topics include soil health improvement options, cover crop success, and wise nutrient management techniques.
bib.ly/12D9VRu

Market Manager Certificate Program
Jan. 30-Feb. 28 | Waterford, Mich.
Voluntary certification program designed to encourage farmers’ market managers to pursue leadership skills and professional development. The program consists of three in-person sessions and seven webinars.
bit.ly/market-manager-certificate-program

Deep Winter Production of Greens and Livestock Fodder Utilizing Passive Solar Energy
Jan. 31 | 10:30 a.m.-3:30 p.m. | Ashby, Minn.
Hosted by the SFA, farm owners Sue Wika and Tom Prive will provide a detailed overview of the construction and operation of their deep-winter greenhouse, which utilizes passive solar energy with underground heat storage.
bib.ly/1GfE9A

Local Foods: The Journey Continues
Jan. 31 | 1 p.m.-3 p.m. | Buffalo, Minn.
Sustainable Farming Association hosts a gathering of area farmers, food advocates and supporters to discuss the potential for moving local foods further into the mainstream. Guest speakers include Dana Moskowitz and Jenny Breen.
sfa-mn.org/crow-river

Webinar: Housing for small poultry flocks
Feb. 9 | 2 p.m. Central
Organized by extension, Phil Cauer from Penn State University will be discussing various issues related to housing for small poultry flocks.
bib.ly/1udWgW

Webinar: Building Pest-Suppressive Organic Farms
Feb. 10 | 1 p.m. Central | Free
eOrganic shares what tools and ecological strategies worked and what did not work on five long-term organic farms. Learn how to manage on-farm biological control organism habitat.
bib.ly/1Do443i

Webinar: Blasting the Competition Away
Feb. 17 | 1 p.m. Central | Free
eOrganic discusses using air-propelled abrasive grits for weed management in organic grain and vegetable crops.
bib.ly/1ylfeHq2

Midwest Soil Health Summit
Feb. 18-19 | Alexandria, Minn.
Organized by the Sustainable Farming Association, this conference includes workshops and a presentation from soil health pioneer, Gabe Brown.
sfa-mn.org/midwest-soil-health-summit

Hopyard Establishment, Harvesting and Processing
Feb. 17 | Warrens, Wis.
Eau Claire-based Grow More Hops, LLC offers this webinar for Midwest growers who want to meet craft brewers’ increasing demand for locally grown hops.
growmorehops.com

26th Annual MOSES Organic Farming Conference
Feb. 21 | 10 a.m. | La Crosse, Wis.
The MOSES Conference is the largest event in the U.S. about organic and sustainable farming. This event includes 67 workshops, inspiring keynote speakers, and a two-floor Exhibit Hall with more than 170 exhibitors open exclusively to conference attendees.
mosesorganic.org/conference

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