

working together, always learning

the Practical Farmer

A quarterly publication of Practical Farmers of Iowa

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On the cover



Susan Jutz with Vic Madsen at the PFI Potluck Party. Vic presented Susan with the 2014 PFI Sustainable Agriculture Achievement Award. *(Read more inside)*

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the Practical Farmer helps keep farmers and friends of farmers in touch with one another through informative articles on the latest on-farm research, demonstration and observation to help all types of farming operations become profitable while caring for the land that sustains them. Provided as a member benefit to supporters, *the Practical Farmer* also updates members on PFI programming and news.

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(Back issues are available upon request.)



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Well Grounded

It was wonderful to see so many of you at the annual conference! Wow, 822 people packed into Iowa State University's Scheman Center for the event!

I loved this year's theme: "well grounded," both because we are blessed with wonderful soils and so many Iowans just seem to be solid people who know what's important. I'm reminded of a dialogue included on the album *Arkansas Traveler*:

"Hey farmer, you're not too far from a fool, are you?" says the traveler, who is looking for directions.

The farmer ponders the question and then responds slowly: "No, but I'm not lost."

That's us: Well-grounded people who aren't lost.

Membership in Practical Farmers now tops 2,500. Check out the chart here for our amazing growth. With 39 percent of you new in the last year and another 24 percent new in the last couple years: There is so much we want to tell you about Practical Farmers!

According to long-time member John Gilbert: "First and foremost, PFI is a member-driven group We bring our ideas and concerns and find ways to . . .

Dog of the Issue

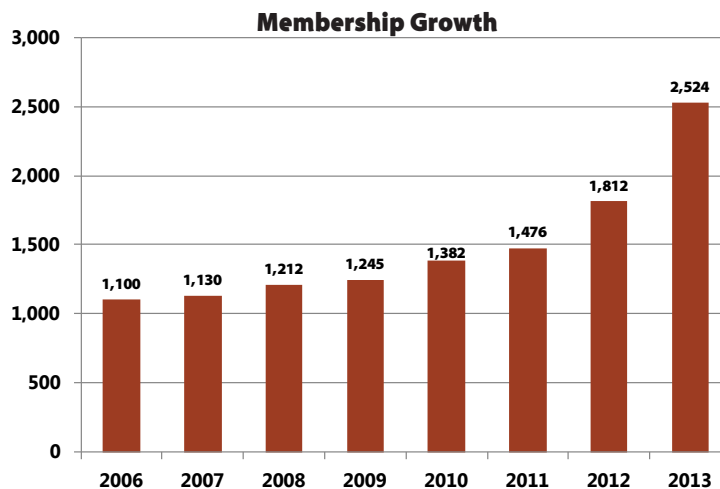


Daisy enjoys the balmy sub-zero temperatures with her owners Mark Runquist and Linda Barnes of High Hopes Gardens, Melbourne. Linda reports that Daisy is "a two-year-old golden doodle. She's actually son Martin's dog but I'm hopelessly in love with her. She's amazingly good-natured, gentle and, for the most part, trainable."

best answer them. The organization is an extended family in much the same way a tribal village was a cohesive means for everyone to band together, live together and prosper or suffer together. . . . Working together searching for answers will get us further than expecting others to guess what our needs are. And we can do this as a family with respect and compassion . . . and an annual reunion [the annual conference]."

See page 25 for a tribute to one of our founders, Dick Thompson, who passed away this summer.

For other members' thoughts on the PFI culture, see www.practicalfarmers.org/blog.



PFI held 139 events last year. That's a lot of farmers contacted, press releases written, food prepared, reports copied, signs stuck into the ground, all by the PFI staff. Kudos to Drake, Erica, Lauren, Liz, Luke, Marc, Margaret, Patrick, Sarah, Sally, Sean, Stefan, Suzi, Tamsyn and Tomoko!

340 leaders also made those events happen in 2013. Members like Ann Cromwell and Kurt Van Hulzen served on the board, Shanen Ebersole and Elizabeth Hertz served on committees, Tom and Mary Cory held field days, Tim Smith and Jeremy Gustafson conducted on-farm research, Dick Sloan and Suzan Erem were featured in the media, and hundreds more. View a complete list of these leaders on pages 18-19. As one of my favorite PFI advisers, Vic Madsen, says: PFI's strength...power...longevity comes from keeping members active and putting the focus on them.

Amen!

For those of you who are new, here are some facts I would most like you to know:

- On-farm research and demonstration is a flagship program for Practical Farmers – indeed the main reason we were formed. In 2013, 78 farmers participated in 38 projects.
- When PFI started in 1985, diversified crop-livestock farmers were the members. Over the years, graziers, fruit and vegetable farmers and non-farmers have joined the group.

- We think farmers are experts, so we pay them for sharing their knowledge through field days, on-farm research and more. In Fiscal Year 2013, we paid out \$140,000 to members for this expertise.

- Virtually all of our events feature food grown by our members. Asking for donations (as many groups do) doesn't help these farmers become profitable.

- With 1,500 beginning farmers in our network, we are a sign of hope for American agriculture.

We are trying very hard to get good numbers on who are members are – how many of you have corn as an enterprise, how many beef cattle, how many vegetables, and so on. Which marketing practices do you use, which conservation ones? Has Practical Farmers helped you improve your farm and your life? When you fill out your membership survey, you help us serve you better. If you didn't do so already, there still is time! Contact Erica or Lauren at (515) 232-5661.

Working for you,

Cover Crops and One Farm's Story: Weed Control, Soil Protection and Weed Resistance Prevention

by Sarah Carlson

Weedy fields not only bother cash crops but can also be considered the sign of a farmer who is deemed not "good" by landlords and neighbors. More than once we have all heard that farmers are "good" farmers when they have "clean," weed-free fields. Some farmers are looking to re-define clean fields, instead aiming for healthy fields with reduced soil erosion and greater soil coverage.

Arlyn and Sue Kauffman farm near Weldon in Decatur County, Iowa, on 150 owned acres plus 100 crop-shared acres. Arlyn also helps on his dad's farm and works with uncles and cousins in the area. Although he grew up working on his family's farm, Arlyn says he began farming on his own in 2009. When a neighbor's farm came up for sale in 2008, he was able to purchase the property by accessing a low-interest loan through the USDA Farm Service Agency's Beginning Farmer and Rancher Loan Program. For years, half of these fields have grown alfalfa, baled and sold off to horse owners, while the other half has grown corn and soybeans. Sometimes wheat was planted to be a nurse crop for alfalfa.

A couple of years ago Arlyn began noticing that row crops grown on fields that had been in sod for several years yielded better. "These fields produced so much better even though the soils were the same and located right next to each other," he says. "I need to cover the soil more during the corn and soybean years. This will help the soil reach its full potential." For Arlyn, cover crops seemed like a good choice. In fall 2012, Arlyn drilled 1.5 bushels of winter, cereal rye following corn harvest on one of his fields.

First-Year Observations

1). Cover saves soil during heavy rain.

The first year Arlyn planted cover crops, a farm immediately southwest of his received a fall herbicide application to clean up the weeds. Both farms are rolling and have similar soil types. This "southwest" farm had

Cover crop rye straw mulch saves moisture and controls weeds for soybeans.



no weeds or soil cover during the winter and spring. Meanwhile, Arlyn's cover crops had a good stand in spring 2013. In the middle of April, all but 9 acres of his cover crop field was sprayed with glyphosate and a residual herbicide, Valor XLT. Shortly following the herbicide burndown an intense rain hit the farm. After the "gully-washer" Arlyn noticed the no-cover-farm next door had lost a lot of topsoil.

"The soil loss was dramatic, with six or so eight-inch-wide washouts," Arlyn says. "But on the cover crop field just a short distance away no soil moved." The cover crop was about 12 inches tall and held the soil in place. "I knew right away that my investment in cover crops had more than paid off to protect the future crop productivity of that field." The same couldn't be said of the uncovered field, where tons of soil were lost.

2). Wet spring delays soybean planting.

Due to the wet spring Arlyn wasn't able to plant soybeans on all his fields until the middle of June. Where he had cover crops he planted half of the field with Roundup Ready soybeans and half with conventional soybeans. At planting there were still those 9 acres where he had not burned down the cover crop. The winter cereal rye plant, now mature, was easily bent over with the 40-foot Henniker air drill and tractor. The few rye plants left standing after planting

were rolled with a Brillon cultipacker. "Normally I'd want to kill the cover crop around the third or fourth week of May since it'll be mature enough at that time to break off," Arlyn says. "Then I would plant soybeans. But 2013 was a challenge because of the excessive rainfall and so we needed to plant later."

3). Planting soybeans through the standing cover crop was no problem.

Sometimes rye plants would wrap around the closing wheels, but after they were "full" of rye straw they wouldn't accumulate much more. Arlyn says he had to "spend some time at the end of the day cutting straw off the closing wheels." The second week of August was the first time herbicide was applied to the 9 acres that had been rolled. Soybeans in this cover crop were shorter and had taken an extra week's time to get started after planting compared to soybeans in the rest of the field where winter cereal rye had been terminated in the middle of April.

4). Soybeans still yield better in late-terminated mature rye.

Fast forward to harvest: Even though the soybeans in the late-terminated cover crop were shorter, the stems were thick with pods. The soybeans in those 9 acres yielded 10 bushels more per acre – in the mid-40 bushel range – compared to the soybeans in the early-terminated rye, which yielded

in the mid-30 bushel range. Plant stands were the same between the two areas of the field. "I think the the extra-thick cover crop mulch decreased soil temperatures during August when we had those triple digit [temperature] days. The soybeans in the rye mat didn't suffer as much under those extreme conditions and the rye seemed to hold moisture and make it available to the soybeans later in the summer."

At Arlyn's field day in August, the rye that had been killed early with an herbicide had broken down and was almost unnoticeable between the soybean rows. Compared to the soybeans growing through the delayed cover crop, the mat was still thick and the ground was well covered (see photo on the opposite page).

5). Multiple strategies can successfully control weeds. Cover crops are serving multiple purposes for Arlyn. He has worked out a system prior to planting soybeans where he can grow as much rye as possible to see if weed control, soil protection and reducing herbicide usage can coincide with improved yields. By working and planning to make cover crops provide more than one purpose his return on investment is quicker.

The Kauffman farm's herbicide program had been working so well that when Roundup Ready corn came on the market Arlyn's family never made the switch. They also felt that growing two Roundup Ready crops back-to-back would create resistance problems. "It just seems to be common sense to not use the same herbicide every single year," Arlyn explains. Delaying cereal rye termination prior to soybeans seemed like a workable way to continue controlling weeds via a method other than an herbicide in order to reduce the risk of weed resistance.

Science of Weed Resistance and Cover Crops

Arlyn and Sue Kauffman are not alone in their observations about the weed-controlling affects of cover crops or the benefits of rotating herbicides to avoid resistance. Prior to the rapid acceptance of genetically modified crops in the 1990s and 2000s, many farmers used a more diverse set of "many little hammers" to



Arlyn Kauffman holds up some rye straw at his August field day.

control weeds to have "clean" fields. Some of those hammers included mechanical cultivation, crop rotation, rotating types of herbicides, cover crops and hand-pulling weeds or roguing. Over time, however, constant reliance on limited groups of herbicides for weed control has resulted in weed resistance. As Bob Hartzler, weed science specialist with Iowa State University Extension & Outreach, has pointed out, in the 1980s and 1990s farmers began relying on a set of herbicides referred to as Group 2 (there are 18 different groups into which individual herbicides are organized). Group 2 herbicides block the normal function of an enzyme called acetolactate

the past couple of years. The overuse of one "hammer," glyphosate, which is in its own herbicide group (Group 9), has shown some selection pressure: Bob Hartzler suggests that about 20 percent of Iowa's fields have glyphosate-resistant waterhemp – and resistance is rapidly increasing. New genetically modified crops are in development, which allow farmers to rotate herbicides from other groups like dicamba or 2, 4-D, but those traits bring potential off-site drift issues. "Choosing the Path of Least [Herbicide] Resistance," published last spring by Madeline Fisher in *Crops & Soils* magazine, outlines issues that Australian farmers are facing with herbicide-resistant weeds and the many ways resistance could be avoided on Midwestern farm fields.

"I knew right away that my investment in cover crops had more than paid off to protect the future crop productivity of that field."

(ALS) actohydroxy acid (AHAS), an enzyme essential in amino acid (protein) synthesis. Without proteins the weeds starve to death. Resistant varieties of waterhemp quickly became a problem and chemical companies essentially stopped recommending Group 2 herbicides to control waterhemp. From field surveys of waterhemp plants conducted in Iowa and Illinois, more than 90 percent of the waterhemp population is resistant to Group 2 herbicides. Fast-forward to today and it's the same story: Weeds are becoming resistant just like in the 1980s and '90s.

Farmers in the south are using winter cereal rye for weed control in cotton. In four on-farm trials in Georgia, farmers are testing a fall-seeded winter cereal rye cover crop that is roll-killed prior to planting cotton the following spring. The cotton is strip-tilled into the rye mulch to manage against Palmer Amaranth, a weed with high incidence of glyphosate resistance. "When the right amount of rye biomass is achieved, Palmer Amaranth emergence drops to 70 to 90 percent," says Stanly Culpeper, agronomist with University of Georgia Extension. Penn State University Extension Agronomist Bill Curran works with farmers to test multiple weed management strategies including cover crops, adds: "Overall, when using an integrated approach, less herbicide is needed to control weeds." ■

In Iowa, we have been hearing about – and sometimes seeing – weed resistance for

What's Bugging the Cows?

by Margaret Dunn

For the past two years, PFI members Dave and Meg Schmidt, and Mary and Tom Cory and family have participated in the fly monitoring project, an effort to quantify, manage and control an extremely common pest on farms. Face flies linger on animals' faces and feed on secretions, causing irritation and spreading disease. Horn flies congregate on animals' backs, sides and bellies, and feed on blood. At high enough populations, the flies can so bother cattle that they spend less time grazing and more time in the shade or other areas where flies are less dense.

This "economic threshold" level of fly load is subject to debate, but has been defined by West Virginia University as about 12 face flies or 200 horn flies. The Practical Farmers trial was designed with two purposes: first, to see how accurately a person could count the number of flies on a cow, compared to a photo taken of the cow at that time; second, to see what conditions affected fly counts – weather, temperature or control methods.

It's hard to directly correlate fly count with specific treatments. As cattle move around pastures, they may be in areas more or less prone to fly infestation. Variations in wind, temperature and humidity may influence fly loads as well, just as much as treatment. In general, as the temperature rose, so did the fly populations. Given that the flies require warm temperatures to survive, this makes sense. Windy days were associated with lower fly counts in 2012, which seems

logical; however, the opposite was true in 2013, though the windy days were also the hottest days. As an example, Figure 1 shows the Corys' fly counts alongside mean daily temperatures in 2013, when no traps or sprays were used.

While not willing to let parasites or associated illnesses interfere with their animals' health or production, the farmers would prefer to avoid harsh chemicals that might kill flies (rather than just repel them)

so that other insect species – including beneficial ones – are not at risk. Because of the biology of the flies, there are a few potential control methods. Breaking the life cycle – preventing flies from laying eggs or from finding cattle – can drastically cut the population. Face flies will travel as much as a mile to find hosts, and horn flies can even travel up to 5 miles (Thomas 2009). Still, moving cattle to a distant paddock every few weeks, or rotating them frequently enough to leave mature flies behind, will limit infestations. The Corys capitalized on this in both years, and Tom notes that the cattle were never really bothered by flies despite being out in the open and not having any shade. In fact, in 2013, they didn't receive any fly control treatments either – but had very manageable fly counts (the scale of 1 to 5 in Figure 1 translates to fly numbers of a few dozen to a few hundred).

While no treatments were used in 2013, the Corys sprayed cattle with Basic H™ (Shaklee Co.), a biodegradable cleaner, as a fly repellent in 2012. Starting in mid-July, two steers were treated every other day. Horn fly counts in particular dropped after treatment, drastically on the treated steers but on other animals as well (Figure 2).

Dave and Meg rotated cattle and used traps and repellents as part of their pasture and pest management system. Fly barrel traps and a repellent-dosed mineral feeder (Fly Killer Kover™, impregnated with Ecto-Phyte™ from Agro-Dynamics) deterred face flies. In both 2012 and 2013, on the observation days when the traps were present, face fly counts were lower than on days without the barrel (Figure 3). The Ecto-Phyte™ reduced face fly counts, but did not greatly influence horn fly numbers (data not shown), which were far below the economic threshold for all but one observation in 2013.

Dave and Meg are still working out their pasture rotations to try and avoid being around fly-heavy areas, but in the meantime are keeping the pests under control with the barrel traps and chemicals. Fly counts – both face and horn flies – were much reduced in 2013 compared to 2012, as were pinkeye treatments required.

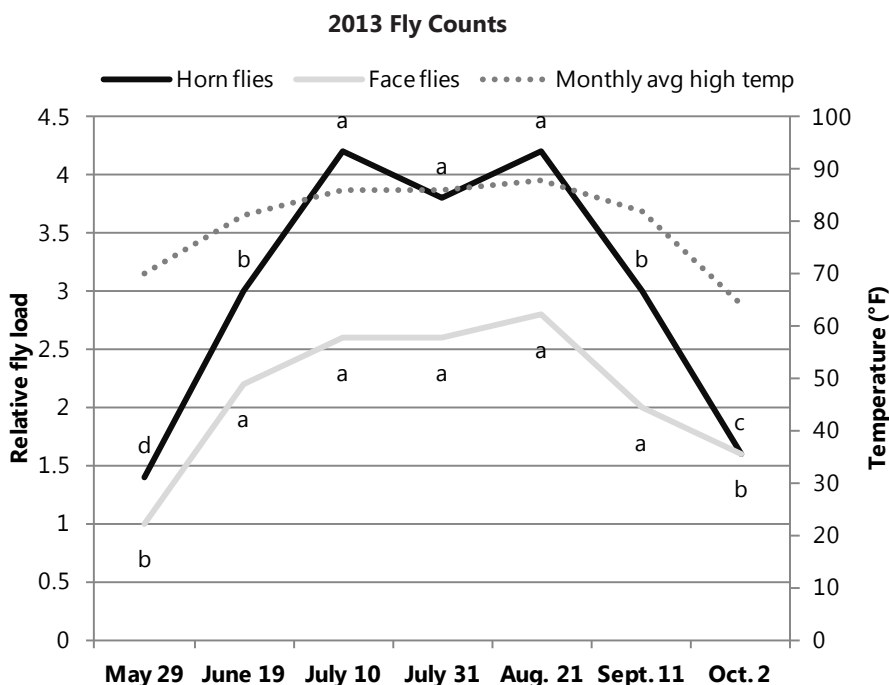


Figure 1. Fly counts (1-5, light-heavy) by date and ambient temperature at Cory Family Farm in 2013. Within a series, data points with different letters are different ($P < 0.05$).

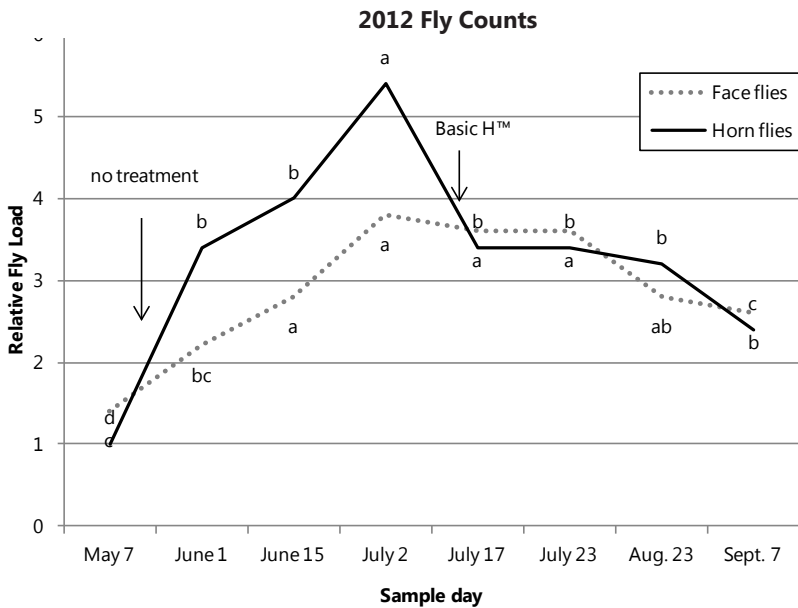


Figure 2. Fly counts (1-5, light-heavy) by date and treatment at Cory Family Farm in 2012. Within a series, data points with different letters are different ($P < 0.05$).

Complete results and details of the trial can be found in a research report, available at: http://bit.ly/PFI_2013_Fly_Monitoring. In the future, the trial will focus less on photos versus in-field observations. There were sometimes considerable differences between in-field and photo counts, but the trends were always similar (whether one observation date had greater or fewer flies than the one before). Instead, the farmers will focus on which treatments are most effective at reducing fly counts. They will also track signs of discomfort in the cattle – tail swishing, stomping, licking sides or kicking flanks – to identify a more realistic economic threshold.

Resources

Dunn, M. 2013. Fly monitoring for grazing cattle - Preliminary study. Practical Farmers of Iowa, Ames, IA. [www.practicalfarmers.org/pdfs/Fly_Monitoring_for_Grazing_Cattle_-_Preliminary_Study_\(2013\).pdf](http://www.practicalfarmers.org/pdfs/Fly_Monitoring_for_Grazing_Cattle_-_Preliminary_Study_(2013).pdf)

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Face Fly Counts at Troublesome Creek Cattle Co.

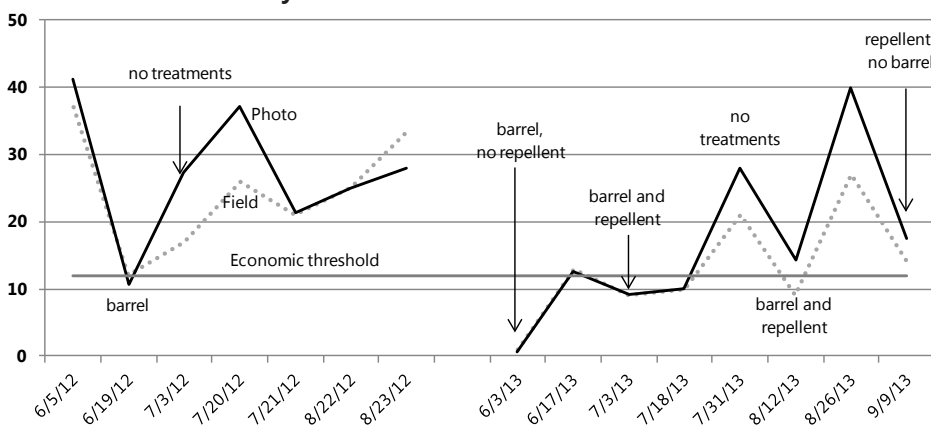


Figure 3. Fly counts by date and treatment at Troublesome Creek Cattle Co.

2014 Holistic Management Courses by Practical Farmers and Land Stewardship Project

Following the "Achieve the Triple Bottom Line with Holistic Management" short course held before the 2014 PFI Annual Conference, three HM training sessions will be held in northern Iowa and southern Minnesota in 2014. Holistic Management aims to sustainably manage farmland, recognizing the importance of environment and conservation, people and communities, and production and profits. The program focuses on harmonizing the needs of the landowners with the needs of the land, to benefit both.

The four cornerstones are: 1) making a healthy profit; 2) increasing land and animal health and productivity; 3) designing an ideal property plan; and 4). assessing land health and productivity. Participants will:

- develop long-term plans of action, which vary by farmers' individual goals and interests
- learn how to manage the land to meet those goals, and
- learn how to monitor the impacts of their efforts and determine if the correct changes are being made.

① **Financial Planning** was held Feb. 5-6 at the Hotel Winneshiek in Decorah, Iowa, taught by renowned speaker and HM expert Joshua Dukart.

② **Holistic Grazing** will be March 21-22 at the Houston Community Center in Houston, Minn., taught by Ralph Tate.

③ **Biological Monitoring** will be offered in May or June, location and teacher TBA.

Course fees begin at \$120 per person, with reductions for members of the same family or farm and for registering for more than a single course. Lunch, snacks and most materials are included. The form can be found online at: www.practicalfarmers.org/blog/2014/4571

Please contact Margaret (margaret@practicalfarmers.org; (515) 232-5661) for more information or to register!

Listen In: Pesticide Spray Drift on PFI Farms

by Liz Kolbe

In November 2012, horticulture farmers at the PFI Planning and Priority-Setting Meeting identified pesticide spray drift as the top concern and research priority. Many people whose farms are hit with spray drift feel powerless, alienated and unsure of the proper next steps. The farmers featured below agreed to share their spray drift experiences as part of our ongoing work on pesticide drift. All of the farmers featured in this article have reported an incident to the Iowa Department of Agriculture and Land Stewardship (IDALS), however, this list represents only a small sampling of PFI farmers who have been affected by spray drift, and many farms have been hit with drift more than once. These stories are offered to provide a glimpse of the experience, to increase understanding and open dialogue.

Anonymous Farmer in Iowa

This farm raised organic row crops and cattle on 900 acres in east-central Iowa. The farm is no longer certified organic, due in part to issues with pesticide drift.

“We were listed on the Sensitive Crop Registry and the Bee List, had “no spray” signs and sent letters to our neighbors every year asking them to be mindful of our organic certification. When we were drifted on in 2008, no one called ahead to warn us of the spraying, which was required under the Bee Rule then. I called the farmer; he blamed the pilot. I then called Kubal’s Aerial Spraying and never heard back from anyone. IDALS told me the pilot was from Texas but I never was able to contact anyone. We did not do any financial analysis of losses.

We continue to have problems with drift. We now rent the crop land instead of farming it ourselves, and the trees in our yard have suffered. We had an orchard in the back of our homestead. Even in a protected place the orchard was hit and the trees were killed. I replaced the orchard twice before giving up.

This should be a concern for everybody, not just organic people. It takes years to grow trees, and rural landowners put a lot of money and care into their landscape. This is happening all over the state, but people are afraid to say anything that might alienate their neighbors. I just think they should have a little more respect for what we’re trying to do too. I don’t have time to grow another oak tree. You get to the point where you just give up; you can’t have anything.”

Jordan Scheibel (Middle Way Farm)

Jordan operates Middle Way Farm near Grinnell. 2013 was the farm’s first year; Jordan had 15 CSA customers and sold at the Grinnell Farmers’ Market. The text below is an email written to the PFI Horticulture discussion list after his farm was hit with pesticide spray drift.

“Last night I found widespread evidence of herbicide drift across my half-acre market garden just north of Grinnell, including visible

damage to zucchini, cucumber, squash, tomato, basil, pepper, basil, carrots and beans from the spraying that took place in the adjacent field on Tuesday evening. In addition, amaranth and other weeds throughout the area [that was] drifted on are showing damage, so I assume that adjacent crops that seem unaffected (kale, broccoli, cabbage...) have herbicide residue on them. The farthest I found damage was 130 feet from the field, which makes my 30-foot buffer strip look like a joke. I was present at the farm when the spraying took place. The operator informed me he was spraying Roundup and atrazine, and there was a breeze from the north and east (from field towards garden). When he made his pass by my garden, he drove slow with the boom low and pressure down. I don’t know if the drift occurred during this pass or if it came from farther in the field where he was far less cautious in spraying.

I have already written an e-mail informing my CSA members what happened and letting them know that I would, out of caution, not be including certain crops in the [next] share delivered. Unfortunately, I sold several crops at farmers market yesterday, before I was aware of the drift, that may have had residue on them. I don’t know what to do about this. I want customers to be informed of what happened but I don’t want to cause unnecessary panic or spend a lot of time and energy trying to track people down. I

“Between the two seasons [of drift effects] we lost \$75,000 to \$100,000 in expected revenue with no compensation. After nearly a decade of market production, we went out of business.”
— ANONYMOUS



advertise myself as chemical-free and I feel I unwittingly misled customers, and I now have to be as up-front as possible about what happened, while at the same time not destroying my reputation and ability to continue to operate as a chemical-free producer in the Grinnell market.

I also have a lot of concerns about whether I will be able to market the crops that were sprayed and whether the ones showing damage will recover or need to be replaced. I don't know what concentration of herbicide is present on the plants and whether they are or will ever be safe to consume. At this point in the season I don't know if I can replace transplants that have been in the ground for a month or more.

I have contacted the IDALS pesticide division by phone (left a message) and e-mail. The landowner (who owns the land I lease and the conventional field) is aware of what has happened but is occupied all day. The land is custom-farmed, not rented, and we have talked about how to prevent drift from happening, apparently to no avail. I had a drift catcher from the Pesticide Action Network taking air samples since immediately after the spraying took place on Tuesday night and should have evidence of the drift, but the visible evidence is already overwhelming and I've taken numerous photos. I've been told that it seems unlikely Roundup and atrazine would drift in this way and that there may have been other herbicides in the tank, or that the tank was not cleaned thoroughly after having other herbicides in it.

Any and all advice you may have for me in this situation is welcome. I know a number of you have already gone through this.

“When we were drifted on in 2008, no one called ahead to warn us of the spraying, which was required under the Bee Rule then . . . We continue to have problems with drift. We now rent the crop land instead of farming it ourselves, and the trees in our yard have suffered.”

– ANONYMOUS

Anonymous Farmer in Iowa

Prior to closing their farm business for reasons associated with drift, this farm family in northeast Iowa was a staple fruit and vegetable producer for area farmers markets.

I didn't see them spraying; I heard from a neighbor. We had our hoop house fans running, so the chemical was sucked inside. A couple days later I noticed some issues with plants in the hoop houses and out in the field. I waited a couple more days, then called IDALS and the neighbor who owned the field. The neighbor told me what the co-op had sprayed and said, “That's why they have insurance; I guess you should call.” The neighbors were helpful. I called the co-op. They said, “We'll come take a look at it, but we don't think it was windy the day we sprayed.”

IDALS came and took samples. Three times I took samples to agronomists at Iowa State University, who told me it was herbicide damage. Another ISU agronomist came out and took pictures. Though we all thought it looked like herbicide damage, it didn't look like Corvus damage (bleaching, ALS-inhibiting); it looked like a growth-regulating herbicide. But because the co-op's records said they sprayed Corvus, IDALS only tested for Corvus active ingredients. Those tests were negative for the chemicals. No one else in the area had sprayed. The co-op even sent out an insurance investigator that did everything to convince me it was an environmental issue and not a pesticide issue.

I called three lawyers, but the folks at ISU seemed to change their tune, said it could

have been environmental damage and they couldn't tell from the photos I had. Other photos taken by the agronomist had been lost. No one wanted to work against the co-ops.

The next year we had residual problems in our hoop houses. The time required to safely plant vegetable crops after herbicides is often over a year – for Corvus it's 17 months. Between the two seasons we lost \$75,000 to \$100,000 in expected revenue with no compensation. After nearly a decade of market production, we went out of business. I was angry about this for a couple years. I was naïve to think the co-op would own up to its mistake. I should have looked for legal support earlier.

These stories (and others available on the Practical Farmers blog) serve as a companion to Summary of Public Record: IDALS Pesticide Bureau Case Files for Alleged Spray Drift to Organic, Fruits and Vegetables, and Horticulture 2008-2012, available on the PFI blog (www.practicalfarmers.org/blog/2014/idals-case-file-summary-pesticide-drift-2008-2012). Practical Farmers also plans to publish a drift response protocol and organize Drift Catcher trainings with Pesticide Action Network.

To learn more about responding to drift events on your farm or property, and seeking compensation, watch the PFI farminar on Feb. 25, titled “Pesticide Drift: Response and Compensation.” ■

Neonicotinoid Seed Treatments and Pollinator Issues

by Stefan Gailans

Neonicotinoids, or “neonics” as they are often called, are a family of insecticides commonly found in corn and soybean seed treatments across the Corn Belt. Seed treatments such as Poncho, Votivo, Gaucho and Cruiser all contain one form or another of a neonicotinoid insecticide. These insecticides are systemic, meaning that as the crop grows from the treated seed the insecticide is translocated through the plant into root and leaf tissues. In turn, this provides protection from chewing and sucking insect pests of corn and soybeans, such as cutworms and aphids.

Neonicotinoids Recently in the News

On April 29, 2013, a two-year suspension was issued in the European Union (EU) on the use of neonicotinoids beginning in December 2013. This suspension was in response to recent findings that implicated neonicotinoids among several factors negatively affecting the health of non-target insects, such as honey bees. Bees are important pollinators for numerous agronomic and horticultural crops around the world, including alfalfa and almonds. While neonicotinoid insecticides were protecting field crops and vegetable crops from insect pests in Europe, the insecticides were also shown to be disturbing honey bees in agricultural areas.

Additional research on the issue will be conducted during the two-year suspension. Shortly after the suspension in the EU was announced, the U.S. Department of Agriculture and Environmental Protection Agency jointly issued a report that identified use of neonicotinoid insecticides as one potential cause of Colony Collapse Disorder in honey bees in North America. More recently, DuPont Pioneer announced last fall that it would be making available neonicotinoid-free corn and soybean seed

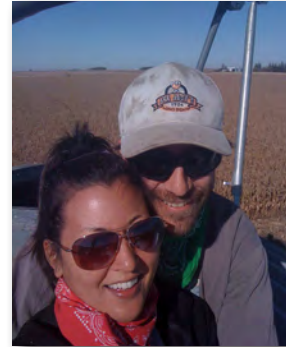
in Canada after neonicotinoids were linked to bee deaths in Ontario and Quebec.

PFI Members’ Interest in Better Understanding Neonicotinoids

Neonicotinoids were recently discussed at the Practical Farmers of Iowa Cooperators’ Program meeting in December 2013. Matt O’Neal, extension entomologist with Iowa State University, gave a brief presentation on current neonicotinoid research to field crop farmers. He explained how neonicotinoids can affect non-target insects like honey bees. Talc, a common lubricant used to move seed through the planter box while planting treated seed, can function as a carrier of the neonicotinoid insecticide seed treatment. Foraging bees can then come into contact with the contaminated talc as it is expelled during planting. Corn pollen from plants grown from treated seeds can also contain neonicotinoids because of the systemic nature of the insecticide. The pollen is then sometimes collected by honey bees and taken back to the hive.

Additionally, Matt presented findings that showed increased crop vulnerability to other insect pests (those not directly controlled by the neonicotinoids) when crops were grown from neonicotinoid-treated seed. For example, soybeans grown from neonicotinoid-treated seed experienced greater infestations of Japanese beetles than soybeans grown from non-treated seed. Corn grown from neonicotinoid-treated seed was also more susceptible to spider mites than corn grown from non-treated seed.

What followed Dr. O’Neal’s presentation was a discussion among the field crop farmers about the possibility of conducting on-farm research comparing crops grown from neonicotinoid-treated and neonicotinoid-free seeds. Chief among the discussion topics was the availability, or lack thereof, of neonicotinoid-free corn and soybean seed in the state. Most of the farmers seemed to agree that neonicotinoid-free soybean seed would be attainable but finding corn seed would be much more difficult, if not impossible.



◀ Wendy with husband Johnny Raffkin on Wendy’s family farm in Charles City.

Wendy Johnson, who farms near Charles City, was among the farmers who expressed interest in conducting a trial comparing neonicotinoid-treated seeds with non-treated seeds.

“This is a no-brainer for us,” Wendy says. “[My cousin] Doug and I had been concerned about the honey bees and the research Dr. O’Neal presented on was really outstanding.” Wendy will be conducting the trial using soybeans in 2014. “It was easier for us to get neonicotinoid-free soybean seed than corn seed in our area from our local dealer. We really had to address the question of availability of seed first before going forward with the trial.”

Neonicotinoid insecticide seed treatments on corn and soybean seed are ubiquitous these days. The trial on Wendy’s farm will seek to determine if the seed treatment benefits the soybean crop in terms of grain yield and reduced insect pest pressure.

Wendy explains that implementing this upcoming trial on her farm is ultimately about “anything we can do to add to the research both for ourselves and for other farmers.” ■

For more on neonicotinoids, look for the companion post to this article on the PFI blog.

For more on Iowa pollinators, read this blog post about Rick and Stacy Hartmann’s 2013 pollinator field day: www.bit.ly/Hartmann_Pollinator_FD



News Story Sparks Policy Discussion on “The Hidden Costs of Ethanol”

by Drake Larsen

In mid-November the Associated Press released a series of articles focused on its investigation of “the hidden costs of ethanol.” The story (<http://bigstory.ap.org/topic/ethanol>) spurred national debate and led to an extensive thread on Practical Farmers’ policy email discussion group.

The AP story was based on a publication earlier this year from the *Proceedings of the National Academy of Sciences*, which shows a reduction in grassland acres in the Upper Midwest and Great Plains for the period 2006-2011 (www.pnas.org/content/110/10/4134.full.pdf+html). The Red River Valley of eastern North Dakota and southern Iowa had the greatest losses of grasslands, much of which was attributed to increased corn and soybean acres.

Helen Gunderson started the email conversation by posting *The Des Moines Register’s* coverage of the story. Francis Thicke provided a counter-argument in posting the Iowa Corn Growers’ response to the AP story. The PFI members’ discussion was largely favorable of the AP’s perspective. Excerpts follow:

Keith Kuper calculated that Iowa farmers applied about 600 million more pounds of actual nitrogen to their 2012 corn crop than their 2001 crop because of more total corn acres and more acres of continuous corn.

Kamyar Enshayan offered an analogy:

“My daughter, when she was 8, had a lemonade stand in the neighborhood. . . thinking she was actually running a business, selling the lemonade real cheap. . . . Meanwhile, infrastructure made the lemonade stand possible: mom is making the lemonade; there is a house payment, insurance, house repair. . . . Ethanol plants are like that lemonade stand: It is all propped up.”



Dennis Keeney commented: “I first stuck my foot into [the corn ethanol debate] when I came back to Iowa in 1988 and saw [ethanol] getting pushed from [commodity groups]. I’ll never forget a meeting with industry and university folks where I almost was tarred and feathered. A student of mine and I were one of the first to publish in a peer-reviewed paper that it was a voodoo energy balance used to claim an energy gain.” (*Keeney’s report can be found at: <http://pubs.acs.org/doi/full/10.1021/es8016182>*).

Matt Hauge posted an article from the *Sioux Falls Argus Leader* (www.argusleader.com/article/20131112/NEWS/311120003/Ethanol-feeling-loss-its-allies) and summed it up: “It extensively quotes the CEO of Poet, Jeff Lauth. He says a lack of effective PR cost the ethanol industry its friendship with environmentalists and conservationists. Lauth suggests you shouldn’t blame ethanol for problematic farm practices because the industry is just another market for a commodity.”

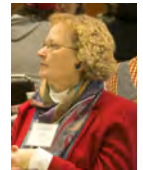
Jerry Depew and **James Frantzen** discussed the nuance of parsing out the fractions of what corn is used where – an issue made more complex by everything from dried distiller’s grains (DDGs) to different data sets.

Jerry explains: “It is misleading to say corn is ‘used’ for exports. It may have gone to export, but it eventually gets used for feed when it arrives at its destination. When stories are confusing about how much of the crop ends up in the gas tank versus how much is consumed for nutrition, ethanol defenders always seize on that error and divert the debate away from land use or the nitrates in Des Moines water.”

James wondered what was lost in using national averages to look at Iowa-raised corn: “More than one-twelfth of our nation’s supply of corn is going toward ethanol production. In Iowa, it would very likely be the number one corn use (beating the claim of livestock feed being number one use), since Iowa produces 1.88 billion bushels of corn annually. If I’m calculating this correctly, 3.8 billion gallons of ethanol

per year is produced in Iowa, which would require about 1.3 billion bushels of corn per year, correct?”

Margaret Smith suggested that what we need is “a well-developed plan to phase out ethanol production from corn grain. To go cold turkey would cause major economic and social upheaval in rural Iowa. I believe change will be more positive and better with a plan towards something that we want, rather than just away from something we don’t want.”



Andy Johnson said that he is “in agreement with most of the comments on this ethanol thread,” and shared additional perspectives on land use, corn prices and current policies. He said current land use trends are “part of a historical see-saw pattern of increases and decreases in cropland and environmental/ecological impact) – such as “the loss of 5 million acres of grassland,” which he called “significant.” But he also pointed out that the Conservation Reserve Program “still has tens of millions [of acres] enrolled.” Musing on the effect of corn prices and policy, Andy wrote: “Corn prices haven’t been driven only by ethanol policies; the international food crisis had a major impact, and now corn prices very closely track the oil markets. Policies distort markets with intent, and ethanol policy has done so and been a tremendous political benefit to politicians but also at significant budget cost.”

Practical Farmers’ staffer, **Stefan Gailans**, capped the discussion pointing out that, “on the heels of the AP report and this discussion comes this from the EPA: A proposal to cut the required amount of ethanol to be blended into gasoline.” ■

If you have questions or want to participate in a conversation like this, join any or all of our six members-only email discussion lists: Cover Crops, Garden and Food, General, Horticulture, Livestock and Policy. To join, call (515) 232-5661 or send an email to erica@practicalfarmers.org.

Five Things to Remember as PFI Plans for the Future

by Fred Kirschenmann

Civilizations that recognize the importance of sustaining natural resources and anticipate and prepare for change tend to survive, while those that fail to exercise that wisdom tend to collapse. (See Jared Diamond, 2005, Collapse) Probably our biggest danger is that the majority of us tend to be in a state of “dreamy belief” (as Robert Engelman put it in State of the World, 2013), assuming that most of what drives our current food system will continue to be there in the future and that all we need to do is to “ramp up” the technologies of our current operations, or “green up” our current operations, and our agriculture and food systems can be “sustained” into the future.

This “dreamy belief” will leave us largely unprepared to meet the challenges of the future. We need to recognize that our current system of agriculture is a very efficient, input-output system that is heavily dependent on a range of relatively cheap inputs. Those inputs include cheap energy, cheap fertilizers, cheap minerals, and the historic gift of relatively fertile soils, abundant fresh water and relatively stable climates. Given the rate at which we are exploiting these inputs, they will likely no longer be there in the near future. To use cheap energy as just one example, financier T. Boone Pickens tells us that we should expect crude oil to reach \$350 a barrel in ten years – only eight years from now!

So as we anticipate the changes coming, recognize the value of natural, sustaining resources, and get a head start preparing for those changes, what role can PFI play in assisting its farmers and supporting members? To begin we might all ask ourselves a poignant, but relevant question. Let’s assume that ten years from now crude oil will be \$350 a barrel, fertilizers, other inputs, and equipment costs will be five times what they are today, that we only have half the amount of fresh

water available, and that we have twice the number of severe weather events--- including more droughts and floods. What kind of agriculture should PFI farmers have on the landscape and what kind of food system should PFI members imagine? We do not have a long time to plan to meet the challenges we will likely all be facing!

To address these challenges, PFI should include the following in its new strategic plan:

1. **Restore the biological health of soil through cover crops, longer rotations and grass-based systems.**

Biologically healthy soil is one of the most important resources to “sustain” food systems. These soils store much more fertility, requiring far fewer inputs, they absorb and retain much more moisture, reducing run-off, flooding, and nutrient loss, requiring less irrigation and making crops much more resilient in times of drought. Biologically healthy soils also sequester more carbon, contributing to the important task of putting a cap on carbon to begin reducing the negative effects of climate change.



Fred Kirschenmann

2. **Restore biodiversity and genetic diversity by increasing the number of types of crops and livestock and habitat on our farms.**

Specialization, simplification and economies of scale produce incredible efficiencies when all of the cheap “inputs” are available to “sustain” such a system. But in a future when cheap inputs are no longer available, farmers will have to adopt a system that is more grounded in the entire biotic community. Such self-renewal is only possible when the many diverse species in the community provide the free ecosystem services that foster the renewal of the whole. Farmers who have practiced various forms of integrated pest management, and farmers and seed breeders who adopt crops and livestock for local adaptation already have experience in such use of biodiversity.

3. **Help lessen dependence on expensive inputs.**

To be “sustainable,” our farming systems are going to have to be more self-renewing and self-regulating. We are using up the “old calorie” oil that has constituted most of our inputs and are already on a trajectory to becoming prohibitively expensive. PFI member and agronomist Matt Liebman’s research has demonstrated that if farmers use a three- or four-crop rotation plus adding a modest amount of livestock manure, they can reduce their fertilizer and pesticide input by almost 90 percent. Because of increased energy costs and depleting natural resources, costs of



Like many PFI members, Grinnell Heritage Farm suffered two major weather disasters in 2013: flooding in the spring and drought in the summer. Here they celebrate the rain they received in the fall. Scientists agree that weather volatility will continue – Practical Farmers should help farmers adapt.



The biological health of the soil should be a major component of PFI's next strategic plan. Grass-based systems, like those on Jodi and Jeremy Peake's farm near Waukon, store more fertility, require fewer inputs, reduce runoff and provide other benefits that improve soil health.

these inputs are likely to increase five-fold. (Only four countries still have rock phosphate reserves and only four still have potash reserves.)

4. Cultivate new farmers. We will need a growing number of the most intelligent, creative, innovative young farmers in the history of American agriculture. As of the most recent available census data (2007), approximately 70 percent of our total U.S. agricultural sales are being produced by just 192,442 farms. More than 30 percent of our farmers are over age 65, and only 6 percent are under age 35. Of course, one of the barriers keeping young people from entering farming careers is the high economic risks and low return to labor that makes careers in farming difficult. One of the bright spots: Farmers who have aggregated their farms into marketing networks, providing them with more economic security, shared skills, and reduced transaction costs. Organic Valley and Niman Ranch serve as examples--as of 18 months ago (according to information from their leaders), the average age of farmers in both market groups is now 46 and getting younger, compared with the national average of 57 and getting older. PFI might explore additional opportunities to join and create such marketing arrangements.

5. Address land and farm transfer issues. Farms are now so capital intensive that it is nearly impossible

WORK ON FOOD DISTRIBUTION SYSTEM

"PFI should be a leader in helping to design and implement a local, sustainable food distribution system. Rationale: Over the past 50 years the industrial ag and food model has developed a highly sophisticated production, processing, distribution and consumption system. Unfortunately, the system isn't optimal for the producers (farmers have a small return on their production and no control over price) or consumers (the focus of food is shelf life and taste, not nutrition)."

– Dick Schwab, Solon

HELP FARMERS COPE WITH EXTREME WEATHER

"We have entered a period of extreme climate volatility. There are more intense rainstorms, earlier in the year, and they are causing more soil erosion and field delays. Swings from one extreme to another have characterized Iowa's 2013 weather patterns. Iowa started the year under the widespread drought but the spring of 2013 (March-May) was the wettest in the 140 years of record-keeping. By mid-August, very dry conditions had returned to Iowa, subjecting many of the state's croplands to moderate drought.

"Scientists agree that this volatility is going to increase. PFI should help farmers become more resilient in a world with uncertain and changing climate patterns. Diversity of crops is critical--some will fail, some will succeed. Perennial cover on our farmland will protect our soils during the intense rainfalls. PFI should help farmers accept the new normal as soon as possible and work to mitigate the extreme economic ups and downs as well."

– Laura Jackson, Cedar Falls

for young farmers to enter commodity agriculture and increasingly difficult for retiring farmers to transfer their land and property to new, younger farmers. This is a very important but difficult problem to solve. There may be opportunities, for example, for PFI to be involved in the development of "land trusts", so that farmers can transfer land into the trust that assures that land transferred from

private ownership into a public trust be made available for farming under certain stewardship requirements.

Fred Kirschenmann is senior fellow at the Leopold Center. To offer your advice on what should be included in PFI's strategic plan, email Teresa Opheim (teresa@practicalfarmers.org) or board Member Tim Landgraf (libland@peconet.net). ■

2014 Annual Conference



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Learning

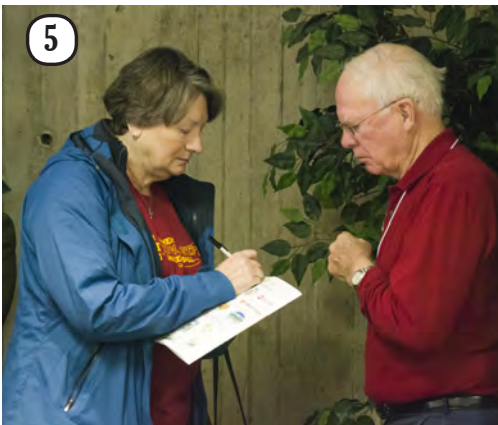
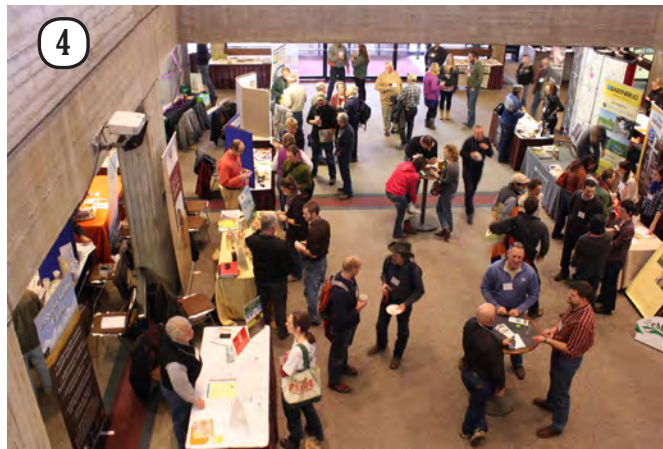
1. Mark Shepard's "Restoration Agriculture 101" short course was packed with participants.
2. Holistic Management International's Ann Adams (right) passes a pen to fellow short course instructor Margaret Smith.
3. A slew of posters and the Ames High School Environmental Club's Lexicon of Sustainability provide a space to network and learn about new topics in a different way.
4. Jan Libbey (pointing) shares thoughts on aggregating deliveries with other Loyd Johnson and other participants in the Saturday morning breakfast cluster.
5. Sandor Katz's fermentation workshop inspires many questions.
6. Attendees have a chance to learn from Gabe Brown (right) one-on-one.
7. Andy Dunham's "Weathering the Weather" session attracted a full house.
8. Jerry Carlson talks with Mary Swalla-Holmes. Sponsors provide the opportunity to learn about new products and services.



8

Networking

1. A sponsor speaks with Bryant Bear during one of the networking breaks.
2. Cindy McCullough (left) chats with Kathy Rose.
3. Donna and Kent Winburn review the conference booklet before heading to the first Saturday morning session.
4. Scheman is a-buzz with activity during networking breaks. With 822 attendees – PFI's largest conference yet – participants have ample opportunity to network, meet with friends and sponsors, and make serendipitous new connections.
5. Kelly Tobin (right) exchanges details with someone. The PFI conference allows the chance to make valuable contacts.
6. Tom Frantzen (left) and Dave Schmidt chat during a break in the short courses on Friday morning.
7. Ron Orth converses with a beginning farmer. PFI's conference is a place where multiple generations can interact.
8. Siobhan Danreis (right) chats with Kerri Leach at the short course
9. Jan Hollebrands visits with a sponsor.
10. Jeremy Peake (left) chats with Karl Dallefeld.





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Good Food ...

1. Conference attendees enjoy Saturday's "All Iowa" local foods lunch of beef barley or vegetable barley stew, salad with micogreens, cornbread, mini tarts and ice cream. Ingredients were purchased from PFI members.
2. Egg fritatta and warm aronia muffins greeted early risers attending Saturday breakfast clusters.



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... And Conversations

3. Gary and Nancy Guthrie enjoy a break to chat with Cedar Johnson and son Wesley.
4. Denise O'Brien poses a question to other participants in the True Wealth: Keynote Follow-up session, including Suzanne Castello and Barney Bahrenfuse.
5. Jack Knight (standing) talks with Mark Peterson (left) and another participant after the Iowa Nutrient Reduction Strategy: Cover Crops, Prairie Strips and More session.
6. Karen Wise (left) speaks with Lorna Wilson before heading home after a productive conference.
7. Mary Cory (left) speaks with Tony Thompson during a break in the short courses on Thursday evening. The more intimate venue of the short courses provided ample opportunities to strike up conversations with fellow attendees.
8. Joe Lynch and Mary Swander converse during the PFI Potluck Party on Friday night.
9. John Jone (left) and Gilbert Gillespie exchange thoughts during a Saturday afternoon session.



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Fun ...

1. Ann Fitzgerald and Garrett Caryl enjoy the photo booth at the PFI Potluck Party.
2. Conference sessions can have their humorous moments: LaVon and Craig Griffieon (left and middle) laugh at a joke made during a Saturday U-Pick session.
3. **From left:** Wade Dooley, Nathan Anderson and Tyler Franzenburg are captured in a moment of levity.
4. Attendees have fun browsing and bidding on the nearly 110 items donated to the silent auction.
5. Emily Rose Pfaltzgraff (left) knows how to entertain Gabe Bahrenfuse.



... And Family

6. Rory Van Wyk attended the conference with his daughter and wife, Lynette.
7. At the end of a long day, Erin Wilson's daughter Nora still seems pert. The sights and sounds of the PFI Annual Conference provide plenty of stimulation for little ones.
8. Amber Anderson Mba and son Elijah take advantage of the PFI photo booth for a portrait.

More Than 340 Members Serve as Leaders in 2013

Speakers

Sharing knowledge, in the news

Speakers

Ibrahim Ali	James Frantzen	Matt Liebman	Neal Vellema	Gahetano	Joanne Peters
Dawn Anderson	Irene Frantzen	Drew Lietz	Ellen Walsh-Rosmann	Mark Gee	Mark Peterson
David Ausberger	Tom Frantzen	Bob Lynch	Jake Wheeler	John Gilbert	Air Philavanh
Jill Beebout	Eric Franzenburg	Cindy McCollough	Daniel Rosmann	Devan Green	Andrew Pittz
Chris Blanchard	Sally Gran	Alice McGary	Dick Sloan	Craig Griffieon	Mark Quee
Anne Bohl	Jeremy Gustafson	Steve McGrew		Helen Gunderson	Lois Reichert
Jacob Bolson	Earl Hafner	Adam Montri		Jeremy Gustafson	Mike Rosmann
Ann Bushman	Jeanne Hansen	Jake Myers		Earl Hafner	Ron Rosmann
Sarah Carlson	Rick Hartmann	Gayle Olsen		Jeff Hafner	Matt Russell
Bruce Carney	Ryan Herman	Jeremy Peake		Twyla Hein	Ben Saunders
Craig Chase	Cheryl Hopkins	Mark Peterson		Chris Henry	Carolyn Scherf
Jordan Clasen	Andy Hunziker	Mark Quee		Rick Juchems	Jordan Scheibel
Larry Cleverley	Maury Johnson	Mike Rosmann		Larry Kallem	Lisa Schulte-Moore
Tim Daley	Susan Jutz	Maria Rosmann		Tom Kaspar	Grant Schultz
Siobhan Danreis	Tom Kaspar	Ben Saunders		Jason Kerr	Sean Skeehan
Richard deWilde	Tom Kaspar	Dave Schmidt		Connie King	Dick Sloan
Melissa Dunham	Ben Kreuter	Meg Schmidt		Greg King	Julia Slocam
Herb Eckhouse	Laura Krouse	Julia Slocum		Fred Kirschenmann	Jennie Smith
Kathy Eckhouse	Keegan Kult	Meghan Spees		Laura Krouse	Tim Smith
Glen Elsbern	Curt Lambertsen	Rob Stout		Matt Lechtenberg	Harn Soper
Rob Faux	Tim Landgraf	Tony Thompson		Matt Liebman	Dan Specht
	Jan Libbey	Laura Vellema		Drew Lietz	Mary Swander
				Daniel Looker	Shari Swaney
				Bob Lynch	Rod Swoboda
				Lee Matteson	Nick Wallace
				Danelle Myer	Ellen Walsh-Rosmann
				Linda Naeve	Paul Willis
				Dale Nimrod	Donna Wilterdink
				Joe Olsen	
				Doug Peters	

Members in the News

Leigh Adcock
Narað Bastola
Jill Beebout
Jacob Bolson
Thomas Burkhead
Angie Carter
Jordan Clasen
Mary Cory
Tom Cory
Melissa Dunham
Carmen Duver
Herb Eckhouse
Kathy Eckhouse
Kate Edwards

Suzan Erem
Rob Faux
Tammy Faux
Dana Foster
Irene Frantzen
James Frantzen
Tom Frantzen
Mukiza

Field Day / Pasture Walk Hosts

Providing networking and information sharing

Fred Abels	Sally Gran	Tim Landgraf	Dan Specht
Kim Alexander	Craig Griffieon	Barb Lengacher	Phil Specht
Nathan Anderson	LaVon Griffieon	Joe Lengacher	Mike Sporrer
Sarah Anderson	Barb Grijalva	Jan Libbey	Kim Steele-Blair
Angie Atwood	Rick Hartmann	Bob Norman	Barbara Stone
Jeremy Atwood	Stacy Hartmann	Joe Olsen	Kent Swanson
Rick Bednareck	Dean Henry	Jeremy Peake	Francis Thicke
Jill Beebout	Judy Henry	Jodi Peake	Susan Thicke
Tim Blair	Mike Henry	Mark Peterson	Becki Tucker
Mary Cory	Lee Matteson	Sara Peterson	Steve Tucker
Tom Cory	Morgan Hoenig	Mark Quee	Connie Vincent
Tim Daley	Adam Hohl	Daniel Rosmann	Mike Vincent
Joel DeJong	Kathy Hohl	Maria Rosmann	Jessica Weber
Andrew Dunham	Julie Hohl	Ron Rosmann	Doug Webster
Melissa Dunham	Kyle Holthaus	Ellen Walsh-Rosmann	Tanya Webster
Ron Dunphy	Mari Holthaus		Janna Wesselius
Don Elsbern	Carl Johnson	Dave Rueber	Jessica Wesselius
Rachel Emig	Cheryl Johnson	Neal Sawyer	John Wesselius
Neal Engel	Rick Juchems	Russ Schelle	Scott Whitney
Dana Foster	Dustin Kaestner	Dave Schulte	Phil Wille
Ann Franzenburg	Brad Kloet	Erik Sessions	Barb Withrow
Eric Franzenburg	Gail Kloet	Sara Peterson	Eldon Yoder
Dean Goodale	Laura Krouse	Sean Skeehan	

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Tyler Franzenburg
Earl Hafner
Sara Hanson
Gail Hickenbottom
Jeff Klinge

Tim Landgraf

Mark Peterson
Kurt Van Hulzen
Dan Wilson

Founders

Larry Kallem
Dick Thompson
Sharon Thompson

Consultants

Kathy Eastman
Rich Schuler
Chris Wilbeck

* indicates partial year

Committees and Programs

Charting a course for the future

Nominating Committee

Irene Frantzen
Jeff Klinge
Teresa Opheim
Donna Prizgintas
Mark Quee
Maria Rosmann
Dan Wilson
Sally Worley

Policy Committee

Nathan Anderson
Sarah Carlson
Rick Hartmann
Fred Kirschenmann
Jeff Klinge
Laura Krouse
Drake Larsen
Jerry Peckumn
Mark Peterson
Ann Robinson
Dan Specht
Francis Thicke

Cooperators' Program Committee

Sarah Carlson
Stefan Gailans
Tomoko Ogawa
Gayle Olsen
Jeff Olsen
Teresa Opheim
Mark Quee
Ron Rosmann
Sean Skeehan

Evaluation Task Force

Tammy Faux
Cornelia Flora
Tim Landgraf
Drake Larsen
Vic Madsen
Teresa Opheim
Sean Skeehan

Other Policy Leaders

Nathan Anderson
Betsy Dahl
Glen Draper
Ron Dunphy
Ann Franzenburg
Eric Franzenburg
John Gilbert
Sally Gran

LaVon Griffieon
Rick Hartmann
Fred Kirschenmann
Jeff Klinge
Laura Krouse
Jerry Peckumn
Mark Peterson
Ann Robinson
Ron Rosmann
Francis Thicke
Ellen Walsh-Rosmann

Labor4Learning

Doug Alert
Jill Beebout
Tom Cory
Mary Cory
Andrew Dunham
Melissa Dunham
Rob Faux
Susan Jutz
Tim Landgraf
Jan Libbey
Margaret Smith

Practical Landowner Services

Sarah Carlson
Helen Gunderson
Chris Henning
Gail Hickenbottom
Tim Landgraf
Dave Miller
Teresa Opheim
Mark Peterson
Doug Roberts
Tim Smith
Harn Soper
Kelly Tobin
Kurt Van Hulzen
Dan Wilson

Representative to Leopold Center Board of Directors

Susan Jutz

Hospitality Hosts

LaVon Griffieon
Jeremy Gustafson
Gary Guthrie
Mark Peterson
Donna Prizgintas
Tom Yucus

Healthcare

Gary Guthrie
Lana Jackson
Susan Wallace

SAVINGS INCENTIVE PROGRAM (SIP)

Class of 2013

Brian Bagge
Thomas Burkhead
Jordan Clasen
Luke Dahl
Kate Edwards
Beth Elsbernd
Glen Elsbernd
Karla Hanson
Morgan Hoenig
Cheryl Hopkins
Mike Hopkins
Jay Jung
Drew Lietz
Brian Ness
Cheryl Ness
Jacob Peterson
Daniel Rosmann
Mike Salama
Jordan Scheibel
Dave Schmidt
Meg Schmidt
Linsey Schuldt
Luke Schuldt
Grant Shultz
Michael Von Weihe
Ellen Walsh-Rosmann
Amber Wheeler
Jake Wheeler
Erin Wilson
Torry Wilson
Ben Wise

SIP Mentors

Nathan Anderson
Jason Bandstra
Mike Bandstra
Jill Beebout
Larry Cleverley
Mary Cory
Tom Cory
Glen Drowns
Rob Faux
Eric Franzenburg
Gary Guthrie
Jay Hansen & Family
Chris Hoerichs
Sharon Hoerichs
Cheryl Hopkins
Mike Hopkins
Martin Kramer
Tim Landgraf
Jan Libbey
Mark Quee
Matt Russell
Ben Saunders
Sean Skeehan
Patrick Standley
Angela Tedesco
Tom Wahl

Class of 2014

Ibrahim Ali
Dawn Anderson
Julie Beougher
Daniel Beougher
Anne Bohl
Matthew Brandenburg
Kim Cross
Cheryl Damon
Kevin Dietzel
Ranae Dietzel
John C Gilbert
Sarah Gilbert

Julie Wilber
Scott Wilber
Dan Wilson
Erin Wilson
Lorna Wilson
Torry Wilson

SIP Committee

Donna Bauer
Erin Drinnin
Elizabeth Hertz
Gail Hickenbottom
Vic Madsen
Sean Skeehan
Marc Strobbe
Angela Tedesco
Sally Worley

Soil & Water Conservation District Commissioners

Nathan Anderson
Dennis Abbas
Amber Anderson Mba
Dan Beougher
Russell Brandes
Tom Buman
Dennis Carney
Donald Davidson

Glen Draper
Jean Eells
Steven Fales
Bill Frederick
Kate Giannini
Gary Hammitt
Paul Hathaway
Chris Henning
Mark Hilleman
Joel Horsley
James Iverson
Andy Krieger
Colleen Krogmeier
Laura Krouse
John Lubke
Robert Lynch
Rick Mallams
Stephen McGrew
Michael Natvig
James Reicks
Arnold Schneider
Delores Sedlacek
John Sellers
Dick Sloan
Curt Smith
Steve Smith
Mark Tjelmeland
Kelly Tobin
Rick Waide

Cooperators

Finding solutions to on-farm challenges

Doug Alert	Logan Handsaker	Mark Quee
Dawn Anderson	Rick Hartmann	Derek Roller
Nathan Anderson	Cheryl Hopkins	Kathy Rose
John Arbuckle	Mike Hopkins	Ron Rosmann
Stanley Mehmen	Chad Ingels	Matt Russell
Thomas Burkhead	Emma Johnson	Mike Salama
Bill Buman	Susan Jutz	Ben Saunders
Jordan Clasen	Dave Kenninger	Dave Schmidt
Tom Cory	Greg King	Scott Shiver
Jerry Depew	Tim Landgraf	Tim Sieren
Andy Dunham	Jerry Laughlin	Dick Sloan
Rob Faux	Nicholas Leete	Patrick Standley
Tammy Faux	Aaron Lehman	Francis Thicke
Craig Fleishman	Dave Lubben	Dick Thompson
Ann Franzenburg	Bob Lynch	Mark Tjelmeland
Eric Franzenburg	Joe Lynch	Ellen Walsh-Rosmann
Tom Frantzen	Vic Madsen	Jessica Wesselius
John Gilbert	Alice McGary	John Wesselius
Sally Gran	Steve McGrew	Wendell Zimmerman
Craig Griffieon	Denise O'Brien	
LaVon Griffieon	Bill Pardee	
Jeremy Gustafson	Joanne Peters	
Gary Guthrie	Mark Peterson	

Savings Incentive Program

Savings Incentive Program

Class of 2015



Tyler Albers
Waverly



Narad Bastola (left)
West Des Moines



Deb Draper
Eddyville



Arlene and Darin Enderton
Nashua



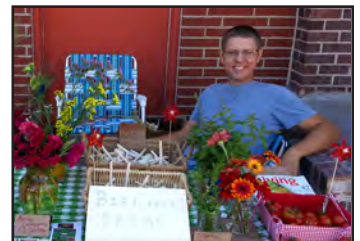
Janna Feldman
Honey Creek



Mukiza Gahetano (right)
Des Moines



Jason Grimm
Coralville



Chad Hensley
Lamoni



Annette and David Hill
Holy Cross



Phillip and Missy Jensen
Ida Grove



Emma and Marcus Johnson
Central City



Wendy Johnson
Charles City



Jason Kerr *
DeWitt

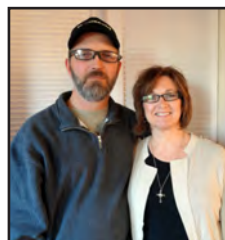
** Photo courtesy of Iowa Farmer Today*



Tyler Magnuson & Caitie Caughey
Hancock



Amber Miller
Story City



Steve & Sue Quail
Spencer



Matt Roe
Allerton



Teresa Stecker
West Liberty



Tony Thompson
Elkhart



Rory Van Wyk
Ankeny



Eric Veach
Zwingle

Learn More
To view profiles of Savings Incentive Program recipients, visit www.practicalfarmers.org/programs/youth-and-next-generation.html

Support for Success: Mentors Help Beginning Farmers Get Off to a Good Start

by Tamsyn Jones

Like most beginning farmers, when Kate Edwards started farming in 2011, she felt a predictable mix of emotions: excitement tinged with fear; certitude clouded by self-doubt. Kate operates Wild Woods Farm near Solon, raising vegetables on 2 acres for her Community Support Agriculture (CSA) business with more than 100 members. Unlike some other beginning farmers, however, Kate started farming with a good business plan – and the support of mentors Dick Schwab, a savvy businessman, consultant and entrepreneur, and Susan Jutz, a veteran vegetable farmer. Both are vested in Kate's success, serving as sounding boards and reality checks, and helping to ensure her dream of farming is anchored in its physical, technical and financial realities.

Dick and Susan fill different mentorship niches. Dick, who has a background in accounting, rents land to Kate and has deep knowledge of business and financial planning. Before becoming a consultant and advisor to organizations and non-profits, he worked for many years in corporate America. Susan operates ZJ Farm near Solon, raising sheep and produce for a 200-person CSA. She has been farming for about 18 years and helped pioneer the CSA model of community-centered agriculture in Iowa.

Kate says both offer guidance on farming and business, but through different lenses. "They both look at things holistically. What Susan is able to provide is perspective on how farming impacts your life," Kate says. "Dick has a lot of business experience, and he's also a visionary."

In day-to-day matters, both mentors operate in the background: Kate makes all the decisions for her farm. While she says Dick and Susan were a little more hands-on her first year, it's their knowledge she especially relies on – the conversations that take place off the farm field. She also stresses they are careful to distinguish between what constitutes mentorship versus any business dealings they have with each other. Dick, for instance, does some custom work for Kate. She also partners with Susan on a fall CSA share.

"They're both giving me their time in terms of mentorship, but services being offered are paid for," Kate says. "That's important because it's helping me understand the true costs of doing business."

Instilling Financial Savvy

Dick and his wife Catherine live in Iowa City and had known Kate – who grew up in Iowa City – and her family for many years. They lost touch after Kate's family moved to Phoenix, but some chance encounters brought them back together just as Kate was seriously looking to start farming. "I hadn't seen them for several years. My parents were passing through Iowa City in 2010 visiting friends and happened to call Dick on the way through," Kate says. "They mentioned that I wanted to farm but wasn't sure how or where, and Dick told them to have me give him a call."

"She stopped by one afternoon," Dick recalls. "I said: 'If you want to farm here, bring me a business plan; show me what you want to do.'" Only after she had – and Dick and Catherine reviewed the plan and offered feedback – did they agree to let Kate farm on their land.

Dick also keeps detailed records of what Kate owes him throughout the year for rent on the land, packing shed and any services rendered, which she pays at the end of the season. But just as in any other professional business relationship, he always encourages Kate to look over the bill so she can "determine if he was charging fair rates." It's a relationship based on mutual trust – and Kate says that Dick's attention to the business side of farming

has helped her develop a more realistic sense of running a farm.

Beyond renting Kate land, Dick serves as both a champion and big picture thinker, helping Kate envision the possibilities for her farm. Her first year farming, for instance, Kate was planning to sell only at farmers markets. Dick suggested she do a CSA and try a couple of different channels. "She got pretty darn good at the wholesale model too, selling to local schools and restaurants," Dick says. "It was significant supplemental income. For those in farming – even for myself – I like diversification in the income stream."

Sharing Life and Production Wisdom

While Susan also helps Kate think about big-picture issues, she's able to offer more specific horticultural advice – and perspective on what it's like to be a woman farming. The two first met in 2006, but Kate

Kate Edwards, Dick Schwab and Susan Jutz



didn't get to know Susan until mid-2011, halfway through her first growing season. Kate had been accepted into PFI's Savings Incentive Program at the start of the year and Susan had been selected as her mentor for the program.

Susan says she thinks her mentorship role is as much about her life experience as it is her horticulture expertise: "I see what I do as a lifestyle. Livestock, particularly dairy, and vegetables – those are very

(Continued on page 27) ➔

Re-energized to Learn More: PFI Members Gather to Reflect on 2013 Research Projects

by Tomoko Ogawa

Despite the approach of a busy holiday season, 65 PFI farmers gathered together at Quality Inn and Suites in Ames on Dec. 5 and 6 to hear presentations on the research and demonstration projects from 2013 and to discuss new project ideas for the coming year. In addition, about 55 researchers and friends-of-farmer members joined for the Cooperators' Meeting dinner, during which a special tribute was held to the late Dick Thompson, co-founder of PFI, and Rick Exner was presented with this year's Master Researcher Award.

In the past, we always held the Cooperators' Meeting in February. This year, however, we tried a new timeframe in response to many requests for earlier meeting dates. Many participants have said that holding the meeting earlier will provide more time to think about project ideas and to prepare before farmers decide which projects will be conducted in the coming year.

While there are many attributes that make Practical Farmers a unique organization, its core strength lies in farmer-led investigation and information-sharing. The Cooperators' Meeting is the backbone to this mission, providing a forum for our farmer members to gather together to learn from previous on-farm research and demonstration projects and to discuss and design new project ideas.

Siobhan Danreis, who farms in Pocahontas County with her husband Sam Eglis, attended the meeting for the first time and gave a presentation on her participation in spray drift monitoring during the horticulture session. Siobhan says the meeting was "food for the soul," where she "learned what others are interested in doing on their farms, and what some of their challenges and successes have been." She most enjoyed the tribute to Dick Thompson, and especially Ron Rosmann's solo guitar and vocal contribution. Other

tributes were delivered by Maria Rosmann, Rick Hartmann, Matt Liebman and Rick Exner.

Another participant, Cheryl Hopkins, returned for her second meeting. Cheryl raises meat goats at Frog Hollow Farm near Walker with her husband Mike, and presented data from her pasture monitoring project to the livestock group. She says, "All PFI events are a tremendous opportunity to network with and learn from successful producers that have their boots on the ground. PFI members are a bounty of information and freely share it with anyone who will listen."

Wendell Zimmerman, who farms near Fontanelle, attended his first meeting in December because he "wanted to learn more about things that he wants to try in [his] field crop operation." While he enjoyed meeting new people and hearing what others are doing, he says he also wanted to hear about what didn't work, as "we all learn from our mistakes." ■



From left: Sue Kauffman, Kelly Tobin, Doug Johnson and Ron Brunk brainstorm new field crop research ideas.



Since 1987...

... PFI farmer cooperators have conducted nearly 900 on-farm experiments and shared that information with neighbors, farmers and the public.

In 2013...

... 73 farmers took part in 38 projects.



Mark Rasmussen presents Rick Exner with the Master Researcher Award. Rick started and ran the Cooperators' Program for many years.



▲ Above: From left: Wade Dooley, Dave Schmidt and Kevin Dietzel chat during the Cooperators' Meeting dinner.

◀ Left: Ron Rosmann performs a song in tribute to Dick Thompson.



PROJECT BRAINSTORM IDEAS FOR 2014

Livestock Project Ideas

1. Can grazing cover crops extend winter cattle feed options without harming subsequent cash crop yield?
2. What are the effects of various grazing management techniques on perennial pastures?
3. Can tall fescue predominance in a pasture be reduced through grazing management?
4. Can perennial pastures be renovated through combinations of high-stock density grazing and interseeding new forage species?
5. What are the benefits of grazing versus haying?
6. What are the economic opportunities and barriers in poultry production?
7. How do two duck breeds compare for dual-purpose (meat and egg) production?
8. Can parasite loads in goats be reduced through grazing management?
9. Is milking once daily better economically and for animal health than milking twice daily?
10. What affects the costs of feeding cows during the winter, and how can the cost be reduced?
11. How can the effects of flies on animal health and performance be measured, and what management or treatment options help reduce fly loads on cattle?
12. What are the effects of apple cider vinegar supplementation for goats?
13. What alternative, low-cost, non-grain feeds can be used to raise hogs to market weight, and are there any nutritional differences in the meat?
14. Can feed efficiency of hogs be increased by tightening down self-feeders?
15. Does treating grow-finish organic hogs with Ivermectin affect feed efficiency or gain?
16. Does pelleting an organic hog ration affect feed efficiency or gain of grow-finish hogs?

Energy Project Ideas

1. Can a farm be energy self-reliant?
2. How much wooded area is needed for sustainable harvesting to supply a wood-burning stove?

3. Which species of trees are best to grow for efficient and sustainable harvesting and use in wood-burning stoves?
4. How does the energy use and cost for a farm-built, walk-in cooler using a CoolBot system compare to a commercial cooler of the same size?
5. How can I determine the baseline energy consumption, cost and environmental impact (in terms of CO₂ emissions) of my farm?
6. How much energy do the different systems on our farm use?
7. How much energy does our irrigation system use?
8. Which greenhouse energy inputs are most cost-effective for seedling production?

Field Crops Project Ideas

1. What are the economics of conventional tillage versus no-till?
2. What are the economics of a three-year rotation?
3. What are the long-term effects and the nitrogen replacement value of an underseeded red clover legume versus a diverse cover crop mix planted following small grain harvest?
4. What are the best management practices for adding winter rye to a crop rotation?
5. What are the yields of GMO and non-GMO corn hybrids?
6. What is the performance of six-row strip-cropped corn or soybeans?
7. What is the performance of neonicotinoid-treated and non-neonicotinoid-treated seed?
8. What is the best way to manage nitrogen in corn following a rye cover crop, considering nitrogen rates and nitrogen stabilizers?
9. Is drilling soybeans into standing rye at anthesis a good method for planting soybeans?
10. What is the effect on cash crop and soil quality of planting winter rye versus a fall-seeded oat cover crop preceding corn?

Horticulture Project Ideas

1. Which perennial living mulches increase pollinator abundance and diversity?
2. What is the yield data for fruit and vegetable farms in Iowa?
3. Does applying compost tea extract to soil improve vegetable quality and yield?
4. Which is best for weed control and product yield for sweet potato and watermelon: plastic mulch, paper mulch or no cover?
5. How do various living cover crops affect broccoli production?
6. Which methods of pest management are most efficient and effective against stink bugs?
7. Can sun hemp be grown for seed production in Iowa?
8. Does tillage practice impact the effect of winter cover crops on cash crops?
9. Which cover crop species have the best weed suppression and biomass growth between spring and fall cash crops?
10. Do organic worm castings improve crop yield?
11. Are pesticides drifting to vegetable farms in Iowa?
12. Does planting cash vegetable crops into a mowed or crimped cover crop increase yield?
13. Does interseeding or overseeding cover crops into a cash crop suppress weeds and increase yield?
14. How is whole-farm income composed on different farms?
15. Does nearby prairie habitat increase the diversity and abundance of pollinators in vegetable crops?

NOTE: These are project ideas; not all will turn into projects. Of those that do, not all projects will be completed in 2014; some might span multiple years. Check back at our next Cooperators' Meeting for results from 2014 research.

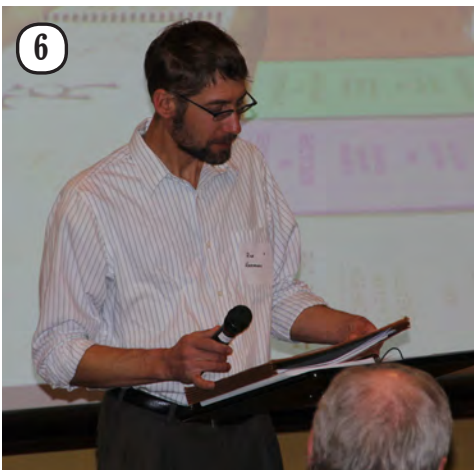
Cooperators' Meeting Recap



1. The field crop group discusses on-farm energy project ideas.
2. Gayle Olson, of J & G Olson Farms in Winfield, shares what she is most curious about during the Cooperators' Meeting dinner lightning round, a long-standing meeting tradition.
3. **Clockwise from left:** Britt Moore, Bob Lynch, Wendell Zimmerman and Jay Mar chat during a break.



4. **Clockwise from left:** Jill Beebout speaks with Jordan Scheibel, Denise O'Brien, Mark Gee and Britt Moore during a horticulture planning session.
5. Alice McGary (center, with pen) discusses a research project with (from left) Siobhan Danreis, Gary Guthrie and Ben Saunders.
6. Rick Hartmann, of Small Potatoes Farm near Minburn, delivers his tribute to Dick Thompson during the Cooperators' Meeting dinner.
7. Jeremy Gustafson presents research he conducted on cover crops to other field crop farmers.



by Drake Larsen

Reflections on a Farmer-Visionary

In December, friends, farmers and those continuing Dick's work in sustainable agriculture gathered at PFI's Cooperators' Meeting – the symbolic heart of the organization – to share memories and pay tribute to the man and friend they credit with inspiring their own commitment to seeking a better path in agriculture. Dick Thompson, Boone-area farmer, master researcher and co-founder of Practical Farmers of Iowa, died Aug. 17 at the age of 81. Dick and his wife, Sharon, led the way in using replicated, randomized on-farm research to find more sustainable farming practices that benefited the land, animals and people. Their example has influenced countless people and farmers, and continues to resonate in the mission of PFI.

The Thompson Legacy

With Dick's death, Practical Farmers' staff has renewed its commitment to his legacy by vowing to perpetuate his wisdom through all the work of Practical Farmers of Iowa, and by reflecting on *Alternatives in Agriculture* in future publications and research reports. This article is the first installment of that endeavor, and upon contemplating the *Alternatives*, there seems to be no better way to start than by reprinting the first paragraph of the first chapter:

Our experience tells us that there are no quick answers to solve agriculture's problems. We find ourselves asking more questions each day and hope we are asking the right questions. We will share our experiences and principles and you will have to do the sorting. We would like to you to consider adapting these ideas to your situation, rather than adopting them. The new ideas we share come by inspiration and perspiration. We are very thankful for the inspiration from above but when the inspiration seems so far away, we had a single purpose in mind and were able to stand together against the tide.

Dick Thompson was more than a co-founder of Practical Farmers of Iowa, and he brought more to the table than just farming information and the how-to's of randomized and replicated trials. Dick gave farmers the opportunity to network with one another through field days, farm tours and regular meetings. He created a wonderful family among the Practical Farmers membership.

Maria concluded her tribute with these words: "Dick Thompson endowed Practical Farmers of Iowa – and in many ways Iowa State University – with his knowledge, his willingness to share and his brilliant approach to being a forward thinker. The endowment left by the work of Dick Thompson was a lifetime of sharing the knowledge of good farming practices that keeps more money in the farmer's pocket and keeps our natural resources where they should be." ■

Farmers, researchers and friends-of-farmers alike, "we've all been impacted in one way or another by the mission of Dick Thompson, whether or not you ever met the man," Maria Rosmann decreed in her role as Master of Ceremonies during the Thompson tribute dinner on Dec. 5, held during Practical Farmer's annual Cooperators' Meeting. Maria, who farms with her husband Ron Rosmann at Rosmann Family Farm near Harlan, was one of several people to pay homage to the man who left such a profound legacy. Maria joined Rick Hartmann, Matt Liebman, Master Researcher Award recipient Rick

produces fruits, vegetables and eggs, while Dick had an integrated field crop and livestock operation that he once described as "corn, beans, oats and hay, cows and sows." Rick graciously articulated how his relationship with Dick had provided the courage that is sometimes necessary to practice an alternative agriculture – encouragement being the one of the greatest gifts.

How Did Dick Influence Me Most?

The answer lies here," Rick said, "in this book," holding up a 1996 edition of Dick and Sharon Thompson's *Alternatives in Agriculture*. Rick was not the only one who brought his copy of the spiral-bound manifesto to the tribute that evening; various editions were seen on tables, or being skimmed as gatherings of friends flipped through pages, nodding emphatically while admiring treasured thoughts from an icon of Iowa agriculture.

"The important and influential part of this book for me is not the research results, per se. The important part for me is the introduction, the

first chapter and the last chapter," Rick explained. "In these sections, there are no replicated strip trials, but there lies a de facto farm manual." Regardless of the differences between farms, this book provides a "manifesto of guiding principles that tells what integrated, or sustainable, agriculture is, why it is important and how to do it – no matter what crops you raise or what your role is in agriculture."

Exner and Maria's husband Ron – who rounded out the occasion with a musical tribute – in delivering messages of love and gratitude for the man they described as a friend, a colleague, a visionary and a humble giant.

Rick Hartmann, who runs Small Potatoes Farm near Minburn, spoke of the lessons learned from Dick even though his organic vegetable farm is very different than the Thompsons' grain and livestock farm. Rick



Growing Food in a Hotter, Drier Land: Lessons on Adapting to Climate Uncertainty

by Rick Hartmann

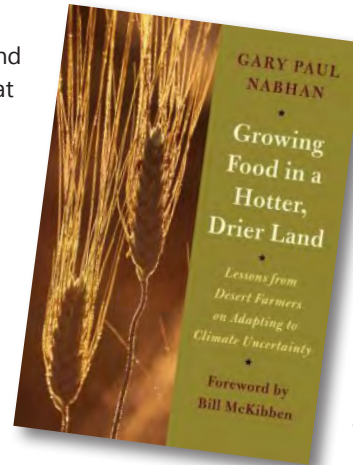
Each year, Small Potatoes Farm tries to anticipate the greatest risks to the farm and then put forth a plan to mitigate those risks. In our 2010 annual farm report, we identified “volatile climate conditions ... as a potential serious risk to the farm going forward.” Volatile weather has earned top-of-list honors each year since. Having the weather as your farm’s gravest threat leads to general uneasiness, mostly because we have no control over the weather.

In *Growing Food in a Hotter, Drier Land: Lessons from Desert Farmers on Adapting to Climate Uncertainty*, author Gary Paul Nabhan admits to the same feeling of incapacity to do anything. His personal frustration stemmed from his failure raising livestock and crops during a recent and historically dry, hot period on the Colorado Plateau. Rather than throw up his hands, Nabhan made a decision to take action. These actions have resulted in his book: a collection of inventive farming techniques from the world’s dry lands and desert farmers. It is meant to guide all food producers in adapting to climate change.

The text touches on the recent scientific literature concerning climate change, water supplies, food production and other pertinent subjects, but doesn’t overly rely on them. Instead, the focus of each chapter of his book contains a story of a farmer or elder from some desert realm and shares his or her experiences, advice and techniques to grow food. Nabhan then extracts from these stories the principles and premises embedded in the long-term success of these farms and communities. Finally, Nabhan proposes planning and practices that could be implemented in your garden, farm and larger community.

The types of practices found in hotter, drier climates that Nabhan enumerates are many and diverse. They include fredges (living fencerows), water harvest structures, storage wells, olla irrigation (buried clay pots), terraces, waffle gardens, nurse plant guilds, use of compost and improved organic matter, bimodal plant selection (they do well in drought and flood), perennial plant preference, use of short-season annuals (ephemerals that produce quickly when water is available) and more. Combined, they are the tools available that can be used to design durable, resilient food production systems.

The traditional desert farming techniques described by Nabhan are not readily adaptable, if it all, to the dominant Midwestern agricultural systems – large, relatively flat fields and large machinery. Their imitation could more easily be done by fresh food producers. Much of the traditional farming techniques described involve an intimate knowledge of the land and more than occasional interaction



with it. They also require maintenance, observation and hands-in-the-soil participation. But as Nabhan says at the beginning of the book, these desert adaptations are meant to inspire and stimulate the imagination so food producers of any region can better adapt to changing climate stresses on their farm.

Staying ahead of anticipated increases in temperatures and decreases in available water resources, according to Nabhan, is not merely purchasing a product or changing a single practice. It is an investment and takes time. For example, Nabhan says the fruit or nut orchardist will need to anticipate weather 20 (or more) years in the future and select varieties requiring far fewer chill hours so they maintain their productivity throughout their life. If you have made the determination that climate change, particularly hotter and drier weather, may have a significantly negative impact on your food production, then I would recommend Nabhan’s book. Now would be the time to allocate thought and resources toward insuring your continued ability to produce food. ■



Rick Hartmann displays some forage soybean leaf at a field day he and his wife Stacy hosted last August.

Rick Hartmann raises certified organic produce for a 100-person CSA at Small Potatoes Farm, which he operates with his wife, Stacy, near Minburn.

William Gilbert and the Gilbert Legacy

by Tomoko Ogawa

Long-time member, the late William H. Gilbert, included Practical Farmers in his will. He was the father of John (married to Bev) Gilbert; and the grandfather of John C. (married to Sarah) Gilbert, James and Kate Gilbert, all PFI members. It was John's involvement with PFI that led William to first learn about the organization – one of many examples illustrating how he was always willing to learn and adopt new ideas or practices from the next generation.

While William joined PFI because of his son, John says that, in many ways, he had already been a Practical Farmer: “He was well read, kept extensive records and believed the right way was the best way to do anything, even if it wasn't the easiest.” John remembers how, as a junior high student, he realized his father wasn't like other farmers in the area to such a point that he wasn't accepted in their cliques. However, John

adds his father “didn't have time to let that bother him, because his days were always long with milking and farming.”

William used a mix of seven legumes and grasses for his hay field seeding, and planted a mix of corn, soybeans and forage sorghum – practices John and the family continue today with only minor changes. William also believed in waterways and other conservation practices, and routinely hauled large quantities of manure. William and his wife, Mary, spent a long time determining how they wanted their lifetime of work to be passed on, and prepared legal documents spelling out their wishes.

As is common with those who lived through the Depression, having savings in case they were needed was important to William and Mary, and the groups and organizations they felt were important received a portion of what remained when they died, including PFI. John says, “Probably one of the things he was particularly proud of was his grandson, John C. and his wife Sarah, carrying on the



William Gilbert (seated in chair) with, clockwise from left: James, John, Bev, John C. and Kate Gilbert.

dairying tradition, which dates to when the Gilberts first came to Hardin County in the 1870s.” ■

Mentoring the Next Generation (cont'd)

◀ (Continued from page 21)

demanding. It's 24/7 some of the time, and you have to factor that in. It affects your entire life. If you look at models within PFI like the Frantzens, Rosmanns and others who have been around a while, that's what they're doing: It's about a business plan as well as a life plan.”

One danger for beginning farmers, Susan says, is getting excited about seeing a farmer who has successfully scaled up and feeling eager to get there too. While she adds that Kate is “the kind of person capable of making that happen,” she and Kate have had long conversations about this topic – and others. Susan says she recommends that all beginning farmers talk to experienced farmers – multiple ones, if possible. “You can go too fast, but

that's one thing Kate and I have discussed: What's going to work for her. Mentors can help reality-check all that information that's available.”

Mentorship is Priceless

All three agree that mentors are vital to beginning farmers' success – especially today. “For a beginning farmer, it's a rare one that can go from not farming to self-sustainable farming the first year,” Dick says. “Mentoring young farmers and helping them get moving at the right pace is a noble pursuit.”

Susan, recalling the trial-and-error she had to go through because mentors in her field simply didn't exist when she was

starting out, thinks she and Dick have helped Kate develop her potential faster than she would have on her own. “She was successful in many ways when I met her, and she's moved that to a different level by working with me and Dick.”

Kate agrees, remembering how she would sometimes text Susan from the field asking for advice about a pest problem. “Any person getting into farming needs to recognize they can't do it on their own, from a knowledge perspective. In any profession, people need mentors. That's the side of the question you can't put a dollar value on.” ■

Rick Exner Receives Master Researcher Award

Rick Exner received a Practical Farmers of Iowa Master Researcher Award for his work in coordinating experiments and analyzing results of more than 800 on-farm research projects since the inception of the Cooperators' Program in 1987.

For many years, Rick was the farming systems coordinator for Practical Farmers of Iowa, and served as an integral part of the cooperative relationship between Practical Farmers and Iowa State University. This close association was critical for conducting robust on-farm research, as well as allowing university scientists carry out their own work in collaboration with producers. Rick received the award on Dec. 5, during the annual Cooperators' Meeting.

The Cooperators' Program gives farmers practical answers to questions they have about on-farm challenges through research, record-keeping, and demonstration projects. The Cooperators' Program began in 1987 with farmers looking to save money through more judicious use of



inputs. In the early days, PFI Cooperators researched the effect of different rates of nitrogen fertilizers on corn yield and how to successfully add cover crops to the farming system. Today PFI has increased its on-farm research projects to include grazing, horticulture, on-farm energy and food purchasing projects. ■

Ann Franzenburg and Wendy Johnson Join the PFI Board of Directors

Every year, Practical Farmers shares important updates about the organization and holds elections for any open board positions at the business meeting held during PFI's Annual Conference. This year, members voted to elect Ann Franzenburg to a first-term at-large farmer position on the board. The board also appointed Wendy Johnson to fill Earl Hafner's vacated at-large farmer position.

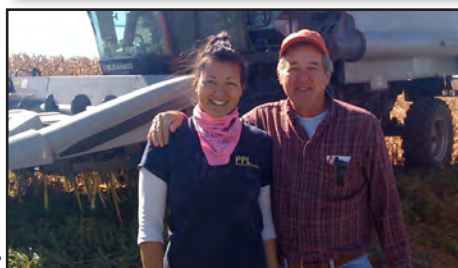
Ann Franzenburg farms with her husband, Eric, near Van Horne. They have a diversified family farm operation that includes the traditional Iowa row crops with the not-so-traditional vegetable, fruit, medicinal herb and cut flower crops. Ann believes that because of their farm's diversity, she has many perspectives on farming that will guide her as a PFI board member. The couple has three children, a dog and six fat farm cats.

Wendy farms corn and beans with her father and a cousin near Charles City. After

a career on the West Coast, she moved back to Iowa to farm in 2010 after her father began contemplating retirement. Along with her new board duties, she is enrolled in the Savings Incentive Program. Wendy and her husband, Johnny Rafkin, have a young daughter. ■



Ann Franzenburg

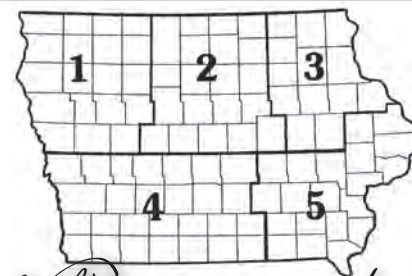


Wendy Johnson with dad Erwin

Cover Crop Farminars Coming up in March

Practical Farmers, the American Society of Agronomy and the National Wildlife Federation are hosting the farminar series. Each farminar will feature an academic and a farmer from across the Cornbelt, who will share their insights on various cover crop topics. Listen in every Thursday in March from noon-1 p.m., central time. For Certified Crop Advisers, CEUs will be offered. Thanks to the generosity of several sponsors, this series will be available for free. The series will also be archived and available to view online:

- **MARCH 6 – Cover Crops, Soil Health Principals and Maximizing Yield**
PRESENTED BY: Kristine Nichos, USDA-ARS, Mandan, ND, and a second speaker TBA
- **MARCH 13 – Combining Livestock, Manure and Cover Crops**
PRESENTED BY: Kent Solberg, MN livestock farmer and Tim Harrigan MSU
- **MARCH 20 – Cover Crop Seed Selection and Planting**
PRESENTED BY: Jim Hoorman, The Ohio State University Extension, and Keith Berns, Green Cover Seed, NE
- **MARCH 27 – Cover Crop Management and Termination**
PRESENTED BY: Mike Plumer, Cover Crop Consultant from IL, and a second speaker TBA



Welcome, new members!

District 1–Northwest

- Alicia Bembenek, Pocahontas
- Jennie Erwin, LeMars
- Daniel Heilman, Hartley
- Michael Kaskey, Alta
- Deb and Bruce Zemke, Knterim

District 2–North Central

- Jeremy Bents, Boone
- Denise and Dean Biechler, Ames
- Charlotte Cleavenger, Ames
- Jean Eells, Webster City

(Continued on page 30) ➔

Susan Jutz Receives 2014 Sustainable Agriculture Achievement Award from Practical Farmers of Iowa

by Tamsyn Jones

SOLON, Iowa — Susan Jutz of Solon has been chosen as the recipient of the 2014 Sustainable Agriculture Achievement Award, granted annually by Practical Farmers of Iowa to someone who has shown exemplary commitment to sustainable agriculture, generously shared his or her knowledge with others and been influential in efforts to foster vibrant communities, diverse farms and healthful food. The award will be presented to Susan at a dinner on Friday, Jan. 24, during Practical Farmers' 2014 Annual Conference, "Well Grounded," in Ames.

Susan owns and operates ZJ Farm, an 80-acre diversified vegetable and sheep farm located between Iowa City and Cedar Rapids. In 1996, she co-founded Local Harvest CSA, a three-season Community Supported Agriculture program that was one of the first CSAs in Iowa, and which helped pave the way for this model of community-centered farming to take root and flourish in the state. Since then, Susan has been a principal partner and vegetable grower for the CSA, which now supplies more than 200 families with a wide variety of fresh vegetables and herbs grown using organic and sustainable practices.

"Susan has always been willing to share her expertise in farming with anyone," says Dan Wilson, president of Practical Farmers' board of directors. "Her commitment to making agriculture more sustainable is leaving an impact on Iowa's agricultural landscape, and she is blazing a path for other women to follow."

Leading by Example

The board cited many examples of Susan's commitment to sustainable agriculture and outreach. Besides serving as a past Practical Farmers board member and board president, Susan has shared her knowledge with the public at numerous field days and been a long-time participant in Practical Farmers' Cooperators' Program, a program rooted in the ethos of farmers finding independent solutions to on-farm challenges through on-farm research and demonstration projects – and then sharing that knowledge freely with other farmers.



Susan has also mentored several aspiring or beginning farmers over the years. Recently, she mentored beginning farmer Kate Edwards, owner of Wild Woods Farm, through PFI's Savings Incentive Program. She and Kate are also partners, along with business entrepreneur Dick Schwab, in The Farming Institute, a summer training program designed to equip emerging farmers with in-depth and hands-on farming experience.

When notified that she was selected to receive this year's Sustainable Agriculture Achievement Award, Susan says, "I was astonished. There are so many amazing farmers in Practical Farmers of Iowa that it's a huge honor to be selected from among such excellent farmers who are striving hard to leave their land and communities in a better place."

Rooted in Sustainability

Part of Susan's unwavering belief in sustainable models of agriculture stems from her vision of sustainability as an ongoing process, rather than a static goal with a firm endpoint. "To me, sustainable agriculture is like a dance with your community, with your land, with your environment, to adapt to the ever-changing world. Right now we're dealing with a volatile climate, what worked for me 10 years ago isn't working now. The

only way I can be effective is to keep experimenting with ways to achieve a better balance."

Susan credits her parents with instilling in her a love for the land and her ethic of stewarding it as sustainably as possible. She grew up on her family's dairy farm near Gibbon, Minn., and recalls her father as being "an excellent farmer" who "really cared about the land."

Susan says, "They used a limited amount of chemicals and were very in touch with their land and animals. They always talked about the future, our responsibility to those who came after us and our responsibility to the land, animals and community."

Before moving to Iowa in 1994, Susan first pursued and received a Master of Social Work from the University of Minnesota Duluth, and she worked in the field of social work before purchasing land in Iowa and starting ZJ Farm. Before settling on vegetable production as her main enterprise, she experimented with a range of other enterprises, from finishing hogs on contract to adding sheep, to a goat dairy that also produced goat cheese. Regardless of enterprise, Susan was always determined to be profitable while following sustainable practices. "We were only an 80-acre farm, but I was determined that we were going to make money on that farm." ■

Welcome, new members!

◀ (Continued from page 28)

- Jim and Cheryl Erb, Charles City
- Kata Erickson, Albion
- Merrick Flynn, Nevada
- Karin Grimlund, Ames
- Kevin Holl, Conrad
- Integrity Hybrids, Stuart Grum, Kelley
- Betsy Jensen, Story City
- Nick Koster, Garwin
- Helen Leavenworth, Jefferson
- Savanna Lyons, Ames
- Guiseppe 'Joe' Maselli, Boone
- Lee Matteson, Nevada
- Karl Nicolaus, Whittimore
- Niman Ranch, Lori Hardman, Latimer
- John Olson, Ames
- Steven Rayman, Elberon
- John and Helen Scuffham, Algona
- Steve Strasheim, Nora Springs
- Vern and Lyn Vande Brake, Randall
- Janet Wiechert, Gilmore City

District 3--Northeast

- Martha McFarland, Fredericksburg
- Tammerlane Schnock, Cedar Falls
- John Schulte, Norway
- Priscilla Sliwa, Decorah

District 4--Southwest

- Catherine DeLong, Des Moines
- Erica Doud, Ankeny
- Glen and Luana Harman, Shelby
- Jason Jones, Des Moines
- Kris King, Altoona
- Mark Konrad, Des Moines
- Glenn and Michelle Kreuder, Garden Grove
- Carole Mapes, Earlham
- Tim Palmer, Truro
- Cathy Priest, Chariton
- Dale Raasch, Bridgewater
- Raccoon River Watershed Association, Michael Delaney, Des Moines
- Daniel Reading, Pleasantville
- Jim Scott, Knoxville
- Gene Steenhoek, Prairie City
- Sherrie Taha, Des Moines

- Jamie Thompson, Glenwood
- Jeremy and Kayla Walter, Farragut
- Matthew Wiese, Earlham
- Nicholas Wuertz, Des Moines
- Wendell Zimmerman, Greenfield

District 5--Southeast

- Anna Bruen, Fairfield
- Don Cranston, Deep River
- Ann DeHart, North Liberty
- Aaron Juarez, Grinnell
- Lawrence and Sue Koehrsen, Muscatine
- Wayde and Karen McNeil, Grinnell
- Fred Meyer, Iowa City
- Joyce Miller, Coralville
- Bonnie Riggan, Iowa City
- David and Cheryl Staley, Bloomfield
- Karla Stoltzfus Detweiler, Iowa City

District 6--Out of State

- Peter and Maureen Allen, Viola, WI
- Benchmark Trading, Inc., David Christensen, Cedarburg, WI
- Hannah Breckbill, Eyota, MN
- Corene Bregendahl, South Haven, MN
- John Brown, Providence, RI
- Jon Fox, Amboy, MN
- Jason Hering, Lawrence, KS
- Martha Holdridge, Bethesda, MD
- Eliza Honan, St. Paul, MN
- Land Stewardship Project, Caroline van Schaik, Lewiston, MN
- Arnold Lau, Evanston, IL
- Kevin Loftis, Craig, NE
- Steven Pincus, Evansville, WI
- Adam Taylor, Lockport, NY
- Brian Taylor, Offutt Airforce Base, NE
- The National Center for Appropriate Technology, Kevin Ellis, Butte, MT
- Andrew Welch, Sheridan, MO

UPCOMING EVENTS – FEB. | MARCH | APRIL

Feb. 18 – SARE National Conference on Cover Crops and Soil Health | Omaha, NE and locations nationwide | FREE

Join the conversation at one of nearly 200 Cover Crops and Soil Health Forums to be hosted nationwide by the Natural Resource Conservation Service (NRCS) and Cooperative Extension offices. Each forum will feature a live-streamed video broadcast of the opening sessions of the national conference in Omaha. Following the broadcast, discuss how cover cropping can build soil health, improve yields, curb erosion, manage pests and build resilience into your farming system. The forum is open to all. For more, visit: www.sare.org/Events/Forum-on-Cover-Crops-and-Soil-Health

Feb. 19-20 – Midwest Soil Health Summit | Alexandria, MN | \$100 for SFA members; \$150 for non-members

The Sustainable Farming Association of Minnesota is hosting this summit that will convene some of the most innovative farmers and researchers in the Upper Midwest for two days of networking, speakers, panel discussions and breakout sessions – all geared toward improving soil health. For more, visit: www.sfa-mn.org

Feb. 21-22 – 2014 Missouri Blueberry School | Springfield, MO | \$50 (\$35 for each additional person)

This event brings together all who have an interest in blueberry production in Missouri and surrounding states. This year, spotted wing drosophila will be among the topics discussed. Others topics will include blueberry soil health management, flash freezing as a way to preserve blueberry fruit, updates to the Midwest Small Fruit and Grape Spray Guide, and blueberry disease diagnostic techniques. The second day of the conference will feature a tour to two blueberry farms to learn about production practices. For more, visit: extension.missouri.edu/blueberry

Feb. 24 – Growing Growers Workshop: "Farm Start-Up, Accessing Land & On-Farm Crop Storage" | Kansas City, KS | 4-7 p.m. | \$15

Growing Growers was established to address the need for more farmers and for more effective farmers. As a collaboration between K-State Research and Extension, University of Missouri Research and Extension, Lincoln University Cooperative Extension, the Kansas City Food Circle (a consumer organization), Cultivate KC and the Kansas Rural Center, it seeks to provide educational opportunities to help new growers get started and established ones get better at what they do. For more: www.growinggrowers.com/growing-growers-workshops

Feb. 27-March 1 – 25th Annual MOSES Organic Farming Conference | La Crosse, WI

Started 25 years ago as a gathering of 90 people who wanted to learn more about farming organically, the MOSES Conference has grown to become the country's foremost educational and networking event for the organic community with annual attendance topping 3,000. Learn more or register at: mosesorganic.org/conference

March 3-4 – 8th Annual Iowa Water Conference | Scheman Building | Ames, IA | \$150 (by Feb. 21); \$175 (after Feb. 21 or walk-in); student rates available

The theme this year's event is "Making Connections – Solving Problems: Water strategies for Success in a Changing World." Explore current trends across water resource management in urban and rural landscapes,

with a particular emphasis on the interconnected nature of our water resources. Attendees can anticipate sessions in stormwater and floodplain management and the intersection of agriculture and the environment, with each track incorporating technical presentations, education and outreach information and problem-solving workshops. For more, visit: www.aep.iastate.edu/iwc

March 16 – Home-Scale Mushroom Cultivation | Caledonia, IL | 1-4 p.m. | \$65

Learn to grow your own mushrooms at home, using simple equipment and materials. You'll leave with the knowledge and skills you need to start growing mushrooms for your family, plus your own mushroom starter kit to take home. For more, visit: www.learngrowconnect.org/event/home-scale-mushroom-cultivation

March 17 – Growing Growers Workshop: "Production Planning & Plant Propagation" | Belton, MO | 4-7 p.m. | \$15

Growing Growers was established to address the need for more farmers and for more effective farmers. For more, visit www.growinggrowers.com/growing-growers-workshops or to register, contact: Katie Nixon at nixon@lincolnu.edu

March 20-22 – Aquaponics Master Class | Montello, WI |

This comprehensive course by Nelson and Pade, Inc. covers all aspects of aquaponics and controlled-environment agriculture. Our Aquaponics Master Class is intended for anyone seriously considering getting into aquaponic food production, or those already doing aquaponics who want to learn more about the technology. Learn more: aquaponics.com/page/aquaponics-master-class-3-days

March 25 – Webinar: "Food Safety Liability & Regulations" | Farm Commons | FREE | 6 p.m. (CDT)

Learn the latest on how farms can comply with the Food Safety Modernization Act as it goes into effect and how they can protect their operations from liability in general. For more, visit: farmcommons.org/webinars

April 5 & 12 – Apple Grafting and Tree Care Workshop | Seed Savers Exchange | Decorah, IA | \$45

Select from workshop times available on either of these dates. Learn the ancient art of grafting and practice apple propagation with SSE staff. Discuss early tree care, training and pruning and take home a few grafted trees to begin your very own orchard. Attendees will go home with three heritage apple varieties and the skills to start their own orchard. Registration is required. For more, visit: www.seedsavers.org/Education/Events/

April 8-9 – Midwest Cover Crops Council Annual Working Meeting | Warsaw, IN

The meeting also will include a visit to cover crops plots at a nearby farm. Producers are encouraged to attend the field day. For more, visit: www.mccc.msu.edu/index.htm

April 19 – Growing Growers Workshop: "Introduction to Soils" | Kearny, MO | 9 a.m. – 2 p.m. | \$30

Growing Growers was established to address the need for more farmers and for more effective farmers. For more details, visit www.growinggrowers.com/growing-growers-workshops or to register, contact Lala Kumar at kumar@missouri.edu

For more events, visit practicalfarmers.org/events.php

Grow your farm with PFI. Join today!

This annual membership is a:

- New membership
- Renewal

I am joining at the level of:

- Student—\$20
- Individual—\$40
- Farm or Household—\$50
- Organization (including businesses, agencies, not-for-profit groups)—\$100
- Lifetime Member—\$1,000

My interest in joining PFI is primarily as a:

- Farmer/grower
- Non-farmer – (You will have the opportunity to expand upon this when you receive your membership information form.)

How did you hear about Practical Farmers of Iowa?

..... Each membership includes one subscription to *the Practical Farmer*.

Sustain PFI

For the long-term health and vitality of PFI, we ask you to consider making a donation above and beyond your membership fee. I would like to make a tax-deductible donation to PFI in the amount of:

- \$1,000
- \$500
- \$250
- \$100
- \$50
- \$_____

JOIN OUR GIFT OF THE MONTH CLUB

The Gift of the Month Club is an easy way to support Practical Farmers of Iowa! Send in your pledge with your credit card information, and we will automatically deduct your donation the first of each month.

YES! I would like to give _____ per month to PFI, to be automatically charged to my credit card the first of the month. (\$10 per month minimum)

Practical Farmers of Iowa is a 501(c) 3 organization. Your gift is tax deductible to the extent allowed by law.

Thank you!

Individual, Farm or Organization Name*: _____

Mailing Address: _____

Street: _____

City, State, ZIP: _____

Primary Phone (with area code): _____

Alternate Phone (with area code): _____

Email: _____

* For Farm/Household membership, please list names of persons included. For Organization membership, please list one or two contact persons.

Payment:

Total: \$_____ = \$_____ membership + \$_____ donation

- Check or money order enclosed. (Please make payable to "Practical Farmers of Iowa.")

TO PAY WITH A CREDIT CARD, PLEASE GO TO: <http://practicalfarmers.org/join-pfi.html>

Practical Farmers of Iowa

600 Fifth Street, Suite 100

Ames, IA 50010-6071



Diverse Farms

Farms that are prized for their diversity of crops and livestock their wildlife, healthy soils, innovations, beauty and productivity their connection to a rich past and a fulfilling present where individuals and families are earning a good living



Healthy Food

Wholesome food that is celebrated for its connections to local farmers to seasons, to hard work and good stewardship Communities alive with diverse connections between farmers and friends of farmers



Vibrant Communities

Places where commerce, cooperation, creativity and spirituality are thriving Places where the working landscape, the fresh air and the clean water remind us of all that is good about Iowa.

