Montana Organic Association

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Summer 2012

Organic Matters

Date Set for MOA Farm Tour - Register Today!

by Wes Gibbs, MOA Board of Directors

MOA's Summer Farm to Market Tour will take place in the Great Falls area on Thursday, August 9. The tour will provide a unique view of organic food production from the field to the shopping cart. Two local organic farms and a Great Falls organic food market are stops for the day-long tour.

FARM TO MARKET TOUR

Thursday, August 9, 8:00 AM - 5:30 PM

Register by Tuesday, August 7

Call: 406-868-0513

Email: keel3@hotmail.com

The $15 registration fee includes a ride in a chartered bus to the tour locations and lunch at noon. Seats on the bus are limited and pre-registration by August 7 is necessary in order to reserve a bus seat.

The day-long tour is open to everyone, but it's specially designed for food consumers, says Sam Schmidt, MOA Vice Chair. "Participants will learn the basics of organic production, see food growing in the field and then how it is labeled and marketed," he explains.

The tour will leave from the 2J's Fresh Market parking lot, 105 Smelter Avenue Northeast, Great Falls, at 8 AM. The first visit will be to the Clay McAlpine Ranch in Valier, Montana. Clay raises organic crops and livestock and will discuss animal quality of life and the impact of food production on the land. He will also help food buyers better understand differences between organic, natural and non-organic food production.

Next, the tour will travel to Jacob and Courtney Cowgill's Prairie Heritage Farm near Conrad. Tour participants will see the Cowgill's small-scale diversified farm and learn more about heritage and ancient staple crops. They will also see how local marketing of food produced by small-scale diversified organic farms takes place.

The last stop of the tour will be 2J'S Fresh Market in Great Falls. Store manager Dylan Pedersen will help food buyers see what organic products are in the store and explain what the organic label means. 2J'S is committed to local sourcing for as many products as possible. The tour will end at about 5:30 PM.

Schmidt says a Growth Through Agriculture grant from the Montana Department of Agriculture is providing additional funding for the Field to Market Tour.

HOW TO PRE-REGISTER:
By August 7, call 406-868-0513, or email keel3@hotmail.com

TOUR FEE: $15, includes lunch and bus ride until seats are filled.

HOW YOU CAN HELP: Come yourself, but better yet, bring a friend and you'll become better informed about organic food production, marketing and labeling.

Inside This Issue

Montana Organic Association is a 501(c)6 non-profit organization dedicated to advocating and promoting organic agriculture for the highest good of the people, the environment and the State economy.

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Where Have All the Organic Grain Growers Gone? by Amy Grisak

Editor's Note: This article is the third of a three-part series. You can read the first and second in the series by visiting www.montanaorganicassociation.org/publications.htm and clicking on the Winter 2012 and Spring 2012 issues of Organic Matters.

In a time when consumers are clamoring for organic choices, many in the organic community were surprised to learn Montana lost thirty two thousand acres of organic grain production in 2010-2011. In the first part of this series we spoke to organic farmers who stepped out of the program to learn the reasons why they made the decision. The second part looked at the marketing and economic aspects. Finally, we'll take a look at one of the biggest reasons growers drop out of organic production.

Bindweed most likely wins as the worst weed faced by organic growers. With roots reaching 20 feet below the surface and stretching out horizontally just as far, it outcompetes most other crops, severely reducing productivity. "It seems like a lot of organic farmers get by for ten years," says Mark Bruckner of Malta. "That weed, as much as anything, throws people out of organic farming."

"We've seen an increase in field bindweed," notes Dr. Fabian Menalled, cropland weed specialist through Montana State University, who focuses his research on ways growers, both organic and non-organic, can deal with weeds. For the most part, he tells growers they don't have to hate weeds, but makes an exception with bindweed.

Bob Quinn, president of Kamut International in Big Sandy, says, "It's worse than Canada thistle. I'm having issues with bindweed in a couple of fields." The ever-innovative Quinn tried crop rotation without much success, and is on the search for another solution to the problem. "I was hoping to get a hold of a biological control in Saskatchewan," he notes, "but I wasn't able to get any down here." A fungus shows promise to control many weeds; Quinn wants to see if it works on bindweed.

Help might be coming from an unusual direction. Companies such as Scotts® Brands see the potential as clients want more natural options to deal with turf grass issues, particularly for golf courses that traditionally use a copious amount of chemical means to keep their landscape perfect. As customers call for less toxic methods, it behooves traditional chemical control companies to step up and find an answer.

Some growers look to the gall mite to knock back the bindweed. "There are a lot of people who are interested," says Jeff Littlefield, research scientist at Montana State University. Gall mites (Aceria malherbae) were introduced to Montana 20 years ago as they showed promise in other states on reducing the voracity of bindweed. Littlefield says, "I did a survey 5 years ago to see how widespread (the mites) were. They seem to be fairly widespread in eastern parts of the state."

Finding evidence of a gall mite infection is fairly easy, although finding the mites themselves takes a keen eye. Littlefield points out if you see the leaves folded and twisted on the bindweed, you most likely have gall mites. They feed on the upper surface of the leaves above the veins forming galls. While the gall mites don't kill the plants immediately, Littlefield says "They can stunt the plants and stunt the tips." Like extensive cultivation, constant pressure by the mites can ultimately weaken and kill the plant.

Theoretically, gall mites sound like a godsend to the bindweed problem, but of course, if they were we wouldn't be having this discussion. "I've had mixed thoughts about the mites in Montana," says Littlefield. The results are inconsistent. Some fields and plants are significantly impacted in areas, while patches of bindweed, sometimes in the same field, aren't touched.

Littlefield followed up on a specific site over a 10 year period and noted roughly 25 percent of the plants were infested by mites. "It didn't seem to have a big impact," Littlefield says. Somewhat of a surprise, gall mites don't necessarily like the lush, green patches of bindweed. They appear to prefer the more open, drier sites. "I have found it in fallow fields from time to time," he says. Cultivated areas are the least desirable because the gall mite habitat is continually disturbed.

Knowing which microclimates, such as the dry regions, are conducive to the gall mite survival and efficiency is key to know how best to use this tool. Research is in the works to pinpoint the optimum situation. Unfortunately, in farming, the weather doesn't always cooperate. "Last year because of the cold, wet spring it knocked back the project," he says. "All of the moisture in the spring knocked back the mites."

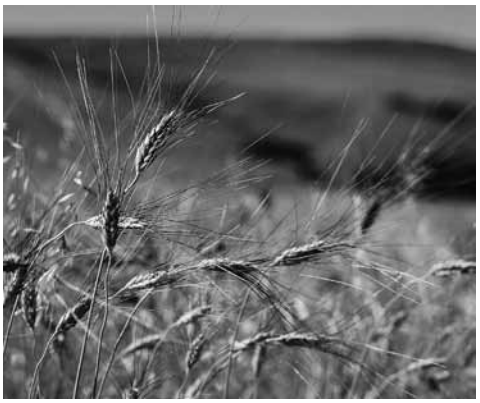
Still, Littlefield notices the mites are more effective in warmer areas of the state, such as around Billings, and in southern states. "I suspect that's why they do better in Texas and Oklahoma," he says. Unfortunately, in Montana it doesn't appear to offer much relief.

Dr. Menalled says battling bindweed is not a new issue. "The truth is there are reports from the 1930s

Bindweed most likely wins as the worst weed faced by organic growers.

Bindweed photo by Weed Science Society of America

Bindweed photo by Weed Science Society of America



Healthy wheat field photo by Kamut International

of sheep grazing it. It doesn't work." Other options from vinegar to the Noble blade don't completely remedy the situation. "My only recommendation is prevention, prevention, prevention," says Menalled.

Bindweed is spread by both seeds and roots, so growers must be vigilant on preventing its introduction into their fields. Since it's often found growing vigorously along roadsides, seeds and parts of the plant can be picked up by driving equipment on or alongside the road. It's crucial to clean equipment before working unaffected areas. Seeds can also be passed through the manure of animals that ate the plants. It can also be mixed up in legumes and small grain seed so care should be taken in cleaning before planting.

Weeds of all types are problems for organic growers, and there are various methods to handle them. Bruckner says, "For me, the rye suppresses the weeds really well. Rye grows six feet high and the weeds don't survive to make seeds." Yet, the challenge for many growers is breaking out of the monoculture mold and finding crops that will compete with bindweed while still bringing in a profit.

As we've witnessed, in the worst case scenario organic growers drop out of the system to utilize chemical measures to handle the problem. Bruckner says, "I don't think it's immoral or wrong. It's easy for a guy who doesn't have the problem to get judgmental on it."

If a grower makes the decision to step out of organic production, particularly with the intention of returning to the program, Menalled says, "Clean the system and come back. Make sure you really clean those weeds. Clear them nicely and start a good transition." He wrote the MSU Extension document, "Conventional to organic cropping: what to expect during the transition years," (www.msuextension.org/store/Products/Montana-Wheat-Production-Guide__EB0197.aspx) covering the process of returning to organic production.

Although bindweed still proves to be a significant issue for organic growers, it's only one of the reasons Montana lost such a significant number of organic growers. Economics plays a big part of the decision on whether to remain organic. Non-organic crop prices are very competitive with organic prices, particularly since it requires less hands-on effort for a healthy return. In addition, if they can eliminate the worst weeds in the process and eventually return to the organic program, it makes logical business sense.

While the high number of lost acreage is troubling, the demand for organic products remains high. Hopefully, for those growers who resort to chemical measures to control bindweed, the choice to transition back into organic production will make just as much sense.

Amy Grisak is a freelance writer in Great Falls specializing in gardening and agricultural-related topics. Read more about Amy and explore her work at www.amygrisak.com.

MOA Celebrates Tenth Anniversary at Upcoming Conference

Reviewing the Decade and Planning for the Millennium

by Lou Ann Crowley, MOA Conference Chair

Excitement is building as we approach our Tenth Anniversary Conference to be held at the Holiday Inn in Helena on November 30th and December 1st, 2012. The conference committee is building the conference around the theme, "Reviewing the Decade and Planning for the Millennium."

As we look back on the last ten years, we're proud that MOA has developed into an organization that can advocate for members who represent diverse types of agriculture across the State. We're pleased that our conferences and farm tours provide continuing education for producers, consumers, retailers and researchers and help create valuable friendships, networks and support systems for our members and their communities. After ten years of service, MOA has earned a place at the table for organics through its connections with a variety of farm organizations and with state, national and international government agencies.

Mark Your Calendar

MOA Tenth Anniversary Conference
Nov. 30 - Dec. 1, 2012
Holiday Inn, Helena, MT

Identifying and grappling with some of our challenges while we move forward over the next ten years will be a large part of the Conference. These challenges include: communicating the value of "certified organic" in a world of natural, sustainable and local choices; confronting GMO issues; and maneuvering in international markets.

The Conference Committee is pleased to have Jeff Moyer, Farm Manager for the Rodale Institute and Gary Zimmer, agri-businessman, author, educator and President of Midwestern Bio Ag to help us tackle these issues during the Conference.

The Committee is still putting the full agenda together, which will be on MOA's website soon and in the fall issue of *Organic Matters*. If you have suggestions for topics or speakers or would like to volunteer or donate auction items, please email lacrowley@onewest.net or phone Lou Ann at (406) 721-4331.

Pollinators: Your Stealthy Partners

Anna Jones-Crabtree, Vilicus Farms, with Jennifer Hopwood, Xerces Society

On a breezy, sunny Thursday in June, the only farmers attending the Montana Pollinator Short Course in Great Falls were organic! The course, sponsored by Western SARE, NRCS and the Xerces Society for Invertebrate Conservation, was packed with topics ranging from why pollinators are important to how you can develop pollinator habitat on your farm or ranch. I came away even more committed to enhance the pollinator work we are already doing on Vilicus Farms, and am happy to have the Xerces Society and NRCS as partners in that effort.

A few of the many interesting things I learned:

- There are over 4000 species of bees native to North America, most of which are solitary, and over 70% of them are ground dwellers.
- Pollination is critical for one in three mouthfuls of food we consume, which in the U.S. equates to $18 to $27 billion in crop value
- In one study, canola growers can make more money on their land if 30% is left uncultivated to support native bees when there is an absence of honey bees.

On Vilicus Farms, we have seeded pollinator plants in our field borders but after this course our focus on supporting pollinators has become even more important. In particular we'll continue to have: flowering crops (such as sunflowers, buckwheat, safflower and flax) as part of our diverse rotation; support more pollinator friendly plants in our field borders (sanfoin, yarrow and prairie coneflower) where we can; and install some native bee nesting sites along with raptor perches.

There was a plethora of resources, but a few key ones that we have found invaluable include:

- General Xerces website for the North Central Region: www.xerces.org/pollinators-north-central-region/
- Pollinator conservation on organic farms: www.xerces.org/organic-farms/
- Pollinator Assessment Form/Guide for Organic Farms: www.xerces.org/wp-content/uploads/2009/11/PollHabAssess_organic_may11_1v3-Web.pdf

continued on p. 11

MOA Financial Report

by Wes Henthorne, MOA Treasurer

I am pleased to report that the Montana Organic Association had the highest **Net Income** ever in 2011. This was achieved with an **Income** that was 14% **lower** than our 2006 -2011 average. The entire board has been very active in searching out ways to cut expenses while bringing our members the highest value possible for their investment in membership and conference attendance. The Conference Committee in particular organized an interesting and dynamic event in an outstanding facility and did it at a surprisingly low cost. You can be proud of the attention that the board pays to the financial implications of all MOA does.

The table on the right (p. 7) shows how important our Conferences are to our financial health each year. The Conference Committee is lining up an exciting agenda for Helena this year and hopes that you can all attend. The Communications Committee continues to improve the newsletter and website while keeping costs closely trimmed. I hope that MOA's ability to wisely use the funding you provide makes you feel as good about MOA's future as I do.

While MOA is doing well, there are some areas that the Board would like to pursue more vigorously, including raising MOA's voice in the arenas of public policy. Specific areas where we would like to do more include expanding our comments to the NOSB on standards issues and protecting organic interests in the 2013 Montana Legislature. Good efforts here will require more resources than MOA has currently. If you are able to include a little extra with your dues or conference registration, I am confident that the board will put it to good use. If you want to make sure of that, please consider joining the board.

Wes Wes Henthorne, MOA Treasurer

MOA Income and Expense

	2011	2010	2009	2008	2007	2006	Average
Income							
Advertising	1,798.50	1,065.77	1,305.71	1,633.10	974.25	898.00	1,279.22
Events Income	20,710.00	20,050.00	27,485.11	27,596.40	31,217.80	32,069.56	26,521.48
Membership	6,235.00	6,635.00	3,860.00	4,515.00	5,905.00	4,960.00	5,351.67
Grants & Gifts	1,336.00	1,536.72	1,476.63	2,570.00	25.00	3,800.00	1,790.73
TOTAL	30,079.50	29,287.49	34,127.45	36,314.50	38,122.05	41,727.56	34,943.09
Expenses							
Administration	3,824.87	3,214.97	3,729.89	2,633.84	2,540.89	1,859.09	2,967.26
Promotion-Website	5,130.77	8,229.50	12,456.82	9,530.00	7,838.50	5,000.00	8,030.93
Conference-Farm Tours	4,575.76	8,187.66	27,718.50	11,839.37	27,623.69	28,561.05	18,084.34
Newsletter	2,684.90	1,890.02	3,384.62	6,443.48	4,369.56	3,088.49	3,643.51
Board Expense	232.85	848.93	272.25	608.90	49.15	269.81	380.32
TOTAL	16,449.15	22,371.08	47,562.08	31,055.59	42,421.79	38,778.44	33,106.36
NET	13,630.35	6,916.41	(13,434.63)	5,258.91	(4,299.74)	2,949.12	1,836.74

NOSB Update by Barry Flamm

Visit www.montanaorganicassociation.org/nosb.htm

The National Organic Standards Meeting May 22-25, held in Albuquerque, New Mexico, had good attendance with 75 participants giving oral comments, adding to the approximately 1700 written comments received prior to the meeting. The new format seemed to improve the quality of topic discussion and efficiency in Board decision making. I received positive feedback from the participants and Board members. However, I have initiated a post meeting evaluation to learn how we can further improve.

In my view, the most important outcome at the meeting was the strong public support for the GMO letter to Secretary Vilsack, which the Board approved by a vote of 15 yes to 0 no. As Chair of NOSB, it gave me great pleasure to sign this letter that hopefully will stimulate needed action on this most critical issue. The GMO ad hoc committee I established at the beginning of my term as Chair, presented and received approval for an ambitious work plan that involves their committee and makes suggestions for GMO issues to be addressed by the six standing committees. This work plan along with the standing committees' plans for the fall Board meeting should be posted soon.

In response to public comments and concerns, a number of committee recommendations were withdrawn prior to a vote. Probably the most notable withdrawal was the recommendation to allow GMO vaccine for livestock use in a declared emergency.

The recommendation by the Handling committee to relist carrageenan in 205. 605(a) drew the most discussion. New information received by the Board raised health and environmental concerns for carrageenan, which is extracted from various seaweed species. The extraction process makes the product synthetic. It is used as an additive in many processed foods as a bulking agent, emulsifier, gelling agent, stabilizer or thickener. In an attempt to address some of these concerns the Handling committee proposed an annotation, which limited carrageenan use to three seaweed species, each identified by separate CAS numbers and prohibiting its use in organic infant formulas. Still, some Board members opposed the relisting. However, the relisting, with the annotation, passed 11 yes to 4 no. You can read the Technical report and public comments pro and con, decide for yourself and then make your choice at the market. There are alternatives.

If you are interested in more details, go to the NOSB website to read the complete agenda and all the actions taken in Albuquerque.

The next Board meeting will be October 16-19 in Providence, RI. This is my last year on the Board and the vacancy announcement is posted on MOA's homepage. If anyone is interested, I would be pleased to answer your questions about what is involved.

Timeless Seeds Hosts Growers' Gathering at MOA Member Farm

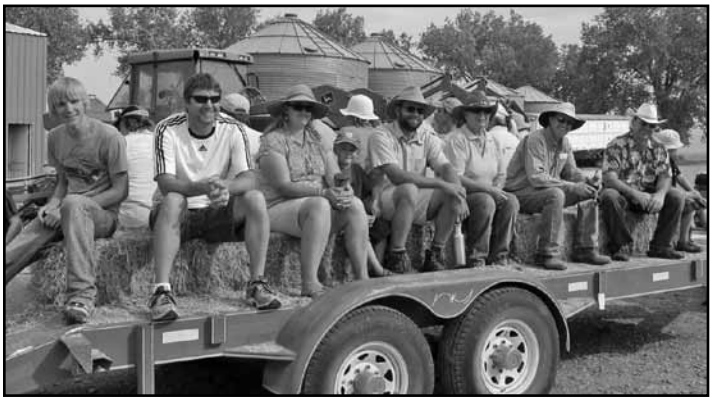
Article and Photos by Liz Carlisle

Over 30 people braved a hot, humid Friday the 13th of July in Fort Benton for the annual Timeless Seeds Growers Gathering. The festivities began with a farm tour hosted by one of the youngest Timeless growers, 32-year old Casey Bailey. Bailey is in his fourth season transitioning his family's 3000-acre grain farm to organic production, and is enthusiastically experimenting with a number of new crops in his rotation, as well as raising pigs and cattle.

Anna Jones-Crabtree of Vilicus Farms (north of Havre) talks shop with Christine Marshall of Pacific Gourmet, who sells several of her crops to chefs.

Mick Odden (Dutton) shares tips with fellow growers Anna Jones-Crabtree and Doug Crabtree (L) and Timeless Seeds CEO Dave Oien.

After presenting a video slideshow, Bailey demonstrated some of the equipment he is using to clean and harvest heritage grains, lentils and oilseeds. Then with western flair, he loaded everyone onto a wagon to tour his safflower, mustard and lentil fields.



Poised for the field tour (From L-R): Two friends of the Bailey family, Mariah O'Halloran, Kale O'Halloran, Brandon O'Halloran (Lewistown), Cathy Odden (Dutton), Eric Nelson (Pendleton, OR), and Doug Crabtree (Havre).

While most attendees were other Timeless growers from north central and central Montana, guests from further afield included organic farmer Eric Nelson of Pendleton, Oregon, no-till diversified growers Jerry and Kathy Sikorski of Baker, Montana, and John Cawley and Christine Marshal of Pacific Gourmet, who market Timeless lentils and heritage grains to chefs in the San Francisco Bay Area.

The gathering gave growers a chance to share information with one another and to hear a buyer's perspective on high value markets for their crops while experiencing a MOA-style Farm Tour to view the Bailey operation.

Organic weed control strategies were a hot topic, but the hottest topic of all was the heat, as growers compared harvest schedules (and rushed home to get combines in working order and ready to go). For those who didn't have to get home to check cows

Linda Lassila's lentil cake, made with Red Chief lentils she and her husband Daryl grow on his family's homestead near Great Falls.

or prepare for harvest, conversation continued over a barbecue, with beef supplied by the Alger Ranch and a number of delicious farm–to-table potluck side dishes.

Missoula native Liz Carlisle is a PhD Candidate in Geography at UC Berkeley, currently at work on a dissertation about diversified farming systems on the northern great plains.

The Right to Know: The Dangers of GMOs in our Food

by Susan Waters, Editor, *Organic Matters*

It's a bit like preaching to the choir to write against GMOs (genetically modified organisms) in an organic association's newsletter. But, **until labeling GMO foods is mandatory, the only way a consumer knows a food is NOT genetically modified is to buy certified organic food.**

Since California is poised to be the first state with mandatory labeling laws through the GMO Labeling Initiative (Prop. 37) on the November ballot, chemical and bioengineering companies and other invested big ag and food businesses have launched a multimillion dollar misinformation campaign in California and across the country. As growers, sellers and advocates for organic food, we can become effective educators about GMOs.

According to Jeffrey Smith, author and founder of the Institute for Responsible Technology and dozens of credible, independent surveys, more than 90% of consumers want labeling on GMO foods so that they can make an informed food choice and over 50% of consumers wouldn't buy a food product if they knew that it had GMOs in it. But the chemical and mega-food industries are launching an estimated $100 million campaign to cloud the labeling issue with misinformation such as: the subsequent hike in the cost of food; unnecessarily scaring consumers; stigmatizing technological advancement; and the questionable "benefits" of GMOs. They have a lot to lose if people find out their products contain GMOs, which have been proven to be detrimental to human health, animal welfare and the environment.

And we don't have to be reminded about the dangers of GMOs when it comes to drift and contamination of organic fields or the bankrupting lawsuits of patent infringement on unwanted plants from contamination.

As advocates against GMOs and official members of the Just Label It campaign, the Montana Organic Association encourages you to become more educated about GMOs. MOA has launched a GMO page on our website at www.montanaorganicassociation.org/GMO.htm (or click on the "no-GMO" image on MOA's homepage) where you can gather up-to-date information on studies about the effects of GMOs, the latest news about labeling campaigns and links to organizations that can help you get more involved to educate others about the dangers of GMOs.

So, for the growers, processors, distributors, researchers educators and consumers of organic food, we challenge you to become educated and vocal against GMOs in the coming months. Our very livelihoods and health, as well as future generations' wellbeing, depend on it.

Notes from Underground

by Cathy Zabinski, Associate Professor, MSU

The best known beneficial interaction between soil biota and plants is the nitrogen-fixing bacteria, which can split the bond between the two atoms in dinitrogen gas, and convert this otherwise plentiful but inaccessible form of nitrogen to a usable form for plants. Nitrogen is the fourth most common element in plant and animal tissues, after carbon, hydrogen and oxygen. Given that the earth's atmosphere is 80% nitrogen, you would think that nitrogen would be one of the least limiting nutrients for plant growth, but in fact the opposite is true.

Atmospheric nitrogen is in the form of N2 gas, and the two atoms of dinitrogen gas are linked by a triple bond. A small group of prokaryotic organisms can convert nitrogen gas to ammonia, using the enzyme nitrogenase, but a large amount of energy is required to split the triple bond. And because oxygen destroys nitrogenase, the process is only efficient in an environment protected from oxygen.

The organisms that fix nitrogen fall into three categories: 1) the nodule-forming Rhizobia bacteria and Frankia actinomycetes; 2) N-fixing bluegreen algae or cyanobacteria; and 3) organisms that are loosely associated with plants on or near the leaf and root surfaces, the free-living N fixers. For the nodule-forming plants, bacteria induce the formation of root nodules and plants supply photosynthate to fuel the microbes. Plant species vary in how they do it, but nodules contain relatively low oxygen concentrations, and in this way the nodules provide both the requirements for the N-fixing bacteria—a high-energy supply and an oxygen-free environment. The amount of nitrogen fixed in the nodules varies with plant and bacteria species, and with soil conditions. Too much soil N can inhibit nodule formation, and too few nutrients or not enough soil moisture can reduce host plant growth enough so there is nothing extra for the symbiont.

Soybeans symbionts can fix as much as 60 to 100 pounds of N per acre per year. Some non-legume plants, such as alders, ceanothus, and Russian olives, form nodules with the N-fixing actinomycete Frankia. Under optimal growing conditions, alders can fix up to 300 pounds of N per acre per year. The advantage for the host plant of having N-fixing nodules is that the ammonium gets released directly into plant tissue, but when plant tissue dies, N is released into the ecosystem, resulting in a nutrient source for the rest of the system. When the host is a long-lived woody species, there is a delay of N release into the ecosystem.

Bluegreen algae or cyanobacteria live independently and are able to photosynthesize, so are not reliant on a symbiont for energy. But the problem for single-celled photosynthetic organisms is that photosynthesis produces oxygen, while nitrogen fixation requires a low oxygen or oxygen-free environment. Some bluegreen algae form heterocysts, cells which don't photosynthesize but have a thick wall to limit oxygen diffusion into the cell for optimal nitrogen fixation. Bluegreen algae can fix up to 22 pounds per acre of N under ideal conditions, and can be important in rice paddies, potentially increasing rice yield by 15 to 25%.

The third major group of N-fixers lives in loose association with plants, on the surface of a leaf or root. Because roots leak and excrete a rich set of carbon compounds, the nitrogen fixers can use those carbon compounds as an energy source, or derive energy from decomposing carbon in the soils rich in organic matter. Estimates of rates of N-fixation by free-living nitrogen fixers is much lower, closer to 1/3 of a pound per acre per year, but given that free-living N-fixers are harder to study, that estimate may be low.

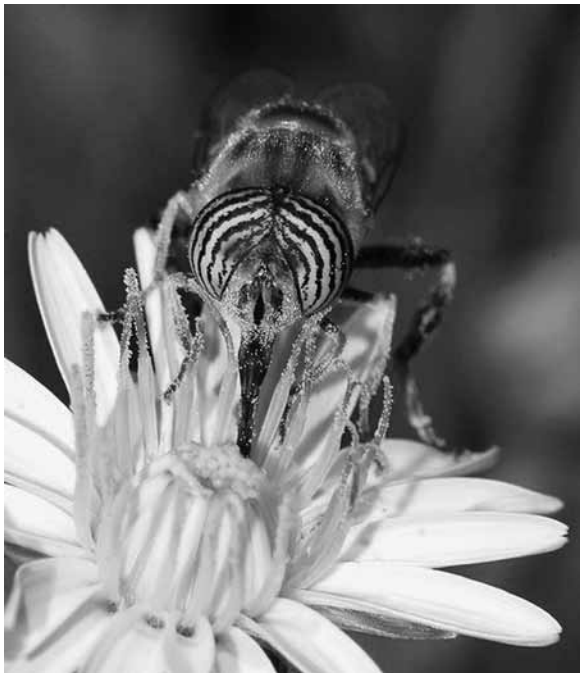
While it sounds advantageous to the plant to have a N-fixer living adjacent to the root, the ammonium is not released like it is in the legume symbionts until the bacteria dies, and then it could be taken up by other microbes that proliferate in the rooting zone and never make it into the plant roots.

The other famous soil microbe that increases nutrient uptake for host plants is mycorrhizal fungi. I will write about mycorrhizal fungi and soil pathogens and how agricultural practices affect soil biota in upcoming articles that will appear in this ongoing series in *Organic Matters*.

Cathy Zabinski is a plant and soil ecologist and an associate professor in the Department of Land Resources and Environmental Sciences, Montana State University at Bozeman.

Pollinators continued from p. 5

- NRCS Pollinator Programs
www.mt.nrcs.usda.gov/technical/ecs/plants/pollinator/programs.html
- Database of native plants that support beneficial insects and pollinators:
www.wildflower.org/collections/



Pollinator photo by Western Montana Science Partnership

Even with a breeze, the class went outside and caught a few bumble bees, metallic sweat bees and digger bees. If you've not had the opportunity to look at a pollinator at work up close you are missing out on one of the most amazing activities on the planet. It's one thing to see a bee flying around, but quite another to look at them up close with bright yellow pollen packed onto their bodies, heaped high. Take some time to check out this list of resources. Both your farm and your pollinator partners will be glad you did.

Join the Discussion on Facebook

www.facebook.com/montanaorganic

Intrepid intern, Kate Sheridan, keeps the MOA social network lively with interesting posts about all things organic. Even if you're not a Facebook member, you can visit and test the waters without having to sign up. Better yet, join Facebook, become a friend and network with like-minded people, get involved in the discussions about GMOs, read informative articles and benefit from news and links to organic resources.

OAEC Survey in Development

The Organic Advisory and Education Council (OAEC) is drafting a survey to determine the greatest challenges in the organic production systems of Montana producers. In the near future, OAEC will be sending these surveys to the organic producers in Montana. Since each aspect of farming has different issues and challenges, the survey is adapted to either grain, vegetable, livestock or fruit producers. Data from the survey will give a strong foundation for OAEC to advise and steer future research where it is needed. Please make your voice heard by participating in this data collection.

To Your Health by Amy Grisak

Sauerkraut and other fermented items were once relegated to the dark reaches of your grandparents' basement or root cellar, but fermenting is making a comeback. Besides an age-old way of preserving food, more people realize its benefits.

Fermented food from kimchi or kefir are created when microorganisms consume carbohydrates, ultimately pre-digesting the food and making it easier for the body to utilize. And it's tremendously good for you. Take sauerkraut as an example. In the 18th century it was often taken along on ships as a source of vitamin C to prevent scurvy, and has more lactobacillus (the good probiotic bacteria) than yogurt.

The most important aspect to vegetable fermentation is keeping the food completely submerged in the brine to ensure it ferments properly. And while many people are intimidated by mold growing on the top of the brine surface, particularly in warm weather, this "bloom" is completely harmless. It's impossible for bacteria that cause food poisoning to develop in the acidic environment of fermented foods.

Although surrounded in a bit of mystery, particularly since it's a process involving the use of bacteria and yeasts to do all the work, fermenting is a simple process.

It doesn't necessarily take special equipment to make sauerkraut, but using a crock with weights makes a consistent product and easy process. If you don't have a crock you can use a 5-gallon food-grade plastic bucket, or even a glass gallon jar. Just be sure you have some sort of weight – it could be a tight fitting plate weighted down with bricks – to keep the cabbage submerged under the brine.

Sauerkraut

Ingredients

2-3 medium heads of cabbage (or 1 really big one). Weigh them so you know what you're working with and can adjust your salt accordingly.	1-3 tsp. of kosher (non-iodized) salt. Use a teaspoon of salt for every couple of pounds of cabbage.

Preparation

Blitz the cabbage through the grating blade on the food processor, or if you're hardcore, you can grate it by hand.

Use a teaspoon of salt for every couple of pounds of cabbage. Press down the cabbage firmly after each addition. When you have all of the cabbage and salt in the container, press down on it until the moisture comes out of the cabbage leaves. You want to have at least an inch of water over the top of the cabbage. If you can't squeeze enough moisture out by compression, boil a couple of cups of water, add ½ tsp. more salt and pour the cooled water over the top until it's the proper level above the cabbage.

Once it's completely submerged under the brine, place the crock or container in a cool place. The time it takes to ferment depends on the temperature. If it's warm (approximately 70 degrees F. or warmer) it might take a couple of weeks. Cooler temperatures take longer, and result in a crisper end product.

Once finished, transfer the kraut to quart mason jars (be sure to use all of the liquid to cover as much of the cabbage as possible) and keep in the refrigerator or cold cellar for many months.

Staff Changes at MDA

Doug Crabtree, former Organic Program Manager for the Montana Department of Agriculture (MDA), has changed positions to Agricultural Plant Specialist so that he can focus more on his farming venture, Vilicus Farms.

Georgana Webster is the new Organic Program Manager for MDA. Georgana has a Bachelor of Science Degree in Animal Science from Cal Poly University and has been deeply involved in agriculture and livestock production. This has ranged from livestock management, clinical and research activities, berry production, quality assurance management in processing, and as an Organic Livestock Field Specialist in two states.

Her focus for the Organic Program will be to strengthen it, increase the program's producers and handlers, and to educate and promote organic agriculture in the state of Montana.

Her office and phone line (406-444-9421) are open to everyone for comments, suggestions, concerns or complaints and she looks forward to personally meeting many MOA members in the near future.

Organic Matters Ad Rates

See www.montanaorganicassociation.org/omadrates.htm for details or call Wes Gibbs at (406) 622-3401.

Calendar of Events

www.montanaorganicassociation.org/events.htm

MOA Farm Tour
Thursday, August 9, 2012
8:00 am to 5:30 pm
See article on p. 1
Registration deadline is Tuesday, August 7, 2012.
Limited bus seats are available.
Fee is $15 for adults (includes meal)
Register by calling (406) 868-0513 or
emailing keel3@hotmail.com

NOP/NOSB Fall Meeting
October 16-19, 2012 at the Providence Biltmore, Providence, RI.

MOA's Tenth Anniversary Conference
November 30 - December 1, 2012
Holiday Inn in Helena
See article on p. 4
Visit www.montanaorganicassociation.org for updates.

Join MOA Today!

Each membership level delivers a quarterly newsletter devoted to sharing the latest news and information about the association and the organic industry, discounts to MOA events, special mailings on legislative alerts and events, and the networking and educational opportunities presented by joining others who share interest and experience in the field of organics.

Other member benefits include eligibility for a Workman's Comp premium discount, safety training, and other services to assist you in your organic endeavors.

The business level categories offer discounts on advertising in our print publications and an online directory listing on the MOA website. The Lifetime Membership gives you permanent access, listings, discounts and the satisfaction that you're supporting the farmers, ranchers, processors, distributors, retailers, students and researchers who make organic food available and accessible.

Join today and support organics!

Please sign me up as a MOA Member!

Name:_____

Farm or Business:_____

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Membership Levels:

☐ Individual.....$30
☐ Family.....$50 (includes two memberships)
☐ Farm/Ranch/Business....$75 (includes a 5% discount on newsletter ads and an online directory listing)
☐ Organic Business.....$250 (includes a 10% discount on newsletter ads and an online directory listing)
☐ Lifetime.....$750

Please fill out this form,
make checks payable to MOA and mail to:
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A View from the Chair

It seems I just got done planting spring crops and things are ripening rapidly. Harvest is on the horizon, ready or not.

Over the past two or three months I have traveled representing MOA and organic growers that should be members, meeting with past acquaintances as well as making new friends. One bit of advice given to me from my son was, "dress for success." Second piece of advice, "act like a professional." Yes, from organic growers to retailers, we are professionals.

At one of the events I participated in, the group was made up of livestock to grain producers, beets to potato producers. All of us produced a commodity for the world. All of us need water and soil. Most, if not all, of the attendees came in a gas-powered vehicle. We were all gathered to promote what we produced.

One individual introduced himself to me, saying, "Hi, I am a GMO grower and we have nothing in common." He walked away, never to meet again. Was this a professional? Did this person care for all the things we do have in common?

The meeting went very well. I was proud to see the dinner menu actually listed and contained the word "organic." From all of us in attendance, "thank you to Bucks T-4 in Big Sky," for a great meal. More food was actually organic than was listed. The menu did not reference anything as GMO, nor did I hear of any grower bragging that GMO was on the menu.

My yearly organic inspection went along with no bad marks. I hope all of you have the same results. If any problem or confusion is around, let me know.

The conference committee is planning the upcoming conference in Helena, celebrating MOA's Tenth Anniversary. They would never turn away volunteer help and are open to ideas to make it an informative and fun event for you.

Keep your harvest safe,

Daryl Lassila, MOA Board Chairman