



Organic Matters

MOA's 2015 Farm Tours Focus on Soil Building, Weed Management, Grazing and More

by Jess Alger, MOA Board Member/Chair of the 2015 Farm Tour Committee and Linda Lassila, MOA Member

Summer is a great opportunity to get away and visit organic operations in the state to see how others grow, learn about solutions to common and not-so-common problems and take the opportunity to talk to other farmers and ranchers.

Two operations have graciously agreed to host the MOA Farm Tours this summer in Stanford and Great Falls. Mark your calendars and don't miss these two informative, inspiring free Farm Tours that will take place in June.

Alger Ranch in Stanford, Montana June 10, 10:00 am – 3:00 pm

The Alger Ranch is 100% Certified Organic. Jess Alger grows, uses and sells lentils, Kamut®, winter wheat, peas, barley, Sainfoin and alfalfa as well as grass-fed cattle. Researchers Dr. Perry Miller, MSU Agronomist, Dr. Pat Hatfield, MSU Livestock Specialist, and Dr. Fabian Menalled, MSU Weed Specialist will also be presenting research findings and observations during the tour.

Participants attending the tour will see and learn about Jess's organic grass-fed cattle's high intensity mob grazing system (a form of rotational grazing in which cattle graze in small areas for

short periods of time). MSU researchers and Jess will explain his grazing system, movement of the cattle through the pastures, the water system to support cattle on pasture, his portable shade structure and fencing design. Jess will also share how using cattle in a grain and legume-cropping system is working to build soil nutrients while providing rotations to break up disease and weed cycles. For instance, Jess's operation is in an area of Montana

with significant Sawfly predation, though he experiences very little damage due to the rotation systems he has developed.

Weed management and building soil nutrients in organic systems can be challenging. On this tour participants will learn how Jess uses a mechanical tillage system and extensive crop rotations to control weeds and build soil nutrients, sustain and improve moisture-holding capacity by building organic matter and overall soil health for future crops.

Jess and the MSU researchers will share information on weed management that is working well and the results of the use of vinegar to control Bindweed, White-top and Canada Thistle.

MOA's 2015 Farm Tours

**Alger Ranch
Stanford, MT**

June 10, 10:00 am – 3:00 pm

Lassila farm

East of Great Falls, MT

June 26, 2:00 pm – 5:00 pm

Inside This Issue

MOA's 2015 Farm Tours	1-2
Food Safety on the Farm	3-5
MOA's 2015 Conference	... 5
5 Reasons to Love Lentils	6-7
Benefits Using Sheep	... 8-9
Whole-Farm Survey	... 9
The Soil Food Web	... 10
Calendar of Events	... 11
NOSB Nominations	... 11
View From the Chair	... 12

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.

Organic Matters is published quarterly by the Montana Organic Association. Send queries, suggestions, letters, and requests to: *Organic Matters*
Montana Organic Association
PO Box 570
Eureka MT 59917
mtorganic@hotmail.com
(406) 297-7588

Organic Matters occasionally includes guest articles and opinions. While we review these for relevance to our mission, the opinions in these articles may not reflect the opinions or policy of the Montana Organic Association.

Editor: Susan Waters
MOA Newsletter Committee:
Seth Swanson - Chair
Nate Brown
Casey Bailey
Heather Estrada
Rob Knotts
John Larmoyeux
Linda Lassila
Sandi Shanks
Michael Vetere

Organic Matters is printed on 100% recycled paper

continued on p. 2

2015 Farm Tours *continued from p. 1*

The Alger Farm Tour is free, open to the public and lunch will be provided.

Directions to the Alger Ranch at 7617 Elevator Road, Stanford, MT 59479:

From the west end of Stanford, Montana, go east on 4th Ave North. After crossing the railroad tracks, take an immediate left (north) onto Elevator Road. Elevator Road parallels the railroad tracks. Travel 8 miles to the Alger Ranch entrance on the left (west) side of road. There will be signs to follow.

For more information and to register (to determine lunch count), call Jess Alger at 406-799-3528.

Lassila farm, East of Great Falls, MT

June 26, 2:00 pm – 5:00 pm

The second event of the season is a Farm Tour Extravaganza east of Great Falls, Montana, at the farm operated by Daryl and Linda Lassila. Scheduled speakers are Max Blodgett from Natural Resources Conservation Service (NRCS); Ron de Yong, Director of Montana Dept. of Agriculture; David Oien, CEO of Timeless Seeds; and Ron Milo from Dave's Killer Bread.

This tour will focus on innovative approaches to soil, nutrient and moisture management in an organic

cropping system. Daryl has a Conservation Stewardship Program (CSP) contract with NRCS that includes several enhancements that utilize cover crops to mine nitrogen that is deeper in the soil profile to break up the hard pan and utilize dual seeded crops. The Lassila farm organic cropping system includes the crops of winter wheat, barley, spring wheat, spelt, peas, lentils and green manure plowdown.

Come and participate in the discussion about crop rotations, nutrient and weed management practices that have been working while improving crop yields, moisture retention and reducing weed, disease and pest issues for the Lassila operation.

The event is free and open to the public and treats of ice cream and cookies will be served around 4:00 as the conversation continues.

Directions to the Lassila farm, Bickford Road Great Falls, Montana:

Go east from Great Falls out 10th Ave. South for 3 miles. Turn left at the blinking light onto Highwood Road for 3 miles. Turn left at mile marker 3 onto Bickford Road at the group of mailboxes. Go on the gravel road for 3 more miles to the farm. Watch for signs.

For more information or to RSVP (not required, but helpful), call Daryl or Linda Lassila at 406-452-0565.

Maximize Yield with Fish on your Field!

NEPTUNE'S HARVEST ORGANIC FERTILIZERS

GET HIGHER YIELDS

More nutritional **NUTRIENT DENSE GRASS** i.e. higher protein, sugar, omega oils, vitamins and minerals.

Raises the Relative Feed Value and Total Digestible Nutrients, so your animals eat less.

Helps breakdown manure faster (less flies, more dung beetles, earthworms, and nitrogen in the soil)

HEALTHIER SOIL: Builds beneficial bacteria, increases organic matter, and gets soil microbes going.

HEALTHIER ANIMALS: Our Fish & Seaweed contains macro and micronutrients, amino acids, vitamins, trace elements, trace minerals, enzymes, naturally occurring growth promoters, and omega oils.

Cattle, Horses and Goats love fields fertilized with Fish.

Keeps animals happy, calm and healthy - saving you money on Vet bills.



- Hydrolyzed Fish Fertilizer
- Seaweed; Liquid, Soluble & Dry
- Fish & Seaweed Blend
- Dry Crab Shell & Flour
- Humate; Liquid or Dry
- Blooming Blossom Biologicals
- GSR Calcium
- and more!



(800)259-GROW[4769] www.neptunesharvest.com

Food Safety Begins on the Farm

Good Agricultural Practices (GAP) for Vegetable and Fruit Growers in Montana

by Jonda Crosby, MOA Board Treasurer, IOIA Inspector

While working with farmers over the past weeks in three workshops for On-Farm Food Safety training, I learned a great deal about the participants' fresh fruit and vegetable operations, their concerns about food safety, and answered questions about their food safety responsibilities as farmers to their customers. Montana fresh fruit and vegetable farmers are aware of and have been participating in food safety practices at the farm level. And they always have been. However, with relatively new on-farm food safety guidelines readily available and buyers expecting farmers to incorporate food safety processes and recordkeeping, many farmers want to assure themselves and their customers that they are following Good Agricultural Practices, known more commonly as GAPs.



Shutterstock/ Iakov Filimonov

There is a lot of information available to farmers these days regarding food safety, due in part to the recent outbreaks of food-borne illnesses from fresh produce. In recent years, cantaloupes, spinach, fruit juices and green onions have all made the news.

'Knock on Wood,' Montana farmers have not been the center of attention in any large scale food-borne illness outbreak. It doesn't mean we couldn't have an outbreak, but our risk in Montana for fruit- and vegetable-producing farms is greatly reduced for several reasons. Montana farms tend to be smaller, owner operated and managed. We are blessed with a dry environment. Montana farmers by and large eat their own food so they have a personal vested interest in growing and selling high-quality, safe food. Most of our water sources used for irrigation are from the mountains, relatively cold and quick flowing. Other commonly used water sources are municipal or from deep wells. Much of the fresh fruit and vegetable harvesting and packaging labor is by family or small crews that have a long history of working together in safe, clean working conditions and environments. And in Montana, most markets are close to the farms, farmers know their customers, and a farm's fruits and vegetables are not anonymous – they are Judy's carrots, Homestead's kale, Eric and Audra's garlic and on and on identifying every farm's crop and the people who grow it. Traceability of any product in the

case of an emergency would be easier due to Montana fruit and vegetable farms' proximity to its markets.

But don't think because Montana has not had a recent food-borne illness outbreak in fresh fruits or vegetables, that we never will. We have risk in Montana. We have open water sources including rivers, ponds, and reservoirs that we irrigate our crops from that are at risk of contamination. We use sources of fertilizer

derived from animal manures. We have domestic livestock, wildlife and migratory birds in our state, close to and on our farms. And we certainly have Salmonella, Listeria and E. coli in our soils, in our water and on our farms as well.

While contemplating what to write as a follow-up to the food safety training, I have concluded

that the farmers' questions themselves are what is of value because what they want to know is likely what every other fruit and vegetable grower wants to know. So what follows are the Frequently Asked Questions (FAQ's) gleaned from the Montana trainings held at Chico, Great Falls and Helena in April.

Q: Do I HAVE to have a written food safety plan for my farm?

A: No. Food safety plans are not required if your buyer(s) have not requested it and you are selling directly to the consumer without any post-harvest handling (washing, chopping, bagging, mixing, etc.).

Q: If I am exempt under the Food Safety Modernization Act do I have to have a food safety plan for my farm?

A: No. Food safety plans are not required unless you are doing post-harvest handling (washing, chopping, bagging, mixing, etc.).

Q: Our Farmers' Market is thinking about requiring a food safety plan. Will I need one to sell there, even if I am exempt under the Food Safety Modernization Act?

A: If any buyer requires that you have a GAP Food Safety Plan, then yes, you will need to complete one if you want to sell through their market.

Q: What pathogens do we, as farmers, need to be primarily concerned about?

continued on p. 4

Food Safety *continued from p. 3*

A: Bacteria, including E. coli (primarily the more virulent strain 0157:H7), Salmonella, and Listeria.

Q: Where do these bacteria come from?

A: Generic E. coli is in the intestinal tract of mammals; cattle and other ruminants are the most common source of the most toxic E. coli variants. Listeria is found naturally in soil and water. Salmonella's primary reservoir is in the intestinal tract of animals.

Q: What are the most important practices I should be instituting on my farm to help prevent future contamination from these pathogens?

A: 1) Keep livestock and other domestic animals out of growing, harvest and packing areas, and minimize the presence of wildlife and rodents. 2) Know the source of your fertility inputs. Add fertility inputs, like manure, 120 days prior to harvesting a crop that is growing close to the ground. If using compost, be certain it has been prepared with adequate levels and duration of heat and turnings to kill pathogens. 3) Use water that has been tested for pathogens before using it to irrigate. Water used to hydro-cool crops must be potable (quality equal to Safe Drinking Water Act), and water used for the application on produce crops of fertility or pest management inputs that require

water must be potable as well. 4) For everyone working directly in harvested crops that are typically eaten raw, like apples, peas and beans, be sure harvest tools, and the harvest and packing containers are clean, that workers have convenient access to restrooms, soap, potable water to wash hands, and single-use towels for hand-drying.

Q: So what exactly are the major food safety risks that I would need to include in a Food Safety Plan for my farm?

A: 1) Water source(s) and use(s). 2) A history of farmland use for growing fruits and vegetables and adjoining land use (remember, blowing manure from a cattle feedlot over a mile away caused one of the worst food borne illness issues). 3) Soil inputs, including manure and compost. 4) Ag chemical inputs. 5) Field worker hygiene. 6) The ability to trace all crops from the farm to the marketplace. 7) Capacity and a system to control animals and pests. 8) Safe harvest, packing and transport systems and procedures.

Q: So, how will my system be verified that I am following these practices?

A: Once you have your food safety plan in place, verification of your plan can be completed by a second party verifier to "test" your food safety plan. The verifier will observe both your plan and your field



**FRESH
MARKET**

Fresh and Friendly

Visit us in store or online!

Store Hours: Mon thru Sat 9am-8pm • Sun 10am-7pm

105 Smelter Ave NE • Great Falls, MT

www.2JsFreshMarket.com

406-761-0134



practices while onsite. You will receive feedback on the areas of strength and weakness in the plan and the operation. If a full GAP audit is needed to satisfy your buyers request, then an audit by a qualified Gap Auditor will be necessary and they will follow the same procedure as the verification to assess your operation procedures and practices. For those of you who already are certified organic, your records for harvest, measures to protect your crops, and traceability records of your products will make the development of a food safety plan much, much easier.

If you feel like your head is spinning a bit at this point, know that there are a lot of resources to help producers and to answer questions. Resources are free and readily available to the public. These resources include sample food safety plans, audit checklists, and FAQs.

Recommended website resources include:

North Carolina Farm Stewards at:

www.carolinafarmstewards.org

Cornell University at: www.gaps.cornell.edu/educationalmaterials.html

The University of Minnesota at: www.extension.umn.edu/rsdp/community-and-local-food/good-agricultural-practices/

FamilyFarmed.org Wholesale Success at: www.familyfarmed.org/our-work/farmer-training

Also know that I am a resource to Montana farmers through a Mission Mountain Food Enterprise Center project funded by the Specialty Crops Grant program at the Montana Department of Agriculture. Do not hesitate to contact me at (406) 227-9161 if you have any questions about farm food safety.

Jonda Crosby is a qualified PrimusLabs GAP Auditor. She also recently completed extensive food safety training including; HACCP, USDA Group GAP & GHP, Cornell Cooperative Extension GAP and Farm Food Safety Plan Writing.

MOA Announces 2015 Conference Dates

Mark Your calendars for MOA's 13th Annual Conference and Member Meeting

"Cultivating Soils, Opportunities and Relationships"
December 3-5, 2015

Holiday Inn, Bozeman, Montana

Visit www.montanaorganicassociation.org for the latest Conference information.

Improved organic yields and soil health start with Sustane granulated fertilizer at planting.

Start with Sustane® Naturally...

- **Proven over 30 Years of field trials**

Across Canada, the U.S. and 62 countries worldwide

- **Allowed for Certified Organic Production**

3-7-4, 4-2-2, 4-6-4, 5-2-4, 8-2-4 and custom formulations

- **Renewable, USDA Certified BioBased**

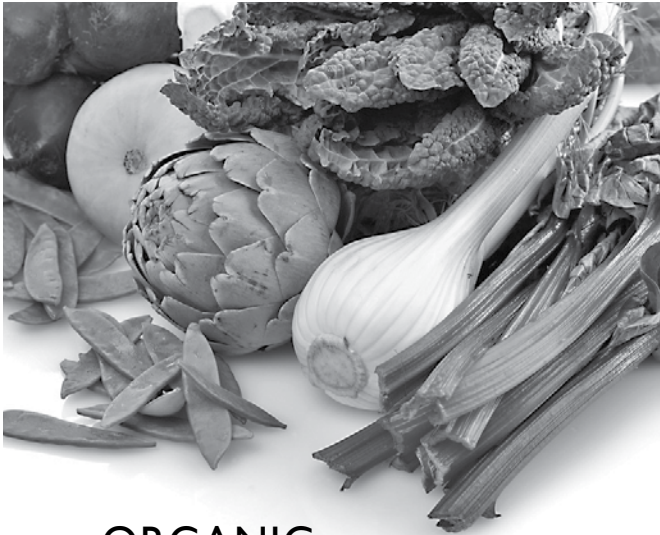
Aerobically Composted, Formulated, Granulated, Guaranteed

Bagged (50-lb.), 1-ton Totes or Bulk. Shipped anywhere, anytime

Greg Naffz, Sales Manager West (530) 823 9636 or 800 352 9245 Kyle Lilly; or

Email: help@sustane.com • Call or visit us today at www.sustane.com





ORGANIC...
 good for you...
 good for the planet.



real food market & deli

Helena's locally owned natural and organic food store since 1975.



1096 Helena Avenue Helena, Montana • (406) 443-5150
 Open Monday-Saturday 8-8; Sunday 9-7 • www.realfoodstore.com

GET LOCAL

WHERE EVERYDAY IS A FARMER'S MARKET!

GOOD EARTH MARKET CO-OP

3024 2nd Ave North
 Billings, MT 59101
 (406) 259-2622

www.goodearthmarket.coop

Five Reasons to Love Lentils

by Liz Carlisle, Author and MOA Member

They're not the charismatic megafauna of the supermarket. But while we've been focused on kale, chia seeds, coconut water, and the dazzling array of organic produce that's recently entered common parlance, they've been waiting for us over in the bulk section—organic lentils.

I know what you're thinking. Lentils are so old school!

Well, you're right about that. Lentils have been rotated with grains for 10,000 years, and their cultivation dates back to the dawn of agriculture.

And yes, some early vegetarian cookbooks wore out on uninspiring versions of lentil soup. But there's so much more to lentils than soup, and there are good reasons these little legumes have stood the test of time. Here are five of them:

Lentils Make Fertilizer

As legumes (members of the pea family), lentils have a symbiotic relationship with soil bacteria, allowing them to fix atmospheric nitrogen. Therefore lentils require no nitrogen fertilizer, and even contribute some nitrogen to subsequent crops. Why does this matter? Because, synthetic nitrogen fertilizer is one of the biggest environmental problems with our food system. When chemical fertilizer runs off into the watershed, it pollutes the drinking water supply in rural communities and causes marine dead zones downstream. Synthetic nitrogen fertilizer also has a hefty greenhouse gas footprint, mostly associated with the energy required to manufacture it. On a life cycle basis, legume crops and legume-based pastures use 35 to 60 percent less fossil energy than chemically fertilized grains. The fossil field savings is even higher for organic lentils.

Lentils are Drought Tolerant

Lentils can be grown without irrigation, and they are tolerant of both low and volatile moisture. They pause their growth cycle during dry times, staging their development to fit within the constants of their water resource. When I was researching my book *Lentil Underground*, which tells the story behind Timeless Natural Food, the 2012 drought hit the grain belt, devastating many farmers' crops. But even though Timeless growers only got 40% of their typical precipitation, they still realized 80% of normal yields.

Lentils Are Good For You

You probably know that lentils are a great source of protein. But did you know that:

- Lentils offer more than one third of the recommended intake of fiber in one ½ cup portion.
- A half-cup serving of lentils provides 45% of recommended daily folate, which is necessary for the production of red blood cells and protein metabolism, and is particularly important for women of childbearing age due to its role in the developing embryo.
- One cup of lentils has potassium comparable to one banana. Potassium is imperative for electrolyte and fluid balance, as well as muscle and cardiac function.
- Blueberries have become popular providers of antioxidant properties, but lentils contain 56% more antioxidant capacity than blueberries.

Lentils Are Good For Farmers

When they are used in a crop rotation, organic lentils can improve soil fertility and provide more stable income for producers who might otherwise be reliant on commodity grains. Diversifying crops, markets and risks decreases a producer’s vulnerability and boosts rural economies.

Lentils Are Delicious

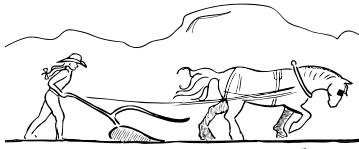
If soup is as far as you’ve ventured, it’s time to get more adventurous with your lentil cooking! Having been cultivated since the dawn of agriculture all over the world, lentils feature prominently in a number of global cuisines, from Ethiopian messor wot to Indian

dal to Lebanese mujadara. For more ideas, check out the teaser slide show for Bozeman Chef Claudia Galofre-Krevat’s forthcoming cookbook, *Pulse of the Earth: Local Food Global Flavors*, at: www.claudiasmesa.com/#!pulse-slideshow/c1d2l.

Montana native Liz Carlisle is the author of *Lentil Underground*, which tells the story of a group of Montana organic farmers who made their farms more sustainable by sharing knowledge, resources, and inspiration. She holds a Ph.D. in Geography from UC Berkeley, where she is a fellow at the Center for Diversified Farming Systems. Find out more at: <http://lentilunderground.com>.

Buy Fresh, Buy Local!

Produce • Meat • Cheese • Flour • Grain • Eggs • Peas • Lentils



Monday - Saturday
11 a.m. - 6 p.m.

(406) 466-2684
501 Main Ave. N., Choteau, MT
Owner: Jill Owen

Mountain Front Market

*Contact Andre' or Eldon
to contract KAMUT® wheat acres.*

Over 30 years of GROWING ORGANIC TOGETHER.





Fort Benton, MT
montanafLOUR.com
406-622-5436



**GOOD
FOOD**

S T O R E



www.goodfoodstore.com

1600 S. 3rd St. West | Missoula | 406-541-3663

THIS IS YOUR **CO-OP.**

WE WELCOME EVERYONE
WITH OPEN MEMBERSHIP.

HERE, DIVERSITY OVERCOMES DISCRIMINATION AND HATE.
WE ARE EQUALLY OWNED BY OUR MEMBERS.

YOU OWN IT. THIS IS A

DEMOCRACY.

OUR BUSINESS STANDS FOR THE MANY, NOT THE FEW.

YOUR VOICE IS OUR STRENGTH.

WE **ARE INDEPENDENT** AND LOCALLY OWNED.

HERE, ECONOMIC SUCCESS AND SOCIAL JUSTICE CAN PREVAIL.

WE BELIEVE SHARED KNOWLEDGE IS POWER.

EDUCATION INSPIRES A BETTER AND MORE JUST TOMORROW.

THE VITALITY OF OUR NEIGHBORHOODS DEFINES US.

GIVING BACK STRENGTHENS OUR COMMUNITY AND OURSELVES.

RESPECT THE FOOD, THE PEOPLE AND THE PLACE

TOGETHER WE ARE STRONGER

COMMUNITY FOOD CO-OP, BOZEMAN

MEMBER OWNED AND COMMUNITY GROWN SINCE 1979

CO-OP WEST MAIN 908 West Main

CO-OP DOWNTOWN 44 East Main

www.bozo.coop

Diverse Benefits Using Sheep

by Jenny Lavey, MSU News Service

Using domestic sheep rather than traditional farming equipment to manage fallow and terminate cover crops may enable farmers who grow organic crops to save money, reduce tillage, manage weeds and pests, and reduce the risk of soil erosion, according to Montana State University (MSU) and North Dakota State University faculty members.

The preliminary results are from the first two years in a long-term United States Department of Agriculture research, education and extension project, which is showing several environmental and economic benefits for an integrated cropping and livestock system, according to Perry Miller, MSU professor of land resources and environmental sciences who is part of the research team.

Miller said that in a typical organic farming system, tillage is used to terminate cover crops and to get rid of unwanted weeds. However, frequent mechanical tilling can disrupt soil structure and reduce organic matter, ultimately harming the success and growth of future crops and costing farmers money.

"There's one major downfall in organic farming – and that's soil erosion, which is related directly to tillage," Miller said. "This project targets that vulnerability. We've designed a system that lets us engage grazing to reduce tillage by more than half."

Instead of using traditional tilling machinery, Miller said the project featured a reduced-till organic system, where faculty researchers used domestic sheep to graze farmland for cover crop termination and weed control. Placing sheep at the heart of the project helped MSU scientists find out that an integrated cropping system that uses domestic sheep for targeted grazing is an economically feasible way of reducing tillage for certified organic farms.

Early project results suggested that grazing sheep saved money on tilling costs. The simulated farming operation also made money when the lambs were sold for processing after grazing cover crops. In providing alternative practices to organic and non-organic ranch and farming operations, the project also makes a case for a closer relationship between livestock and crop producers, said Patrick Hatfield, MSU animal and range sciences professor who is part of the research team.

"Using sheep as the central tool in an integrated system like this is unique because it looks at agroecosystem management from a holistic perspective," Hatfield said. "Our study is unique in that it's

bridging farm systems and ranch systems in an enterprise-level manner and finding very real economic and agronomic benefits.”

The project evaluates an organic farming operation, largely because the organic market is one of the fastest growing markets in the food industry. According to MSU Department of Agricultural Economics and Economics Assistant Professor Anton Bekkerman, American consumers spend about \$30 billion on organic foods each year.

“Montana is the third largest producer of organic crop and livestock in the United States, and this study is looking at how organic food can be produced and brought to market in an efficient and cost effective way,” Bekkerman said. “The study also provided us with alternative ideas of how to manage cropping systems, with the potential for sustainability and potential entrepreneurship.”

The multidisciplinary project team involves faculty, graduate and undergraduate students from varied fields that include agronomy, weed ecology, animal and range sciences, community development, political science, entomology, soil science and agricultural economics.

“We are approaching this perspective not from a sole discipline; we are looking at a system-level approach,” said Fabian Menalled, MSU Extension weed ecologist. “Cropping systems can get complex in terms of interactions of plants with soil organisms, crops and crop pests, and farmers need to find a balance between economic return, productivity and sustainability. This study speaks to every one of those factors.”

The project will continue to be housed at several of MSU’s College of Agriculture and Montana Agricultural Experiment Station’s affiliated research farms, including the Fort Ellis Experiment Station west of Bozeman, a historic U.S. Cavalry fort turned into a livestock teaching and research farm.

MSU is the largest land-grant university in Montana, and the MSU College of Agriculture and Montana Agricultural Experiment Station are charged with delivering cutting-edge agricultural research for the state’s public.

For more information on the study, contact: Patrick Hatfield, hatfield@montana.edu or 994-7952; Perry Miller, pmiller@montana.edu or 994-5431; or Anton Bekkerman, anton.bekkerman@montana.edu or 994-3032.

This article was reprinted with permission of the Montana State University News Service.

Whole-Farm Revenue Protection Survey: Your Input Is Needed

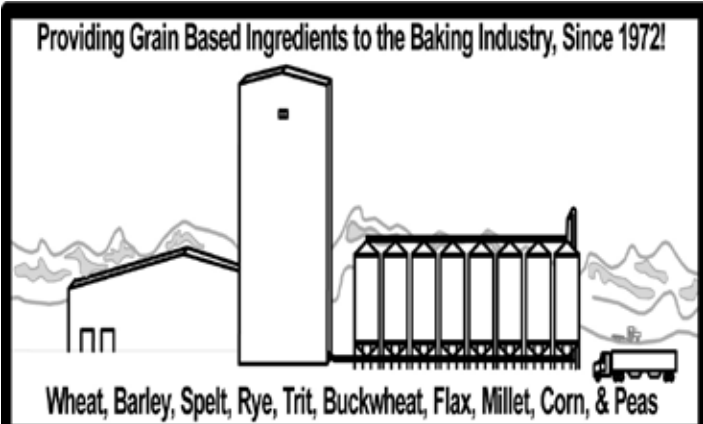
The National Center for Appropriate Technology (NCAT) is working with the Rural Advancement Foundation International-USA (RAFI) to better understand experiences with crop insurance and with a new crop insurance product called Whole-Farm Revenue Protection.

Whole-Farm Revenue Protection is a pilot crop insurance policy available for the 2015 crop insurance year. The policy provides crop insurance coverage based on a farm’s 5-year revenue history, and it enables a farm to insure more than one crop with one policy.

During the Whole-Farm Revenue Protection pilot phase, farmers and farm organizations can recommend changes to the policy. By completing the survey, pilot participants will help RAFI, NCAT, and other organizations advocate for changes that improve Whole-Farm Revenue Protection.

The link to the survey is <https://www.surveymonkey.com/s/rafiwfrpsurvey>.

Questions can be directed to James Robinson at 919-542-1396 ext. 209 or james@rafiusa.org.



Providing Grain Based Ingredients to the Baking Industry, Since 1972!

Wheat, Barley, Spelt, Rye, Trit, Buckwheat, Flax, Millet, Corn, & Peas

MONTANA MILLING INC.

If interested in pre-contracting 2014/15 wheat, barley, rye, millet, or peas, contact Sam Schmidt @ (800) 548-8554 or sam@montanamilling.com

The Power of the Soil Food Web

by Heidi Fleury, FVCC Ag Student

If land is being managed organically, it can be inferred that there is already an understanding that soil microorganisms are beneficial. Digging deeper into the exact purpose and calculated use of the benefits of the various bacteria and fungi is a management strategy to consider for the future. This strategy focuses on identifying various functional groups in the soil food web and harnessing their power. The soil food web is an ecological relationship diagram of the microscopic food chain in the soil under our feet. The web comes complete with predators and prey: predators such as protozoa that graze on soil bacteria; decomposers such as soil fungi; and producers, the plants that take root in the soil. To begin to understand these relationships further we look at the composition and mass of microbes.

Bacteria dominate the soil food web in high disturbance areas like agricultural soils and other places with annuals. Fungi dominate in established soils, like conifer forests, orchards and some perennial bushes. Plants have evolved to form incredibly intricate relationships with these different bacteria and fungi and benefit in many ways from them. The by-products of the soil food web are plant nutrients that include nitrogen and phosphorus. Healthy microbial communities continue to cycle these nutrients, making them available for subsequent crops while reducing the overall leaching potential of these nutrients into our water sources.

As the main source of food for the soil food web, as well as the main decomposers of organic material, microscopic soil bacteria and fungi really pull their weight. What is it that they're doing? Not only are they creating organic matter but they are also fixing atmospheric nitrogen into the soil to create plant-available nitrogen. This incredible adaptation is one of only two ways that plants naturally receive nitrogen, a principal element for higher plant growth. Plants rely on those basic chemical elements for food to fuel their life processes; every soil has inherent nutrient levels because each has a unique composition of organic and inorganic matter.

The level of organic matter in a soil dictates its productivity and, more importantly, its resilience factor. In an agricultural ecosystem, resilience is measured in a soil's ability to handle dry years and wet years and still continue to produce adequate yields. With the uncertainties of the climate, global commerce, and the increasing diversification of products created from crops and crop residues, resilient soils and

agricultural systems need to be created. Finding innovative ways to more actively manage for soil microbial communities is becoming recognized as a key for future soil health and productivity.

Steps to more actively manage for soil microorganisms:

1. Educate. This short reading list includes beginner, more advanced, and personal perspectives on managing for microbes.

- *Teaming with Microbes*, By: J. Lowenfels and W. Lewis (Timber Press 2010)

- *Soil Fertility Management for Sustainable Agriculture*, By: R. Prasad and J. Power (CRC Press 1997)

- *Lentil Underground: Renegade Farmers and the Future of Food in America*, By: Liz Carlisle (Gotham Books 2015)

- *Managing Cover Crops Profitably 3rd Edition*, available for FREE at www.sare.org/Learning-Center/Books/Managing-Cover-Crops-Profitably-3rd-Edition

- *Building Soils for Better Crops: Sustainable Soil Management*, By: F. Magdoff and H. Van Es (SARE Handbook 2010)

2. Get a baseline Microbial Activity Test.

The sample is taken similarly to a soil sample but care should be made to get soil by the roots of actively growing plants around 8 weeks after emergence. There are few labs that run tests that can help define baseline microbial activity.

- Earthfort (www.earthfort.com) Basic and Advanced Microbial Tests \$108-144

- Ward Laboratories (www.wardlab.com) PLFA Microbial Analysis is \$39.50

3. Vary crop rotations. Focus on plenty of legumes, which form especially close relationships with nitrogen fixing soil bacteria. Include active rotations of varying cover crop cocktails. This will help grow beneficial microbes and organic matter that combat weeds, disease and pests.

4. Consider microbial amendments that can be homemade or purchased commercially to jumpstart microbial activity in worn or less productive soils. There are several products on the market today, and one can also make homemade compost that will help bolster microbial populations.

Heidi Fleury is a full-time student in the Natural Resources Conservation Management Program at Flathead Valley Community College and will complete her degree in 2016. During the school year she works at the campus farm and in the summer she participates in the Pathways Trainee Program with NRCS. This summer Heidi starts an internship supported by NASA and the Montana Space Grant Consortium to further her knowledge of geospatial technologies, a very important part of the future of agriculture and natural resources management.

Calendar of Events

www.montanaorganicassociation.org/events.htm

Rancher Workshop on Biological Soil Management

May 21, 2015, 9:00 am to 5:00 pm

Indreland Ranch, Big Timber, MT

Nicole Masters with Integrity Soils of New Zealand helps people understand soils and tools that are very easy to use for monitoring soil conditions and increasing nutrient cycling. \$50 includes lunch and supplies.

Please RSVP by May 15. For more info, contact Roger or Betsy Indreland, 406-932-4232 or 406-930-0671, e-mail: iaranch@mtintouch.net

MOA's 2015 Farm Tours

June 10, 2015 at Jess Alger's Ranch in Stanford, MT

June 26, 2015 at Daryl and Linda Lassila's farm in the Great Falls, MT area

See article on front page.

MOA's 2015 Conference and Member Meeting

Cultivating Soils, Opportunities, and Relationships

December 3-5, 2015

Holiday Inn, Bozeman, MT

Visit www.montanaorganicassociation.org

USDA Seeks Nominations for the National Organic Standards Board

Nominate for the following NOSB Board positions:

- Two organic farmers/producers,
- Two public or consumer interest group reps, and
- One USDA accredited certifying agent.

Written nominations must include a cover letter, resume, and an AD-755 Application Form, and **must be postmarked on or before May 15, 2015.**

More information at: www.ams.usda.gov/AMSV1.0/getfile?dDocName=STELPRDC5111076

Organic Matters Ad Rates

Ad prices and dimensions (black and white only):

1 page ad --- \$110 (Size: 7-1/2W x 10H")

3/4 page ad --- \$90 (Size: 7-1/2W x 6-1/2H")

1/2 page ad --- \$65 (Size: 7-1/2W x 5H") -OR- (3-1/2" W x 10"H)

1/4 page ad -- \$40 (Size: 3-1/2W x 4-1/2"H)

Business card ad --- \$30 (Size: 3-1/2W x 2H")

Classified ad --- \$8/column inch or 40 cents/word

***If you are a Farm/ranch Business level member, you will receive a 5% discount on your ad, or an Organic Business, a 10% discount on your ad. All ads must be print ready. See www.montanaorganicassociation.org/omadrates.htm for details or call Seth Swanson at (406) 258-4205.

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.

Please sign me up as a MOA Member!

Name: _____

Farm or Business: _____

Address: _____

City/State/Zip: _____

Phone: _____

Email: _____

Type of Work: _____

Membership Levels:

- Individual.....\$30
- Household.....\$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:
MOA, PO Box 570, Eureka, MT 59917
(406) 297-7588

Montana Organic Association

PO Box 570
Eureka MT 59917

(406) 297-7588

mtorganic@hotmail.com

www.montanaorganicassociation.org

MOA Board Members:

Nathan Brown - Chair
Doug Crabtree - Vice-chair
Jonda Crosby - Treasurer
MonaRae Tuhy - Secretary
Sam Schmidt - Advisor
Jess Alger
Heather Estrada
Seth Goodman
Rob Knotts
John Larmoyeux
Andrew Long
Cliff Merriman
Judy Owsowitz
Seth Swanson
Michael Vetere



PRSR STD
US POSTAGE
PAID
MISSOULA MT
PERMIT #569

A View from the Chair

This spring, I'm heading to Washington, DC to represent MOA on the Farmer Advisory Council at Organic Trade Association's Hill Days. I look forward to speaking about our organization and learning what is going on in organics around the nation. There will be topics in a number of areas, including trying to figure out how to increase supply to meet the growing organic demand. The ideas generated in these discussions will be very interesting and I will bring them back to the board and our membership.

The farm tour committee has been very busy putting together two excellent tours for the month of June. These interactive events have been a staple of MOA for years and we hope that you are able to attend them this year. Our volunteer board puts in numerous hours planning tours and this year's will be some of the best yet!

I'm also happy to report that the conference committee's planning for our annual conference is starting to shape up nicely. There is some interesting research coming from MSU that we hope to highlight. The committee is working on choosing speakers and we will have a preview of the conference in the next newsletter, so stay tuned for that.

Spring is upon us and I hope everyone has a safe start to the year as we begin getting into the busy seasons. Moisture is on my mind with the unseasonably warm winter that we had in my area. I hope the rain comes at the right time for my farm and yours.

A handwritten signature in black ink, appearing to read 'Nathan', written in a cursive style.

Nathan Brown, MOA Board Chairman