



BIO-NEWS

SUMMER 2008

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Celebrating the 2008 Organic Farm of the Year Field Day scheduled for Tuesday, Aug. 19

Midwestern Bio-Ag's 17th annual field day to be held on Tuesday, Aug. 19 will be bigger and better than ever, but at its core, the event is still the same gathering that started with a few dozen people back in 1994—a day to learn about and celebrate biological farming.

Biological farming, like the field day, has grown in stature over the past twenty plus years, earning international recognition. The Field Day has done the same—annually bringing together a diverse group of farmers and agriculture professionals from around the Midwest, and around the world, who share a passion for changing agriculture.

Presentations, special guests, booths and vendors, the always popular farm walk, and the simple pleasure of sharing the day with like-minded fellow farmers are among the highlights of the annual event.

"First, it's a chance to meet the diversity of people in the biological farming movement," says Gary Zimmer, Midwestern Bio-Ag president. The day features "information, ideas, farming practices, educational tents and demonstrations, all the things involved with this production system."

It's about growing not buying what you need on your farm; raising energy in the feed your produce; about biological and sustain-



Many of the crowd of over 700 who attended the 2007 Midwestern Bio-Ag Field Day joined the farm walk that concludes the day.

Otter Creek named MOSES Organic Farm of the Year

Innovation, education, and conservation—all taking place on a real working farm—each is a part of Otter Creek Organic Farms' goals and purposes.

That three-part philosophy brought honors to the Zimmer family's farm earlier this year when it was named the 2008 MOSES (Midwest Organic and Sustainable Education Service) Organic Farm of the Year.

The annual award honors those who have "demonstrated innova-

tions in organic farming and livestock management, excellence in enhancing and managing farm resources like soil, water, wildlife and biodiversity; and who serve to educate and inspire farmers, consumers and others in their communities."

From mineralizing soils with balanced fertility always focusing on calcium availability to nurturing soil life, from green manure crops to tight rotations, from innovative

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More info at <http://www.nuganics.com.au>

Gary Zimmer's Summer Letter

Dear Farmer/Agribusiness person,

Why Organic Farm of the Year?

It's about the things that we do and the ideas we share. It's about helping others and educating farmers and consumers. It's also about a system of farming.

Organic certification is easy — just quit what you have been doing—



- no fertilizer, no drugs, no chemicals, no mineral for livestock, no prohibited substances.

But, now, how do you become successful organic? That's a whole different story!

First, let's define successful. Because some people or some groups of people are willing to support this method of farming, what do they want? They want a healthy, nutritious, great tasting product. I believe they are also concerned about how the land is taken care of and the animals as well — are they healthy, comfortable, well cared for and fed properly?

Success in farming has been based on output-volume-yield at whatever cost both to the land and

the livestock. I do believe consumer and environmental pressure will change that.

I believe that success on a farming scale is delivering to the consumer what the consumer wants. A system of farming that will satisfy most, call it sustainable, biological or as we call it, MBA. There are two rules of Mineralized Balanced Agriculture (MBA) farming.

Rule One: Do everything you can to get the soils mineralized and healthy.

Rule Two: Do everything you can to make livestock healthy and comfortable.

Get soils healthy and mineralized: that's a nice thing to say, but how do you measure healthy?

And what do you do to achieve it? After farming myself and visiting with many farmers around the U.S. and the

world for many years, there is some common ground. Best management practices, things that work and are a real part of biological/ organic farming. Now, you don't have to be certified organic to follow these practices—they work on all farms. Yes, they do require more intensive management, but without the use of chemicals and drugs you do have to become a better manager because you don't have these things to bail you

ents up to sufficiency levels. This is soil correction— if nutrient levels are low, add more and if the levels are high enough, don't add any more.

Two—Crop fertilizer is what's added to the soil in addition to the nutrients the soil has available for the crop. This is usually a balance of many minerals. Compost, manure, natural mined minerals, and liquid crop foods such as fish also fit into this group. This is not a replacement for good soil fertility—it's an addition to it.

Three—pH levels are nice to look at but don't guarantee an abundant uptake of a balance of minerals. If nitrogen is the conventional farmer's main tool, then calcium has to be the main

tool of a biological/organic farmer. There are different sources for different purposes. If the soil has a low pH and needs lime, that's simple chose the source that fits and lime it. If the soil pH is neutral or high lime is insoluble and may not be the right source. Soluble calcium sources and gypsum are other tools available to you.

Also note when using calcium, that Boron is essential for proper uptake and crop performance.

We are dairy farmers and depend on high energy high quality forages. Calcium is a major part of it. To have success, thick beautiful stands of forages (blends, not straight alfalfa) are planted. A proper prepared seed bed and a calcium source mixed in near the top works great. Yearly, crop calcium fertilizer materials are ap-

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I believe success on a farming scale is delivering to the consumer what the consumer wants.

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out.

So what are some of the practices successful biological farmers use?

One-- Get a complete soil test. Bring nutri-

....Gary's Summer Letter

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plied.

Four—Organic matter. Biology. That's why the name organic/biological farming was created, to get the farmer to focus on these two key soil components. To do everything you can to get the soil healthy and mineralized means focusing on green growing plants and lots of soil life. Take every opportunity to grow something—never leave soils bare.

Mono-cropping sets up conditions for soil biological imbalances. The secret is plant diversity which yields biological diversity:

Different plants also extract, exchange different minerals. They take up different ones, the minerals are then held bound with plant carbon.

The wider variety of plants, the wider variety of soil life, and the fewer problems with diseases and

insects. Tight rotations, forage blends, winter covers, green manure crops—use all of these whenever possible.

Feeding cows lots of forages, and a variety of forages, if properly done, makes for healthy, productive cows and more acres planted.

One more thing about biology and plants—they need air, water, not too little, not too much. It's an art—when to till and when not to, and with that and how.

Shallow incorporating residues and deep tilling to allow water in and gas exchanges makes sense. I don't want to stir the soil up a lot or flip it over but I want to shallowly mix it so that the soil can breathe. A soil crust must be avoided.

Soil biology fixes nutrients, makes them more available, protects soils, makes them more forgiving. They can tolerate dry spells longer, take in more water, ex-

change more nutrients, do a better job of keeping plants healthy. But the biology needs to have ideal conditions to thrive—food, a roof over its head, minimal disturbance, minerals.

What are the easiest things to transport and the easiest things to obtain without buying them? Seeds and soil life.

A new emerging area of interest and study is 'plants with a purpose'. Some plants grow nitrogen, others bring up phosphorus and trace elements. Some control weed populations, and some act as fumigants when they decay. All of them are changing soil biology, nutrient levels, and soil structure—that is building a sustainable soil system.

This takes time but it does lead to success, success meaning healthy productive soils, healthy productive livestock, and healthy productive people, living and caring for the land, all the while making a profit with the willing support of consumers.

There are, as they say, lots of roads to Rome, lots of types of farms and farmers. We are all dealing with the same things—minerals, plants, soil life—and the rules for how life works are the same everywhere.

The same is true for the cow or pig or other animals, there are universal rules.

Take for example the dry cow, not milking for the last two months of her gestation. The feeds I feed her, the comfort I give her, the supplements I provide her, not only gives me a healthy calf but a healthy cow as well. Problems at calving, with either the cow or the calf, are pre-

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Mono cropping sets up conditions for soil biological imbalances.

....Otter Creek Farm honored

(Continued from page 1)

tillage to harvesting first crop hay before planting corn, from nutrient management to weed control, from an emphasis on forage blends and plant diversity to providing habitat for wildlife, building healthy soils and preventing diseases in crops and cattle, educating farmers and consumers by hosting visitors from neighboring communities and around the world, Otter Creek Organic Farm works to make the connection between

healthy soils, healthy livestock, healthy (and profitable) farms, and healthy humans.

The farm's philosophy can be summed up in the Two Rules of Mineralized Balanced Agriculture: Do everything you can to get soils mineralized and healthy. Do everything you can to make livestock healthy and comfortable.

Nicholas, Gary and Rosie Zimmer were presented the award at the MOSES Organic Farming Conference this past February.

....Gary's summer letter

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ventable, and many farmers are doing this. Can we do better?

I'm sure we can but healthy, high quality forages grown on healthy, mineralized, balanced soils fed using common sense feeding practices works really well right now. That's what Rule Two of Mineralized, Balanced Agriculture is — do everything you can to get the livestock healthy and comfortable.

Being honored as the Organic Farm of the Year, does that mean everything always works perfect on our farm? That we never make mistakes, that we never have a bad day? Certainly not. This is life, and we are always learning, and always willing to share our successes and our failures. We learn from others, too. We utilize many different practices that fit on our farm (see list at right).

Come visit our Field Day and see for yourself!

Being named Organic Farm of the Year is about many things besides being a successful farm. It includes fair treatment of farm workers, environmental practices, energy efficiencies, and being part of our local communities. Our farm includes our Local Choice Farm Market store, our meat processing with Black Earth Meats, marketing our products to consumers and education in our local communities, helping consumers become more aware of where their food comes from and how it was raised.

I look forward to having you join us in celebrating and sharing this honor, MOSES Organic Farm of the Year, at our Field Day on Tuesday, Aug. 19.

Gary F. Zimmer

Successful Organic Farming Practices Worth Looking At

1. Deal with calcium every year, every crop. Different amounts, different sources
2. Use trace elements and natural mined minerals
3. You can grow nitrogen with plants and biology, it's a great measure of soil health and farm success; growing large crops without the need for purchased nitrogen.
4. Have a nutrient management plan- use manure distribution as a first step to balance nutrients
5. Tight rotation. 1-2 year hay, corn, summer forages, winter crops; always planning on using soil building crops. Give fields soil building rest.
6. Grow a large diversity of plants. Select plants species and genetics based on your farming methods/systems.
7. Residue management, soil surface conditions and compaction are major farming issues and led us to shallow incorporate residues and subsoil for air and drainage. Aeration in pastures also needs to be dealt with.
8. Make hay, then plant corn, planting corn under better soil conditions OR grow a spring green manure crop like oats, then plant row crops.
9. Row cleaners, planting in furrows, weed burners, rotary hoes, good cultivation and proper timing all play a part in row crop success. You need the right equipment.
10. Focusing on forage quality. We can change mineral levels and increase energy levels, digestibility, protein quality and palatability. Test. We have established guidelines, something to shoot for.
11. Create a 'Grow it, don't buy it' farming mentality Feeding cows on a grazing system, three rules not to break: 1. Effective ration fiber, 2. Nitrogen management, 3. Free choice minerals.
13. Feeding for balance then and in addition feed for health that's where all the extras fit: kelp, CharCal, Direct Fed Microbials (DFMs), yeast, extra vitamins and selenium
14. The dry cow ration—If you can't grow it, buy it. It's the best investment one can make. Get the right feeds to the dry cow. Low K grass hay.
15. Calf milk additives, late weaning and accelerated growth work—once a runt, always a runt: don't let it happen!
16. Once calves reach 5 lbs. of grain/day from the pail or later silages, keep it there. The rest is done with proper forages it's entire growing life.
17. There are three classes of feed: 1) Milk cow, calves; 2) Dry cow; 3) Bedding/compost



Midwestern Bio-Ag's 17th Annual
Mineralized Balanced Agriculture
Field Day



On the 2008 MOSES Organic Farm of the Year

Tuesday, August 19

9 a.m. to 4 p.m.

SCHEDULE

9 a.m. Registration
 Booths open
 10 a.m. Introduction
 with Gary Zimmer
 11 a.m. Presentations
 Noon Presentations
 1 p.m. Presentations
 2:30 p.m. Farm Walk
 with Gary Zimmer

*Please join us for a day of education,
 sharing and fun for everyone interested in
 Biological and Organic Farming*

Presentations hourly 11 a.m., Noon, 1 p.m.

Education/Information Booths open all day

**Special Guests: Dr. Joel Gruver,
 Jerry Brunetti, Bill Wolf, John Kempf**

Free admission / Free parking / Free lunch

Look for updates on our website

www.midwesternbioag.com

The Bio-Ag Learning Center and Otter Creek Organic Farm are located on Hwy 130, 5 miles south of Lone Rock or 15 miles north of Dodgeville in Iowa County, Wis.

Midwestern Bio-Ag



10955 Blackhawk Dr.
 Blue Mounds, WI 53517

1-800-327-6012



More info at <http://www.nuganics.com.au>

Cover Crops with a Purpose

by Leilani Zimmer-Durand and Karl Dallefeld
MBA staff

As the cost of fertilizer continues to rise, more farmers are looking for alternatives to \$0.80/lb N, \$0.60/lb P and \$0.50/lb K. One way of reducing fertilizer costs is to utilize cover crops. Seeds are the least expensive product per area to truck to a farm.

For the cost of seed and a couple trips across your field, you can grow between 40 and 100 lbs of N per acre. And the cover crop provides a lot more than just less expensive nitrogen. A good cover crop, worked back into the soil at maturity, can also:

- improve soil structure
- improve soil water holding capacity
- provide Ca, P, K and micronutrients to the following crop, as well as N
- increase soil organic matter levels
- suppress some weeds and insect pests
- feed soil biology

There are many different types of cover crops, and they all have different benefits. But there are a couple things that all cover crops have in common: cover crops increase plant diversity in your rotation, and pull up and hold onto soil nutrients.

The benefits of plant diversity

There are a lot of benefits to increasing plant diversity by adding another type of plant to your rotation. Different plants favor different pests, so increasing diversity can break pest cycles. Different plants will access nutrients other than those your crop pulls up. When that cover crop is tilled into the soil, it will then release those nutrients back into the

soil, to be utilized by your crop. Different plants also favor different microorganisms, so increasing plant diversity will also increase diversity in your soil. Cover crops also have different types of root systems than your crop, and will help keep channels in the soil open to allow water infiltration and air movement.

An example of nutrients provided by a cover crop

Studies have shown that around 50% to 60% of the nutrients in a cover crop will be available for the following crop to utilize.

After the cover crop is tilled in, the plant material will be digested by microorganisms. As those microorganisms die and decay they release nutrients into the soil in a plant-available form. They also produce proteins and increase plant available nitrogen through their own biological processes.

In 2006, MBA tested the level of nutrients found in a cover crop. In early August, a green manure crop of perennial ryegrass, hairy vetch, and buckwheat was planted. Just before the first killing frost, above-ground and below-ground nutrients were measured to determine what the cover crop had extracted. This provided an estimate (see the chart below) of what nutrients will be made available for the

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	Nutrients in Green Manure Crop	Nutrients available for next crop	Value of fertilizer (July 08 price)
N	92 lbs/acre	55 lbs/acre	\$44/acre
P	16 lbs/acre	9.5 lbs/acre	\$12.95/acre*
K	78 lbs/acre	47 lbs/acre	\$28.31/acre*
Mg	16.5 lbs/acre	10 lbs/acre	Variable
Ca	37 lbs/acre	22 lbs/acre	\$0.88/acre
S	8 lbs/acre	5 lbs/acre	\$0.20/acre
Trace Minerals	9.5 lbs/acre	5.7 lbs/acre	Variable
Approximate value of the cover crop			\$85.34/acre

* value converted to P₂O₅ and K₂O

....Cover Crops with a Purpose

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following crop.

As fertilizer prices climb, the value of the nutrients provided by a cover crop climbs as well.

Cover crop seeds generally range in price from \$20 to \$35 per acre. The many benefits of a cover crop -- from added nutrients, to building organic matter, to feeding soil life -- far outweigh the cost. In addition, in most parts of the country, the NRCS EQIP program provides funds to farmers to offset the cost of cover crops. This benefit varies from county to county, so check with your local NRCS or FSA office to find out what benefits are offered in your area.

The right cover crop for your farm

Cover cropping systems vary. For example, a corn/bean farmer won't be able to plant a cover crop in August, but there are alternatives.

First, an over-winter cover crop like cereal rye after beans or possibly corn harvest could be planted.

Second, a farm could introduce another crop into the farming rotation, whether it be small grains such as winter wheat or an alfalfa/grass stand. This would create a shorter, more diversified rotation and provide opportunities for planting soil-building, nutri-

ent-capturing cover crops.

Adding winter wheat to the rotation allows time to plant a buckwheat or brassica cover crop, in addition to a fall application of livestock manure. A third option is to plant a spring cover crop, such as oats, before planting corn or soybeans.

All cover crops have different attributes, and it's important that you choose the right cover crop for your farm and your needs.

For example, legume cover crops will provide nitrogen, but less biomass than other crops. Oilseed radish can suppress certain types of nematodes, but will not provide a lot of ground cover and will winterkill. Cereal rye will overwinter and will provide a lot of biomass, but it is extremely important to control this crop in the spring before it gets too mature or lignified.

There are dozens of different cover crop plants, so a little research is needed before choosing one for your farm.

Your Bio-Ag Consultant is an excellent source of information. We also recommend "Managing Cover Crops Profitably" published by the Sustainable Agriculture Network.

cover crops
increase plant
diversity in your
rotation, and pull
up and hold onto
soil nutrients.

Other upcoming MBA Field Days

In addition to Midwestern Bio-Ag's annual Field Day held on the third Tuesday in August each year, several other MBA Field Days are scheduled around the Midwest.

Bernard, Iowa— Wednesday, Aug. 13 from 1-5 p.m. at Karl Dallefeld's Prairie Creek Cattle Company

Activities will include a farm walk, discussion of cropland conversion to pasture, forage quality,

the forage chain, water, and fencing. Lunch will be served. To reach the farm go 1 mile west of Bernard on Higgensport Road, then south one-quarter mile on McCarthy Road to the top of the hill.

For more information call Karl at 563-590-7929.

Wells, Minnesota— Saturday, September 6 organic farm field day on two farms.

The event begins at 9 a.m. on the Ray Yokiell Farm, 1 1/2 miles east of Wells on County Road 32. Bob Yanda of Midwestern Bio-Ag will speak on soil fertility and organic farming. The group will then move on to the Dennis Lutteke farm for lunch and afternoon speaker on the topic of food quality and human health. The day concludes by 4 p.m.

For more details, call Ray at 507-380-5745.

....Field Day

(Continued from page 1)

able farming methods and the tools we use, says Zimmer.

Presentations

The heart of every Field Day is the series of presentations offered at locations around the two farms. In addition to our guest speakers (profiled on the next page) we'll once again offer a choice of eight presentations.

Sessions start every hour on the hour beginning at 11 a.m., noon, and 1 p.m. At each location, Midwestern Bio-Ag's staff and certified consultants will share their expertise in short talks (half hour or less) on the topic, followed by lots of time for questions and answers.

1. How To Get Started in Biological Farming: the Six Rules plus Nutrient Management— For first time attendees as well as a refresher on the rules and the basics of biological farming

2. Corn and Soybean production Growing healthy crops starts in the soil, a chance to look at plants and roots and factors affecting quality and yields.

3. Forage Varieties— connecting the soil, forage genetics, and livestock nutrition to meat/milk quality. Look over our test plots.

4. Quality Forage Production covers all the aspects of growing mineralized forages

5. Organic Farming (Presentations at 11 and 1 only, with one special presentation by special guest Bill Wolf at noon) Transitioning to organic as well as all the aspects of organic crops and livestock.

6. Dairy: Lactating cows: Focus on dairy nutrition, practical management practices and more

7. Raising Calves/Heifers; Dry, Transition and Pre-Fresh Cows

Dairy nutrition tends to focus on the lactating cow, but every phase of her life, from calf to heifer through dry periods and other transitions are all vital to a healthy, productive lactation

Farm Walk

One change to the schedule this year is that we've moved up the Farm Walk to an earlier starting time— 2:30 p.m. Gary Zimmer will lead as always, accompanied by special guests Dr. Joel Gruver and Jerry Brunetti.

MBA Research

Every year we carry on several research projects on the farm. There will be signs guiding you for a self-tour of two demonstration plot areas.

The first plots are an OrganiCal field trial. These field trials were set up to look at how OrganiCal performed on-farm compared to gypsum. The test plots are at the corner of the farm driveway and Hwy 130— look for markers. A recent forage test will be available comparing available nutrients between the different plots.

The second set of plots is a long-term soil-corrective study, examin-

ing whether an extra 250 lbs/acre of sulfate of potash can move soil K levels up. These plots are on the hillside above the compost plots. Soil tests will be available from the past 10 years, as well as one from this summer after the first treatment was applied. Unfortunately, after the first sulfate of potash application this June, flooding rains occurred, so this year's results are influenced by possible leaching or runoff. This is a multi-year trial, and more sulfate of potash will be applied to this field next spring.

Composting Demonstration

Midwest Bio-Systems will demonstrate how to build and manage a good compost windrow and discuss how to use compost as part of an efficient fertility program. The Tampico, IL company has been making compost equipment for 15 years.

MBA certified/staff consultant Dan Davidson, who has extensive knowledge of composting, will also be on hand to answer questions.

As always, the day is free, including lunch which will be served behind the shed from 11:30 a.m. to 1 p.m.

Field Day Presentation Schedule

10 a.m. Gary Zimmer Intro and Welcome

*11 a.m. and 1 p.m. Dr. Joel Gruver
Discovering the Hidden Half of Your Farm*

12 Noon John Kempf Vegetable Production

*11 a.m. and 1 p.m. Jerry Brunetti
Livestock Nutritional Support*

12 Noon Bill Wolf Organic Integrity

All other Presentations at 11 a.m., Noon, 1 p.m.

Check the schedule in the field day program, given out at registration

Field Day Guest Speakers



Dr. Joel Gruver, PhD

Discovering the hidden half of your farm is the title of Dr. Gruver's presentations at the soil pit (check the map when you arrive for the exact location on the west side of Hwy 130), offered at 11 a.m. and 1 p.m.

"He's been involved in sustainable, biological, organic production, looking at soils," says Zimmer Gary of Gruver, "looking at soils from a diverse background."

Growing up on a homestead in rural Maryland, Dr. Joel Gruver discovered his fascination with crops and soils at a young age. His formal education includes a BS in Chemistry from Principia College (Elsah, IL), an MS in Agronomy from the University of Maryland, and a PhD in Soil Science from North Carolina State University.

He has taught courses related to soil science and agroecology at Tufts University, Principia College, North Carolina State University, Central Carolina Community College and Western Illinois University where he is currently

an assistant professor in the Department of Agriculture. His current responsibilities include teaching three Soil Science courses each semester and coordinating WIU's Organic Research Program.

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**John Kempf**

A Midwestern Bio-Ag consultant from Ohio, he will give one presentation on **Vegetable Production**, at noon in the soil pit tent.

John is a young farmer who has worked in his family's vegetable production business (including greenhouses and potted plants) as well as experience consulting on large scale vegetable production and marketing. He'll share his experiences, the things he looks at and applies.

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Bill Wolf

Bill will offer one presentation on **Organic Integrity** in the organic tent at noon. He is President of Wolf, DiMatteo + Associates, which delivers strategic expertise

to help organic, socially and environmentally responsible products and project with certification, organic system plans, policy advice, sourcing support, and organic regulatory compliance. Wolf is also founder and President of Thorvin Kelp, the leading seaweed ingredient supplier in the U.S. He has over 35 years experience in nearly every aspect of the organic industry, from farming to feed manufacturing, to food processing

"He's been involved in organics since the beginning," says Gary Zimmer, and has seen the changes as organics has become economically viable.

The USDA NOP is intended to be a public-private partnership that embraces continuous improvement and is not a static pass-fail regulation. It is less than 6 years old and is only now beginning to pay attention to these important principles that are at the root of the organic movement and are intended to assure a higher quality of food. Bill will share ways to include these principles in your Organic System Plan.

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**Jerry Brunetti**

President of Agri-Dynamics, Jerry brings a wealth of knowledge on natural animal health to his presentations on **Livestock Nutritional Support**. Jerry will have his own tent (on the east side of Hwy 130) with talks at 11 a.m. and 1 p.m.



## Field Day booths

Booths will once again be located in the shed on the west side of Hwy 130 (near the lunch area), and will be open starting at 9 a.m.

The **Midwestern Bio-Ag** booth will once again be located in the shed, with consultants and staff on hand to answer your questions about our company and our products.

Learn about the wide variety of products offered by **Bio-Vet**, a 'sister' company of MBA, from Bio-Vet staff including Dr. Bill Zimmer, DVM. Bio-Vet researches, manufactures and markets innovative direct fed microbial products, focused toward the improvement of livestock health and productivity. Their offerings include capsules, pastes, soluble powders, drenches, calf and cattle electrolytes and daily feed additives.

Joining us again this year is **Local Choice Farm Market** of Spring Green, WI to talk about mineralized balanced agriculture direct marketed foods. They'll be joined by **Gorman's Locker**, Lone Rock, WI, **Black Earth Meats** and **Midwest Pastures Meats**. If you have beef, hogs or lambs ask about local marketing and/or custom processing. (For more info see the article on pg. 13)

### Booths

Our booth area was a big hit last year, and we'll again welcome a wide variety of businesses that we work with and that fit in to the biological farming philosophy.

**CalWest Seeds** will discuss breeding alfalfa under the MBA fertility program. They are our producers of MBA exclusive alfalfas and clovers

**Barenbrug USA** is MBA's benchmark for producing high quality, later maturing grasses used in MBA blends. We have enjoyed

a long time relationship with them.

**DLF Intl.** A farmer-owned grass seed cooperative, reps will explain some of the grass genetics we are purchasing from them for our blends. They provide a broad selection of organically produced grass seed and are committed to organic seed production.

**Midwest Labs** began in 1975 as A & L Mid West Agricultural Laboratories, Inc. Starting principally with agricultural analysis of Soil, Plant tissue, and Feeds, they've expanded into Pesticide, Water, Microbiological, Food, Pet Food, Fertilizer, Nematodes, Biosolids, Petroleum, and Hazardous waste analysis.

**Dairyland Labs**, Arcadia, WI. is an independent, full service agricultural testing laboratory established in 1958.

Also on hand will be **Popple Consulting**, a firm that creates nutrient management plans and works closely with Dairyland Labs.

The **MOSES** (Midwest Organic Services) booth will offer the opportunity to choose from a wide variety of books and materials for biological and organic farmers.

**MOSA** organic certifiers will answer organic certification questions.

**Organic Valley** the largest organic cooperative in North America working with over 1,100 farms from its LaFarge, WI headquarters.

**Dave Engel-- Nature's International Certification Service--** will offer information on organic certification.

**Calcium Products Inc** is a firm that pelletizes our specialty products such as HumaCal™, CharCal™, Pel-Lime™ and Cal-Sul™.

**Great Salt Lake Minerals** is a supplier of micro-nutrients used in our MBA products

**Nature Safe Fertilizers** supplies components used in some of our MBA fertilizers.

**Redmond Salt** has served agriculture for over 40 years as a natural source to meet the nutritional needs of livestock.

**Oxyblast Water Treatment** helps farmers solve water quality problems, including keeping lines and tanks clean, filtering high iron, bacteria and manganese and reducing/eliminating odors such as sulfur.

**Thorvin Kelp**— supplier of organic kelp from the pristine waters of Iceland

**Driftless Area Land Conservancy** is a local land trust seeking to protect the quality of life and rural landscape in southwestern Wisconsin, including farms, forests, grasslands, streams, wetlands, soils, of Iowa, Lafayette, Richland, and Sauk Counties.

**Agri-Dynamics** animal nutrition products will be on display in Jerry Brunetti's Livestock Nutritional Support presentation tent on the east side of Hwy 130.

Set up outdoors along the farm driveway will be a tent with samples of **MBA calcium products** with Butch Meeker of Meeker Ag.

### Machinery

Get an up close look at the **Howard rotovator** with Clyde Morter of Guy Machinery.

**100th Meridian Manufacturing** of Cozad, NE. will display an organic hybrid rolling cultivator.

MBA of Minnesota sponsored  
Bus Trip to the Aug. 19  
Midwestern Bio-Ag Field  
Day. Departs plant at Utica at  
6 a.m. returns about 6 p.m.  
\$20/person  
RSVP by Aug. 12 to (507)  
932-4300 or 1-866-485-4300



# Avoiding eye problems

By Jerry Brunetti

In the spring 2008 issue of the *BioNews*, I discussed methods and strategies to reconcile challenges from the various families of fly genuses which affect productivity, health and comfort on the farm. This article will focus upon one potential unsavory outcome of fly persistence, namely pink eye, scientifically called keratoconjunctivitis.

Pink Eye is an infectious bacterial disease caused by the bacterium *Moraxella bovis*, which attacks the cornea, or the transparent layer of the eye which allows light to enter. This painful condition can affect all ages of stock, particularly calves up to one year old during their first season of grazing. The process begins when the *Moraxella* begins to burrow into the cornea forming a pit, or ulcer which appears as a small white spot or ring upon the cornea surface.

Fortunately, livestock have the ability to respond vigorously with a quick immune response, thus it's important that your stock have a robust immune system in order to launch and maintain such a defense (more on that later).

Initially, copious amounts of tears are produced, in order to wash away the infection, as well

as delivering anti-bodies to the site. The eyelids may close to reduce the pain and protect the eyeball, especially from bright sunlight which has irritating Ultra violet rays.

If the ulcer progresses, another immune summons beings signaling a rapid growth of blood vessels across the eye, which appears as a red ring, progressing inwards from the rim of the cornea toward the center. The eye may become totally red (pink eye) but there is still an opportunity for the eye to recover, especially if the herdsman intervenes prior to the bacterium perforating the cornea, causing the fluid in the anterior chamber of the eyeball to leak out. At this point, the eye may be lost.

Conventional treatments are antibacterial ointments which are quite effective if applied as recommended by your veterinarian, usually at least four days. Some longer lasting antibiotic preparations claim to be residual for 72 hours. Of course if you are a certified organic producer antibiotics presents a NOP problem. Fortunately, there are natural

treatments that can be made that are quite effective in containing the progression of pink eye, but timing is important and dedication to daily treatment is necessary.

The botanical world has blessed the livestock steward with numerous options, of which I'll discuss just a few.

Begin by making a tea, utilizing approximately (1) oz (30 grams) each of the following of dried, or fresh herbs to (1) quart (approx. 1 liter) of water. Some herbs one can blend are: 1) Eyebright (*Eupasia*); 2) Comfrey Root (*Symphytum*); 3) Goldenseal (*Hydrastis*); 4) St. John's Wort (*Hypericum*); 5) Calendula or pot marigold; and 6) Plantain (*Plantago*). Ideally, after blending in a stainless steel pot, bring to a boil, then immediately remove from the stove and let steep overnight. Then filter the tea through a coffee filter or clean

muslin cloth, add about 1oz. of boric acid per quart to preserve the infusion and then refrigerate in a spray bottle, to be used on an as needed bases. I would say the infusion has a shelf life of 1-2 weeks at least.

Some of the attributes of these "phyto-medicinals" that allow it to address pink eye are as follows:

- Comfrey (*Symphytum*): Con-

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## ...avoiding eye problems

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tains allantoin, a cell proliferation stimulant for wounds. It also contains a lot of demulcent mucilage to soothe and coat damaged tissue.

- Eyebright (Euphrasia): is an excellent anti-inflammatory and astringent for all mucous membranes, and especially the eyes.
- Goldenseal (Hydrastis): is not only healing to mucous membranes, but it has effective antimicrobial properties that are attributed to the alkaloids berberine and hydrastine.
- St. John's Wort (Hypericum): has anti-inflammatory, antimicrobial, astringent and analgesic compounds that speed the healing of wounds and minor burns.
- Calendula: also known as pot marigold, this plant is rich in terpenes that have demonstrated anti-bacterial, anti-viral, anti-fungal and anti-inflammatory activities. It's a great partner with comfrey to stimulate the regeneration of tissue.
- Plantain (Plantago): has valuable healing properties acting as a demulcent, anti-inflammatory, astringent and anti-microbial.

Generously spraying this infusion into the affected eye daily, even several times daily for a week is a sound idea. This is obviously an easier task with young calves and lactating cattle, but not easily done with heaves, heifers and dry cows.

Prevention is obviously the preferred route to travel and of

course fly control is of paramount importance here. Some folks use the Moraxella vaccine, however results are inconsistent due to the fact that there are many different strains of Moraxella.

Foreign bodies are contributors as well. Overhead hay racks for calves should be discouraged according to some opinions because there is a danger of grass seeds and other debris falling into the calves eyes when they pull the hay away from the rack.

Getting cornea injuries from coarse weeds and grass while grazing maybe another contributing factor, but hey, lets not get paranoid about all the "what if's" either! Remember my comments about a "vigorous immune response"? What really creates a hearty and hale immune system? In a word, "nutrition." More specifically, good quality proteins (i.e. amino acids) to build anti-bodies, and immune cells; then there's the fat soluble vitamins A, D and E. Vitamin A, livestock get from the carotenoids (e.g. beta carotene, lutein); Vitamin D they synthesize from sunlight; Vitamin E (tocopherol) is loaded in fresh green forages.

Let's not forget about the immunity associated with trace elements such as selenium, zinc, copper, iodine which make up important enzymes that are requisite

for strong immunity. An example is the enzyme "Glutathione Peroxidase" which is made up of the amino acids, Methionine, Glycine and Glutamic Acid and the trace element Selenium. Livestock or humans can't go very far without it.

If the animal has compromised immunity, is plagued with flies, dust and debris, you may witness the unfortunate consequences of such,

namely blindness.

Get the house (farm) in order by making sure there is an adequate threshold of immunity in the cows. Supplement adequate vitamins and minerals if necessary.

Meanwhile, build up the fertility of your soil with all the macro and micro elements while not forgetting about the biological fertility either which is to be sure you have good managed swards of bio-diverse grasses, legumes and forbes growing upon mineralized and aerified (not compacted) paddocks so that you can grow roots and build humus. Eliminate or reduce as much as possible the "stress" that hammers immunity and the "terrain" that invites the opportunistic Moraxella bacterium to thrive.

*Jerry Brunetti will be speaking at our Field Day on Aug. 19. Bring your questions to his presentations at 11 a.m. and 1 p.m.*

*Prevention is obviously the preferred route to travel and of course fly control is of paramount importance here.*



# Midwest Pastures seeks meat producers

Midwest Pastures Meat Co.  
Black Earth Meats  
Otter Creek Organic Farms  
Gorman's Locker, Lone Rock

What do they all have in common? They're all local. The Zimmer family is involved. And they're all about promotion and marketing of local meats in three categories: organic, pasture raised, and Grandpa's Way.

With the recent acquisition of Black Earth Meats, by the time you read this, we will be USDA federal licensed and approved to market in states surrounding Wisconsin. We are already certified organic and have state of the art processing equipment, professional sausage makers and high quality packaging, ideal for private label and direct marketing.

As our markets expand, we will be looking for producers of hogs, beef and lamb plus possibly bison.

Farmers, let us know what you produce! Also check out our custom processing. We are working out a system of pick up and delivery in southwest Wisconsin, saving on travel costs.

Livestock must be raised following the Mineralized Balanced Agriculture principles (Do everything you can to get soil healthy and mineralized. Do everything you can to get livestock healthy and comfortable.)

Grass fed may be organic or not. 'Grandpa's Way' is a production method similar to the 'old days' production methods including feeding dry hay; fresh air pastures, year around access to outdoor lots; some grains and minerals, vitamins and extras but no hormones or drugs; locally farm grown feeds, smaller cattle groups, etc.

Meat producers, call Mike at 608-583-2781

For custom processing, call Black Earth Meats at 608-767-3940.



## WANTED

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**Wanted**— Lime spreader 218-955-0888

**Machinery wanted**— 6 row 30" corn head, IH 863, IH 963 or JD 643 High Tin in excellent condition or priced accordingly 715-592-4468

**Consultants wanted** We have openings for full-time consultants to work with biological farmers. Farming experience or sales experience helpful. Help Midwestern Bio-Ag change agriculture! For more information, call 1-800-327-6012, ask for Tim Williams

**Wanted— Organic producers** of milk, meat and eggs. Now and into the future. Please contact Organic Valley 1-888-809-9297

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**Farm wanted**— 80 acres with good barn to milk 25-30 cows; with house. Southwest Wisconsin Rent or buy. 608-489-3104

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*Trading Post ads run one time free.  
To place an ad in the Fall edition of the BioNews,  
call Mary at 1-800-327-6012 by October 1.*



# Feeding High Quality Forages

By Jon Woolover  
MBA Dairy Staff

In the last issue I started by talking about the (seemingly) outrageous price of many farm inputs. I guess sometimes we don't know just how good we've got it until it's gone! While corn and beans have gone up and come back down at least some, there are many inputs which only continue to surge ahead. Producers are worried, and rightfully so.

So let's continue the discussion about feeding high quality forages as well as reducing the amount of grain and protein supplementation.

Through careful planning and gradual implementation many farmers have successfully reduced the amount of purchased feed ingredients. Not every herd/farm is ready to reduce their grain feeding but it should be the eventual goal of most MBA customers.

The first step is to evaluate your current operation to determine if you can begin to reduce the amount of supplements. A lack of energy is typically the first limiting factor affecting high forage-low grain diets. To avoid this situation, farmers need to ask themselves the following questions:

- Are my forages mineralized, healthy, and properly stored?
- Have I taken steps to improve the energy level and digestibility of my forages?
- Do I have the right combination and quantity of high pro-



tein and high energy feeds to compensate for lower supplementation?

- Do my animals have the correct physical and genetic makeup to handle high-forage diets?
- Do my cows carry an adequate to good level of body condition and are they healthy and productive?

- Do I have the proper management style and abilities to focus on cow health and forage quality?

If you can answer yes to these questions, then you may be ready to increase your profitability through reduced grain and protein feeding.

All ration changes should be made slowly and based upon the advice of a qualified consultant/nutritionist. (A local MBA consultant would be an excellent choice!) Any new ration must be nutritionally sound and meet all the requirements for your animal's level of production. Also, don't neglect to feed a balanced mineral during this process as forages can vary greatly in mineral content. Even a short-term deficiency can cause long-term health

issues!

When making the transition towards lower grain/protein supplementation there are a number of steps you can take to make the transition smoother and more successful. I've outlined a few of them below. Work with your nutritionist to determine which ones are right for you.

1) Take baby steps. Gradually make diet changes and allow 5-10 days after each change for your animals to adjust.

2) Improve digestive efficiencies. Consider microbial products like Generator Elite™, Dairy ProP169™, or yeast culture to improve fiber digestion and utilization.

3) Add readily degradable protein and carbohydrates to diet. Products like molasses, Alcomp, urea, etc. will give rumen microbes a nutritional "kick start".

4) Evaluate the physical characteristics of your feedstuffs. Make sure you supply enough effective fiber while also providing readily digestible feeds. For example: In low grain TMRs, use finely

A lack of energy is typically the first limiting factor affecting high forage-low grain diets.

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# ....feeding high quality forages

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ground corn instead of cracked or rolled corn for a more complete digestion.

5) Try to include a diversity of feedstuffs, both forage and concentrate. Multiple feeds will provide your animal with a broad spectrum of nutrients in a more balanced package.

6) Maintain a balanced ration in regards to starch and protein. Overfeeding protein (in relation to energy) is costly, environmentally

unsound, and can cause health problems.

Every herd is unique in many aspects. Differences in animals, genetics, forage quality, environment, management style, etc play a role in dictating what nutritional strategy is best on a particular farm. Because of this, all good managers and consultants need to constantly evaluate their decisions. During the process of reducing purchased supplements we need to analyze the following areas so we can modify and fine-tune our rations.

**Body Condition-** Cows routinely lose 1 body condition score (BCS) during early lactation. Ideally cows freshen with a BCS of 3-3.5 and drop to a 2-2.5 during peak milk. Few animals should be below a BCS of 2.

**Reproduction-** Producers cannot afford to have reproductive performance drop simply to cheapen the ration. Monitor pregnancy rate, conception rate, services per conception, and number of days open to ensure your animals are receiving adequate energy and protein.

**Health-** Inadequate energy intakes can negatively affect the immune system. Re-evaluate your ration if you experience a higher incidence of disease, especially metabolic disorders (ketosis, milk fever, etc.)

**Milk Components-** Avoid costly changes in butterfat and milk protein levels. This is especially true in

herds receiving cheese yield pricing. Milk protein levels are among the largest influences on milk income and easily affected by diet changes. Monitor MUN levels as well to avoid the overfeeding of protein.

**Production-** Dairying is a business and it is important to maintain a strong bottom line. Just like any new expense must be offset by increased profit, any reduction in milk production MUST be more than compensated by reduced expenses.

Avoid the old saying, "Saving yourself poor."

Low grain diets can work, but they are not for everyone. Producers need to earn the right to reduce concentrate feeding and do so carefully and cautiously. Forage quality, good management, excellent herd health, and profitable production are all keys to making this system work. High forage diets may take an early investment in forage quality, but they can pay off in the future by helping reduce feed costs.

Make sure to stop by the Dairy Nutrition presentations during Field Days to learn more about MBA's Nutrition Program. Also we'll be demonstrating some on-farm management practices that make a BIG difference for your herd!

A farmer's best investment today is an honest discussion about profitability and long-term planning with their advisors and management team. The first person to invite: your local Midwestern Bio-Ag Consultant!

Producers need to earn the right to reduce concentrate feeding and do so carefully and cautiously.

**The Bio-News**  
is once again available  
on our Website:

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