Agricultural Newsletter

UW-Madison College of Ag & Life Science University of Wisconsin-Extension

> April-May-June 2010 Volume 16 Issue 2

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Regional Cow-Calf Meeting Features Beef As a Side-Enterprise with Organic Dairy Cattle

Exeland, Tuesday, April 20, 5:00-8:30 PM

Otto Wiegand Area Agricultural Agent Burnett, Sawyer, & Washburn Counties

Be sure to attend this year's spring beef cow-calf meeting on Tuesday, April 20 in Exeland sponsored by the UW-Extension Livestock Team. The meeting will be held at the Kormann Farm owned by Steve and Ann Kormann, 1950N County Road C, Exeland in Sawyer County. The Kormanns rotationally graze an organic herd of 50 crossbred dairy cattle plus youngstock. Son Nate has been raising beef cattle since age six. He runs 30 Angus-Hereford crosses on 73 acres next door. The beef cattle out-winter on the dairy farm. The Kormanns have been using management-intensive rotational grazing since 1994.

The program begins at 5:00 PM with a farm tour followed by a beef supper and program at 6:00 at the Meteor Town Hall 1.5 miles away. Speakers will include Amy Radunz, the new State Extension Beef Specialist from UW-Madison, Brenda Boetel, Extension Ag Economist from UW-River Falls, Keith Vandervelde, Ag Agent from Marquette County, and David Ruid, USDA/APHIS Wildlife Biologist from Rhinelander. Topics will include: (1) Costs of Cow-Calf Production and Breakeven Numbers; (2) Industry Outlook; (3) Merits of Sexed Semen Use on Beef Heifers; (4) The Latest Information on Wolves.

The farm is located at 1950N County Road C in Sawyer County south of Hwy 70 and north of Hwy 48. To get to the farm from Rice Lake, take Hwy 48 east about 30 miles, then turn left or north on Cty C and go one mile. From Hwy 40 in Exeland, travel west on Hwy 48 seven miles to Cty C, then turn right or north. From Spooner, take Hwy 70 east about 30 miles through Stone Lake, turn right or south on Cty C, and go six miles. From Radisson, take Hwy 70 six miles west through Couderay to Cty C, then turn left or south on Cty C. From Hayward, take Hwy 27 south and then go east on Hwy 27/70. Watch for the signs.

The cost of the program is \$10 for the meal. Please register in advance by Friday, April 16. For registration or questions, contact Otto Wiegand or Kevin Schoessow at UWEX-Spooner, 800-528-1914 or 715-635-3506.

Agricultural NEWSLETTER

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University of Wisconsin, United States Department of Agriculture and Wisconsin Counties Cooperating. UW-Extension provides equal opportunity in employment and programming. Including Title IX and ADA requirements.

If you have any special needs or require special accommodations, please write to UWEX Area Agricultural Agent, Spooner Ag Research Station, W6646 Highway 70, Spooner, WI 54801 or UWEX Area Agricultural Agent, Ashland Ag Research Station, 68760 State Farm Road, Ashland, WI 54806.

High Yield, High Input Soybeans

Phil Holman Superintendent Spooner Ag Research Station

Grain yield contests statewide and nationally for corn and soybeans have pushed the upper limits of what we can achieve for corn and soybean yields. The real question to most producers is whether or not the added inputs translate to profitability.

The last two years, Shawn Conley, UW Soybean Specialist has conducted trials comparing traditional soybean production practices versus various levels of added inputs trying to achieve "High Yields". In 2008 the levels of management were labeled as low input, standard input, kitchen sink and ultra kitchen sink (Table below).

	Low Input	Standard	Kitchen Sink	Ultra Kitchen Sink
Seeding Rate	175,000	175,000	260,000	260,000
Fertigation (irrig. only)	28%	28%	28%	28%
Innoculant		optimize	optimize	optimize
Seed Treatment		CruiserMaxx	CruiserMaxx	CruiserMaxx
Foliar Insecticide		Warrior	Warrior	Warrior
Foliar Fungicide		Headline (1x)	Headline (2x) Quilt (1x)	Headline (2x) Quilt (1x)
Foliar micros (irrig. only)			3 times	3 times
Soil applied biocide			Contains	Contains
Manure			Chicken Liter	Chicken Liter
P and K			40P & 80K	40P & 80K
Ethephon (Pistill)				Yes
Input Cost/A (non-irrig)	35.00	67.63	294.11	331.95
Input costs/A (irrig cost, 28% & micros)	109.85	142.48	368.97	406.80
Non Irrigated Yields (bu/A)	66.0	64.5	69.5	69.0
Irrigated Yields (bu/A)	66.5	74.5	76.0	78.0

Similarly in 2009, a different trial compared 4 high yielding commercial varieties under normal variety trial management and management similar to the "kitchen sink" treatment from the previous year. Under this trial the High Input (kitchen sink) management yielded 80 bu/A and the normal variety trial management yielded 67 bu/A.

In conclusion, yields were increased both years fairly significantly, however, costs of the high input treatments more than offset the yield gains. Many times research only looks at one or two treatments while these plots compared the use of several inputs at one time. Information for this article came from Shawn Conley's report at the winter soybean conference and the web site: http://soybean.uwex.edu/documents/Conley_Area_Soybean_2010.pdf.

New Horticulture & Ag Agent for Douglas County

Jane Anklam is the new Horticulture and Agriculture Educator for University of Wisconsin-Extension,



Douglas County. She will be working part-time at the Douglas County Extension office. Her office is located in the Douglas County Courthouse, 1313 Belknap Street, Room 107, Superior.

Ms. Anklam has a degree in Agronomy and Soil Science from the University of Illinois, Urbana-Champaign. She is a Professional Soil Scientist, licensed with the state of Wisconsin. She maintains her Certified Crop Advisor credentials for both Wisconsin and Minnesota.

"I am eager to work with the gardeners, farmers, and businesses of Douglas County," explained Anklam. "The people that work with the land, soil, climate, and vegetation in the Superior Basin and headwaters of the St. Croix play an important role in the quality of life for Douglas County and the region."

Ms. Anklam can be reached at 715-395-1363 or jane.anklam@ces.uwex.edu.

Soil sampling: A Good Investment

Nancy Drummy Discovery Farms Outreach Educator

Fertilizer prices hit record highs last year, making that crop one of the most expensive on record. Expensive inputs combined with low milk prices are causing economic hardship for our dairy industry. Fertilizer prices have softened since last year. Our major nutrients are roughly half the price they were last year at this time. However, for dairy producers, fertilizer budgets will be limited, and getting the most out of every dollar spent is critical. Soil tests are the foundation of any crop fertility program and especially important when fertilizer dollars are limited. However, as producers look for ways to reduce production costs, many will be tempted to eliminate soil testing.

Soil sampling is expensive - fact or fiction?

Fiction: It is recommended that you collect a soil sample every 4 years, taking one soil sample for every 5 acres. The lab fee for a soil sample is \$7 per sample. When you spread the cost out over 4 years, it comes to about 35 cents per acre per year. If you don't have the time to collect your own soil samples you may need your fertilizer dealer or agronomist to pull your soil samples. Lab fee and labor will typically run about \$16 per sample. Again, collecting one sample for every 5 acres, and spreading the cost out over 4 years, it comes to 80 cents per acre per year. As a comparison, that will buy you about 2 pounds of potassium.

I can't afford fertilizer - why bother soil sampling?

Even if you're not planning on applying much, if any, commercial fertilizer this spring, soil samples can help you to prioritize manure applications. Target fields that test low in P and K. This is where you will see the greatest crop response.

Fields that test high/excessively high are unlikely to have a response to added nutrients. In addition, take into account the crop nutrient needs over your rotation. Large amounts of nutrients are removed when the whole plant is harvested, as in corn silage and alfalfa. It's easy to see why soil potassium can fall short on dairy operations (See crop removal table). A soil test will also provide you with the soil pH value. A soil pH too high or too low can render nutrients unavailable. This is especially important to know prior to seeding down alfalfa.

The nitrogen fixing bacteria on the roots of alfalfa are pH sensitive. When alfalfa is grown in soils with a low pH, it can lead to nitrogen deficiency, decreased yield, decreased protein content and an increase in winterkill. The ideal soil pH for alfalfa is 6.8. An alfalfa seeding is a 3-5 year investment. If the pH is low, you need to apply lime as indicated by your soil test, or consider a different field to seed down. Without a soil sample, we are only guessing about phosphorus and potassium needs. Even in down economies, soil sampling is a good investment.

Nutrients removed from crop harvest (lbs/acre)

CROP	P2O5	K2O
Alfalfa, 4-5 ton/acre	65	250
Corn silage, 20 ton/acre	90	170
Corn grain, 150 bushel	60	45
Soybeans, 50 bushel	35	40

Establishing Improved Pastures

Rhonda R. Gildersleeve UW Extension Grazing Research Specialist

Before establishing a new pasture, take soil samples to determine if any soil nutrients are deficient. Be sure to indicate the type of pasture planned for the site so that fertility recommendations are applicable to the species you will be seeding. For more information on soil testing and analysis, please refer to UWEX Publication A 2100, Sampling Soils for Testing.

Contact your local UW Extension Office for a copy or view it online at: http://learningstore.uwex.edu/pdf/A2100.PDF.

For new pastures, pH may need to be adjusted to at least 6.3 for legumes to be planted. Soil phosphorus, potassium, and sulfur levels may also need to be adjusted. If possible, apply lime, manure and/ or fertilizers prior to any tillage activities or surface apply during the fall prior to a spring seeding to improve effectiveness and availability of the nutrients applied. Newly established pastures will not need additional fertilizer that season if soil fertility has been adjusted prior to seeding. Once established, test soils every 3 or 4 years and add nutrients as needed to maintain pasture soil fertility levels

Seeding rates may vary based on site conditions, method of seeding and the number of seeds per pound for a particular forage species. For pasture plant species grown in Wisconsin, seeding rate

recommendations are listed in UWEX Publication 1525, Forage Variety Update for Wisconsin, which is updated annually and is available through your local UW Extension Office or can be viewed online at: http://learningstore.uwex.edu/pdf/ A1525.PDF. With small-seeded species, fewer pounds are needed to achieve a full stand, so use a lower seeding rate and make planter adjustments to place seed at the correct depth. Under marginal conditions, or when using broadcast seeding methods, it may be wise to increase the recommended seeding rate by 10 to 20 percent. To decrease erosion, use a companion crop such as perennial or Italian ryegrass (2 pounds per acre), or small grains (oats at 1 bushel per acre) with the seeding mixture.

When purchasing legume seed, if the seed is pre-inoculated, store in a cool place prior to planting. If seed is not pre-inoculated, purchase and apply the appropriate rhizobial inoculants(s) at planting for all legumes that are included in your seeding mixture to ensure nitrogen fixation. Store legume inoculants(s) in a cool dark place until used and follow label application directions.

Pastures can be established in the early spring or late summer months. Spring planting takes advantage of residual winter soil moisture and the promise of a season of good growing conditions, with potential to provide pasture later that year. A primary disadvantage of spring seeding is that weed competition is usually greatest in the spring months. This may be an issue for some pasture species which are slower to establish, such as reed canarygrass and Kura clover.

Late summer pasture seeding can follow winter wheat, rye, and or spring oats/pea crops that are

harvested earlier in the summer. There are fewer weed species that will germinate and compete with a new pasture seeding in late summer, but a disadvantage is that germination will be at the mercy of fall rains to ensure good establishment prior to winter. Late summer seeding should be planned to ensure at least 6-8 weeks of forage growth prior to killing frost. There are two primary requirements for the seedbed: (1) A firm seedbed to allow precise placement and good soil contact with small pasture seeds, (2) Minimal competition from existing sod or weeds for sunlight and moisture

Proper site preparation is a critical step in establishment. The amount and type of land preparation varies with site and soil conditions, and equipment available. Compacted soils may require ripping, and this is best done in the fall when the soil is driest. Plow, chisel, disk, or harrow as appropriate to eliminate clods and firm the seedbed. If tillage is required, it can be done in the fall prior to a spring seeding and used to incorporate any lime or fertilizers needed.

Pastures can be established by drilling, broadcasting, or even aerial seeding. Development of a wellprepared seedbed through tillage followed by cultipacking is still the most consistently successful method of pasture establishment where topography and soil type allows it. While drilling or cultipacker seeder (Brillion seeder) into a prepared seedbed is generally the preferred method, broadcast seeding methods followed by harrowing and/or cultipacking the seedbed have also been successful. Seeding in two directions ensures the most uniform stands, but may not be cost effective or practical for hilly conditions, where

machinery safety and potential for soil erosion may also need to be considered. If a no-till drill is available, little or no tillage may be necessary, unless a light disking is needed if the ground is rough or uneven. No-till drills open a furrow, place the seed in the opening and press the soil back into place and are particularly suited for areas where soil erosion is a concern. Prior to using a no-till drill, existing vegetation should be sprayed with appropriate herbicides or grazed very closely to reduce sod and weed competition.

The goal is to uniformly sow the seed into a firm seedbed at the correct depth and seeding rate. The optimum seeding depth for most forage species is 1/4 to 3/4 -inch, with the soil packed firmly around the seed. Some soils are difficult to pack, and new seedings may fail from drilling into a fluffy seedbed because seed placement is too deep and/or the soil dries too quickly. It may be necessary to use a cultipacker behind the drill to firm the soil around the seed. If the seedbed was prepared the previous fall, or has received some rain, packing behind the drill may be unnecessary.

Frost seeding is also an option in some situations. Most legumes can be frost seeded successfully, but frost seeding is only recommended for ryegrass (Italian or perennial) and orchardgrass. To frost seed, broadcast seed during the late winter period during warm sunny days and cold nights that produce frost cracking of the ground. The broadcast seed falls into the cracks and germinates as spring conditions improve. Prepare these areas in late fall by either grazing or mowing closely. Frost seeding works well for thickening thin pasture stands and to add legumes to the

stand, but is not recommended for establishing new pastures. Research suggests that frost seeding is successful about 60% of the time due to variations in weather conditions from year to year. For this reason some producers plan to frost seed every year to create a pasture "seed bank".

Control perennial weed problems such as Canada thistle prior to establishment through use of crop rotation (where possible) or with appropriate herbicides. Since most weed problems will be broad-leaved species, broadcast spraying with available pasture herbicides such as 2, 4-D, dicamba, or trichlopyr is recommended only if legumes are not present, as these herbicides will also kill legumes. Spot treatment with appropriate herbicides may be used for problem areas where desirable legumes are present to minimize injury. For more information on herbicide treatments, consult the pasture section of UWEX Bulletin A3646, Pest Management in Wisconsin Field Crops, available from your local UW

Do not graze or cut pasture for hay until seedlings are well established, usually in the summer for a spring planting. If pasture was established the previous late summer/ fall, delay use until the plants start stem elongation and flowering (late spring/early summer). Clipping (mowing) once or twice in the establishment year reduces weed competition and gives the seedling grasses and legumes a chance to compete. Light grazing can be used if soils are dry and firm, followed by clipping to help control weeds that are not grazed. Use a rotational system to graze through the area quickly with hungry animals and then remove them. Provide a sufficient pasture rest period between clipping or grazing events. With adequate rainfall and appropriate soil moisture conditions, most new pastures can withstand two or three defoliations (clipping and/or grazing) in the establishment year.

Hybrid Poplar Harvest & Replanting

Phil Holman & Jason Fischbach

Hybrid Poplars were planted at the Spooner Ag Research Station and former Ashland Ag Research Station in 1999. Original plans for the hybrid poplar were for the timber but now there is interest in using the poplar for energy production. Hybrid poplar should be harvested in 10 to 12 years. Thus, the Ashland poplar stand was recently harvested and the Spooner poplar stand will be harvested in early April.

The trees were planted on a grid 10 feet by 10 feet for a total of 435 trees per acre. The poplar was recently harvested at the former Ashland Ag Station. The harvest yielded 275 green tons from 4.2 acres for a yield accumulation of 2.7 dry tons per acre per year. In January, 10 trees were cut and weighed at the Spooner Ag Research Station to estimate a yield of 64 green tons per acre for a yield accumulation of 2.9 dry tons per acre per year. A more accurate yield will be obtained from the sales receipts and summarized later this year.

A grant to study replanting of hybrid poplar and willow was obtained by Jason Fischbach for both sites and replanting is planned for this spring.

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Selecting a Good Grass Variety

Dan Undersander UW-Madison Agronomist Summarized by Kevin Schoessow

Selecting proper grass varieties for grazed pastures and harvested hay fields should involved the same scrutiny as selecting a proper corn or soybean variety. Selecting a variety with top yield performance is one consideration, other important characteristic are winter survival rating and maturity. According to Dan Undersander, UW-Extension forage specialist, there are greater differences among grass varieties than among corn and soybeans. This is based on University of Wisconsin yield data of cool-season grasses from 1996 to present. This research has shown that some of the top yielding varieties can produce as much as 4 tons/a more per year than the lowest yielding varieties.

When it comes to selecting grass species Undersander is not a big fan of timothy or smooth bromegrass. In high yield environments timothy doesn't have the yield potential of other cool season grasses and it tends to be short lived. Smooth bromegrass is high yielding, however, most of that yield (60-70%) is from first cut, with little re-growth and yield for the rest of the season. Other cool season species tested are Italian rye, and festolium however both have poor winter survival for Wisconsin growing conditions. Meadow bromegrass, and meadow fescue may also be possible species,

however more varieties and data needs to be analyzed.

The most promising species to plant in combination with alfalfa and other legume forages is orchard grass or tall fescue. Both of these cool season grasses have high yielding varieties that produce consistently through the season. When selecting an orchard grass or smooth bromegrass variety look for late maturity, winter hardiness, rust resistance, and those rated for consistent season-long yield.

Some orchard grass varieties that ranked well for yield, maturity, winter survival, rust resistance, and yield consistency in the UW variety trials include Albert, Century, Extend, Icon, Megabite, Pizza and Progress. Tall fescue varieties that ranked well over the 13 yr trial were Courteney, Desperado, Fawn, Savory, Teton and Tuscany II.

A full list of varieties can be found at www.uwex.edu/ces/forage/resdata/grass-table.htm. Yield of cool-season grasses as tested in University field trails, 1996 to present.

Farmstead Planning Resources Available

Adapted by Otto Wiegand Area Agricultural Agent Burnett, Sawyer & Washburn Counties

Building a new freestall barn or a milking parlor to update a dairy business can save time and labor and increase income. However, not developing an overall, long-range plan for the farmstead can result in costly mistakes.

Without a plan, you might find that something you added last year, is in the wrong place for something you want to do this year. For example, a farmer might need more feed or manure storage. But, if he or she is just focusing on the current project, without thinking about how it will fit in with future renovations, there can be problems in the future.

According to Dave Kammel, UW-Extension Ag Engineer, farmers need to consider the following: Is the feed center plan expandable and does it have room to expand? Do feed handling traffic patterns minimize handling time and congestion on the farmstead? What about water drainage and maintenance of all weather road system to allow access to feed?

People who modernize a dairy by building a milking parlor often decide to add more cows to the herd either because they have to increase income to pay for the parlor or because they find they can easily handle more cows. More cows need more housing, heifer housing, feed storage and manure handling, Kammel explained.

Each of these facilities requires good planning to function correctly and fit together as a system.

Farmstead planning considers the existing resources and the near-term resource needs as well as longer-term resource needs. These considerations include the amount of land available; constraints such as roads, runoff drainage, rock outcroppings, water supply; and resources to be protected such as groundwater, streams, wetlands, neighbors and communities. People also need to think about where crops will be

grown and how manure will be used to grow crops.

If you are contemplating a farmstead modernization or upgrading facilities, having a thought out plan and seeking advice is critical. When seeking input on facility upgrades farmers can seek advice from other farmers, building/contractors, ag lenders, UW-Extension Ag Agents and Specialists, nutritionists, milk equipment dealers, veterinarians, and financial consultants. Farm tours and visits are other ways to collect input.

If you are interested in developing a farmstead modernization plan or upgrading farm buildings MidWest Plan Service has a "Farmstead Planning Handbook," which can help farmers better understand factors to consider and how to develop a farmstead plan. The publication, in CD format, can be obtained by ordering from the web site, www.mwpshq.org or by calling 1-800-562-3618.

The UW-Extension Dairy Modernization team also has resources on it website http://www.uwex.edu/ces/dairymod/. In addition to farmstead planning, there are resources on milking center design, cow housing, manure storage, feed storage and dairy facilities estimated costs.

Another resource available to farmers in NW Wisconsin is a farmstead consultation and farm visit with UW-Extension, Ag Engineer, Dave Kammel. As a UW-Extension building specialist, Dave is available for on-site visits with farmers giving them advice and rough plans on farm building projects. If you would like to arrange a visit to your farm by Dave Kammel, contact Otto Wiegand, UW-Extension Area Ag Agent.

This Quarter's Events

Contacts: Ag Agents Otto Wiegand or Kevin Schoessow, UW-Extension, Spooner Station, 715-635-3506, or Jason Fischbach, UW-Extension, Ashland & Bayfield Co., 715-682-8393 for more information, brochures or how to register.

March 31, Weds, 5:00-8:00 PM – Cow-Calf Seminar, Centuria, contact Ryan Sterry at Polk Co. UWEX, 715-485-8600, except for wolves, similar topics as April 20 below.

April 19, Mon, 3:00 PM – Pruning Fruit Trees & Grapes Workshop, Spooner Ag Research Station – Free of charge, registration suggested, with Bob Tomesh, contact Kevin Schoessow, 715-635-3506.

April 19, Mon, 6:00 PM – Apple Tree Grafting Workshop, Spooner Ag Research Station – \$13, pre-registration required, limit if 35 participants, with Bob Tomesh, contact Kevin Schoessow at Spooner UWEX, 715-635-3506.

April 20, Tues, 5:00-8:30 – Cow-Calf Seminar, Kormann Farm, Exeland – topics include: (1) Costs of Cow-Calf Production, (2) Industry Outlook, (3) Sexed Semen for Beef Heifers, and (4) Latest Information on Wolves. Contact Otto Wiegand at UWEX-Spooner, 715-635-3506, see article for details.

April 24, Sat, 10-4 – Earth Day, Shell Lake, contact Mary Ellen Ryall at 715-468-2097.

April 24, Sat, 10-2 – Earth Day & Global Youth Service Day, Hayward Workforce Development Center next to High School. Contact Sue Menzel at damzel02@gmail.com.

May 8, Sat, 9:00-Noon – Composting & Build Your Own Compost Bin Workshop, Hunt Hill - \$50. Preregistration and payment required by April 23. Contact Hunt Hill Audubon Sanctuary, 715-635-6543.

May 25-26, Tues-Weds – Grazing School, UW-River Falls - other Schools scheduled: Black River Falls (July 21-22), Lancaster (July 23-24), Merrill (Aug 16-17) and Florence (Aug 19-20), contact Dennis Cosgrove at UW-River Falls, 715-425-3345.

June 12, Sat AM – Washburn County Dairy Breakfast, Spooner, – Fairgrounds.

June 19, Sat AM – Burnett County, Siren Community Ag Assoc. Dairy Breakfast, Lewis/Frederic, Doug & Laura Coyour Farm.

June 26, Sat AM – Sawyer County Dairy Breakfast, Hayward – Fairgrounds. A freewill non-perishable food donation for the food pantry will be collected.

June 22, 23, 25, Tues, Weds & Fri – Youth Tractor Safety Training, Spooner, Spooner Ag Research Station – for youth 12-17, contact Lorraine, Otto or Kevin at UWEX-Spooner, 715-635-3506.

June 26, Sat AM – Hayward, Sawyer County Dairy Breakfast – Fairgrounds.

July 8-10, Weds-Sat - Central Burnett County Fair, Webster.

July 20-22, Tues-Thurs - Farm Technology Days, Pierce Co, WI.



UWEX Area Agricultural Agents Burnett, Sawyer, & Washburn Counties Spooner Agricultural Research Station W6646 Highway 70 Spooner, WI 54801

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Attend a valuable agricultural training this spring

Meet the new ag & hort agent for Douglas County

Should you soil sample?

Hybrid poplar research continues

Kevin Schoessow

UWEX Area Agricultural Agent