

Agricultural Newsletter

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



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Turning the lights on in the barn increases winter milk production

Tom Syverud
Extension and Outreach Educator
Ashland Ag Research Station

Dairy cows in northern regions like Wisconsin give more milk if they get extra lighting during the winter months when days are short. According to Scott Sanford, an outreach specialist in Biological Systems Engineering at University of Wisconsin-Madison, the increase in production is, on average, four pounds a day for each cow. Farmers who are considering leaving the lights on should provide lighting so cows get about 15 to 20 foot-candles of light for 16 to 18 hours each day. Sanford said cows getting extra light during the winter eat, on average, four percent more.

"It is very important to turn the lights on and off at the same time each day," Sanford said. "It's best to use an automatic timer." Sanford recommends using high efficiency lamps and said that *Focus on Energy* has grants that could help farmers pay for them. Information is available at 1-800-762-7077 or to www.focusonenergy.com.

In a tie stall barn, you can use one continuous row of single bulb T-8 fluorescent lamps or two bulb T-8 fluorescent lamps every eight feet in water resistant fixtures on the ceiling over the cows' heads. In a freestall barn, Pulse Start metal halide or high pressure sodium lamps are recommended, but one should consult a lighting contractor about proper placement. Sanford said the payback time for installing and using long-day lighting is about two years for a 40-cow herd and just six months for a 300-cow herd. This practice will increase feed costs, but results in an increased profit of about \$62 to \$67 per cow per year.

For more information on lighting for agricultural buildings, refer to UW-Extension publication "Energy-Efficient Agricultural Lighting" (A3784-14), which can be found at <http://cecommerce.uwex.edu> under the heading "Agriculture" and sub heading "Energy, Engineering, Environment, Safety." For more information about long day lighting in dairy barns, contact Scott Sanford at 608-262-5062, sasanford@wisc.edu

Private Pesticide Applicator Training Offered

For those needing to recertify or for new certifications, there will be an all-day training and testing session on **March 2, 2005** from 9 a.m. to 3 p.m. at the Spooner Agricultural Research Station. Lunch will be on your own. Registration and training materials cost \$30 and can be purchased at the door or in advance at your local County Extension Office or at the Spooner Ag Research Station. For more information, call 800-528-1914.

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and
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Sciences

Representing Burnett, Sawyer, & Washburn Counties:

Kevin Schoessow
Area Ag Development Agent
715-635-3506 or 800-528-1914

Richard Otto Wiegand
Area Ag Agent
715-635-3506 or 800-528-1914

Yves Berger
Spooner Ag Research Station
Superintendent & Sheep
Researcher
715-635-3735

Phil Holman
Spooner Ag Research Station
Asst. Superintendent
715-635-3735

Representing Ashland, Bayfield, Douglas, and Iron Counties:

Tom Syverud
Ashland Ag Research Station
Extension & Outreach Educator
715-682-7268

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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.

Assistance programs for farmers

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

For more information or questions on other programs, call Otto Wiegand or Kevin Schoessow at Spooner, 715-635-3506, or Tom Syverud at Ashland, 715-682-8393.

Farm Link – program that connects beginning farmers with retiring farmers or helps farmers to relocate. Contact: Gwen Garvey, Wisconsin Farm Center, DATCP, 800-942-2474.

CWT/Cooperatives Working Together – allows dairy farmers belonging to participating cooperatives in many parts of the US to liquidate their herds for amounts higher than cull cow prices. Two rounds were implemented, one in 2003 and the second in 2004. The program may be implemented again in 2005. Contact: 888-463-6298.

Land Trusts – lands trusts or land conservancies assist landowners in putting easements on all or portions of their property to restrict future use. Contacts: Western Wisconsin Land Trust, Trego 715-635-8614, or Menomonie 715-235-8850, Bayfield Regional Conservancy 715-779-5363, or Gathering Waters Conservancy 608-251-9131 to find out which land trusts serve your immediate area.

Farm Family Weekend Getaway – sponsored by Sowing The Seeds of Hope Coalition and DATCP, there are five weekends for couples in February-March at hotels in Rib Lake, West Bend, Shawano, Dodgeville and Black River Falls, and one weekend in Jan for women in Fennimore. Participants learn to deal with stress, communicate more effectively, work on future plans and just take a break. There are no costs while attending and some assistance may be available for labor or child care. Contact: Kathy Schmitt at 608-224-5048.

Farm Labor – several farm employment agencies operate in Wisconsin. Farm magazines often carry ads. Farm trainees from Asia, Europe, Africa or Latin America are also available. Call your county agricultural agent for more information.

Relief Milkers – we have found one full-time relief milker in the area. He has milked on 40+ farms and lives just west of Cumberland. Call Scott Riebe, 715-822-3004.

AgrAbility Program – provides advice to farmers with disabilities on how to obtain financial assistance. It is a partnership between UW Cooperative Extension and Easter Seals of Wisconsin. Contact: 800-422-2324.

Livestock Insurance – Livestock Risk Protection (LRP) is a new insurance program that protects producers of feeder cattle, fed cattle and hogs from unexpected declines in the market price. Contact: www.rma.usda.gov/policies/2005LRP, or Brenda Boetel, UW-River Falls, 715-425-0702.

Rumensin now approved for dairy

*Tom Syverud
Extension and Outreach Educator
Ashland Ag Research Station*

Recently, Elanco received FDA approval for the feeding of Rumensin to lactating and dry dairy cattle. The studies to get approval in dairy cattle began about 10 years ago. It has been approved for beef animals for about 30 years and for dairy replacement heifers since 1983. Rumensin has historically been illegal to feed to lactating dairy cows for many years. The label claim is for improved feed efficiency, i.e., more milk per pound of feed. The approved dosage range is 11-20 grams/ton of TMR dry matter; the company will recommend 11 gm/T in most cases. At the approved feeding rate, the cost will be about two cents per cow per day.

It is important to remember that rumensin is rapidly fatal to horses and that any medicated feed must be kept away from equines. Otherwise there are virtually no safety issues with this product, although producers should be prepared for a (usually transient) drop in butterfat test when they start feeding it.

Based on information from Elanco, the label reads as follows; For increased milk production efficiency (production of marketable solids-corrected milk per unit of feed intake): Feed continuously to dry and lactating dairy cows a total mixed ration (complete feed) containing 11 to 22 g/ton monensin on a 100% dry matter basis.

Pat Hoffman, Dairy Herd Management Specialist, UW

Marshfield Ag Research Station states that in the overall picture, addition of monensin to lactating dairy cattle has been demonstrated to make subtle performance changes. Possible responses include a potential small increase in milk (1-2 lbs) with a potential small reduction in feed intake (1 lb/day). In addition dairy producers may see small reductions in (.1 percentage units) fat test. Thus the reason for the feed efficiency claim on the label. While production changes are not dramatic Rumensin has historically been relatively inexpensive to feed (1-2 cents/day).

This clearance will result in some evolution of the exact intent of the label and feeding strategies. With the help of UW Dairy Scientist Dr. Randy Shaver, we hope to develop additional educational materials on the issue in the near future. For now however it is probably best to sit tight for a while and see what the response is from the industry.

How much nitrogen does my corn crop need?

*Kevin Schoessow
Area Ag Development Agent
Burnett, Sawyer, & Washburn Counties*

With increase concerns of the environmental impacts of nutrients on surface and groundwater, let alone economics considerations, it is becoming more important to understand this basic question. The old approach has been to base corn nitrogen (N) recommendations on expected yield goal. Typically, a factor of about 1.2 lb N/bushel of expected yield was used. This approach would result in

recommending 120 lb N/acre for 100 bushel corn or 180 lb N/acre for an expected yield goal of 150 bushels corn. A common short coming of this approach is selecting a reasonable yield goal. Numerous studies across the Midwest and Canada have also shown that there is a poor relationship between yield goal-based N recommendations and the economic optimum N rates.

Wisconsin's N recommendations for corn are based on soil-specific characteristics that include soil organic matter, soil texture, and soil series or soil name information. These recommendations were developed over many years from N response research conducted on a wide range of Wisconsin soils to determine what is the economic optimum N rate (EONR) for corn. The EONR is the nitrogen rate which provides the greatest potential for profit not yield.

The maximum amount of N needed for economically optimum yields for corn range from 120 lb N for non-irrigated sands (low yield potential), to 180 lbs for silt loam type soils (high yield potential). These rates are for soils with less than 2% organic matter. Soils with more than 2% organic matter will require even less applied nitrogen. These recommendations do not take into account any N credits that would be given to manure applications or legume plow down.

While there are some soil types in Northern Wisconsin that have a high corn yield potential most northern soils have a medium or low yield potential. Assuming no manure or legume plow down and conventional tillage how much N does your corn crop need? In most cases 120-150 lbs N/acre is all that is required.

Notes from the Dairy-L discussion group

*Tom Syverud
Extension and Outreach Educator
Ashland Ag Research Station*

Feeding Raw Soybeans

A Wisconsin dairy producer asked a common question: We are feeding roasted soybeans this fall for the first time and are pretty happy with the results so far. We screen washed a manure sample and are finding what seems to be quite a quantity of soybean particles that are undigested. Our roasted beans are coarsely rolled and I wonder if processing them finer would be a good or bad idea? We are currently feeding 5#/cow as fed.

A feed company rep gives a good overview when he replied that many dairy customers feed their farm raised soybeans in one of three ways: raw, cooked/flaked, and roasted. Each has its own unique properties and work well in various types of feeding programs.

Raw beans that are cracked are probably better than raw beans that are ground. Ground raw beans contain an enzyme that will speed their rancidity, and grinding raw beans exposes a lot of free fatty acids to the environment inside the rumen and before the beans are consumed. Rancidity may develop, which affects vitamin requirements and the taste. Do not feed raw beans to mono-gastric animals or young ruminants such as calves 6 months of age or less. Do not mix raw beans with urea as the enzymes in raw beans will release the urea as ammonia. Cracked raw beans are

very digestible. I like to limit raw bean intake to about 3 lbs. / cow / day.

Steam flaked or cooked beans are usually processed at the temperature of steam, around 180 to 212 F. This destroys most of the rancidity enzymes, but does not destroy trypsin inhibitor enzymes. For this reason, steam flaked beans should not be fed to young animals where the Trypsin enzyme is critical in protein digestion and optimal growth. Generally they can be fed to older animals, even mono-gastric, but must be fed in limited amounts. The amount of cooling time greatly affects the nature of protein release in cooked beans. Be sure you know whether and how fast beans were cooled after steaming. In high corn silage and grass hay diets, it is possible to feed 4 to 6 lbs. of cooked beans safely.

Roasted beans are either roasted or expelled at temperatures exceeding 260 to 270 degrees F. This processing destroys all the enzymes and makes the roasted bean safe for all species and ages of livestock. The roasting process costs more, but also increases the undegradable protein for high producing (>70 lbs. of milk) dairy cows. Roasting takes moisture down to only 5 or 6% so be sure to adjust for this after roasting when calculating cost (extra shrink) and balancing the ration. Excessive roasting or very slow cooling of roasted beans can affect protein digestibility in a negative manner, and I have seen in extreme cases actually cause fire. Tests are available to determine the degree of heat processing for either steam flaked or roasted soybeans. In high producing dairy cows we have some herds that feed 6 to 7 lbs. of roasted beans, but

be sure to limit total added fat to the ration to 1.5 lbs. or less and provide adequate fiber since high fat rations tend to reduce availability and digestibility of fiber.

In most cases, the amount of soybeans you can feed depends on the processing method, age/type of animal, and balance of the diet. Generally if beans are the only external fat source in the ration you can feed 6 to 7 lbs. safely. This may be too much if beans are not roasted. Raw and cooked beans are high in rumen soluble protein, and part of this excess nitrogen may be lost in diets already high in soluble protein from good haylage or other feed byproducts.

A retired UW Dairy Scientist adds that “the processing of the roasted soybeans finer may improve the digestibility of the beans, but may result in freeing more soy oil and be a greater negative on fat test as well as the protein % in milk. Five pounds of the roasted beans would be about my maximum amount of the beans. If the diet fat is above 6% consider reducing the amount of fat contributing ingredients. The bottom line for me is to check with the cows. If they are milking well, components are normal, and cows appear to be chewing a normal amount of time, don’t get too excited about the manure.”

The UW Ashland Ag Research Station fed raw soybeans for many years with good success. Beans were ground in the grain mix every two weeks and no storage or palatability problems were noted. Feeding levels were commonly 5-6 pounds per day, occasionally higher for high producing cows.

Crop trial harvest report

*Phil Holman
Assistant Superintendent
Spooner Ag Research Station*

Alfalfa & Grass Mixture Trial

In late summer of 2003, an alfalfa & grass mixture trial was seeded to look at yield and quality of different alfalfa & grass mixtures compared to alfalfa alone. In addition early, medium, and late harvests were taken to determine the yield increase and feed quality decline with different harvest dates. This study is being repeated at two other locations in Wisconsin as well.

2004 was the first harvest here at Spooner. Yield data only shows that a pure alfalfa stand without any grass yields the most in an early cutting for first, second or third crops. However, with later cuttings the alfalfa and orchardgrass mix or the alfalfa and timothy mix yielded slightly more than pure alfalfa.

It will be interesting to see how this trial performs in a second harvest year and then to compare the data with the other two locations. It will also be interesting to see the forage quality data when the samples are analyzed.

2004 Emergency Forages Trial

An Emergency Forages Trial conducted at the Spooner Ag Research Station in 2003 and 2004. This trial has been repeated at several locations in a few states. In addition, samples have been saved for feed analysis. When all the data is combined the UW-Extension Forage Program will publish yield and quality results.

Based only on Spooner Yield Data, I have made the following observations:

- Corn Silage, even when planted as late as July 1st, produces the greatest yield in tons of dry matter per acre.
- 90 day relative maturity corn yielded more at all planting dates than 80 or 100 day relative maturity corn silage.
- May planted corn silage yielded 6.0 to 8.6 tons of dry matter per acre
- June planted corn silage yielded 5.0 to 7.8 tons of dry matter per acre
- July planted corn silage yielded 4.3 to 5.4 tons of dry matter per acre
- Multicut-Tall crops of Sudangrass, Sorghum-Sudan, Japanese Millet, and Pearl Millet yield 2.2 to 4 ton of dry matter depending on the year.
- Multicut-Tall crops had poor stands in May plantings as it is too early to plant the warm season crops.
- Small Grain Forages mixed with peas produce 1 to 2 tons of dry matter
- Foxtail millets produce 1.5 to 3 tons of dry matter
- Soybeans for forage will produce 2.5 to 3.5 tons of dry matter.

Variety Trials

With the crops harvested for the year, now plans can start being made for next year. For the different variety trials the average and top yields were:

Crop	Trial	Average Yield	Top Yield
Alfalfa	2003 Seeding	5.15 ton dm/A	5.38 ton dm/A
Barley	Silt Loam	66 bu/A	74 bu/A
Corn	Irrigated Sandy Loam	158 bu/A	189 bu/A
Corn	Non-Irrigated Sandy Loam	123 bu/A	154 bu/A
Corn	Silt Loam	130 bu/A	154 bu/A
Oats	Silt Loam	88 bu/A	109 bu/A
Soybeans	Irrigated Sandy Loam	37 bu/A	48 bu/A
Soybeans	Silt Loam	26 bu/A	33 bu/A
Winter Wheat	Non-irrigated Sandy Loam	55 bu/A	66 bu/A

Specific Variety trial information is available in UW-Extension publications and at the following web sites:

- Corn <http://corn.agronomy.wisc.edu/HT/2004/Text.htm>
- Soybeans <http://soybean.agronomy.wisc.edu/soyvar.htm>
- Small Grains <http://soybean.agronomy.wisc.edu/publications/A3397.pdf>
- Alfalfa <http://www.uwex.edu/ces/forage/alf04.htm>

Livestock premises registration now available

All Wisconsin farmers who house, keep or co-mingle livestock can register their premises now as part of an effort by the Wisconsin Livestock Identification Consortium (WLIC). WLIC is the statewide organization that is assisting farmers, meat packers and all others who house or move animals on their properties to register their sites in preparation for meeting the Wisconsin Premises Registration Act.

The Wisconsin Premises Registration Act defines livestock as cattle, swine, poultry, sheep, goats, horses, farm-raised deer (and other cervidea), bison, llamas (and other camelids), ratites (such as emus), ostriches and fish. The act requires all state premises be registered by November 1, 2005, but sooner is better in this case. It's the foundational step for a national animal identification trace back system which provides an infrastructure for animal health officials to respond within 48 hours of an animal disease outbreak. "Premises" are facilities, or areas of land such as farms or hobby farms, veterinary clinics, stables, livestock markets, livestock exhibition areas, or any other locations where livestock are kept.

There are three ways to register premises: computer registration at www.wiid.org is available by clicking on the link for WLIC Premises Registration; a premises registration form can be mailed directly in response to a producer who calls

WLIC at 1-888-808-1910; or a producer may register premises by requesting a WLIC agent—listed on the web site at www.wiid.org to register premises on his or her behalf.

The WLIC and its partners are implementing the National Animal Identification System (NAIS) in Wisconsin. The NAIS is comprised of three major steps: premises registration; animal identification; and animal tracking. Registering premises or locations creates no obligation to participate in the animal identification phase of the plan.

WLIC is a multi-species effort led by Wisconsin's livestock and industry organizations whose mission is to create a secure, nationally compatible livestock identification system for the purposes of protecting animal health, safeguarding market access and offering opportunities to enhance the marketability of Wisconsin livestock products. WLIC is registering premises today, working in cooperation with the United States Department of Agriculture, the Wisconsin Department of Agriculture, Trade and Consumer Protection (DATCP) and the University of Wisconsin-Extension.

Premises registration will not prevent the occurrence of animal disease, but, along with animal identification, it will help health officials locate animals and respond more quickly to reduce the risk of spreading the disease. Timely response can help minimize the economic impact of such an event and safeguard the health of our livestock.

FAQ: There are no fees. Similar measures have already been implemented or are in the process of being implemented in Europe, Canada and Australia. Premises where

animals on the list above are kept only for home use are still required to register. Owners of rabbits, cats, dogs or other common household pets are exempt. It has not yet been determined whether registration will become an annual or multi-year requirement. Persons having questions about the law should contact their State Legislator.

For more information, you may contact Leanne Ketterhagen, WLIC, at 608-848-5237 or email at lketterhagen@wiid.org or Otto Wiegand, Area Ag Agent at 715-635-3506, 800-528-1914 or email at otto.wiegand@ces.uwex.edu.

Grants and tax credits for agriculture

*Otto Wiegand
Area Ag Agent
Burnett, Sawyer, & Washburn Counties*

Contacts: for Dept. of Revenue programs, Elaine Kroger 608-266-2442; for DATCP programs, Jim Cisler 608-224-5137, for Dept. Commerce programs, Tim Griswold 608-266-7370.

- Dairy Modernization Tax Credit - up to \$50,000 in tax credits based on 10% of invested money for improvement or purchases related to dairy production (does not include implements). Administered by Dept. of Revenue.
- Dairy 2020 program - \$3000 for assistance in planning and business strategies, cannot be used for "brick and mortar" only planning. Administered by Dept. of Commerce.

• Dairy 2020 Multiple Entity Grants

- Grants up to \$7500 for planning and business strategies. Grants to encourage two or more independent entities to pool their resources to create a dairy business. Administered by Dept. of Commerce.

• Milk Volume Production (MVP) Program

- MVP is a loan package for “significant” increases in herd size. Provides seven-year financing for cattle purchases only. \$500 per animal at 2% interest rate. Administered by Dept. of Commerce.

• Business Employee’s Skills Training (BEST) Program

- Money to train employees to upgrade their skills. Must have under 25 employees and under \$2.5 million in gross sales. Administered by Dept. of Commerce.

• Value Chain Development Pilot Grant

- Up to \$50,000 awarded to dairy businesses looking to introduce new products and other activities related to product development. Administered by Department of Ag, Trade, and Consumer Protection (DATCP).

• Local Dairy Development Pilot Grant

- Up to \$25,000 to enhance development of modernized dairy farming. Administered by DATCP.

• Dairy Farm Modernization Pilot Grant

- Up to \$7,500 for professional services related to risk management, engineering/siting, and labor management. Only available for producers who have a business plan. No “brick and mortar” allowed using grant funds. Administered by DATCP.

This Quarter’s Events

January 5, 2005, Dairy Road Show, *Gaining The Competitive Edge*, 10:30 a.m. to 3:00 p.m., Turtleback Conference Center, Allen Street, Rice Lake. \$20, covers dairy heifer management, milk quality for transition cows and heifers, genetic susceptibility for disease, cow comfort and premise and animal identification. Contact Otto Wiegand at 800-528-1914.

January 8, 2005, *Growing Wisconsin Farmers, A Workshop For Beginning Farmers, Experienced Farmers and Those Who Support Them*, 9:30 a.m. to 3:30 p.m., Barron Co. UWEX, 410 E. LaSalle Ave.. \$10 includes lunch, covers strategies for getting started, linking retiring and beginning farmers, contacts and networking, farming as a career, preserving the family farm and farm transfer. Contact Tim Jergenson at 715-537-6250.

January 9-11, 2005, Fresh Market Fruit and Vegetable Growers Conference, Steven’s Point. \$110 for two people from a farm, \$85 for association members. Contact Anna Maenner at 920-478-3852.

January 12, 2005, Conservation Tillage Seminar, 10 a.m. to 3 p.m, Cumberland. \$10, register by January 7, topics include no-till and conservation till, regulations and cost-sharing, water quality impacts and panel discussion. Contact Ryan Tichich at 715-485-8600.

January 28-29, 2005, Value Added Conference, The Plaza Hotel & Suites, 1202 W. Clairemont Ave., Eau Claire. \$90 for both days, \$55 for Friday, \$45 for Saturday, register by January 15. Includes getting financing, pricing, marketing (Mary & Dave Falk, Love Tree Farms), cooperatives, business planning, access to your farm, branding, organics, food safety, E-commerce, partnerships, and other subjects. Contact Heather Amundson at 715-834-9672.

January - February 2005, 2005 Northern Safari. See attached brochure.

February 5, 2005, Northwest Graziers Conference, UW-Barron Rice Lake Campus, 9:30 a.m. - 3:30 p.m. \$15 includes lunch. Covers manure management on pasture, marketing value-added products, pasture agronomics and improvement, fencing, financial analysis of grazing, beginning graziers, starting a marketing club, and Master Grazer Program and mentoring. Contact Tim Jergenson at 715-537-6250.

February 5-12, 2005, California Agriculture Tour, \$1,345/person double occupancy, includes two days at Tulare Show, tours of seven family-operated dairy farms, cheese plant, orange grove, winery, San Francisco and Monterey Aquarium. Contact Ken Natzke at 715-758-2718.

February 14-16, 2005, GrassWorks, Wisconsin Grazing Conference, Chula Vista Resort, Wisconsin Dells. \$90-100 for non-members. Contact Paul Nehring, GrassWorks Director, at 715-261-6009.

February 24-26, 2005, MOSES 16th Annual Upper Midwest Organic Farming Conference, *Make Mine Organic*, LaCrosse Center, downtown LaCrosse. \$150, includes 45 workshops and 140 exhibitors, largest organic conference in Midwest. 715-772-3153 or www.mosesorganic.org.