

Agricultural Newsletter

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



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What to expect from late harvested hay

Tom Syverud
Extension and Outreach Educator
Ashland and Iron Counties

Relative Feed Value

Forage plant growth is rapid in early spring and after each harvest. During the growth of these vegetative stages, the proportion of leaves is greater than that of stems. At flower initiation, stem growth increases and the concentration of fiber and lignin increases as well. The higher yields in late harvested hay is due to heavier and thicker stems, which have more indigestible cellulose and lignin. When the indigestible cellulose and lignin of forage increases, the Relative Feed Value (RFV) of the total forage decreases. For example: a legume-grass mixture in early June may have a RFV of 145 and in late June the same field may have a RFV of 120. Dairy producers look for a forage with a RFV 124 or greater for the milking herd. Remember that RFV does not relate to the protein content of the forage.

The Ensiling Process

Ensiling forage does not improve quality; the forage quality has to be present before ensiling begins. When forage is ensiled wet--above 68% moisture for example--a secondary fermentation occurs with clostridia bacteria being the driving force. Then an odorous acid called butyric is formed. The resulting silage is dark colored, has a strong odor, has lower nutritional value, and is not readily accepted by livestock. One aspect of lower nutritional value is that the forage protein has been heated, and is in a 'bound' form unavailable for use by the animals. When this type of forage is fed, poor intake and performance can result. Dilution with other forages, slow introduction of this feed to the herd, and proper ration balancing is important.

Silage Making Additives

Two strategies exist for additive use in making silage. The first group, stimulants enhance the growth of lactic acid bacteria, which reduces silage pH quicker, and completes the silage fermentation sooner. The second group, inhibitors slow down the undesirable aerobic microbial growth during the silage fermentation period. Of the stimulants group, inoculants add bacteria, etc. which speeds up fermentation process, while adding enzymes and sugars extend fermentation period. In the inhibitor category; some acids inhibit continuing aerobic fermentation during feed-out, some acids increase crude protein content and/or reduce pH rapidly, and some preservatives reduce soluble proteins levels avoiding fermentation losses. The most commonly used additives are lactic acid bacteria and yeasts.

Agricultural NEWSLETTER

*produced by
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and
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54806.

New Dairy/ Livestock Agent

Richard "Otto" Wiegand will join the staff at the Spooner Area UW-Extension Office starting on July 19, 2004 as the Dairy/Livestock/Farm Business Management Agent. Mr. Wiegand has worked most recently as a Dairy Business Management Consultant for Dairy Strategies in Madison and as an Agriculture Instructor for Northeast Wisconsin Technical College in Green Bay. Mr. Wiegand has done international work in East Africa and Paraguay as well as operated the family dairy farm.

Richard is filling the vacancy of Bill Saumer who left his position in January of 2004. If you have any questions related to dairy management, livestock or farm business management, please give Richard a call at the Spooner Area Ag Agents office at 1-800-528-1914 or (715) 635-3506.

Growing season off to a slow start

*Phil Holman
Asst. Superintendent
Spooner Ag Research Station*

Official Weather records here at the Spooner Ag Research Station indicate that as of July 1st we are 100 growing degree units behind a normal year. This equates to being about a week behind normal.

Crop Updates

Corn: On June 28th we finally received a warm day and the corn turned from yellow to green and seemed to grow several inches. Our corn was close to waist high by the fourth of July. All of our corn was

planted in early May and should make maturity just fine; however, late planted corn in the counties will need plenty of hot weather to reach maturity.

Alfalfa: Our first cutting alfalfa yield was around 1.5 tons of dry matter per acre. This is close to normal yields for here. We chopped our alfalfa for silage the second week of June and forage sample results show excellent quality.

Alfalfa/Grass mixture Trial: An alfalfa & grass mixtures trial had its first harvest. Results show the increase in tonnage over a two-week time. Yields increased close to half a ton of dry matter from June 7th to June 21st. Samples were saved for forage quality analysis. This trial will run two years at three locations in the state. Once all data is in and samples are analyzed, results will be made available through UW-Extension.

Soybeans: It was a challenge to get the soybeans planted in between the rains this spring. On the sandy soil site we planted around the right time, but water ponding and compaction reduced emergence in some varieties. Due to the frequent rains, the silt loam site didn't get planted till June 4th.

Potatoes: The potatoes are close to row closure now and we will be starting our disease prevention program this week. Emergence is spotty with some varieties, but others look really good.

Canola: The canola variety trial showed symptoms of sulfur deficiency. This year, we had fertilized the Nitrogen with urea which doesn't contain sulfur. Last year, we had used ammonium sulfate and didn't have any sulfur deficiencies. Additional ammonium sulfate was added to the plots and they are growing out of the symptoms.

Winter Wheat: We lost a seven-acre field of winter wheat to winter kill. A couple other fields had patches of low populations. Two fields of winter wheat showed no evidence of winter kill. Fields that were open to the winter wind and had low snow cover seemed to have the most winter kill. The winter wheat variety trail had three varieties that did poorly over winter, even in one of the good fields. Winter survival and yield data will be available after harvest and you will be able to use this when selecting winter wheat varieties.

Children and dairy chemicals

*National Farm Medical Center
Marshfield Clinic*

Chemicals used to clean dairy facilities and equipment, especially dairy pipeline cleaners, pose a special risk for children. Here are answers to some questions that will help you protect children that visit your dairy.

What dairy chemicals are dangerous for children?

A dairy operation uses a variety of chemicals, both acid and alkali-based for cleaning of the barns, parlors, and equipment. Most of these preparations are highly concentrated – powerful cleaning agents formulated for industrial settings. Although any of these agents can cause injuries, the most dangerous are the alkali cleaners that are used to disinfect and clean residual milk out of pipelines.

How does alkali cleaner cause injury?

The alkalis used in dairies are generally sodium hydroxide and potassium hydroxide-based and range in concentration from 8 – 25%.

These products are many times more caustic than a common household alkali-based drain cleaner. These cleaners are so caustic that when they come into contact with skin or mucous membranes, they produce immediate chemical burns. Some children who have swallowed liquid pipeline cleaners have had burns severe enough to perforate their esophagus. Some have died from these ingestions; others have required repeated surgeries to repair scarred tissues. The long-term risk for developing esophageal cancer is greatly increased in these children.

How common are injuries from pipeline cleaning products?

There is no single source of statistics on alkali ingestion on farms. We can get some sense of the problem by looking at individual studies in selected area. A South Dakota study found that fourteen children were seen in Sioux Falls area emergency rooms alone over a five-year period for caustic farm product ingestion. A study of four hospitals in Wisconsin over a ten-year period showed that ten children were admitted for dairy pipeline cleaner ingestion. These injuries are very severe and since they are entirely preventable, even one injury is **one** too many.

How do children gain access to these chemicals?

Unlike caustic household products, which are packaged in accordance with the federal Poison Prevention Packaging Acts, there are no childproof packaging requirements for these chemicals in agricultural or industrial settings. While children do not typically have access to industrial work areas, they can be present as family members or visitors in dairies.

For the cleaning products to be used, they must be transferred somehow to the equipment that needs to be cleaned. Some dairies use a closed system, where the cleaner is pumped directly into the pipeline. This is childproof and protects adult workers from spills and splashes as well.

However, in many dairies, the alkali is stored in large containers and is either poured or pumped into another small container, which is then carried to a point where it can be poured into the systems. It is during this transfer process that young children, especially toddlers who want to touch and taste everything, gain access to the caustic. Tragically, some dairies use glasses, cups, and squirt bottles, or other drinking containers for this transfer process, which makes the product even more attractive to the child.

What can be done to prevent these injuries?

Children should be separated from these chemicals at all times. One way to do this is simply to keep young children out of the milk house and/or chemical storage area. An additional safeguard is to use a closed system so the caustic is never in a container that can be accessed by children. Yet another prevention measure is to use packaging that is childproof. Some manufacturers have developed special transfer pumps and locking devices that are designed so that young children cannot open them.

Finally, many dairy operators simply are not aware of how dangerous these caustics are. Please share this information with others – but don't stop there. Awareness of the danger is not enough. Take one or more of the measures listed above and encourage others to do the same.

Soybean aphid watch to begin

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

First detected in the United States in 2000, the soybean aphid has since become one of the most important insect pests of soybeans for Upper Midwest soybean producers. Soybean aphids were detected on fields in Northwest Wisconsin beginning in 2002.

Prior experience indicates many fields begin to see dramatic increases in soybean aphid populations in mid-July. Soybean producers should start scouting soybean fields by the first week of July to determine the activity of the soybean aphid. They should walk soybean fields at least once a week--preferably twice a week--to determine whether the population is increasing. Natural enemies (predators and parasitic wasps), temperature, rainfall, planting date, aphid fungal disease, soybean growth stage and perhaps soybean variety all play a role in regulating soybean aphid populations. Regular scouting will help determine how these factors are influencing aphid growth rates under field conditions.

Optimum field conditions for the soybean aphid include mild temperatures. University of Minnesota laboratory research indicates that the soybean aphid survives for the longest time at 68 degrees F and has the greatest reproductive capability between 68 and 77 degrees F. Once constant temperature in laboratory experiments reached 95 degrees F, soybean aphids lived for less than five

days and no young were produced. Thus, a mild summer would lead to a greater infestation than a hot summer.

Soybean aphids usually are found on the underside of leaves, on new growth at the top and side branches, and can be distributed on leaf petioles and stems under heavy infestation. The insects are small (1/16 inch), soft-bodied, with or without wings. They are yellow early in the season. Winged adults have a black head and thorax. When scouting, producers should walk in a W-shaped pattern across the field stopping to take whole plant counts on 20 to 30 plants throughout the field.

Currently, the Midwest soybean aphid action threshold is set at 250 aphids per plant when the population is actively increasing and the soybean plant is in the R1 to R4 growth stages. The R1 soybean stage relates to first bloom while the R3-R4 soybean stage relates to beginning pod set.

This threshold incorporates a seven-day lead time so growers have time to schedule treatment, purchase product, or deal with weather delays. A regular scouting interval will help to determine if the population is actively increasing. Beyond the R4 stage, the threshold is likely higher. Midwest entomologists are conducting a common experimental protocol this summer to better determine late season thresholds. Treating beyond R6 (full seed) is not recommended.

UW-Extension has created a publication X1134 *Reproductive Soybean Development Stages and Soybean Aphid Thresholds* to help in staging soybeans. This publication can be viewed and printed for free from the following website <http://www.planthealth.info/soyaphid/uwexsoystage.pdf>. or requested from the Spooner or Ashland Area Offices.

Property tax on agricultural forest lands

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



In case you have not heard, Gov. Doyle signed a substitute amendment to Assembly Bill 650 into law on April 14, 2003. This amendment expands the amount of wooded land on farms that qualify for preferential property tax treatment as "agricultural forested land."

2003 Wisconsin Act 33 provided that agriculture forest land is assessed for property taxes at 50% of its fair market value. "Agriculture forest land" was defined as land that either is producing or is capable of producing commercial forest products and that is contiguous to another parcel of land that has been classified in whole as agriculture land if both parcels are owned by the same person.

The amendment (AB650) retains the current law definition of "agriculture forest land" but provides terms that prevents owners of wood land from qualifying their land for assessment as agriculture wood land by converting a small portion of nearby land to agriculture use.

If you own "agriculture forest land" make sure both you and your local assessor understand the definitions and the 50% reduction that is to be given. More information on AB650 can be found on the Wisconsin State Legislature website at <http://www.legis.state.wi.us/>.

Great Lakes Dairy Sheep Symposium back in Wisconsin

*Yves Berger
Superintendent
Spooner Ag Research Station*

After a detour to prestigious Cornell (New York) in 2002 and fabulous Quebec City (Quebec, Canada) in 2003, the Great Lakes Dairy Sheep Symposium is back in Wisconsin. It will be held at the Hudson House Inn in Hudson, Wisconsin on November 4-6, 2004. The little modern town of Hudson has been chosen because of its proximity to a major airport and to Wisconsin's good neighbor Minnesota where the pioneers' spirit still lives. Two of the three farm visits offered by the symposium are located in Minnesota.

Again this year, a full day of the program is dedicated to beginners and potential dairy sheep producers. The basics of sheep dairying will be presented by current producers and by a milking machine specialist directly on the farm of one member of the Wisconsin Sheep Dairy Cooperative. The second day of the symposium is oriented toward the more advanced producers but should be of interest to anyone. The third day is the traditional and popular farm tour. A relatively new medium-size producer in Wisconsin and a real entrepreneur in Minnesota who is milking a large number of ewes and making cheese in a newly developed facility have volunteered to welcome all of you on their farms.

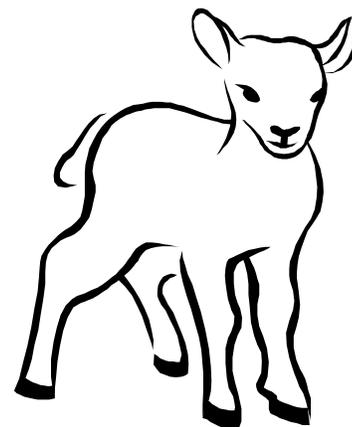
The dairy sheep industry is showing signs of tremendous potential growth. Small cheese makers are being very creative and are gleaning

Potential Solutions to Reducing Traffic Problems Related to Farming Activities:

- √ Place stop signs at farm exits.
- √ Place equipment entering signs at approaches to farm entrances.
You must get approvals from state/county/town highway departments first!
- √ Adequate width entrances to minimize delays in entering the farmstead or fields
Entrances wide enough for two vehicles to pass will help get equipment off the road quickly.
- √ Locate and maintain entrances to eliminate blind intersections.
- √ Place farm roads between buildings to keep traffic off public roads.
- √ For safety, all equipment exiting the farm should have and use brake, signal, flashing lights and slow moving vehicle signs.
- √ Require all custom operators to have proper exhaust and muffler systems.
- √ Organize work to minimize equipment on or crossing highways during busy hours.
(e.g., 7 - 8:30 am and 3:00 - 5:30 pm)
- √ Application of manure by hose rather than with truck and tanker.
- √ Put equipment into transport mode when traveling on the highway.
- √ Select equipment that can travel at or close to the speed limit on local roads.
- √ Provide pull-off areas for unloading manure tankers to avoid parking on highways.
You must get approvals from state/county/town highway departments first!
- √ Use road cones and signs where equipment enters/leaves fields.
You must get approvals from state/county/town highway departments first!

more and more awards in cheese competition, which in turn fuels an ever increasing demand for milk. It is an exciting time for the industry.

Please contact the Lorraine Toman at Spooner Ag Research Station (715-635-3735) to obtain a brochure with program and registration or download it at www.cals.wisc.edu/cos. Two other sites that will provide additional information on sheep dairying are www.sheepmilk.biz and www.dsana.org.



Northwest Grazers pasture walk July 24

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

Rotational grazing in recent years is becoming a popular management method for raising livestock. The key to rotational grazing whether management intensive or not is learning how to farm forages using livestock rather than more conventional high capital mechanized methods.

In an effort to help experienced and beginner livestock grazers learn more rotational grazing, a pasture walk is scheduled for Saturday, July 24 starting at 1 p.m. at the Brian Lundeen Farm four miles west of Frederic on Freedom Rd. Mr. Lundeen operates a 55 cow/calf herd of commercial Angus Beef and has been actively working on a rotational grazing program for the last several years. The farm consists of 100 acres of converted hay ground that is now being used as pasture.

The pasture walk will cover “real world” experience with water system design, pasture fertility management, over-wintering options, no frills fencing, and cattle handling. Using a core aerator to help with compaction issues and improve pasture condition will also be discussed.

This Pasture walk is being sponsored by the Northwest Wisconsin Grazers Network. For more information, contact the Spooner Area UW-Extension Office at 1-800-528-1914 or 1-715-635-3506.

Cows and economic development

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

Economic development and job creation is one of the more common priority issues in communities across Wisconsin, especially in rural areas. Economic development often brings with it an image of retail business, or light manufacturing, but rarely the image of a cow. As rural communities struggle to attract new business, perhaps they should look at keeping the farms and cows that once dotted the country side.

A recent University of Wisconsin study shows each dairy cow generates \$13,737 of economic activity. A 1993 Minnesota study estimated the impact of one cow to be \$11,671. This money ripples through the community in the form of jobs, goods, and services created by a cow. Each cow paid \$604 in state and local taxes in the Minnesota study and \$512 in the Wisconsin study. These estimates are in close agreement given that 10 years separated the time of the studies.

Many people in local rural communities benefit from the ripple effect. The farm family benefits from milk and animal sales. Providers of goods and services benefit from sales to the farm. Processors add value to milk products and employ many workers. These two dairy sectors create added business activity in the local community.

Cows generate jobs. Every nine cows supported one job in the recent Wisconsin study.

Every 1,000 dairy cows within a community contribute approximately \$2.7 million in gross farm income, employ 12 people, and use 1,224 acres of corn and 621 acres of hay. Raising replacements in the community would increase this contribution by \$1 million. The purchased services for 1,000 animals would add \$65,550 in veterinary and breeding, \$167,232 in interest, \$63,835 in supplies, \$58,650 in utilities, \$57,600 in taxes and insurance, and \$342,985 in wages.

According to Wisconsin Agriculture Statistic Service, the counties of Ashland, Bayfield, Burnett, Douglas, Sawyer and Washburn Counties had a combined total of 11,700 dairy cows in 2002. Using the above numbers it's not hard to see the economic impact still have in Northwestern Wisconsin.

Cows encourage diversity in cropping systems through hay or cover forage crops and sustainable crop rotations. Among domestic animals, cows are the most efficient converters of these crops to high-quality food products. Hay crops provide protection to easily eroded soils that are found in many areas of the state. Good manure and nutrient management programs use manure as a crop nutrient resource to minimize pollution risks and sustain soil fertility and structure, reducing dependence on commercial fertilizers. The dairy industry is based on use of renewable resources and therefore is one of the state's most sustainable economic engines.

So hats off to those farmers and cows for helping keep our local economies strong.

Pesticide Containers: What do you do with them?

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

Over the years, I've seen all kinds of creative ways to recycle and reuse containers on the farm. Cut them in half and use them for collecting waste oil or fluid, use them for storage bins for bolts, and miscellaneous parts, use the larger ones to make bins for lumber and metal scraps. They also make handy gas containers for lawn mower or chain saw gas.

While these are all practical uses, most farms generate more containers than they can recycle or reuse on the farm. It is these extras that often end up either being burned or tossed. Based on information from the Agriculture Container Research Council U.S., farmers use 35 million plastic crop protection products containers a year. If you laid these containers end to end, they would line the route from Miami to Seattle, across to Boston, and back to Miami. That's a lot of plastic!

While burning and or tossing pest containers maybe the easy thing to do, why not recycle them?

The Wisconsin Fertilizer and Chemical Association is once again offering a free recycling program to collect and recycle empty agricultural plastic pesticide containers.

Any grower and agricultural dealer may bring containers for recycling. The containers are either chipped on site or transported to a chipping site, and the plastic recycled into pallets for use in the agricultural

industry. Their distinctive black and yellow colors have coined the nickname "tiger pallets".

Containers are inspected on site. Containers that are not properly rinsed will not be accepted or recycling. To pass inspection for recycling:

- All containers must be HPDE #2 plastic
- Containers must be 2 1/2 gallons or smaller
- All containers must be clean (triple-rinsed or equivalent)
- All caps must be removed (rinse caps and dispose of in normal trash)
- Labels, booklets, plastic wrapping, and foil seals must be removed as best as possible

This recycling program began in 1993 to help keep pesticide containers out of Wisconsin's landfills. No federal or state tax dollars are used to support this program.

WFCA Pesticide Container 2004 Chipping Schedule

(by date and time)

Sponsored by these companies and the WI Fertilizer and Chemical Assn., Ph:608-249-4070 Fx: 608-249-5311 e-mail: wfca@aol.com Please note: Times may vary due to mechanical problems and container volume.

Burnett Dairy Co-op
7/14/2004 11:45 AM
11679 State Road 70
Grantsburg, WI 54840
Steve Christian (715) 689-2467

Rice Lake Farmers Union Cooperative
7/14/2004 2:30 PM
1906 McCauley St.
Rice Lake, WI 54868
Mark Kucko (715) 234-3346

This Quarter's Events

July 21, 2004, Home Pest Workshop, Spooner Ag Research Station.

July 22-25, 2004, Washburn County Junior Fair, Spooner.

July 24, 2004, Pasture Walk, Brian Lundeen Farms, Frederic.

July 29-August 1, 2004, Sawyer County Fair, Hayward.

July 29-August 1, 2004, Iron County Fair, Saxon.

August 3, 2004, Garden Flower Workshop, Spooner Ag Research Station.

August 12-15, 2004, Bayfield County Fair, Iron River.

August 17, 2004, Twilight Garden Tour, Ashland Ag Research Station.

August 18, 2004, Twilight Garden Tour, Spooner Ag Research Station.

August 19, 2004, Potato Growers Field Day, Spooner Ag Research Station.

August 26-29, 2004, Burnett County Fair, Grantsburg.

August 28, 2004, Spooner Sheep Day, Spooner Ag Research Station.

September 2-5, 2004, Ashland County Fair, Marengo.

September 15, 2004, All About Potatoes, Ashland Ag Research Station.

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Kevin Schoessow
UWEX Area Agricultural Agent

**UW
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