

Richland County AG News & Notes

Agricultural Newsletter of the Richland County Extension Office

Summer 2006

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Calendar of Events:

July

- 8 **Beef for Breakfast Seminar - Richland Co. Fairgrounds**
- 11-13 **Farm Technology Days – Sheboygan**
- 12 **Pasture Walk – Jim & Shirley Stoltz Farm – 1:00 pm**

August

- 3-13 **Wisconsin State Fair**
- 5 **Richland Co. Horse Show - Fairgrounds**
- 8 **Multiflora Rose Network Meeting - Ewrin Schmitz – 7:00 pm**
- 10 **Multiflora Rose Network Meeting – Bill Hillamen – 7:00 pm**
- 23 **Pasture Walk - Dave and Susan Wiegandt – 1:00 pm**

September

- 7- 10 **Richland County Fair**
- 13 **Richland County Carcass Show**
- 16 **Richland County Household Clean Sweep**

Southern Wisconsin Pasture Walks Announced

Do you have dairy, beef, sheep, or any other animals that utilize grass? Are you interested in grazing? Are you looking for ways to manage your pastures?

Well... Take advantage of the summer long pasture walks available. These are farmer hosted field days that focus on various areas of pasture management and animal management. There are many different production systems and species featured. You will be able to observe and discuss everything from grass and legume species and varieties to watering and fencing systems. There is something for everyone.

The Ocooch Grazing Network will be hosting pasture walks in Richland County. All walks in will start at 1:00 pm. A walk, hosted by Jim and Shirley Stoltz, will held on July 12. This pasture walk will focus on a second year rotational system transitioning to organic dairy production. The second pasture walk, hosted by David and Susan Weigandt, will explore water access improvements on a spring fed creek and invasive brush control in a beef grazing system.

For a complete listing of pasture walks in Southern Wisconsin, or for more information on the pasture walks in Richland County log onto the Richland County Website at <http://Richland.uwex.edu> or contact Adam Hady, Richland County Agriculture Agent, at the Extension Office, 647-6148, or Jean Stramel, NRCS Grazing Specialist, 647-8874 ext.110.

Pay Attention to Beef Cattle's Sulfur Intake

Dr. Jeff Lehmkhuler, Extension Beef Cattle Specialist

Mineral requirements for beef cattle are often overlooked by many producers. This may be partially due to the ease of supplementation using trace mineral packages and other mineral products. It is complicated by the mineral interactions that can occur and limited research that has been conducted in the mineral area.

The recent version of the National Research Council (NRC) Nutrient Requirements of Beef Cattle list a recommended dietary sulfur content of 0.15% for all phases of production. This publication also lists that the maximum tolerable level for sulfur is 0.4% in diets. Excessive dietary sulfur can be detrimental to animal health as well as inducing mineral deficiencies as a result of forming insoluble mineral complexes. Copper for instance has been shown to bind with sulfur and iron in the rumen.

It is widely known that dry matter intake is impacted by water consumption in cattle. Water containing high concentrations of sulfur can be problematic reducing intake and animal performance. Research conducted in 1971 illustrated heifers receiving water with 5,000 ppm of sulfates from sodium sulfate lost more weight due to lower water and feed intakes. More recent research conducted in South Dakota further illustrated the detrimental impacts of high sulfate containing water on performance. Additionally, polyoencephalomalacia (PEM) or brainers can be induced by the consumption of high levels of sulfate.

The Merck Veterinary Manual lists PEM as being caused by both thiamin status and excessive sulfur consumption. Brainers were associated with a thiamin deficiency as a result of low tissue thiamin levels. Diets containing high levels of grain can favor environments for microorganisms that produce thiaminase destroying thiamin resulting in an increased risk of a deficiency. Cattle suffering from PEM may respond to thiamin supplementation. Recent findings have revealed that PEM can be a result of hydrogen sulfide gas inhalation independent of thiamin status.

Within the rumen, the microorganism ferment sulfur containing substrates producing hydrogen sulfide gas. The animal eructates (belches) the gas from the rumen and may then subsequently inhale this gas. Hydrogen sulfide interferes with energy metabolism of the central nervous system. Researchers at Oklahoma observed PEM symptoms in 100% of cattle consuming experimental diets containing 0.55% and 0.71% sulfur. Polioencephalomalacia was observed in animals beginning on day 13 and continued through day 37 indicating that the cattle did adjust to the excessive dietary sulfur intake. Though PEM was not detected in cattle consuming diets containing 0.39% sulfur, all were found to have microscopic brain lesions. Others have observed PEM in cattle consuming diets containing sulfur levels of 0.26%.

When utilizing alternative feedstuffs and co-products, it is highly recommended that a feed test be conducted which includes a mineral assay. Recently, it appears that the sulfur content of corn-based co-products vary and may contain high levels of sulfur. This is due to the use of sulfuric acid to control the pH as well as the inclusion of ammonium sulfate to aid

fermentation. It is recommended that producers work with their nutritionist or county agent to reduce the risk of inducing PEM.

UW Lancaster Beef Cow-Calf Field Day

On July 26, the UW Lancaster research station will host a cow-calf field day entitled "Dollars and Sense". The field day will be held from 4:00 p.m. to supper at 7:30 p.m.

Topics for the night will include the Cattle Cycle & Market Update presented by UW-River Falls Livestock Economist Dr. Brenda Boetel; Crossbreeding, Mineral Supplementation Research by UW Extension Beef Specialist Jeff Lehmkuhler and Lancaster Station Assistant Arin Crooks. Grant County Dairy & Livestock Agent Dave Wachter will be discussing Frame Scores and Economic Relationships. The last topic for the evening will be Pasture Finishing and Pasture Forage Update presented by Rhonda Gildersleeve, Iowa County Agriculture Agent.

Supper will be provided by the Grant County Cattleman's Association.

There is a registration fee of \$10. This fee includes supper and materials and is payable at the door. If you would like to attend this field day please phone your pre-registration by contacting Dave Wachter 608/732-2125; Rhonda Gildersleeve 608/935-0391; or Arin Crooks 608/723-2580.

Production from the Past:
Beef production in the mid to late 1800's

In the book Feedlot Empire: beef cattle feeding in Illinois and Iowa, 1840-1900, by James W. Whitaker, the cattle feeding industry was at a shifting point from mainly pasture to grain based feeding systems.

Cattle marketed in the 1850's were very similar to today's fat cattle, with weights of 800-1600 pounds with 1200+ pounds being the most common. The greatest difference in cattle from then to now is the time that it takes to get an animal to a marketable weight. In the 1840's & 50's cattle were marketed at ages of 3- 6 years of age, with a large number being marketed at 3-4 years.

Between the years of 1840-1860 a 1,500 pound steer was worth anywhere from \$22.50- \$75 per head in the New York or Chicago markets.

Cutting Alfalfa Very Frequently

Dan Undersander
 UWEX Forage Agronomist

There has been some interest in cutting alfalfa frequently to get very low fiber for dairy rations. We had a study in 2000 and 2001 where we compared 20 alfalfa varieties with and without wheel traffic. We cut at 21-day and at 35-day intervals. The yield data averaged across the varieties is presented in the table below. In the seeding year we saw 33 to 51% yield reductions and, in the first production year, about 50% yield reductions.

The study was not continued beyond the first production year because the 21-day alfalfa varieties with 21-day cutting interval died out the next winter while the same varieties with 35-day cutting intervals came through the winter in good shape.

There did not appear to be any significant differences among the varieties in tolerance of the more frequent cutting.

Thus, as farmers are thinking of the shorter cutting intervals to reduce fiber content of the forage, we should keep the 50% yield reductions and expected shorter stand life in mind. It is difficult to believe that the economics of this practice will be beneficial to the farmer.

Effect of Cutting Frequency on Alfalfa Yield, Arlington, WI				
Management	Seeding year		First Production Year	
	21 day cutting interval	35 day cutting interval	21 day cutting interval	35 day cutting interval
	-----Yield (t/a dry matter)-----			
No traffic	2.9	4.3	3.9	7.3
Reduction (21 vs 35 days)	33%		47%	
With wheel traffic	1.8	3.7	3.2	6.6
Reduction (21 vs 35 days)	51%		52%	

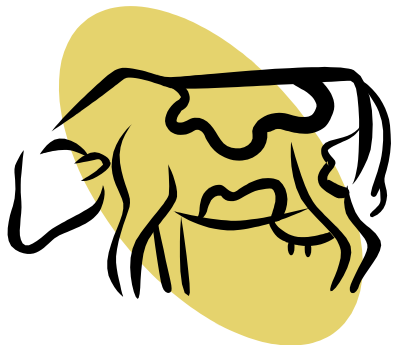
RICHLAND COUNTY HOUSEHOLD CLEAN SWEEP

Richland County, in cooperation with the City of Richland Center will host a Household Clean Sweep on **Saturday, September 16, 2006**. The event will run from 9:00 a.m. – 1:00 p.m. The Clean Sweep location will be the Richland County Highway Shop, located in the Richland Center Industrial Park.

The program is aimed at household generated products. This means household cleaners, solvents, oil based paints/varnishes, car maintenance products, wall or driveway sealers, and pesticides. We will NOT accept latex paints, fertilizer, empty containers, or waste oil.

Anything brought to the collection should be in its original container. For easy transport and handling, all containers should be placed in a plastic (garbage bag) lined cardboard box. For safety, the containers should be in the trunk of your car or back of a truck. Once at the site, collection personnel will handle the product. You will be asked to stay in your vehicle.

There is no registration required. For more information, call Steve Kohlstedt at the Richland County UWEX Office at 647-6148.



Proper use of ERCR Can Improve Conception Rates and Farm Profitability

Dr. Kent Weigel
Assistant Professor, Extension Genetics
Specialist, University of Wisconsin
Genetic Programs Administrator,
National Association of Animal
Breeders

Fertility is a hot issue in the dairy industry today. Changes in herd management, coupled with higher milk production per cow and greater economic pressure on the farmer, have made ‘getting cows in calf’ a frequent topic of discussion at academic and industry meetings and at farmer gatherings.

Conception rates seem to be declining, but what is the cause? Many people are quick to blame genetics, and we’ll discuss this point in detail a bit later, but there are many other possibilities as well. Dairy farms are changing rapidly, and some of these changes lead to greater challenges in reproductive management. For example, herds are increasing in size at an astonishing rate. Common sense tells us that reproductive management is more difficult and time consuming with 500 cows than with 50 cows. Many duties, such as heat detection, that were previously handled by the owner-operator are now handled by hired employees who may not have much on-farm experience or training. Furthermore, changes in facilities may contribute to the problem. In many new dairies, cows are housed on concrete 24 hours a day, and this could certainly affect a cow’s tendency to express estrus symptoms.

What about the cow herself? Modern dairy cows continue to produce greater levels of milk each year, and without corresponding improvements in nutrition and cow comfort, these cows will experience significant stress. Fertility of virgin heifers has not declined over time, so it is easy to conclude that the stress associated with high milk production is the problem. However, many studies have shown that the herds with highest average milk production also have the best reproductive performance (presumably because they have the best management). Genetically speaking, we know there is a slight negative relationship between milk production and cow fertility. Bulls that sire daughters with high milk production, particularly bulls whose daughters tend to have poor body condition scores, will also tend to sire daughters with below average fertility. However, the magnitude of this relationship is small, and we know that it is possible to find many bulls that transmit high milk production and above average fertility.

Management and environmental factors account for 96% of the variation in conception rates! Differences between herds due to factors such as nutrition and heat detection are huge. Climate differences, particularly high temperatures, also have a major impact on fertility. The cow's genetic background accounts for only 3% of the variation in conception rate, and the service bull accounts for only 1%. So, genetic differences exist between animals, but it is very clear that the primary focus should be on improvement of management factors that influence fertility.

Suppose that you've already addressed issues such as herd health, nutrition, heat detection, and employee training, and

you want to get a little extra "bump" in conception rate by selecting cows and service bulls with enhanced fertility.

National genetic evaluations for cow fertility (often called daughter fertility or female fertility) will not be available for another 12-18 months, so you're out of luck for the moment. But service bull fertility (often called male fertility) is routinely evaluated by Dairy Records Management Systems (DRMS) in Raleigh, NC. In May and November of each year, this organization releases Estimated Relative Conception Rate (ERCR) information for hundreds of Holstein and Jersey bulls. These data can be accessed electronically by visiting <http://www.drms.org>.

The ERCR value for each bull can be interpreted as the 70 day non-return rate (i.e., presence or absence of a repeat breeding within 70 days) corresponding to inseminations by that bull relative to all other bulls that were used in the same herds. Environmental factors, such as herd, month of insemination, age of cow, days in milk, and milk production of the mate are taken into account. Only first services are used, and bulls must have at least 300 inseminations in the past three years to get a publishable ERCR evaluation.

Differences between service bulls are significant. A quick scan of the DRMS Raleigh web site shows that the poorest Holstein AI bulls are around -5% ERCR, and the best are around +5%. That's a 10% difference in conception rate! Let's assume that you've never used ERCR before, so you've been using bulls that are, on average, about 0 for ERCR. You really want to improve the conception rate in your herd, so why not jump onto the ERCR bandwagon and breed the

whole herd to the bull that's +5%? Not so fast.....

Fertility is just one of several important traits we'd like to improve in our dairy cattle.

There's milk production, of course, but there are also other traits like type, somatic cell score, and productive life. Where does ERCR fit on the priority list? Virginia Tech research shows that, in an average herd, ERCR is worth about \$2 per percentage point.

For example, if you're considering two bulls that are equivalent in genetic merit for all of the other important traits, you can assume that a straw of semen from the bull with +3% ERCR is worth \$4 more than a straw from the bull with +1% ERCR. Yes, ERCR can be a useful trait to consider when purchasing semen, but like somatic cell score, productive life, and type, it is a secondary trait. You won't get much benefit from using a bull with +5% ERCR if you give up \$100 in Net Merit in the process.

What about selecting AI studs based on ERCR data of their bulls? Unlike the other traits in your selection program, service bull fertility can be influenced by the AI stud where the bull is housed. Differences in management of the bulls, handling of the semen, discarding of ejaculates, and other routine practices can have a slight effect on conception rates. However, differences between AI studs are extremely small when compared with differences between herds, seasons, and individual bulls within a stud.

In summary, let's review several key points:

1. Improvement of conception rate starts with good management. Cows need proper nutrition, as well as a clean, comfortable environment. Herd managers must make heat detection a priority, and effective training of every employee who is involved in the reproductive management program is essential.
2. After these management issues have been addressed, additional gains in fertility may be possible by selection for cow fertility and service bull fertility.
3. Service bull fertility, as measured by ERCR, is routinely available through DRMS.
4. Differences between AI studs are small, but significant differences exist between individual bulls within a stud.
5. Primary selection emphasis should focus on bulls that sire high lifetime profitability, as measured by Net Merit. Secondary selection for bulls with higher ERCR values can improve conception rates and increase farm profitability.

Richland County Agriculture Fact:

***Richland County has
209 milking herds***

Dairy herds by type in Richland County:

Grade A Milking Herds:

159 herds making up 76% of the total milking herds in Richland County

Grade B Milking Herds:

50 herds or 24 % of Richland County's milking herds

Source: Wisconsin Agriculture Statistics 2005, DATCP

Fencing in Agricultural Areas

By Steve Kohlstedt, Ag/Resource Agent



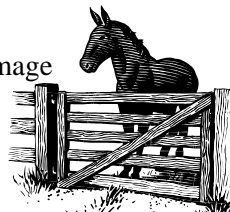
I have had several questions concerning fencing issues in the past few weeks. Chapter 90 of the Wisconsin State Statutes governs fencing in agricultural areas. There is an old saying that good fences make good neighbors so keep this in mind when discussing maintenance and construction of boundary fences.

Boundary disputes must be distinguished from fence disputes. Placement of a fence does not determine the boundary of the property. A survey of the property is the only way to settle a boundary dispute.

Neighbors should first determine if a fence is required. The law provides that if either adjoining property of two neighbors is used for farming or grazing, a fence is required. However, neighbors may reach an agreement to use markers instead of a fence or agree not to have or maintain a fence at all (Sec. 90.03). Disputes often occur when one neighbor changes the use of the land, (ie.) if two neighbors both have wooded lands, a fence is not required. But if Neighbor A chooses to graze cattle in his or her woods, both Neighbor A and Neighbor B would then have to build and maintain a fence between their land, under the law, unless they both agree otherwise.

Who should bear the cost of the fence? In our example above, Neighbor B may believe that Neighbor A should bear the full cost for the fence because the fence arose from his decision to graze. But under Chap. 90 both adjoining neighbors are responsible for erecting and maintaining their half of the fence, unless otherwise agreed.

A fence can limit or prevent damage from animals and affect liability. An owner not maintaining a partition fence in good repair cannot claim damages when the neighbor's animals trespass. However, construction of a



fence does not relieve the owner of swine, sheep, horses or goats from liability for damages they commit upon the enclosed premises of a neighbor. (Sections 90.04 and 172.01) In addition, under Section 172.01, some animals are considered so powerful or difficult to contain that the state has imposed liability on their owners regardless of whether the animals escape was the owner's/keeper's fault. This strict liability applies to stallions over one year old, bulls over six months old, and to boars, rams and billy goats over 4 months old.

Although the law provides that responsibility for a fence is divided evenly between two adjoining neighbors, they may agree upon another arrangement. Partition fence agreements (especially if the arrangement is different from what the law prescribes) should be in writing, signed by the owners and two witnesses, notarized, and filed with the town clerk. (Sec. 90.05) These agreements may be recorded with the Register of Deeds. A purchaser/owner should check with the town clerk and check their abstract or title insurance policy when buying/financing property to see if an agreement has been filed or recorded. Also, fence viewers should ask the property owners if there are any existing written agreements. (Past oral agreements are not binding on present owners.)

A partition made by agreement and filed with the town clerk, or one made by decision of fence viewers, binds future owners until a new partition is made.

General rule of thumb in dividing responsibility between neighbors is: "Whenever practicable...when facing a farm, going around the farm to the right, the first one-half of the line fence belongs to the farm faced." (Sec. 90.07) This directive, found in a section concerning divisions of fences by fence viewers, also provides guidance for neighbors dividing responsibility themselves. The meaning of the directive may not be clear at first. It means a person standing on his or her property line, facing the neighbor's property, would ordinarily have the duty to

maintain the half of the fence on his or her right, with the neighbor maintaining the half on the left. However, this may not be practicable, and another arrangement may be called for in light of past practices or challenging features, such as water.

If neighbors cannot agree on how a fence should be divided, either neighbor may apply for help from town supervisors, who are empowered to resolve fence disputes.

For additional information, contact the Extension Office, 608-647-6148, for a copy of UWEX Fact Sheet #13, entitled, "Fences for Agricultural Areas". You can also find the fact sheet on the internet at: www.uwex.edu/lgc/program/pdf/fact13.pdf

Custom Rate Considerations for 2006

By Steve Kohlstedt, Ag/Resource Agent

The Wisconsin Agricultural Statistical Service periodically conducts a Custom Rate Survey. This survey is done every two or three years. The survey is mailed out to farmers who hire custom work, custom operators and farmers who perform work and machinery dealers who rent out equipment. The last time this data was collected was in 2004. In 2004 over 1300 participants returned the survey and this is the report that we use to help people start to think about "Custom Rates for Services".

The report is broken into several categories: *Land Tillage Operations*, includes nearly all tillage operations and some specialty operations, such as cultivation and stalk shredding; *Planting Operations*, includes conventional and no-till planting for a wide variety of crops; *Haylage Harvest Operations*, includes all stages of haylage harvest; *Hay Baling and Wrapping*, includes baling big and small square and round bales, plus wrapping costs; *Corn Silage Harvest Operations*, includes chopping, chopping and processing, chopping, hauling and silage bagging; *Harvesting Operations*, includes a wide range of harvest operations; *Machinery Rental*, includes tractors, combines, skid

steers and bulldozers; *Farm Labor*, includes the wages for a relief milker and general farm labor; *Land Rental*, includes rents for cropland, tillable pasture and non-tillable pasture.

The custom rates for these categories are generally given in a range (low to high) per acre for a certain activity, with the average for the state on a per acre basis and an hourly basis. The low ends of the range are those custom people who do a lot of acres and can spread the cost of labor, equipment, and fuel over many acres. The high ends of the range are those custom people who do very few acres and the cost becomes higher because of the limited acres. Generally speaking, the average rate is used as the starting point to determine an "agreement" for custom rates for services.

Since this report is done every few years, not annually, we need to adjust the rates for the current year expenses. Those changes are the cost of equipment, changes in fuel cost, and changes in labor costs. In 2006, the biggest change is the cost of fuel. It has more than doubled since last year and this must be considered when applying the 2004 custom rate information to the 2006 custom rate to be charged. This may increase the rate from 10-20% depending on the rest of the costs of the operation. On the other hand, in another year, the rate may go down somewhat based on a stable fuel supply and a constant labor force and machinery cost. This is why it is important to view this data on a year-to-year basis and to use current expenses and trends to develop a profitable custom rate for an agricultural activity.

This Wisconsin Agricultural Statistical Service Survey results can be obtained on the Internet at: www.nass.usda.gov/wi/.

To better determine an appropriate charge in your situation, obtain a copy of Bulletin A3510, "Estimating Agricultural Field Machinery Costs", from the Richland County Extension Office (for a small fee) or at: <http://cecommerce.uwex.edu/pdfs/a3510.pdf>.

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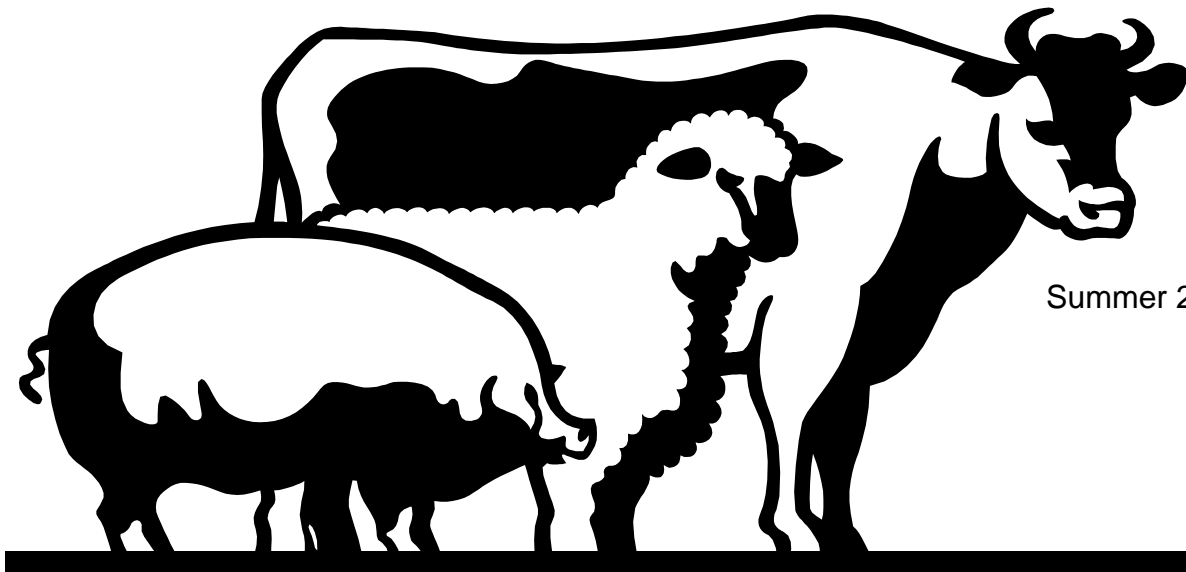
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