

Central Wisconsin Agricultural Extension Report

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Economic Impact of Agriculture

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A recent examination of the proportion of jobs in this seven county area for 2001 has shown that agriculture supports the local economy more than any other industry.

The reasons behind this fact is simple, think of the businesses that your farm buy from and sell to and then think of the businesses that a manufacturing or other industry works with. Your money stays local. Then that money spent at local cooperatives, farm suppliers, implement dealers, and farm service professionals (ex. Vets and consultants) stays in the community to support not just those local industries but also industries that support the residential population of everyone involved (retail shopping, car dealers, plumbers, electricians, etc.). In 2001, money spent from your business cycled through the economy in such a fashion that your job in agriculture roughly supported three other jobs in your community.

Conversely other industries that buy from and sell to industries/people in other counties, states, and even countries so our local economy does not benefit as much; a job in manufacturing roughly supports 1-2 other jobs in the community. This is not to say that manufacturing is a less desirable industry, however, as the jobs they support are importing (taking away) economic activity from other areas, which is a good thing. But when it comes to what type of job offers the most local support, agriculture is the clear winner.

This analysis was done with simple multiplier analysis of 2001 industry workforce percentage numbers in Adams, Green Lake, Juneau, Marquette, Portage, Waushara, and Wood counties with data from the Wisconsin Department of Workforce Development (www.dwd.state.wi.us/lmi). Contact Jacob Schuelke at jacob.schuelke@ces.uwex.edu or 920-787-0416 for more information.

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Feed Inventory Management

By: Matt Lippert

To many people, the end of the season would be the best time to calculate feed inventory. Others simply harvest what they have and never actually calculate an inventory. If conditions have left you with some question if forage supplies will be adequate for the herd, an inventory now will give you more opportunities to make wise and relatively painless choices to keep the herd fed.

Early decisions may allow for the opportunity to harvest alternative forages such as harvesting small grains as forage rather than as grain, or to divert corn from grain to silage. Soybean crops can be harvested as forage. A reduction of ten head to feed right now early in the season will save the same amount of forage for the remainder of the herd as if the herd size were dropped by 100 head next April.

If feeds that you are less familiar or comfortable with are going to be fed, utilizing them continuously throughout the season in small amounts rather than large amounts later is a more consistent feeding program that livestock will generally respond favorably to. A high fiber, low protein first crop haylage will perform better if it can be paired with a high RFQ 3rd crop.

Crop conditions currently look good so inventory may build for you over the season. However for many, we already know that our first crop hay crop was severely limited because of winter damage.

In addition to increasing harvest and reducing cow numbers, another valuable management tool would be to make efforts to decrease harvest and storage loss. Actions such as excellent packing of silages, careful covering of piles or bales and appropriate dimensions of the silage mass to cause adequate removal of feed from the face while feeding out will keep losses low.

The steps of projecting feed needs and usage are to know how to determine tonnage produced and needed. There are many resources available on the internet at the extension forage web site <http://www.uwex.edu/ces/crops/uwforage/uwforage.htm> that can help you with this. You can call the extension offices for assistance with calculating inventory as well. We have the information including silo charts, projected harvest and storage loss, capacity of bags or bunkers, and daily per head needs of forage. Inventory management is extremely important when feed supplies are tight, however it should be a routine part of feeding every year even if supplies are good.

Central Wisconsin Agronomy Crops Field Day

The Central Wisconsin Agronomy Crops Field Day will be held at the Hancock Agricultural Research Station on Tuesday, July 29th. This year the field day is co-sponsored by the Juneau – Adams – Maquette Corn and Soybean Growers Association and UW-Extension. All area producers, crop consultants and industry representatives are invited.

The field day will begin at 10:30 a.m. with various company representatives available to answer your questions and to discuss new products and services. A catered lunch will be served at 11:30, provided by the JAM Corn and Soybean Growers Association.

A tour of the Hancock Ag Research Station will follow lunch highlighting selected research projects including presentations from:

- ◆ Chris Boerboom, UW Agronomy Dept. – Conventional Soybean Herbicide Options.
- ◆ Joe Lauer, UW Agronomy Dept. – Corn Management Update.
- ◆ Larry Bundy, UW Soil Science Dept. – Cover Crop Effects on Corn Yields and Nitrogen response.
- ◆ Dick Wolkowski, UW Soil Science Dept. – Soil Compaction and Tillage.
- ◆ Don Genrich, UW Extension – Corn Yield Factors

Growers, crop consultants, agribusiness reps and anyone interested in raising grain crops in Central Wisconsin are invited to attend. The field day will proceed rain or shine. CCA continuing education credits have been applied for. The Hancock Agricultural Research Station is located about one mile southwest of the village of Hancock on County Highway V just west of I-39 / Highway 51. For more information contact Jeff Breuer at jbreuer@wisc.edu or call 715-249-5961.

Beware of Silo Gas

By: Craig Saxe

During silo filling and for about 3 weeks after, take special care when entering or working around a silo. Silo gas, which is formed as newly stored silage ferments, can cause serious injuries – severe respiratory distress, permanent damage to lungs, and even death. According to Mark Purschwitz, University of Wisconsin-Extension Agricultural Safety and Health Specialist, silo gas has predominately been a concern with corn silage but there have been incidents of silo gas exposure from haylage, so do not overlook silo gas concerns when dealing with haylage.

The primary component of silo gas is nitrogen dioxide. This highly corrosive, toxic gas mixes with moisture, such as the moisture in the lungs, to form nitric acid. Low concentrations of nitrogen dioxide will cause a burning sensation in the nose, throat, and chest. Heavy concentrations can cause death within seconds. Even brief exposures to moderate concentrations can cause extensive lung damage and pneumonia. Because silo gas is heavier than air, it will settle on the surface of the silage and flow down the silo chute if given the opportunity.

Anyone exposed to silo gas should see a doctor and explain what happened. Even though they might feel better after getting fresh air, they can still die many hours later, as fluid collects in the lungs.

To prevent silo gas exposure, the following steps are recommended:

- Stay out of the silo for three weeks after filling. This is the peak period of silo gas formation. Keep the silo room closed off from the rest of the barn, and ventilate it to remove any gas that flows down the chute.
- Before you enter the silo for the first time, run the forage blower for 30 minutes, and leave it running while inside. Ventilate the chute and silo room as well. Have someone with you outside the silo to go for help if needed.
- If you must enter the silo to level off or set up an unloader after filling, do so immediately after the last load is in. Do not wait until after supper or the next day. The blower should be running while you are inside.
- Since silo gas settles to the bottom of the silo, be aware that air from the forage blower may not adequately ventilate a partly filled silo. Some recommend leaving silo doors open to allow gas to escape, but be sure to close off and ventilate the silo room.
- Keep children and visitors away from the silo area during the danger period.

Central Wisconsin Potato Field Day July 22, 2003 9:00 a.m. (Note Change in Time from Previous Years')

Speakers and Topics include:

- ◆ Chuck Kostichka – New Potato Storage Research Facility
- ◆ Keith Kelling – Improving Fertilizer N Use Efficiency on Potatoes
- ◆ Walt Stevenson – Potato Disease Forecasting, Fungicide Treatments & Cultivar Resistance
- ◆ AJ Bussan – Potato in Row Spacing, Seed Effects, Stem Number, Tuber Set, Yield and Quality
- ◆ Doug Rouse – Potato Early Dying Research
- ◆ Ann MacGuidwin – Soil Solarization and Soil Borne Potato Disease Control
- ◆ Jiwan Palta – Calcium Nutrition and Potato Quality
- ◆ Jeff Wyman – Advances in Potato Insect Control
- ◆ Jiming Jiang and Bryan Bowen – New Potato Selections from the Potato Breeding Program

Tenth Annual Fruits, Flowers and Vegetables Twilight Tour

Be sure to mark your calendars for the Tenth Annual Fruits, Flowers and Vegetables Twilight Tour on Monday, August 11th from 5-8 p.m. at the Hancock Agricultural Research Station. More than 500 varieties of fruits, flowers and vegetables are featured in the many demonstration gardens. Master Gardener assisted and self guided tours will be available in addition to several University of Wisconsin specialists on site to answer your gardening questions. UW—Extension will also have a Latino foods display and there will be haywagon ride tours of the Station. For more information call the Hancock Agricultural Research Station at 715-249-5961.

Why Are My Crops Less Than Perfect ??

By: Don Genrich

Part of my responsibility as grain crops and agronomy specialist for the Central Wisconsin Agricultural Specialization Team is to go out and look at fields that aren't quite what the grower hoped for. These are some of the issues I have observed.

Soil Quality Issues

Soil serves as a medium for root growth. Anytime that the ability of a plant to grow a root system is effected, there is a potential to impact plant growth and development and eventually yield. One of the first things that I do when I check on crop growth is to take a shovel and dig out some plants. This helps me assess the development of the root system in corn and soybean plants. I believe that a plant with a good root system will be a productive plant. It also gives me an idea about restrictions placed on root growth by soil condition. The increase in farm size and equipment size contribute to loss in soil quality and increase in soil compaction. The entry to a field or the headlands where you have the most wheel traffic are the first places impacted. I have found many plants where the root systems were not developed properly or did not penetrate into the soil because of soil density and compaction.

Insect issues

Sandy soils are home to two insect pests that don't cause problems in other soil types. But in the Central Sands, the sandhill cutworm and needle nematode can cause significant damage. Both are very early season pests of corn. The sandhill cutworm lives under ground and often cuts plants before they emerge. As corn plants reach the V-3 or V-4 stage of growth, these cutworms can eat the growing point as it is still below ground. These cutworms overwinter as larvae in this area, so you will probably see infestations in the same field or the same area of the field each corn year. Insecticides can provide control, but timing and the subterranean lifestyle of this cutworm make control difficult.

The needle nematode lives exclusively on the roots of plants in the gramineae (grass) family, which includes corn. Nematode damage is characterized by stunted corn that has short bristle like roots. Severe nematode damage may mean the death of the plant or a barren plant. Crop rotation with a non-grass crop and complete control of grass weeds in the rotational crop are the only options for lessening the population of these nematodes.

Fertility issues

Corn on lighter soils at the V-3 to V-6 growth stage had a light yellow color, especially the new growth. Closer examination showed a striping of the leaves with the areas along the leaf veins a darker green in color. Plant analysis indicated a sulfur deficiency.

Weed control issues

Grass control, especially in an old sod or in corn following a first cutting of hay, is difficult. Roundup-Ready corn is a nice fit in these situations. Quack grass is usually a problem and I have observed that one application of Roundup does not achieve satisfactory control. A second application of Roundup is cheaper, provides better weed control and has no potential for crop injury when compared to other products available to control grasses in a post application. Weed competition can affect yield of both corn and soybeans. Many times in soybeans the application timing of Roundup is less than optimal. I have looked at fields where the weeds have totally overgrown the soybeans. An application of a high rate of Roundup will kill the weeds, but soybean yield has been lost due to the extended period of weed competition.

Planting issues

Planting depth of corn is an issue that may or may not impact yields depending on the herbicide used and the weather. I like to see corn planted about 1.5 inches deep. Shallower planting is very common, with the feeling that the corn will emerge quicker. The problem comes when the nodal root system starts to develop on the plants. Shallow planting puts root development into the herbicide zone instead of below it and also puts developing nodal roots into a hot dry environment depending on the weather.

Disease issues

Examination of corn plants that are growing slower than others often shows a discoloration or darkening of the mesocotyl and early root system. A fungal disease called Fusarium has been identified by the disease diagnostic lab as being present. Crop rotation is the best remedy.

Feel free to give me a call if your crops are not what you had hoped for.

Fly Control

By: Keith VanderVelde

Saturday as I was working in the garden I was reminded by several hard bites that fly season is again upon us. Not only are flies a nuisance in the yard and around the house they do disrupt our livestock and if populations are large enough they can decrease weight gains or milk production.

There are basically four major flies that affect livestock in Wisconsin: house, stable, face and horn flies are the four major flies we deal with. If you live in a wet area you may be troubled by deer flies and for horse owners horse flies and bats can be problems for horses.

House and stable flies lay eggs and the larvae develop in decaying organic matter. Most barns and livestock lots provide good locations for these flies to propagate. Face and horn flies lay their eggs in fresh manure and reproduce quickly in the manure. House and face flies pester livestock and spread diseases like pinkeye. Horn flies can bite an animal 40 times per day and can reduce weight gains in calves by 15-25 pounds and by 30 pounds in stocker cattle. .

The horn fly alone is estimated to cause animal losses to the U.S. beef industry of \$700 million.. Both face flies and horn flies annoy cattle, resulting in reduced grazing time and increased energy expenditure. The adult horn fly, which is about one-half the size of a house fly, has piercing/sucking mouth parts and feeds on blood and tissue fluids of cattle. They spend most of their adult life on cattle and feed 20 to 40 times a day. They are normally found on the animal's back, but may migrate to the sides and the belly as the temperatures increase. They are weak fliers, but may be carried great distances by high winds. The females leave the animal to lay eggs only in fresh cow manure, where they hatch into larvae. The life cycle is completed in eight to 45 days depending on temperature and humidity. With the short life cycle they may complete a dozen or more generations during the warm months. The fact that adult horn flies spend most of their time on cattle makes their control much easier.

The face fly is about the size of a house fly. They are non-biting and feed on secretions from the

eyes and muzzle. They avoid entering dark places, such as a barn, while on the animal. The female lays eggs on freshly deposited manure like the horn fly; however, unlike the horn fly they are present on cattle only about 10 percent of the time and may be found resting on fence posts, trees, bushes and other objects the other 90 percent of the time. Because they spend so little time on the animal and do not feed on blood they are much harder to control than horn flies. When feeding around the eyes, they cause irritation creating an environment suited to bacterial growth..

Other flies common to cattle are the house fly, which feeds on organic matter, and the stable fly, which feeds on blood. The females of both flies lay eggs in freshly deposited manure and other types of decaying organic matter. Female horse flies and deer flies feed on blood of warm-blooded animals while their male counterparts feed on vegetable sap, etc. The females lay eggs on foliage or other objects that project over water or moist ground. Because these species of flies lay eggs in places other than cow manure oral larvicides do not give good control.

Cattle can tolerate low horn fly populations. When horn fly populations reach 100 to 200 per animal it is economically advantageous to begin a control program. There are several methods of fly control, such as insecticide sprays, dusts, pour-ons, oilers, dust bags, ear tags, oral larvicides in minerals and blocks and controlled release boluses. All of these methods are effective and have a place in the control program; however, the best fly control can most likely be obtained through an integrated fly control program.

Good sanitation is the best way to deal with house and stable flies. Get the manure and spilled hay out of the lots and spread on the farm fields. Since hay and straw seem to provide the best sites for egg laying switching to sawdust bedding will rob these flies of a place to reproduce.

For additional fly control publications contact the Marquette County UW Extension office at 608-297-9153.

Kyoto Treaty to Benefit US Agriculture

By: Jacob Schuelke

New Zealand is considered by most everyone to be the low cost dairy production region of the world. For those who don't know, it's a two-island country to the southeast of Australia with a population of 3.9 million and more notably where the Lord of The Rings movies were shot.

They get a milk price that is $\frac{2}{3}$ to $\frac{1}{2}$ ours, and they are able to produce milk at such a low price since they have the same technology as us with good pastureland that generally sells for much less than Wisconsin farmland. Citing a recent article that I wrote on trade economics, New Zealand's advantage is in dairy but such advantages are only due to relative prices because they can't do other things as well. In other words, it would be ridiculously inefficient for them to make their own cars so when they come to America to trade, cheese and butter are their advantage. Ie, its not because they are so good at dairy but because they are so bad at everything else.

A recent study done by the University of Wisconsin Department of Agricultural Economics on the effects of opening up dairy trade borders, <http://www.aae.wisc.edu/www/pub/dairyland/rd6.pdf>, determined that border protections from low cost regions like New Zealand are likely the backbone of our industry. Currently New Zealand has been getting around this restriction by selling milk protein concentrate (filtered skim milk powder) as a non-dairy protein and the effects to the industry have been regarded as so severe that legislative action has been called upon. Green County even passed a resolution to restrict its sale in America.

As we move toward a more global and trade-friendly marketplace, New Zealand stands as the number one threat to Wisconsin Dairy-farming and our 18 billion dollar industry, but things could soon change for the better. The reason is that New Zealand is one of the few developed nations to sign the Kyoto Greenhouse Gas Emissions Treaty and soon every New Zealand Dairy Farmer will pay a tax of one cent per gallon of milk and forty cents per cow on their farm to meet this years compliance.

The reason is that cows, horses, sheep, deer, and all other grass eating mammals produce methane as a part of their normal digestive processes and terms of the Kyoto Protocol are that the nation must produce at 1990 greenhouse gas levels or pay a tax until the nation/technology gets there. This is quite radical environmental legislation, so much that Bill Clinton

wouldn't even sign it, and what makes it so radical is, not its production cutbacks, but the way that it measures greenhouse gas production. For instance, farmers do not receive credit for methane reductions if they were to plant trees to reduce the net level of gas emitted and they also don't receive any credit if the farmer collects the gas to use in power production. They only measure greenhouse pollution in levels produced, not net levels produced, and because of this you don't have to be an economist to see that this "flatulence tax" won't reduce pollution or encourage environmentally sound production practices.

This article is not about identifying the inefficiency in New Zealand's methane reduction policy, however, its about how their policy will help us. New Zealand Farmers will only have to pay about a dollar for each cow this year, but that tax will likely increase each year as they approach their 2012 reduction goal. Then once they get to 2012, who knows what politicians will mandate of their farmers.

Because of all this, New Zealand farmers who want to be farming twenty years from now are going to have to consider doing something other than dairy, beef cattle, or sheep farming which is a comforting to Wisconsin as the world trades more. I don't know what New Zealand will have to trade with when it buys computers from us in twenty years but with their flatulence tax and laws overlooking practical greenhouse gas reduction technologies, there's a better chance than ever that it won't be dairy. You can find out more about this story at <http://www.stuff.co.nz/stuff/0,2106,2546057a11,00.html>

Calendar of Events

July 2003

15-17 Farm Technology Days (formally Farm Progress Days), Waupaca County. For more information go to:
<http://www.wifarmtechnologydays.com>

A Recycling Program for Pesticide Containers is being held. The Juneau County site will be the Wisconsin River Coop-Agronomy building. For more information or to drop off containers call 608-847-6006 on or before July 16.

18 Beef Grazing/Pasture Walk at the Keith Dunnett farm in Westfield. Keith is rotationally grazing an established orchard grass pasture for the first time in 2003. For more information contact Keith Vander Velde at 608-297-9153.

The Juneau County Fair Secretary Is In!!! Come out to the Fairgrounds and meet the new Fair Secretary, Vicki McGowan, every Tuesday & Thursday from 1:00 to 7:00 p.m. Call before coming {847-6192}. She will help fair exhibitors complete their entry forms.

22 Central Wisconsin Potato Field Day, Hancock Agriculture Research Station. Tour Begins at 9:00 a.m.

29 Upper Midwest Grazing Conference July 29-31, 2003 at the Best Western Midway Hotel, LaCrosse Wisconsin. Speakers and Tours on Dairy, Livestock and Forage. For more information call Dave Wachter at 608-723-2125.

Central Wisconsin Agronomy Crops Field Day. Hancock Agricultural Research Station. Speakers and Tours on Agronomic Crops. Day starts at 10:30 a.m. with lunch served at 11:30. Sponsored by the JAM Corn and Soybean Growers Assn. For more information call 715-249-5961.

31-10 Wisconsin State Fair

August 2003

6 Processing Vegetable Field Tour, Hancock.

13-17 Juneau County Fair in Mauston.

15 Beef Grazing/Pasture Walk at the Dean Kendall farm in Montello. There will be a demonstration on fencing options. For more information contact Keith Vander Velde at 608-297-9153.

18-20 Central Wisconsin Junior Livestock Show, Adams-Friendship Fairgrounds, Friendship WI

21 Potato Growers Field Day, Spooner

September 2003

19-21 Wisconsin Woodland Owners Assn Annual Meeting at the Telemark Resort in Cable WI. For more information call WWOA at 715-346-4798.

25-28 World Beef Expo, Milwaukee WI

26 Beef Grazing/Pasture Walk at the James Schindlbeck farm in Grand Marsh. You will have an opportunity to look at hay storage and methods to prevent loss. For more information contact Keith Vander Velde at 608-297-9153.

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