

Agricultural Newsletter

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



April-May-June
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Cow-Calf Seminar for Beef Producers to be held at Hubin Farm in Spooner

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

A cow-calf seminar for beef producers will be held at the Pete and Betty Hubin Farm east of Spooner from 4:30-8:00 PM on Thursday, April 21, 2005. From the intersection of Highway 53 and Highway 70 just east of Spooner, take Highway 70 east for 2.5 miles past Yellowstone Drive to Wind Road, then turn right into the homestead.

The program will begin with registration at 4:30 p.m., a farm tour at 5:00 p.m., dinner at 5:30 p.m., a farm description by the owner, and then presentations by area UW-Extension agricultural agents. Topics covered include Beef Trends, Successful Marketing of Cows and Bulls, and Forage and Grazing Opportunities. Premises Registration will be covered briefly. There will be opportunities for questions at any time.

More and more landowners are deciding to raise beef cattle for a number of reasons. However, many cow-calf operations are unprofitable. There are a number of ways to improve grazing management and marketing that could improve profits. Take the opportunity to join the discussion at this seminar.

There is a \$10 fee per person to cover the meal, speaker costs and handouts. Please register by Monday, April 18. To register, or for more information, contact Otto Wiegand or Kevin Schoessow at the UW-Extension Area Ag Office in Spooner at 715-635-3506 / 800-528-1914.

Youth Tractor and Machinery Safety Training

to be held at the Spooner Ag Research Station

on

June 20, 21, & 23, 2005

Further details on Page 3

Agricultural NEWSLETTER

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and
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Research Station, W6646 Highway 70,
Spoooner, WI 54801 or UWEX Area
Agricultural Agent, Ashland Ag Research
Station, 68760 State Farm Road, Ashland, WI
54806.

A New Ag Agent begins work for Ashland and Bayfield Counties

Vijai (V.J.) Pandian is the new
agriculture agent for University of
Wisconsin Cooperative Extension in
Ashland and Bayfield Counties. Mr.
Pandian replaces John Markus who
left his position in February 2004.



Vijai is native of India and
received his bachelors degree in
Horticulture at Tamil Nadu
Agricultural University. He has a wide
range of experience in growing
tropical fruits and vegetable crops like
mango, banana, sapota, custard
apple, gooseberry, tomato, eggplant,
pepper and cucumbers. In addition,
he undertook an extension training
program in India and served in a rural
county as a part of a training program
to educate growers to prevent bunchy
top viral disease in banana.

Vaijai moved to East Lansing,
Michigan in 2002 where he received
the “Graduate Research Fellowship”
in 2002 from Michigan State
University and in 2004, received his
Masters degree in Horticulture from
the same university. Vijai’s research
program was on the weed
management of nightshade species in
tomato, potato, and dry beans and
screening herbicide sensitivity among
five different nightshade species and

its population in Michigan. Apart from
his research work in Michigan State,
Vijai was a graduate teaching assistant
in 2003 and taught a “Principles of
Weed Science” lab course work
program to undergraduate students.
Mr. Pandian also served a research
technician at Michigan State for a
short time specializing in screening and
developing transgenic celery.

Vijai foresees introducing various
new horticulture avenues in Ashland
and Bayfield Counties, like promoting
value added products and updating to
the latest agriculture production
technologies, executing variety trials,
and organizing an annual fruit and
vegetable conference.

Mr. Pandian’s office is located in
Washburn, at the Bayfield County
Courthouse on the second floor. He
can be reached at 715-373-6104,
Ext. 253 or by email at
vijai.pandian@ces.uwex.edu.

Youth tractor & machinery training dates set

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

Wisconsin Law requires that any
youth less than 16 years of age be
certified to operate a tractor or
machinery on public roads—even if
working for a parent or guardian. In
addition, Federal Child Labor
regulations make it unlawful to hire or
even permit without pay any youth
under age 16 to participate in any
work activities listed as hazardous
unless the youth is working on a farm
owned and operated by the youth’s
parents or legal guardian, or the youth
has a training certificate which

provides an exemption from certain hazardous work activities. Operating a tractor over 20 PTO horsepower is included in the list of hazardous work activities.

Wisconsin training guidelines require that youth participate in 24 hours of classroom training and complete a driving course. A course satisfying these requirements will be conducted in Spooner at the Spooner Agricultural Research Station on June 20, 21, and 23 from 8:30 a.m. to 4:30 p.m.

Students must be at least 12 years old to enroll in the program and attend all the training sessions to receive their certification.

In order to have time for parents and students to complete permission forms, preregistration for this course is required.

To preregister for the training, contacting Lorraine Toman at the Spooner Area Ag Agents UW-Extension office at 715-635-3506 or 800-528-1914. Please provide the name, address, telephone number, date of birth, and social security number of the youth to be certified.

Farmstead Plan Can Prevent Problems

*Brian Holmes
UW-Extension Ag Engineer*

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

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

Farmers need to consider the following: Is the feed center plan expandable and does it have room to expand? Do feed handling traffic patterns minimize handling time and congestion on the farmstead? What about water drainage and maintenance of all weather road system to allow access to feed?

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

Each of these facilities requires good planning to function correctly and fit together as a system. Farmstead planning considers the existing resources and the near-term resource needs as well as longer-term resource needs. These considerations include the amount of land available; constraints such as roads, runoff drainage, rock outcroppings, water supply; and resources to be protected such as groundwater, streams, wetlands, neighbors and communities. People also need to think about where crops will be grown and how manure will be used to grow crops.

MidWest Plan Service has recently introduced the “Farmstead Planning Handbook,” which can help a person better understand factors to consider and how to develop a farmstead plan. The publication, in CD format, can be obtained by ordering from the web site, www.mwpsHQ.org or by calling 1-800-562-3618. For additional information, contact UW Extension Agricultural Agents: Otto Wiegand or Kevin Schoessow at Spooner, 715-635-3506 / 800-528-1914, Tom Syverud at Ashland, 715-682-8393, or V.J. Pandian at Washburn/Bayfield, 715-373-6104.

Timing is Everything

*Chris Boerboom
Extension Weed Scientist*

A “crabgrass in turf” radio ad got me thinking about timing and weed management. The ad was promoting applications of crabgrass preventer (herbicide) and it was still March. A crabgrass preventer is certainly worthwhile (I’ve nearly eradicated my crabgrass with it). However, it’s all in the timing. If crabgrass doesn’t start to germinate until the middle or end of May, why spread the crabgrass preventer six weeks earlier? The herbicide will be more effective and last longer into the summer if applied closer to when the crabgrass starts to germinate.

The same types of timing issues apply to our weed management practices in field crops, and I would like to highlight a few.

Regarding herbicide timing in no-till (especially soybeans), a single

herbicide application timing cannot optimize weed control. With Roundup Ready soybeans, there may be a temptation to delay the burndown treatment and combine it with the in-season postemergence treatment. This approach typically fails because the early season weeds become too competitive before they are controlled and yield is lost. In addition, some weeds like giant ragweed will become too large and control will be difficult. It is still best to use a burndown treatment that gives your crop a clean start and follow that with a correctly timed postemergence treatment in season.

Preemergence herbicides have optimum activity when applied soon after planting. Delaying preemergence herbicides until all of the corn or soybeans are planted will lessen their value or increase the risk of inconsistent performance. Consider how preemergence herbicides work. They generally need about a 0.5 inch of rainfall to move them off the soil surface into the soil to create a herbicide-treated zone (e.g. an activating rainfall). If the application is delayed for seven days after seedbed tillage and planting, an activating rainfall may have occurred during that time, but would have been missed. What if the next rain does not happen for another 6 days? During that 13 days, weed seeds could be germinating in warm, moist soil and weeds may begin to emerge even before they are exposed to the herbicide. Control will suffer and some of the \$20-30/acre value of that application has just been lost. Evaluate how you manage the timing of your preemergence applications to get the most out of this investment.

Don't be tempted to delay one-pass postemergence programs until "all the weeds have germinated". Even though you may be able to kill all the weeds at that time, it will come at a price. The price is two fold. First, you may suffer yield loss from early season weed competition. Second, you may not get good control of some of the larger or tougher weeds. In most situations, it is better to err on the early side with one-pass postemergence programs. The early weeds can affect yield more than late emerging weeds. In corn, weeds should be controlled by 4 inches tall or about the V3 corn growth stage. In soybeans, weeds should be controlled by 6 inches tall or the V3 soybean growth stage (3 trifoliates).

Perennials are an exception to the "early is better" rule. For perennial broadleaf weeds, the optimal timing in crop maturity is typically at the bud to early flower stage. Earlier applications will control the shoot, but less herbicide will translocate down into the roots. A delayed application will increase herbicide translocation down into the roots for greater long-term control. To get the proper timing on annuals (early) and perennials (bud stage), Jerry Doll has described a simple three step approach: 1) use no-till, which allows the perennials to grow faster since they don't have to re-grow after tillage, 2) apply a preemergence herbicide to suppress many of the annual weeds, and 3) apply glyphosate postemergence at the bud stage for the perennials. This glyphosate application will also clean-up any of the remaining annuals.

Still crunched for time to make postemergence applications on time? Consider the option of using a pre-emergence herbicide to extend your postemergence application window.

Consider conventional corn for a minute. Preemergence grass herbicides like Dual, Outlook, Harness, etc. may not control all of your broadleaf weeds, but they do two things. First, they remove the annual grass weed competition so the remaining broadleaf weeds can stay in the field for longer without affecting yield. Second and perhaps more important, these preemergence grass herbicides may not control broadleaf weeds, but they certainly stunt and slow the growth of many of them. This allows for the planned postemergence herbicide to be applied later, but still to smaller weeds without the risk of yield loss from early season weed competition.

There also comes a time when you have to let the crop canopy take over. We cannot afford to spray for weeds throughout the season. Late season weeds do not cause much harm if there is a good crop canopy. Waterhemp is known as the classic late season weed. But even late emerging waterhemp is held to minimal damage, especially with a good canopy formed by drilled soybean. In the study shown below, the authors concluded it was justified to control waterhemp through the V4-5 soybean growth stage, but waterhemp had little growth or yield effect after that time. The study also highlights the clear benefit of narrow-row soybeans for weed management.

I guess the bottom line is that we have the tools to achieve excellent weed management at an affordable price in most situations. However, we need to consider the timing of our operations to obtain their full value and minimize the risk for inconsistency. Of course, I know that Mother Nature's wind and rain makes perfect timing difficult, but planning can remove some of these risks.

Alternative Forages are tested at SARS

*Phil Holman
Assistant Superintendent
Spooner Ag Research Station*

An “Emergency Forages” trial was conducted the last two years at the Spooner Ag Research Station. Crops included: corn for silage, brown mid-rib sorghum, sudangrass, sorghum-sudangrass, Japanese millet, pearl millet, peas & oats, barley & oats, forage barley, foxtail millet, and soybeans for forage.

Yield data shows the most dry matter was harvested with corn for silage. Forage quality analysis is not yet completed. For a higher protein crop, you may try soybeans for forage. Attached is information on soybeans for forage from Ron Wiederholt and Ken Albrecht, UW-Extension Crops and Soils Agent, Clark County; Forage Research Agronomist, University of Wisconsin.

What type of soybean and maturity level should be planted?

Recent research has been conducted to determine if there are varietal differences in yield and quality of soybean grown for forage (Hintz et al., 1994, Hintz et al., 1992). There have also been releases of new soybean varieties developed specifically for forage production, and these were tested in Minnesota (Sheaffer, et al., 2001).

The results of this research show that in order to optimize forage yield and quality, standard grain varieties rather than the new forage soybean varieties would be the best choice. The reason is that, like with corn for

silage, grain makes an important contribution to whole-plant feeding value. The forage types had comparable or slightly greater yields but low forage quality compared to standard varieties since the harvested portion of the plant contained a low percentage of pods and grain. Using a variety that matures 5 to 15 days later than would normally be planted for grain production can provide up to 0.6 ton/acre extra yield. Therefore, for high quality and good yield, a maturity of soybean that you would plant for grain, or if you are certain that the crop will be harvested for forage, a slightly later maturing variety, is recommended.

What plant population or row spacing should be used?

Best forage performance was obtained when soybean was planted at population levels comparable to those recommended for grain production. Narrow row spacing (7.5 in.) produced 0.5 ton/acre or 17% more forage than when planted in wide rows (30 in.). Feeding value was not affected by either population density or row spacing.

What about weed management and feeding restrictions?

Weed management is an issue in all annual crops whether they are grown for grain or forage. Glyphosate resistant soybean varieties can be used for forage. There is no feeding restriction of GMO crops. The economics of GMO seed cost versus conventional seed cost and resulting herbicide programs should be compared when deciding on a weed management program.

If you plant conventional varieties and plan on drilling the soybeans in narrow rows, a single application of a

pre-emergence herbicide should give adequate control. If you plant in wide rows, a post-emergence herbicide application may be more effective. The concern you have to be aware of is feeding/grazing restrictions noted on the labels of the products you choose to use. Be aware of any feeding/grazing restrictions noted on the pesticide labels and plan ahead if there is a chance that the crop will be used as forage.

When should soybeans be harvested as a forage?

As previously mentioned, the best combination of quality and yield is realized when soybean is harvested for forage near grain maturity at the R7 stage, when one pod on the main stem has reached its mature color. This is the stage when lower leaves of the plants are beginning to yellow but remain attached to the plant, and seeds completely fill the pods. It is important to remember that soybean should reach this stage before frost which, based on your planting date, should help you decide what maturity level to plant.

How should soybean forage be fed to dairy cows?

This research showed that soybean forage quality is similar to that of alfalfa forage with 150 RFV. The major difference is that whole plant soybean forage contains a substantial amount of oil because of the contribution of seed. While this oil can serve as a source of energy for milk production, too much oil plus fat in the ration can reduce intake and fiber digestion. To avoid negative impacts of too much vegetable oil in the ration, soybean forage should make up no more than 50% of the total ration dry matter.

Evaluating and managing alfalfa stands for winter injury

*Phil Holman
Assistant Superintendent
Spooner Ag Research Station*

This winter we have had low soil temperatures in January and ice ponding on alfalfa fields during snow melts in February. Parts of alfalfa fields at the Spooner Ag Research Station were under ice for a month. I have already been checking, and have found significant winter kill. The following is information from an article on winterkill written by Dennis Cosgrove and Dan Undersander, Extension Forage Agronomists from the University of Wisconsin.

How do I diagnose winter injury?

Slow Green Up. One of the most evident results of winter injury is that stands are slow to green up. If other fields in the area are starting to grow and yours are still brown, it is time to check those stands for injury or death.

- **Asymmetrical growth.** Buds for spring growth are formed during the previous fall. If parts of an alfalfa root are killed and others are not, only the living portion of the crown will give rise to new shoots resulting in a crown with shoots on only one side or asymmetrical growth.
- **Uneven growth.** During winter, some buds on a plant crown may be killed and others may not. The uninjured buds will start growth early while the killed buds must be replaced by new

buds formed in spring. This will result in shoots of different height on the same plant, with the shoots from buds formed in spring several inches shorter than the shoots arising from fall buds.

- **Root damage.** The best way to diagnose winter injury is by digging up plants (4 to 6 inches deep) and examining roots. Healthy roots should be firm and white in color with little evidence of root rot. Winter killed roots will have a gray, water-soaked appearance early, just after soils thaw. Once water leaves the root, the tissue will become brown, dehydrated and stringy (see Figure 2). If the root is soft and water can be easily squeezed from it, or is brown, dry and stringy, it is most likely winter killed. Also, if 50% or more of the root is blackened from root rot, the plant will most likely die during spring green up or later in the year. See [UW Extension Publication A3620](#) for more details on evaluating root health.

My alfalfa stand is winter injured. Now what?

Winter injured stands required different management than healthy stands if they are to stay in production. If winter injury is evident consider the following:

- **Determine yield potential.** Potential yield of an alfalfa stand may be estimated by determining the number of stems in a square foot area. Once stem number is determined use the following formula to calculate yield potential of that stand: Yield (tons/acre) = (Stems/ft² x 0.1) + 0.38

For example, an alfalfa stand with 50 stems/ft² would have a yield potential of 5.38. Remember, this is potential yield. Soil factors, nutrient deficiency, insects, diseases and many other things may affect the actual yield.

- **Allow alfalfa plants to mature longer before cutting.** Allowing plants to mature to early, mid or even full bloom will help the plants restore needed carbohydrates for subsequent production. How long and during which cutting depends on the extent of winter injury. For severely injured stands, allow plants to go to nearly full bloom in first cut and to early flower in subsequent cuttings. This will give these stands the best chance at survival. Stands with less injury could be harvested somewhat earlier depending on the extent of the injury. Stands with only mild injury could be allowed to go to 10 to 25% bloom at sometime during the season. It may be best to choose second or third cutting with these stands as first crop is usually the highest yielding.
- **Increase cutting height.** This is particularly important when allowing plants to flower before cutting. At this time, new shoots may be developing at the base of the plants. It is important to not remove these shoots as it will further weaken the plant to have to produce new ones.
- **Fertilize.** It is particularly important that winter injured stands have adequate fertility. Soil test and apply needed fertilizer prior to first cutting if possible.
- **Control weeds.** Herbicide applications to control weed competition will help the stand by

eliminating weeds that compete for moisture, light and nutrients.

No late fall cutting. Do not cut winter injured stands after September 1 to allow for the buildup of food reserves prior to winter unless the intent is to plow down the stand.

Rising energy prices impact machinery costs

*Ronald T. Schuler
Extension Agricultural Engineer*

Recent increases in fuel prices impact machinery costs directly in the added fuel costs of doing field operations. The degree of the fuel price impact will be dependent on the machine operation, soil conditions, and machine adjustment. Fuels prices are expected to increase into this summer. Knowing the contribution of fuel costs to the machinery costs will provide an opportunity to reduce the impact of the price rise.

As for spring machinery operations such as tillage and planting, the estimated fuel and lubricant costs range from about 25 percent of the total machinery costs for subsoiling to 5 percent for conventional row crop planter. The total machinery costs, which include all fixed (depreciation, interest, insurance, and housing) and variable costs, are estimated to be \$18.00 per acre for subsoiling and \$9.00 per acre for planting, not including seed and fertilizer. Other common tillage machines are between these extremes such as moldboard plow at 16 percent, disk-chisel at 21 percent, tandem disk at 16 percent, and soil finisher at 18 percent.

Knowing these estimates of fuel and lubricant costs, the impact of

energy prices can be estimated. For example, if the prices increased 10 percent, which may be a bit conservative, the cost of subsoiling will increase 2.5 percent or about \$0.45 per acre. For planting it would be 0.5 percent or about \$0.05 per acre.

To reduce the impact of increased energy prices, tillage operations should be evaluated with respect to the necessity of doing tillage operations and to machine adjustments primarily operating depth. Some tillage operations may be done only because that is the way it has always been done for years. Each operation may be evaluated with respect to its costs and yield benefits.

For most tillage machines, the fuel usage is directly related to the operating depth. If the depth is doubled, the required draft and fuel use are doubled. For example, if the subsoiling depth is changed from 18 inches to 15 inches (17 percent decrease), the fuel use is estimated to decrease by 17 percent. This change may not impact yield especially if the compacted layer is at 12 inches. Other tillage machine depths should be evaluated, reducing it by one inch may be sufficient to offset the price increases but not affect yield.

As fuel prices increase, crop producers should consider changes in tillage operations to reduce fuel consumption. These changes may have no impact on the crop yield.



This Quarter's Events

April 21, 2005, Cow-Calf Seminar for Beef Producers, 4:30 p.m.-8:00 p.m., Pete and Betty Hubin Farm, Wind Road off Highway 70, 3.5 miles east of Spooner, \$10 includes meal, discussions on beef trends, marketing of bulls and cows, and grazing & forages.

May 7, 2005, Northwest Graziers Pasture Walk, 1:00-4:00 p.m., Charles and Lynda Cain Farm, N4095 Cty K, Shell Lake. Beginning grazier, open land divided by former railroad bed, planning sheep or goats, discussion on rotational grazing design, fencing, watering.

June 11, 2005, Washburn County Dairy Breakfast, Washburn County Fairgrounds.

June 18, 2005, Burnett County Dairy Breakfast, farm location to be announced.

June 20, 21 & 23, 2005, Tractor and Machinery Safety Training for students aged 12-15., 8:30 a.m. – 4:30 p.m., Spooner Ag Research Station.

June 25, 2005, Sawyer County Dairy Breakfast, Fairgrounds, Hayward

July 9, 2005, 1:00-4:00, Northwest Graziers Pasture Walk, Mike and Vicki Brenna Farm, 243 140th Ave., Turtle Lake. Discussions on beef grazing, fencing, rotations, alternative energy.

July 12-14, 2005, Farm Technology Days, Loyal, WI.

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Check your alfalfa stands for winter injury

How the rising cost of fuel impacts your machinery costs

Kevin Schoessow
UWEX Area Agricultural Agent

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