Once the harvest is in, it’s time to begin carefully reviewing variety trial data and ultimately selecting next year’s highest yielding and most persistent alfalfa varieties for your farm. Sounds easy in print, but of course it’s not always that simple. One resource I would recommend is the annually updated UW Extension publication, A1525 “Forage Variety Update for Wisconsin”. These trial results are published along with corn, soybean and other crop variety trial results in many of the state agricultural papers, as well as being posted online. Publication A1525 recommends several key steps to selecting varieties: 1. Select top-yielding varieties; 2. Check yields of your varieties at sites near you with similar conditions to yours; 3. Compare disease resistance and stand persistence between varieties; 4. Compare varieties for winter survival.

Yield is the single largest determining factor of economic return, so to repeat, your major concern is to find high yielding varieties that are persistent. Unfortunately, sometimes the highest yielding varieties are not always the most persistent, while persistent varieties may have the poorest yields.

Until recently, winter survival has been measured between alfalfa varieties primarily using fall dormancy ratings. Fall dormancy is measured by determining how alfalfa grows in the fall as temperatures and day length decreases. More dormant types, such as Vernal, will remain short and low yielding through the fall. Less dormant varieties typically yield more in the fall, green up earlier in the spring, and recover more quickly between cuttings. The fall dormancy rating system is now viewed as a better system to project yield rather than winter survival. With this distinction in mind, a newer winter survival ranking system has been developed. The current strategy should be to choose less fall dormant varieties that meet your winter survival requirements.

Your location in Wisconsin plays an important role in the winter survival rating. Generally in central Wisconsin where snow cover is not dependable, varieties with very good to superior winter survival should be selected. More intensive cutting schedules may increase the need for varieties with a higher winter survival rating. Also, if you harvest in the fall, the recommendation is to use alfalfa varieties with superior winter survival. Generally, the best alfalfa varieties for our area have winter survival scores of two or less. Those with lower scores will: better tolerate later fall cutting with less impact on next year's yield, better survive adverse winters especially with periods of no snow cover, and green up with less winter injury in early spring.
Cows Perform Based on Nutrients
By Matt Lippert, Wood County

The 2013 crop year in general has not been kind to dairy producers, ditto for 2012. Likely you have had to change diets due to pricing or availability issues. First crop was generally abundant but harvested

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much too late to be of typical “dairy quality” standards. Dry conditions reduced the amount of later
crops of hay to adequately compensate for the loss earlier in the year. Winter kill may have reduced your
stands of quality hay. Corn silage is tending to be immature, high in moisture and low in starch due to
late planting and heat and drought during pollination.

There are rations that dairy nutritionists and dairy producers find fit into their comfort zone.
Rations that are about half haylage/ half corn silage for the forage, with the corn silage being 35% dry
matter and 30% starch, the haylage being about 150 RFV/RFQ, maybe a little cottonseed, a couple
pounds of alfalfa hay, maybe a good buy in a commodity with good fiber digestibility such as corn gluten
feed, corn distillers, or soy hulls, and then some corn correctly processed and stored, and your protein of
choice--soybean meal, canola meal; these are rations that many in the industry try to stick to.
Some producers like more haylage because they don’t like to purchase as much protein as is typi-
cal of corn silage diets. Others really like the consistency and increased intakes and energy they tend to
experience with corn silage. Maybe a bit of straw or cottonseed makes you happiest with the rumen en-
vironment and effective fiber they provide. Realize that very cost effective diets that support high pro-
duction and good cow health have been developed that don’t require any of these particular ingredients.
Cows respond to nutrient profiles, consistency and well formulated rations. Ration balancing can be
quite detailed today, way beyond crude protein or gross fiber and energy levels. If the performance
doesn’t seem up to par, there is probably a ration parameter that is deficient that can explain what needs
to be corrected.

If nature has given you low starch corn silage, or more mature, less digestible haylage, or both,
there are still opportunities to balance the diet to optimize the ration. Granted purchased feed prices go
up if you weren’t as successful at producing your own quality forage.

Here are a few things to keep in mind for the 2013-2014 feeding season:
• Lower commodity prices! Corn and byproduct feeds are trending down in price considerably.
If you don’t believe they can stay there, you can contract and lock in these prices today.
• Normally if forages don’t deliver as they should for quality even though it costs out of pocket
money, you are ahead to adequately supplement the forages’ deficiencies; this is even more
true if commodities drop in price.
• Cows still need to ruminate. If you are trying to balance rations with very little forage or of
poorer quality, seek help from advisors, such as Extension, nutritionists, veterinarians. Keep-
ing an eye on manure consistency, production, components, intakes, MUN levels, particle
size, sorting, etc. will help keep your herd on target.
• Low starch corn silage, may be higher in sugar and NDF digestibility. It may be better than
you think. However too wet corn silage could have a bad fermentation profile.
• Poor nutrient analysis in a forage is easier to deal with than excessive moisture or dryness,
heating, molds, off flavors, too fine of particle size and other issues.
• Inventory management, pairing your limited supplies of high quality feeds with your lower
energy sources feeds, will optimize the use of both.
• Allocating feeds to the right herd groups is also highly beneficial; make an effort to make this
possible.
• In general, when reducing forage contribution to the diet NDF level must increase as effective
fiber level decreases. There are great byproduct feeds that can work to bridge this gap.

There is never a feeding year without its challenges. All we can do is make the best choices pos-
sible with the cards as they are dealt to us. Keep an open mind; challenges are typically also opportunity
if we just realize it.
As we go into the fall season, it is a good time to re-evaluate beef cattle body condition scores. Beef cattle are generally evaluated on a nine point scoring system. The major areas of evaluation for fat cover include the ribs, spine, hook & pin bones, brisket fill, and presence of tailhead fat. An animal with a score of 1 is emaciated with prominent bone structure; an animal score of 5 having moderate fleshing while still being able to see the last two ribs; and an animal scoring of 9 being excessively fat with no bone structure visible.

Beef cows maintaining a body condition score of at least 5 throughout gestation tend to recover condition faster after calving, breed back quicker, and have higher pregnancy rates which leads to an earlier calving the following year. This usually results in a heavier calf at weaning. Heifers should be maintained at a score of around 6 as they have more energy demands compared to a cow because they are growing a calf, later on maintaining lactation, and finishing their own growth. Cows that are too thin are more prone to sick or weak calves, decreased milking ability, and calving problems. On the other side, a cow that is too fleshy can also have calving difficulties and is costing you money by eating more feed than she needs.

Body condition scores are critical to efficiently feeding your herd and the more uniformity there is in body condition, the easier it is to feed the herd appropriately. Consider splitting the herd into at least two groups if you have more than one body condition score difference between animals. If you split the herd into only two groups, heifers and thin cows should get grouped together as they will have higher nutrient requirements than cows with a body condition score of 5 or more. Cows carrying more flesh than desired should be provided with lower value feed (as compared to thin cows or heifers) to bring the condition score down to the desired level, then maintained according to their nutrient requirements for their stage of gestation.

Keeping records of body condition scores is a simple and easy way to track progress when you are attempting to adjust body condition scores. Progress can be monitored simply by re-evaluating an animal’s body condition in a month and adjusting your management of feed accordingly. For thin cattle, positive changes in condition early on in gestation mean cheaper gains for you as it is challenging (and generally expensive) to get weight gains once the cow enters lactation. After entering the third trimester, nutrient requirements of the animal are quickly increasing to support fetal growth: almost a pound a day gain can be expected. You don’t want to be feeding to gain body condition during this period especially with the cost of hay this year. Feeding your herd according to body condition scores will allow you to make the most of your feed resources and help keep costs as minimal as possible.
Degradation of land includes soil erosion, salinization, nutrient depletion, and desertification. The rate of degradation has increased dramatically with growth in human populations and technology. Severe land damage accompanies large scale agriculture and the restoration is very difficult. Continued loss of arable land is a growing concern.

Soil Degradation: Impact on Agriculture and Food Production
By Nav Ghimire, Green Lake County

Soil Degradation-How to Deal with Drought and Deluge
By Donald Genrich, Adams County

Last year’s drought and this year’s spring deluge have caused significant losses in crop production in each of the last two years. What happened to “normal” weather? Are there actions we can take to mitigate the effects of these extremes in weather? From a crop production and soils perspective, I would say that there are.

This year, 2013, differences in crop growth could be plainly seen between similar fields and in different parts of fields. As I travelled across Central Wisconsin, I could see fields where the corn had excellent color and appropriate size and adjacent fields where it did not. I could see parts of fields, the headlands, the little wet bird bath areas, the tracks from heavy equipment, where the growth of corn was severely impacted.

One of the farmers that participated in a soil quality field day at the Marshfield Research Station in August talked about the cumulative benefits of farming practices that enhance soil quality. He was highly optimistic about his crops for 2013 and he was a strong advocate for no-till or strip-till. His main point was that he was planting corn on the few days available for field work this spring while his neighbors were tilling their fields and then had to wait for the soil to dry after the rains. He also indicated that water moved through the soil on his fields much faster than on his neighbors.

These differences in crop growth observed this year are mainly due to differences in soil quality, primarily the difference in soils for water infiltration. Water infiltration and movement through the soil was critical this spring, and those cultural practices that impact infiltration such as tillage, working soil when wet, planting in the “mud”, multiple passes with heavy equipment, took their toll.

In the drought of 2012 and in the months of July and August in 2013 a lack of water negatively impacted crop growth. Soils managed for quality have a higher water holding capacity so the crops can better withstand periods of no rain and these soils also have a better structure and do not turn into “concrete” when dry.

The best soil on farms is the soil in the fencerow, where the soil is not tilled, where the organic matter accumulates every year, where something is growing from early spring to late fall. If you still have a fencerow on your farm that has been there a long time, take a shovel and go dig and closely look at the soil. It will be dark in color, crumbly, loose with strong aggregates and a model of the soil we need to create in our fields.

So as you harvest your crops this fall and see the variation of yield in a given field and between fields start to think about the soil and the things you can do to improve its’ quality. Plan how you can till less, plan how you can add or leave more organic matter on your soil, plan how you can use cover crops to protect your soil and feed the organisms that grow in soil. Realize that as you improve the quality of your soil you will improve yields in subsequent years and you are reducing the risk of losing yield when the weather is anything but “normal”.

Soil Quality-How to Deal with Drought and Deluge
By Donald Genrich, Adams County

Degradation of land includes soil erosion, salinization, nutrient depletion, and desertification. The rate of degradation has increased dramatically with growth in human populations and technology. Severe land damage accompanies large scale agriculture and the restoration is very difficult. Continued loss of arable

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land will jeopardize our ability to feed the world’s increasing population that is expected to exceed 9 billion by 2050. Land degradation is a problem worldwide - both developed and developing countries.

The world's croplands are in decline due to the pressure of human activities. The first global survey of soil degradation was carried out by the United Nations in 1988-91. This survey, known as Global Survey of Human-Induced Soil Degradation, has shown significant problems in virtually all parts of the world. The land degradation is a function of two factors: human population and cropland area. North and Central America and the former USSR are regions with significantly higher cropland areas per capita. However, all regions, including these, have shown decreases. South America croplands have declined at a rate that is slower than the global average, while African per capita croplands have declined at a greater than average rate.

The loss of arable land has been caused by a number of factors, most of which are tied to human development. The primary causes are deforestation, overexploitation for fuelwood, overgrazing, agricultural activities, and industrialization. On the global basis, the soil degradation is caused primarily by overgrazing (35%), agricultural activities (28%), deforestation (30%), over exploitations of land to produce fuelwood (7%), and industrialization (4%). The patterns are different in the various regions. In North America, agriculture has been responsible for 66% of the soil loss, while in Africa, overgrazing is responsible for about half of the soil degradation. The economic reasons for these processes are complex and are linked to the particular characteristics of each region. The central portion of the United States is an area of particular local concern. The practices of large scale mechanized monoculture have contributed to the decline in soil in the mid-west.

All our amino acids and nutrients eventually come to us from plant life (sometimes via the meat of plant-eating animals). Plants synthesize amino acids from the combination of sunlight, water and soils. Soil is therefore of critical importance to life. Simply put: no soil, no life. Soil is a dynamic natural body capable of supporting a vegetative cover. Where there is no soil, there is no plant life. Soil is composed primarily of weathered materials, along with water, oxygen, and organic materials.

Soil is generated by the process called weathering. This is a very slow process - and one that depends on the local conditions. For example, consider what happens if you drop an iron nail in a garden in Wisconsin. After a few years, you would be able to break it in two, because it has degraded - or rusted. If, however, you were to drop the same nail in a dry environment - for example in Antarctica - it would last for hundreds of years before rusting. Aluminum cans decay very slowly and glass decays even more slowly. Plastic is considered "biodegradable". Soil itself is an important agent in weathering. When soil is present, rocks weather much more quickly into soil. Thus, soil is both a factor in weathering - and a product of weathering. The bottom line on soil production is that it takes 100 years to generate a millimeter of soil. This is about a human lifetime. Thus, soil generation is a very slow process.

In a period of 1985-2000, a total of 1500 million hectares arable land was lost worldwide due to the combined effects of desertification, salinization, erosion, and development activities. When topsoil is mobilized and gets into the hydrological cycle - it gets washed to the sea. The topsoil travels down streams and rivers, ultimately reaching the sea.

Erosion is the term given to soil loss due to the mobilization of topsoil by the forces of water and wind. Wind and water move the eroded particles to some other location, where it is deposited as sediment. Soil erosion is a natural process that removes soil from the land. The critical aspect of soil erosion is highly dependent on human actions. Natural rates of soil erosion are lower for soil with a good cover of vegetation than for bare soil. In fact, any human actions that uncover soil (e.g., farming, logging, building, overgrazing, road vehicles, fires, etc.) enhance soil erosion rates.

During the last dust bowl in the 1930's more than 30 million hectares were severely damaged in parts of Texas, Kansas, Oklahoma, and Colorado. The Dust Bowl was primarily caused by the two

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The annual Beginning Sheep Shearing School will be held on Saturday and Sunday, December 7 and 8, 2013 at the Sheep Unit, Arlington Agricultural Research Station, Arlington, WI. The school will cover basic shearing skills including sheep handling, shearing positions, wool handling, and equipment care and maintenance. Cost of the school will be $75.00 per participant. All equipment will be furnished. Participants can bring their own shearing equipment if they wish.

Registration includes lunch both days. Lodging is not included, but a list of local hotels will be provided. Please contact Todd Taylor (608-846-5858, toddtaylor@wisc.edu) with questions and to obtain registration information. The registration deadline is November 15, 2013, and enrollment will be limited to the number of students the space can accommodate. The school is organized by the Department of Animal Sciences, UW-Madison; Cooperative Extension, UW-Extension; and the Wisconsin Sheep Breeders Cooperative.

Visit the Central Wisconsin Agricultural Specialization Team on the Web
http://fyi.uwex.edu/cwas/
Central Wisconsin Vegetable Industry to Add Flavor to 2014 Farm Technology Days in Portage County - August 12-14!
By Ken Schroeder, Portage County

Held in a different Wisconsin county each year since 1954, Farm Technology Days is a non-profit, educational event intended to showcase the cutting-edge of agriculture products and practices. Hosted by family farms, the event appeals to large scale agriculture and hobby farmers alike. This three day event traditionally draws 40,000 to 80,000 attendees.

Portage County host farms are Blue Top Farms, a 1,200 acre grain and vegetable operation and Feltz Family Farms, a 550 cow dairy located east of Plover’s Crossroad Commons, south of Highway HH. Additional land, being used for field demonstrations, is being made possible through neighboring potato and vegetable growers; Myron Soik and Sons, Inc. and Greg Kizewski and Sons, Inc.

Field demonstrations will feature a wide array of attractions including potato sweet corn and snap bean harvesting, multiple forms of forage cutting and harvesting, and tillage demonstrations.

The food tents will feature locally produced baked potatoes and sweet corn on the cob. Additional food being planned is a pork tenderloin sandwich with cranberry chutney and local homemade ice cream.

To further showcase the potato industry in Central Wisconsin, the commemorative toy collectible for 2014 is a one-of-a-kind, limited edition 2000 Lenco Self Propelled Airhead Potato Harvester. Only 1,000 of the toys (1:42 scale, die-cast metal) will be produced. These potato harvesters will be sold exclusively through the 2014 Portage County Farm Technology Days organization. It is sure to be a collector’s keepsake. Check out the Portage County Farm Tech Online Store at http://www.portagecountyfarmtech.com" to order online or for a printable order form. This is a must have especially if you have any connections to the potato industry at all. Also available is a commemorative 16-month barn calendar featuring pictures of over 50 rural Wisconsin barns.

It takes 1,000 to 1,500 volunteers to host an event like this. Volunteer opportunities include tractor drivers, equipment operators, setup and takedown, parking assistants, admissions, information booth assistants, help in the youth and family living exhibits and the list goes on. If you have the time, we can use your talents.

Visit our website http://www.portagecountyfarmtech.com for opportunities to be a part of this exciting event. Opportunities exist for sponsorship, exhibitor space, committee service, and day of the event volunteering. Please partner with us to showcase the unique agriculture of Central Wisconsin. For additional information call 715-344-2556.

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Calendar of Events

**October**
28  Pasture walk, 1-3 PM, Art and Rheta Richardson farm, N461 Sorenson Road, Waupaca.

**December**

Soil, Water and Nutrient Management Meetings
4  Sparta - contact Bill Halfman, Monroe Co., 608-269-8722
6  Marshfield - contact Don Genrich, Adams Co., 608-339-4237
10  Shawano - contact Jamie Patton, Shawano Co., 715-526-6136

Beginning Sheep Shearing
7 & 8  Arlington Ag Research Station. Registration: Todd Taylor, 608-846-5858, toddtaylor@wisc.edu
2013 Pest Management Update Meetings  
Eileen Cullen, Extension Entomologist

We are pleased to announce the schedule and topics for the 2013 Pest Management Update Meetings. The schedule is listed below. Please check the dates and locations and reserve a date on your calendar. Registration details are listed at the top of the schedule. Please pre-register with the host agent so they can make meal reservations. Registration for a particular location is firm. It is not possible for host agents to switch attendees and meal counts between locations on the day of the meeting. Most host agents add an additional “walk-in” fee for those who have not pre-registered.

Topics at the meeting will review the 2013 crop year and provide field and forage crop management updates for 2014. The speakers will be extension specialists, Mark Renz, weed scientist, perennial cropping systems; Vince Davis, weed scientist, annual cropping systems; Damon Smith, field crop plant pathologist; and Eileen Cullen, field crop entomologist.

On behalf of the speakers and host agents, we hope to see you this November at the meetings and wish you a good harvest season in the meantime.

2013 Pest Management Update Topics:


**Insect Management:** 1) New insecticide and Bt trait updates  2) Bt corn rootworm resistance and trait stewardship  3) Impact, management and range expansion of Brown Marmorated Stink Bug in field crops  4) Seasonal fluctuation and research updates for soybean aphid, Japanese beetle, and western bean cutworm  5) Pest Management Mobile, demo of insecticide and Bt trait features.

**Disease Management:** 1) New fungicide products in field crops  2) Utility of fungicides in field crops  3) Head scab and other wheat disease updates  4) 2013 soybean diseases in Wisconsin  5) Roundup Ready alfalfa and *Aphanomyces euteiches* Race 2 resistance.

**Meeting locations and schedule:**

All meetings will start with check-in registration and coffee at 9:30 a.m. Presentations start promptly at 10 a.m. and will conclude by 3:00 p.m. Four hours of Certified Crop Advisor CEU credits in pest management are requested for each session. The $40 registration fee per participant includes a noon meal and information packet.

**November**

11 Marshfield Agricultural Research Station, 2611 Yellowstone Dr., Marshfield, WI 54449, Registration: Richard Halopka, Clark County Extension, Courthouse Room 104, 517 Court Street, Neillsville, WI 54456 (715) 743-5121

13 Jake’s Northwoods, 1132 Angelo Road, Sparta, WI 54656 Registration: Bill Halfman, Monroe County Extension, 14345 County Hwy B, Sparta, WI 54656 (608) 269-8722

14 Arlington, Arlington Agricultural Research Station, Public Events Bldg, N695 Hopkins Rd, Arlington, WI 53911 Registration: George Koepp, Columbia County Extension, 120 W. Conant St., Ste. 201, Portage, WI 53901 (608) 742-9682

18 Fond du Lac, University of Wisconsin – Fond du Lac, Rm 113 University Center, 400 University Dr., Fond du Lac, WI 54935 Registration: Mike Rankin, Fond du Lac County Extension, 227 Admin/Extension Bldg., 400 University Dr., Fond du Lac, WI 54935 (920) 929-3170
An EEO/Affirmative Action employer, University of Wisconsin-Extension provides equal opportunities in employment and programming, including Title IX and ADA requirements.

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