Wisconsin Crop Manager
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……And the 2012 Wisconsin CCA of the
Year is!!!!!!!!!!!!!

Cyndi Heath! Cyndi is one of the lead Agronomist for
Black’s Valley Ag Supply, Durand. Cyndi was nominated by
Hannah Brion and coworkers because of her professionalism
and work ethic. She consults with almost 100 dairy and cash
grain producers making crop, nutrient and pest management
recommendations. Cyndi also has a background in Animal
Science and does ration balancing work as well. She assists
with the management team at Black’s Valley Ag Supply
making important business decision anywhere from human
relations to finances. According to Hannah, “Cyndi is a strong
team leader, especially during the chaos of the spring, she is
the glue that holds the team together”. Quite an endorsement
when it comes from your coworkers!

In addition to formulating crop recommendations, Cyndi is
involved with writing Nutrient Management, Comprehensive
Nutrient Management and Pest Management Plans for CAFO’s
as well as writing their NR243 plans. Cyndi was even invited
to speak at Canada’s Tri-Provincial Manure Applications and
use Guidelines Training event and has been a member of the
Wisconsin’s Department of Ag Trade and Consumer
Protection’s Quality Assurance Team.

Cyndi’s is a proponent of education and wants all
agronomists to be certified because she realizes the value of
being a CCA and establishing credibility. She is a multi-tasker
at work and in the community. The next time you see Cyndi
make sure you congratulate her on a job well done!

Wisconsin Hosts the 2012 North American
Manure Expo- August 22, 2012

If you are interested in the latest equipment and technology
for professional manure management, plan to attend the 2012
hosts the Expo this year and it will be held at the USDA-Dairy
Forage Research Center farm located just north of Prairie du
Sac on State Highway 78.

The 2012 North American Manure Expo will feature field
demonstrations, hands-on product and safety education,
educational sessions, exhibitor booths, and commercial vendor
displays. There is no cost to attend the Expo. This is the 10th
Manure Expo. The Expo started in Wisconsin and has also
been previously held in Minnesota, Michigan, Ohio, Iowa,
Pennsylvania, and Nebraska.

Demonstrations, exhibitors, educational sessions, and
sponsorships are being finalized. Visit the website
http://www.manureexpo.com/ for up-to-date information on all
the activities associated with this year’s Expo.

The North American Manure Expo is presented by the
Professional Nutrient Applicators Association of Wisconsin,
University of Wisconsin Extension Nutrient Management
Team, USDA-Dairy Forage Research Center and is supported
in part by a consortium of land grant universities and conservation agencies from across the United States.

For more information about the 2012 North American Manure Expo, please contact Ted Bay, Grant County Crops & Farm Management Agent, University of Wisconsin-Extension, 608-723-2125, ted.bay@ces.uwex.edu.

Vegetable Crop Update 5/23/12
The 9th issue of the Vegetable Crop Update is now available. This issue includes information on various vegetable diseases and insect updates. 

Click here to view this update.

Double Crop Soybeans in WI may be a Gamble Worth Taking in 2012
Shawn P Conley, State Soybean and Small Grain Specialist and John Gaska, Extension Outreach Specialist

The Wisconsin winter wheat crop remains 3 weeks (developmentally) ahead of where we were at this time last year. If this progress continues we can realistically be cutting dry wheat in southern WI by July 1st. Couple that with Nov. CBOT soybean contracts at $12.81 (5/22/12) and though still risky we can start to pencil out a potential profit for WI growers to double crop soybeans in 2012. The first two questions growers considering double crop soybean will likely ask are “What can be done to expedite wheat harvest” and “Can I apply glyphosate or some other desiccant to my winter wheat to aid in dry down?”

Click here to continue reading.

Minimize Dry Matter Loss by Minimizing Silage Porosity
Brian Holmes, University of Wisconsin Madison and Richard Muck, USDA, ARS, US Dairy Forage Research Center-Madison

A major dry matter (DM) loss mechanism in silage is deterioration of readily available carbohydrate by aerobic microorganisms. These microorganisms need a supply of oxygen to grow, and that growth causes silage heating. Evidence that aerobic activity has occurred for some time is increased fiber and crude protein contents and in extreme cases moldy gray to black colored silage. We preserve silage by taking measures (plastic covers, bags and tight concrete walls) to exclude oxygen during the fermentation and storage phases. The aerobic deterioration process begins as soon as oxygen is reintroduced to the silage, whether by a failure of the oxygen exclusion measures just mentioned or when the silo is opened for feed out. The rate of deterioration is influenced by the rate at which oxygen can infiltrate through the silage. The oxygen infiltration rate is a function of the silage gas filled porosity. Porosity is a measure of the voids between the solid particles of a material. Pore space can be filled with fluids including gas and/or water in silage. For gases to move throughout the material, the pores must be continuous. The preferred gas in stored silage is carbon dioxide. In high concentration, carbon dioxide displaces oxygen. To minimize silage porosity, forage should be packed to a bulk density which is as high as practical.

Silage bulk density (wet density) increases with degree of packing and moisture content. The recommended range of moisture content for hay crop silage is 60-65% and 65-70% for whole corn crop silage. When forage is in this range of moisture content, the porosity is in the range listed in Table 1. We currently recommend porosity be kept below 40%, which is achieved by maintaining bulk density at greater than 44 lbs AF/cu ft. The higher the bulk density, the lower the porosity and the slower the rate at which oxygen can penetrate through the silage. In the extreme case, silage removed from a silo and left on the floor between feedings has a very low bulk density (25-30 lbs AF/cu ft) with correspondingly high porosity (near 60%). This explains why heating of this silage often occurs before feeding.

<table>
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<th>Table 1. Porosity As a Function of Bulk Density in the Range of 60-70% Moisture Silage</th>
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<td>Bulk Density (lbs AF/cu ft)</td>
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The degree of aerobic deterioration at the feed out face is a function of oxygen infiltration rate and time of exposure to oxygen. Silage heating may be evident at the feed out face but more likely it is more evident at a distance behind the feed out face where active aerobic deterioration is occurring. Thus temperature measurements at the feed out face surface may be deceiving. Oxygen has been measured up to three feet behind feed out faces in well-packed bunkers (~50 lbs AF/cu ft). The time silage is exposed to oxygen is also a function of feed out rate. Table 2 lists time of exposure to oxygen for different feed out rates and three different aerobic zone depths. A 1-foot aerobic zone distance from the feed out face represents an exceptionally well-packed bunker or pile whereas the 5-foot distance, a poorly packed one. Conditions which lead to silage exposure to oxygen for more than 8 days can result in dry matter losses of more than the recommended minimum of 3% of total dry matter in the storage. This is why a minimum of 6 inch/day face removal rate has been recommended when designing bunker and pile silos. Dry matter losses in the 5 range are common when bulk density is low (porosity is high) and feed out rate is also low (Figure 1). Note from Figure 1 that it is essentially impossible to get a high enough bulk density to keep feed out loss under 3% if you are removing feed at 2 inches/day. Even at a 6 inch/day removal rate, bulk density needs to be at least 40 lbs AF/cu ft to be under that target loss.
For further reading on this subject refer to Density and Porosity in Bunker and Pile Silos and Packing Bunker and Pile Silos to Minimize Porosity found on the Harvest and Storage Page of the UW Extension Team Forage Web site at: http://www.uwex.edu/ces/crops/uwforage/storage.htm

**Diagnosing Early Season Corn Insect Damage**

Bryan Jensen, IPM Program

A few calls have been coming in regarding insect damage in seedling corn as well as some confusion when making a diagnosis. Below are a few observations regarding insect injury symptoms. Keep in mind that corn growth stage can affect symptoms and that injury symptoms are not always “classic” appearing. Look at a range of plant symptoms and try to locate the insect causing the problem. Finally, look at injury patterns in the field and determine if these patterns match what you would expect.

**Seedcorn Maggot:** Larvae may injure the seed and cause poor emergence. Seedcorn maggots also feed on the emerging shoot which results in holes in the first or second leaf. Leaves emerging later are often symptomless. Injury is more severe to corn following a green manure, an application of livestock manure or if the soil is freshly tilled. Damage is usually uniform across a field.

**Wireworms:** Feeding is almost always below ground. Injury to the seed will cause poor germination while shoot feeding results in “wilted whorl” symptoms. If feeding is above the growing point holes will appear in the leaves above ground. Wireworms are somewhat easy to find around damaged plants. However, wireworms will migrate deeper in the soil profile when soils warm up. Damage is more common in corn planted after sod and distribution maybe spotty within a field.

**True White Grub larvae:** Damage is below ground. White grubs will not injure corn seed, however, larvae will feed on roots or underground stems causing stunting or wilted plants. Larvae require two growing seasons to complete their development; as a result both large and small larvae may be present. Damage is more common in corn planted after sod or after any crop that had grassy weed problems. Grubs can be relatively easy to find around most, but not all, damaged plants.

**Black cutworm:** Early instar larvae feed on corn leaves. Late instars may cut small corn plants or feed below ground on the shoot causing wilted whorl symptoms above ground. Larvae can be found in the soil around damaged plants. Damage may be spotty within a field and sometimes confined to low poorly drained areas of a field.

**Dingy cutworm:** Overwinter as partially grown larvae and injury if often found before black cutworm damage is anticipated. Dingy cutworms rarely cut plants. Feeding is above ground and usually considered cosmetic. Identification is often confused with black cutworms. Use a hand lens to look at the tubercles (small black dots) on their back. Dingy’s have four small, similar sized tubercles/segment. Black cutworms also have 4 black tubercles but are of two different sizes. The tubercles to the rear of each segment are approximately 50% larger than the front tubercles.

**Sandhill cutworm:** Overwinter as partially grown larvae and feed almost exclusively below ground and in sandy soils. Above ground symptoms are dead heart or dead plants. Sandhill cutworms are pale in color and are easily found around damaged plants. Rescue treatments for sandhill cutworms do not usually work.

**Stalk borers:** Are found in close association with perennial grasses, including grass waterways, fencerows and terraces. This distribution can be an excellent diagnostic tool for stalk borers as well as hop vine borers. Larvae migrate short distances to corn and feeding is exclusively above ground. Larvae will either feed on whorl leaves before burrowing down into the stalk or will enter into the stalk directly. Symptoms include holes in leaves and dead heart. Larvae are easily found in damaged plants by pulling the whorl leaves or by splitting stalks. Stalk borer larvae have longitudinal black and light colored stripes and a black band, often called a “saddle” behind the legs.

**Hop vine borer:** Life cycle is very similar to stalk borer, however, all feeding is below ground. Above ground symptoms are wilted whorls or completely dead plants. No holes in the leaves. Larvae are cream colored, have tan heads with a pair of dark-colored eye spots behind the head.

**Billbug:** Adults injure corn seedlings by feeding into the stem above the soil surface. As leaves emerge from the
whorl, holes will be present in the newest emerging leaves. Injury is often associated with grassy weeds and/or yellow nutsedge. Feeding is usually cosmetic and not considered to have economic consequences unless corn is very small. Unfortunately, adults are very hard to find making verification of damage difficult.

Armyworm: Early season armyworm damage is easy to differentiate from most other insects mentioned above. Larvae are usually visible in the whorl and feeding is from the leaf margin in.

Slugs: Not an insect, but a pest favored by cool wet weather, crop residue and/or weed growth. Slugs are nocturnal feeders and difficult to locate during the day. However, their damage is unique compared to the other insects. Slug symptoms include longitudinal feeding scars. The leaf cuticle can remain intact at first and eventually may fall out.

Need to scout for alfalfa weevil after first cut?

Bryan Jensen, University of Wisconsin Integrated Pest Management Program, takes you into the field to show you how to scout and manage alfalfa weevil in Wisconsin field crops. Scouting AFTER first cut harvest is different than scouting before harvest because it includes checking during regrowth for green up. Also, the economic threshold moves up to 50% on the count of plants showing damage.

If environmental conditions are favorable, larvae may survive cutting and harvest, and feed on newly forming crown buds, which significantly delays regrowth and lowers yields. Revisit fields with elevated first crop defoliation within four to five days of cutting. Check to make sure crown buds are forming.

Look for larvae on the soil surface, under leaf litter and at the juncture between soil and the alfalfa crown. During cool, cloudy weather you may find weevils feeding on new alfalfa buds during daylight hours. Click on the image of the video below to view.

For more information:
http://labs.russell.wisc.edu/cullenlab/
http://datcpservices.wisconsin.gov/pb/
http://learningstore.uwex.edu/Pest-Management-in-Wisconsin-Field-Crops2012-P1...
or your local UWEX agent.

Wisconsin Pest Bulletin, May 24 2012

A new issue of the Wisconsin Pest Bulletin from the Wisconsin Department of Agriculture, Trade and Consumer Protection is now available. The Wisconsin Pest Bulletin provides up-to-date pest population estimates, pest distribution and development data, pest survey and inspection results, alerts to new pest finds in the state, and forecasts for Wisconsin’s most damaging plant pests.

Issue No. 6 of the Wisconsin Pest Bulletin is now available at:
http://datcpservices.wisconsin.gov/pb/index.jsp

http://datcpservices.wisconsin.gov/pb/index.jsp
http://datcpservices.wisconsin.gov/pb/index.jsp
See you at the Expo!

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Prairie du Sac 2012 Wisconsin

August 22, 2012

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USDA Dairy Forage Research Center, Prairie du Sac, WI

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