

Wisconsin Crop Manager

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2012 Wisconsin Crop Management Conference and Tradeshow

Matt Ruark, Extension Soil Scientist

The agenda has been finalized, so it's time to mark your calendars for the 2012 Wisconsin Crop Management Conference and Tradeshow, January 10 -12. We look forward to seeing you all at this year's conference. The Keynote speaker will be Brigadier General Kerry G. Denson (Ret.) who will present a humorous and motivational seminar on leadership in the workplace. Additional information about General Denson can be found at www.appliedleadership.us. Additional day one presentations will include a review and presentation of new information on what we know about pathogens and atrazine in the environment. A special training session (SNAP-Plus for Beginners) is being offered on Wednesday morning on the nutrient management software SNAP-Plus. This session requires pre-registration and is limited to 30 people. Technical sessions on Wednesday and Thursday will cover a range of topics including nutrient management on tile drained land, the industry trait pipeline, and topical discussions on soil fertility and grain, forage, and pest management. In total, 33 CEU credits for CCAs will be available, 2 for professional development, 9 for nutrient management, 4 for soil and water, 8.5 for crop management, and 10 for pest management. Early registration is accepted through December 24th, 2011. The speaker list, information on hotel accommodations, and advance registration forms can be found at <http://www.soils.wisc.edu/extension/wcmc/2012/ap.pdf>.

Nominations Sought for 2012 WI CCA of the Year

Bryan Jensen, IPM Program

Know a great CCA?

The Wisconsin CCA board is now accepting nominations for the "2012 Wisconsin CCA of the Year". An acceptable candidate must hold a current Wisconsin CCA certification and may be nominated by a customer, employer or colleague. To nominate an individual, the [CCA Nomination Form](#), consisting of 5 questions, must be completed. Three letters of reference are also required.

Completed nomination packets must arrive by the March 1, 2012 deadline. [Tips on completing the nomination](#) are available. Nominees will be evaluated only on the information submitted in the nomination packet. The recipient will receive a commemorative plaque and a \$500 award and their nomination packet will be forwarded for the ICCA of the Year Award.

Electronic applications are preferred; however, applications can be faxed or mailed. Unsuccessful applications will not automatically be reconsidered the following year. For more information contact Bryan Jensen, Dept. of Entomology, 1630 Linden Dr., Madison, WI 53706, Fax: 608-262-3322, bmjense1@facstaff.wisc.edu.

So please, take some time to nominate a worthy candidate. If you don't, who will?

Wisconsin Corn and Soybean Conferences

Joe Lauer

This is the second announcement for the 2012 Corn and Soybean Conference meeting series sponsored by UWEX, the Wisconsin Corn Growers Association, and the Wisconsin Soybean Association. We invite you to be a part of these conferences.

The Corn and Soybean Conferences are designed to provide farmers with technical insight and practical advice to improve on-farm results. These meetings use the latest information available from university and industry research to help farmers raise a crop with maximum yield, quality and profitability.

The meeting dates and locations for the 2012 Wisconsin Corn and Soybean Conferences are:

Tuesday, January 17 – Seymour – Doxbee's Banquet Hall

Wednesday, January 18 – Menomonie – Stout Ale House

Thursday, January 19 – Darlington – Bridges Banquet Center

Please join us at a meeting in your area. Help us spread the word by informing farmers from your county or area, and encourage them to attend.

[The brochure and registration form can be found here.](#)

If you have any questions, or if I can be of any assistance, please contact me.

Joe Lauer

University of Wisconsin

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Fall TMR mixer maintenance

Matthew Digman, Research Agricultural Engineer, Dairy Forage Research Center (USDA-ARS)

As fall field work nears completion, it is now time to focus much-needed attention on our livestock equipment. Preventing a TMR breakdown through regular maintenance is a much better situation than finding yourself with a half-loaded tub and an empty feed bunk in the middle of December. Trust me, I've been there.

Before we get started with the grease-work, it is always prudent to wear protective eye wear and gloves (e.g., Nitrile Rubber, Silver Shield, Viton) when handling chemicals such as grease, oil, fuel and solvents. Hopefully, greasing your mixer is more of a weekly routine than a once-a-year maintenance item. Regular maintenance grease points on TMR mixers generally include: universal joints, drive-line bearings and door guides and linkages. If your machine relies on grease lines, take some time to follow each one to its delivery point. Check both lines and fittings for leaks. There are also a few yearly grease points on these machines, such as the re-packing wheel bearings and load cell mounting tubes. While you're in the vicinity, check tire pressures. Proper tire inflation is critical to ensuring proper tire wear and life.



Figure 1. Check chain tension, tracking and supply of grease to bearings

Next, on to chains. Make sure you first clean any dirt or grease that may have accumulated. Dirt-laden grease can be abrasive, causing unnecessary wear to the drive components. While cleaning these areas, take a moment to check sprockets for excessive wear or for evidence that the chain has not been riding properly on the sprocket. These signs could indicate a misaligned sprocket, excessive chain elongation or simply the need to adjust the chain tightener. Knowing that mixing feed is a dusty environment, some manufacturers opt for automatic oilers or partial submersion of the chain in an oil bath. For automatic oilers, make sure the reservoir is adequately filled. Additionally, it is important that the oil dripper or brush is properly positioned over the chain. For oil baths, the oil level is also important. If the oil level is too high, it may indicate that the oil has been contaminated with water or feed ingredients. In this case, make sure the oil bath is properly sealed and that shaft seals are in good repair. Finally, in addition to the roller chains, make sure apron chains are adjusted properly and tracking well. Adjustment usually entails taking up slack on either side of the conveyor until the conveyor's slats are restricted to a specified amount of movement from the conveyor floor. See your operator's manual for recommendations specific to your machine. Finally, after the lubrication work is done, take a moment to reinstall all safety shields. They'll do double duty keeping you safe and keeping dirt and feed off drivelines and chains.



Figure 2. Planetary gear-box (left) oil reservoir (right).

The heart of many TMR mixers is the planetary gear-box. These compact, high-efficiency gearboxes are used in both vertical and horizontal mixer types. Be sure to check the oil level(s) and follow the manufacturer's recommendation for change intervals as well as draining and filling procedures. Most recommend a yearly oil change. After properly draining, check oil for moisture, dirt or metal contamination. If you suspect the oil composition is off, take a sample to your dealer as they will have a better perspective based on their experience with similar model machines. Alternatively, you could send an oil sample in for analysis. A mail-in sample can be obtained at your local main-line dealership for between \$10 and \$35, depending on the level of analyses. I would, at the least, opt for the viscosity, silicon (Si) and additive break down tests as these would indicate water, dirt and the level of degradation in the oil, respectively



Figure 3. Vertical mixer auger scraper bar and kicker.

Over time, feed ingredients take their toll on the mixer's augers, paddles, and hoppers. Inspect each of these elements for excessive wear. Wear can show up as thin or bent auger flighting, thinning or holes in hoppers, and the rounding of knives and clean out elements. Your operator's manual will spell out tolerances that must be maintained for critical mixing components. For example, the manufacturer of the auger pictured above recommends that the auger scraper bar clearance to the side panel (tub) should not exceed 1/2 in. Most manufacturers offer replacements for all wear components. Some even offer wear-resistant, weld-on wear liners for hoppers and augers.

The next area for inspection is the electrical system. For both the lighting (if equipped) and scale system, it is important to clear wires of buildup and debris and to make sure they are neatly tied up and out of the way. If wires run down a chase tube make sure the tube is clear of debris. These tubes can become high-rise apartments for rodents. If you suspect a non-paying tenant, steel wool can be stuffed partially down the tube as a deterrent. Most TMR weigh bars or load cell wires are potted into the load cell (weigh bar), so damage to a wire means carefully splicing or, in some cases, sending the bar back to the manufacturer for repair. If you do need to splice a cable, take care to use solder and heat shrink to ensure moisture is not introduced to the connection. Because the scale indicator predicts weight based on change in resistance in the load cell (weigh bar), changes in cable resistance can throw off the calibration or cause erroneous readings. If you are suspicious of your system's accuracy, hang a weight or enlist someone to stand at each corner of the mixer. The weight should read the same at each of these locations.

Next, remove the junction box cover and check for corrosion. The box should be sealed and water tight. While you are in there, check that all wires are tight in the connector block. The weigh bars themselves need little maintenance -- just that yearly shot of grease in their receiver tube that we talked about earlier. Load cells, on the other hand, usually employ a check arm system to keep the mixer secure to the trailer/truck without transferring any weight to the frame. The spherical joints of these arm should be tightly attached to the mixer and trailer/truck frame, yet the arms should be free to move about that spherical joint. Work with some oil or grease and a rubber mallet to free the joint. Do not loosen the attachment points as the mixer could become unstable,

shearing the bolts and causing significant damage. Replace any check arms that cannot be freed.



Figure 4. Junction box (left) tail lights and reflector (right).

Last but not least, if you're planning on road travel, check the lighting, reflectors and your slow moving vehicle (SMV) emblem. Most states require that slow moving vehicles, that is vehicles traveling less than 25 mph, be equipped with both SMV emblems and rear reflectors that are visible for at least 500 ft to the rear. Dirty or faded signs and reflectors provide little or no protection in traffic.

I hope that you find these tips useful as you prepare for the winter months. I think you will find that an afternoon will be well spent and the peace of mind that you will not be late for that holiday party will be worth it!

University of Wisconsin Crop Variety and Hybrid Trial Results

Joe Lauer

Every year, the University of Wisconsin Extension-Madison and College of Agricultural and Life Sciences conduct a corn evaluation program, in cooperation with the Wisconsin Crop Improvement Association. The purpose of this program is to provide unbiased performance comparisons of hybrid seed corn available in Wisconsin. These trials evaluate corn hybrids for both grain and silage production performance.

In 2011, grain and silage performance trials were planted at thirteen locations in four production zones. Both seed companies and university researchers submitted hybrids. Companies with hybrids included in the 2011 trials are listed in Table 1. Specific hybrids and where they were tested are shown in Table 2. Transgenic technologies of the hybrids grown are described in Table 3. In the back of the report, hybrids previously tested over the past three years are listed (Table 24). At most locations trials were divided into early and late maturity trials, based on the hybrid Relative Maturities provided by the companies. The specific relative maturities separating early and late trials are listed in the tables.

Results from the 2011 crop variety trials conducted by the University of Wisconsin can be found at the websites below. These trials are a "consumer report" of commercial varieties and hybrids offered for sale to farmers in Wisconsin. These results are derived from replicated plots grown around Wisconsin at university research stations and farmer fields.

- [2011 Wisconsin Corn Hybrid Performance Trial Results](#)
- [2011 Wisconsin Soybean Variety Test Results](#)
- [2011 Forage Variety Update for Wisconsin](#)
- [2012 Wisconsin Oats and Barley performance tests](#)
- [2011 Wisconsin Winter Wheat performance tests](#)

These results offer the best predictor for next year's potential performance of crop varieties.

