Wisconsin Crop Manager

Volume 16 Number 20 - - - University of Wisconsin Crop Manager - - - July 16, 2009

What's new!

Crops

Weeds

Plant Disease

Minnesota Strip-tillage Expo

Dick Wolkowski, Extension Soil Scientist

If you are looking for more information about strip-tillage and don't mind a bit of a drive consider attending the Minnesota Strip-tillage Expo that will be held at the Southwest Research and Outreach Center near Lamberton on Tuesday, August 11th. The event will run, rain or shine, from 9:00 to 4:00, with registration starting at 8:30. Entry to the Expo is free with lunch and refreshments available on the grounds for a fee.

Field demonstrations by major manufacturers of strip-tillage equipment will run from 9:00 to 11:00 and again at 1:00 to 3:00. Educational presentations by University researchers and Extension Educators on strip-tillage fertilizer management, economics, and management essentials will run from 10:00 to 12:00 and 2:00 to 4:00. Field tours of strip-tillage research and demonstration plots will run from 11:00 to 12:00 and 3:00 to 4:00. From 12:15 to 1:00, a farmer panel of producers currently using strip-tillage will discuss their experiences and share tips with attendees. A flier for the event can be downloaded from the calendar at the UW Soil Science Extension Website: (http://www.soils.wisc.edu/extension/upcoming/current/2009_Strip_Till_Expo.pdf).

Strip-tillage addresses common concerns of conservation tillage management related to soil warm-up in the spring and seed zone soil management. This system clears residue and tills the soil in the plant row while maintaining high residue levels overall. Recent research conducted at the UW has demonstrated that strip-tillage can lower the cost of production in row crop systems, increasing return per acre. The "Strip-tillage Expo" is a great opportunity to learn more about strip tillage and current research results, to compare what system might work best for you, and to learn from others currently practicing strip-tillage to help fine-tune your management practices.

Introducing Matthew Digman

As the new UW-Extension Machinery Systems Specialist, I'd like to take this opportunity to introduce myself and my career in agriculture. My first experiences in agriculture came from my family's dairy farm in Mount Hope, WI. There I learned the responsibilities, rewards and challenges involved in an agricultural vocation. My early interest in agricultural equipment led me to pursue a Bachelor's degree in Mechanical Engineering at the Milwaukee School of Engineering. For two summers, I held an internship with Knight Manufacturing Corporation, a moderate size manufacturer of agricultural equipment for the dairy and livestock industry, located in Brodhead, WI.

In May 2003, I graduated from MSOE and returned to Kuhn Knight as a full-time design engineer. My efforts at Kuhn Knight resulted in a new product-line, known as the Pro-Push manure spreader, which was introduced to the market in 2004. During this project, I developed and implemented solutions to field issues, oversaw production of prototypes, and worked to develop new models of this product.

In early 2004, I accepted a research assistantship at the University of Wisconsin – Madison under the direction of Dr. Kevin Shinners. Our research included the investigation of near infrared reflectance spectroscopy (NIRS) to meet the challenge of predicting moisture in real time on the forage harvester.

I began my Ph.D. work in 2006 at the United States Dairy Forage Research Center (USDA-ARS). My work investigated on-farm storage and chemical treatment as a method of preservation and pretreatment of biomass. By developing in-storage pretreatments at ambient temperature and pressure with prolonged reaction times, we hope to lower pretreatment costs and provide a better return for farmers.

As I start working at the University of Wisconsin – Madison I plan to begin my research and extension work in the area of forage production. To date, I have served on the board of the Wisconsin custom operators. I have also begun an applied research program investigating precision agriculture technologies in forage harvesting, including machine guidance (auto steering), moisture sensing and systems modeling. I also plan to gather data to better understand the costs related to forage harvesting through the collection of both fuel usage and repair and maintenance data for various forage related operations. I would welcome collaboration from anyone interested in these areas.

Challenging as it may be, I look forward to translating published research into a form that is applicable to everyday, on-farm production. Additionally, I look forward to solving agricultural problems by working closely with extension faculty as well as through research that directly relates to farmers' day-to-day needs.

Sincerely,

Matthew

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Wisconsin Vegetable Crop Update, 2009-5 and 2009-6

Alvin J. Bussan, Potato and Vegetable Cropping Systems Specialist, UW-Madison, Department of Horticulture

Vegetable Crop Update newsletter issue five and issue six is out! Weekly updates should be available as disease, insect, weed, fertility, and crop progress changes.

Upcoming events include:

Friday, July 17, 2009 – Lelah Starks Foundation Seed Farm Tour, Rhinelander

Thursday, August 6, 2009 – Potato Field Day, Hancock Ag Research Station

Friday, August 7, 2009 – Langlade Co. Potato Field Day, Antigo

Tue – Wed, August 11-12, 2009 – Sweet Corn Hybrid and Snap Bean Demonstration Tour, Hancock

Monday, August 20, 2009 – Grower Field Walk, Norman Miller Farm, Pardeeville, WI

Both issues have been posted on the IPCM web site on a new page titled appropriately: The Vegetable Crop Update page. Look for a new menu item under "WCM-News" to find this page, or click here >>>
http://ipcm.wisc.edu/WCMNews/VegCropUpdate/tabid/115/Default.aspx

Don't Exceed Maximums in Roundup Ready Soybean

Chris Boerboom, Extension Weed Scientist

As some of the second applications of glyphosate that are being made, it might be time to review a couple maximums with glyphosate.

Glyphosate labels specify that glyphosate can be applied to soybeans through the flowering stage, which is equal to the R2 growth stage. The next growth stage is R3, which begins when one of the four top nodes with a fully developed leaf has a 3/16 inch long pod. Applications made to soybeans in the R3 stage would be considered off-label applications. Hopefully, weeds have been controlled prior to this stage. Adding glyphosate with late season insecticide or fungicide treatments would also be off-label if made after the R2 stage.

With second or even third applications of glyphosate to soybeans, we must also be aware of the maximum rates of glyphosate that can be applied in-season. The maximum rate for a single application in-season is 1.5 lb ae/a and the maximum for the total of all in-season applications is 2.25 lb ae/a. If we use a generic glyphosate (3 lb glyphosate/gallon) as an example, a maximum of 2 qt/a can be applied at one time and a total of 3 qt/a can be applied in-season. This could be applied as three 1 qt/a treatments or as a 2 qt/a plus a 1 qt/a application. If the example was a PowerMax or WeatherMax formulation (4.5 lb glyphosate/gallon), the maximum for a single application is 44 oz/a and the in-season total is 64 oz/a. For formulations with other concentrations, these maximums are listed on the glyphosate label. When dealing with certain tough weeds, the potential exists that these maximums could be exceeded if care is not taken, but a little planning will ensure the label is followed.

HPPD Injury to Soybeans

Chris Boerboom, Extension Weed Scientist

Just a quick reminder that the HPPD-inhibiting herbicides (Callisto, Impact, and Laudis) have postemergence activity on soybeans. Consequently, relatively small amounts of tank contamination can cause visible injury to soybeans (Fig. 1). As these are pigment inhibiting (or bleaching) herbicides, symptoms may range from minor chlorosis to bleaching. Often the chlorosis is interveinal and greater towards the leaf margin. With higher rates, necrotic tissue may occur around the leaf margin. Leaves that develop after the time of the contaminated application will show the greatest injury.

Figure 1. Soybeans injured by a spray contaminated with a HPPD inhibiting herbicide such as Callisto, Impact or Laudis.

Certain nutrient deficiencies such as potassium or manganese deficiencies may mimic the symptoms of HPPD tank contamination, but these few key features will likely provide simple clues to distinguish between the two.

1. Chlorosis appears within several days after a herbicide application.

2. Callisto, Impact, or Laudis were applied by the sprayer prior to when the soybean field was sprayed.

3. The chlorosis has a pattern consistent with the spray application. Injury may appear or be more severe in areas where the boom was first charging, in streaks where the boom overlapped, and in overlaps in the headlands or in point rows.

The degree of spray tank contamination will determine the severity of soybean injury. Predicting the final impact on the soybean yield will therefore depend on the severity of injury and how favorable the rest of the growing season is. In most cases, I would expect the soybeans to recover from most of this injury, but some areas with overlaps may suffer some yield loss. Fortunately, these areas should be a smaller portion of the field in most cases.

Harvest Aids for Winter Wheat

Chris Boerboom, Extension Weed Scientist

I have received a couple calls concerning options to control large weeds in winter wheat fields to aid in harvest. First, Gramoxone or paraquat is not labeled as a harvest aid in wheat or other small grains. Options for harvest aid herbicides in winter wheat include glyphosate, 2,4-D, and dicamba.

Glyphosate can be applied to wheat and feed barley (no other small grains) to control grasses and suppress broadleaf weeds. Wheat must be in the hard dough stage (30% or less grain moisture) before treatment and wheat harvest must be delayed at least 7 days after application. Only 0.75 lb ae/a of glyphosate may be applied preharvest, which is equivalent to 32 oz/a of most generic glyphosate formulations, 22 oz/a of PowerMax and WeatherMax, and 24 oz/a of Touchdown Total as examples. It is not recommended to apply glyphosate preharvest to seed wheat because it may reduce seed germination.

2.4-D ester should be more effective as a preharvest treatment than 2.4-D amine, but overall control of broadleaf weeds may be limited. Wheat must be in the hard dough stage before the application. Check the label of the 2,4-D product for allowable rates. Most labels have a maximum of 1 pt/a, but at least one lists a maximum of 2 pt/a. Most labels require a 14 day interval between application and harvest.

Clarity (not other dicamba formulations) can be applied at 8 oz/a for broadleaf weed suppression. Wheat must be in the hard dough stage and the green color must be gone from the nodes in the stem. Wait 7 days before harvest after application.

As you can see, these preharvest herbicide options are rather limited. Consequently, it may be wise to consider these questions before making a preharvest herbicide application to winter wheat.

1. Does the increased harvest efficiency outweigh the expense of the herbicide, application, and lost grain from sprayer tracks?
2. If the weeds are mainly in patches, is there enough wheat in the weed patch to justify the expense of spraying the weeds and combining or would it be more logical to combine around the patches. This may be the case with weeds in areas where the wheat suffered winter damage or with large weeds like giant ragweed.
3. Will the herbicide provide enough control to desiccate the weeds before harvest? Often the herbicide label may not allow a high rate to control the large, mature weeds found in wheat fields.

UW-Extension/Madison Plant Disease Diagnostic Clinic (PDDC) Update

Brian Hudelson, Ann Joy, Amy Gibbs, and Brooke Weber,
Plant Disease Diagnostics Clinic

The PDDC receives samples of many plant samples from around the state. The following diseases/disorders have been identified at the PDDC since July 8, 2009:

PLANT/ SAMPLE TYPE	DISEASE/ DISORDER	PATHOGEN	COUNTY
FORAGE CROPS			
Alfalfa	Aphanomyes Seedling Blight/Root Rot Crown Rot	*Aphanomyces euteiches* *Fusarium* sp., *Pythium* sp.	Washington Calumet, Washington
FRUIT CROPS			
Cherry	Brown Rot Powdery Mildew	*Monilia laxa* *Podosphaera* sp.	Dane Dane
Cranberry	Root Rot	*Pythium* sp.	Wood
Pear	Phomopsis Canker Sphaeropsis Canker	*Phomopsis* sp. *Sphaeropsis* sp.	Dane Dane
Plum	Anthracnose	*Colletotrichum* sp.	Iowas
Strawberry	Root/Crown Rot	*Pythium* sp., *Rhizoctonia* sp.	Bayfield
VEGETABLES			
Rhubarb	Root/Crown Rot	*Colletotrichum* sp., *Pythium* sp.	Waukesha
Tomato	Growth Regulator Herbicide Damage Walnut Toxicity	None None	Green Lake Iowa

For additional information on plant diseases and their control, visit the PDDC website at pddc.wisc.edu.