

Wisconsin Crop Manager

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epidemiology of *Sclerotinia minor* of peanut, and using this knowledge to improve peanut disease management strategies. This research led him to become particularly interested in the development of *Sclerotinia* blight forecasting systems using on-site and modeled weather data. The *Sclerotinia* blight advisory enables peanut growers to time fungicide applications more effectively.

In addition to his research in epidemiology of *Sclerotinia* blight, he also evaluated experimental peanut breeding lines for resistance to *Sclerotinia minor*. One of these lines, N96076L, was registered as a *Sclerotinia*-resistant germplasm line. Damon tested advanced breeding lines that were derived from crosses with N96076L under field conditions, and examined the role of partial resistance in epidemic development.

Damon's research at OSU continued upon the theme of integrated disease management and epidemiology. He developed a disease-forecasting model for turfgrass systems and developed an internet-accessed disease prediction system for grapes. He also conducted research on pecan where we evaluated a disease prediction system and developed an improved understanding of disease resistance in commercially available pecan cultivars.

Damon's new position at UW-Madison will address disease concerns of soybeans, field corn, and wheat. He plans to focus his research efforts on developing new methods to manage white mold including the development of improved soybean varieties with resistance to the disease and developing a viable disease forecasting system for white mold. Other diseases like soybean cyst nematode and sudden death syndrome will also be high priorities for Damon's soybean research program. Research on field corn and wheat will be focused on sustainably managing important diseases of those commodities.

If you would like to contact Damon he can be reached at dsmith@plantpath.wisc.edu. More information about Damon's program at UW can be found at <http://www.plantpath.wisc.edu/users/dsmith99>

A New Field Crops Pathologist at the University of Wisconsin Madison

Dr. Damon Smith has joined the Department of Plant Pathology at the University of Wisconsin (UW)-Madison as the new field crops extension pathologist. He assumed this role as of September 1, 2012. Damon comes to the University of Wisconsin from Oklahoma State University (OSU) where he was the horticultural crops extension pathologist for the past five years. Damon is a native of western New York and attended the State University of New York (SUNY) College at Geneseo where he received his B.S. in biology. He then moved to North Carolina State University (NCSU) where he received his M.S. degree in 2004 and his Ph.D. degree in 2007, both in plant pathology.

At NCSU his research and extension interests were primarily focused on improving the understanding of the biology and



Dr. Damon Smith

2012 Pest Management Update Meetings

Eileen Cullen, Extension Entomologist

We are pleased to announce the schedule and topics for the 2012 Pest Management Update Meetings. See the table with this article for the schedule. 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, as they have to make the 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, each location in the series is a separate event for registration and local arrangements purposes. Most agents add an additional “walk-in” fee for those who have not pre-registered.

Topics and issues at the meeting will review the 2012 crop year and field and forage crop management topics for next year. The speakers will be extension specialists Mark Renz, weed scientist, perennial cropping systems; Vince Davis, weed scientist, annual cropping systems; Eileen Cullen, field crop entomologist, and this year we are pleased to welcome Damon Smith, field crop plant pathologist.

We hope to see you this fall at the meetings and wish you a good harvest in the mean time.

2012 Pest Management Update Topics will cover:

Weed Management: *Annual Crops:* 1) New herbicide updates for 2013 2) Update on Herbicide Resistance in the State 3) carry-over concerns for 2013 and the utility of bioassays. *Perennial Crops:* 1) Benefits of Roundup Ready alfalfa establishment systems on weed control yield and stand establishment, 2) Do some corn herbicides prevent establishment of grass with alfalfa the following year?, 3) Pasture weed management after a drought what should we expect?, 4) Impact of Canada thistle on pasture utilization, 5) Poisonous plants, what to remember.

Insect Management: 1) Western corn rootworm resistance to Bt CRW corn – where is it? what trait(s) are we concerned about? why has resistance occurred? 2) Best management practices for Bt CRW traits going into 2013, 3) Recap on twospotted spider mite control during drought conditions, 4) Managing the expected and unexpected insect pests in alfalfa – potato leafhopper to variegated cutworm, 4) label updates for insecticides and Bt corn traits

Disease Management: 1) Introduction and background of Damon Smith, new field crops extension plant pathologist, 2) Announcement of the 2012 PMU survey, 3) Soybean vein necrosis-associated virus: A new and emerging virus of soybean in the Upper Midwest, 4) The 2012 drought: Reminders about mycotoxins in corn, 5) The status of wheat stem rust: Where is Ug99?

The schedule is attached at the end of this issue of the PDF print version of The Wisconsin Crop Manager

2012 Area Soybean Conferences: December 11-13

Shawn Conley, Soybean and Wheat Extension Specialist

First Announcement: The Wisconsin Soybean Association, Soybean Marketing Board, and Cooperative Extension are hosting the 2012 WI Area Soybean Conferences. They will be held on December 11-13 in Holmen, Ripon, and Janesville, WI. Topical areas include:

- The 2012 Drought Impact on the 2013 Soybean Crop
- Assessing Soybean ROI. Where Should I Spend my Money for 2013
- New Soil Fertility Recommendations for Soybean
- Do Soybean Leaf Tissue Tests Tell you the Real Story
- The National Soybean Sustainability Initiative and Why You Should Care
- Soybean Disease Considerations for 2013
- Marketing Tips for 2013
- New products
- Membership

Registration information will be available November 1st.

New weed management during drought video

Vince Davis, Cropping Systems Weed Scientist and Extension Specialist

Weeds compete with crops for resources like sunlight, nutrients and water. In a stressful growing environment like we experienced in 2012, the effects of weed competition can be extremely visual and magnified to the point of crop death. As control measures are delayed in the year, the more visual crop stress symptoms become, and the more yield will be lost. This video shows a general view of how weed management can affect soybean and corn growth at various degrees from slight stunting to complete crop loss. Tips include controlling weeds earlier in the season to avoid weed competition, but when that doesn't happen, scout for weed control problems and make detailed notes about where patches of weed escapes are in fields to help with interpreting yield monitor maps and devising best management practices for controlling those weed species in the future.

<http://www.youtube.com/watch?v=aKtFNV4cfAE>

Is it legal to use a cover crop as a forage crop? Maybe Not

Vince M. Davis, Department of Agronomy, UW-Madison/Extension

There are a lot of people interested in establishing cover crops with the intention of harvesting them as an emergency forage crop due to the 2012 drought. Species that are often discussed range from traditional cereal grain crops like wheat,

rye, and oat, to species that are less conventional like wild buckwheat and chicory. Much interest is even being driven by agencies that have lifted other restrictions on this practice.

Herbicide labels are the law. It is a violation of Federal law to use pesticide products inconsistent with its label.

[Click here to read the full article as a 4 page PDF.](#)

Drought 2012: Moldy Corn and Crop Insurance

Damon L. Smith, Plant Pathology (UW-Madison/Extension), Paul D. Mitchell (Agricultural and Applied Economics, UW-Madison/Extension)

To download this article as a PDF file [click here](#).

Corn harvest is beginning throughout Wisconsin and should proceed quickly with the projected dry weather. Though the USDA estimates that the state average yield will be 130 bu/ac, yields have been varying greatly from one location to the next. Some growers will find themselves with decent yields and good test weights, and so they may feel no need to contact their crop insurance agent. However, due to the moisture and heat stress with the drought of 2012, Wisconsin farmers should be especially aware of moldy corn this year, for the health of their livestock and food safety. Buyers will also be looking for moldy corn; we have already heard reports of loads of corn being rejected due to mold and mycotoxin contamination.

Quality losses due to moldy corn are insurable losses for those with crop insurance, even if the total harvested yield will not trigger an insurance indemnity. Appropriate grain samples have to be collected and tested before harvest. Farmers suspecting losses due to moldy grain should contact their crop insurance agents before they harvest, otherwise they may forfeit crop insurance indemnities for quality losses.

Corn Molds and Mycotoxins

Aspergillus species and *Fusarium* species are fungi that cause molds and produce mycotoxin problems in corn. Both are very common in nature. *Aspergillus* species tend to grow best between 80 and 100 degrees F, with 85% relative humidity and grain moisture of 18%-20% also favoring fungal growth and aflatoxin production. Fungal infections are also more common in corn under stress, such as from drought, heat, insects, nutrient deficiency, etc. As a result, *Aspergillus* ear rot in corn is typically more common in southern states, but conditions in Wisconsin during 2012 were favorable for increased risk of *Aspergillus* ear rot.



Fungal growth and visible mold on corn can lead to grain contamination with mycotoxins – toxins produced by these fungi. *Aspergillus* ear rot on corn can produce aflatoxins – highly toxic compounds officially listed as potential carcinogens. The U.S. Food and Drug Administration (FDA) has established aflatoxin maximum acceptable limits of 20 parts per billion (ppb) for corn used as feed for dairy animals and 0.5 ppb in milk. These extremely low levels reflect the highly toxic nature of these compounds and the importance of examining corn at harvest and testing for aflatoxin.

Other mycotoxins can also cause problems. More common in the upper Midwest are *Fusarium* species that can infect corn kernels and produce fumonisins and vomitoxin. The FDA has established maximum allowable levels of fumonisins in corn and corn products for human consumption ranging from 2-4 parts per million (ppm). For animal feed, maximum allowable fumonisin levels range from 5 ppm for horses to 100 ppm for poultry. Vomitoxin limits are 5 ppm for cattle and chickens and 1 ppm for human consumption.

Reducing Mycotoxin Risks

Before harvest, farmers should check their fields to see if moldy corn is present. Similarly, during harvest they should carefully monitor the grain for mold. If substantial portions of fields appear to be contaminated with mold, it does not mean that mycotoxins are present and vice versa. Appropriate grain samples should be collected and tested by a reputable lab. Work with your corn agronomist or local UW Extension agent to ensure proper samples are collected and to identify a reputable lab. If tests show high levels of aflatoxin in grain, that grain **SHOULD NOT BE BLENDED** with uncontaminated corn. The FDA has established a “do not blend” policy for aflatoxin due to its extreme toxicity.

If you observe mold in certain areas of the field during harvest, consider harvesting and storing that corn separately, as it can contaminate loads and the fungi causing the moldy appearance can grow on good corn during storage. Harvest corn in a timely manner, as letting corn stand late into fall promotes *Fusarium* ear mold. Avoid kernel damage during harvest, as cracks in kernels can promote fungal growth. Also, dry corn properly (12% or less), as grain moisture less than 12% typically inhibits fungal growth. Finally, keep storage facilities clean.

Crop Insurance Rules

Quality losses due to moldy corn are insurable losses for those with crop insurance, but to claim indemnities, growers must follow crop insurance rules. If you suspect aflatoxin or other mold issues, contact your crop insurance agent before harvesting, storing or selling the corn. Farmers will likely lose indemnities for grain quality losses if grain is harvested. If aflatoxin tests indicate contamination above safety limits (e.g., 20 ppb for aflatoxin), insured growers following proper procedures will be compensated for the reduction in value of the grain. The key is to communicate with your crop insurance agent before harvesting contaminated grain. Your crop insurance agent will tell you how to proceed: how to collect grain samples and how many samples to collect. Also, growers may be asked to leave un-harvested rows for crop loss

adjustors to use to determine indemnities. Expect delays in crop loss adjustment, as the system is overwhelmed with insurance claims this year, but your crop insurance agent will be able to tell you how to proceed to confirm suspected aflatoxin contamination in order to receive indemnities if they are due.

For More Information

Contact your local UW Extension agent or the authors with questions or for more detailed information and your crop insurance agent with specific questions regarding your crop insurance coverage. Also, the USDA Risk Management Agency also has two fact sheets:

- Loss Adjustment Procedures for Aflatoxin: <http://www.rma.usda.gov/pubs/rme/2012aflatoxinfo.pdf>
- Aflatoxin Testing: IA, MN, WI: http://www.rma.usda.gov/fields/mn_rso/2012/2012aflatoxin.pdf

Fall is still a Good Time to Sample for SCN and Other Plant Parasitic Nematodes

Shawn Conley, Soybean and Wheat Extension Specialist

The WI Soybean Marketing Board (WSMB) sponsors free nematode testing to help producers stay ahead of the most important nematode pest of soybean, the soybean cyst nematode (SCN). Eggs of SCN persist in the soil between soybean crops so a sample can be submitted any time that is convenient. The soil test report indicates the number of eggs in the sample and is useful for selecting the right variety for the next soybean crop. Retests of fields planted with SCN-resistant varieties over multiple years shows how the nematode population is responding to variety resistance and provides an early warning should the nematode population adapt to host genetics.

In the spring of 2012, the WSMB expanded the nematode testing program to include other pest nematodes in addition to SCN. These nematodes are less damaging to soybean than SCN but can cause enough yield loss to warrant treatment. As is the case for SCN, there are no rescue treatments for nematodes so the primary purpose of this year's soil test is to plan for next year's crop. Soil samples collected in corn for nematode analysis have predictive value for explaining yield if they are collected before the corn V6 growth stage. Sampling early in the season will provide information about the risk potential for the current corn crop AND the next soybean crop.

The assays used to recover nematode pests other than SCN in soil require that the nematodes are alive. So, it is important to keep the samples moist and at least room temperature cool. Collecting a sample that includes multiple cores ensures that there will be plenty of root pieces to assay. It is not necessary to include live plants in the sample. The soil test report will indicate which pest nematodes are present and at what quantities and their damage potential to soybean and corn based on the numbers recovered.

Free soil sample test kits are available now and can be requested from My Linh Do at (mldo@wisc.edu) or at 608-262-1390.

For more information on SCN testing and management practices to help reduce the losses from this pest, please contact: Shawn Conley: spconley@wisc.edu; 608-262-7975 or visit www.coolbean.info.

Remember the first step in fixing a nematode problem is to know if you have one! The WSMB sponsored nematode testing program provides you that opportunity.

Herbicide carryover concerns—Challenges from the drought will keep on coming

Vince M. Davis, Department of Agronomy, UW-Madison/Extension

Is herbicide carryover a concern for fall 2012 and spring 2013 crops?—Yes

Are there great remedies and advice to alleviate carryover concerns?—Few, and some are arguable

It has been a challenging year where rainfall was scarce through much of the early part of the crop growing season. Unfortunately, the challenges associated with herbicide carryover may keep on coming into the fall and spring if crop rotations aren't carefully matched behind residual herbicide products.

In July I put an article in the WCM titled: "*Forage harvest and re-crop considerations following these drought conditions*": <http://ipcm.wisc.edu/blog/2012/07/forage-harvest-and-re-crop-considerations-following-these-drought-conditions/> In that article I made the simple suggestion to make sure you review your herbicide application records and review the recrop restriction tables in A3646 and on herbicide labels to insure you won't have a failure in a succeeding crop establishment. I also provided the re-crop interval table and you can still download that from the article. I know that suggestion was more subtle than it should have been, and perhaps more vague in advice than some wanted, but honestly I think that was the extent of the advice I felt could be delivered with confidence. I still think the best suggestion is for you to study and interpret those re-crop intervals as much as can be learned about what may or may not be a concern. Other recommendations to alter management practices like bioassays or increasing tillage are a guessing game, in my opinion.

When issues are important, like this issue, I really strive to provide information in these newsletter articles that I am confident can be backed up by scientific data and manuscripts from which I form an opinion. i.e., I like to be confident in the advice I give. Unfortunately, there is little science and few data that truly outlines the extent of the problems we may face following 2012, and how we should address those problems are equally questionable. Yes, it is true that carryover is not a new phenomenon and much was learned in the drought years of the late 80's. So, we do have some precedence, but in many ways things have changed since then like the crop genetics we plant, the herbicide chemistries we are, and in some cases the amount of herbicides. So, there are lots of opinions, and we can make

lots of guesses, but rest assured we are on un-charted territory with what we will see moving forward.

The biggest challenge for making broad spectrum predictions and sweeping management recommendations is that I expect herbicide persistence in fields will be extremely variable. Early anecdotal reports of corn yields in some southern counties of Wisconsin range from 0 to 180 bushels per acre, and that's in the same field. So, that should indicate exactly how variable growing conditions were in 2012, and that's exactly how variable I expect, even within a field, herbicide persistence will be. Why? because what we do know is there are several factors that are important for herbicide persistence. Hartzler and Owen did a nice job of presenting the factors that determine the risk of carryover injury in a recent Iowa State Extension article. They presented seven factors:

- 1) chemical half-life
- 2) rate of herbicide application
- 3) application date
- 4) soil characteristics (texture, organic matter, pH)
- 5) rainfall (total amount and distribution throughout year)
- 6) sensitivity of rotational crop
- 7) growing conditions following planting next spring

As you can see from that list of factors, there are several factors that can't be changed 'after the fact'. What I mean is you obviously can't go back in time and change the herbicide rate or timing of what you already applied and you are stuck with the soil and weather parameters you're dealt. So, the only factor you can influence is number six; sensitivity of rotational crop. Thus, I feel confident that the only good advice is to do exactly as I said in July, review your herbicide labels and plan your crop rotation accordingly.

More specifically, I would recommend interpreting the re-crop tables and intervals—and READ THE FOOTNOTES—on the cautious side. For instance, it is acceptable to rotate to soybean the year following a Lumax® application, however, it is not acceptable to rotate to soybean in the year following Lumax IF the application was made after June 1. That restriction applies to a 'normal' year. I bet many Lumax applications were made after May 10 this year. So, my question to you would be this...., how different were weather conditions between May 10 and June 1 in 2012 compared to a normal year? Or worded differently, was any rainfall received in that time frame and were weather conditions conducive for the early stages of herbicide degradation prior to June 1 this year? If the answers to those questions were 'not really', then rotating to soybean might 'not really' be a good idea. Other products with important footnotes to consider are on the Hornet® label that states: "When annual rainfall and/or irrigation is less than 15 inches on soils with less than 2% organic matter, alfalfa, dry beans, lima beans, peas, snap beans, and soybeans should not be planted until 18 months after treatment." Again, did your fields receive close to 15" rainfall? Are those soils close to 2% organic matter? These are important details in a year with unknown outcomes.

I am only mentioning these two products as EXAMPLES, and I do not mean to single these particular products out in the marketplace. But, my point is there may be very important clues in the 'fine print' of the labels that need to have a lot of consideration this year. May other herbicide labels have the same type of 'fine print' in the directions for use that revolve around other important field conditions like soil pH and texture. Reading these labels closely and interpreting them with caution should help avoid many of the carryover problems that will be encountered, and yes, in many cases this may very well mean that a cautious interpretation will mean planting the same crop back into that field!

If you want to study this issue in even more detail, it is important to note that herbicide persistence is most often a function of herbicide family, and herbicide family does not always directly correlate to herbicide mode-of-action. A good example is there is a big difference in the way sulfonylureas and imidazolinones degrade in the soil even though they are both amino acid synthesis inhibitors (ALS inhibitors). Imidazolinones are more reliant on rainfall for degradation than sulfonylureas. So, in addition to reading the herbicide label for re-crop intervals and/or using the chart in A3646, I advise you to use a combination of Dr. Colquhoun's *Herbicide persistence and carryover* publication [<http://learningstore.uwex.edu/Assets/pdfs/A3819.pdf>] and the *Corn and Soybean Herbicide Chart* [http://ipcm.wisc.edu/download/pubsPM/Herbicide_MOA_CornSoy_02_2012.pdf] to determine which corn and soybean herbicides have a likelihood of long persistence.

Wouldn't it be better to just recommend bioassays to help make re-cropping decisions?

I'm personally not convinced that bioassays are a tremendous help in decision making for the amount of work and time they require in order to conduct them correctly, and the amount of error that they can sometimes still present. I admit, this is my opinion and others have been promoting bioassays more than I have. I do think bioassays can help, if done correctly, but how much it improves your decision making skills above a 50/50 chance after reading labels and crop rotation guidelines is still a question in my mind. In Illinois Dr. Hager has conducted greenhouse bioassays this year and has shown lacking herbicide degradation may be an issue this year: [<http://bulletin.ipm.illinois.edu/article.php?id=1712>]. So, if you are interested in bioassays, there are good recommendations for conducting bioassays in the UW-EXT *Herbicide persistence and carryover* publication, and also in a 2008 Extension article from Nebraska: *A quick test for herbicide carry-over in the soil*. Just note, that I said 'if done correctly' they can help. My point is this, if you're going to conduct a bioassay, give adequate effort toward doing a good job in order to make a calculated conclusion about the extent of the problem you may be facing. First, carefully read the publications I just referred to and follow the directions. Second, make certain you carefully sample several different areas of a field targeting areas you expect should be the worst case scenarios (end rows, boom overlap areas, low OM areas, high pH areas), target different soil drainage and topography areas (get on top the hills and in the valleys), target contrasting weedy and less weedy areas

(this may indicate the amount of herbicide that was metabolized by foliage), and target contrasting yield areas of the field. And then, replicate the sampling in these areas.

Will tillage help?

This is the most common question I have received. It is another difficult question to answer because the only correct answer is: “it depends”. In most cases, however, I don’t think tillage is going to help. In some cases, it might. I polled a few of my colleagues to get their opinions. One colleague said “Tillage, if it is deep enough will dilute the herbicide residues, particularly since they weren’t moved into the soil profile by rain this year. The other thing to keep in mind is for anything that is broken down microbial, tillage will stimulate microbial activity for a short time and specific herbicides will be broken down more quickly.” Another colleague said “I believe the risks of tillage outweigh any benefits that are expected. Experience from many years ago with the imidazolinone and sulfonyleurea herbicides suggested that you may or may not get carryover response after tillage and similarly, you may or may not get responses from doing nothing. The risks of added expense, time, and potential for erosion are 100%.” The logic of physical dilution seems to side with the first response, but data in the literature supports the second opinion. Which one is correct?, I think they both are depending on the situation and herbicide. Research conducted in Missouri in 1988, 1989, and 1990 by Walsh et al. (1993) found no evidence that tillage reduced carryover potential of chlorimuron, clomazone, imazaquin, imazethpyr, or metribuzin in succeeding crops when applied at normal and twice the normal use rates. On the other hand, there are plenty of data sources to show herbicide breakdown will increase with warmer soils, and you can get warmer soils in the spring with tillage and potentially increased microbial activity with burial of crop residues. Additionally, it makes perfect sense that tillage would help dilute the activity of seedling root and shoot inhibitors (i.e. Prowl, Treflan, Dual II Magnum, Harness) because the seedlings need to come into contact with a high concentration of the herbicide during the germination and emergence process. However, dilution of ALS inhibitors, HPPD inhibitors, or PPO inhibitors may not matter as much. So, I’ll leave the recommendation of whether tillage will help as ‘undecided’ or ‘depends’ on the situation. I wish it were more clear cut, but it’s not. However, if you’re in a cropping system and topography where tillage is not too detrimental from an erosion standpoint and tillage would help you sleep better at night, then it at least it will help you sleep better. – Vince M. Davis, Extension Weed Scientist

Below are links and citations to more additional information:

Colquhoun. University of Wisconsin-Extension. 2006. Herbicide persistence and carryover: <http://learningstore.uwex.edu/Assets/pdfs/A3819.pdf>

Corn and Soybean Herbicide Chart: http://ipcm.wisc.edu/download/pubsPM/Herbicide_MOA_CornSoy_02_2012.pdf

Hager, University of Illinois. September 7, 2012. Considerations for Fall-Seeded Small Grains: <http://bulletin.ipm.illinois.edu/article.php?id=1712>

Hartzler and Owen, Iowa State University. August 8, 2012. Carryover concerns for 2013: <http://www.extension.iastate.edu/CropNews/2012/0807hartzlerowen.htm>

Hornet®, product of Dow AgroSciences: <http://www.dowagro.com/usag/prod/015.htm>

Klein, Bernards, and Shea. University of Nebraska. September 2008. A quick test for herbicide carry-over in the soil: <http://elkhorn.unl.edu/epublic/pages/publicationD.jsp?publicationId=1052>

Legleiter. Purdue University. August 6, 2012. Herbicide carryover in dry conditions: <http://www.ppdl.purdue.edu/ppdl/weeklypics/8-6-12.html>

Lumax®, product of Syngenta Crop Protection: <http://www.syngentacropprotection-us.com/pdf/labels/SCPI152AL1D0106.pdf>

Walsh, J.D., M.S. Defelice, and B.D. Sims. 1993. Influence of tillage on soybean (*Glycine max*) herbicide carryover to grass and legume forage crops in Missouri. *Weed Science*. 41:144-149

Vegetable Crop Update 9/16/12

The 25th issue of the Vegetable Crop Update is now available. This issue contains updates on late blight as well as updates from the Wisconsin Seed Potato Certification Program. [Click here to view this update.](#)

Planting Winter Wheat into Dry Soil

Shawn Conley, Soybean and Wheat Extension Specialist

Dry soil conditions have sparked many questions from growers on how best to establish their winter wheat crop. As we have been reminded in the drought of 2012 there is no substitute for rain (unless you have irrigation), however here are a few ideas to consider to mitigate your risk.

- Conserve soil moisture. If possible no-till your winter wheat. If this is not possible due to equipment limitations, limit your tillage passes across the field.
- Increase your seeding depth (e.g. plant to moisture). As stated in the [Top 8 Recommendations for winter Wheat Establishment](#): Wheat should be planted ~1.0 inch deep **depending upon soil moisture conditions**. Wheat planted more than 1.5 inches deep may result in death due to pre-mature leaf opening or poor tiller development and winter survival.
 - As a grower there is little you can do to prevent pre-mature leaf opening. This phenomenon is rare unless seeded extremely deep and compaction also occurs.
 - You can increase tiller development or effective head number by increasing your seeding rate.
 - I do not have yield loss or winter kill data implicitly from seeding depth experiments

however deep seeding will delay emergence which may be similar to delayed planting. Data from our 2009 Lancaster and Arlington WI planting date experiments show that yield and winter survival decreased as planting date was delayed (Table 1.).

- Deeper planting may expose germinating and emerging wheat seed to greater potential for herbicide carryover in this drought year. However if you explicitly followed the herbicide label restrictions for rotational crops you have a basis to contact the company if problems occur. **Remember the label is the law.**

Lancaster, WI		
Planting date	Grain yield (bu/a)	Winter survival (%)
17-Sep	74.9	88.5
30-Sep	68.3	70.0
13-Oct	54.2	58.0
Arlington, WI		
Planting date	Grain yield (bu/a)	Winter survival (%)
18-Sep	101.9	83.8
1-Oct	93.3	55.3
17-Oct	73.9	30.

Table 1. Planting date effect on grain yield and winter survival at Lancaster and Arlington WI, 2009.

- Remember to use a fungicide seed treatment. Even though you are planting into dry soil and the overall pathogen load may be lessened, you are planting deeper and delaying emergence especially as soil temps continue to decrease.
- Remember your crop insurance and planting date restrictions. In a spring seeded crop we would often say wait until it rains to establish the crop however we have a short window to get the crop established and still get your full crop insurance coverage. Please talk to your crop insurance agent for specific dates for your county.
- Lastly and perhaps most importantly for WI growers is the fact that crop insurance restrictions for insuring a crop after you take off a forage where lifted for 2013. Please see [USDA Changes Crop Insurance Rules for Cover Crop Harvesting in Spring 2013](#) for details. In short if your winter wheat crop that you established for grain stinks (very scientific term I know), it can be taken as a forage and you can establish another crop and insure it in 2013.

When Should I Soil Sample this Fall?

Carrie A.M. Laboski, Extension Soil Fertility/Nutrient Management Specialist

This past summer's drought has left some wondering when they should soil sample this fall. Sampling very dry soil may provide erroneous soil test results for several reasons:

1. It is difficult to sample to the desired depth consistently.
2. The soil core does not stay intact, particularly very dry surface soil, and some of the soil is lost between taking the probe out of the ground and placing the sample in the bucket.
3. Soil test P and K may be lower with smaller differences for P and larger differences for K.
4. pH may be slightly lower because of salt build up with lack of rain.

Once rainfall has occurred, soils will begin to re-equilibrate and the effects of dry conditions on soil test P, K and pH will diminish. It is hard to provide an exact amount of rainfall that is needed to alleviate the effects of dry conditions on soil test results because it depends upon how dry the soil was, soil mineralogy, and likely other site specific conditions. However, if the soil is moist enough to push a probe into the ground to the desired sampling depth consistently, it is likely that the soil has re-equilibrated. In some parts of the state, it is possible to take a good soil sample now. In others, it is difficult to insert the probe more than 4 to 5 inches; thus, waiting to sample these fields until more rain falls is appropriate.



2012 Wisconsin Pest Management Update Meetings

The schedule for the Wisconsin Pest Management Update meeting series is listed below. Presentations will include pest management information for Wisconsin field and forage crops. Speakers will include Mark Renz and Vince Davis, weed scientists, Eileen Cullen, entomologist, and Damon Smith, plant pathologist.

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 \$35 registration fee per participant includes a noon meal and information packet.

Make your reservation with host agent one week prior to the scheduled meeting date.

DATE	LOCATION	HOST AGENT
Monday November 5	<u>Marshfield</u> Marshfield Agricultural Research Station 2611 Yellowstone Drive Marshfield, WI 54449	Richard Halopka Clark County Extension Courthouse Room 104 517 Court Street Neillsville, WI 54456 (715) 743-5121
Tuesday November 6	<u>Chippewa Falls</u> Lake Hallie Eagles Club 2588 Hallie Road Chippewa Falls, WI 54729	Jerry Clark Chippewa County Extension 711 N. Bridge Street Chippewa Falls, WI 54729 (715) 726-7950
Wednesday November 7	<u>Belmont</u> Belmont Inn & Suites (formerly Baymont Inn) 103 West Mound View Avenue Belmont, WI 53510	Ted Bay Grant County Extension P.O. Box 31 Lancaster, WI 53813 (608) 723-2125
Thursday November 8	<u>Arlington</u> Arlington Agricultural Research Station Public Events Building N695 Hopkins Road Arlington, WI 53911	George Koepf Columbia County Extension 120 W. Conant St., Ste. 201 Portage, WI 53901 (608) 742-9682
Monday November 12	<u>Fond du Lac</u> University of Wisconsin – Fond du Lac Rm 113 University Center 400 University Drive Fond du Lac, WI 54935	Mike Rankin Fond du Lac County Extension 227 Admin/Extension Bldg. 400 University Dr. Fond du Lac, WI 54935 (920) 929-3170
Tuesday November 13	<u>Green Bay</u> Rock Garden (Comfort Suites Hotel) 1951 Bond Street Green Bay, WI 54303	Mark Hagedorn Ag & Extension Service Center 1150 Bellevue St Green Bay, WI 54302 (920) 391-4612
Wednesday November 14	<u>Sparta</u> Jake's Northwoods 1132 Angelo Road Sparta, WI 54656	Bill Halfman Monroe County Extension 14345 County Hwy B Sparta, WI 54656 (608) 269-8722
Thursday November 15	<u>Janesville</u> Best Western 3900 Milton Avenue Janesville, WI 53546	Jim Stute Rock County Extension 51 S. Main Street Janesville, WI 53545 (608) 757-5696