

*By Virgil Schmitt, ISU Extension Field Agronomist*

*1514 Isett Avenue*

*Muscataine, IA 52761-4629*

*563-263-5701*

*Covering the Iowa counties of Cedar, Clinton, Des Moines, Henry, Jackson, Louisa, Muscatine, and Scott*

April 21, 2009

## **YIELD POTENTIAL FOR SMALL GRAINS DECLINES AFTER ABOUT APRIL 15**

Some drills were running this past week seeding oats and wheat. Potential yields decline for both oats and wheat about 10% per week for each week planting is delayed after April 15, and an additional 15% per week if planting is delayed beyond May 1. A nice fact sheet on growing spring wheat in Iowa is at

<http://www.extension.iastate.edu/Publications/AG202.pdf>.

## **SEEDING FORAGES AND WATERWAYS**

Drills were also running last week seeding waterways and also seeding some forages. In general, try to complete seeding of cool season forage grasses and legumes before May 1 as seeding after May 1 increases the likelihood that seeds will germinate but less frequent rainfall will allow the soil to dry out before roots are deep enough to reach moist soil, killing the seedlings.

## **CHECK ALFALFA FOR WINTER-KILL**

I have not heard of any major problems with winter-kill this spring, but every spring there is some alfalfa stand loss. So far I have been in one new seeding (last fall) that had over 95% stand loss due to winter-kill and I'm hearing rumblings of other new seedings where green-up is suggesting that there has been some extensive stand loss. Its best to wait until the alfalfa has about 6 inches of growth to make a final determination on whether the stand is too thin to keep. The stem count method can be used then and is usually more reliable than counting crowns. Optimum yields are obtained with stem counts of 54 or more per square foot (regardless of stand age). Areas with stem counts of less than 40 per square foot (4 crowns per square foot on older stands) usually have enough of a yield loss that they either should be rotated out of alfalfa or inter-seeded to prolong the stand. For more details on stand

evaluation see Iowa State University Extension publication PM-1632 “Evaluating Hay and Pasture Stands for Winter Injury” <http://www.extension.iastate.edu/Publications/PM1362.pdf>. One option for fields with marginal stands in parts of the field is to try to extend the stand another year or two by inter-seeding red clover, perennial ryegrass, or oats into the thin areas.

## CORN

### **Paying Attention to Detail during Corn Planting can Pay Big Dividends**

We are approaching the ideal planting window for both corn and soybeans and some corn planters are rolling now. The planting operation is one of the most important influences on the final yield. Small mistakes made at planting time can haunt you the rest of the season. Many producers can get most of their corn planted in about 3-4 days, so starting a day too soon and planting half the corn under marginal conditions usually doesn't make sense. It's best to wait until the soil temperature is close to 50F and increasing before planting corn. Current soil temperatures can be seen at <http://mesonet.agron.iastate.edu/agclimate/display.php?prod=2>. Some other points to consider with corn planting this spring:

1. Don't plant into wet soils. This can lead to sidewall compaction which can lead to season-long problems. The roots will have difficulty growing through the compacted zone made by the planter and will be pancaked into a flat plane in the direction of the planter. This can lead to uneven corn growth, rootless corn, and K deficiency symptoms due to poor root growth.
2. Don't plant too shallow. When soil moisture is plentiful producers are tempted to plant corn more shallow. For every corn field I see with problems caused by planting too deep, I see a hundred fields with problems caused by planting too shallow. If the seed ends up being less than 1.5 inches deep, problems such as rootless corn and K deficiency symptoms are much more likely to occur. Even if the seed is placed 1.5 inches deep, sometimes the soil can settle after planting or there can be soil erosion so that the plant actually “sees” a more shallow depth. Corn should be planted 1.5-2” deep and error on the deep side.
3. Shoot for corn stands of about 30,000-34,000 plants per acre. Seeding rates around 35,000-36,000 seeds per acre have given maximum net profits in recent trials. Ideal corn seeding rates have been increasing at the rate of about 400 seeds/A/year. Average corn yields per plant haven't changed much in the past 50 years. Most of the yield gain has been from breeding corn that can tolerate an increased population. **If**

**you are still planting the same population you did 10 years ago, you're paying 2009 seed prices and only getting 1999 yields.**

4. Pay attention to details at planting. A little extra time making sure planter settings, seed spacing, depth, and population, and soil conditions are correct can pay big dividends, especially with today's prices.

### **How Long Do I Have To Wait After Anhydrous Ammonia Application To Plant Corn?**

There is no magic number of days to wait after applying anhydrous ammonia before it's safe to plant corn, but if the anhydrous is injected 7 or more inches deep with a good seal, the corn can usually be planted the same day with few problems. The anhydrous typically diffuses about 2.5-3 inches from the point of injection, resulting in a diffusion zone of 5-6 inches in diameter. If you inject the anhydrous 4 inches deep and plant 2 inches deep, you're planting into the zone and even waiting a week may not solve the problem.

A study done in Illinois showed that even when 200 lb/A of N was injected 10 inches deep, the corn could be planted right over the row the day of application without any affects. When injected 7 inches deep there was some slight stunting of the corn but no stand loss. With a 4 inch depth injection, there was severe stunting and some stand loss. The best way to avoid problems is to inject the anhydrous at least 7 inches deep and where possible plant at an angle to the injection direction so if there is a problem entire rows of corn are not lost.

### **Still Trying To Decide Nitrogen Rates with these High Prices?**

Although optimum N rates do go down somewhat as N prices go up, it's important to remember that we hopefully are no longer working with \$2 corn. The corn nitrogen rate calculator can help in selecting nitrogen rates. It is based on over 250 N rate corn trials in Iowa. According to the calculator, with \$850/T anhydrous and \$4 corn, an average recommendation for corn on soybean ground is 116 lb/A, compared to 123 lb/A with \$350/T anhydrous and \$2 corn. You can access the calculator at <http://extension.agron.iastate.edu/soilfertility/nrate.aspx>.

## **INSECT UPDATE**

### **Alfalfa Weevil**

Alfalfa weevil activity may be starting south of I-80, so alfalfa fields south of I-80 should be scouted, beginning on south facing slopes. For details on scouting for and managing alfalfa weevils, see the Integrated Crop News article at <http://www.extension.iastate.edu/CropNews/2009/041709pope.htm>. Alfalfa weevil activity is based on Growing Degree Days Base 48. Growing Degree Days Base 48 for

Burlington, Davenport, Cedar Rapids, and Dubuque are posted at <http://www.extension.iastate.edu/Pages/eccrops/alfalfaweevil.html>.

### **Stalk Borers**

Stalk borers can be a concern for corn grown adjacent to grassy areas, such as ditches and waterways, or in areas where there was a grassy weed or giant ragweed control problem in 2008. We are rapidly approaching the end of the time for one management strategy and approaching the second approach, especially along Highway 34 (Burlington – Mount Pleasant area). The first strategy is to burn the residue in those areas, thereby destroying the eggs before they hatch. The second strategy is to spray an insecticide to those areas immediately before egg hatch to kill the larvae as they hatch. If the temperature forecast from the National Weather Service is correct for Burlington, stalk borer eggs should start hatching along Highway 34 on Saturday, so burning or spraying areas of concern should be completed by then along Highway 34. The egg hatch is controlled by Growing Degree Days, so the egg hatch will slowly “move north” as more Growing Degree Days accumulate there. Stalk borer activity is based on Growing Degree Days Base 41. Growing Degree Days Base 41 for Burlington, Davenport, Cedar Rapids, and Dubuque, as well as additional stalk borer management information, are posted at <http://www.extension.iastate.edu/Pages/eccrops/stalkborer.html>.

## **THE RULES HAVE CHANGED**

### **Iowa Bee Rule**

Effective January 22, 2009, the Iowa Bee Rule was significantly changed. The item that has remained the same is that bee keepers are to register the locations of their hive with the state apiarist annually. The main points of the change are:

1. Applicators no longer need to provide notice to bee keepers prior to making an application of an insecticide labeled as being toxic to bees. (I still may be good for relationships, however, to provide notice.)
2. Commercial Pesticide Applicators are prohibited from applying an insecticide labeled as being toxic to bees between the hours of 8:00 a.m. and 6:00 p.m. within a one-mile radius of bee hives that are on “the bee list.”
3. The two-mile radius no longer exists.
4. Private Pesticide Applicators are not bound by the Bee Rule. However, federal law states that insecticides that are toxic to bees are not to be applied to blooming crops when pollinators are present, so due diligence by Private Pesticide Applicators is still appropriate.
5. In a related rule, Commercial Pesticide Applicators must now record the start and stop times of applications in addition to the previous record keeping requirements.

For more information see 21—45.31(206) Application of pesticides toxic to bees on page 17 of [http://www.iowaagriculture.gov/Pesticide/pdf/Ag\\_CH45\\_Pesticides.pdf](http://www.iowaagriculture.gov/Pesticide/pdf/Ag_CH45_Pesticides.pdf).

To register the location of hives or to view the list of hives or other sensitive crops, go to the WWW site of the Pesticide Bureau of the Iowa Department of Agriculture and Land Stewardship <http://www.iowaagriculture.gov/pesticides.asp>.

### **FOR YOUR CALENDAR**

#### **SPRING FIELD DAY & SPECIAL SESSION FOR CCAs SE IA RESEARCH FARM – CRAWFORDSVILLE JUNE 24, 2009**

Certified Crop Advisors can obtain 5 hours of credit (including 3 hours of soil and water) by attending a special session in the morning followed by the afternoon tour at the ISU SE Iowa Research & Demonstration Farm near Crawfordsville on June 24, 2009. More details will be posted soon at

<http://www.extension.iastate.edu/Pages/eccrops/meetserc.html>.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, political beliefs, sexual orientation, and marital or family status. (Not all prohibited bases apply to all programs.) Many materials can be made available in alternative formats for ADA clients. To file a complaint of discrimination, write USDA, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call 202-720-5964.