June 6, 2008

Iowa State University Extension Information for Southeast Iowa
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WET WEATHER WOES

Corn

The continuous thunderstorms have not only delayed planting this spring, but may now result in having to change cropping plans or even abandon planting a crop. Most of the corn has been planted, but many farmers do have a field or two left to plant, especially in the south. Although decent yields can be obtained with corn planted as late as June 10-15, the risk and yield variability increases substantially with corn planted in mid June. On average the yield potential is about 68% of what the corn could have yielded if it had been planted in early May. If planting is delayed beyond June 10-15, it would be best to switch to soybeans as long as any applied herbicides will allow it. If any atrazine has been applied, soybeans should not be planted. Even though soybeans often can tolerate some atrazine, it is not legal to plant soybeans into soil with atrazine and would be very risky. Mike Owen has an article regarding rotational intervals for planting soybeans after corn herbicides in the ICM News at http://www.extension.iastate.edu/CropNews/2008/0531MikeOwen2.htm.

Because of the poor planting and growing conditions, there are corn fields that could benefit from re-planting, but if the rains continue, this becomes less of an option. It would now take corn stands of less than 12,000 plants per acre to justify re-planting. It
would be best to use very early corn hybrids (more than 10 days earlier than full season) when planting after June 10, if you can find the seed. Fuller season hybrids will still have greater yield potential than early maturing hybrids, but the risk would be high that they would not reach maturity before frost and result in poor quality, wet grain. The Corn Planting Guide can help in making decisions: http://www.extension.iastate.edu/Publications/PM1885.pdf.

**Soybean**

I’m finally starting to see some emerged soybean fields, but I’m guessing about a third of the soybeans are yet to be planted. Soybeans do respond more to narrow rows the later that planting is delayed, so using a drill or planting in 15” rows would be preferable to the 30” rows it that is an option. Seeding rates do not need to be increased with late planting. Good soybean yields can be obtained with mid-June planting, especially in southern Iowa, but as with corn the yield variability becomes greater the greater the delay in planting. On average, soybeans yield about 82% of the full yield when planted in mid-June in southern Iowa, but only about 60% in central and northern Iowa. Some are also making replant decisions now for soybeans. Soybean is less sensitive to population than corn. Use the following tables to help in making re-plant decisions.
Effect of plant density on soybean yield.

(Plants thinned at VC<sup>a</sup>)

<table>
<thead>
<tr>
<th>Plants/acre</th>
<th>Bushels/acre&lt;sup&gt;b&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>150,000 (no thinning)</td>
<td>45.1</td>
</tr>
<tr>
<td>125,000</td>
<td>44.8</td>
</tr>
<tr>
<td>100,000</td>
<td>45.1</td>
</tr>
<tr>
<td>75,000</td>
<td>44.2</td>
</tr>
<tr>
<td>50,000</td>
<td>41.6</td>
</tr>
<tr>
<td>1-ft gap&lt;sup&gt;c&lt;/sup&gt; (75,000)</td>
<td>43.6</td>
</tr>
<tr>
<td>2-ft gap (75,000)</td>
<td>41.5</td>
</tr>
</tbody>
</table>

<sup>a</sup> VC, cotyledon stage.

<sup>b</sup> LSD (0.05) = 2.1 bushels/acre difference between any two means.

<sup>c</sup> 1- and 2-foot within row gaps were applied 2–4 weeks after planting.

Source: University of Minnesota.

Effect of planting date on soybean yield in Iowa (1995 to 1997).

<table>
<thead>
<tr>
<th>Planting Date</th>
<th>Northern Iowa</th>
<th>Central Iowa</th>
<th>Southern Iowa</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relative yield (percent of potential yield)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Late April</td>
<td>100*</td>
<td>96*</td>
<td>98*</td>
</tr>
<tr>
<td>Early May</td>
<td>96*</td>
<td>100*</td>
<td>100*</td>
</tr>
<tr>
<td>Mid-May</td>
<td>99*</td>
<td>96*</td>
<td>98*</td>
</tr>
<tr>
<td>Early June</td>
<td>81</td>
<td>93</td>
<td>89</td>
</tr>
<tr>
<td>Mid-June</td>
<td>61</td>
<td>59</td>
<td>82</td>
</tr>
<tr>
<td>Early July</td>
<td>33</td>
<td>45</td>
<td>47</td>
</tr>
</tbody>
</table>

* Not statistically different from 100 percent.

Source: Iowa State University Extension publication PM-1851 “Soybean Replant Decisions”
Palle Pedersen has a nice article on late planting of soybeans in the ICM News at [http://www.extension.iastate.edu/CropNews/2008/0531PallePedersen01.htm](http://www.extension.iastate.edu/CropNews/2008/0531PallePedersen01.htm).

**Prevented Planting**

I haven’t thought much about the prevented planting insurance options since 1995, but unfortunately there are farmers faced with these choices again. A document that goes into the details is available at [http://www.extension.iastate.edu/agdm/crops/pdf/a1-57.pdf](http://www.extension.iastate.edu/agdm/crops/pdf/a1-57.pdf). In short, from June 1st through June 25th the reduction in insurance is 1%/day for corn. The same is true for soybeans from June 16th to July 10. Prevented planting and crops planted after the late planting period ends (June 25 for corn and July 10 for soybeans) are at 60% of the original guarantee for timely planted acres. If an election was made when the policy was written to change the 60% to 65% or 70% then that number would prevail.

**Nitrogen Losses**

With the excess rain we have likely experienced nitrogen losses in many fields through leaching or denitrification. It’s not too late to be pulling soil samples to test for nitrate. The cool weather this spring would have delayed the nitrification of ammonium to nitrate, which will likely be occurring now at a much more rapid rate with these warmer temperatures. Soil nitrate samples should be pulled to a one foot depth when the corn is 6-12” tall. A minimum of 16 cores should be pulled per sample (24 if there are zones of high N concentration from anhydrous or manure applications). With the excess rain it is likely that some nitrate has leached below the one foot depth, but may still be available for the corn. Because of this it is recommended to reduce the critical nitrate level from 25 ppm to 20-22 ppm. To calculate nitrogen fertilizer needs you subtract the nitrate result from the lab from the critical value and multiply by 8. On soybean ground without manure, if the test reads 15 ppm and 20 ppm is the
critical value chosen, the recommended nitrogen rate would be 40 lb/A [(20-15)X8]. Some results have been on the low side this spring, which may be due to ammonium not being mineralized yet and/or nitrate being lost. For more information on how to pull soil samples for the late spring soil nitrate test see http://www.extension.iastate.edu/Publications/PM1714.pdf.

PESTS

Corn

Continue scouting for cutworms

There have been fields sprayed for cutworms this week in the area. The problems are most likely to be found where there were weeds in the field that attracted the cutworm moths, but any field can be hit. Continue scouting until the corn is at V5 (five leaf collars visible).

Seedling diseases

The cool wet weather has increased problems with damping off from pythium and other seedling diseases. Hopefully the warmer weather we are seeing now will help to reduce these problems.

Soybean

Asian Soybean Rust

Some good news is that according to X.B. Yang’s model, there is little chance of any rust spores reaching Iowa in the next few weeks. Although rust has been found in Texas, dry weather there should help prevent its spread. You can see the latest of what is being found in the south at http://sbrusa.net/cgi-bin/sbr/public.cgi.
FOR YOUR CALENDAR

SPRING FIELD DAY & SPECIAL SESSION FOR CCAs
SE IA RESEARCH FARM – CRAWFORDSVILLE
JUNE 26

Certified Crop Advisors can obtain 5 hours of credit (including 2 hours of soil and water) by attending a special session in the morning followed by a controlled drainage field day and the afternoon field tour at the ISU SE Iowa Research & Demonstration Farm near Crawfordsville on June 26. There is a $50 fee for credit ($70 after June 24). You can pay at the door (check or cash), but please call the Johnson County Extension office at 319-337-2145 or send me an e-mail note by June 24 if you plan to attend.

The controlled drainage field day and afternoon tour are free to the public (if not obtaining credit). The lunch at noon is courtesy of Qualisoy.

8:30 a.m.  Registration - $50 Fee ($70 after June 24) – Includes Lunch

9:00 a.m. Special Session for Certified Crop Advisors (0.5 hour pest management, 1.0 hour crop production)
  • Corn Herbicide Management & Mismanagement - Jim Fawcett, ISU Extension Field Agronomist
  • Corn Yields – How High Can They Go? - Kendall Lamkey, ISU Agronomy Department Head & Corn Breeder

10:30 a.m.  Controlled Drainage Field Day (1.5 hours soil & water)
  • Tour of soil drainage research on the farm - Matt Helmers & Greg Brenneman, ISU Extension Ag Engineers

Noon – Lunch – Qualisoy Presentation by Dennis Byron, Pioneer Hybrids
1:00 p.m. – 3:00 p.m. **Spring Field Day** (0.5 hour pest management, 0.5 hour soil & water, 1.0 hour crop production)

- Crop Season Review & Current Crop Concerns - Kevin Van Dee, Farm Superintendent, & Mark Carlton, ISU Extension Field Agronomist
- Food vs. Fuel vs. Feed – Kendall Lamkey
- New Corn Herbicides – Jim Fawcett
- Does Tiling Pay? – Matt Helmers

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