

Extension Crop Update

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This newsletter, and previous issues from last year, can be found on-line at:

<http://www.extension.iastate.edu/plymouth/info/cropupdate.htm>

We Lead the State! In the most recent Iowa Crop Report, it is obvious that we are fortunate in NW and WC Iowa this spring. We are about the only part of Iowa that has planted significant acres of corn so far. At least we are off to a good start! I have been watching corn seedlings that were planted on April 15. That's three weeks ago today! These plants made almost no progress through much of last week, but today they are right at the soil surface. All plants that I dug were in great condition and looking very healthy. Seeds planted a week later are less than 1" from the surface in a nearby field. There wasn't much growth in that additional week!

The ISU "Corn Planting Guide" (<http://www.extension.iastate.edu/Publications/PM1885.pdf>) relative yield and planting date curve, figure 1, stays right at about 100% yield potential until May 10. The old "rule of thumb" says that yield expectations drop about 1 bushel per day from May 10 to May 20, then about 2 bu/day until about the first of June. The curve has a much sharper drop after that time. Our data would also indicate that you should stay with full season hybrids until about the 20th of May. Keep at it!

Soybean planting notes. Palle Pedersen, ISU Extension Soybean Specialist, has found that earlier soybean planting can bring yield benefits. For the northern 1/3 of Iowa he would say early May is a good soybean planting time, if soil conditions and near-term forecast are favorable. So, if you're done with corn and the ground is fit to plant beans, I wouldn't discourage you from starting bean planting.

Populations for planting? Dr. Pedersen's research indicates that having 100,000 uniformly dispersed plants at harvest is adequate for optimal yields, and our NW Iowa On-Farm Research projects would confirm this. Therefore he has revised ISU's soybean recommendation to 125,000 – 140,000 seeds per acre to achieve that final 100,000 plants. However, with higher bean prices and some bean quality concerns out there, Palle is encouraging the top end of that range this year. He is assuming that you are doing a good job placing seeds in the soil (drilling no-till beans at high speeds likely justifies a higher rate of seeding), and marginal conditions would indicate that you might need to be higher, too (early, cooler, wet soils). If your field has a history of seedling diseases, poorer drainage, and other risk factors, then seed treatments might offer a boost.

Know the risk of emergence in your field - you know 100,00 plants are needed to give optimum yield – and use a rate that will get you the number of uniform plants you need at the end of the season!

Bean Leaf Beetle Update: Normally, about 90% of bean leaf beetles in northern Iowa do not survive our winter. This past winter was cold enough to reduce normal bean leaf beetle pressures even more than normal – about 95%! But remember – beetles are attracted to the first emerging fields. I know that some beans are in the ground, so these fields need to be monitored the most. Food grade and seed beans also create more concern due to the risks of bean pod mottle virus discoloring these seeds later, an additional reason to pay particular attention to these fields.

Last year we also had lower bean leaf beetle populations in Iowa due to a colder than normal winter. In the past 3 years we have conducted an intensive soybean disease study in Iowa. The incidence

of fields (over 1000 sampled each of the last 3 years) with Bean Pod Mottle virus dropped from 36% testing positive in 2006, to 21% positive in 2007. With a good bean leaf beetle winter kill, maybe the percentage of fields with BPMV will be lower this growing season!

See the recent article in the "Integrated Crop Management News" found here:
<http://www.extension.iastate.edu/CropNews/2008/0421MarlinRice2.htm>.

Nitrogen, Part 1: The potential loss of N from non-incorporated urea always causes some concerns. Losses typically are minimal if incorporated by tillage or a half-inch of rain or more within two or three days. Some research would indicate that the worst case scenario of nitrogen loss from volatilization can be 30%. *Remember that liquid N solutions are typically half urea – so losses in a worst case scenario would be about 15%.*

*Here are some conditions that favor volatilization losses from surface applied urea:

- soil surface is damp or wet
- high pH soils
- warm (70F) sunny conditions
- high amounts of crop residue

*Here are conditions that lessen the chance of urea volatilization:

- soil surface dry
- neutral or slightly acid pH soils
- cool air temperature
- low amounts of crop residue.

Nitrogen, Part 2: Should you plant corn or apply N? I think I would apply N if it does not delay planting, and if it can be done without a lot of risk to the developing corn seedlings. Anhydrous can cause some risk, so consider that if it is the form of N you will be applying. John Sawyer, ISU Extension Soil Fertility Specialist, and ISUE Corn Specialist Roger Elmore recently wrote a very good article about these issues in the "Integrated Crop Management News" which can be found here:

<http://www.extension.iastate.edu/CropNews/2008/0505JohnSawyerRogerElmore.htm>

Also found in this article – information on side-dressing N, applying over the top to an emerged field, and even late sidedress N considerations. It's a good N management article – read it when you have a chance!

Thanks for "Subscribing!" For more information contact:

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