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Corn planting decisions in late May

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Abstract
After my first spring in Iowa, I wonder whether there are more cloudy days in Iowa than in Denmark! It definitely has not been an easy spring, and it's only the third week of May. Based on USDA's Crop and Weather report, we had a little more than half a day suitable for fieldwork from May 4 to May 11, compared with 4 days last year. However, with 5 days of reasonably warm weather (without any rain), there is a chance to get back into the field. Before this weekend (May 17 to 18), the USDA predicted that corn planting was 4 days behind normal with approximately 64 percent of the corn planted across the state, compared with 81 percent last year.

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The corn planting delays this year have increased concern on how late we can plant full-season corn hybrids in Iowa. Many have been wondering about switching to earlier maturing hybrids because delayed planting of full-season hybrids may not only expose them to a greater risk of frost before crop maturity but also to higher drying costs. Although delayed planting shortens the growing season, corn hybrids adjust well to this delay. A generalization for changing hybrid maturities in Iowa is if planting is delayed until May 25, select a hybrid that matures 5 days earlier than an adapted full-season hybrid for that area. If planting is delayed another 7 days, select a hybrid that matures another 5 days earlier than the previous one. In general, the date to switch maturities becomes later in southern Iowa. More information on corn planting in Iowa can be found Iowa State University's Extension Publication PM 1885, Corn Planting Guide [1].

Corn that was planted in the last week of April emerged in 3 weeks and is currently stressed and yellow because of the cool and wet conditions. As corn plants emerge, stand evaluation and assessments need to be made in each field. Every farm has a field or part of a field with poor emergence due to weather conditions, pests, pathogens, or crusting. Regardless of the cause of the damage, the key to survival and regrowth is the health of the growing point. Many fields have been flooded or "severely saturated." Flooding at any time when the growing point is below the water level can kill the corn plant within a few days. With average soil and air temperatures this year, if recovery from the whorl is not visible within 4 or 5 days of improvement of soil conditions, then healthy plant counts should be made and replanting decisions considered. Conversely, cool temperatures in the days after the damage slow both the recovery and deterioration, which may force us to wait a few extra days before making an accurate assessment of the field. Dr. Joseph Lauer (University of Wisconsin) has a six-step process to evaluate corn stands:

1. determine plant population in the field;
2. evaluate plant health after 3-4 days (if plant health is suspect, count as 0.5 plant);
3. assess the unevenness of stands;
4. compare the yield of a reduced stand to that of a replanted stand;
5. calculate replanting costs; and 6) factor in risks of replanting.

Finally, a few questions have arisen during the last couple of days on intra-row plant spacing because of uneven emergence. Research from University of Illinois and University of Wisconsin has shown that there is little or no yield response to changes in intra-row plant spacing. The “real” problem is skips and loss of plant population. Another resource on corn planting in the upper Midwest is the Web page of Dr. Joseph Lauer at University of Wisconsin (http://corn.agronomy.wisc.edu).

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