

Field Connections

Corn Planting: What To Consider

When the soil warms up and dries out enough to plant corn, what is the course of action? There are a lot of factors to consider such as; calendar date, soil temperature, corn maturity, expected yield, frost date in the fall, etc.

Here's information on some of those topics:

Potential Yield

The best chance of high corn yields correlates to early planting dates. But what is considered early? Generally speaking, anytime between the last week in April and the middle of May is a good time for planting corn and considered early.

Supporting data comes from South Dakota State University and North Dakota State University. Research for 101-103 day corn at SDSU Southeast Experiment Farm over 14 years showed yields in the 130-132 bu/ac range when planted April 17th through May 17th respectively at Beresford, SD. Research conducted by NDSU at Fargo, ND showed corn planted May 1st yielded 104.1 bu/ac while corn planted May 16th yielded 116.8 bu/ac, averaged across 21 corn hybrids. The average yields of 15 hybrids at Lisbon, ND followed that same trend—no yield loss through mid-May planting.

The University of Minnesota indicates a more linear relationship to planting date and yield with 2-3% loss every 5 days through the month of May. Considering the U of M sliding scale, the expected yield loss at May 15th is 9%. This estimate differs from the data found in ND and SD research. Although it's less than ideal, it is most likely worth it to stick to your original plan. One thing is for certain... there are no easy answers.

Moving even later on the calendar, corn yields drop significantly as planting dates move to the end of May and into June. Corn yields at the NDSU research trial in Fargo, ND were reduced to 86.5 bu/ac when planted June 3rd. The University of Minnesota project yield losses jump to 17-23% for May 30 and June 4, respectively.

Corn Maturity

Ideally every corn grower should be spreading risk by using corn products of different maturities every year. It's logical to diversify the corn acres with some full, mid, and short season corn products for the given geographic location. The differing maturities provide several advantages to a farm operation including: to ensure genetic diversity; to minimize the risk of weather events; and to improve time management for harvest.

As planting time shifts later, the full season corn should be planted first for the best opportunity possible to finish well. If corn planting is not completed by mid-May then serious assessment needs to be made on what fields and what maturity corn remain.

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Corn Maturity *(continued)*

Are the fields ready to go? Is the corn product mid or short season? What are the average GDUs for the area from planting date to typical frost date in the fall? These are important questions to think through. Generally mid May planting should have a mid season corn product and late May planting should have a short season product.



Planting Depth

With cool wet soils, growers may be tempted to plant the seed a little more shallow than normal, thinking that it would help with emergence to get the corn plant growing more quickly. Don't do it!

A healthy productive corn plant needs a great foundation to support itself and massive root development to furnish water and nutrients. Keeping the planting depth at 2 inches allows the crown and secondary roots to be securely in the soil. The extra day that it may take for emergence is well worth the payoff.

Other Crops

It's a hard decision to switch from one crop to another at planting time. Crop rotations, fertilizer, and herbicides are just a few factors that need consideration when making such a decision.

However, it may make sense if the field work is delayed enough. Planting corn is not recommended after May 20th for northern North Dakota, June 1st for central and southern North Dakota, June 5th for northern and central Minnesota, and for June 10th in South Dakota and southern Minnesota.

Depending on the specific situation, there are several alternative crop options. Corn for silage can be a little more flexible and can be planted into the first part of June. Soybeans would be another choice and can be planted well into June.

So What's the Bottom Line This Spring?

- Continue planting with your originally planned corn products until around May 20.
- Consider a shorter season corn product if planting beyond May 25.
- Plant the corn seed at 2 inch depth.
- Switch to an alternative crop after the end of May.

References

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