Dow AgroSciences

Mycogen® SEEDS

AGRONOMY BULLETIN 25 — DELAYED PLANTING — CENTRAL CORN BELT

MAKE ADJUSTMENTS TO OFFSET CORN PLANTING DELAYS

SITUATION

When corn planting is delayed due to inclement weather and poor field conditions, you can still take advantage of the compressed growing season and achieve reasonable yield results by adjusting your hybrid selection and managing cropping activities with later planting dates.

FACTORS TO CONSIDER

- Date
- Weather and soil conditions
- Planting schedule
- Maturity options
- Previous field activities

ACTION PLAN

1. **Plant first.** Prioritize cropping activities and realize that planting corn in a timely manner is most important. Nitrogen can be sidedressed up to the eight-leaf stage. Postemergence herbicides can be substituted for preplant and/or preemergence herbicides and still provide effective weed control.

2. **Consider the current date.** Corn planted after May 1 requires fewer growing degree-days (GDD) to reach blacklayer. This equates to 6.8 GDD reduction for each day planting is delayed through May. This means there is little need for growers to consider changing their hybrid selection because corn plants can help make up for the later planting dates. For most full-season hybrids, planting can be delayed until June 1. After that date, the risk of plants not maturing before frost increases. These recommendations will allow enough time for corn to reach physiological maturity and avoid significant yield loss from frost, not provide corn at 15 percent moisture. In the north-central and northern Corn Belt, planting can be delayed into early June before switching to a shorter-season hybrid.

Table 1. Expected Corn Grain Yield Due to Various Planting Dates and Final Plant Populations

Planting Date	Plant Stand, '000s Per Acre						
	10	15	20	25	30	35	40
	Yield, Percent of Maximum						
April 1	56	66	76	84	91	96	99
April 10	59	69	78	86	92	97	100
April 20	61	71	79	86	92	96	99
April 30	61	70	79	85	90	94	96
May 10	60	69	76	82	87	90	92
May 20	56	65	72	77	82	84	85
May 30	51	59	66	71	75	77	77
June 9	45	52	58	63	66	68	68

Data from Emerson Nafziger, University of Illinois. Used by permission from the Illinois Agronomy Handbook, 24th Edition (2009), Publication C1394, University of Illinois Extension.

3. **Prioritize your planting schedule.** Plant the fullest-season, latest-flowering hybrids first as they will take the longest to reach blacklayer and generally have the potential for the greatest yield response to early planting. The next priority is early flowering, full-season hybrids. Next plant later-flowering, short-season hybrids. Last-planted hybrids should be those considered early flowering and short-season.

4. **Do not work wet soils.** Soil structure determines the ability of soil to hold and conduct water, nutrients and air necessary for plant root activity. Heavily compacted soils contain few large pores and have a reduced rate of water infiltration and drainage. Tilling fields while wet can produce cloddy soil conditions, resulting in poor seed-to-soil contact and a reduction in stand establishment. It also can cause corn plants to leaf out underground. This can be a major issue in cool, wet years and will reduce yields far more than a short planting delay.

5. **Plant for a uniform stand.** Maintain recommended planting speed for your target plant spacing. Increased planting speeds can result in poor stands and greater planting problems. If conditions indicate a prolonged cool, wet period after planting, increase planting populations 5 percent to 10 percent to compensate for potential emergence problems and seedling diseases. Additional planter attachments such as "spiked" closing wheels may be beneficial to minimize any effect from sidewall compaction in minimum or no-till planting environments.

Summary

To manage delayed planting scenarios, start by prioritizing your planting schedule and knowing the maturity recommendations specific to your area. For more information, contact your local Mycogen Seeds customer agronomist or trusted agronomic adviser.

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