

BETWEEN THE ROWS

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THE RISK AND REWARD OF PLANTING VERY EARLY

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Background

Planting date is an important factor in corn performance, but it is far from the most important. The optimum planting window in the central corn belt is generally April 20 through May 12. But there is no best date and every year has a different best date. Research has shown the highest percent of optimum yield comes from planting corn within that window.

Current Conditions

Our current conditions are causing increased field activity in many areas. Warm, dry soil increases the debate about when it is too early to plant corn. The calendar says too early, but the conditions are good to plant. Rewards for very early planting could include several agronomic benefits and management advantages.

1. Planting very early may allow all of a grower's corn acres to be planted ahead of or within the optimum window. Weather delays in some years pushes the planting date beyond the optimum date and some yield reductions are possible.
2. Very early planting may help in some weed control worries. The corn crop emerges ahead of many warm season weeds. And the timing of some potential insect concerns may be to the benefit of the early planted crop. For example, early planted fields that don't have weeds are unattractive to black cutworm moths for laying eggs, so this may reduce possible infestations.
3. Corn, planted very early, will develop to pollination ahead of the more riskier high temperature period of later July. Corn is more susceptible to yield reduction if pollination occurs during heat and drought stress.
4. A very early planted field of corn will be filling grain during longer day length periods compared to later planted corn.
5. Also, very early planted corn will reach black layer (maturity) during warmer late summer and fall when temperatures improve field dry down and reduce drying cost.

When considering these potential benefits or advantages, it's important to realize that this same list of benefits is also true for an April 20 planting. So while planting in March or early April may be an agronomically sound decision, it will likely not translate to improved performance.

What are the risks of very early planting compared to our more normal planting schedule?

1. Cold soils. Current soil temperature and moisture appear good for early corn growth, but changes can occur quickly and linger. Corn planted into warm soil with three warm days for early growth to start can handle a cold spell, as long as some warmth returns within several days. But, extended cold conditions have the potential to reduce stands and cause uneven emergence. Corn planted into cold, wet soils (less than 50 degrees) may experience a higher degree of emergence

problems and increased uneven growth. Combining lower populations and uneven growth may cause greater yield reductions or a cause for replant consideration.

2. Damaging frost after emergence probably poses the greatest risk to the early planted crop. On average, the last freeze date in the central corn belt ranges from mid-April to mid-May. An early planting date potentially exposes the corn plant to be at a later stage of growth for a longer period of time with the growing point near the soil surface when freezing temperatures could occur. It is this length of time of potential frost or freezing temperatures that places the very early crop at greatest risk. Stand reductions, uneven recovery, and slow growth may cause significant yield reduction or a replant situation.



Summary

The rewards or benefits from very early planting listed above are limited, except for the earlier crop development beating the heat in July and earlier harvest and field dry down advantage. But all of these benefits are still in place for most corn planted in the early part of the optimum window.

Planting date research suggests that there has been very little consistent yield advantage to planting earlier than the typical optimum window. The unpredictable weather holds the trump card. A critical step in top performance is establishing a high population of uniform, fast-emerging corn seedlings. The weather risk can cause this critical step to influence the rest of the growing season and final performance.

The high risk factor of unpredictable weather appears to negate any potential benefit to very early planting. Managing a high value corn crop with high input costs should make us consider lower risk decisions to enhance our chances of excellent stand establishment and uniform fast emergence with high yield potential. **A lower risk decision is to wait.** The beginning of the optimum planting window is still 3-4 weeks away.