



Farm Progress

PLANTING DATE: Soybeans respond favorably to earlier dates if soil conditions are ideal for planting.

When should you plant soybeans?

Soybean Source: Should you plant corn or soybeans first? Is there a yield advantage for early-planted beans?

Mark Licht | Mar 27, 2020

What's more sensitive to planting date, corn or soybeans? In typical fashion, it depends. Early in the planting season, soybeans can be more sensitive to early planting dates because soybeans are not as cold tolerant as corn, and soybeans are more susceptible to seedling diseases.

The result is that planting soybeans earlier than April 15 in Iowa can result in emergence rates of 80% to 85% even with seed treatments — whereas corn emergence rates could still be 90% to 95%. On the flip side, soybean yields are less affected by late planting than corn but are also more variable.

Across Iowa, the critical planting date is May 18 for corn and May 20 for soybeans. Beyond these dates, yield potential begins to fall quickly. The rate of lost yield potential is much less for soybeans compared to corn. And in some instances, soybean yield potential could be quite high still. We've all heard stories of late-planted soybeans that still had a 50- to 65-bushel-per-acre potential. But we never hear stories of late-planted corn having yield potential of greater than 200 bushels per acre.

Planting date affects maturity

There are some advantages for planting soybeans at the same time as corn. First, this extends the corn and soybean planting window. This seems trivial, but what it does is spread out the growth and development, which can minimize environmental stresses at key points in the growing season (i.e. reduces weather risks). Second, it widens the harvest window since it will extend the time frame that maturity is reached. This may not be as important for corn as for soybeans.

Think how often you hear about soybeans harvested below 13%. This is money lost because the farmer doesn't get paid for the moisture lost below 13%. If the harvest window is wider, there would, hopefully, be less soybeans harvested below 13% and more profit potential. However, planting corn and soybeans at the same time is likely only feasible for larger operations that have multiple planters, or for operations that are willing to switch from corn to soybeans based on individual fields being suitable for planting.

Plants capture more sunlight

The reason soybeans can benefit from being planted a bit earlier than when many of them are now being planted in Iowa is that they can put on more vegetative growth before flowering. The ideal scenario would be to have 100% canopy closure (100% radiation or sunlight interception) achieved by the time of flowering (and definitely by the time of pod set).

The downside for ultra-early planting is the increased seed mortality and spring frost risk mentioned earlier. I think this split between early and ultra-early soybean planting is somewhere between April 11 and April 15.

On-farm and research farm trials that have looked at early soybean planting (typical April 20 to May 1) do not consistently result in higher grain yields compared to planting dates in early to mid-May. But they also seldom have significantly lower grain yields. Ultra-early planting date trials are very limited. The few that I am aware of are outside of Iowa and haven't given me great confidence in making it a recommended practice.

Don't plant soybeans when soils are too wet or too cold. Early planting means colder soil and slower emergence than later planting, but this will in most cases not negatively influence yield. Optimal planting date for soybeans, if soil conditions are suitable, ranges from April 20 to May 10 in southern Iowa and April 25 to May 15 in northern Iowa.

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