Is It Time to Switch Soybean Maturity Group Varieties?

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Abstract
Many farmers were able to get back into the field this week and start finishing up planting. However, there are still many areas where fields remain flooded and it will take awhile before we can get back in and replant. Some fields need to be replanted and some don't. It is important to accurately estimate a surviving stand and then evaluate the economics of replanting.

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Is It Time to Switch Soybean Maturity Group Varieties?

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Many farmers were able to get back into the field this week and start finishing up planting. However, there are still many areas where fields remain flooded and it will take awhile before we can get back in and replant. Some fields need to be replanted and some don’t. It is important to accurately estimate a surviving stand and then evaluate the economics of replanting.

Consider the yield potential of late-planted soybeans, along with costs associated with late planting. Final stands of at least 73,000 uniformly distributed plants per acre will consistently yield more than 90 percent of optimum plant population. If you are replanting an area that has been flooded, it is highly recommended to use a fungicide seed treatment and Bradyrhizobium inoculants. The level of seedling diseases probably will be high with our current conditions and the level of Bradyrhizobium in the soil could have been reduced, particularly in fields that were flooded for an extended period of time.

After the flood in 1993, an extensive research project was conducted by Keith Whigham (former ISU Extension agronomist) throughout Iowa from 1995 to 1997 to assess management decisions when planting occurs in late June and early July. Based on that data, the yield potential from planting in mid-June was approximately 60 percent of the optimum yield in northern and central Iowa and 80 percent of the optimum yield in southern Iowa. When planting was delayed until early July, soybean yield potential dropped even further and producers would have approximately 33 percent of the maximum yield in northern Iowa and 50 percent in central and southern Iowa available.

Another thing that was investigated in that study was when we should be switching to earlier maturity group varieties. Based on that study, it was concluded that producers should plant their original soybean variety unless planting is delayed beyond late June in northern and central Iowa and beyond early July in southern Iowa.

We are frequently concerned about late maturity of full-season varieties planted in mid-June or later. Planting a full-season variety in Iowa in late June or early July will, on average, delay physiological maturity of the soybean crop to mid October. Soybean yield potential and seed quality may be negatively affected if frost damages the soybean crop before the plants reaches physiological maturity (R7).

Therefore, we are recommending that growers in central and northern Iowa switch to a shorter maturity group and shorten the maturity group by 0.5 to 1.0. Southern Iowa growers can wait another 10 days before needing to switch to a shorter maturity group. No data supports planting soybeans as a grain crop after mid July in Iowa.
More information about soybean management can be found at www.soynmanagement.info.

Palle Pedersen is an assistant professor of agronomy with research and extension responsibilities in soybean production.

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