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## *Late Soybean Planting Recommendations*

- Environmental conditions can delay soybean planting beyond the planting window recommended for maximum yield potential. This requires changes in management tactics.
- Management considerations for late-planted soybean fields include changes in maturity group, seeding rates, and row spacing, as well as addressing weed, insect, and disease management issues.

Soybean planting dates in the Midwest have shifted earlier as a result of higher yield potential and seed treatment protection against early-season, soilborne diseases associated with cooler, wetter soils. However, in some years planting is significantly delayed, and producers may need to consider moving to an earlier maturity group.

### **Seeding rate**

The recommended seeding rate in the Midwest for soybean when planted in late April and May is 140,000 seeds per acre to achieve an average final stand of 100,000 plants per acre. As planting is delayed into June, it is recommended that seeding rates be increased. In Ohio, the recommended seeding rate for June planting is 200,000 to 225,000 seeds per acre.<sup>1</sup> In Wisconsin, the recommended seeding rate for a mid-June planting date is 200,000 seeds per acre with a target of 180,000 plants at harvest.<sup>2</sup> In eastern Canada, a 10% increase of the standard rate used in a field at mid-May is recommended when planting is delayed until mid-June.<sup>4</sup>

#### ***Why is it recommended that the seeding rate be increased when planting soybean late?***

There are several reasons to consider increasing the seeding rate with a late planting. A higher seeding rate can increase the likelihood of setting a higher number of pods to help increase yield potential. A higher seeding rate can increase canopy density, shading out weeds and helping to reduce soil evaporation by “closing the row” at a faster rate.<sup>3</sup>

### **Row Spacing**

If planting is delayed in the Midwest until June, using a narrow row spacing (less than or equal to 15 inches) can help maximize yield potential by capturing more light for photosynthesis and “closing the row” at a faster rate, which helps with weed control and reduces soil evaporation.

#### ***Will an increased seeding rate and/or narrow rows lead to an increased risk of white mold?***

Fields with a history of white mold may be more at risk with increased seeding rates and narrow rows. White mold risk may be greater if the soybean field blooms later, over an extended period, and the weather is cool, wet, and humid. Monitoring the weather conditions during bloom is advisable, and a fungicide application may be necessary.<sup>5</sup>

### **Weed Management<sup>6</sup>**

Planting soybean late is usually the result of wet conditions, and in the rush to plant as soon as conditions are favorable, the control of existing weeds may not be a priority. While winter annual weeds may have essentially

# Late Soybean Planting Recommendations

completed growth and are setting seeds, the priority in many fields should be summer annual weeds that may be emerging or will be soon. A 2,4-D ester formulation is usually not an option as the 7-day waiting period will delay planting even longer. Consult with your herbicide provider for available burndown products. In cases where weeds may have resistance to glyphosate or other post emergence herbicides, tillage may be an option. The use of a residual herbicide can help provide early control, and when used in combination with narrow rows, they can provide an effective herbicide management program with late soybean planting.

## **Late planting of soybean usually results in an open canopy for a longer period of time. Will this result in late-season weed escapes?**

This can be particularly true for fields with a history of waterhemp and for fields where a residual product was not applied with either a burndown herbicide or tillage. If a residual herbicide was not applied prior to planting or during early post-emergence, continue to scout the fields and consider a post-emergence herbicide product to control late emerging weeds.

## **Insect Management**

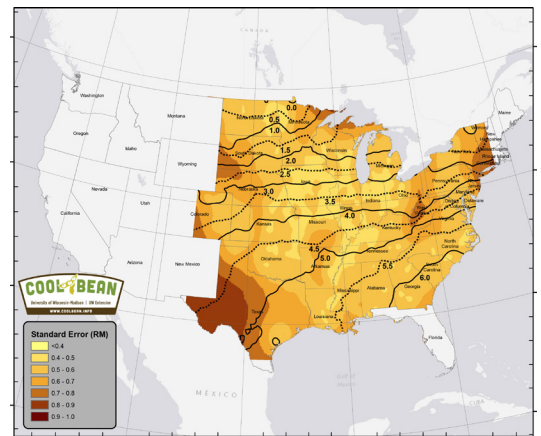
Delayed soybean planting, particularly if it is a single field in the landscape, may result in the attraction of some insect pests and lower populations of other insect pests. Later planting of soybean often results in less injury by seedcorn maggot and bean leaf beetle, while soybean aphid, stinkbug, and grasshopper injury may be increased. Soybean aphids developing on vegetative stages of soybean reproduce at higher rate than when feeding on early reproductive stages; therefore, reaching the economic threshold of 250 aphids per plant at a faster rate.<sup>3</sup>

## **Seed Treatments**

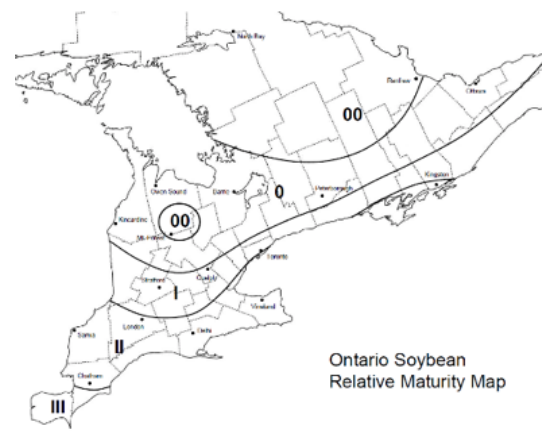
Planting later than normal is usually associated with warmer soil conditions that enable the seed to germinate quickly and emerge from the soil in less than week. Therefore, the need for a seed treatment may not be as great as when planting in the early spring. However, some root diseases, such as Phytophthora root rot, may still be of concern, and the use of treated seed in fields with a history of this disease should be considered.<sup>3</sup>

## **Maturity Group**

Many universities recommend planting an earlier maturity group (MG) soybean product when the date of planting is delayed until mid-June in the upper Midwest and Eastern Canada. Selecting a soybean product that is no more than 0.5 MG earlier than what is normally planted offers a balance between maximizing yield potential and limiting injury from frost (See Figure 1 and 2 for



**Figure 1. Recommended soybean maturity groups by location in the United States. Image courtesy of University of Wisconsin, Soybean program.**



**Figure 2. Recommended soybean maturity groups by location for Eastern Canada. Image courtesy of Ontario Ministry of Agriculture, Food, and Rural Affairs.**

# Late Soybean Planting Recommendations

recommended maturity group). A general rule of thumb is that a 3-day delay from the optimal planting date for your area only results in a 1-day delay of maturity, as later planted soybean plants will mature at a faster rate than those planted during the normal planting window.<sup>2,3,4</sup> See Figure 1 and 2 for recommended maturity group ratings for the United States and Canada.

## Sources

- 1 Lindsey, L. 2016. Adjustments for late planted (or replanted) soybean. Ohio State University Extension. <https://agcrops.osu.edu/newsletter/corn-newsletter/adjustments-late-planted-or-replanted-soybean>.
- 2 Conley, S. and Gaska, J. 2015. Considerations for switching soybean maturity groups for delayed plantings. University of Wisconsin Extension. <https://fyi.extension.wisc.edu/grain/switching-soybean-maturity-groups/>.
- 3 Staton, M. 2019. Late-planted soybean recommendations. Michigan State University Extension. [https://www.canr.msu.edu/news/late\\_planted\\_soybean\\_recommendations#:~:text=Producers%20that%20have%20purchased%20a,following%20the%20final%20planting%20date.&text=1%2C%202019%2C%20and%20receive%20a%20full%20prevent%20plant%20payment%20](https://www.canr.msu.edu/news/late_planted_soybean_recommendations#:~:text=Producers%20that%20have%20purchased%20a,following%20the%20final%20planting%20date.&text=1%2C%202019%2C%20and%20receive%20a%20full%20prevent%20plant%20payment%20).
- 4 Soybeans -Agronomy Guide for Field Crops - Publication 811. Ontario Ministry of Agriculture, Food, and Rural Affairs. <http://www.omafra.gov.on.ca/english/crops/>.
- 5 Smith, D. and Telenko, D. 2019. How will delayed planting influence crop disease in 2019. University of Wisconsin Extension. <https://badgercropdoc.com/2019/05/21/will-delayed-planting-influence-crop-diseases-2019/>.
- 6 Burns, E. and Sprague, C. 2019. Weed control recommendations for late and prevented planting. Michigan State University Extension. <https://www.canr.msu.edu/news/weed-control-recommendations-for-late-and-prevented-planting>.

## Legal Statement

ALWAYS READ AND FOLLOW PESTICIDE LABEL DIRECTIONS. Performance may vary, from location to location and from year to year, as local growing, soil and weather conditions may vary. Growers should evaluate data from multiple locations and years whenever possible and should consider the impacts of these conditions on the grower's fields.

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