



Late Corn Planting Considerations

- When corn planting is delayed, growers may be considering switching from full season relative maturity corn products to earlier relative maturity corn products.
- Switching to earlier maturity corn products for late-planting situations is not always an automatic decision as individual corn product's growing degree units (GDU) requirement is reduced when planting is delayed.

How Long Is My Growing Season?

The amount of "days" a corn plant needs to grow from emergence to maturity is often referred to as growing degree units (GDU). These units are calculated based on a formula using the high and low temperatures of each day along with upper and lower limit temperature parameters. By using these values, approximate GDU needed to reach specific corn growth stages can be estimated (Table 1). Daily GDU accumulation increases as the growing season progresses.

Previous Ohio and Indiana research results indicate a reduction in GDU requirement was about 6.5 GDU per day when planting was delayed beyond the normal planting window.¹ While the actual decrease in GDU varied somewhat among years in the research, it does indicate that late-planted products typically mature in fewer than expected GDUs. This decrease in GDU requirement, however, usually comes at the cost of decreased yield potential compared to timely planting.

When to Switch Maturities?

Careful consideration of several factors should be given prior to switching to an earlier corn product include:

- Full-season corn products for a given area typically have the highest yield potential.
- Daily GDU accumulation is minimal during planting season compared to flowering and drydown periods (Table 1).
- As planting is delayed, corn product maturities will come closer together.
- A primary reason for switching corn product maturity is not due to increasing yield potential but to reduce the risk of immature and wet grain in the fall.

Impact of the Growing Season

The remainder of the growing season does make a difference:

- The yield for late-planted corn will vary greatly, depending on the rest of the growing season.
- The decision to switch maturity with delayed corn planting is challenging because of variations in growing seasons relative to available GDUs, first frost date, and fall drying conditions.
- Planting into wet soils can result in uneven planting depth and seedling establishment, poor root development, or

sidewall compaction. Make good agronomic decisions and plant when fields are fit.

- Insect protection, disease tolerance, and crop safety become even more important with later planted corn.
- Even with delayed planting, it is still important to try to minimize the risk of adverse weather during critical growth stages by planting a package of products that range in GDU requirements to flowering as well as maturity.

Your local agronomist can provide recommendations for corn relative maturity groups and seeding rates that fit specific situations.

Table 1. Approximate GDUs needed to reach different growth stages of a corn crop (planted at the normal time, using a corn product that requires 2700 GDU to reach maturity).

Corn Growth Stage	GDU
VE (emergence)	115
V6 (6 leaf collars)	555
V12 (12 leaf collars)	945
VT (tassel)	1350
R1 (silk)	1400
R3 (milk)	1925
R5 (dent)	2450
R6 (physiological maturity)	2700

Source: Illinois Agronomy Handbook, 24th Edition. University of Illinois Extension.

Sources:

¹ Nafziger, E. 2009. Illinois agronomy handbook, 24th edition. Chapter 2. University of Illinois Extension. <http://extension.crops.cornell.edu/handbook/>. ² Myers, B and Wiebold, W.J. 2013. Corn maturity ratings and delayed planting. University of Missouri. <http://ipm.missouri.edu/IPCM/2013/5/Corn-Maturity-Ratings-and-Delayed-Planting/>. ³ Nielsen, R.L. 2013. The planting date conundrum for corn, Corny News Network, Purdue University. <http://www.agry.purdue.edu/ext/corn/news/timeless/pltdatecorn/ld.html>. Web sources verified 04/15/15

For additional agronomic information, please contact your local seed representative. Developed in partnership with Technology, Development & Agronomy by Monsanto.

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