

## Late Planted Corn

Many farmers are now just starting to plant corn. For Northern Ohio, the ideal time to plant corn is late April until May 10 for optimal corn yields. In the Midwest, estimated yield losses for corn are about 0.3% per day initially reaching about 1% loss per day by the end May (Nielsen, 2013). Yield losses are based on many factors including the risks of hot dry conditions during pollination, insect and diseases pressures, and a shorter growing season; which may or may not occur. In 2010-2011, late planted crops produced great yields because of timely summer rains.

According to Peter Thomison, OSU corn specialist, "Lower grain yields are not a certainty with late plantings. While delayed planting may cause slightly lower yields, planting date is just one of many factors that influence corn yield. Weather conditions (rainfall and temperature) in July and August are probably the most important yield factors. However, if late planted crops experience severe moisture stress during pollination and grainfill; crop yields may be significantly lower than average."

Dr. Peter Thomison and Robert Mullen offer some suggestions on planting corn late (next six paragraphs). Avoid tilling and planting corn when the soil is too wet. "Mudding" corn in and soil compaction cause the greatest yield loss. Soil compaction may reduce yields only slightly in the year it was initiated. However, soil compaction effects may be felt for several months or years later, generally when dry weather occurs and crop roots fail to grow, limiting water intake.

For spring nitrogen application, anhydrous N may be applied as close as a week before planting unless hot, dry weather is predicted. In late planting seasons associated with wet cool soil conditions, growers should consider side-dressing anhydrous N (or UAN liquid solutions) and applying a minimum of 30 lb/N broadcast or banded to stimulate early seedling growth and allows greater time for planting.

Crop requirements for P and K can often be met with starter applications placed in bands two inches to the side and two inches below the seed. With higher soil temperatures and later planting, there is less benefits from starter fertilizer unless the soil test level is below the critical level. No-till benefits the most from P and K starter fertilizer.

Keep time expended on tillage passes to a minimum. No-till offers the best option for planting on time this year. Field seedbed preparation should be limited to leveling ruts that may have been left by the previous year's harvest - disk or field cultivate very lightly to level. Most new planters provide relatively good seed placement in "trashy" or crusted seedbeds.

Don't worry about switching hybrid maturities unless planting is delayed until late May. If planting is possible before May 20, plant full season hybrids first to allow them to exploit the growing season because earlier maturity hybrids lose less yield potential than the later maturing, full season hybrids.

In delayed planting situations, use the optimal seeding rates for the yield potential of each field. Recommended seeding rates for early planting dates are often 10% higher than the desired harvest population due to greater seedling mortality. However, soil temperatures are usually warmer in late planted fields, so seeding rates may be lowered 3 to 5% due to less seedlings mortality.

When is a good time to kill cover crops? If the soil is wet and rain is expected, do not kill the cover crop until right before planting. The cover crop will transpire moisture and dry out the soil. For crop insurance purposes, kill the cover crop before the new crop is planted which may be the same day. It is easier to plant into a live crop than it is to plant into a cover crop that is dead. If you kill it too early, the residue may go down and keep the soil from drying out. The planter tends to “hair pin” and the dead residue will wrap on the planter unit. For legume crops like crimson clover or winter pea, letting the crop grow until they flower adds nitrogen. For cereal rye, avoid planting to corn, however, cereal rye makes an excellent cover crop for soybeans. Kill the cereal rye right before or as you are planting soybeans, unless it turns dry; then kill it early. Add 40-50 lbs N/Acre as a starter with all cover crops to give corn a good start.