



**THE OHIO STATE UNIVERSITY**

COLLEGE OF FOOD, AGRICULTURAL,  
AND ENVIRONMENTAL SCIENCES

## **Hardin County Extension News Release**

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### **Corn Planting**

*Hardin County* - Farmers are anxious about this year's corn planting after the disastrous spring they had last year, which left about 60% of the corn fields unplanted. They have to focus on the possibility of good crop this year and force out thoughts of last year.

Farmers assume a lot of risk hoping that the weather will be suitable over the next five months to have yields large enough to make a profit. They know the decisions they make at planting time will often determine whether the crop will be able to compensate during periods of adverse weather.

The following are some of the practices farmers use to get a corn crop off to a good start: Minimize tillage operations and only under the proper soil conditions. Farmers know that any type of tillage may cause compaction zones and especially if soil is worked when wet. Soil compaction will greatly reduce root development and if severe, will interfere with stand emergence.

Secondary tillage, such as disking and cultivating, is only done to prepare an adequate seedbed. Too much secondary tillage may cause shallow compaction zones. Deep tillage is only used to tear up compacted zones and should only be used on relatively dry soils.

Planting as soon as soil conditions are suitable for equipment and soils are warming to temperatures above 50°F. Soils temperatures are currently in the 40s. Most farmers in the area prefer to start planting the last week of April and be completed by May 15 for optimal yields.

However, farmers know that they can plant too early on poorly drained soils and soils prone to ponding. Yield reductions that occur from "mudding the seed" into fields are often greater than waiting for better soil conditions.

Good yields may still be obtained if rains delay corn planting past May 15. However, the probability of good yields drops rapidly once planting moves into June. It depends on favorable moisture at pollination and grain fill and the fall frost date.

Planting the seed at the proper depth. Farmers often plant shallower under cold and wet conditions and deeper for dryer, warmer soils. However, the corn seed must be planted at least 1 ½ inches deep for proper root development and early protection of the growing point.

The permanent roots will develop near or at the surface at shallower depths – increasing the chance for herbicide damage, lodging and snapping of seedlings, and producing plants vulnerable to dry weather. Ideally corn should be planted at 1 ½ - 2 inch depth, but will emerge as deep as 3 inches in most soils.

Adjust seeding rates for each field. Farmers will adjust the seeding rate depending on the yield potential of a field. Ohio State University research has shown that a population of at least 30,000 plants per acre is needed for maximum yields on highly productive soils. Farmers often plant around 34,000 seeds per acre in our area.

Reduced seeding rates are used on droughty or low yielding soils. On soils that generally yield less than 120 bushels per acre, a population of 20,000 – 22,000 plants per acre is often adequate.

Most university research has shown that farmers have a greater chance of lower yields from being below the optimum population than above. Seed companies will provide the optimum population for each hybrid they market.

Plant hybrids from more than one maturity group. Farmers minimize risk of environmental stress at pollination time by planting different maturities. This causes fields to flower at different times to prevent the whole crop from being exposed to a hot, dry period at pollination. It also spreads out the workload at harvest time.

A common practice is to plant 25% of the fields to early maturity hybrids, 50% to mid to full season, and 25% to full season. Planting a range of hybrid maturities diversifies genetics and may also minimize risk since hybrids of different genetic backgrounds will respond differently to environmental stress.

Full season hybrids are generally planted first since they require the most heat units for optimal yields. A common practice is to plant full season first, then alternate between early and mid-season hybrids to get the most benefit from planting different maturities.

Farmers follow these steps and other practices at planting to insure rapid germination, good emergence, and uniform stands. They know that they basically have one shot to get it right.

Currently soils are wetter than farmers would like moving into the planting season. They do not want a repeat of last year's wet spring. As a result, farmers will be anxious to plant when conditions finally become dryer and warmer. In addition, like us, farmers are dealing with the uncertainty of the COVID-19 pandemic. They will feel better once corn planters are rolling across fields.

*Article written by Ed Lentz-OSU Extension, Hancock County; edited by Mark Badertscher-OSU Extension, Hardin County.*