

# THE FORAGER

*Agronomics with livestock in mind!*

## **SPRING REMINDERS FOR CORN & SOYBEANS!**

**Early Planted Corn:** As the planting season quickly approaches, a common concern is always, "How early is too early to plant corn?" The time at which you plant contributes immensely to grain and silage yield in the fall. Earlier planting generally results in higher yields because it allows for longer periods of grain fill. Soil temperature, at the 2-inch level is the key factor in determining planting date. Germinating corn requires soil temperatures of at least 55°F and adequate soil moisture in order to start the germinating process. Planting in soil with temperatures of 50°F or cooler can result in reduced seedling emergence.

Seeds decay in cool soils in a process called respiration. This process reduces the amount of energy available to the seedling as it grows to the soil surface. Seedlings commonly run out of energy and are easily infected with seedling diseases which often results in death before the seedling reaches the soil surface.

Greater yield losses are seen when planting is delayed 7 days versus planting in soils with temperatures in the 50° to 55°F range. On average, grain and silage yield will not vary a great deal for plantings made a week earlier or later than the optimum time period. After May 10<sup>th</sup>, yield losses accelerate quickly each day.

**Starter Fertilizer Placement:** *The "rule of thumb" is that nitrogen + potassium (K<sub>2</sub>O) should not exceed 10 total actual units in contact with the seed.*

Every year some corn stands begin life with uneven emergence, missing plants, or an unthrifty appearance to some of the seedling plants. The blame is often placed on herbicides or "bad" seed, when the real problem may lay with starter fertilizer applications.

Most growers understand that starter mixes containing nitrogen and/or potassium can cause problems when in contact with the seed. The 2x2 placement of starters has almost completely replaced the old pop-up applications.

What we often fail to acknowledge is that fertilizer coulters sometimes wander or swing from side to side during planting. With higher rates or "complete" planter band fertilizer applications, we can still end up with fertilizer injury to seed.

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Avoidance of fertilizer injury to corn seed and seedlings is mostly a matter of taking the time to see that equipment is in good shape prior to the planting season. Make sure that coulters are mounted to apply fertilizer at least 2 inches to the side and 2 inches below the seed. Also make sure that coulter movement is not excessive and that there is not much play in the mountings.

**Fertilizing Soybeans:** *If you are considering planting more acres to soybeans this year, and if your soils test levels are less than optimum, consider applying phosphorus and potassium fertilizer to maximize yield potential and dollars returned per acre.*

Target fields that have not had a fertilizer program applied for a two-year rotation. Fertility levels in these fields may be somewhat low and response to fertility applications will be positive. In fields involved in a corn/soybean rotation, most retailers will fertilize for the two years the field will be in production.

Soybeans will remove 0.80 lb of phosphorus and 1.5 lb of potassium for every bushel of yield produced. If a field produces a yield of 45 bushels/acre, it will remove 36 lbs of phosphorus and 68 lbs of potassium. This would lower the soil test approximately 9 lb or 4.5 ppm for each nutrient.

Soybeans may also respond to starter fertilizer applications that are high in phosphorus. Soybeans respond to phosphorus applications, especially when the soil test is 10 ppm or less. However, the early growth response that is commonly seen with corn is not typical in soybeans. Do not place starter fertilizers closer than 1 inch to the seed or damage to the seed and seedling will occur.

Here's to a great growing season and a productive, good-yielding harvest in the fall!

*(Edited from an article by Art Graves, Agronomist with Mycogen Seeds in the northeastern USA)*

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