

Seeds for Success

Agronomy Update

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Agronomy Update

is a monthly publication provided to producers free of charge. AgVenture, Inc. and its independently owned and operated Regional Seed Companies are dedicated to providing producers exceptional seed products – genetics and technologies, professional service, and local knowledge of agronomic conditions impacting producer profitability.

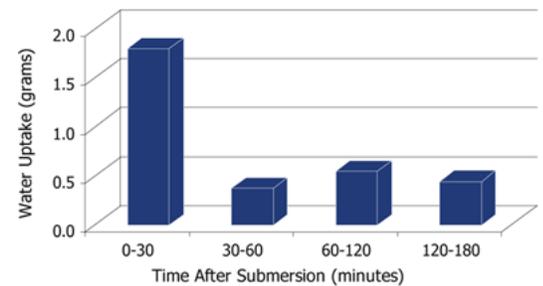
Grow with Confidence!



Importance of Warm Soils at Planting

Less than ideal stands result from planting into cold, wet soils or directly before a cold or wet weather event, resulting in significant stand loss. But cold and wet snaps are often inevitable. The chances of establishing a good stand are greatly improved if hybrids are allowed to germinate at least 1-2 days in warmer, moist conditions before a cold-stress event. Hybrids with a higher stress emergence score can help moderate stand losses due to cold stress.

One reason why temperature during imbibition is critical to corn emergence is the fact that seed imbibes most of the water needed for germination very rapidly. To illustrate the rapid timing of water uptake, seed was submerged in 50 F water for 3 hours and weighed at intervals of 30, 60, 120 and 180 minutes to determine water uptake.



Amount of water uptake by corn seed during the first 3 hours after submersion in 50 F water.

Seed imbibes the most water within the first 30 minutes after exposure to saturated conditions. If this early imbibition occurs at cold temperatures, it could kill the seed or result in abnormal seedlings. Growers should not only consider soil temperature at planting, but also the expected temperature when seed begins rapidly soaking up water. Seed planted in warmer, dry soils can still be injured if the dry period is followed by a cold, wet event (sources: AgVenture and Pioneer).

Enemies of Corn Seedlings

Even after you've planted into an ideal seedbed, damage or stress to the first few sets of developing nodal roots during V1-V5 can severely stunt or delay a corn plant's development. Damage to the first few sets of nodal roots forces young seedlings to continue their dependence on the kernel reserves longer than optimum. If stresses cause the seedling to rely longer on the nearly exhausted kernel reserves, stunting or even seedling death may occur. Among the biggest challengers to nodal root development include fertilizer salt injury, seedling diseases, herbicide injury, insect feeding damage, excessive wet or dry soils and subsequent crusting, and soil compaction. Some seedling stresses can be avoided or reduced through proper planning and timely response to an issue. Talk with your AgVenture Yield Specialist for additional suggestions specific to your acres.

Notes on Starter Fertilizer

Until about the V3 stage, the young corn seedling relies upon its kernel reserves. V3 is a critical transition period that greatly influences how the crop continues to develop strongly and uniformly. Starter fertilizers begin to influence seedling development at V3 when one or more nodal roots tap into a starter fertilizer band placed approximately 2 inches to the side and 2 inches below the seed. Placed in this position, starter fertilizer has an advantageous positioning to over-the-seed placed starter fertilizers. That's because its position is more accessible to nodal roots and because higher rates of nitrogen and/or potassium can be used without risk of injury to the seed during germination and emergence.

AgVenture, Inc.

is the nation's largest network of independently owned regional seed companies. Based in Kentland, Indiana, AgVenture provides a growing network of independently owned and managed regional seed companies with seed products meeting exacting standards for quality, together with leading-edge genetics and technology.

Since 1983, this unique marketing approach has allowed each individual company to match the hybrids it sells to the specific needs of the geographical area it serves. Combined with professional seed representation at a local level, AgVenture strives to help every grower realize more profit from every field.

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Soybean Profitability

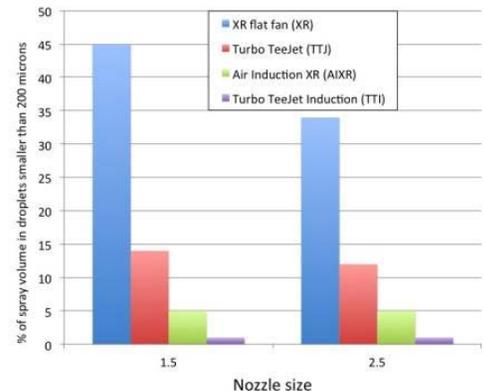
In the past three years, soybeans have been more profitable than corn in Illinois. And, according to a University of Illinois study, soybeans could pull it off again in 2016 one or more of the following drivers occurs:

1. Both corn and soybean prices increase to higher levels than currently expected. If relative price increases are the same for corn and soybeans, higher prices cause corn returns to increase relative to soybean returns.
2. Relative corn and soybean prices change, with the corn price increasing relative to soybean price
3. Corn yields are high relative to soybean yields.
4. The difference in corn costs decrease relative to soybean costs. Likely items that could contribute to this decrease are lower nitrogen fertilizer prices or lower corn seed costs.

<http://farmdocdaily.illinois.edu/2016/02/corn-versus-soybean-returns-2016-projections.html>

Nozzel Size and Postemergence Weed

Control Proper application of postemergence herbicides includes selecting the correct herbicide, applied to appropriately sized weeds, field/environmental considerations, etc., as well as equipping the sprayer to achieve uniform coverage of the target weeds. New research from Purdue University weed scientists recently explored the influence of nozzle type and spray volume on target coverage within the soybean canopy. They found that regardless of nozzle type or target placement, better coverage was achieved with the larger nozzle size that provided greater gallons per acre (GPA) spray volume. Averaged over nozzle types and the two years of the study, 15 GPA provided 26% coverage compared to 13% at 10 GPA (Reference: Legleiter, T.R. and W.G. Johnson. 2016. Herbicide coverage in narrow row soybean as influenced by spray nozzle design and carrier volume. Crop Protec. 83:1-8.ods.).



Keep Stored Grain Cool and Dry

Check stored grain during springtime fluctuating temperatures. For every 10-degree increase in grain temperature, the allowable storage time decreases by roughly half. For example, the allowable storage time for 18% moisture corn is 200 days at 40°F, 90 days at 50°F, 50 days at 60°F and only 30 days at 70°F. The springtime angle of the sun also accelerates bin warming. There's twice as much solar energy warming the south wall of a bin on February 21 vs. June 21 due to the low solar angle. Growers are encouraged to carefully monitor stored grain temperatures, run aeration fans at night or during the cool part of the day to keep grain cool (source: North Dakota State University).

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