

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!



The Freeze

When freezing temperatures arrive before the crop reaches maturity, yields are likely reduced. In both corn and soybeans, the negative impact on both yield and crop quality primarily depends on the growth stage of the crop, the temperature and duration of low temps experienced. Moisture levels, soil conditions, topography, etc., also play roles in the extent of freeze damage incurred.

October frost/freeze damage to late-developing, immature fields results in leaf or whole plant death that effectively puts an end to the grain-filling process and negatively impacts test weight. Corn leaf tissue dies within a few hours at temperatures of 32 degrees. Temps below 32 degrees for several hours typically kill leaves and stops ear development. Soybeans are somewhat more resilient. A light frost may only impact the upper canopy of the plant and pods and seeds can continue to develop with a minimal impact on yield. A hard freeze can damage stems, pods and seeds jeopardizing both the soybean crop's yield and quality.

Harvesting Wet Crops

Spring rains delayed planting for many growers. But while drying costs may be higher, harvesting wet or immature crops may be necessary. To make the most of harvesting in these conditions, some combine adjustments (including cylinder/rotor speed and concave clearance adjustments) help reduce grain damage and threshing losses. In corn at moisture levels of 25-30 percent or higher, limit drying temperatures to avoid scorching grain, and the subsequent stress cracks and kernel breakage. In soybean fields with delayed maturity and/or early frost, harvest can be initiated at 18 percent moisture or even slightly higher where soybeans are adequately defoliated. Drying temperatures for those beans will need to be significantly lower than for corn. Carefully monitor relative humidity of the drying air to optimize drying environment and help preserve seed quality. Talk with your AgVenture Yield Specialist for considerations impacting your operation.

Frequently Found This Year, Yet Uncommon for the Norm

This has been a season ideal for development of a host of ear rots. Three not-so-common ear rots that this season's harvest has produced include Nigrospora, Trichoderma and Cladosporium ear rots. None of the three produces mycotoxins.

Meanwhile, "beer-can ear" or arrested development is another uncommon occurrence. Arrested ear development happens when the corn plant is stressed at or just after V8 when the plant is determining kernels per row. Triggers include stresses from too much rain combined with some very cool nights (at or below 50-degrees) in June.



Nigrospora Ear Rot

Found on plants weakened from frost, drought, root injury, leaf blights, stalk rots or poor nutrition



Trichoderma Ear Rot

Found scattered where injury occurred to the developing ear, i.e. bird/ insect feeding, etc.



Cladosporium Ear Rot

Often seen on ears damaged from frost, insects or other mechanical injury

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.

Grow with Confidence!

Tar Spot Confirmed A corn disease new to the Midwest has been diagnosed in Illinois and Indiana. Tar spot causes brownish lesions primarily on corn leaves, and on leaf sheaths and husks. Black, spore-producing structures called ascomata appear later, protruding from the leaf surface and giving the leaf a rough or bumpy feel. Tar spot can be caused by two different fungi - *Phyllachora maydis* and *Monographella maydis*. So far, only *Phyllachora maydis* has been found which is not considered to significantly impact yields. The other causal fungus can cause severe crop losses where it is found in Central and South America. As this is a new disease for North America, growers are encouraged to send in samples of any symptomatic leaf tissue to your local diagnostic lab for testing.



Effect of Harvest Delay on Soybean Field Losses

Harvest Delay	Year 1	Year 2	Year 3	3-Year Average
% yield lost				
None	4.1	6.7	7.5	6.1
2 Weeks	5.0	9.9	9.2	8.1
4 Weeks	6.3	16.1	12.1	11.5
6 Weeks	6.8	18.1	19.9	13.9
Average	5.6	12.7	11.4	9.9

Losses increased with weeks of delay in all cases (source: University of Wisconsin).

Soybean Harvest Delays Cost Yield Over the course of three years, testing two varieties each from three maturity groups, a University of Wisconsin study tested soybean yield losses that accrued beyond full maturity. 3-7 days after the soybean fields reached R8, harvest began. Other portions of the field were harvested at 2 week increments beyond the initial harvest date. Yield losses were calculated. Yield losses were greatly affected by year. In year one, fewer losses were seen (due to weather), but in years two and three, losses were more than doubled.

Keep Workers Safe while Handling Grain Grain entrapments typically happen when a farm worker enters a bin or silo to break up clumps of out-of-condition grain during loading or unloading. Entrapments have increased more than 183 percent from 2001-2010. Nationwide, there were 38 documented entrapments resulting in 17 deaths in 2014, compared with 33 entrapments and 13 deaths in 2013. Whether you have hired help without experience in handling grain, or have seasoned employees, friends and family members helping out, it is always a good idea to refresh safety tips with workers. The Grain Handling Safety Coalition provides resources for training workers to help prevent and reduce accidents, injuries and fatalities of those working in the grain industry. The website provides helpful tips on how to talk with workers about safety and provides useful online resources and links: <http://grainsafety.org>.

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