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Contact your local Logan Ag warehouse or sales associate to schedule fungicide application to V4-V6 corn. Add SABLE™ slow release nitrogen for extra yield. Sable is a trademark of Midtech R&D.

# LOGAN AG NEWS

## Estimating Crop Hail Damage

Recent storms included hail in some locations. Recovery from hail damage differs by crop.



**Hail Damage V6 Corn**

Surprisingly, corn suffers its greatest yield loss from bruising of the stalk. Bruises first appear as white specks on leaves and stalks. Bruises reduce plant health and may impact late-season standability. Stripping of leaves is responsible for large yield loss if occurring at or near tassel emergence.



**Hail Damage V2 Soybeans**

Soybeans usually recover from hail damage provided they are not cut below the cotyledon (seed) leaves.

The chart below helps estimates yield loss in corn and soybeans based on the percent of leaf defoliation. It does not account for yield loss due to plant health issues caused by stalk bruising.

GROWTH STAGE	PERCENT DEFOLIATION			
	25	50	75	100
7 LEAF CORN	0	2	5	9
10 LEAF CORN	1	6	9	16
VE - V3 SOYBEANS	1	6	7	21

Estimated Yield Loss %  
 From Plant Defoliation

## GDD Important To Corn Plant Development

Recent cool temperatures and wet soil conditions hindered crop development throughout the Logan Ag trade area. Mid-May found west-central Illinois and Missouri corn planting nearly complete, while soybean planting was off to a strong beginning. Southern, eastern and northern areas of Illinois, as well as Indiana and Ohio were far behind due to continued wet soil conditions.

For growers still planting corn, it may be time to review hybrids and move to earlier maturities. There are many corn hybrids on the market in the 2700 Growing Degree Day (GDD) maturity range that will perform very well including some of the Lewis and Mycogen brand products available from Logan Ag. 2700 GDD refers to accumulated heat units to black layer or physiological maturity. GDD, sometimes called Growing Degree Units (GDU) are calculated using the formula in the table below:

$$\text{GDD} = \frac{\text{Daily High Temp}^{**} + \text{Daily Low Temp}^{**}}{2} - 50$$

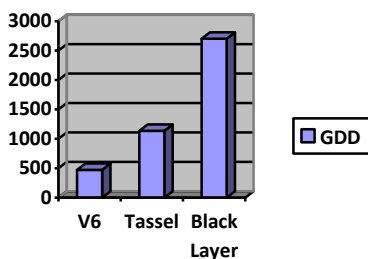
\*\* Daily high temperature is capped at 86°. Daily low temperature is never lower than 50°.

EXAMPLE: Daily high is 80°; Daily low is 60°. 80 + 60/2 minus 50 = 20 GDD

EXAMPLE: Daily high is 90°; Daily low is 72°. 86 + 72/2 minus 50 = 29 GDD

Northern areas of IL, IN and OH accumulate 2800 to 3000 GDD from May 10 to October 10 on average. Central IL, central IN and south-central OH average 3000 to 3200 GDD in the same timeframe. GDD accumulation in southern IL and most of MO ranges from 3200 to 3600 during the early May to early October period. Therefore, a hybrid that requires 2700 GDD to black layer (30-35% moisture) should not be impacted by early frost.

The chart below from Purdue University reveals GDD requirements for various vegetative and reproductive stages of a 2700 GDD hybrid.



At V3 (~275 GDD), the ear shoot is initiated. At V4-V5 (345-400 GDD), the number of rows of kernels on each ear are determined. The V12-V14 growth stage (870-1000 GDD) is when the number of potential kernels per row is determined.

Soybeans respond differently to late planting than corn. Soybean flowering is closely related to the length of daily light and dark periods (photoperiod) whereas corn flowering (tassel) is more dependent upon temperature. This is why accumulated GDD are not reliable for predicting soybean growth stages.

The initiation of flowering in soybeans typically begins as the dark period begins to lengthen in late June (summer solstice). Late planted soybeans (mid-June or later) have reduced vegetative growth, resulting in shorter plants and occasionally

lower pod height. Logan Ag recommends consideration of full season soybean varieties, along with narrow rows and higher planting populations in these situations.

## FAQ About Early Plant Health

Logan Ag crop specialists recommend corn producers make a V4-V6 application of fungicide and slow release nitrogen to improve plant health and yield. Below are some FAQ (Frequently Asked Questions) regarding this application.

**Q.** Why consider plant health during early growth stages?

**A.** AT V4-V6 GROWTH STAGE, LEAF & EAR SHOOT INITIATION IS ALMOST COMPLETE; THE NUMBER OF KERNELS IS BEING DETERMINED; THE GROWING POINT IS EMERGING ABOVE THE SOIL.

**Q.** What diseases impact corn at this growth stage?

**A.** ANTHRACNOSE, EYESPOT, GRAY LEAF SPOT, LEAF BLIGHTS.

**Q.** Can herbicides be mixed with the fungicide application at V4-V6?

**A.** GLYPHOSATE AND OTHER POST-EMERGE CORN HERBICIDES WORK IDEALLY AT THIS GROWTH STAGE AND SAVE THE EXTRA APPLICATION TRIP FOR FUNGICIDE TREATMENT.

**Q.** What if my corn is yellow or off-color when it's time to spray? Can I do anything to help green it up?

**A.** ADD 1 GALLON SABLE™ SLOW RELEASE NITROGEN TO THE HERBICIDE & FUNGICIDE MIXTURE. THE SLOW RELEASE NITROGEN PROVIDES A LITTLE MORE PUNCH FOR LATER SEASON N REQUIREMENTS.

**Q.** If I apply a fungicide treatment and Sable, how much yield increase can I expect?

**A.** YIELD RESPONSE DEPENDS UPON THE AMOUNT OF DISEASE POTENTIAL EACH YEAR. SOME DISEASES THRIVE IN CERTAIN WEATHER CONDITIONS AND NOT IN OTHERS. BAYER REPORTED AVERAGE YIELD INCREASES OF MORE THAN 8 BU/A IN 2010. IF THE V4-V6 TREATMENT IS COMBINED WITH A VT TREATMENT, THE AVERAGE YIELD RESPONSE WAS MORE THAN 15 BSHEL PER ACRE.

**Q.** What is the cost per acre?

**A.** USING CURRENT FALL DELIVERY CORN PRICES, IT'S LESS THAN 3 BUSHELS PER ACRE. YOU MAY REALIZE MORE THAN \$48 PER ACRE RETURN ON YOUR INVESTMENT IF YOU OBTAIN THE 2010 AVERAGE YIELD RESPONSE! AND THAT DOES NOT INCLUDE ANY POTENTIAL YIELD BUMP FROM THE SABLE!

**Q.** Do you still recommend fungicide applied at tassel? What about Sable?

**A.** YOU MAY GET ANOTHER 7 BUSHEL RESPONSE FROM THE FUNGICIDE APPLICATION AT VT. AND THE ADDITION OF SABLE SHOULD PROVIDE SUFFICIENT NITROGEN TO HELP THE CORN PLANT ACHIEVE ITS FULL YIELD POTENTIAL. WITH \$6 CORN, WE BELIEVE YOU CAN MAXIMIZE YIELD AND PROFITS WITH FUNGICIDE AND N APPLICATION. Sable is a trademark of Midtech R&D.

Now is the time to schedule early fungicide application to improve plant health and yield. Our knowledgeable staff is ready to help you increase profits.

Logan Ag serves growers from warehouse locations in **Griggsville, IL, Paris, MO, Star City, IN** and **Pittsburg, OH**, as well as a network of sales associates in Illinois. Contact us for chemicals, fertilizer and seed.