

Time now to scout corn for grey leaf spot - by Craig Kilby

Weather conditions are near ideal for infection with high humidity and higher temperatures. Leaf spots or lesions have been reported on lower leaves for a couple weeks, and progress up the plant. Gray leaf spot is identified by rectangular lesions on leaves. Early infection occurs on lower leaves. The parallel borders of a lesion are major veins in the leaf. Longer and more numerous spots or lesions are found on more susceptible hybrids.

Infected leaf area does not form visible lesions for 7-10 days following infection, so more will appear for this period following a fungicide application. This phenomenon is accounted for in threshold levels. The disease threshold developed for GLS in the mid 1990s was lesions on the third leaf below the ear leaf or higher on 50 percent of the plants at tasseling. Another threshold method being used is based on level of ear leaf infection. Since the ear leaf can be responsible for up to 50% of yield, protecting this leaf is essential. Treatment could be warranted when lesions are found on the ear leaf at tassel and the hybrid is considered susceptible.

Deciding if and when to spray foliar fungicides is very subjective. Evaluating the ear leaf at tassel is possibly the easiest method. If it is free of any grey leaf spot lesions and pollination is occurring, then a fungicide application is probably not warranted.

If a fungicide is needed, what product should be used? There are several fungicides labeled for corn, and some are listed in the table. Most are listed as curative and preventative. The preventative residual portion can last a few weeks after application. The curative portion will not kill existing lesions older than a few days. Quilt® contains the active ingredients of Quadris® and Tilt®. Quilt Xcel™ has nearly twice the amount of Quadris in the formulation as the original Quilt.

If a field requires treatment that has uneven tassel emergence, it's better to wait for most of the younger corn to have tassel points showing before the fungicide is applied.


Table 1. Estimated corn yield loss based on percentage of infected leaf tissue.

Percentage Ear Leaf Area Affected by Early Dent Stage (R5)	Approximate Yield Loss
5% or less	0-2%
6-25%	2-10%
25-75%	5-20%
75-100% (leaf death)	15-50%

Source: Patrick Lipps, 1998. Gray leaf spot and yield losses in corn. *Crop Observation and Recommendation network*. Issue 98-23.

Product	Fungicide group	Fungicide family
Tilt	Curative	Triazole
Headline	Curative and preventative	Strobiluron
Quadris	Curative and preventative	Strobiluron
Stratego	Curative and preventative	Strobiluron and triazole
Quilt	Curative and preventative	Strobiluron and triazole
Quilt Xcel	Curative and preventative	Strobiluron and triazole

Table 1. Probability of Yield Response

Crop Rotation	Tillage Type	High			Moderate			Low					
 Corn on Corn	No-Tillage	3A65 ^{TM*} 4N49 ^{TM*} 4J63 477T	573T 6C56	4537VT3 4877VT3 5317VT3 5423RR2		255R 3C98 ^{TM*} 4K74 ^{TM*}	5R68 ^{TM*} 6H22 ^{TM*} 7D51 ^{TM*} 798BW	5557VT3 5827VT3		5M17 ^{TM*} 5P55 ^{TM*} 589BL	6A27 6B51 ^{TM*} 811T	8G23 ^{TM*} 5566GT3 5833GT	
	Strip Tillage	3A65 ^{TM*} 4N49 ^{TM*} 4J63 477T	573T 6C56	4537VT3 4877VT3 5317VT3 5423RR2		255R 3C98 ^{TM*} 4K74 ^{TM*}	5R68 ^{TM*} 6H22 ^{TM*} 7D51 ^{TM*} 798BW	5557VT3 5827VT3		5M17 ^{TM*} 5P55 ^{TM*} 589BL	6A27 6B51 ^{TM*} 811T	8G23 ^{TM*} 5566GT3 5833GT	
	Conventional	3A65 ^{TM*} 4N49 ^{TM*} 4J63 477T	573T 6C56	4537VT3 4877VT3 5423RR2		255R 4K74 ^{TM*}	5R68 ^{TM*} 6H22 ^{TM*}	5317VT3		3C98 ^{TM*} 5M17 ^{TM*} 5P55 ^{TM*}	589BL 6A27 6B51 ^{TM*}	7D51 ^{TM*} 798BW 811T 8G23 ^{TM*}	5557VT3 5566GT3 5827VT3 5833GT
Corn-Soybean	No-Tillage	3A65 ^{TM*} 4N49 ^{TM*}	4J63			477T	573T 6C56	4537VT3 4877VT3 5317VT3 5423RR2		255R 3C98 ^{TM*} 4K74 ^{TM*} 5M17 ^{TM*}	5P55 ^{TM*} 5R68 ^{TM*} 589BL 6H22 ^{TM*} 6A27	6B51 ^{TM*} 7D51 ^{TM*} 798BW 811T 8G23 ^{TM*}	5557VT3 5566GT3 5827VT3 5833GT
	Strip Tillage	3A65 ^{TM*} 4N49 ^{TM*}	4J63			477T	573T 6C56	4537VT3 4877VT3 5317VT3 5423RR2		255R 3C98 ^{TM*} 4K74 ^{TM*} 5M17 ^{TM*}	5P55 ^{TM*} 5R68 ^{TM*} 589BL 6H22 ^{TM*} 6A27	6B51 ^{TM*} 7D51 ^{TM*} 798BW 811T 8G23 ^{TM*}	5557VT3 5566GT3 5827VT3 5833GT
	Conventional					3A65 ^{TM*} 4N49 ^{TM*} 4J63 477T	573T 6C56	4537VT3 5317VT3 5423RR2		255R 3C98 ^{TM*} 4K74 ^{TM*} 5M17 ^{TM*}	5P55 ^{TM*} 5R68 ^{TM*} 589BL 6H22 ^{TM*} 6A27	6B51 ^{TM*} 7D51 ^{TM*} 798BW 811T 8G23 ^{TM*}	5317VT3 5557VT3 5566GT3 5827VT3 5833GT

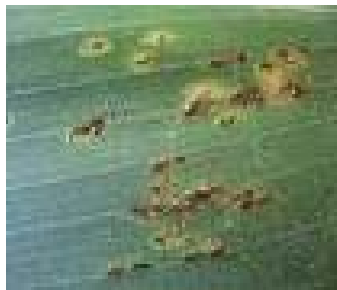
Only the highest traited version of a genetic family is listed. For the hybrids not included on this chart, consult your Product Selection Guide, then look up the comparable products. Example: Burrus 573T is listed, Burrus 571R is not. But they should both be treated the same since they are from the same genetic family.

*Power Plus® Brand seed distributed by Burrus.

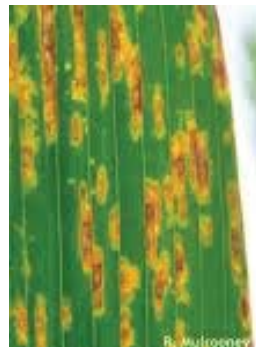
Common Rust of Corn –Be careful not to confuse for Grey Leaf Spot

~by Craig Kilby

Common rust is very widespread today on corn in all growth stages. Once again the persistent wet conditions of 2010 have favored infection by common rust easy to find today in pre-tassel corn, but should pose minimal potential yield loss. The concern is in mistaking the rust lesions for gray leaf spot. Common rust lesions are raised, reddish-brown pustules scattered over both the upper and lower leaf surface. Gray leaf spot lesions are not raised and are light tan to gray in color. Generally temperatures above 80° F halt common rust development on upper leaves.



Common Rust



Grey Leaf Spot

Japanese Beetles – numbers and activity increase with temperatures

~by Craig Kilby

The one insect guaranteed to survive extreme weather year around returns to central Illinois and other areas of the Midwest. Their presence was evident this spring as tillage exposed large numbers of over-wintering larvae. Survival through heavy rainfall and perpetually saturated soils was good judging by beetle counts today. Today beetles can be found on a wide range of crops, weeds, trees, and ornamental plants. Japanese beetles generally first infest ornamental plants, fruit trees, and dark leaf trees while corn and soybeans are in vegetative growth stages. This early activity often goes unnoticed since beetles may remain at the top of plants and trees feeding on new, lush growth.

As corn pollination begins beetles will be attracted to both pollen and silks. In soybeans leaf defoliation occurs especially on newly emerging soybean leaves. When scouting in crops move beyond border rows to assess insect pressure.

Corn Threshold: Consider a foliar insecticide if there are three or more Japanese beetles per silk and pollination is not complete. The abundant soil moisture allows rapid silk growth and should be considered when making treatment decisions.

Soybean Threshold: Use of foliar insecticide warranted at 30 percent defoliation before bloom and 20 percent defoliation after bloom through seed set.

