

## WHAT ABOUT DISEASES IN CORN?

1824 N St, Ste 102 • Auburn NE 68305  
402-274-4755 • [www.nemaha.unl.edu](http://www.nemaha.unl.edu)

With the recent rains last week and the warm temperatures this week, crops will really take off and grow with these ideal growing conditions. As the corn crop progresses, it is important to check cornfields for potential disease outbreaks. Scouting fields for diseases is an important IPM tool to use to determine if and when corn diseases become problems in corn fields and if fungicides should be applied. It is important to keep updated on “*CropWatch*” at <http://cropwatch.unl.edu/> to see what diseases or insect pests are moving into Nebraska. Tamra Jackson-Ziems, UNL Extension Plant Pathologist does an excellent job of keeping on top of the corn diseases as they develop around the state. Corn diseases may be developing in the near future, but there will still be time to treat the diseases if warranted. Positive identification of the disease is important, i.e. Goss’s wilt, Bacteria Leaf Streak, Southern corn leaf rust and Gray Leaf Spot in corn. If you have some minor infestation, you may be able to spray at a later date, get better control and save having to potentially spray twice for later season infestation of diseases. If corn becomes injured due to hail or wind, this provides an entry way for diseases to enter the plant. Goss’s Wilt is a disease that enters the plant in this manner. It is also a bacteria, so a normal fungicide will not control it. Another bacterial disease which could be showing up now is Bacterial Leaf Streak. It has been confirmed in southeastern Nebraska in previous years, and has caused issues in many parts of Nebraska. This disease does not need an injury to the corn plant to infect it. This disease has infected fields as early as the V6 stage, so it can be much earlier than Gray Leaf Spot usually infects corn, which looks quite similar to this disease. Southern Corn Leaf Rust has also caused problems in southeast Nebraska in previous years. It is important to scout your fields for this disease. Southern rust pustules are smaller than those of common rust. Southern rust spores are typically orange to tan in color and produced in pustules predominantly on the upper leaf surface, although they can also be produced abundantly on/near the midrib on the underside of the leaves. Timely fungicide applications can be very effective at controlling rust and other fungal diseases in corn. It is important to remember that making applications too early might mean that the protection they provide may be worn off before substantial southern rust or gray leaf spot develops, leaving plants vulnerable to disease spread. Systemic fungicides can provide protection from disease spread for about 21 days, so application timing is important to make the best use of the protective and curative characteristics of the products. In 2016 some fields were hit hard with infestations of Southern corn leaf rust in southeast Nebraska that came in late summer. I believe one producer may have lost 30-40 bu/ac in yield for an irrigated field. Most hybrids do not have very good resistance to this disease in Nebraska. That is why it is important to scout for diseases throughout the summer.

Under certain conditions the use of fungicides can definitely be insurance against some diseases, especially under circumstances where disease development is more favorable. Fungicides can also as a management tool to improve plant health and reduce lodging under adverse weather conditions, which could reduce down corn and potentially increase harvestable corn yields. In southeast Nebraska there have been several reports of significant corn yield responses to fungicide applications, especially in corn hybrids susceptible to Gray Leaf Spot. In all crops, environmental factors, cultural practices, such as variety, planting date and irrigation may influence the incidence of disease infection. In some years, conditions have been favorable for disease development, such as Gray Leaf Spot, and application of fungicides provided significant yield responses in a number of University trials. In other years, environmental conditions were less favorable for disease development, and fungicides had less of an impact on corn yields.

For corn the best strategy is: apply a fungicide only when warranted, use IPM and scout fields, use recommended fungicide rates and mix or alternate fungicides with different modes of action. If you have questions about diseases in corn or other crop related issues, feel free to contact me at (402) 274-4755, (402) 274-9639 (cell) or at [glesoing2@unl.edu](mailto:glesoing2@unl.edu).

Gary Lesoing  
Extension Educator  
Nemaha County  
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