WHAT ABOUT DISEASES IN CORN?

With the wet weather we have been having this spring and early summer, there is definitely potential for diseases to develop in corn this summer. The humid conditions, rains and heavy dews we have experienced can be conducive for diseases. To date most of the region has been spared major hail damage, although if we have strong winds it eventually takes its toll and cause crop injury to corn as it grows extremely fast in these warm, humid growing conditions. If we have crop injury to corn due to strong winds or hail, Goss’s Wilt, a bacteria can develop. Although corn prices are not as high as previous years, the market has gotten stronger with reports of several unplanted acres and poor looking corn across the Midwest. There is still potential for excellent yields and it doesn’t take much of a yield bump to pay for a fungicide application to corn. Having said that, it is important to identify what if any disease you have in your crop fields. Certain diseases do not respond to fungicide application. Fungicides will not control Goss’s wilt. If you do have a field that is infected, there are some rescue treatments available, but the best thing to do is plant varieties that have resistance to the disease.

As the summer progresses, scouting fields for diseases is an important IPM tool to use to determine if and when a fungicide should be applied. It is important to keep updated on “CropWatch” at [http://cropwatch.unl.edu/](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. In this week’s issue of CropWatch, Tamra discusses the development of Northern Corn Leaf Blight in some corn fields in Nebraska. She cautions that there have been problems with fungicide application prior to tassling. You can access this article at: [http://cropwatch.unl.edu/corn-fungicide-precautions](http://cropwatch.unl.edu/corn-fungicide-precautions). With corn growth and development behind schedule, 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 also important, i.e Goss’s wilt, 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 twice for later season infestation of diseases.

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 2007 with the heavy rains and wind damage received in August, fungicide application was cost affective on several acres of corn. 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.
Should corn be sprayed with fungicides? One thing is certain with fungicide applications; any response has been variable and not consistent across all fields and crops. Fields which are more subject to development of foliar diseases include: fields that have sprinkler irrigation, protected fields that have little air circulation and bottom fields that are subject to heavy dews. These fields will generally also be higher yielding, so a fungicide application may be beneficial. The problem is you can not predict a disease problem or environmental conditions that will determine if you will get a yield response from a fungicide application. 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, feel free to contact me at (402) 274-4755.

Gary Lesoing
Extension Educator
Nemaha County
July 2015