

BE ALERT TO SEVERAL POTENTIAL CORN DISEASES IN 2022

It seems each year we learn of potentially new corn pests or diseases we need to be aware of. Well, 2022 is no different. In October of 2021, the corn disease “**Tar Spot**” was positively confirmed in seven Nebraska counties, including Richardson County, in extreme southeast Nebraska. They believe it may have even been in corn fields in southeast Nebraska in 2020. While the late discover of tar spot did not impact yields in 2021, it has been shown to have a significant impact on crop yields in other states where they had a high infestation of this disease. The disease first showed up in some Midwestern states in 2015, and since then has been moving west. In the wet year of 2019, it traveled almost across the whole state of Iowa, ending up one county to the east of Nebraska’s border. In the dry year of 2020, the disease did not spread as much and regressed to counties farther east in Iowa. In 2021 again, conditions were more favorable for tar spot to spread. Tar spot prefers cool and wet conditions and flourishes under this type of environment. Therefore, there is concern that tar spot was positively identified in York County, NE, in the heart of Nebraska’s irrigation country. The disease can over winter on cornstalk residue and with significant acres of corn on corn, tar spot could be a challenge in irrigated fields. With the very humid conditions under irrigation, tar spot could spread very rapidly if not controlled with a fungicide. Research has shown tar spot can be controlled during the season, but treatment should be made at early detection of the disease for best results. There is a publication on the Crop Production Network that provides the Fungicide Efficacy for Control of Corn Diseases that shows results for tar spot and other diseases, i.e. Southern Rust, Gray Leaf Spot and others <https://crop-protection-network.s3.amazonaws.com/publications/fungicide-efficacy-for-control-of-corn-diseases-filename-2021-07-14-205804.pdf> . Under some circumstance they have determined yield reductions of close to 50% from tar spot. There is much to learn about hybrid susceptibility to tar spot and if treatment with a fungicide is cost effective. Here is a link to an article and photos of tar spot from *CropWatch* <https://cropwatch.unl.edu/2021/tar-spot-disease-corn-confirmed-several-nebraska-counties> . This article has photos of tar spot. If you have corn with black spots on it or lesions that look like fisheyes, this may be tar spot. You can contact me or the Extension Educator in your county and we can send it in to the Plant Diagnostic Clinic to get a positive identification of the disease.

Another disease that can be an issue is Southern rust, which blows up here from the southern states each year. It doesn’t overwinter in Nebraska on corn stalks, so it arrives at different times each year. It depends on the weather if it is going to be an issue. If it is left untreated Southern rust can cause severe yield losses, 30-40 bu/ac. Therefore, regularly scouting your corn fields is important to determine potential disease issues before they develop.

Gray leaf spot and bacterial leaf streak are other common diseases in southeast Nebraska it is important to look out for. There still is much to learn about bacteria leaf streak, but if you have it, regular fungicides will not control it, since it is bacteria, and not a fungus. It sometimes infects the corn plant earlier than gray leaf spot, as early as the V-7 Stage. Corn plants can be infected by both diseases on the same plant. If you are unsure whether you have gray leaf spot or bacteria leaf streak, feel free to bring a sample to me or the Extension Educator in your county and we will get it to the Plant Diagnostic Center for a positive ID in Lincoln. Positive identification is important for all of these diseases.

With the high cost of inputs for corn production, it is important to be diligent in scouting your fields to determine if treatment with a fungicide will be beneficial for your corn crop. Under some circumstances, say the weather becomes dry and few diseases develop, it may not pay to spray. Also if conditions don't warrant a fungicide application in mid-summer, you may want to bypass an early application and check later. You may be able to save an extra fungicide application. There is good information regarding the efficacy of different fungicides and treatments for field crop diseases including corn in the 2021 and 2022 Guides for Weed, Disease and Insect Management in Nebraska. If you have questions feel free to contact Gary Lesoing at glesoing2@unl.edu or (402) 274-4755 or (402) 274-9639 (cell).

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April 2022