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Assessing Corn Pollination

Corey Prosser, Sales Agronomist – LG Seeds

This year has been a very challenging one to say the least. From a wet spring with a record number of replants, to extreme dry conditions. And for us in Ohio in particular – a very wet year. Some of these issues have impacted corn pollination across the Buckeye state along with others states across the Midwest.

One of the major factors that impacts corn pollination is extreme heat and drought conditions. Drought stress or extreme heat can prevent the corn plant from functioning properly at this very important time. Drought stress can slow silk elongation and can cause pollen shed to be accelerated. With this out of sync, pollen shed may have occurred before silks are fully exposed and can cause poor pollination. High temperatures will cause the pollen to not be viable for as long and also can dry out and damage exposed silks.

There are other factors that impact pollination however.
In Ohio, we have been extremely wet over the year. At the Ohio Corn Performance Testing locations, they have recorded up to 19.1 inches of rain from May 15th to July 19th. This does not include the 2 to 4 inches in the last few weeks. These large amounts of rain have caused corn development to be uneven and there are reports of corn head high that is tasseled. With these conditions, the corn plant has gone through extreme stress which has impacted potential yield.

There are hybrids that have fared better than others as this picture shows. The ear on the left has the best pollination, with the ear on the right having good pollination but there are some issues. The ear in the middle, on the other hand, had major pollination issues. These ears are from commercial hybrids are in a test plot in Ohio.

Corn Pollination
Picture courtesy of Corey Prosser, LG Seeds

Successful pollination in corn is also affected by insects. Insects such as corn rootworm beetles will feed on silks, pollen and kernels. Japanese beetles will feed on the silks which will affect the ability for the corn to properly pollinate. There have been many reports of high numbers of Japanese beetles in both corn and soybeans, causing many growers to apply insecticides with fungicide applications.

It is important to look at your fields to access corn pollination. Looking at ears by pulling back husks will help to determine if your corn pollinated correctly. While accessing pollination make sure to look at multiple ears in different locations of the field. Look at the same hybrid across different fields and soil types if possible as well. This will help determine if there is an issue, was it was related to a single field or soil type. Some hybrids may have handled the stress better and this knowledge will help you make hybrid selections for the future.

Growers also need to look at GDU's to determine if the hybrid hit pollen shed at a time that could impact pollination. For example, 100 day corn and 112 day corn would shed pollen at different GDU's, so if the 100 day corn was not in extreme heat its pollination could be better than the 112 day hybrid. Make sure you look at many factors to help determine what impacted your pollination.

If you have any questions about the hybrids you planted, please contact your DSM or Regional Agronomist for assistance. Thank you for your continued support of the LG Brand and we look forward to a great harvest.

References:

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