

Check Corn Pollination



DR. EMERSON NAFZIGER

URBANA, ILL.

We are starting to get reports that corn pollination might not have been as successful as expected in parts of Illinois. While the weather was generally favorable during the peak period of pollination, it was warm during the third week of July, and soil water may have been limiting during this period in some fields. Thus we would expect to see this in the areas with low rainfall in July.

This is not the lack of silking that we saw in many areas under the drought of 2012. Silks generally emerged well in most fields this year, but tassel emergence was slowed by dry soil conditions in some cases. The warm third week of July was followed by unusually cool weather, with some lows in the upper 40s and lower 50s the last weekend in July.

It's possible that these unusual conditions limited pollen production or that silks became non-receptive (unable to accept and germinate pollen) before the end of pollen-shed. Indications are that scattered kernels from poor pollination are being found at the base of the ear more than at the tip, which might point toward lack of early pollen production and possible loss of silk receptivity.

Regardless of the cause, it's time to get into

fields to see how successful pollination has been. Once silks start to dry, remove husks and shake or pull on silks. Those that detach easily are from fertilized kernels, while those that stay attached are on kernels that have not been fertilized. Silks that emerge more than a week after silks first appeared and seem to be fresh probably emerged after rainfall, and there will typically be little or no pollen available to pollinate these. The target is to have around 500 kernels per ear at populations in the lower to mid-30,000 plant population.

There is little to be done about lack of kernel set at this point, but it will help us know what's coming, and it may help us identify causes. When different hybrids show different degrees of this type of problem, it is often more a matter of timing than genetics; hybrids that silked on a certain date are often affected more than those that silked a day or two later. But if the same hybrid planted on different dates shows the problem, it may be genetic in nature, or possibly related to soils or management. For example, a better root system that can pull water a little more effectively can make a large difference in pollination success.

I'd be interested to receive reports and observations on this so we can try to put the puzzle together. Δ

DR. EMERSON NAFZIGER: Professor, Research Education Center Coordinator, University of Illinois