

Silver Leaf Symptom in Corn

R.L. (Bob) Nielsen
Agronomy Dept., Purdue Univ.
West Lafayette, IN 47907-2054
Email: rnielsen@purdue.edu

Nighttime temperatures have been quite chilly around parts of Indiana for the last week or so. While there have been no reported instances of frost, there have been a number of early mornings with air temperatures in the low 40's F. If you've been out walking your cornfields recently, you may have noticed a curious leaf symptom that may remind you of freezer burn.

Rapid heat loss from terrestrial surfaces to the atmosphere (i.e., radiational cooling) can occur on clear, dry (low humidity), calm nights with temperatures in the low 40's F or cooler. Minor levels of radiational cooling can damage the outer surfaces of corn leaves that are positioned horizontally or parallel to the night sky. The subsequent symptom of such minor chilling injury is often referred to as "silver leaf" in corn.

The "silver leaf" symptom indeed appears as a silvery or dull gray leaf surface. Any portion of a leaf that was not horizontal to the sky or that was protected by another leaf or plant part will not exhibit the symptom.

The effect of this type of minor leaf damage is negligible, if any. The leaves will not die abruptly as will genuinely frosted leaf tissue. Continued expansion of the whorl will not be restricted in any way. New leaves that expand from the whorl will be normal in appearance. This symptom is more of a curiosity than a nuisance.

Don't forget, this and other timely information about corn can be viewed at the Chat 'n Chew Café on the Web at <http://www.kingcorn.org/cafe>. For other information about corn, take a look at the Corn Growers' Guidebook on the Web at <http://www.kingcorn.org>.