Zinc, Sulfur Deficiencies Could Cause Yellow Corn Too

COLUMBIA, MO.

Most yellow corn throughout Missouri is the result of nitrogen deficiency following heavy precipitation this spring, but zinc and sulfur deficiency can also cause striping of corn leaves.

Plant tissue testing is the most accurate way to diagnose nutrient deficiency symptoms in corn, says John Lory, nutrient specialist for the University of Missouri Extension Commercial Agriculture Program.

In many Missouri cornfields, the wet spring washed away a lot of the nitrogen applied in the fall and early spring. Cool, wet soils can also cause temporary sulfur deficiency by slowing the release of sulfur from soil organic matter. By slowing root growth, cool, wet soils can lead to temporary zinc deficiency as well.

While deficiencies in any or all of these nutrients can cause yellowing, there are visual differences.

Nitrogen deficiency causes yellowing from the leaf tip and along the midrib while edges remain green. Yellowing from sulfur deficiency tends to be more evenly distributed throughout the plant. Zinc deficiency can cause yellow to white bleaching of the tissue between leaf veins. The bleached area may spread to include the veins, but the midrib and leaf edges usually stay green.

Visual symptoms can be confusing, however, and mild nutrient deficiencies may not produce obvious visual symptoms, notes David Dunn, MU Extension associate at the Delta Research Center's soil testing laboratory, Portageville.

Tissue testing is the best way to diagnose sulfur and zinc deficiencies in corn, Dunn says, particularly when paired samples are taken, comparing nearby plants that appear to be healthy with those that exhibit symptoms. He also recommends testing at different growth stages.

When submitting samples, remove soil and foreign matter and place the sample in a clearly labeled paper bag. Air-dry the sample for 12-24 hours before mailing or dropping off at your local MU Extension center.

You may also mail samples to the MU Delta Research Center at P.O. Box 160, Portageville, MO 63873. Results are returned in about five working days of receipt. An interpretation of the results also will be sent.

Maintain records of the sampling date, field location, submission date and results. Δ