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WHEN SCOUTING FOR RUST, KEEP AN EYE ON NUTRIENTS, TOO

With so much attention being given to soybean rust, many people will be watching their soybean crop more closely than ever. If you plan on scouting your fields for diseases, you may also want to keep a watchful eye on visible signs of nutrient deficiencies. Not all deficiencies will be discussed here, just some of the ones you are more likely to see.

Yellowed, or chlorotic, leaves can be caused by deficiencies in potassium, iron, manganese, sulfur, and magnesium.

Potassium deficiencies have been observed more frequently in recent years. Affected soybean plants will typically begin to show yellowed tissue along the edges of lower, older leaves first. If the deficiency persists, more affected leaves will appear at progressively higher positions on the plant. Some agronomists have also reported seeing yellowed leaf margins primarily on the upper leaves during soybean reproductive stages.

Iron deficiency chlorosis is common in areas with high pH soils containing free calcium carbonate. Symptoms typically appear first on the younger, upper leaves. Leaf tissue between the veins is yellow, with the veins remaining green (termed interveinal chlorosis). In severe cases, leaves turn a whitish color.

Like iron, manganese deficiency symptoms also appear first as interveinal chlorosis on the newer, upper leaves of the soybean plant. Similarly, symptoms are also more likely to be seen on plants grown in alkaline soils. Yellowed or light green, stunted plants may be exhibiting S deficiency when found on sandy, low organic matter soils.

Magnesium deficiency symptoms occur first on older, lower leaves on soybeans grown in more acid, sandy soils. The lower leaves will show interveinal chlorosis, either as a uniform pale green or yellow color, or as yellow or bronze mottles.

Not all nutrient-deficient plants will show visual symptoms of their malnutrition. This fact, coupled with the understanding that some symptoms are common to more than one nutrient, bolster the need for in-season tissue testing.

Nutrient levels of plant tissue will confirm suspected deficiencies and guide decisions for future nutrient and soil pH management.

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