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URL: <https://ag.purdue.edu/agry/extension/Documents/Soil%20Fertility/Striped%20corn%202013%20URL.pdf>

Striped Corn – Potential Nutritional Deficiencies

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Interveinal chlorosis of corn leaf tissue (striped corn) occurs to some extent every growing season. Several nutrient deficiencies result in similar striped corn symptoms that can be very difficult to distinguish.

Plant sampling and tissue analysis should be conducted to diagnose if leaf striping is due to a particular nutrient deficiency or multiple nutrient deficiencies or another factor unrelated to plant nutrition. Plant samples should be obtained from both good and bad areas of the field. Whole plants can be sampled when plant height is less than 12 inches tall. The most recently collared leaf is suggested when plants exceed this height. The earleaf is sampled at tasseling and silk emergence.

Soil sampling at the same time as plant sampling can help determine whether or not impaired nutrient levels in the plant tissue are a result of inadequacies or imbalances in soil nutrient and pH levels or inefficiency of the crop root system.

Not all cases of striped corn are due to nutrient deficiency. Nematode predation and/or herbicide injury have been implicated as causal factors in



Sulfur (S) deficiency may cause striping or overall yellowing of corn leaves. Release of S from soil organic matter (O.M.) is the primary source of S for plants when no fertilizer S is applied. Cold, wet, low O.M., and sandy soils, high residue, and no-till, are conditions that promote S deficiency. Tissue S <0.15 - 0.18% and/or a N:S ratio >15:1 - 20:1 are indicative of S deficiency.



Zinc (Zn) deficiency may cause striping that begins at the base of the leaf and progresses to the tip. Stripes often coalesce to form a white band along the edge of the leaf or the midrib. High pH, low O.M., sandy soils are most prone to Zn deficiency especially in cool, cloudy springs. Tissue Zn <15-25ppm is considered deficient.



Magnesium (Mg) deficiency may cause striping and/or reddening of corn leaves. Yellow areas between the veins may be 'beaded' rather than striped. Low Mg is often associated with low pH, but Mg deficiency can occur at high pH if imbalances with calcium occur. High soil potassium (K) and high applications of K and anhydrous ammonia can aggravate Mg deficiency. Tissue Mg < 0.15-0.20% is considered deficient.

some instances of striped corn that cannot be attributed to nutrient deficiencies.

Consider submitting whole plants and roots with rootzone soil to the Purdue Plant & Pest Diagnostic Laboratory for nematode analysis and herbicide injury diagnosis.

<http://www.pddl.purdue.edu/PPDL/>



Manganese (Mn) deficiency causes striping that is often described as olive green or mustard yellow in color with veins remaining green. High pH, high O.M., and dry soil conditions reduce Mn availability in certain soils resulting in Mn deficiency. Tissue Mn < 20ppm is considered deficient.

Other useful information

Zinc deficiency in corn. <http://www.agry.purdue.edu/ext/soilfertility/ZincDeficiencyCorn.pdf>

Sulfur deficiency in corn. <http://www.agry.purdue.edu/ext/corn/news/timeless/SulfurDeficiency.pdf>

Manganese deficiencies in Indiana soils. <http://www.agry.purdue.edu/ext/pubs/AY-276-W.pdf>

Role of micronutrients in efficient crop production.

<http://www.extension.purdue.edu/extmedia/AY/AY-239.html>

Tri-state fertilizer recommendations for corn, soybean, wheat & alfalfa.

<http://www.extension.purdue.edu/extmedia/AY/AY-9-32.pdf>

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