

Nutrient Imbalances



FIGURE 1



FIGURE 2



FIGURE 3

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PHOTOGRAPHS: Courtesy of the American Phytopathological Society Bean Compendium (CIAT, A.W. Saettler) [07/10]

COMMON HOSTS: All Legume Crops

SYMPTOMS (ON COMMON BEAN):

Nutrient imbalances may be suspected by the type(s) of symptoms exhibited on plant tissues and entire plants in part or all of an affected field: chlorosis or yellowing; necrosis or death; accumulation of anthocyanins (reddish coloration); lack of new growth; and stunting. Soil testing before planting is recommended to determine existing soil conditions and the need for appropriate amendments.

FIGURE 1 • Manganese deficiency appears as interveinal yellowing, with green veins, and fine speckling of younger leaves which may appear pimply. Older leaves are smoother, and generally yellowed; and pods may be yellowed. Plants may appear stunted.

FIGURE 2 • Iron chlorosis may appear as interveinal yellowing, with green veins, of new leaves. More intense yellowing may develop and appear nearly white, yet veins will remain green. Small necrotic (dead) spots may develop and enlarge.

FIGURE 3 • Zinc deficiency symptoms appear as interveinal yellowing and leaf deformation on younger leaves. Necrotic spots develop, and margins appear lighter in color than the interior of the leaf.

FACTORS FAVORING:

- High soil pH
- Cold, wet soil after planting
- Low organic matter content
- High phosphorus levels
- Soil compaction, restricted root zones and poor root vigor
- Leveled or eroded soils
- Varietal sensitivity

ADDITIONAL DIAGNOSTICS AVAILABLE AT:

<http://legume.ipmpipe.org>

<http://wiki.bugwood.org/PIPE:Legume>

<http://www.apsnet.org/> —

Compendium of Bean Diseases, 2nd Ed.