

MOLYBDENUM FACTOR

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Deficiency Symptoms	Legumes, which exhibit nitrogen starvation, are pale yellow and lack vigor.
Functions In Plant	Necessary for nodule bacteria in fixing nitrogen from the air by legumes. Traces are needed to reduce Nitrate Nitrogen so that they can use Ammonium (NH ₄) in protein formation.
Mobility In Soil	Mobile.
Influence Of Soil pH	Availability of Molybdenum is greatly increased as pH goes up between 4.0 and 7.0. Acid soils fix Molybdenum as oxides of Iron and Aluminum Iron Molybdate, etc.
Factors Affecting Level	pH (soils should be limited to 6.0 to correct deficiencies). Light, sandy soils are most likely deficient.
Factors Affecting Utilization	Excess Copper or Sulfate may depress utilization of Molybdenum. Uptake of phosphorous favors Molybdenum uptake.
Level In Soil	0.1 to 5 lbs. per acre
Adequate Level In Plants	1 – 2 ppm.
Correcting Deficiencies	(1) Apply ½ to 1 oz. per acre on Soybean seeds (2) Lime to pH 6.0 (3) Place 2 oz. per acre in fertilizer treatment (4) Spray 2 oz. per acre of Sodium Molybdate as foliar spray
Sensitive Crops	Soybeans, other legumes.
Remarks	Molybdenum toxicity in animals can occur when their forage contains greater than 10 ppm. Legumes are most likely to accumulate toxic levels of Molybdenum.