

Special Analysis Interpretation Sheet
DTPA Extractable Copper, Iron, Manganese and Zinc
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This test analyzes for soil test levels of Copper (Cu), Iron (Fe), Manganese (Mn) and Zinc (Zn) with DTPA-TEA. Following are the interpretation for these elements in Louisiana soils with this extractant.

-----parts per million-----

Soil Test Rating	Copper	Iron	Manganese	Zinc
Low	<0.2	<2.5	<2.0	<0.5
Medium	0.2-0.25	2.5-4.5	2.0-4.0	0.5-1.25
High	>0.25	>4.5	>4.0	>1.25

Copper- Copper deficiencies in plants are rare in Louisiana. They usually occur on soils containing greater than 12% organic matter. Copper toxicities in plants are also rare, usually occurring where large amounts of copper-based pesticides were applied in the past.

Iron- Iron deficiencies are common in some ornamental, turf and fruit crops. The most common crops are azaleas, camellias, blueberries and centipede grass. Iron deficiency symptoms appear as interveinal chlorosis. The leaf becomes yellow while the veins of the leaf remain green. This usually occurs on the newest leaves. The most common cause of iron deficiency is over-liming, although excessive fertilization with phosphorous can also be a factor. Foliar and soil iron fertilizer treatments or soil acidification can help alleviate iron deficiency.

Manganese- Manganese deficiencies are uncommon in Louisiana. Where they occur, they resemble iron deficiencies. Manganese toxicity is a common problem in the state. It is caused by low soil pH (highly acidic soil). It can be corrected by liming the soil to a pH of 5.5 or higher.

Zinc- Zinc deficiencies are observed in Louisiana on rice, corn, ryegrass, pecan trees and other crops. Zinc deficiency is the most common micronutrient deficiency in the state. It is more likely to occur on over-limed or alkaline soils. Soil and/or foliar –applied zinc is used to correct the deficiency.