Introduction to Section 16 (16h - Field Examples of Plant Nutrients Analyzed for Select Crops)

Nutrients in Crop Plants (highlighted numbers are crop results)		Pecan East El Paso, Tx	Apples Shiprock, NM	Chile Sena, NM	Pumpkins Lordsburg, NM	Blue Corn Isleta, NM	Sorghum Clovis, NM	Alfalfa Animas, NM	Pasture(Tierra Amarilla, NM)
		Sufficiency Range (% or ppm)	Sufficiency Range (% or ppm)	Sufficiency Range (% or ppm)	Sufficiency Range (% or ppm)	Sufficiency Range (% or ppm)	Sufficiency Range (% or ppm)	Sufficiency Range (% or ppm)	Sufficiency Range (% or ppm)
1	Nitrogen	(2.49 - 2.8%) 2.66%	(1.9 - 2.3%) 2.04%	(3.0 - 5.0%) 5.22%	(3 - 6%) 5%	(2.8 - 4.0%) 2.5%	(3.3 - 4.0%) 3.14%	(4.5 - 7.0%) 4.03%	(2.0 - 3.15%) 2.53%
2	Phosphorus	(0.11 - 0.3%) 0.12%	(0.09 - 0.40%) 0.09%	(0.3 - 0.5%) 0.32%	(0.3 - 0.5%) 0.54%	(0.25 - 0.5%) 0.15%	(0.20 - 0.35%) 0.26%	(0.25 - 1.5%) 0.33%	(0.14 - 0.34%) 0.17%
3	Potassium	(0.74 - 1.25%) 0.95%	(1.2 - 1.8%) 1.37%	(2.5 - 5.0%) 5.43%	(2.3 - 4.0%) 3.62%	(1.8 - 3.0%) 2.2%	(1.4 - 2.5%) 1.94%	(2.5 - 7.0%) 3.52%	(0.85 - 2.35%) 1.67%
4	Sulfur	(0.19 - 0.4%) 0.22%	(0.2 - 0.40%) 0.11%	unavailable 0.42%	(0.2 - 0.40%) 0.36%	(0.15 - 0.6%) not analyzed	unavailable 0.17%	(0.3 - 1.0%) 0.3%	(0.14 - 0.25%) 0.14%
5	Calcium	(0.89 - 1.5%) 1.21%	(0.8 - 1.6%) 1.84%	(0.9 - 2.5%) 1.74%	(0.9 - 1.5%) 1.95%	(0.25 - 0.8%) 0.5%	(0.30 - 0.60%) 0.24%	(1.0 - 5.0%) 1.67%	(0.40 - 1.55%) 1.39%
6	Magnesium	(0.29 - 0.6%) 0.31%	(0.25 - 0.45%) 0.50%	unavailable 0.49%	(0.35 - 0.60%) 0.54%	(0.15 - 0.6%) 0.3%	(0.20 - 0.50%) 0.15%	(0.30 - 2.0%) 0.24%	(0.11 - 0.28%) 0.31%
7	Zinc	(49 - 100 ppm) 58 ppm	(20 - 50 ppm) 32 ppm	unavailable 25 ppm	(20 - 50 ppm) 36 ppm	(20 - 70 ppm) 35 ppm	(15 - 30 ppm) 30 ppm	(20 - 150 ppm) 18 ppm	(11 - 34 ppm) 26 ppm
8	Iron	(49 - 300 ppm) 135 ppm	(50 - 200 ppm) 174 ppm	Unavailable 97 ppm	(40 - 100 ppm) 182 ppm	(30 - 250 ppm) 100 ppm	(65 - 100 ppm) 273 ppm	(50 - 1000 ppm) 151 ppm	(25 - 65 ppm) 85 ppm
9	Manganese	(99 - 800 ppm) 58 ppm	(25 - 135 ppm) 97 ppm	unavailable 49 ppm	(40 - 100 ppm) 41 ppm	(15 - 150 ppm) 55 ppm	(8 - 190 ppm) 28 ppm	(30 - 250 ppm) 51 ppm	(25 - 45 ppm) 57 ppm
10	Copper	(9 - 30 ppm) 6 ppm	(6 - 12 ppm) 6 ppm	unavailable 8 ppm	(5 - 10 ppm) 12 ppm	(5 - 25 ppm) 15 ppm	(2 - 7 ppm) 23 ppm	(10 - 50 ppm) 9 ppm	(5 - 11 ppm) 10 ppm
11	Boron	(29 - 45 ppm) 105 ppm	(30 - 50 ppm) 26 ppm	unavailable 35 ppm	(25 - 40 ppm) 107 ppm	(5 - 25 ppm) 17 ppm	(1 - 10 ppm) 7 ppm	(30 - 100ppm) 45 ppm	(15 - 30 ppm) 30 ppm
12	Molybdenum	unavailable not analyzed	(> 0.1 ppm) not analyzed	unavailable not analyzed	unavailable not analyzed	(0.1 - 2.0 ppm) not analyzed	unavailable not analyzed	unavailable not analyzed	unavailable not analyzed
13	Sodium	(0 - 0.1%) 0.02%	unavailable not analyzed	unavailable 0.01%	Excessive > .5% Below detection	unavailable not analyzed	unavailable not analyzed	unavailable 0.138%	unavailable not analyzed
14	Chloride	(> 0.5%) not analyzed	unavailable not analyzed	unavailable not analyzed	unavailable not analyzed	unavailable not analyzed	unavailable not analyzed	unavailable not analyzed	unavailable not analyzed

Nutrient levels at or below the Low Sufficiency Range indicate a High Probability of a fertilizer response.

A fertilizer response May or May Not be obtained when the nutrient levels are Within the Sufficiency Range.

Nutrient levels at or above the High Sufficiency Range indicates a Low Probability of a fertilizer response.

NOTE: Leaf and Petiole analysis is used as a monitoring tool for determining the adequacy of the fertilization and crop management practices.

Considerations: Nutrient Deficiency, Nutrient Toxicity, Hidden Hunger (i.e., no visual symptoms), Nutrient Imbalance and Fertility Monitoring & Effectiveness

Agronomy Tech Note 76 (http://www.nm.nrcs.usda.gov/technical/handbooks/iwm/nmiwm.html)

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