

Woody Ornamental Nursery Container Crops

Suggested Ranges and Limits for Nutrient and Chemical Capacity Factors for Water, Mid-Season Substrates, and Plant Tissue

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Capacity Factor	Irrigation Water	Substrate Leachate (BMP's & VTEM PT)	Plant Tissue (General Guidelines)
pH	5.4-7.0	5.2-6.3	---
Conductivity (mmhos/cm)	0.2-2.0	0.5-2.0	---
Total Dissolved Salts	<1000 ppm	<1400 ppm	---
Bicarbonate	<100 ppm or <2 meq/L	---	---
Alkalinity (carbonate + bicarbonate) [1 meq/L = 50 ppm CaCO ₃]	<100 ppm CaCO ₃ or <2 meq/L	---	---
Total Conductivity	<2 meq/L	---	---
Hardness (Ca+Mg)	<150 ppm or <3 meq/L	---	---
Sodium Absorption Ratio (SAR)	<10 meq/L	---	---
Individual Elements			
N	---	100-150 ppm	2-3.5%
NO ₃ -N	10 ppm	50 ppm	---
NH ₄ -N	2-10 ppm	50 ppm	---
P	<1 ppm	3-15 ppm	0.2-0.5%
K	<10 ppm	<100 ppm	1.1-2 %
Ca	<60 ppm	40-200 ppm	1-2 %
Mg	<6-24 ppm	10-50 ppm	0.3-0.8%
S	<24 ppm	75-125 ppm	0.2-0.7%
Fe	0.2-0.4 ppm	0.3-3 ppm	35-250 ppm
Mn	<0.5-2 ppm	0.02-3 ppm	50-200 ppm
Zn	<0.3 ppm	0.3-3 ppm	20-200 ppm
Cu	<0.2 ppm	0.01-0.5 ppm	6-25 ppm
B	<0.5 ppm	0.5-3 ppm	6-75 ppm
Mo	<0.1 ppm	0-1 ppm	0.1-2 ppm
Al	0.05-0.5 ppm	0-3 ppm	<300 ppm
Fl	<1 ppm	---	---
Na	<3 meq/L or <50 ppm	<50 ppm	0.01-0.1 %
Cl	<70 ppm	<70 ppm	50-200 ppm