

# Super Start

Super Start 12-45-10<sup>PLUS</sup> is especially designed as a starter solution which aids plants in rooting faster. It helps overcome transplanting shock. Its nitrogen content is low enough to prevent burning and still promote new top growth. Super Start is widely used in greenhouse and nursery operations to correct and supplement low phosphorous levels in established plantings. It is also very effective in promoting blossoming. Young vegetable plants being set in the field respond especially well to this starter formula. Use for seedling, transplants and rooted cuttings. Excellent for container azaleas and rhododendrons to promote compact growth and increase bud density.

**GREENHOUSE MIXING RATE FOR 200 PPM NITROGEN HOSE END SPRAYER:**  
 1:15 ratio- Premix  
 3.33 oz. in 1 gallon (25 grams per litre).  
**TANK:** 0.22 oz. per gallon (1.67 grams per litre).  
**PROPORTIONER:**  
 1:100 ratio use 22.21 oz. per gal. of concentrate (167 grams per litre).  
**OTHER RATIOS:**  
 Multiply ratio times weight divided by 100.  
**OTHER PPM:** Multiply desired PPM times weight divided by 200.  
 Increase or decrease PPMN according to crop response.

<b>Guaranteed Analysis</b> (For continuous liquid feeding)			
<b>12-45-10+ Super Start</b>	<b>Percent</b>	<b>Lbs/Ton</b>	<b>Concentration at 200 PPM</b>
Total Nitrogen (N) .....	12%	240	200 PPM as N
9.11% Ammoniacal Nitrogen			
2.89% Nitrate Nitrogen			
Available Phosphate (P <sub>2</sub> O <sub>5</sub> ) .....	45%	900	750 PPM as P <sub>2</sub> O <sub>5</sub>
Soluble Potash (K <sub>2</sub> O) .....	10%	200	167 PPM as K <sub>2</sub> O
Magnesium .....	0.05%	1.0	0.83 PPM as Mg
Sulfur (S) .....	0.31%	6.2	5.2 PPM as S
0.31% Combined Sulfur (S)			
Boron (B) .....	0.02%	0.4	0.33 PPM as B
Copper (Cu) .....	0.05%	1.0	0.83 PPM as Cu
0.05% Chelated Copper (Cu)			
Iron (Fe) .....	0.10%	2.0	1.67 PPM as Fe
0.10% Chelated Iron (Fe)			
Total Manganese (Mn) .....	0.05%	1.0	0.83 PPM as Mn
0.05% Chelated Manganese			
Molybdenum (Mo) .....	0.001%	0.02	0.0167 PPM as Mo
Zinc (Zn) .....	0.05%	1.0	0.83 PPM as Zn
0.05% Chelated Zinc (Zn)			
Derived from Ammonium Sulphate, Ammonium Phosphate, Potassium Nitrate, Magnesium Sulfate, Borax, Sodium Molybdate, and the EDTA forms of Copper, Iron, Manganese and Zinc. Potential acidity equivalent to 737 lbs. Calcium Carbonate per ton.			

<b>Nitrogen Parts Per Million Chart</b>				
<b>Injector Ratio</b>	<b>Ounces required per Gallon of concentrate</b>			
	<b>100 PPM</b>	<b>150 PPM</b>	<b>200 PPM</b>	<b>300 PPM</b>
<b>1:50</b>	5.55	8.33	11.11	16.65
<b>1:100</b>	11.11	16.67	22.22	33.33
<b>1:150</b>	16.67	25.00	33.34	50.01
<b>1:200</b>	22.21	33.32	44.42	66.63
<b>1:300</b>	33.32	49.98	66.64	99.96

Based on 1/2 gallon per square foot coverage.  
 Two Tablespoons equals One Ounce (approximately)  
 One Cup equals One Pound (approximately)

<b>Conductivity of 12-45-10+</b> using distilled water mixed at: (allow +/- 10%)	
50 PPM Nitrogen =	.36 Millimhos/CM
100 PPM Nitrogen =	.71 Millimhos/CM
150 PPM Nitrogen =	1.07 Millimhos/CM
200 PPM Nitrogen =	1.42 Millimhos/CM
300 PPM Nitrogen =	2.13 Millimhos/CM
400 PPM Nitrogen =	2.84 Millimhos/CM
500 PPM Nitrogen =	3.55 Millimhos/CM