5-12-26 PART A

PRODUCT NUMBER 79030

FeED

FORMULA

5-12-26

PART A

GROWTH OF LEAVES & STRONG ROOTS

guaranteed analysis

F1313

Total Nitrogen (N)	5.0%
5.0% Nitrate Nitrogen	
Available Phosphate (P_2O_5)	12.0%
Soluble Potash (K_2O)	26.0%
Magnesium (Mg)	6.3%
6.3% water soluble magnesium (Mg)	
Sulfur (S)	8.5%
8.5% combined sulfur (S)	
Boron (B)	0.05%
Copper (Cu)	0.015%
0.015% chelated copper (Cu)	
Iron (Fe)	0.30%
0.30% chelated iron (Fe)	
Manganese (Mn)	0.05%
0.05% chelated manganese (Mn)	
Molybdenum (Mo)	0.019%
Zinc (Zn)	0.015%
0.015% chelated zinc (Zn)	

Derived from: Potassium nitrate, magnesium sulfate, monopotassium phosphate, iron DTPA, iron EDTA, iron EDDHA, copper EDTA, manganese EDTA, zinc EDTA, boric acid, ammonium molybdate.

Potential Basic: 170 lbs. of calcium carbonate equivalent (CCE) per ton. Information regarding the contents and levels of metals in this product is available on the internet at: http://www.aapfco.org/metals.html

Limit of Solubility = 1 lb. per gallon

ATTENTION: The application of fertilizer material containing Molybdenum (Mo) may result in forage crops containing levels of Molybdenum (Mo) which are toxic to ruminant animals.

Information regarding the contents and levels of metals in this product is available on the internet at: **http://www.aapfco.org/metals.htm**

mixing instructions

FOR AN EC OF 1.0 (50 PPM N)

An improvement on the classic "Part A" formula for general vegetative growing. This redesigned blend is built with purely soluble and available nutrients to allow the grower maximum flexibility. This specific mixture of macro, secondary and micronutrients delivers a combination of nutrients suitable for many different growing environments and crop types. As with all Jack's fertilizers, we use only the highest grade technical materials in our formulation. Manufacturing is done under laboratory control with the finest available mixing and blending equipment using an exclusive JR PETERS process.

Follow these steps to obtain a precipitate free solution:

Step 1: Dissolve 13 ounces of 5-12-26 Hydro FeED Part A in 100 gallons of final feed solution at a strength of 50 ppm N. Mix well. Using warm or hot water will speed up the dissolving process. To follow the Jack's 3-2-1 method, PROCEED WITH THE REMAINING STEPS.

Step 2: Dissolve any additional Epsom Salts (MgSO4) into the solution before proceeding. For most crops, 50 ppm Mg is an adequate level in solution. To increase Mg levels, a good equation to remember is for every 10 ounces of Epsom salts you will add 7.5 ppm of Mg and 12 ppm S.

Step 3: Dissolve 8.6 ounces of Calcium Nitrate into the above 100 gallon solution to obtain a total nutrient concentration of 150 PPM Nitrogen and 116 PPM Calcium. Please refer to elemental breakdown in the chart below.

For best results, keep in mind that fertilizer salts dissolve in an endothermic reaction which means that they absorb heat from their surroundings during the process. This is why hot water works best when dissolving high concentrations (over 1lb per gallon range). Maximum fertilizer solubilities per gallon of hot water are listed with each formula description.

(FOR CONTINUOUS LIQUID FEED PROGRAMS)

1 GALLON CONCENTRATE	30 LITERS	100 GALLONS
FOR INJECTORS AT 1:100 :	WHEN MEASURING BY VOLUME:	FOR LARGER SIZE GROWING SYSTEMS:
Mix 13 oz. per gallon of stock	Mix 30 mL of fertilizer in water as a constant liquid feed	Mix 13 dry oz of fertilizer in water as a constant liquid feed

*USEFUL CONVERSIONS:
1 OZ BY VOL = 29.57 ML AND 1 GAL = 3.78 L
1 TSP = 5 GM

elemental concentration

50 ppm N Solution Contains the Following Elemental ppm		
Nitrate - N	(NO_3)	50.0
Ammonium - N	(NH_4)	0.0
Urea – N	(Urea)	0.0
Phosphorus	(P)	52.35
Potassium	(K)	215.85
Calcium	(Ca)	0.0
Magnesium	(Mg)	63.2
Boron	(B)	0.500
Copper	(Cu)	0.150
Iron	(Fe)	3.000
Manganese	(Mn)	0.500
Molybdenum	(Mo)	0.100
Zinc	(Zn)	0.150

6 71341 79030 3

NET WT. 25 LB. (11.34 KG)

PROUDLY CRAFTED IN THE USA

5-12-26 PART A

PRODUCT NUMBER 79030

12-4-16

PRODUCT NUMBER 79040

FeED

FORMULA

12–4–16

NUTRIENT UPTAKE IN PURE & REVERSE OSMOSIS WATERS

guaranteed analysis

F1313

Total Nitrogen (N)	12.0%
0.2% Ammoniacal Nitrogen	
11.8% Nitrate Nitrogen	
Available Phosphate (P_2O_5)	4.0%
Soluble Potash (K_2O)	16.0%
Calcium (Ca)	7.0%
Magnesium (Mg)	2.0%
2.0% water soluble magnesium (Mg)	
Boron (B)	0.02%
Copper (Cu)	0.020%
0.02% chelated copper (Cu)	
Iron (Fe)	0.15%
0.15% chelated iron (Fe)	
Manganese (Mn)	0.05%
0.05% chelated manganese (Mn)	
Molybdenum (Mo)	0.001%
Zinc (Zn)	0.035%
0.035% chelated zinc (Zn)	

Derived from: Calcium nitrate, potassium nitrate, magnesium nitrate, monopotassium phosphate, iron DTPA, iron EDTA, iron EDDHA, manganese EDTA, zinc EDTA, copper EDTA, boric acid, ammonium molybdate.

Potential Basic: 338 lbs. of calcium carbonate equivalent (CCE) per ton. Information regarding the contents and levels of metals in this product is available on the internet at: http://www.aapfco.org/metals.html

ATTENTION: The application of fertilizer material containing Molybdenum (Mo) may result in forage crops containing levels of Molybdenum (Mo) which are toxic to ruminant animals.

Information regarding the contents and levels of metals in this product is available on the internet at: **http://www.aapfco.org/metals.htm**

mixing instructions

FOR AN EC OF 1.38 (150 PPM N)

When you are starting with water that is very pure, one key is to remember that it is up to YOU to add back all the good nutrients that your crop needs to survive. Formula designers at JR Peters ensured this blend will provide a highly soluble NPK plus an enhanced micronutrient package along with 7 % Calcium and 2 % soluble magnesium to help replace the nutrients that are missing from pure water and RO filter water types.

Dissolve 17 ounces in 100 gallons of water to achieve a final feed strength of 150 PPM

For best results, keep in mind that fertilizer salts dissolve in an endothermic reaction which means that they absorb heat from their surroundings during the process. This is why hot water works best when dissolving high concentrations (over 1lb per gallon range). Maximum fertilizer solubilities per gallon of hot water are listed with each formula description.

(FOR CONTINUOUS LIQUID FEED PROGRAMS)

1 GALLON CONCENTRATE	30 LITERS	100 GALLONS
FOR INJECTORS AT 1:100 :	WHEN MEASURING BY VOLUME:	FOR LARGER SIZE GROWING SYSTEMS:
Mix 17 oz. per gallon of stock	Mix 56.25 mL of fertilizer in water as a constant liquid feed	Mix 17 dry oz of fertilizer in water as a constant liquid feed

*USEFUL CONVERSIONS:
1 OZ BY VOL = 29.57 ML AND 1 GAL = 3.78 L
1 TSP = 5 GM

elemental concentration

100 ppm N Solution Contains the Following Elemental ppm		
Nitrate - N	(NO_3)	99.7
Ammonium - N	(NH_4)	3.1
Urea – N	(Urea)	0.0
Phosphorus	(P)	34.2
Potassium	(K)	134.3
Calcium	(Ca)	59.1
Magnesium	(Mg)	17.0
Boron	(B)	0.150
Copper	(Cu)	0.160
Iron	(Fe)	1.250
Manganese	(Mn)	0.500
Molybdenum	(Mo)	0.010
Zinc	(Zn)	0.300

6 71341 79040 2

NET WT. 25 LB. (11.34 KG)

PROUDLY CRAFTED IN THE USA

12-4-16

PRODUCT NUMBER 79040

15-5-20

PRODUCT NUMBER 79050

FeED

FORMULA

15-5-20

GROWTH OF LEAVES & STRONG ROOTS

guaranteed analysis

F1313

Total Nitrogen (N)	15.0%
3.0% Ammoniacal Nitrogen	
12.0% Nitrate Nitrogen	
Available Phosphate (P_2O_5)	5.0%
Soluble Potash (K_2O)	20.0%
Calcium (Ca)	3.0%
Magnesium (Mg)	1.5%
1.5% water soluble magnesium (Mg)	
Boron (B)	0.02%
Copper (Cu)	0.020%
0.02% chelated copper (Cu)	
Iron (Fe)	0.15%
0.15% chelated iron (Fe)	
Manganese (Mn)	0.08%
0.08% chelated manganese (Mn)	
Molybdenum (Mo)	0.001%
Zinc (Zn)	0.050%
0.050% chelated zinc (Zn)	

Derived from: Potassium nitrate, ammonium nitrate, calcium nitrate, magnesium nitrate, monopotassium phosphate, iron DTPA, iron EDTA, iron EDDHA, copper EDTA, manganese EDTA, zinc EDTA, boric acid, ammonium molybdate.

Potential Basic: 20 lbs. calcium carbonate equivalent (CCE) per ton.
Information regarding the contents and levels of metals in this product is available on the internet at: http://www.aapfco.org/metals.html

ATTENTION: The application of fertilizer material containing Molybdenum (Mo) may result in forage crops containing levels of Molybdenum (Mo) which are toxic to ruminant animals.

Information regarding the contents and levels of metals in this product is available on the internet at: **http://www.aapfco.org/metals.htm**

mixing instructions

FOR AN EC OF 1.23 (150 PPM N)

City and well water typically maintains pH levels between 6.5 to 8.5. The scientists at JR Peters designed this product to work with these water types to optimize nutrient absorption. 3% Calcium and 1.5% Magnesium deliver the preferred ratio of soluble secondary nutrients..

Dissolve 13.5 ounces in 100 gallons of water to achieve a final feed strength of 150 PPM N

For best results, keep in mind that Fertilizer salts dissolve in an endothermic reaction which means that they absorb heat from their surroundings during the process. This is why hot water works best when dissolving high concentrations (over 1lb per gallon range). Maximum fertilizer solubilities per gallon of hot water are listed with each formula description.

(FOR CONTINUOUS LIQUID FEED PROGRAMS)

1 GALLON CONCENTRATE	30 LITERS	100 GALLONS
FOR INJECTORS AT 1:100 :	WHEN MEASURING BY VOLUME:	FOR LARGER SIZE GROWING SYSTEMS:
Mix 13.5 oz. per gallon of stock	Mix 30 mL of fertilizer in water as a constant liquid feed	Mix 13.5 dry oz of fertilizer in water as a constant liquid feed

*USEFUL CONVERSIONS:
1 OZ BY VOL = 29.57 ML AND 1 GAL = 3.78 L
1 TSP = 5 GM

elemental concentration

100 ppm N Solution Contains the Following Elemental ppm		
Nitrate - N	(NO_3)	80.79
Ammonium - N	(NH_4)	20.7
Urea – N	(Urea)	0.00
Phosphorus	(P)	35.87
Potassium	(K)	134.80
Calcium	(Ca)	20.37
Magnesium	(Mg)	10.30
Boron	(B)	0.15
Copper	(Cu)	0.15
Iron	(Fe)	1.31
Manganese	(Mn)	0.500
Molybdenum	(Mo)	0.010
Zinc	(Zn)	0.330

6 71341 79050 1

NET WT. 25 LB. (11.34 KG)

PROUDLY CRAFTED IN THE USA

PRODUCT NUMBER 79050

15-5-20

10-30-20

PRODUCT NUMBER 79060

FeED

FORMULA

10-30-20

ROOT GROWTH + FLOWER & FRUIT DEVELOPMENT

guaranteed analysis

F1313

Total Nitrogen (N)	10.0%
5.0% Ammoniacal Nitrogen	
5.0% Nitrate Nitrogen	
Available Phosphate (P_2O_5)	30.0%
Soluble Potash (K_2O)	20.0%
Magnesium (Mg)	0.5%
0.5% water soluble magnesium (Mg)	
Sulfur (S)	0.80%
0.8% combined sulfur (S)	
Boron (B)	0.02%
Copper (Cu)	0.050%
0.05% chelated copper (Cu)	
Iron (Fe)	0.10%
0.10% chelated iron (Fe)	
Manganese (Mn)	0.05%
0.05% chelated manganese (Mn)	
Molybdenum (Mo)	0.001%
Zinc (Zn)	0.050%
0.050% chelated zinc (Zn)	

Derived from: Monoammonium phosphate, monopotassium phosphate, potassium nitrate, magnesium sulfate, boric acid, iron EDTA, manganese EDTA, zinc EDTA, copper EDTA, ammonium molybdate.

Potential Acidity: 417 lbs. of calcium carbonate equivalent (CCE) per ton.
Information regarding the contents and levels of metals in this product is available on the internet at: http://www.aapfco.org/metals.html

ATTENTION: The application of fertilizer material containing Molybdenum (Mo) may result in forage crops containing levels of Molybdenum (Mo) which are toxic to ruminant animals.

Information regarding the contents and levels of metals in this product is available on the internet at: **http://www.aapfco.org/metals.htm**

mixing instructions

FOR AN EC OF 1.5 (150 PPM N)

Need a Boost of Flower Power? Our 1:3:2 major nutrient ratio has been trusted by Jack's Professional growers for over 70 years. This soluble and available nutrient combination stimulates blooming. Start using me when you initiate flowering.

Step 1: Dissolve 20 ounces in 100 gallons of water to achieve a final feed strength of 150 PPM N

Step 2: Add in 4oz of Greener

For best results, keep in mind that fertilizer salts dissolve in an endothermic reaction which means that they absorb heat from their surroundings during the process. This is why hot water works best when dissolving high concentrations (over 1lb per gallon range). Maximum fertilizer solubilities per gallon of hot water are listed with each formula description.

(FOR CONTINUOUS LIQUID FEED PROGRAMS)

1 GALLON CONCENTRATE	30 LITERS	100 GALLONS
FOR INJECTORS AT 1:100 :	WHEN MEASURING BY VOLUME:	FOR LARGER SIZE GROWING SYSTEMS:
Mix 20 oz. per gallon of stock	Mix 45 mL of fertilizer in water as a constant liquid feed	Mix 20 dry oz of fertilizer in water as a constant liquid feed

*USEFUL CONVERSIONS:
1 OZ BY VOL = 29.57 ML AND 1 GAL = 3.78 L
1 TSP = 5 GM

elemental concentration

100 ppm N Solution Contains the Following Elemental ppm		
Nitrate - N	(NO_3)	50.0
Ammonium - N	(NH_4)	50.0
Urea – N	(Urea)	0.0
Phosphorus	(P)	130.9
Potassium	(K)	166.0
Calcium	(Ca)	0.0
Magnesium	(Mg)	20.3
Boron	(B)	0.068
Copper	(Cu)	0.036
Iron	(Fe)	0.500
Manganese	(Mn)	0.250
Molybdenum	(Mo)	0.009
Zinc	(Zn)	0.025

6 71341 79060 0

PROUDLY CRAFTED IN THE USA

NET WT. 25 LB. (11.34 KG)

PRODUCT NUMBER 79060

10-30-20

15-6-17

PRODUCT NUMBER 79070

FeED

FORMULA

15-6-17

FAST ROOT DEVELOPMENT & EXTENSIVE ROOT SYSTEM GROWTH

guaranteed analysis

F1313

Total Nitrogen (N)	15.0%
3.0% Ammoniacal Nitrogen	
12.0% Nitrate Nitrogen	
Available Phosphate (P_2O_5)	6.0%
Soluble Potash (K_2O)	17.0%
Calcium (Ca)	4.0%
Magnesium (Mg)	1.80%
1.80% water soluble magnesium (Mg)	
Boron (B)	0.02%
Copper (Cu)	0.01%
0.01% chelated copper (Cu)	
Iron (Fe)	0.23%
0.23% chelated iron (Fe)	
Manganese (Mn)	0.05%
0.05% chelated manganese (Mn)	
Molybdenum (Mo)	0.009%
Zinc (Zn)	0.05%
0.05% chelated zinc (Zn)	

Derived from: Ammonium nitrate, calcium nitrate, potassium nitrate, magnesium nitrate, monopotassium phosphate, iron DTPA, iron EDTA, iron EDDHA, manganese EDTA, zinc EDTA, copper EDTA, boric acid, ammonium molybdate.

Potential Basic: 75 lbs. calcium carbonate equivalent (CCE) per ton.
Information regarding the contents and levels of metals in this product is available on the internet at: http://www.aapfco.org/metals.html

ATTENTION: The application of fertilizer material containing Molybdenum (Mo) may result in forage crops containing levels of Molybdenum (Mo) which are toxic to ruminant animals.

Information regarding the contents and levels of metals in this product is available on the internet at: **http://www.aapfco.org/metals.htm**

mixing instructions

FOR AN EC OF 0.77 (100 PPM N)

Jack's FeED 15-6-17 was developed to shorten the time it takes for a newly stuck young plant, cutting or clone to produce an extensive and established root system. Fertilizing with this formula from initial watering up to transplant, provides the developing root system with the nutrients needed to begin a strong vegetative growth stage.

Dissolve 9 ounces in 100 gallons of water to achieve a final feed strength of 100 PPM N

For best results, keep in mind that fertilizer salts dissolve in an endothermic reaction which means that they absorb heat from their surroundings during the process. This is why hot water works best when dissolving high concentrations (over 1lb per gallon range). Maximum fertilizer solubilities per gallon of hot water are listed with each formula description.

(FOR CONTINUOUS LIQUID FEED PROGRAMS)

1 GALLON CONCENTRATE	30 LITERS	100 GALLONS
FOR INJECTORS AT 1:100 :	WHEN MEASURING BY VOLUME:	FOR LARGER SIZE GROWING SYSTEMS:
Mix 9 oz. per gallon of stock	Mix 20 mL of fertilizer in water as a constant liquid feed	Mix 9 dry oz of fertilizer in water as a constant liquid feed

*USEFUL CONVERSIONS:
1 OZ BY VOL = 29.57 ML AND 1 GAL = 3.78 L
1 TSP = 5 GM

elemental concentration

100 ppm N Solution Contains the Following Elemental ppm		
Nitrate - N	(NO_3)	79.57
Ammonium - N	(NH_4)	20.09
Urea – N	(Urea)	0.0
Phosphorus	(P)	38.56
Potassium	(K)	114.08
Calcium	(Ca)	26.01
Magnesium	(Mg)	11.91
Boron	(B)	0.15
Copper	(Cu)	0.10
Iron	(Fe)	1.50
Manganese	(Mn)	0.35
Molybdenum	(Mo)	0.01
Zinc	(Zn)	0.35

6 71341 79070 9

NET WT. 25 LB. (11.34 KG)

PROUDLY CRAFTED IN THE USA

PRODUCT NUMBER 79070

15-6-17

5-50-18

FeED

FORMULA

5-50-18

BUD SET & ENHANCED
FLOWER PRODUCTION

PRODUCT NUMBER 79010

guaranteed analysis

F1313

Total Nitrogen (N)	5.0%
5.0% Ammoniacal Nitrogen	
Available Phosphate (P_2O_5)	50.0%
Soluble Potash (K_2O)	18.0%
Magnesium (Mg)	1.00%
1.00% water soluble magnesium (Mg)	
Sulfur (S)	1.40%
1.40% combined sulfur (S)	
Boron (B)	0.01%
Copper (Cu)	0.004%
0.004% chelated copper (Cu)	
Iron (Fe)	0.05%
0.05% chelated iron (Fe)	
Manganese (Mn)	0.02%
0.02% chelated manganese (Mn)	
Molybdenum (Mo)	0.001%
Zinc (Zn)	0.002%
0.002% chelated zinc (Zn)	

Derived from: Monopotassium phosphate, monoammonium phosphate, potassium chloride, magnesium sulfate, iron DTPA, iron EDTA, manganese EDTA, zinc EDTA, copper EDTA, boric acid, ammonium molybdate.

Potential Acidity: 554 lb. calcium carbonate equivalent (CCE) per ton.
Information regarding the contents and levels of metals in this product is available on the internet at: http://www.aapfco.org/metals.html

ATTENTION: The application of fertilizer material containing Molybdenum (Mo) may result in forage crops containing levels of Molybdenum (Mo) which are toxic to ruminant animals.

Information regarding the contents and levels of metals in this product is available on the internet at: **http://www.aapfco.org/metals.htm**

mixing instructions

FOR AN EC OF 1.8 (100 PPM N)

Remember the old school Variegated Violet of the 1960's? The formula designers at JR Peters adapted this Jack's FeED formula with the most innovative raw materials to enhance that original very popular blend. The results speak for themselves and deliver that hard to reach boost of P that is useful for the short period of time that the plant will benefit from it the most.

Dissolve 27 ounces in 100 gallons of water to achieve a final feed strength of 100 PPM N

For best results, keep in mind that fertilizer salts dissolve in an endothermic reaction which means that they absorb heat from their surroundings during the process. This is why hot water works best when dissolving high concentrations (over 1lb per gallon range). Maximum fertilizer solubilities per gallon of hot water are listed with each formula description.

(FOR CONTINUOUS LIQUID FEED PROGRAMS)

1 GALLON CONCENTRATE	30 LITERS	100 GALLONS
FOR INJECTORS AT 1:100 :	WHEN MEASURING BY VOLUME:	FOR LARGER SIZE GROWING SYSTEMS:
Mix 27 oz. per gallon of stock	Mix 60 mL of fertilizer in water as a constant liquid feed	Mix 27 dry oz of fertilizer in water as a constant liquid feed

*USEFUL CONVERSIONS:
1 OZ BY VOL = 29.57 ML AND 1 GAL = 3.78 L
1 TSP = 5 GM

elemental concentration

100 ppm N Solution Contains the Following Elemental ppm		
Nitrate - N	(NO_3)	0.0
Ammonium - N	(NH_4)	100.0
Urea – N	(Urea)	0.0
Phosphorus	(P)	436.4
Potassium	(K)	298.8
Calcium	(Ca)	0.0
Magnesium	(Mg)	20.0
Boron	(B)	0.140
Copper	(Cu)	0.070
Iron	(Fe)	1.000
Manganese	(Mn)	0.500
Molybdenum	(Mo)	0.020
Zinc	(Zn)	0.050

6 71341 79010 5

NET WT. 25 LB. (11.34 KG)

PROUDLY CRAFTED IN THE USA

PRODUCT NUMBER 79010
5-50-18

7-15-30

PRODUCT NUMBER 79020

FeED

FORMULA

7-15-30

STRONG, FINISHED PLANTS

guaranteed analysis

F1313

Total Nitrogen (N)	7.0%
3.0% Ammoniacal Nitrogen	
4.0% Nitrate Nitrogen	
Available Phosphate (P_2O_5)	15.0%
Soluble Potash (K_2O)	30.0%
Magnesium (Mg)	2.00%
2.00% water soluble magnesium (Mg)	
Sulfur (S)	9.70%
9.70% combined sulfur (S)	
Boron (B)	0.02%
Copper (Cu)	0.05%
0.05% chelated copper (Cu)	
Iron (Fe)	0.07%
0.07% chelated iron (Fe)	
Manganese (Mn)	0.05%
0.05% chelated manganese (Mn)	
Molybdenum (Mo)	0.002%
Zinc (Zn)	0.05%
0.05% chelated zinc (Zn)	

Derived from: Potassium nitrate, monopotassium phosphate, ammonium sulfate, potassium sulfate, magnesium sulfate, iron DTPA, iron EDTA, manganese EDTA, zinc EDTA, copper EDTA, boric acid, ammonium molybdate.

Potential Acidity: 228 lbs. of calcium carbonate equivalent (CCE) per ton.
Information regarding the contents and levels of metals in this product is available on the internet at: http://www.aapfco.org/metals.html

ATTENTION: The application of fertilizer material containing Molybdenum (Mo) may result in forage crops containing levels of Molybdenum (Mo) which are toxic to ruminant animals.

Information regarding the contents and levels of metals in this product is available on the internet at: **http://www.aapfco.org/metals.htm**

mixing instructions

FOR AN EC OF 1.0 (100 PPM N)

The formula design of Jack's 7-15-30 FeED is to promote a robust plant with high quality nutrients at the right ratio for plant uptake at this growth stage. With no calcium in the formula, it may be advised to evaluate your water source and plan to add additional Ca as in Jack's CaNO3 Boost to supplement your water source.

Dissolve 19 ounces in 100 gallons of water to achieve a final feed strength of 100 PPM N

For best results, keep in mind that fertilizer salts dissolve in an endothermic reaction which means that they absorb heat from their surroundings during the process. This is why hot water works best when dissolving high concentrations (over 1lb per gallon range). Maximum fertilizer solubilities per gallon of hot water are listed with each formula description.

(FOR CONTINUOUS LIQUID FEED PROGRAMS)

1 GALLON CONCENTRATE	30 LITERS	100 GALLONS
FOR INJECTORS AT 1:100 :	WHEN MEASURING BY VOLUME:	FOR LARGER SIZE GROWING SYSTEMS:
Mix 19 oz. per gallon of stock	Mix 43 mL of fertilizer in water as a constant liquid feed	Mix 19 dry oz of fertilizer in water as a constant liquid feed

*USEFUL CONVERSIONS:
1 OZ BY VOL = 29.57 ML AND 1 GAL = 3.78 L
1 TSP = 5 GM

elemental concentration

100 ppm N Solution Contains the Following Elemental ppm		
Nitrate - N	(NO_3)	50.1
Ammonium - N	(NH_4)	57.0
Urea – N	(Urea)	0.0
Phosphorus	(P)	215.1
Potassium	(K)	431.3
Calcium	(Ca)	0.0
Magnesium	(Mg)	22.9
Boron	(B)	0.300
Copper	(Cu)	0.780
Iron	(Fe)	1.000
Manganese	(Mn)	0.750
Molybdenum	(Mo)	0.030
Zinc	(Zn)	0.750

6 71341 79020 4

NET WT. 25 LB. (11.34 KG)

PROUDLY CRAFTED IN THE USA

PRODUCT NUMBER 79020

7-15-30

18-8-23

PRODUCT NUMBER 79140

FeED

FORMULA

18-8-23

OUTDOOR

GROWTH OF LEAVES & STRONG ROOTS

F1313

guaranteed analysis

Total Nitrogen (N)	18.0%
6.48% Ammoniacal Nitrogen	
11.52% Nitrate Nitrogen	
Available Phosphate (P_2O_5)	8.0%
Soluble Potash (K_2O)	23.0%
Magnesium (Mg)	0.50%
0.50% water soluble magnesium (Mg)	
Sulfur (S)	1.59%
1.59% combined sulfur (S)	
Boron (B)	0.02%
Copper (Cu)	0.011%
0.011% chelated copper (Cu)	
Iron (Fe)	0.15%
0.15% chelated iron (Fe)	
Manganese (Mn)	0.05%
0.05% chelated manganese (Mn)	
Molybdenum (Mo)	0.010%
Zinc (Zn)	0.050%
0.050% chelated zinc (Zn)	

Derived from: ammonium nitrate, potassium nitrate, monopotassium nitrate, monopotassium phosphate, potassium sulfate, magnesium sulfate, citric acid, iron EDTA, manganese EDTA, iron DTPA, Zinc EDTA, Iron EDDHA, boric acid, copper EDTA, ammonium molybdate.

Potential Acidity: 386 lb. Calcium carbonate equivalent per ton.

ATTENTION: The application of fertilizer material containing Molybdenum (Mo) may result in forage crops containing levels of Molybdenum (Mo) which are toxic to ruminant animals.

Information regarding the contents and levels of metals in this product is available on the internet at: **http://www.aapfco.org/metals.htm**

mixing instructions

FOR AN EC OF 0.78 (100 PPM N)

Jack's 18-8-23 Outdoor Formula is a potentially acidic formula useful to deliver soluble nutrients in the powdered form.

Best for use in situations where the root environment or source water starts at a higher pH and/or alkalinity.

The scientists at Jack's put together this combination of nutrients so that the plant can take up very soluble and available nutrient sources as well as stay in the target pH range.

Trialed and tested to show optimum results in the vegetative stage of the crop cycle especially for plants grown in soil/soilless media and other substrates with higher starting pH's.

(FOR CONTINUOUS LIQUID FEED PROGRAMS)

100 GALLONS

FOR LARGER SIZE GROWING SYSTEMS:

7.5 oz per 100 gallons of ready to use nutrient solution

OR

1 GALLON CONCENTRATE

FOR INJECTORS AT 1:100 :

7.5 oz per gallon of stock concentrate

*USEFUL CONVERSIONS:
1 OZ BY VOL = 29.57 ML AND 1 GAL = 3.78 L
1 TSP = 5 GM

elemental concentration

100 ppm N Solution Contains the Following Elemental ppm		
Nitrate - N	(NO_3)	100.0
Ammonium - N	(NH_4)	30.0
Urea – N	(Urea)	70.0
Phosphorus	(P)	45.0
Potassium	(K)	128.0
Calcium	(Ca)	0.0
Magnesium	(Mg)	10.0
Boron	(B)	0.100
Copper	(Cu)	0.060
Iron	(Fe)	0.900
Manganese	(Mn)	0.300
Molybdenum	(Mo)	0.050
Zinc	(Zn)	0.300

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PROUDLY CRAFTED IN THE USA

NET WT. 25 LB. (11.34 KG)

PRODUCT NUMBER 79140

18-8-23

15-0-0

BOOST

FORMULA

15-0-0

CAL NIT PART B

CALCIUM UPTAKE & STRONG LEAF GROWTH

guaranteed analysis

F1313

Total Nitrogen (N)	15.0%
15.0% Nitrate Nitrogen	
Calcium (Ca)	18.0%

Derived from: calcium nitrate

Potential Basic: 400 lb. of calcium carbonate equivalent (CCE) per ton. Information regarding the contents and levels of metals in this product is available on the internet at: http://www.aapfco.org/metals.html

mixing instructions

FOR AN EC OF 0.74 (100 PPM N)

An essential "Part B" provides a very soluble and available source of Calcium in a two-part nutrient system. Contains very pure and completely available calcium and nitrate nitrogen nutrient sources.

Dissolve 8.6 ounces in 100 gallons of water to achieve a final feed strength of 100 PPM N

For best results, keep in mind that fertilizer salts dissolve in an endothermic reaction which means that they absorb heat from their surroundings during the process. This is why hot water works best when dissolving high concentrations (over 1lb per gallon range). Maximum fertilizer solubilities per gallon of hot water are listed with each formula description.

(FOR CONTINUOUS LIQUID FEED PROGRAMS)

1 GALLON CONCENTRATE

FOR INJECTORS AT 1:100 :

Mix 8.6 oz. per gallon of stock

30 LITERS

WHEN MEASURING BY VOLUME:

Mix 20 mL of fertilizer in water as a constant liquid feed

100 GALLONS

FOR LARGER SIZE GROWING SYSTEMS:

Mix 8.6 dry oz of fertilizer in water as a constant liquid feed

*USEFUL CONVERSIONS:
1 OZ BY VOL = 29.57 ML AND 1 GAL = 3.78 L
1 TSP = 5 GM

elemental concentration

100 ppm N Solution Contains the Following Elemental ppm		
Nitrate - N	(NO_3)	93.0
Ammonium - N	(NH_4)	7.0
Urea – N	(Urea)	0.0
Phosphorus	(P)	0.0
Potassium	(K)	0.0
Calcium	(Ca)	116.1
Magnesium	(Mg)	0.0
Boron	(B)	0.000
Copper	(Cu)	0.000
Iron	(Fe)	0.000
Manganese	(Mn)	0.000
Molybdenum	(Mo)	0.000
Zinc	(Zn)	0.000

6 71341 79080 8

PROUDLY CRAFTED IN THE USA

NET WT. 25 LB. (11.34 KG)

PRODUCT NUMBER 79080

15-0-0

PRODUCT NUMBER 79080

15-0-0

Rev 5/08

14-5-38 K-Trate LX

(FOR CONTINUOUS LIQUID FEED PROGRAMS)

Product Number 77950

Product Number 77950

14-5-38K-Trate LX

14-5-38K -Trate LX

GUARANTEED ANALYSIS F1313

Total nitrogen (N) 14%
10.46% nitrate nitrogen
3.54% urea nitrogen
Available phosphate (P_2O_5) 5%
Soluble potash (K_2O) 38%
Boron (B) 0.0140%
Copper (Cu) 0.0070%
0.0070% chelated copper (Cu)
Iron (Fe) 0.0700%
0.0700% chelated iron (Fe)
Manganese (Mn) 0.0350%
0.0350% chelated manganese (Mn)
Molybdenum (Mo) 0.0070%
Zinc (Zn) 0.0350%
0.0350% chelated zinc (Zn)

Derived from: urea, potassium phosphate, potassium nitrate, boric acid, iron EDTA, manganese EDTA, zinc EDTA, copper EDTA, ammonium molybdate

Potential basicity: 234 lb. Calcium carbonate equivalent per ton.

Information regarding the contents and levels of metals in this product is available on the internet at: http://www.aapfco.org/metals.html

WARNING: This product contains Molybdenum (Mo) and may be harmful to ruminant animals foraging on grass where applications have been made

Small Volume Measuring
(Indicates ppm N delivered)

%N in the fert	*Fertilizer/Gallon*		
	1/2 tsp	**1 tsp**	**1 Tbsp**
20%	125	250	750
15%	94	188	564
10%	67.5	125	375

SUGGESTED FEEDING CONCENTRATIONS PPM NITROGEN

Jack's Professional® recommends these feed rates for the following crops. Remember to also consider plant stage, pot size, leaching fraction and environmental conditions when applying suggested rates. The quality of your water source will also affect overall feed rates, frequency and other additions in order to achieve optimum growth.

	Constant Liquid Feed (CLF)	**Periodic** (Every 7-10 days)
Plugs/Salt Sensitive	50-125	175-225
Woody Ornamentals	50-100	200-375
Bedding Plants	100-150	200-250
General Foliage	100-200	250-300
Cut Flowers	175-225	300-450
Garden/Landscape	200-300	400-750
Heavy Feeders *Geranium, Mum, Lily, Poinsettia, Vegetable*	200-300	350-400
Light Feeders *NG impatiens, Fuscia, Begonia, Fern, Orchid, Native perennial*	75-150	200-250

MIXING INSTRUCTIONS

Chart displays the amount of dry fertilizer (oz.) to add to each gallon of water to make a concentrated solution. Please check your injector setting before use.

Desired N feed rate	*Injector Setting*			**E.C. value** *(mmhos)*
	1:15	**1:100**	**1:200**	
50 ppm	.72	4.83	9.65	.39
100 ppm	1.45	9.65	19.30	.78
200 ppm	2.90	19.30	38.60	1.56

Limit of Solubility = 3 lbs per gallon

***Important Notes**:*

E.C. value is the best method to determine fertilizer strength. Fertilizer appearance may vary in color due to variation in raw material size and tracer dye distribution upon the particles in the bag. In solution, color will remain consistent.

For best results, use warm water to dissolve product. Jack's fertilizers are made with 100% soluble raw materials that will form a true solution. Some raw materials are slower to dissolve than others. Keep stock tank covered to reduce light and debris inputs.

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Product Number
77950

NET WT. 25LB (11.34KG)

Rev 5/08

10-0-0 Mag-Trate LX

(FOR CONTINUOUS LIQUID FEED PROGRAMS)

Product Number 77420

10-0-0 Mag-Trate LX

Product Number 77420

10-0-0 Mag-Trate LX

GUARANTEED ANALYSIS F1313

Total nitrogen (N) 10%
10.00% nitrate nitrogen
Magnesium (Mg), total 9%
9% water soluble magnesium (Mg)
Boron (B) 0.0100%
Copper (Cu) 0.0050%
0.0050% chelated copper (Cu)
Iron (Fe) 0.0500%
0.0500% chelated iron (Fe)
Manganese (Mn) 0.0250%
0.0250% chelated manganese (Mn)
Molybdenum (Mo) 0.0050%
Zinc (Zn) 0.0250%
0.0250% chelated zinc (Zn)

Derived from: magnesium nitrate, boric acid, iron EDTA, manganese EDTA, zinc EDTA, copper EDTA, ammonium molybdate

Potential basicity: 348 lb. Calcium carbonate equivalent per ton.

Information regarding the contents and levels of metals in this product is available on the internet at: http://www.aapfco.org/metals.html

WARNING: This product contains Molybdenum (Mo) and may be harmful to ruminant animals foraging on grass where applications have been made

Small Volume Measuring
(Indicates ppm N delivered)

%N in the fert	*Fertilizer/Gallon*		
	1/2 tsp	**1 tsp**	**1 Tbsp**
20%	125	250	750
15%	94	188	564
10%	67.5	125	375

SUGGESTED FEEDING CONCENTRATIONS PPM NITROGEN

Jack's Professional® recommends these feed rates for the following crops. Remember to also consider plant stage, pot size, leaching fraction and environmental conditions when applying suggested rates. The quality of your water source will also affect overall feed rates, frequency and other additions in order to achieve optimum growth.

	Constant Liquid Feed (CLF)	**Periodic** (Every 7-10 days)
Plugs/Salt Sensitive	50-125	175-225
Woody Ornamentals	50-100	200-375
Bedding Plants	100-150	200-250
General Foliage	100-200	250-300
Cut Flowers	175-225	300-450
Garden/Landscape	200-300	400-750
Heavy Feeders *Geranium, Mum, Lily, Poinsettia, Vegetable*	200-300	350-400
Light Feeders *NG impatiens, Fuscia, Begonia, Fern, Orchid, Native perennial*	75-150	200-250

MIXING INSTRUCTIONS

Chart displays the amount of dry fertilizer (oz.) to add to each gallon of water to make a concentrated solution. Please check your injector setting before use.

Desired N feed rate	*Injector Setting*			**E.C. value** *(mmhos)*
	1:15	**1:100**	**1:200**	
50 ppm	1.0	6.75	13.5	.40
100 ppm	2.0	13.5	27.0	.80
200 ppm	4.0	27.0	54.0	1.60

Limit of Solubility = 15 lbs per gallon

***Important Notes**:*

E.C. value is the best method to determine fertilizer strength. Fertilizer appearance may vary in color due to variation in raw material size and tracer dye distribution upon the particles in the bag. In solution, color will remain consistent.

For best results, use warm water to dissolve product. Jack's fertilizers are made with 100% soluble raw materials that will form a true solution. Some raw materials are slower to dissolve than others. Keep stock tank covered to reduce light and debris inputs.

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Product Number
77420

NET WT. 25LB (11.34KG)