

WATER SOLUBLE FERTILIZERS



Total Gro premium plant foods are formulated from the highest purity components and contain no chlorides or fluorides that could damage the sensitive greenhouse and nursery crops. All formulations include properly proportioned ratios of micronutrients manufactured from high purity chelated iron, manganese, copper, zinc, sodium borate and molybdate. An intense blue-green tracer is included to facilitate easy monitoring when used in an injector. These products are packaged in a 25 lb., 5 mil. multi-wall polyethylene bags to prevent excessive moisture build-up.



All Purpose 20-20-20

This all purpose plant food can be used where the fertility state of the soil is not known, or where nutrients are at a medium (optimum) level where no special fertility correction is necessary. It is recommended that our higher nitrate general purpose formula 20-10-20 be used in low light conditions or cool weather periods to avoid ammonium conversion problems.

ITEM #	DESCRIPTION
FTT20	20-20-20

General Purpose 20-10-20

This general purpose formula serves a wide variety of needs in all growing conditions, and meets the specific nutritional needs of many floricultural and other greenhouse crops. This formulation contains 60% nitrate nitrogen, and as such, is recommended for all phases of bedding plant productions, and most potted flowering crops including poinsettia, chrysanthemum, geraniums, gloxinia, gerbera, and many others.

ITEM #	DESCRIPTION
FT201020	20-10-20

Cal-P-Mag Special 14-4-14

The Cal-P-Mag Mix is a versatile and easy to use **two-part** high calcium, magnesium and nitrate formula that has the added advantage of being capable of supplying phosphorus. This formula is an ideal secondary feed when using 20-10-20 as your primary plant food source.

ITEM #	DESCRIPTION
FT14414	14-4-14

Hi-Phosphate Special 15-30-15

Hi-Phosphate Special is useful where soil test calls for additional phosphate. Can be used as plant starter for young plants and ideal for bedding plant production.

ITEM #	DESCRIPTION
FT153015	15-30-15

Soil-Less Mix Special 15-16-17

While the name infers peat-like usage, the high nitrate nitrogen content makes this blend suitable for modern bark-containing mixes. A high ratio of nitrate to ammoniacal nitrogen, ideal for mums and geraniums, is achieved in this formula, while maintaining an equal balance of total nitrogen, phosphorus and potash.

ITEM #	DESCRIPTION
FT151617	15-16-17

Pansy Special 15-2-20

This unique 2-part formula contains high levels of calcium needed for robust, stocky stem growth and strong roots. It also contains magnesium needed to promote chlorophyll production and deep green leaves. The relatively low phosphorus is designed to produce compact plants and minimize the common problem of stretching.

ITEM #	DESCRIPTION
FT15220	15-2-20

WATER SOLUBLE FERTILIZERS



Fern Special 18-24-18

This formula specifically meets the high ammonium, nitrogen, and phosphorus requirements of Boston fern and similar plants. Chelated trace elements prevent deficiencies that are common in the well-drained soils used in fern production.

ITEM #	DESCRIPTION
FT182418	18-24-18

Acid Special 20-6-20

The Acid Mix is an ideal alternative to 20-10-20 for growers using alkaline irrigation water. High alkalinity waters, combined with high hardness (high calcium and/or magnesium), may cause media to increase in pH over time. Unlike formulas containing urea phosphate that has inherent initial acidity, our product has high potential acidity that controls pH after fertilization.

ITEM #	DESCRIPTION
FT20620	20-6-20

OUNCES of FERTILIZER per GALLON of CONCENTRATE						
% NITROGEN	100 ppmN 1:15 Ratio	100 ppmN 1:100 Ratio	100 ppmN 1:200 Ratio	200 ppmN 1:15 Ratio	200 ppmN 1:200 Ratio	200 ppmN 1:200 Ratio
10 % Nitrogen	2 oz.	13.5 oz	27 Oz.	4 oz.	27 Oz.	N/A
15% Nitrogen	1.35 oz	9 oz	18 oz	2.70 oz.	18 oz	36 oz
20% Nitrogen	1 oz	6.75 oz	13.5 oz	2 oz.	13.5 oz	27 oz
21% Nitrogen	.95 oz	6.44 oz	12.9 oz	1.90 oz.	12.9 oz	25.7 oz

Helpful Hints

1 oz./ gal = 7490 ppm
 1 oz./ 100 gal = 75 ppm

To determine Parts Per Million (ppm) of an element in a fertilizer, simply multiply the percent of that element by 75. The answer will be the ppm of the element per ounce of the fertilizer in 100 gallons of water

Example: Ammonium Sulfate contains approximately 20% Nitrogen. 20% X 75 is 15
 15 is the ppm of nitrogen in 1 ounce of Ammonium Sulfate per 100 gallons of water.

VOLUME AND LIQUID MEASURE

- 3 teaspoons = 1 tablespoon = 14.8 cc
- 2 tablespoons = 1 fluid ounce = 29.6 cc
- 8 fluid ounces = 16 tablespoons = 1 cup = 236.6 cc
- 2 cups = 32 teaspoons = 1 pint = 473.1 cc
- 2 pints = 64 teaspoons = 1 quart = 946.2 cc
- 1 liter = 33.81 ounces = 0.2642 gallons = 1000cc
- 4 quarts = 256 tablespoons = 1 gallon = 3785 cc
- 1 gallon = 128 fluid ounces = 231 cubic inches = 3785 cc
- 1 bushel = 2244 cubic feet = 9.309 gallons = 352 liters
- 1cc = 1 ml



CONTROLLED RELEASE FERTILIZER



Nutricote is characterized by coating nitrate compound fertilizers with a special resin. The duration of nutrient release is controlled by the porosity of the resin coating. A more porous coating results in quicker release. This technology ensures consistency and precision of nutrient release from Nutricote controlled release fertilizers.

When Nutricote is applied to the soil, the water in the soil enters the granule through micropores, which dissolves the nutrient elements. The nutrient elements will then be released steadily through the same pores. Most Nutricote granules are 3 to 4 mm in diameter.

What Affects Release?

Nutricote's release rate is influenced by soil temperature, the higher the soil temperature, the greater the release rate. Absorption of nutrients and water by plants is generally increased with increasing temperature and plant growth will become more vigorous as a result. Nutrient supply through Nutricote nicely matches the physiology of plant response to temperature.

Unique Nutricote Qualities

- True control of nutrient release based on temperature
- Optimum fertilizer levels are maintained since leaching of nutrients is minimized
- Resin coating is very smooth and uniform which would allow uncontrolled release of nutrients
- Uniform particle size allows easier and precise mechanical distribution

Stocking Formulas

18-8-8 8-9 Month Controlled Release - This 100% polymer coated fertilizer is by far our best seller. Superior performance has been proven over and over gain. This fertilizer contains a slow release coated mid term Nitrogen, an early release coated Phosphorus for root development, along with a long term, slow release coated potash for Flowering. This formula has a good minor package with coated slow release magnesium.

ITEM #	SIZE	RELEASE	DESCRIPTION
FK1888	50 Lb.	Up To 9 Months	Nutricote 18-8-8

17-5-9 8-9 Month Controlled Release - A 76% polymer coated fertilizer that is a lower cost alternative to 18-8-8. It also contains a slow release coated mid term Nitrogen, a early release coated Phosphorus for root development, along with a long term, slow release coated potash for Flowering. This formula has a good minor package with coated slow release magnesium.

ITEM #	SIZE	RELEASE	DESCRIPTION
FK1759	50 Lb.	Up To 9 Months	Nutricote 17-5-9

14-14-14 3 Month Controlled Release – This formula is custom made for caSSco's greenhouse customers and is a caSSco exclusive. 14-14-14 is recommended for annuals, flowering ornamentals, mums and perennials. It contains a high percentage of nitrate nitrogen with no urea that makes this formula ideal to use in almost any situation. The highest quality sources of N-P-K makes the nutrients readily available to the crop.

ITEM #	SIZE	RELEASE	DESCRIPTION
FK141414	50 Lb.	Up To 3 Months	Nutricote 14-4-14

GENERAL FERTILIZER



Gro & Sho 12-6-6 Premium Nursery Fertilizer has been a widely used analysis for many years. This formula works well for foliage plants, ornamental shrubs, bedding plants and any plant requiring a balanced feeding of necessary nutrients. A portion of the nitrogen is released through soil bacterial action providing nitrogen in amounts required by the plant.



Many factors will influence the longevity of this product. Based on 68-degree soil temperature, optimum plant growth and appearance occurs when the product is reapplied in 1 to 2 months.

ITEM #	FORMULA
FGS126650	12-6-6 Nursery Fertilizer

General Fertilizer & Trace Elements

ITEM #	SIZE	FORMULA	ITEM #	SIZE	FORMULA
FGS0460	50 lb.	0-46-0 Triple Superphosphate	FESU4	4 lb.	Iron Sulfate
FDOLIMEPE	40 lb.	Dolomitic Lime – Pelletized	FESU50	50 lb.	Iron Sulfate
FDOLIMEPO	50 lb.	Dolomitic Lime – Powdered	FBONEM4	4 lb.	Bone Meal
FALUMS4	4 lb.	Aluminum Sulfate	FBONEM20	20 lb.	Bone Meal
FALUMS50	50 lb.	Aluminum Sulfate	FSODMI1P	1 lb.	Sodium Molybdate
FESP330	5 lb.	Iron Chelate			

Meg-Iron V

Micro-Nutrient Package

A very cost effective Micro Nutrient Package for Trees, Shrubs, Foliage, Palms, and Woody Ornamentals. Base rate of incorporation is 2-5 lbs./cu yd. Contains Calcium, Magnesium, Sulphur, Copper, Iron, Manganese and Zinc.

ITEM #	FKMEGIRON
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Calcium Nitrate

Calcium Nitrate is completely water soluble and leaves no oily residue like Agricultural Grade Calcium Nitrate.

ITEM #	FCALNIT
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Calcium Nitrate		15.5% Nitrogen EC @ 100ppm=0.74			
		mmho/cm			
Oz/Gal Of Concentrate To Deliver Indicated ppm					
Injector Ratio	50 ppm	100 ppm	150 ppm	200 ppm	
1:15	0.65	1.3	2.0	2.6	
1:100	4.36	8.7	13	17.7	

Magnesium Sulfate

A water soluble source of magnesium.

ITEM #	FMAGSU50
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Magnesium Sulfate		10% Magnesium EC @ 100ppm=0.38			
		Mmho/cm			
Oz/Gal Of Concentrate To Deliver Indicated ppm					
Injector Ratio	50 ppm	100 ppm	150 ppm	200 ppm	
1:15	1	2	3	4	
1:100	6.7	13.4	20.1	26.8	

Before using above charts, check label for percent of nutrients. Adjust rate as necessary.