

CALCIUM/POTASSIUM NITRATE HANDLING

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The care of the 15-0-15, 15-0-18 and 14-0-22 fertilizers, mixtures of calcium and potassium nitrates, has been described over the telephone very frequently. It is time to again remind our readers of a simple procedure that will overcome the absorption of moisture and caking or dissolving in the bag.

Calcium and potassium nitrates are being used more widely for many crops including bedding plants in Connecticut and in other areas where there is little calcium in the irrigation water. Depending upon the clay and/or vermiculite content of the root medium and the requirement for potassium, three formulas are generally used.

Calcium Nitrate:Potassium Nitrate			Analysis
1	:	1	= 14-0-22
3	:	2	= 15-0-18
2	:	1	= 15-0-15

All of these are hygroscopic, absorbing water from the air. Once a bag is opened, it becomes hard and calcium nitrate may dissolve. This can be avoided by deciding in advance just how much you will need each time you prepare a stock solution for your injector. For instance, suppose that you wish a stock solution for a five gallon container for use in a 1:100 injector at 450 ppm nitrogen. You will need 2 1/2 lbs. per gallon of stock, or 12 1/2 lbs. of 15-0-15 or 15-0-18 for five gallons.

Calcium and potassium nitrates are usually sold in 100 lb. bags. The ratio for 15-0-18 is 3:2. On a clean floor or sheet of plastic, dump 100 lbs. of calcium nitrate and 67 lbs. (2/3 bag) of potassium nitrate. Mix well. Find a container to measure out 12 1/2 lbs. or the amount needed for your injector system. Then fill plastic bags (sandwich, food-wrap, wastebasket liner or garbage depending on the amount being used each time) and place them inside a large plastic garbage bag inside a garbage pail.

Be certain to seal and label each bag. This will prevent moisture absorption while providing premeasured amounts of fertilizer for your stock solution.

This will cost about 15¢ per pound, 1/3 the price of a prepared 15-0-15. It will contain less than 4% ammonium nitrogen instead of 13% as in the commercial preparation.

Less than a penny will add color if desired. For another penny, a soluble trace element mix can be included if the root medium is primarily peat-lite.

This does not dissolve as readily as commercial mixes. Hot water is desirable. Without hot water, dissolve it a day before using. If some sludge is left in the bucket, don't worry. If 2% doesn't dissolve, it looks like a lot of junk in the bucket but the plants won't know the difference.

Since the cost of fertilization is usually less than 2% of the value of the crop, nothing less than the very best fertilizer program is profitable. Here is a chance to have the best fertilizer for many crops at less than the usual cost.