# Fertilizing a garden takes more than a guess

NEWARK, Del. - Many home gardeners mistakenly overfertilize their flower and vegetable plants, unaware that nutrients like potassium and phosphorus tend to accumulate in the soil and can reach levels which interfere with healthy growth. What appears like only a small amount of fertilizer when you spread it over a few square yards is actually a rather high rateespecially considering the high nutrient concentration of today's fertilizers.

In most cases, says University of Delaware Extension soil specialist Leo Cotnoir, when a complete fertilizer has been used for several years, the potassium and phosphorus are at good levels and all you need to grow a good crop is some added nitrogen.

This should be applied at the rate of three pounds actual nitrogen per 1000 square feet of ground. This can be provided by using either 10 pounds of ammonium nitrate or 7 1/2 pounds of urea per 1000 square feet. These materials are available at most garden centers, as well as farm supply stores.

For ease of application figure on putting down one cup of ammonium nitrate per 100 square feet or 3/4 cup urea over the same area at planting time. Then apply an equal amount divided over three subsequent applications-the first when plants are vigorously growing (sweet corn and tomatoes will be about a foot high); a second and third application at two to three week intervals following

Each of these later applications will amount to about 3 heaping tablespoons

of ammonium nitrate or three level tablespoons of urea per 10 feet of rows spaced two feet apart. Increase the dosage slightly if rows are further apart; decrease it if they are closer.

For individual plants, such as tomatoes, small shrubs, etc., or for small flower beds these supplementary applications should be either 2 heaping tablespoons of ammonium nitrate or 2 level tablespoons of urea per plant or per square yard.

Work the fertilizer in around the plants. This is especially important when using urea.

Should you prefer to supply the nitrogen needs of your garden with animal manure, this may be applied at a rate of up to 500 pounds per 1000 square feet, depending on the condition of the material. Nitrogen from a source like cow manure

for two or three years following application. Unless the manure is well-rotted, be careful about using it around growing plants.

On the subject of special fertilizers such as bonemeal, Cotnoir isn't very enthusiastic. He feels this material is somewhat overrated and says superphosphate will do just as good a job at a much lower cost. And, of course, if your soil already tests high in phosphorus, there's no reason for using this material anyway.

High-acid fertilizers designed for use around holly, rhododendron and azalea plants may also give you more of a good thing than you need. In this case, they may make the soil too acid. If your pH is already satisfactory, you could be better off just using a simple nitrogen source-but no lime, of course.

Except where special plant needs require an acid soil, home gardeners may also need to lime their soil, if

will have a residual benefit the pH level is too low. The only way to find this out is to have your soil tested. If lime is called for, 50 pounds per 1000 square feet will usually

be the amount needed, but on very acid soils as much as 200 pounds can sometimes be



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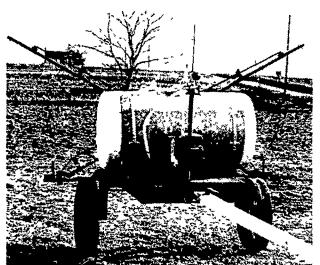
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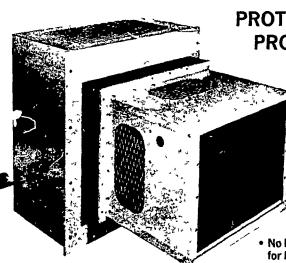
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