

## Are You Using the Right Fertilizer?

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Fertilizer can be a good thing. Fertilizers contain nutrients that plants need to grow. A typical fertilizer contains N (nitrogen) - P (phosphorus) - K (potassium), in that order. Those are the three numbers in a fertilizer analysis. A 5-10-15 fertilizer, for example, contains 5% nitrogen, 10% phosphorus, and 15% potassium.

Excess fertilizer can be a bad thing, much as excess food can cause us health problems. We need to be careful not to apply fertilizer nutrients that aren't really needed. We also need to try and apply fertilizer nutrients in the ratios that do our plants the most good.

Many fertilizers that are sold give plants too high of a nitrogen to potassium ratio. A perfect example is the 27-3-3 lawn fertilizers that are sold. That's a 9:1 nitrogen to potassium ratio! Too much nitrogen over too short a period of time can result in excessive vegetative growth on plants. Excessive vegetative growth makes us mow and prune more often and can lead to secondary problems such as increased disease and insect pest susceptibility. Fertilizers such as 27-3-3 also lack sufficient potassium. Potassium is needed for strong cell walls in plants. Strong cell walls help increase plant hardiness, such as cold hardiness or drought hardiness.

Many fertilizers also supply more phosphorus than we need. Many of our Florida soils already have adequate phosphorus available to plants. So phosphorus deficiency is a rare problem. If we apply excess phosphorus, it can run off into our stormwater and on into our lakes. There it stimulates excessive algae and plant growth and can result in fish kills. So the excess fertilizer we apply in our yards becomes a water-pollution problem.

Considering these factors, a 15-0-15 fertilizer is a good general-purpose landscape fertilizer. It has a 1:1 nitrogen to potassium ratio. It has no phosphorus. And if you select a 15-0-15 fertilizer with 7.5% slow-release nitrogen, you reduce the rapid growth flush that too much nitrogen applied at once can cause. You also reduce the amount of nitrogen that leaches down below the root system and into our groundwater. And you lengthen the amount of time that the plant will be able to utilize the nitrogen from the fertilizer.

To help you simplify the maze of possible fertilizers on the market, below is a list of good fertilizers for our area that should cover most needs:

15-0-15	General-purpose landscape fertilizer for shrubs, small trees, lawns, flowers, and groundcovers. Select one with 7.5% slow-release nitrogen.
15-5-15	For new plantings, where the available phosphorus may help establishment. Also for short-term plantings such as flowering annuals or for when a soil test indicates a need for phosphorus. Select one with 7.5% slow-release nitrogen.
10-10-10 20-20-20 15-15-15 etc.	For general vegetable garden and fruit tree use. Vegetables and fruits can probably use the phosphorus. Or, at least we don't have the research yet to show otherwise, as we do in landscape horticulture.
5-10-15	For vegetable gardens when you need to use less nitrogen. If you've been getting lots of vegetative growth and no vegetables, excess nitrogen may be your problem (provided you have plenty of sun).

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<p>5-0-15 5-0-20</p>	<p>If you want to fertilize your lawn in late August to late September, these would be good “winterizer” type fertilizers. Could be used on shrubs at that time of year, too.</p>
<p>Palm Fertilizers</p>	<p>Palm fertilizers should be those such as 15-5-15 with 1% magnesium (Mg) and also containing sulfur (S), about 1 to 2% iron (Fe) and manganese (Mn), and trace amounts of zinc (Zn), copper (Cu) and boron (B).</p>
<p>Citrus Fertilizers</p>	<p>Citrus fertilizers can be a fertilizer such as 10-10-10, but should contain about 1.6% magnesium, about 0.5% manganese, and small amounts of copper and boron. Actually, the palm fertilizers mentioned above should work fine for the citrus, too.</p>
<p>Fertilizers for pansies and cool-season flowers</p>	<p>Plants absorb nitrate forms of nitrogen more readily than the ammoniacal form of nitrogen from cold winter soils. So check the nitrogen source of your winter fertilizer to make sure it has nitrate nitrogen.</p>
<p>Organic Fertilizers</p>	<p>Many natural organic fertilizers are good in that they are slow-release. However, try to avoid organic fertilizers that contain excessively high phosphorus levels... you don't need that much phosphorus. Also, be aware that urea is a synthetic organic fertilizer and is not slow-release. Though it is often marketed as “organic”, it offers no slow-release advantage.</p>

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