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Feeding Plants to Protect Our Water

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Plants need to eat, but they prefer nitrogen, phosphorus, macronutrients, and micronutrients that are present in fertilizer. There are a variety of reasons to fertilize plants, which range from nutrient poor soil to enhancing growth and plant appearance. In order to get the most out of your fertilization efforts, first establish the reason for applying fertilizer. Ask yourself what you are trying to achieve in your landscape: do you want to establish a tree or shrub, increase flowering and fruiting, enhance plant appearance, or prevent soil nutrient deficiencies.

After figuring out what you want to achieve, you need to determine if fertilizer is the best thing. The first thing to do is to conduct a soil nutrient test, which determines pH and what nutrients are already present in the soil. A foliar nutrient analysis is also beneficial because this test determines what nutrients the plant already contains and is able to absorb from the soil. The University of Florida Soil Extension Laboratory offers these tests, and the local Extension service can provide sample materials and instructions. Based on the test results, determine what nutrients your landscape needs and whether fertilizer is best for your situation. For example, soil may need to be amended if it contains adequate amounts of nutrients that aren't being absorbed by the plants. So, adding more fertilizer will not help if the soil conditions are unfavorable for nutrient uptake by plants.

If you do decide fertilization is necessary, ask yourself what level of maintenance you want in the landscape because that will determine how much nitrogen to apply.

- Basic: 0-2 pounds of nitrogen per 1,000 ft² per year.
- Moderate: 2-4 pounds of nitrogen per 1,000 ft² per year.
- High: 4-6 pounds of nitrogen per 1,000 ft² per year.

The amount of phosphorus in the fertilizer should be 0-2% because Florida soils usually contain plentiful amounts. Adding more phosphorus than what is recommended may not help your plants, and it could harm the environment by finding its way into our water resources. This contributes to a reduction in water quality. The fertilizer also should be a slow-release type because it reduces the potential for leaching losses of the nutrients.

When it finally comes to applying fertilizer, broadcast it uniformly over the desired areas of the landscape. Consider where the plants' roots are located, species of plants, and your fertilization objectives. If you live along a water body, do not apply the fertilizer within five feet of the water's edge. Make this your "ring of responsibility," which helps prevent excess nutrients from entering the water and polluting the water.

By taking a few moments to settle on your objectives, determine the nutrient content in your landscape, and the level of landscape maintenance, you can save time, money, and headaches when it comes to fertilization. The local county Extension service can guide you through this process.

Information for this article was provided by Knox, G. et al., (2002) "Fertilizer recommendations for landscape plants," University of Florida/ IFAS Fact Sheet ENH-858.