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Fertilization Practices Can Affect Water Quality

We have all heard the cliché about people in glass houses. This quote applies to us as gardeners. Before too much blame for declining water quality is placed upon the manufacturing industry, farmers and others, we gardeners need to take a look in our own yard.

We live in a very environmentally sensitive state. Locally, most residents have surface waters nearby, as well as ground water that is not far below the soil surface. If we goof up when applying fertilizers, the results of that mistake usually ends up in the ground water, the surface water, or both.

"Goofing up" is defined as an avoidable mistake and in the case of lawn and landscape fertilization it usually means applying more than the plants can use, or making an application too close to a body of water. Any nutrients that are applied at rates above what plants can use stand a good chance of eventually finding their way to surface or ground water.

Research at the University of Florida and in other states has revealed, for example, that lawn grass can never use more than one pound of actual nitrogen per 1,000 square feet of area per application. This is true even on golf courses, where the demands for growth and turf quality are much higher than on a home lawn.

Let's break that down and see how this applies to the average home lawn. I figure that the average urban or suburban lawn is about 8,000 square feet. If a commonly recommended fertilizer such as 16-4-8 is used, then the maximum suggested amount required to apply one pound of actual nitrogen would be a little over 6 pounds per 1,000 square feet, or around 50 pounds of fertilizer for an average sized lawn.

Assuming that homeowners occasionally or habitually overfertilize, excess amounts go somewhere. All minerals that cannot be used by the plants, or that will not adhere to soil

particles, eventually make their way to surface or ground water. Though we hear the most about nitrogen because most forms are soluble, phosphorus and potassium also have the potential for contaminating water.

When excessive amounts of a nutrient are found in water our first reaction is to look for the cause. The reason is sometimes found to be a single cause, known as a "point source." More often, the cause cannot be traced to one source, and is therefore labeled "non-point source pollution." In other words, it is probably due to many small sources that, added together, could result in higher levels of nutrients in water.

Are we, as gardeners, contributing to lower water quality? If we are fertilizing with the "more is better" mentality, then we might be. There are currently studies underway that address this question.

Meanwhile, there are some things that gardeners can do to maintain a healthy landscape, while reducing the possibility of contaminating our waters with excessive nutrients.

✍ Know the square footage of the lawn, shrub and flowerbeds because most fertilizer rate recommendations are based upon the area to be covered. This is a simple procedure. Just measure and multiply the length by the width, in feet.

✍ Use fertilizers that have at least 30 percent of the nitrogen in the slow release or controlled release form.

✍ Consider making split applications, applying one-half pound of actual nitrogen at a time instead of applying the maximum rate. A second, light application can be made if needed, but once too much has been applied, it can't be taken back.

✍ On shoreline property, have a maintenance free zone of landscaping along the waterfront edge of the yard. This buffer zone protects the water from areas that are fertilized.

✍ "Is perfect practical?" Take a more moderate approach to fertilizing the landscape. Heavy fertilization for lush, dark green growth creates the need to do more pruning, watering and pest control and just might lead to lower water quality.