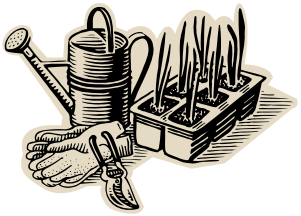
BACKYARD CONSERVATION
*It'll grow on you.*

# Yard Fertility Management

**USDA, Natural Resources Conservation Service**

## What is Yard Fertility Management?

Fertility Management in your yard and garden means maintaining a healthy plant and soil environment by supplying the right amount of nutrition, in the right place, at the right time.



## Plant Nutrition

Twenty nutrients have been identified that are required by plants. Of these, nitrogen, phosphorus, and potassium are required in relatively large amounts. Nitrogen stimulates vegetative growth, phosphorus encourages flowering and fruiting, and potassium helps a plant resist stress and disease.

Calcium, sulfur, and magnesium are also required in comparatively large quantities. These six nutrients are referred to as macronutrients. The other nutrients, referred to as micronutrients, are required in very small amounts. These include such elements as copper, zinc, iron, and boron. While both macro and micronutrients are required for good plant growth, over-application can be as detrimental as a deficiency. Over-application of plant nutrients not only may impair plant growth and increase it's susceptibility to pests but may contaminate groundwater by leaching through the soil or pollute surface waters by washing away.

## Fertilizers and Soil Amendments

***All*** fertility supplements (organic, mineral or synthetic) have the potential to impair water quality if used in excessive amounts. You can eliminate or minimize your dependence on fertilizer by landscaping with the many beautiful native and adapted grasses, shrubs, and trees that have little need for fertility supplements. When fertility supplements are necessary, consider alternatives to mineral or synthetic fertilizers such as compost and mulching of lawn clippings. Organic soil amendments are easy to use, safer for the environment and the gardener, and can save you time and money!

## Fertilizing With Compost

Compost supplies essential plant nutrients, including micro nutrients not found in most mineral and synthetic fertilizers, and is especially beneficial in improving the condition of the soil. By keeping the soil loose, compost allows plant roots to grow well throughout the soil, allowing them to extract nutrients from a larger area. A loose soil enriched with compost is an excellent habitat for earthworms and other beneficial soil microorganisms that are essential for releasing nutrients for plant use. Fertilizing with compost adds organic material to the soil which increases the soils water holding capacity and reduces the need for frequent watering. The nutrients from composted mature or stable compost are also released slowly so there is little concern for "burning" the plant with an over-application.

If preparing a bed before planting, compost may be worked into the soil to a depth of 6 to 12 inches. If adding to existing plants, carefully work the compost into the upper 2 to 3 inches of soil around the base of the plants.

Compost can also be applied to a lawn: Using high quality fine textured compost apply a thin layer (less than ¼ inch) to the lawn and spread with a rake. When compost is distributed evenly, water for 15 to 20 minutes. After this, water your lawn as you normally would but allow seven to eight days before mowing.


## Mulching of Lawn Clippings

Leaving grass clippings on the lawn, when done properly, provides many benefits including:

- ✓ Shading the surface of the soil which helps prevent moisture loss
- ✓ Helps decompose thatch (surface layer of dead roots, leaves, and stems)
- ✓ Saves time and energy from raking and reduces waste sent to landfill.

- ✓ **Can provide up to 2 lbs (a years worth) of Nitrogen annually!**
- ✓ Provides phosphorus and potassium

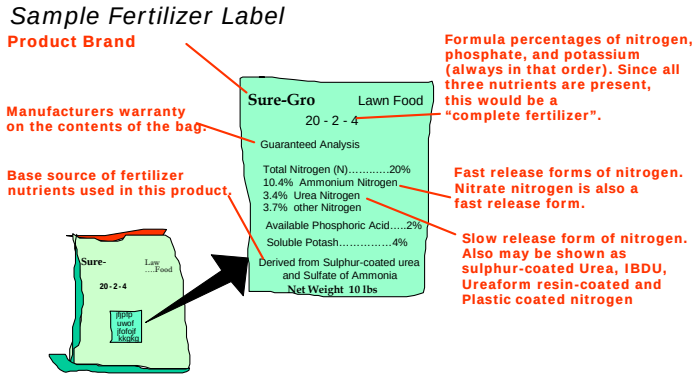
Lawn clippings are very high in nitrogen and clippings less than one inch in length break down rapidly and actually help decompose thatch. A good rule of thumb is to mow when your grass is dry and 3 to 3-1/2 inches tall. Never cut it shorter than 2 to 2-1/2 inches or remove more than one third of the leaf surface at any one mowing. If you must mow when the grass is wet or remove more than one inch, clippings should be removed and composted. See the Backyard Conservation tip sheet for *Yard Waste Composting*.

## Mineral and Synthetic Fertilizer

If a mineral or synthetic fertilizer is selected for use, its application should be tailored to the needs of the plants and the soils in your area. Over application of phosphorus is a concern for Tahoe soils. Phosphorus is a highly mobile nutrient and can easily be leached out of our coarse textured soils or carried by runoff into waterways causing algae blooms. Therefore fertilizers with little to no phosphorus are recommended for the Lake Tahoe Basin. Too much fertilizer or fertilizer applied when the plant is not actively growing will move beyond the root zone before it can be used, resulting in wasted money and potential pollution.

Mineral and Synthetic Fertilizers are available in many different formulations. All fertilizers will be labeled with a "guaranteed analysis" which shows the percentage of nitrogen, phosphorus, and potassium. A formulation recommended for Tahoe soils is 27-0-12. This fertilizer contains 27% N, 0% P, and 12% K.

Be sure to choose the right fertilizer formulation for your needs. Plants differ in their nutritional needs and a fertilizer developed for vegetables will not be appropriate for lawns or shrubs. For chemical fertilizer use, pelletized slow release formulas are the best choice for most lawn and garden situations.




To fertilize a lawn, apply a maximum of one pound of actual nitrogen per 1000 square feet of lawn on each application maximum of two applications per year). If you were to use the example of a 27-0-12 fertilizer, one pound of that fertilizer would be 27% N. To apply one pound of N you would need roughly four pounds of the fertilizer (1lb. ÷ 0.27 = 3.7 lb) for a 1000 square foot lawn. If your lawn is smaller than 1000 square feet, divide the actual square footage by 1000 and then multiply that by 4 pounds (or the appropriate application rate based on your selected fertilizer) to determine the amount of fertilizer to be applied ((Sq. Ft. Lawn ÷ 1000) x 4lb = Application Amount).

## Timing

For the most efficient use and to decrease the potential for pollution, fertilizer should be applied when the plants have the greatest need for the nutrients. Plants that are not actively growing do not have a high requirement for nutrients. Therefore, applications of nutrients to dormant plants, or plants growing slowly due to cool temperatures, are more likely to be wasted. Late season applications of nitrogen fertilizers are not recommend for the cold climate of the Lake Tahoe Basin. Since nitrogen encourages vegetative growth, if it is applied in the fall it may reduce the plant's ability to harden properly for winter and leave the plant more susceptible to early frosts.

## Safe and Effective Fertility Management

- ✓ Choose the right fertility amendment for your needs and apply in the right amount at the right time.
- ✓ Sweep up any fertility amendment spilled on hard surfaces and reapply to the grass or garden area.
- ✓ **Do not use any fertilizer within 25 feet of a stream or riparian area.**
- ✓ Never apply fertilizers to frozen ground or snow.
- ✓ Leave a natural filter strip of grass, trees, and/or shrubs next to the shoreline.
- ✓ Do not over water! Too much water will leach nutrients out of the root zone before they can be used. See our *Turf Water Management* tip sheet for more information.
- ✓ When in doubt do not hesitate to contact your local conservation district or the NRCS for additional advice.

**For Further Information Contact:**

In Nevada
Nevada Tahoe Conservation District
775-586-1610 x 28

In California
Tahoe Resource Conservation District
530-543-1501 x113

Or
Natural Resources Conservation Service
530-543-1501 x 3

# HOW TO APPLY
# THE RIGHT AMOUNT OF FERTILIZER

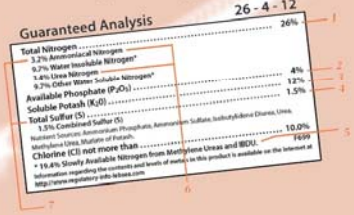
## STEP 1

**MEASURE THE AREA IN SQUARE FEET**

## STEP 2

**GUARANTEED ANALYSIS N-P-K**

How many pounds of fertilizer do you need to equal one pound of N?



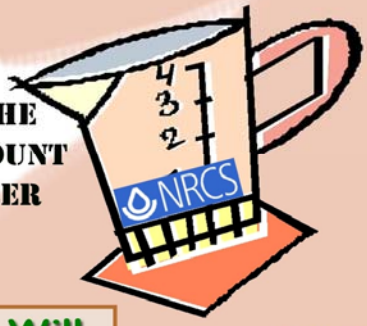

## STEP 3

**CALCULATION TO APPLY 1 LBS. OF N PER 1,000 SQ.FT.**

1 lbs. / .26 = Application Rate

## STEP 4

**MEASURE THE CORRECT AMOUNT OF FERTILIZER**




## How YOU Will Benefit

1. You'll save money by using only what the plants need.
2. Turf and other Landscape plants will be healthier and more attractive.
3. Your customers will receive a professional state-of-the-art service that

**Helps Keep Lake Tahoe Beautiful!**

## STEP 5

**APPLY THE MEASURED AMOUNT**

United States Department of Agriculture
NRCS CALIFORNIA
Helping People Help the Land
More information available at www.ca.nrcs.usda.gov

TAHOE RESOURCE CONSERVATION DISTRICT

Nevada Tahoe Conservation District