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## Fertilizing Lawns

Larry A. Sagers  
*Utah State University*

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# Fertilizing Lawns

Larry A. Sagers, USU Extension Horticulturist

## HORTICULTURE FACT SHEET 04

1990

HG/H 04

### FERTILIZERS

All fertilizers have their contents printed on the bag or label. A bag of fertilizer marked 10-8-6 contains 10% nitrogen, 8% phosphate ( $P_2O_5$ ) and 6% potash ( $K_2O$ ).

The rate of solubility and availability of the nutrients varies with individual brands and analyses. Inorganic fertilizers are usually more rapidly available and higher in analysis than organic forms. Some fertilizers are combinations of organic and inorganic forms.

The order of importance of the three fertilizer nutrients for lawns is nitrogen, potassium, and phosphorus.

Nitrogen is the most important element in developing a dense, attractive turf. Unless fertilized regularly, most lawns are deficient in nitrogen. This causes slow growth, narrow leaves, and a light yellow-green color. There is no direct test for soil nitrogen. Recommendations are based on experimental results. These may be modified according to the amount of watering and whether or not clippings are removed. Soils vary in the amount of available phosphorus and potassium. This information is given in a soil test report. Deficiencies are not as obvious as that of nitrogen, but may cause stunted growth and winter damage.

Soil test summaries in the Salt Lake City area have shown that 90 percent of lawn samples are high or very high in phosphorus. Potassium is also usually adequate for lawn grasses. Nitrogen is often the only fertilizer element needed unless a soil test specifically shows a deficiency of phosphorus or potassium. Sandy soils or subsoils from which top soil has been excavated should be tested to determine needed elements. This is especially important as soil is being prepared for planting.

### TYPES OF NITROGEN

The fertilizer label indicates, besides the amount of nitrogen, whether it is water soluble or water insoluble. The water soluble form is more rapidly available to the plant. Water insoluble nitrogen is more slowly available. The latter form is more expensive but may be more convenient as a single application will supply the needs of the plant for a longer period of time.

## **FERTILIZER RATES**

For a well kept lawn in Utah, apply 1 pound of available nitrogen per 1,000 square feet each 4 to 6 weeks throughout the growing season. The following chart indicates how much of various fertilizers will supply 1 pound of nitrogen.

%Non Label	Pounds of Fertilizer Per 1000 Square Feet
12–15	7–8
18–21	5–5½
24–28	3½–4
30–34	3–3½
45–46	2–2¼

## **FERTILIZER APPLICATION**

Read and follow the instructions on the lawn fertilizer bag. Many commercial lawn fertilizers will state the proper spreader setting for various rates of application. If spreader settings are not on the bag you'll need to calibrate the spreader. Fertilizers in general weigh about a pound per pint.

Apply fertilizer only when the grass blades are dry, unless instructions on the bag state otherwise.

Travel in two directions—at right angles to each other—when applying fertilizer. This is particularly true with droptype spreaders. The cyclone or rotary type spreader applies the fertilizer more rapidly and uniformly with less streaking.

## **IRON**

Iron deficiency (chlorosis) shows as a distinctive yellowing on grass blades in mid to late summer. Iron is actually abundant in Utah soils but their alkaline nature prevents its absorption by plants. Iron chlorosis is rather quickly and easily corrected. Iron may be applied alone or in combination with other fertilizers. A simple method to apply iron is to dissolve two tablespoons of iron sulfate in one quart of hot water. Dilute this with 2½ gallons of cold water and apply uniformly to 1,000 square feet of lawn with hand sprayer. Do not water for at least 24 hours after applying iron liquid spray. Permanent rust stains will appear if you spray concrete walks or driveways.

## **GENERAL GUIDELINES**

It is important to fertilize on a regular basis every 4 to 6 weeks to maintain an attractive lawn. Begin when lawns start to green in the spring, mid to late April. Earlier applications may cause a lawn to become greener faster, but may also increase spring disease problems. Summer applications of nitrogen fertilizers will not burn lawns if you apply them to dry grass and water immediately. Fall applications are important for good winter cold tolerance, extended fall color, and fast spring green-up. A complete fertilizer containing nitrogen, phosphorus and

potassium should be applied in the fall every 3 to 4 years. This will prepare the lawn for winter conditions and allow the phosphorus to penetrate into the root zone by the next growing season.

## **LAWNS ON SANDY SOILS**

Lawns on very sandy soils may need more frequent fertilizer applications (every 4 weeks) at smaller rates per application. The total amount of fertilizer applied will be the same. Consider the use of slow release nitrogen fertilizers, such as sulfur coated urea or urea formaldehyde, to increase time between applications.

## **CLIPPING REMOVAL**

Grass clippings are a valuable source of nutrients. Research has shown that when clippings were removed, one-third more nitrogen fertilizer was necessary to maintain the same color and density as in areas where clippings were returned. Contrary to popular belief, grass clippings do not contribute to thatch accumulation if the turf is maintained at its recommended cutting height and not more than one-third of the leaf surface is removed at one mowing. If clippings leave a residue on the lawn you should mow more frequently.

## **FERTILIZER AND PESTICIDE COMBINATIONS**

Fertilizer and pesticide combinations are readily available. Herbicides, insecticides and fungicides are blended with fertilizers for easy applications and convenience. Use them wisely and precisely follow manufacturers directions for maximum benefit.

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