

## **FERTILIZE SPRING-FLOWERING BULBS**

October is the month that existing beds of spring-flowering bulbs such as daffodils and tulips are fertilized. If bulbs have been fertilized in the past, there is often plenty of phosphorus and potassium in the soil though it is best to take a soil test to be certain. If the soil needs phosphorus and potassium, use a complete fertilizer (such as 10-10-10, 9-9-6, etc.) at the rate of 2.5 lbs. per 100 square feet. This would equal 1 rounded teaspoon per square foot. If phosphorus and potassium are not needed, blood meal makes an excellent fertilizer. It should be applied at the rate of 2 pounds per 100 square feet or 1 teaspoon per square foot. Turf fertilizers such as a 27-3-3 or 30-3-3 can be used, but cut the rate by a third. If there is difficulty in determining exactly where the bulbs are planted due to the lack of foliage, fertilizing in the spring rather than the fall is acceptable. However, it is important that the plants are fertilized when the foliage first shows. Waiting until the bulbs are flowering is too late as the roots have already begun to shut down.

## ***Preventing Sunscald on Thin-Barked Trees***

Many young, smooth, thin-barked trees such as honey locusts, fruit trees, ashes, oaks, maples, lindens, and willows are susceptible to sunscald and bark cracks. Sunscald normally develops on the south or southwest side of the tree during late winter. Sunny, warm winter days may heat the bark to relatively high temperatures. Research done in Georgia has shown that the southwest side of the trunk of a peach tree can be 40 degrees warmer than shaded bark. This warming action can cause a loss of cold hardiness of the bark tissue resulting in cells becoming active. These cells then become susceptible to lethal freezing when the temperature drops at night. The damaged bark tissue becomes sunken and discolored in late spring. Damaged bark will eventually crack and slough off. Trees often recover but need TLC — especially watering during dry weather. Applying a lightcolored tree wrap from the ground to the start of the first branches can protect recently planted trees. This should be done in October to November and removed the following March. Failure to remove the tree wrap in the spring can prove detrimental to the tree.

## ***Questions on Ornamental Grasses***

Is it best to cut back ornamental grasses in the fall or spring? As a rule, ornamental grasses should not be cut back while green because they need time to move the energy found in the foliage into the roots. Even when browned by cold weather, most gardeners will leave the foliage until spring because of the interest it adds to winter landscapes. Early March is the preferred time to cut back these plants. However, dry foliage is extremely flammable and should be removed in the fall from areas where it is a fire hazard. Another question we often receive is whether we can divide ornamental grasses in the fall. Spring is the preferred time because divisions done in the fall may not root well enough to survive the winter.

## ***Fruit Planting Preparation***

If you plan to develop or add to your fruit garden next year, now is a good time to begin preparing the planting site. Grass areas should be tilled so grass does not compete with the fruit plants for soil moisture and nutrients. Have the soil analyzed for plant nutrients. Your local K-State Research and Extension agents have information to guide you in taking the soil sample. From that sample, the agent can provide recommendations on what and how much fertilizer to add to correct nutrient deficiencies. Organic materials such as compost, grass clippings, leaves, hay, straw or dried manure, can be tilled into the soil to help improve its condition. Time and weather conditions generally are more suitable in the fall than in the late winter and spring for preparing soil. If fruit plants can be set by early April, they will have developed a stronger root system to support plant growth than they would if planted later. If there are only a few plants to be planted, consider tarping each planting area to guard against a wet spring, delaying planting after plants are shipped and received. Also, fruit tree planting can be done in the fall but plants may need to be watered during the winter if the weather is warm and dry.

## ***Soil Tests and Plant Growth***

Though soil tests are useful for identifying nutrient deficiencies as well as soil pH, they do not tell the whole story. We often receive soils from gardeners that are having a difficult time growing crops even though the soil test shows that nothing is deficient. Here are some factors that can affect plant growth that are not due to nutrient deficiencies or pH.

**Not enough sun:** Plants need a certain minimum amount of sun before they will grow well. As a general rule, flowering (and fruiting) plants need at least 6 to 8 hours of full sun per day. There are, of course, exceptions such as impatiens that bloom well in shade. Move sun-loving plants out from the shade or use plants that are better adapted to shady conditions.

**Improper watering:** Roots develop where conditions are best for growth. Shallow, frequent watering leads to roots developing primarily near the surface of the soil where the soil is moist. Such shallow root systems are easily damaged by heat and any interruption in the watering schedule. It is better to water less frequently and to a greater depth to encourage a deeper root system that is less sensitive to heat and water stress. Watering during the evening can also be detrimental to plants if the irrigation wets the foliage. Many diseases are encouraged by free water on the leaves. Watering late in the day often will keep the foliage wet until dew forms. Dew will keep the foliage wet until it evaporates the next morning. It is better to water early in the morning so leaves do not stay wet as long. If you must water late in the day, use drip irrigation if practical (such as in a vegetable garden).

**Too much phosphorus:** Most Kansas soils are naturally low in phosphorus. However, soils that have been fertilized for a number of years may have phosphorus levels that are quite high. As a matter of fact, the majority of soil tests we receive show phosphorus levels in the "high" category. Too much phosphorus can interfere with the uptake of some micronutrients such as iron, manganese and zinc. High phosphorus soils should only be fertilized with fertilizers that have relatively low amounts of phosphorus.

**Poor soil physical characteristics:** Roots need oxygen as much as they need water. A tight clay soil can restrict soil oxygen levels as well as make root penetration of the soil difficult. Increasing the organic matter content of clay soils can help break them up. Add a 2-inch layer of organic matter and till it in.

**Walnut trees:** Walnuts give off a natural herbicide that interferes with the growth of some plants such as tomatoes. Vegetable gardens should be at least 50 feet away from walnut trees if possible.

**Tree roots:** Trees not only compete with other plants for sun but also for water and nutrients. Extra water and nutrients may be needed.

**Shallow soils:** When new homes are built, the topsoil is often stripped off before the soils are brought to grade. Though the topsoil should be replaced, it sometimes is not or is not replaced to the same depth as it was originally. You are left with a subsoil that usually does not allow plants to grow well due to a lack of soil structure. Adding topsoil to a depth of 8 to 12 inches would be best but this often is not practical. In such cases, try to rebuild structure by adding organic matter and working it into the soil.