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Research and Extension

Using Compost

Many gardeners make compost without knowing how to use it around the home. Here are a few beneficial applications to consider.

Fertilization and Soil Improvement

The addition of organic material improves texture and workability of soil. Heavy, tight clay soils benefit from the loosening effects of organic materials. Sandy soils also benefit from the improved water-holding capacity and fertility organic materials provide. Compost contains nutrients plants require. Nutrient content varies based on the types of materials and the amount of water in the compost. A general recommendation is to apply compost at the rate of 50 to 100 pounds per 100 square feet. This translates to 1 or 2 bushels of material for every 10 square feet of garden area, or about $\frac{1}{4}$ inch of compost spread over the entire area.

The best time to apply compost is just before tilling in either the spring or fall. Tilling incorporates the compost throughout the plant root zone. In Kansas, gardeners typically till garden soils in the fall.

Compost made early in the season should be ready for use by then. If you have a two-pile system, you can use compost prepared last year.

Compost at Planting

Apply as a band in the bottom of a row trench, or add several shovelfuls of compost to the bottom of planting holes. Single tomato plants, perennial flowers, trees, or shrubs all benefit from the "slow release" of compost nutrients through the early growth period. For seeded vegetables or flowers, use compost as a top-dressing over the row to prevent soil crusting. Compost can be mixed with water to form compost tea and applied as a substitute for soluble fertilizers or starter solutions. As a general rule, mix equal parts of compost and water. The leftover compost can be added to garden soil later.

Mulching

Use of mulch is one of the most beneficial practices for summer gardening in Kansas. Mulches hold moisture in the soil, prevent weed growth, and reduce soil crusting and splashing. Mulches also help to keep the soil cooler in the summer. A mulch of compost 2 to 3 inches thick along the row of garden vegetables or flowers, or spread around perennial flowers, trees, or shrubs reduces moisture fluctuations and slows evaporation of water from the soil surface. At the end of the garden season, till the mulch into the soil as a source of organic material.

Using Compost on a Lawn

The best way to use compost on a lawn is to apply liberally before planting. You can add a fine top dressing of compost each year during lawn fertilization, but only apply a thin layer.

Common Problems

Compost is not a cure-all for garden soils or problems. The benefits of composting outweigh limitations, but it is possible to overdo it. The high nutrient content of some composts can promote lush, rapid growth at the expense of fruit production if you apply too much. Compost that has not completely decomposed continues to break down. If added to the soil in large amounts, it can remove or tie up soil nutrients until decomposition slows. This is of particular concern with spring applications and where compost is incorporated into the soil.

When applied to the soil surface, certain types of compost pack to a dense, tight layer almost impervious to water. This may be sign of poorly made compost. To correct this, use more soil with the compost or mix the soil with compost before use. Creating a dark, cool environment at the soil surface provides ideal conditions for sowbugs, squash bugs, and other insect pests. Contact your local K-State Research and Extension office for specific control recommendations for each of these insects.

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