

Direct Application of Organic Materials

Organic materials can be applied directly to garden soil and incorporated with a plow or tiller, allowing decomposition to occur directly in the soil rather than in the compost pile. The autumn season is an ideal time to do this when a variety of organic materials are available in the form of prunings, leaves, garden refuse, and lawn clippings.

Unless you have access to large-scale tilling equipment or a commercial plow, you may not be able to apply more than 5 or 6 inches of organic materials to the soil at any one time. A backyard garden tiller should be able to incorporate 4 to 5 inches of organic material without much difficulty. To apply organic materials directly to the garden, spread materials 4 to 6 inches deep over the surface of the soil. Go over the area with a rototiller or plow as deeply as possible. It is best to do this in early autumn to allow time for the organic materials to decompose during the late fall and winter months. The soil will have a chance to settle before spring planting season, and soil nutrients will not be tied up in the process.

Nutrient “Tie Up”

The large populations of microorganisms needed to break down organic materials depend on elements of

fertilizer for support. These elements are drawn from the garden soil into which these materials have been incorporated. This means that for one to two months, nutrient materials may be unavailable to plants because they are being used by the microorganisms. After materials decompose, the organisms die and release nutrients back into the soil, along with additional nutrients in the organic material. If nutrients are applied to soil directly in the spring or summer, additional fertilizer must be provided to compensate for the nutrients tied up by the microorganism population.

If you have trouble incorporating all of the material at once, allow the materials to stand for 1 to 2 weeks and repeat the tilling process. This allows organic materials that have been covered to begin to decompose. Materials remaining near the soil surface can be incorporated more easily during the second tilling. After tilling, moisten the soil if natural rainfall is not sufficient to encourage complete and rapid decomposition of organic materials. Take care not to till or cultivate soil if it is excessively wet. This can create clods that make it difficult to break up and prepare a fine seed bed for later planting.

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