

Straw Bale Gardening: Grow Food and Improve Soil Quality

Kefyalew Girma (Desta), Michael Reinert, and Adam Cobb

Oklahoma Cooperative Extension Service, Department of Plant and Soil Sciences, Oklahoma State University, Stillwater, OK

Abstract

A straw or hay bale bed is a plant growing media which can be used for raising vegetables, herbs and even cover crops. The straw or hay bale should be held together with 2-3 strands of twine preferably made from biodegradable materials such as sisal or less preferably from synthetic materials. Bales can be arranged based on area, crop grown and mobility needs. The grower can also design the placement of the bales for an attractive appearance. There are two ways to plant the 'bed'. One way is to make pockets or 'holes' about 3 to 4 inches deep by gently loosening and carefully removing a small amount of the straw. It takes about 10-15 minutes to get four pockets or 'holes' on a straw bale. The other method is adding or spreading soil materials on the top of each bale also called flat straw/hay bale bed. For both methods, the growing medium can be a compost or manure mixed with blood meal and other nutrient rich materials. Each pocket requires about 1 lb of compost. For the flat-bed design, a 2-3 inch deep layer compost or matured manure works well. Once the growing media is in place, the bales need to be moistened. It is necessary to create a favorable rooting condition for successful production on bale beds. In this poster, we will present information regarding seeding, transplanting, garden management, watering, fertilization, weed control, and insect control. Bales used for gardening do not last long due to rapid breakdown. The high temperatures in Oklahoma accelerate this decomposition. Consequently, bales may not support two production seasons. If straw bales are used in a traditional garden setting, partially decomposed bales can be incorporated into the ground for conditioning the soil or used as mulch at the completion of the straw bale growing season. The old straw can also be added to compost piles for quick and complete breakdown. Given the amount of nutrient needed for vegetable production, this method can assist in reducing costs associated with fertilization.