

Apply Animal Manures to Fall Garden for Nutrient Boost



Fertile soil is rich in organic matter, but by late fall, most plant nutrients are depleted. To rejuvenate garden soil, try adding animal manure. Cow manure is a relatively cheap source of organic matter. Other sources of animal manure include racetracks, horse stables, rodeo grounds, sheep pens and chicken farms. Pig manure can be too smelly. Avoid manure from meat-eating animals like dogs and cats, which can carry parasites and other disease organisms that can infect humans.

Manures differ widely in nutrient content, age and the bedding materials they contain. These factors affect application rates and times and whether to compost them before using. Horse stall manures with lots of bedding material like straw may contain weed seed, making composting important. Aerobic composting techniques that subject the manure and bedding materials to prolonged temperatures of 135 to 150 F will kill most weed seed and disease organisms. Frequently turn compost to insure that all manure is heat-treated.

Disease organisms are a major problem with animal manures. *E. coli* can be particularly bad in cattle and sheep. Other pathogens include *salmonella* and *cryptosporidium*. Aerobic composting will help kill most of these organisms. Most nurseries also sell heat-treated manure. Disease organisms tend to decrease in well-aged, decomposed manure because of exposure to ultraviolet light. Incorporate aged manure into the soil in the fall. Over time, natural soil microorganisms will further reduce pathogens. Incorporating manure into the soil will also reduce nitrogen loss from the manure to the atmosphere. Do not harvest vegetables or fruit from the garden until 120 days after manure has been applied.

Apply aged cow manure 1 to 2 inches deep across the garden. Apply chicken manure and composted manure at half this rate. Incorporate immediately to keep children and dogs from becoming contaminated. Wear plastic gloves when applying and clean all equipment with water afterward.

This article adapted from Cooperative State Research, Education and Extension Service, USDA. Please contact Ken Churches at cdcalaveras@ucdavis.edu or (209) 754-6475 with your agricultural questions. To speak with a Certified Master Gardener: Calaveras (209) 754-2880, Tuolumne (209) 533-5696, Amador (209) 223-6837, El Dorado (530) 621-5543.