



ASK A MASTER GARDENER

USE OF MANURE IN VEGETABLE GARDENS

By Trish Grenfell, Placer County Master Gardener

Q I have been reading about E.coli poisonings from spinach and other garden vegetables. What can I do to prevent this from happening in my garden?

A An E.coli illness caused by eating undercooked hamburger has also affected people eating vegetables amended with fresh manure. According to Richard Kersbergen, Extension Educator at the University of Maine, "Animal manure can contain bacteria such as Listeria, Salmonella, and E. coli 0157:H7, as well as roundworms and tapeworms. These tiny organisms are called pathogens because they may cause disease. Pathogens can pass from animal manure to humans through direct contact between contaminated manure and fresh fruit and vegetables."

Bovine and chicken manure have always been an excellent soil additive for vegetable and fruit gardens, but these food safety issues mandate using proper composting practices followed by adequate, prior-to-eating food cleaning. Composting to eliminate pathogens will include adding carbon materials to the manure such as dried leaves, grasses, newspapers, and sawdust; mixing the manure + materials regularly to elevate the temperature to 130-140 degrees F for at least two five-day periods; and very importantly—to cure the finished compost for 2-4 months before you add it to the "edible" garden. At no time in this process should the composting/composted material come into contact with unprocessed manure. The prior-to-curing, dark finished compost will have a good earth fragrance, commonly referred to as black gold. There will be no hint that it once contained fresh manure. Then and only then do you cure it for 2-4 months.

Common good practices in the past allowed aged manure to be worked into the soil in the fall, at least 120 days from application to garden harvest. However, Carl Wilson, horticulturist from the University of Colorado, warns that "Bacteria will survive winter freezing so fall garden applications and even 'aged manure' additions provide no guarantee of a garden free of potential disease organisms. " If you are uncomfortable with the fall manure application, fully compost the manure over the winter instead. And don't forget to cure it by leaving the finished compost in an undisturbed pile for 2-4 months.

Note that compost made exclusively from plant wastes does not need a curing period and adding leaves or other plant materials directly to the vegetable garden is safe. Also note the practice of using aged manure for "nonedible" ornamental and turf plantings is still recommended.

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