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FACT SHEET

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ORGANIC VS. CONVENTIONAL VEGETABLE GARDENING

Successful vegetable gardens are the result of planning, preparation, and constant care.

Organic gardening differs from conventional gardening mainly in the areas of fertilization and pest control. The organic gardener prefers to use natural and organic materials and methods, whereas the conventional gardener uses a combination of all materials and methods that he believes to be safe, effective, and non-detrimental to himself or his environment.

Organic gardening relies on the application of abundant quantities of organic material to the soil, in the form of animal manures, compost, or mixed organic fertilizer.

Animal manures are probably the best source of fertilizer and organic matter for the organic gardener. When not available, compost can be substituted. Compost is made by alternating layers of organic materials, such as leaves and kitchen vegetables refuse, with manure, topsoil, lime, organic fertilizer, water, and air, in such a manner that it decomposes.

Adapted from: Fact Sheet from
New York City Gardening Program

Some advantages in adding organic materials to the soil are to improve soil structure, to increase water holding capacity, and to add fertilizer elements. Since most of the fertilizer elements in organic materials are in the organic form, they are not immediately available for plant absorption. The process of nitrogen conversion to the inorganic form is a slow procedure, but must take place for plants to be able to use them. This can be a disadvantage when rapid plant growth is desired or an advantage since it reduces the possibility of fertilizer burn and of the elements leaching during periods of heavy rainfall and may insure long term productivity of soils.

Organic materials vary widely in their fertilizer content. Most are low in potassium and some, such as sawdust, are low in all fertilizer elements. For that reason, conventional gardeners do not depend entirely on organic materials to supply all the fertilizer elements needed for plant growth. (See chart on "Organic Materials as Fertilizers.")

Contrary to popular belief, research has not shown a nutritional advantage of organically fertilized vegetables over those grown with chemical fertilizers. Given equal amounts of available nutrients, the nutritional composition of produce from either type of fertilizer appears the same.

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Organic Materials as Fertilizers

Fertilizer	% N	% P	% K	Tons/Acre for 60 lbs. N
Inorganic Example	5	10	10	0.6
Fresh Manures				
Cow	.55	.15	.50	5.5
Hen	1.10	.90	.50	2.7
Hog	.55	.30	.45	5.5
Horse	.65	.25	.50	4.6
Sheep	1.00	.75	.40	3.0
Steer (Feed Lot)	.60	.35	.55	5.0
Organic Fertilizers*				
Fish Meal	10.0	4.0	0.0	0.3
Sewage Sludge	2.0-6.0	1.0-2.5	0.0-0.4	1.5-0.5
Dried Blood	12.0	1.5	0.8	0.2
Soybean Meal	7.0	1.2	1.5	0.4
Animal Tankage	9.0	10.0	15.5	0.3
Garbage Tankage	2.5	1.5	1.5	1.2
Tobacco Stems	1.5	0.5	5.0	2.0
Seaweed	1.0	--	4.0-10.0	3.0
Bone Meal	3.5	22.0	--	0.9
Wood Ashes	--	2.0	4.0-10.0	--
Cotton Seed Meal	6.0	2.5	1.5	0.5
Horn & Hoof Meal	12.0	2.0	--	0.25
Milorganite	6.0	2.5	--	0.5
Peat and Muck	1.5-3.0	0.2-0.5	0.5-1.0	2.0-1.0
Other Organics				
Corn Stalks	.30	.13	.33	10.0
Crabgrass, green	.66	.19	.71	4.5
Oak Leaves	.80	.35	.15	3.8
Pine Needles	.46	.12	.03	6.5

*Percentages on dry weight basis.