

Table 15-7. Organic fertilizer options. (Reprinted from *Growing Fruits and Vegetables Organically*, © 1994 by Rodale Press, Inc. Permission granted by Rodale, 400 S. 10th St., Emmaus, PA 18098. Information in brackets has been modified from the original table.)

Amendment	N-P-K ratio	Other nutrients	C/N ratio	Comments
Alfalfa hay	2.6 - 0.6 - 2.2	0.3% S; 1% Ca; 0.02% Mg; micronutrients	16	Well balanced, slowly available. Contains growth stimulants
Alfalfa meal or alfalfa pellets	2.7 - 0.5 - 2.8	0.2% S; micronutrients	15	Well balanced, more rapidly available than alfalfa hay. Contains growth stimulants.
Blood meal	13 - 2 - 0	Not a significant source of other nutrients	3	Rapidly available N. Stimulates microbes.
Bonemeal	3 - 2 - 0.5	24% Ca	-	Rapidly available P source. Mildly increases pH.
Compost (dry, commercial)	1 - 0.8 - 1	0.4% S; 0.2% Ca; 0.1% Mg; micronutrients	10-17	Balanced, slow release. Good choice for busy gardener.
Compost (homemade)	1 - 0.5 - 1 to 2 - 1 - 2	0.4% S; 0.2% Ca; 0.1% Mg; micronutrients	10-17	Balanced, slow release.
Cottonseed meal	6 - 2 - 2	Not a significant source of other nutrients	7	Rapidly available N source. May contain pesticides.
Egg shells	1.2 - 0.4 - 0.1	0.4% Ca; micronutrients	-	Should be crushed. Good compost addition.
Epsom salts	0 - 0 - 0	13% S; 10% Mg	-	Rapidly available Mg and S source.
Feather meal	11 - 0 - 0	Not a significant source of other nutrients	4	Rapidly available N source.
Fish emulsion	5 - 2 - 2	5% S	4	Rapidly available N source.
Fish meal	10 - 4 - 4	Not a significant source of other nutrients	4	Rapidly available N source.
Granite meal	0 - 4.0 - 0	Micronutrients	-	Very slow release of P. Use to build soil reserves.
Grass clippings (fresh)	0.7 - 0.3 - 0.8	0.1% S; 0.2% Ca; 0.1% Mg	33	Balanced, slow release.
Greensand	0 - 0 - 7	Micronutrients	-	Very slowly available source of K. Use to build reserves.
Gypsum	0 - 0 - 0	17% S; 22% Ca	-	Slowly available source of S and Ca. Does not affect pH. Improves alkaline soil structure. Increases plant growth in acid soils.

Amendment	N-P-K ratio	Other nutrients	C/N ratio	Comments
Kelp meal	1 - 0.2 - 2	3% S; micronutrients	-	Slow release of K and micronutrients. Contains growth stimulants.
Lime, oyster shell	0 - 0 - 0	38% Ca; 1% Mg	-	Slow release of Ca. Used to increase pH.
Limestone (dolomitic)	0 - 0 - 0	20% Ca; 10% Mg	-	Slow release of Ca and Mg. Used to increase pH.
Limestone (high - Ca)	0 - 0 - 0	26-36% Ca; 2-7% Mg	-	Slow release of Ca. Used to increase pH.
Manure, cow (dry)	2.0 - 1.0 - 2.4	0.5% S; 0.2% Ca; micronutrients	18	Best when composted.
Manure, horse	2 - 1 - 2.5	1% S; 0.2% Ca; micronutrients	22	Slow release when dry; rapid release when fresh.
Manure, poultry (dry)	4 - 3 - 1	0.2% S; 2% Ca; 0.3% Mg	7	Very rapidly available N and P. Should be composted; fresh manure will burn plants.
Oak leaves	0.8 - 0.4 - 0.1	Micronutrients	Variable	Very slow release. Improves soil structure.
Orchard grass (hay)	2 - 0.6 - 2.7	0.3% S	24	Balanced, slow release. May need rapidly available N source added.
Rock phosphate (hard rock)	0 - [15] - 0	[33%] Ca; micronutrients	-	Slowly available P and Ca. Will increase pH. Used to build reserves.
Sawdust	0.2 - 0.2 - 0.3	Not a significant source of other nutrients	Very high	Use only when well rotted. Add a rapidly available N source. Good soil conditioner and mulch for [acid-loving plants].
Soybean meal	6 - 1 - 2	0.8% Mg; micronutrients	7	Rapidly available nitrogen.
Sulfur ("flowers")	0 - 0 - 0	99.5% S	-	Used to lower high pH.
Sul-Po-Mag ^{III}	0 - 0 - 22	19% S; 10% Mg	-	Rapidly available K and Mg. Don't use with dolomitic lime.
Weeds (fresh)	2.4 - 0.8 - 3.8	2.3% Ca; micronutrients	17	Balanced, slow release.

continued ...

Table 15-7. (continued)

Amendment	N-P-K ratio	Other nutrients	C/N ratio	Comments
Wheat straw	0.6 - 0.2 - 1	0.2% S; 0.2% Ca; 0.05% Mg; micronutrients	78	Very slow release. Used to improve soil structure. Should be applied with a rapidly available N source.
Wood ashes (leached)	0 - 1.6 - 5	15% Ca; micronutrients	-	Low P content, but rapidly available. Good source of K and Ca. Will increase pH. Can injure microorganisms. Do not use more than $\frac{1}{2}$ - $\frac{3}{4}$ lb per 100 ft ² .
Wood ashes (unleached)	0 - 1.7 - 7	15% Ca; micronutrients	-	Low P content, but rapidly available. Good source of K and Ca. Will increase pH. Can injure microorganisms. Do not use more than $\frac{1}{2}$ - $\frac{3}{4}$ lb per 100 ft ² .
Wood chips (deciduous)	0 - 0.2 - 2 to 0 - 1 - 3	Not a significant source of other nutrients	Very high	Very slow release. Do not apply without a rapidly available N source. Used to improve soil structure. May take >1 year to decompose.
Worm castings (Biocast)	0.5 - 0.5 - 0.3	Micronutrients	-	Excellent for improving soil structure.