

Pat Welsh-Introduction.		Page 1(of chart)					7/25/08	
Generic Fertilizers Chart to go near other information on fertilizers near Insert E, page 28								
Mainly a source of:	Products:	FAST	MEDIUM	SLOW	Approximate formula:			Characteristics:
					N	P	K	
Nitrogen	Alfalfa meal		X		2	0	3	Excellent to use twice or three times a year, at most, for lawns, roses, flowers, and vegetables. (Contains growth hormone <i>tricotanol</i> , that if overused causes negative effects.) It may attract animals unless worked or watered into soil.
Nitrogen	Bat guano		X		10	2	1	One of the best and strongest organic fertilizers, but has been known to burn. Products vary in nutrient values; read packages.
Nitrogen	Blood meal	X			13	0	2	Apply 1-2 cups between layers of compost to heat up pile. (Apply no more than 1/4 cup per feeding to a plant such as a mature rose. Work into the ground and water in. Otherwise it may burn.) Odor of exposed powder may attract raccoons, rats, dogs, and cats when used on top of ground. Said to repel rabbits.
Nitrogen	Cotton-seed meal			X	7	2	1	Slowly releases nutrients over 4 months time. Slightly acid, thus a preferred fertilizer for azaleas and camellias. Contains trace elements. Some brands contain pesticide residues, but certified organic types are available.
Nitrogen	Feather Meal		X		12	0	0	Mainly composed of keratin, a protein that releases both rapidly and slowly. Highly effective lawn fertilizer, strong nitrogen source, but may attract animals.
Nitrogen	Fish emulsion		X		5	2	2	Liquid products needing dilution. Some products contain kelp or yucca. Some are made of the whole fish, and others have odors removed. Some contain up to 5% urea (a type of synthetic nitrogen) and thus are not fully organic.

Nitrogen	Fish meal		X		10	5	2	A commercial product made from bones and whole fish. (Fish fertilizers have been used for centuries.) Mix into soil. Contains trace elements, but nutrients vary widely between products.
Nitrogen	Fish hydrolysate		X		5	5	2	Ground up whole or partial fish carcasses out of which fish emulsion is made. Nutrients vary widely. (Read labels to compare values.)
Nitrogen	Human hair			X	20	0	0	There is 1 pound of nitrogen in 6 to 7 pounds of hair. Bury handfuls under plants when planting. Must have moisture in order to rot, so nutrients can be available to plants. (Excellent nitrogen source, free from hairdressers.)
Nitrogen	Horse manure	X		X	7	3	6	A safer manure than most with less salt, but when using be sure to have up-to-date tetanus shot. Applied as mulch in fall can feed the whole garden for a year.
Nitrogen	Human urine	X			15	2	2	Used as fertilizer since ancient times in rainy climates, where rains wash out the salts it contains. Excellent weed killer either straight, or diluted 5-or-10 to 1 with water. Add to compost to heat up pile. A clean and safe substance to use.
Nitrogen	Rabbit manure			X	2	1	8	Non-burning manure, safe to use straight on the ground over plant roots, spread onto lawns, or mixed into soil. Not necessary to age.
Nitrogen	Chicken manure		X		15	2	0	Good fertilizer for lawns, vegetables, and all plants, but can burn. Fresh chicken manure should be aged at least 3 months before use. Available already aged, dried, and bagged.
Nitrogen	Corn gluten meal			X	9	0	0	Apply spring and fall to lawns as a pre-emergent herbicide and fertilizer. Does not kill existing weeds but only the seeds. Sold under the trade name "Espoma Organic Weed Preventer".
Nitrogen	Soybean meal			X	7	2	1	Releases nutrients slowly in 1 to 4 months. Effectively greens up lawns due to increased fungal activity that in turn feeds the lawn. (Purchase from feed stores.)

Nitrogen	Steer manure			X	5	3	5	Bagged product may contain salts from salt licks. Raw, un-aged product may contain weed seeds. Don't dig un-aged manure into garden soil, but you can put it on top of the ground to age in place. (Urine in manure is its main source of nitrogen. This is lost if you age it in a pile, and manure piles cause runoff.)
	Cow manure			X	3	2	1	Some nutrients are lost in aging process. Can be used without aging but wait 2 weeks to plant. Or put on top of soil as top dressing in fall around existing plants. Contains salt, and both steer and cow manure may contain antibiotics and hormones. May contain less salts than steer if the source is known.
	Green manure	X			5	1	2	A legume such as clover, fava beans, or vetch, planted from seeds in fall and tilled into the ground in spring to increase tilth and fertility. Nutrient values vary greatly. Lawn grass is a green manure when the mowed blades are allowed to fall back onto the lawn to feed the turf.
Nitrogen	Earthworm castings			X	1	.07	0	Minor source of NPK, which may vary in nutrient value. Contains 11 trace minerals and aids in pest and disease control. When using in dry interior climates mix into soil or use as worm casting tea so it does not cake into a water-resistant lump.
Nitrogen	Meadow foam meal			X	4	1	1	Contains a growth-regulating hormone that can increase plant growth if not over-used, but will reduce growth if too much is used.
Nitrogen	Seaweed extract and kelp		X		5	3	1	Concentrated organic fertilizer available in liquid or granulated form. Spread dry product on soil and water in. Dilute liquid and apply to seedlings or mature plants. Used mainly to provide micronutrients. (Often sold as a "tonic" for soil without any fertilizer values given.)

Phosphorus	Bone meal			X	0	12	0	Stimulates strong roots, growth, flowering and fruiting. Usually steamed, powdered, and bagged, but can be obtained in liquid form. In USA, not a source of mad cow disease.
Phosphorus	Fish bone meal		X	X	3	18	0	May contain beneficial soil microbes as well as other nutrients. Odor may attract animals unless mixed into soil or covered with mulch. (Most effective when worked into soil.)
Phosphorus	High phosphorus seabird guano			X	0	12	1	Marine bird guano mined from ancient deposits in uninhabited areas of the world. Rich in minerals. Creates vigorous growth and fruiting of plants.
Phosphorus	Shrimp shell meal			X	5	8	15	Machine-ground heads and shells of prawns, formerly a waste product, now used worldwide in agriculture and gardening. Contains 15% calcium, 18% chitin, as well as trace minerals. Controls nematodes in moist soil.
Phosphorus	Soft rock phosphate			X	0	2	0	A mined product containing 20% phosphorus, though only 2% is available. Also contains 16% calcium with some trace minerals. Necessary to apply 5 to 10 lbs. per square foot
Phosphorus	Crab shell			X	2	3	0	Formerly a waste product, now found to have beneficial agricultural and garden uses. Apply it once or twice a year to aid in control of nematodes and fungus diseases. Contains chitin, calcium, and trace minerals.
Potassium	Wood ashes			X	0	1	3	Used for centuries as fertilizer. Highly alkaline, thus not recommended in dry Southwest. Don't use ash from charcoal, treated wood, or plywood. Don't add wood ash to compost since ash reduces compost's nitrogen content.
Potassium	Greensand			X	0	0	7	Iron potassium, a variable mineral, also called Glaucinite, can contain as much as 7.5% potassium, as well as iron, but only 1% of the potassium is soluble. Naturally occurring Iron potassium silicate, called Jersey greensand, is from New Jersey. It loosens clay soils, increases crop yields, and contains iron, magnesium, calcium, and trace minerals.

Potassium	Sulfate of potash (Sul-PoMag.)		X	X	0	0	2	A naturally occurring mineral salt, often call Sul-Po-Mag contains 22 % potash, 11% magnesium, and 23% sulfur. Apply according to package directions, once or twice a year. It dissolves easily in water.
Beneficial soil organisms	Humic acid		X					Humic acid is a dark brown, concentrated form of humus, available in liquid or solid form, found to be valuable in agriculture during the 1960's. Usually derived from Leonardite, a type of soft coal (ancient organic matter) discovered in 1920 on top of lignite; found no deeper than 20 feet below ground in parts of North Dakota, New Mexico, northeast China, Turkey, and eastern Europe. When added to soil or used as foliar spray, humic acid reduces plant disease, improves root growth, activates soil bacteria, and helps plants access nutrients. Excellent as a transplant fluid.