

ORGANIC FERTILIZERS

Fertilizer products supplement the nutrients already in the soil. Man-made (non-organic) fertilizers are concentrated and quick acting. Organic fertilizers release nutrients slowly and usually contain many trace elements your plants need that are not found in most chemical formulations.

Not all organic fertilizers are useful to plants immediately. The soil must be warm enough for organic fertilizers to break down and nutrients to be released. For a quick response, try fish emulsion or seaweed extracts. These are water soluble and instantly available to plants. For early season feeding use foliar sprays.

Too much fertilizer can burn plants and leach into the groundwater, causing pollution problems. Organic fertilizers are safer to use because they are not as concentrated as chemical fertilizers.

APPLICATION METHODS

Broadcasting

Fertilizer is spread on the top of the soil at a recommended rate and worked into the soil with a spade or tiller or left to filter down to the roots.

Banding

Fertilizer is applied in narrow bands 2 to 3 inches from the seed and 1 to 2 inches deeper. Placing fertilizer too close can burn tender new seedlings.

Side Dressing

After plants are up and growing, apply fertilizer on both sides of the row 6 to 8 inches from the plants. Rake it into the soil and water.

Foliar Feeding

Fertilizer is sprayed on a plant for a fast result. This is usually done when insufficient fertilizer was used before planting, a growth spurt is wanted, or the soil is too cold for the conversion of soil fertilizers into usable forms. Absorption starts within minutes after spraying and is completed in a couple of days. Foliar feeding of phosphorus helps in root development of transplants, helping plants through transplant shock. Foliar feeding in the early spring gets plants growing before the soil is warm enough to release nutrients.

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Bone Meal

Bone meal decomposes slowly and releases phosphorus gradually. Bone meal is good for bulbs that don't sprout for several months after they're planted and for alkaline-loving plants such as clematis, lilac and hydrangea.

(Continued on back page)

Cottonseed meal

In warm soils this fertilizer is readily available with little danger of over-fertilizing. Use for acid-loving plants such as rhododendrons, blueberries and azaleas.

Blood meal

This dried blood from cattle slaughterhouses is a rich source of nitrogen. Do not apply at more than recommended rates because it is concentrated enough to harm plants.

Fish emulsion

This well-rounded fertilizer consists of partly decomposed ground fish. The smell is strong but will dissipate in a day or two, and can deter pests that don't like the fish smell. It has a high concentration of nitrogen and can burn plants if over-used (especially container plants).

Manures

Nutrient concentrations in manures vary widely with the kind of animal they're from. Fresh manure has the highest concentration and can burn tender roots easily. Composted manure is less harsh. Although the concentration of nutrients is lower in manure than in man-made fertilizers, manure improves soil structure and increases its water holding capacity.

Seaweed extract

Seaweed is a good source of trace metals. It doesn't smell as much as a fish emulsion but is more expensive.

Product	% Nitrogen (N)	% Phosphorus (P)	% Potassium (K)	Suggested amounts of material (lbs per 100 sq feet of garden area)
Dried Blood Meal	12	0	0	3
Bone Meal	6	12	0	6
Cotton Seed Meal	7	3	2	0.2-0.5
Fish emulsion	5	1	1	1 Tbsp./gallon water
Seaweed extracts	9	2	7	varies
Chicken manure, dry	2 to 4.5	4.6 to 6.0	1.2 to 2.4	12.5
Steer manure, dry	1 to 2.5	0.9 to 1.6	2.4 to 3.6	45
Dairy manure, dry	0.6 to 2.1	0.7 to 1.1	2.4 to 3.6	60
Calcium nitrate (15.5-0-0)	15.5	0	0	1.6 to 2.5
Ortho Natural Fish Fertilizer	5	1	1	1 Tbsp./gallon water Water generously.
Ammonium sulfate (21-0-0)	21	0	0	1.2 to 1.9
Ammonium nitrate (33.5-0-0)	33.5	0	0	0.7 to 1.2
Urea (46-0-0)	46	0	0	0.5 to 0.9
5-10-10	5	10	10	3 to 4
16-20-0	16	20	0	1.6 to 2.5
16-16-16	16	16	16	1.5 to 2.5

Compiled by Tonie Fitzgerald. For more information, contact Master Gardeners at (509) 477-2181.

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