

COMPLETE ORGANIC FERTILIZER (C.O.F.)

Alfalfa Meal: N-P-K * = 3-2-2

This is dried alfalfa ground to a meal. It acts as a slow release nitrogen source.

Cottonseed Meal: N-P-K * = 6-1-1

This is the ground meal from cotton seeds. It's nitrogen is almost 85 per cent water insoluble making it a slow-release fertilizer.

Rice Bran: N-P-K * = 4-3-1

Rice bran is a by-product of the processing of white rice.

Soybean Meal: N-P-K * = 7-2-0

Derived from soybeans, soybean meal is prized for its high nitrogen content and as a source of phosphorus.

Fish Meal Products: N-P-K * = 5-2-2

Fish by-products make excellent fertilizers. You can buy them in several different forms. *Fish emulsion* is derived from fermented remains of fish. This liquid product can have a fishy smell (even the deodorized version), but it's a great complete fertilizer (5-2-2) and adds trace elements to the soil. When mixed with water, it is gentle, yet effective for stimulating the growth of young seedlings. *Hydrolyzed fish powder* has higher nitrogen content (12%) and is mixed with water and sprayed on plants. *Fish meal* is high in nitrogen and phosphorus and is applied to the soil. Some products blend fish with seaweed or kelp for added nutrition and growth stimulation.

Linseed Meal (Nutrient value similar to soybean meal)

This is derived from the manufacturing of linseed oil, also known as flax seed oil.

Beet Pulp (dried)

A high-energy food source for soil microorganisms, This is a by-product of the sugar beet industry.

Oyster Shell

This contains a high percentage of calcium which is good for strong cell formation in plants and prevents bud-end rot on tomatoes. It also contains a number of other trace minerals.

Kelp Meal: (*Ascophyllum nodosum*) N-P-K * = 1-0-2

Kelp meal products are a natural and cost effective enhancement to any fertilization and conditioning program. They are suitable for all crops and applications, and can be mixed with most soil conditioners and fertilizers.

* Nitrogen - Phosphorus - Potassium

Bat/Seabird Guano: N-P-K * = 10-10-2

Yes, this is what sounds like--the poop from bats and seabirds. It comes in powdered or pellet form and is high in nitrogen. Bat guano only provides about 2% phosphorus and no potassium, but seabird guano contains 10 to 12% phosphorus, plus 2% potassium. The concentrated nitrogen in these products can burn young plants if not used carefully. They tend to be more expensive than land-animal manures.

MINERAL BASED FERTILIZERS

Chilean Nitrate of Soda: Mined in the deserts of Chile, this highly soluble, fast-acting granular fertilizer contains 16% nitrogen. It's also high in sodium though, so don't use it on arid soils where salt build up is likely, or on salt-sensitive plants.

Epsom Salt: Epsom salt not only helps tired feet--it's a fertilizer too! Containing magnesium (10%) and sulfur (13%), Epsom salt is a fast-acting fertilizer that you can apply in a granular form or dissolve in water and spray on leaves as a foliar fertilizer. Tomatoes, peppers and roses love this stuff! Mix 1 Tablespoon of Epsom salt in a gallon of water and spray it on when plants start to bloom.

Greensand: Mined in New Jersey from 70 million-year-old marine deposits, greensand contains 3% potassium and many micronutrients. It's sold in a powdered form, but breaks down slowly so is used to build the long-term reserves of soil potassium.

Gypsum: This powdered mineral contains calcium (20%) and sulfur (15%). It's used to add calcium to soils without raising the soil pH.

Hard-rock Phosphate: This mineral powder contains 20% phosphorus and 48% calcium, which can raise soil pH--avoid it if your soil is already alkaline. It breaks down slowly, so use it to build the long-term supply of phosphorus in your soil.

Soft-rock Phosphate: Often called colloidal phosphate, soft-rock phosphate contains less phosphorus (16%) and calcium (19%) than hard-rock phosphate, but the nutrients are in chemical forms that plants can use more easily. This powder breaks down slowly, so one application may last for years in the soil. It also contains many micronutrients.

Limestone: This mined product has various nutrient levels, depending on its source. It is used primarily to raise pH, but *dolomitic* limestone, which is high in calcium (46%) and magnesium (38%), also adds magnesium to the soil. This powder also comes in an easier to spread granular form. *Calcitic* limestone is high in calcium carbonate (usually above 90%). Conduct a soil test for pH and for magnesium to find out which kind of lime and how much to add to your soil.

* Nitrogen - Phosphorus - Potassium