

Organic Fertilizers and Soil Amendments Will Help Improve Your Soil

Greensand – It comes from the marine deposits of ancient seabeds that are loaded with iron and other trace minerals. It can be a problem in soils with high levels of iron.

Lava sand is loaded with trace minerals and water holding ability. It is an energy soil amendment that you can use as much as you want to for as long as you want. Remember that the most productive soils in the world are in places with a history of volcanic activity.

Crushed granite, as an organic fertilizer, is a slow-releasing source of potassium and trace minerals. It contains 67% silica and 19% trace minerals. Be sure to add sufficient amounts of organic matter (compost) so bacteria can convert these minerals to needed nutrients.

Coffee grounds are acidic and contain many minerals and are great to use around acid loving plants. Can be used in the garden and compost pile to increase the nitrogen level. They have a 20-1 carbon to nitrogen ratio so you do not want to use any more than 25 percent in your compost pile.

Peat moss has about the same acidity as coffee grounds and is a good way to lower the pH of your soil.

Sulfur is an essential plant nutrient as well as a good way of lowering soil pH. Use soil sulfur which will release more slowly and be less likely to overwhelm beneficial soil.

Vinegar, especially fruit vinegar, will improve the quality of alkaline water when mixed at a rate of 1 tablespoon per gallon of water. At this rate it is highly beneficial, especially when your soil or water is alkaline or you are trying to grow acid loving plants.

Alfalfa meal (or pellets) contains around 3% nitrogen and is commonly used as an animal feed. It is an excellent fertilizer material in horticulture, and is said to contain unknown growth factors which make its mineral content more effective as plant nutrients.

Cottonseed meal is a rich source of nitrogen (7%). Unfortunately, a substantial percentage of the insecticides used in the U.S. are applied to cotton, and some of these tend to leave residues in the seeds. Most organic certification programs restrict or prohibit the use of cottonseed meal.

Soybean meal is a high nitrogen, high protein feed that, when broken down by microbes, provides natural organic nitrogen fertilizer. It provides a soluble form of phosphorous (7-2-1). With about 7% nitrogen it can be a useful, but expensive, fertilizer material.

Cornmeal, a natural fungicide, is a disease fighter that should be used until you have healthy soil.

Epsom salts is used as a fast acting source of magnesium and sulfur. It is an excellent organic fertilizer.

Molasses – A food for microorganisms in the soil, which contains trace minerals, sulfur and potash and is a good carbon source. It is a good quick source of energy for soil microbes and plays a very important part of a complete organic program.

Gypsum is an excellent source of micronutrients, sulfur and calcium. Used in clay soils because of its draining capabilities. It provides aeration.

Fish meal and fish emulsion are rich in nitrogen. Fish meal contains about 10% nitrogen, along with about 6% phosphate. The fertilizer analysis of fish *emulsion* varies with the preparation method. Acid-digested fish emulsion usually has an analysis around 4-4-1, while enzyme-digested fish emulsion usually measured as 4-1-1. Fish emulsion may be fortified with chemical fertilizer, so organic farmers should be suspicious of any product with nitrogen content in excess of 5%.

Seaweed is a soil amendment and foliar feeding material which will increase plant production and stimulate root growth from the trace minerals as well as the growth regulators it contains. This organic fertilizer when combined with fish emulsion will make one of the best complete fertilizers.

Kelp meal is made from dried seaweed and is a good source of potassium, copper and boron. It is rich in plant food growth hormones and is a natural source of chelated trace elements that increases the health of the soil and plants. Use as an additive to organic fertilizers.

Bone meal is the best source of phosphorus and also contains calcium and some trace materials. Because of its slow release, it is a safer fertilizer especially when potting or transplanting new or young plants.

Blood meal is a good source of nitrogen (13%) that you can add to your garden. The organisms in the soil will turn it into available nitrogen for plants. It is also a slow release source of calcium and phosphorus and is good for bulbs and most vegetables. Be careful to closely follow the instructions on how to apply the blood meal that you have purchased as it is a very concentrated form of nitrogen. Too much nitrogen in the soil can, at best, keep the plants from flowering or fruiting and, at worst, “burn” the plants and possibly kill them. It is smelly.

Humates/Humic Acids are the result of decomposed prehistoric plant and animal matter. It provides at least 70 trace minerals for plant health and human health. Humates are metal (mineral) salts of humic or fulvic acids. Microorganisms are stimulated to do their jobs. It helps aerate the soil, enhances water retention and acts to increase the soil's ability to absorb nutrients into the soil. It provides buffering acids to guard the soil's pH. It is especially helpful when starting plants.

Mulch - 3 inches of mulch will not only protect your plants in the winter but will help keep the soil cool in the summer. It helps keep out weeds, but most importantly, as it composts, it will act as a slow release fertilizer. Maintain a three inch layer of mulch and help feed your plants.

Manure based organic compost – one of the building blocks of organics. It acts as a gentle fertilizer encouraging bacterial based microbial activity. Bacterial manure based composts produce nitrogen, and work best for the grasses and shrubs from the prairies. Examples are chicken, turkey, rabbit, cow, worm castings.

Plant based organic compost – another building block of organics. It acts as a gentle fertilizer encouraging beneficial fungal activity. Fungal, plant based composts, work best on trees, shrubs and plants from the forest. Examples are cotton burr, acidified cotton burr (with sulfur added), peat humus.

Compost Tea Mix - 1:4-1:10 compost to water in an open container, stir occasionally. Let steep at least 3 days at 15-25°C (50-70 °F).

Aerobic Compost Tea - Add oxygen to compost, increased number of microbes. Brew 24-36 hours. Must be used within 2 hrs of brewing.