NATURE'S WAY RESOURCES
an organically based service company

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Why is COMPOST called Black Gold?

or "The Real Value of Compost"

Compost is like any other product we buy and use, there is a huge variation in price, quality and value. So how does one determine the value of compost? How does compost compare **to other products like fertilizers, seaweed, fish emulsion, humates, beneficial microbes, etc.**

1) Fertilizer (N-P-K): A cubic yard (cy) of good compost will contain the same amount of nitrogen, phosphorous and potassium as $150-170 worth of fertilizer. Or to put it another way, a gardener would have to purchase at least $150.00 worth of organic fertilizer to get the same amount of major nutrients.

2) Fertilizer (Minor Nutrients): Similar to above to get the iron, calcium, sulfur, magnesium, zinc, copper, boron, manganese and molybdenum it would require another $7.00 worth of minor nutrients.

3) Fertilizer (Trace Elements): Compost will contain over 65 trace elements that are naturally found in plants. It would also require over $50.00 worth of fish emulsion to get the same amount of trace minerals.

4) Energy: All life forms require energy. For the life in the soil (bacteria, fungus, earthworms, etc.) the energy comes from the carbon it contains. If dry molasses is used as a carbon source to provide the energy found in one cubic yard of compost it would cost over $150.00.

5) Organic Matter: Organic matter is critical for healthy fertile soil. If Humates are used as a source of organic matter to provide the same amount of organic matter in a cubic yard of compost it would cost over $100.00

6) Microbes: Compost is teeming with beneficial microbes. It would require over $100.00 worth of microbial inoculants to provide the same amount of microbes and would not even be close to providing the same value or diversity.

7) Growth Hormones: Compost naturally contains many plant growth promoting hormones. It would require at least $5.00 of hormones to provide a similar benefit as found in one cubic yard of compost.

One cubic yard of compost provides over the same value as $562.00 worth of other products combined! ➔ "THE REAL BLACK GOLD"

101 Sherbrook Circle • Conroe, Texas 77385-7750
(936) 321-6990 Metro • (936) 273-1200 Conroe • Fax (936) 273-1655

Many people know the benefits of various soil amendments but are not familiar with the similar benefits of good compost.

1-3) Fertilizer (N-P-K), Minor Nutrients, Trace Elements:

We all know the importance of nutrients (fertilizers) for plants and human health. Compost is rich in plant nutrients, however; compost will release some nutrients immediately and the rest slowly over 5-7years. Hence we get the best results at first when used with a good organic fertilizer and a minor and trace mineral source like greensand.

Over time the microbes in the compost will collect nitrogen (N) from the atmosphere and give it to the plants as needed. This is additional and free nitrogen. Also the nitrogen release from compost does not pollute or create toxic nitrate in our foods (fruits and vegetables).

4) Energy:

All life requires energy to grow and perform work. For life in the soil (from the microbes that prevent disease or create soil structure to earthworms, etc.) the energy comes from carbon in the amendments that are applied to the soil. Similar to burning wood in a fire place, where the carbon in the wood is combined with oxygen and energy is given off or when we eat sugars and the carbon in the sugar is combined with oxygen by microbes in our digestive system to give us energy. Dry molasses is an excellent energy source as it contains many types of complex sugars that provide fuel for soil life. The energy in dry molasses is available immediately but is quickly used up versus compost where the energy takes a few days to be available but lasts for months to years.

5) Organic Matter:

Organic matter is critical to soil health and fertility. It affects everything from water retention, soil structure and tilth, to aeration and much more. Without organic matter in the soil all plants suffer and have many problems. Humates are often used as a source of organic matter. The family of molecules called humates is composed of many types of organic molecules from short and simple to long and complex, with each type providing different benefits. Mined Humates commonly sold by the bag provide organic matter, nutrition, food for microbes; increase the water holding capacity of soils, and many other benefits. They are quick acting but due to the short chain (small) humus molecules they do not last long, hence they must be applied frequently and they are relatively expensive.

Studies have shown that good mature compost will contain up to 70% humic substances that are both short and long chain molecules! These humic substances are composed of three types of humus;
1) An active fraction that will last 1-5 years

2) A slow fraction that will slowly degrade over 20-40 years
3) A passive fraction which is resistant to microbial decay with a life of 200-1500 years (real long term benefits and provides sequestering of carbon).

These humic substances are a mix of humins, fulvic acid, humic acid and other beneficial components. *A cubic yard of compost can easily contain over 300 pounds of humic substances!*

6) Microbes:

In recent years we have begun to understand that all life on Earth is dependent on microbes. For plants it is the microbes that live in the soil and live on the roots, leaves and stems. Research has shown that microbial inoculants can have a tremendous benefit on plant growth and health. The best inoculants on the market have only 100-200 species of bacteria and 20-30 species of fungi and very few protozoa, nematodes, arthropods or other beneficial life forms. By comparison good compost will easily have 25,000 species of bacteria, 10,000 species of fungus, many species of protozoa and beneficial nematodes to cycle nutrients, prevent disease, and create soil structure. The microbes found in compost provide disease suppression (competition, inhibit, consume), they improve nutrient retention in soil, they mineralize nutrients and make them available to plants, they improve soil structure allowing water and oxygen to move into the soil, they decompose toxic materials (phenols, tannins, pesticides), they produce plant growth promoting compounds, and they improve crop quality (flavor, nutrients, yield). In addition, the good microbes in compost prevent diseases which save additional value through cost avoidance of purchasing expensive toxic fungicides and pesticides.

7) Growth Hormones

Research is just beginning to identify and understand the many substances in good compost that promote plant growth. These range from enzymes and hormones to vitamin like substances. Numerous studies have shown that compost helps all plants grow better (faster, stronger and healthier).

Other Value Added Benefits of Compost:

- Compost holds water in the soil and helps create soil structure so that rain fall and irrigation water soaks into the soil
- Plants use far less water when compost is used, and with some turfgrass, 50-70% less water is required.
- Compost stimulates disease and insect resistance in plants so expensive toxic chemicals are no longer required
- Compost enriched soil holds in nutrients from fertilizer better. This means less fertilizer runs off to pollute our waterways.

Compost buffers the soil, neutralizing both acid and alkaline soils, bringing the pH levels to the optimum range for plants.

- Compost helps sandy soil retain water and nutrients
- Compost loosens tightly bound particles in clay or silt soil so roots can spread, excess water can drain out, and air can penetrate the soil
- Compost alters soil structure, making it less likely to erode, and prevent soil spattering on plants reducing the spread of disease.
- Compost can hold nutrients tight enough to prevent them from washing out but loose enough that plants can easily take them up as needed.
- Compost makes any soil easier to work
- Compost enriched soils have a lot of beneficial insects, earthworms and other organisms that burrow through the soil keeping it aerated (no need to rent expensive aerators wasting time and money).
- Compost encourages healthy root systems which decreases runoff (less flooding)
- Only a 5% increase in organic material in the soil from compost quadruples its water holding capacity.

Every time we use compost it is like making a deposit in a bank account called soil fertility!

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