

PFEIFFER BD COMPOST STARTER

Now Produced by:

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materials high in cellulose and lignin content in general. Loosely piled materials with air spaces between the particles will provide the best breeding conditions for soil organisms which break down the raw materials under heat development. There is also another type of fermentation, which goes on at lower temperatures between 56° and 120° F. This fermentation is somewhat slower but leads to an excellent product. It is this kind which usually takes place in a garden and farm compost pile containing a large percentage of soil. One should not be disturbed if the home garden pile does not heat up so much.

LIMING:

If lime is to be added, which is not always necessary, we recommend the use of dolomitic lime. If this is not available locally, a good agricultural lime will do. Very little, if any, will be necessary and under no conditions more than 100 lb. per ton of raw material. The lime can be sprinkled on the layers or mixed with the materials. If the compost is to be used for rhododendrons, azaleas, or other acid loving plants, no lime should be added.

LENGTH OF FERMENTATION PERIOD:

The fermentation period will depend more or less upon the type of materials used, the size of the particles, moisture content, size of pile, climate (summer or winter), etc. Some materials decompose more slowly than others. If the materials are ground up and thoroughly mixed, the fermentation process should be complete within 3-8 weeks. Otherwise it will take longer. The pile can be turned after a few weeks and sprayed again with the BD Compost Starter solution. Shredded or ground up materials will not need turning. During extremely cold and freezing temperatures the action is slowed down somewhat but not otherwise impaired.

THE FINISHED PRODUCT:

We are frequently asked when compost is ready for use and what it is like. The following can be a guide. The odor should be one of freshly plowed soil or soil found in the woods beneath trees. A slightly musty odor is not objectionable. Old leaf mold has a very characteristic odor, indicating good fermentation, which is similar. There should be no putrid odor.

The structure of the original material should have disappeared. Sometimes straw, wood, fiber or other particles may still remain but can easily be broken between the fingers. In this condition they will fall apart quickly in the soil. Any large pieces that have not completely decomposed can be added to the next pile for further decomposition. Summing up, the finished product should be dark brown to black in color, crumbly in texture, and have a so-called "woody" odor. Finished piles will keep a long time provided the moisture content is very low and they are covered.

INSTRUCTIONS FOR BUILDING A COMPOST PILE WITH BD COMPOST STARTER

Generally the materials for "small" compost piles are not put through a grinder or otherwise macerated as in the case of large composting operations. If no grinding is possible, compost piles can be built by hand in *thin* layers, alternating the materials in each layer. However, the smaller the particles, the faster the fermentation. Grinding the materials will definitely shorten the period of fermentation, while the ungrounded materials will take a longer time, depending upon the size of the particles and the thickness of the layers, as it will take the Starter solution more time to penetrate. The following steps should be observed in building compost piles:

MATERIALS:

Any organic materials, such as kitchen garbage, lawn cuttings, garden refuse, manure (any kind, but avoid cat or dog manure in compost intended for edible crops), leaves, weeds, etc. can be used. When pulling weeds for a compost pile it is well not to shake the soil from the roots, as some soil is necessary in the pile. Also paper can be used. While paper does not add to the quality of the compost, it does improve the structure. The paper should be shredded or crumpled and not laid in sheets. Materials of any length or thickness, such as straw, hay, stalks, tall weeds, corncobs, corn stalks, etc. should be chopped or shredded if fast fermentation desired.

LOCATION OF THE PILE:

It is advisable to build the pile in the shade or semi-shade so that the direct sunlight will not dry it out. However, if a shady spot is not available, the pile should be protected from the direct sunlight by covering it with a layer of soil, hay, straw or leaves. In any case it is well to cover the pile. It can also be built near the edge of the garden where the finished product will be readily available. *There should be no obnoxious odor if the pile is properly handled.*

PREPARATION FOR BUILDING THE PILE:

The pile should be built on *bare soil*, not on vegetation. All sod and vegetation should be removed, together with the top foot of soil in order to make a shallow pit. This soil can be used later for covering the finished pile or for interlaying or mixing while the pile is being built. In warm dry climates the pit can be deeper than one foot to preserve the moisture.

BUILDING THE PILE:

Either of two methods can be used in building the pile.

1. **IN LAYERS:** Each layer in this method should be *thin, not more than two inches thick*. This is important in order that the BD Compost Starter solution can penetrate all of the material in each layer. The first layer may be garbage, spread over the prepared soil in a two-inch (or less) layer. If there is not enough garbage, other materials can be added to complete the layer. Each layer should be sprinkled lightly with soil (any kind). The BD Compost Starter solution should then be sprayed over the entire surface of the layer. The pile can be built in this way, alternating the materials in each layer, sprinkling with soil and spraying with the Starter solution. If a layer is to be of soil only, it should not exceed 1 inch in thickness; leaves and grass cuttings should be less than two inches as they tend to cake.

EACH LAYER SHOULD BE SPRAYED WITH THE BD COMPOST STARTER SOLUTION.

Several layers can be built at one time or a layer added each day. If there is an interval of more than one day between the buildings of layers, *fresh Starter solution should be used*. Once the BD Compost Starter is re-activated, it should be applied within 24 hours. When the pile is completed, vertical holes can be made with a crowbar, or similar instrument, into the pile at varying lengths, about 1 foot apart in checkerboard fashion, and each hole filled to the brim with the Starter solution. In this way the starter solution will seep into the pile in all directions, insuring thorough inoculation with the potentized biodynamic preparations. The pile can then be covered with a layer of straw, hay, leaves, etc.

2. **BUILDING THE PILE BY MIXING THE MATERIALS:** If a stockpile of leaves, lawn cuttings, weeds, manure, etc., is available for composting, the materials should be mixed together thoroughly, 15 to 20% soil (by volume) added, and sprayed with the Starter solution while the materials are being mixed. If a cement mixer is available it will serve the purpose very nicely, or any other similar equipment. Mixing the materials on the ground with a shovel, shoveling back and forth (or with a hoe) until they are well mixed will also do the trick. The idea is to *see* that the materials are well mixed, soil *added* during the mixing, and the *BD Compost Starter* solution sprayed into the mixture. The materials are then ready for the pile.

SIZE OF THE PILE:

The "critical maximum" size of a pile is 5 feet high and 12 feet wide, since aerobic conditions are considerably reduced in the core of a pile larger than that. The pile can be as long as desired. Dry loose materials may be piled up to the upper limit of 5 feet height, but wet sticky materials should be kept to the lower level of 3 feet in height, here also 9 feet width is preferable.

Small piles 3 to 4 square feet at the base usually do not heat up as well as larger piles. They dry out easily, freeze more quickly, and in general do not always work successfully, especially in regard to the time of fermentation. Small piles need more

attention in connection with moisture control and they should be well covered. They are not representative of the type of fermentation, which goes on in the larger piles. Summing up, the minimum height of a pile should be 2 to 3 feet, maximum height 5 feet, and the maximum width at the base 12 feet, with slanting sides. Within these proportions proper fermentation can take place.

DILUTING THE BD COMPOST STARTER:

The water for diluting the re-activated (moistened) Starter is used primarily for the dispersion of the potentized biodynamic preparations in the suspension as well as for moistening the materials to be composted. In general, 2 to 5 gallons of water are sufficient for diluting one unit of Starter for 1 ton (1½ cubic yards) of compost material. However, more water can be used if the material is especially dry. The important thing is to see that all the compost material is thoroughly penetrated by the solution. Each layer of the pile, if it is being built in layers, should be well saturated. If the pile is being built by mixing the materials, enough water should be used to saturate all of the materials as they are being mixed. The solution should be constantly stirred or agitated during the spraying to assure an even distribution of the potentized biodynamic preparations within the Starter. *The amount of water to be used does not depend on the quantity of Starter, but on the rate of delivery of the spraying equipment.*

MOISTURE CONTENT OF THE PILE:

Moisture is very important for proper fermentation. The ideal moisture content of the pile is between 40% and 60%. The pile should not be allowed to dry out below 30%. Water should be added if it becomes too dry. On the other hand, the pile should not be soaking wet. If dry materials, such as corncobs, weeds, straw, hay, sawdust, etc., are used, the materials should be well moistened before the pile is built or while it is being built. This can be done by soaking the materials in a pit until they are well moistened.

According to our observations, water sprinkled over the surface of the pile will penetrate only about 1 foot beneath the surface. When the pile dries out the surface becomes caked, thus excluding the air. Therefore we recommend that you attach a ½ or 1 inch pipe (2 to 3 feet long) to a hose, thrust the pipe down into the pile and fill with water so that it can penetrate and filter into the pile in all directions. These holes can be made in an overall checkerboard fashion 1 to 2 feet apart according to the size of the pile.

HEATING UP OF THE PILE:

Temperatures between 120° and 140° F, are easily reached in a well built and covered pile amply supplied with moisture and air, provided the pile is large enough to generate heat. In small piles of only 1 or 2 cubic yards the conditions are not favorable for heating, especially at low outside temperatures or when the material is too wet. A pile needs a certain body or mass in order to heat up. Piles that are soaking wet do not provide the inner "atmosphere" to make a pile "sweat." This sweating atmosphere is essential in piles containing straw, sawdust, dry weeds, i.e.,