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ARTIFICIAL MANURE PRODUCTION

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The well recognized value of manure as a fertilizer has always created a demand for it. Good organic fertilizer is stimulating to all crops, since it not only supplies the plant food necessary for normal growth but also supplies valuable soil constituents such as humus. It is generally recognized that manure supplies something that produces better plants than the equivalent amounts of plant food supplied from commercial fertilizers. Humus is made up largely of partially decayed vegetation and markedly improves the physical condition of the soils and increases the capacity to hold water. It also makes soils more friable and easily cultivated.

There is considerable interest in the possibility of using certain waste materials that occur on the farm or around the home in making synthetic or artificial manure. The need for utilizing such material is especially urgent in the South where there is a shortage of barnyard manure due to the relatively small number of livestock kept. On the average Alabama farm, the use of synthetic manure should have a place. Every homeowner has need for manure in the garden, in the flower beds, on the lawn, and in the field; but, the supply is usually limited. It is not generally known that artificial manure can be made from leaves, straw, or other crop residues that is equal to animal manure.

The principle of making synthetic manure has been known and used for a number of years in this country and in Europe. It is not necessary to purchase any patent material for making artificial manure. Such patented products are on the market but are expensive. So far as is known, they are not superior to common materials that may be purchased cheaply. This leaflet describes a method of preparing and using compost and supplementing it with commercial fertilizers to make a complete fertilizer.

Materials to Use

The essentials to produce artificial manure are fertilizers, lime, and straw or other crop residues placed in a favorable temperature with sufficient moisture to allow bacteria and other microorganisms to break down the carbonaceous material to the consistency of manure.

On almost every piece of property is a large amount of organic material that can be made into excellent compost. Any vegetable matter that will decay readily may be used for this purpose. Leaves, pine straw, oat straw, corn stalks, low-grade hay, weeds, lawn clippings, vegetable

trimmings, discarded papers, paper boxes, etc., are excellent materials that may be used in a compost and made into manure. In the fall dry leaves are a fire hazard if they are allowed to blow around and if they are burned, the smoke is a nuisance. Many homes have access to leaves that could be made into excellent manure.

Fertilizers to Use

If the composting is done on a small scale, such as for the average home garden, a ready-mixed fertilizer such as 6-8-4 or 4-10-7 is the most practical material to add. Two hundred pounds of a complete fertilizer will be needed for each ton of dry material used. A small amount of lime (50 to 100 pounds per ton of dry material) should be added to the compost.

For large scale production, use one of the following:

(1) One hundred pounds of ammonium sulfate or the equivalent in other forms of nitrogen, and 200 pounds of basic slag per ton of dry leaves or straw. Do not mix the ammonium sulfate and slag together but apply each one separately over the surface of the leaves or straw. Other sources of nitrogen may be mixed with basic slag and applied over the leaves. If basic slag is not available, 100 pounds of superphosphate and 100 pounds of finely-ground limestone may be used in its place.

(2) One hundred pounds of cyanamid and 100 pounds of superphosphate per ton of dry leaves or straw.

Constructing the Compost

In preparing compost from waste materials, the problem is to bring about thorough decomposition as rapidly as possible. Decomposition may be stimulated by the addition of certain fertilizers, which hasten rotting and make a richer compost. Decomposition is also hastened by the presence of sufficient moisture. It is well to start the pile early in the fall and if it is properly cared for, it will have decomposed and made an excellent fertilizer by spring.

Compost piles may be made in pens or they may be made without a pen. Usually it is preferable to build a pen. A pen 10 feet by 10 feet and 6 feet high will hold 1 ton of dry leaves or straw. One ton of dry leaves or straw will produce about 2-1/2 tons of manure. The compost pile should be built in the open so that rain can fall on it. Put a layer of straw or leaves about 1 foot thick and sprinkle over the surface a suitable portion of the previously mentioned fertilizer and then scatter a thin layer of manure or rich loamy soil over the surface to inoculate the compost with decomposing organisms. Then add another layer of straw or leaves about 1 foot thick, and fertilizer and manure or soil over the surface. Continue this procedure until the pile is complete. Usually the piles should be 5 feet high. The piles should be left sloping toward the center so that water will run into them. If the water is available, the pile should be thoroughly wet. The material should be kept moist to hasten decomposition. Usually sufficient moisture is supplied by rain but in a dry season handwatering

will be desirable. The compost should be moistened at least once or twice a month until decomposition is complete. Excessive water, however, should not be used as it will cause leaching of plant food.

Working the composted mass by forking it from one pile to another two or three times in the course of making will hasten the decomposition and give a better product. When a new supply of vegetable matter is available, it should be added to the compost pile and an application of fertilizer made and some of the compost forked over it.

Constructing and Locating Pens

Many gardeners find that a pen of concrete or wood located in an out-of-the way place makes a very convenient container for preparing compost. On the farm it can be built of poles or slabs. The pens should have one side open or easily removable for convenience in forking and in removing the compost. The compost pile may be of any convenient height. Usually a height of 5 or 6 feet is preferred. A compost pile is usually not very attractive. Therefore, unless it is located in an out-of-the-way place it should be screened from view by plants or a lattice screen. A corner of the lot or an area behind a building can be utilized for this purpose. By planting a few shrubs or vines it can be concealed easily.

Such a compost usually does not breed flies.

