

# How to make good, hot compost

<b>Source</b>	The German Federal Enterprise for International Cooperation (GIZ) - Market-Oriented Agriculture Program (MOAP)
<b>Keywords</b>	Disaster prevention, drought, tomato (plant), vegetable Composting, compost, soil fertility, organic fertilizers
<b>Country of first practice</b>	Ghana
<b>ID and publishing year</b>	8234 and 2015
<b>Sustainable Development Goals</b>	No poverty and life on land

## Summary

Compost has many advantages. It is a well-balanced fertilizer, it improves long term soil fertility and it helps to suppress soil borne diseases. The following video shows a good way of how to make compost in Ghana.

First three shallow pits of minimum 3 feet deep and 3 feet wide are dug (Figure 2).

Figure 1. Composting materials



## Description

[Video: How to make good, hot compost](#)

### 1. Composting materials

Different kinds of crop residues and animal manure can be used to make compost, using the following materials:

- maize stalks;
- chicken manure mixed with saw dust;
- goat manure;
- freshly cut leaves, grass and weeds;
- sawdust;
- rock phosphate;
- ashes, saw dust and algae; and
- water.

Figure 2. Digging 3 compost pits



When preparing compost, you should aim to have at least four different kinds of materials. You should aim to have at least one kind of animal manure, one kind of crop residue and one sort of green plant material.

### 2. Creating the compost pile

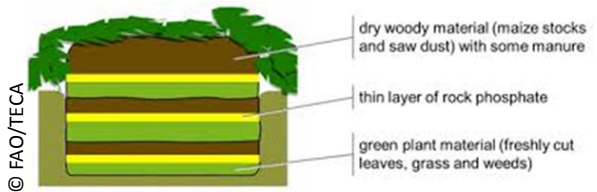
It is good to place the compost pile in a shady place with a water source nearby.

After collecting the materials, larger pieces should be cut into smaller pieces of the size of a finger. The composting process will be much faster and the final product will be better if the material is chopped. Place the materials in layers



into the first pit. The first layer should be of green material and it should be wet. After the first layer, continue with a layer of dry woody material (maize stalks and sawdust with manure). Then alternate between layers of fresh material and dry material. The last layer on top should be of dry woody material. Then the pit should be covered by large leaves in order to protect the pile. If available, a couple of handfuls of rock phosphate should be added after each green plant material layer. It is important to sprinkle water on the layers of dry material and on the rock phosphate so that the material is moist.

Figure 3. Layers of different materials in a compost pile



### 3. Measuring the temperature

Three days after the completion of the compost pile, it is important to check its temperature. This can be done by inserting a long stick into the centre of the pile. After five minutes, the end of the stick should be hot. This indicates that the composting process has started. If the compost pile is still cold, it means that the compost is too dry or it is lacking green material or manure. Whenever there is a problem with the compost pile, the pile should be turned and aerated. If too dry, water should be added in the process. If the pile does not heat up, add nitrogen rich materials.

### 4. Turning the compost

When the pile is cold after having been hot before, it is time to turn the compost to reignite the heat. This turning process should be repeated twice during the hot phase.

It should be done by shifting the compost material into an adjacent pit. Material that was in the corners before should go in the centre now and what was in the centre should go to the sides.

Figure 4. Measuring the temperature of a compost pile

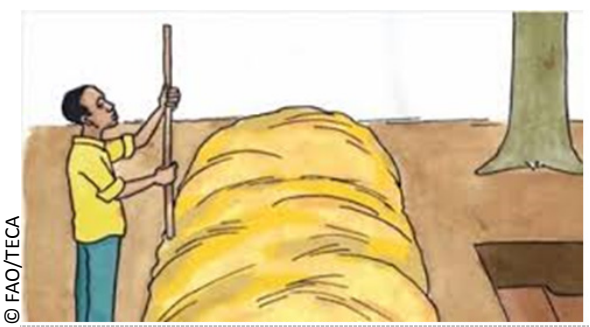


Figure 5. Shifting the compost



### 5. Checking the moisture

It is also important to check the moisture level of your compost during this process. Take a well-mixed sample of the compost material and squeeze it with one hand. When water is dripping out, it means that the compost is too wet. When opening your hand the material falls apart, the compost is too dry. When opening your hand and the material stays in a ball, the moisture level is right.

### 6. Applying compost on your fields

The compost process happens in two phases. The first hot phase is followed by a cold phase. The cold phase is characterized by



worms. Once the worms have left the pile, this is a good sign that the compost is ready. After your compost is ready, as a general rule, two to three shovels full per square yard is a good quantity to apply.

## **7. Agro-ecological zones**

- Tropics, warm

## **8. Objectives fulfilled by the project**

### **8.1 Labour-saving technology (LST)**

Improved soils thanks to composting require less labour and effort to use and maintain.

### **8.2 Women-friendly**

The technology is designed and has the potential to support the needs and labour

demands of women. For example the technology is easy to use, it is affordable, it is light and manageable, it supports tasks specifically assigned to women; advisory services target women's needs and time availability.

### **8.3 Resource use efficiency**

Compost is a well balanced fertilizer, it improves long term soil fertility and it helps to suppress soil borne diseases.

### **8.4 Pro-poor technology**

With improved soil fertility thanks to compost usage this can lead to improved yields providing additional income and food source.