



What is Compost ?



The Farmers' Handbook - "Near The House 1", Chapter 5 - Compost

Mrs Saraswati Adhikari and her improved compost heap, Begnas VDC, Kaski district, Nepal



All farmers have experience of making compost. They also know very well how much compost is needed for their plants. But if the compost used on the fields is not well rotted down, it can cause more problems of pests and disease, rather than benefits. Like carrying fodder from the forest and tending livestock, carrying the compost is hard work, but it should also give good production. But if the compost is poor quality all the work can be wasted and result in loss for the farmer.

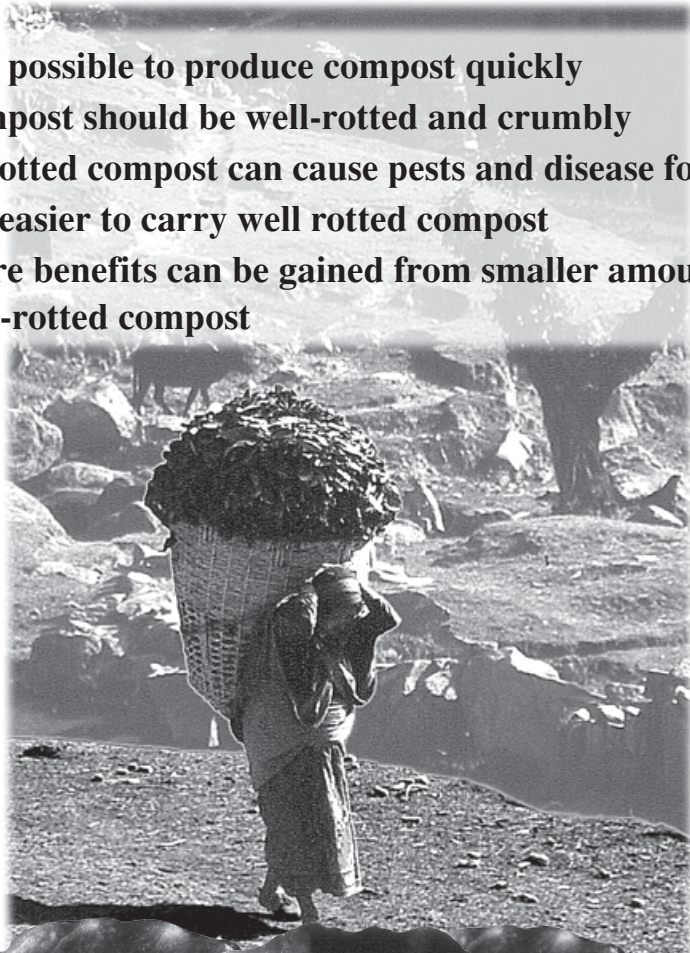
So this chapter gives information on easy methods to produce good quality compost.



Why make Compost ?

Things to consider when making compost

- it is possible to produce compost quickly
- compost should be well-rotted and crumbly
- unrotted compost can cause pests and disease for crops
- it's easier to carry well rotted compost
- more benefits can be gained from smaller amounts of well-rotted compost



How to make Compost ?

To improve the method of compost making, first it's necessary to understand how compost is made and what things it needs to make it.

Materials needed to rot animal manure and plant materials (biomass) :-

- **things to decompose** :- leaf litter, grass, animal manure, etc.;
- **decomposing agent** :- micro-organisms break down biomass, manure, etc. These micro-organisms are present in rotted compost and fertile soil;
- **moisture** :- micro-organisms need the correct moisture to work;
- **air** :- micro-organisms also need air to work;
- **right temperature** :- it shouldn't be too hot.

Quick rotting compost needs good management of the micro-organisms

Materials needed to build a Compost Heap

soil or well rotted compost



unrotted manure, leaf litter, straw, etc. from the livestock sheds



small twigs or branches



poles



How to make Compost ?

- 1 When making a compost heap first put a layer of thin sticks and branches on the ground



- 2 Then put a layer of the material to be rotted - manure and biomass from the livestock pens, leaves, etc.



- 3 Then put a thin (2 inch) layer of soil or fine, well rotted compost. This layer should completely cover the one beneath so you can't see it.



- 4 Now bury a pole upright in the heap, and without removing it, continue to add layers as before. On each 12-15inch layer of manure, biomass, etc., add a thin layer of soil or compost.

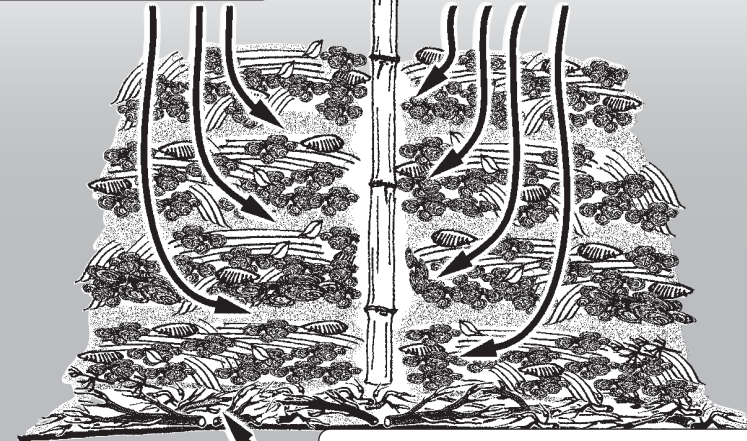


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From time to time move the pole from side to side to keep the hole open

layer of soil or rotted compost

layer of fresh manure, straw, leaf litter, etc.



layer of thin sticks or branches

- If there is a tradition of removing all the manure from the livestock pens at once, just burying the poles without making layers will still improve the compost.

By doing this, the numbers of micro-organisms in the compost will increase. Then, they can decompose the manure and biomass quickly. There are most micro-organisms in the soil and rotted compost, so this does the same work as "seed" to help make more micro-organisms to rot the compost.

The thin branches and the pole allow air into the heap.

Let's See

how to make Compost



1

newly made compost

oldest compost

3 month old compost

Compost made in separate heaps, with poles



Shaking the pole from time to time quickly rots the compost



2



3

Remove the pole to test the heap

If there's too little water in the heap a white fungus can be seen



4

fungus



5

This well rotted compost heap is being removed

new compost heap

Maintenance

How to maintain the Compost

In many villages there is a shortage of water. However, from time to time it's good to put waste washing up water down the holes in the compost heap.



Symptoms of poorly rotting compost

If there is anything lacking in management of the compost heap, it will rot slowly or badly. But how to recognise what is wrong ?

- If there is white fungus on the pole when taken out, perhaps there is not enough water in the heap. Pouring a little water from time to time will solve this problem.
- If your hand is burned when you bury it in the heap, this is a bad sign. Too much heat will also kill the micro-organisms. This will slow the decomposition process. This is probably due to not enough air circulation. Make more holes in the heap to solve this.

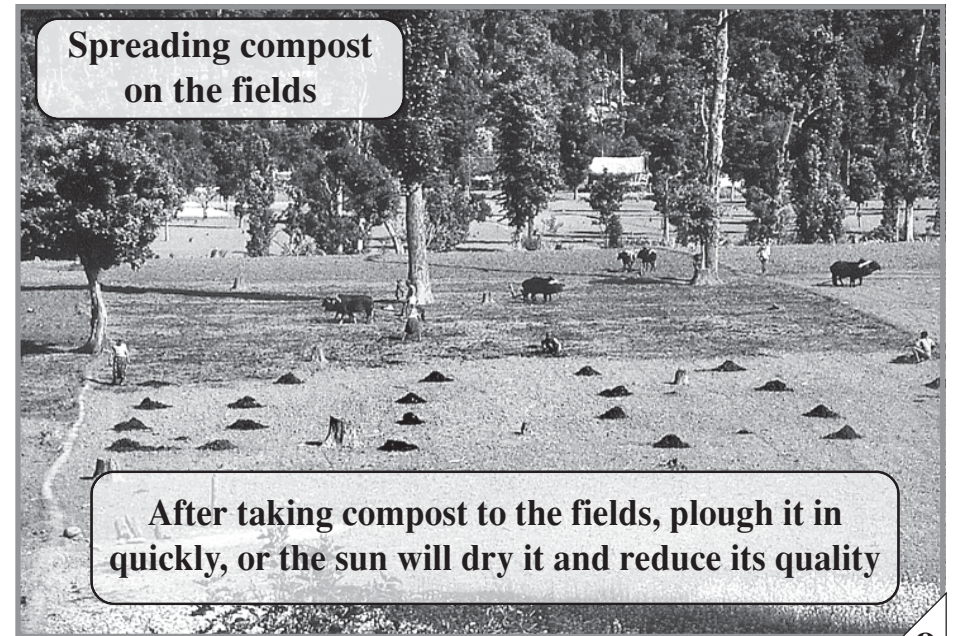


- If there is a bad smell from the heap, and lots of flies, add more straw or leaf litter. This can also be due to lack of micro-organisms and without them, the manure etc. will not rot down well. For this, add more soil or well rotted compost to increase micro-organisms.

When all these needs are met, compost will rot quickly, and you will have better compost to go onto the fields

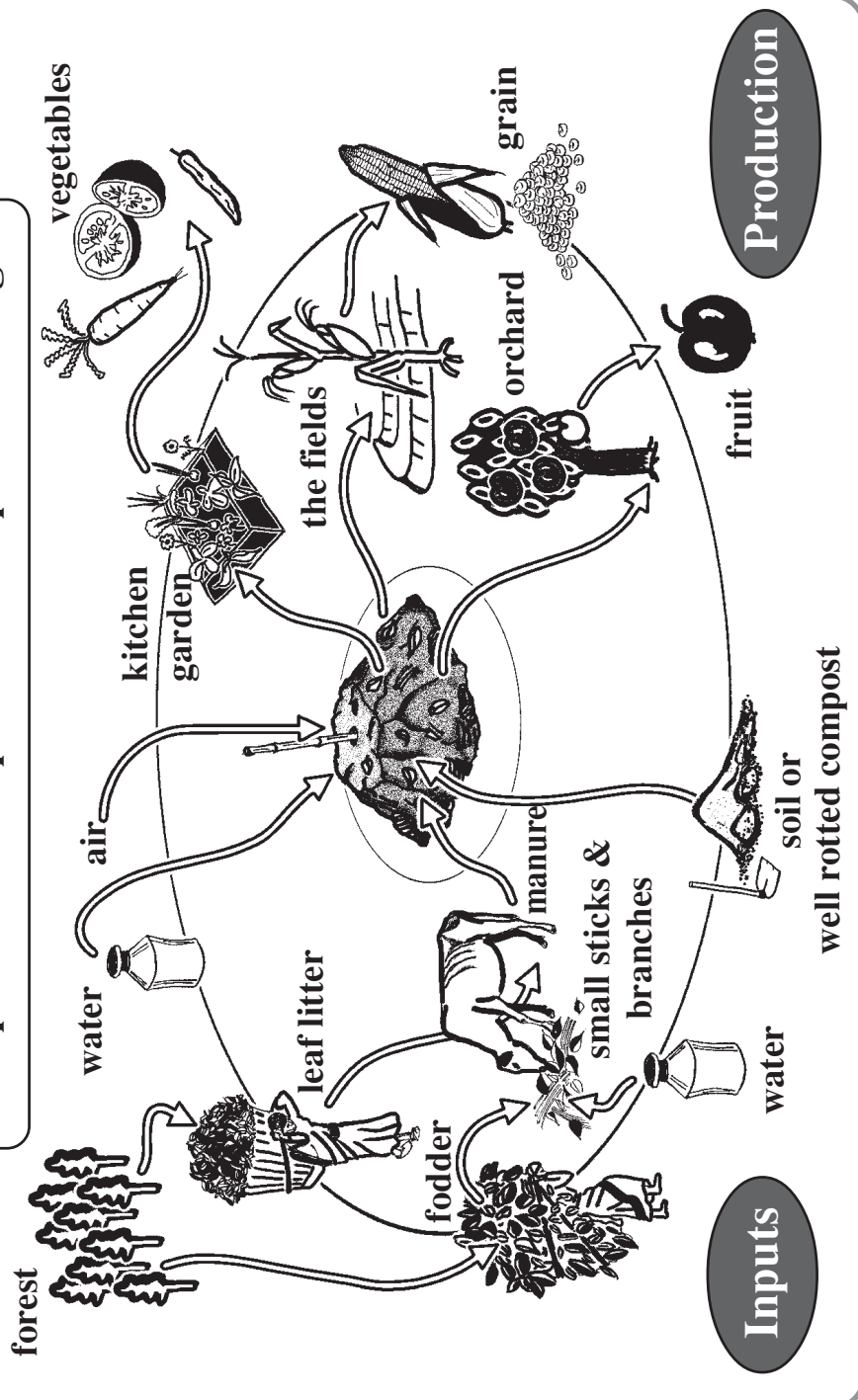
If you can't make a heap with layers and it is all stacked in one place, you don't have to do anything else but make holes in the heap with the poles. Move these sticks around from time to time. Just doing this will improve the compost.

Spreading compost on the fields



After taking compost to the fields, plough it in quickly, or the sun will dry it and reduce its quality

Inputs and Outputs of Compost Making



Farmers' Experience

Mrs Sita Bucha Magar

From Nepal, Surkhet district, Gumi - 3, Ratadada village, and a member of "Hariyali" women's group, Mrs Sita Bucha Magar has made improved compost. Now let's hear about her experience.



Mrs Sita Bucha Magar

“ In 1994 I learned how to improve my compost from the Homestead Programme (JPP). Before this we would put out just partially rotted compost. We had a habit of heaping compost anywhere to rot. Now we make it with a pole for a chimney, and it rots much more quickly. Mixed grass, leaves and manure are stacked in layers with soil or old compost, and the pole buried in. It's an easy method. Before this the compost would be wet and sticky but now it's much better. It's more crumbly, and is also easier to carry, and to spread out on the fields. Now we always make compost like this. Twice a year we carry it to the fields. It's easy to make compost like this, you don't have to work hard. And because it's easy to do, it's easy to learn and to teach others as well. That's why there are many farmers using this method in the village nowadays. ”



Read On !



Subjects Related to Compost



Soil Conservation and Improvement Chapter

What is soil? What does good soil need? What damages the soil? What methods are there to protect and improve soil? The answers to all these questions, and more information on soil, are given in this chapter.



Livestock Management Chapter

Livestock can be healthy and give good production from nutritious fodder grown close to the home. Information on this and other simple methods to manage livestock through health, diet, hygiene and breeding are given in this chapter



Agroforestry Chapter

Trees planted on the land produce many products to make compost for the soil, but you can't plant them anywhere. In this chapter, information is given about how to plant trees on farmland without decreasing farm productivity.

