

10. Leave the compost unturned. It will mature within one month. It is ready for use

- i) when the temperature in all layers of the pile has gone down. You can tell this by feeling the straws.
- ii) The volume of the pile is only 30% of what it was before.
- iii) The substrates are brown to black and no longer recognizable as such they became soily in appearance
- iv) The odour is not foul

11. Before the last harrowing, scatter the compost on the field. Harrowing will mix it with the topsoil.



## **Rapid Composting for Rice Farmers**



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Ordinary composting is too slow for farmers who plant two or three crops a year. The rapid composting method, speeds up the process with a compost fungus activator, *Trichoderma harzianum*, and a set of procedures that provide favourable conditions for the quick decay of agricultural wastes. Like the normal method, it uses rice straw animal manure and water. It uses no ash or lime because only minimal organic acids are produced during decomposition. The compost fungus activator replaces soil as source of waste cellulose decomposers, thereby increasing the number of decomposers.

Rapid composting requires two kinds of substrates: those rich in carbon and those rich in nitrogen. Rice straw is abundant on the farm. It is rich in carbon but not in nitrogen. To speed up decomposition and get good quality compost, a farmer will also need fresh or dry animal manure such as poultry dung, cowdung, buffalo dung etc. A good substrate combination is three parts carbon

to one part nitrogen substrate. If animal manure is difficult to obtain, it can be partly replaced by azolla, Sesbania and other leguminous plants. They can be combined with animal manure at a 3 to 1 ratio (75% manure and 25% leguminous plants, according to weight). *Trichoderma harzianum* is now produced by Bio Control laboratory, Medziphema Deptt of Agriculture Nagaland.

The ideal compost heap cover is white transparent plastic. Good substitutes are open plastic bags sewn together, banana leaves or coconut fronds.

#### **Procedures :**

How to do rapid composting on irrigated low land rice fields ?

1. At harvest time, heap up the rice straw from each paddy on one side of that paddy. It saves labour later when you have one compost pile for each paddy instead of one big pile for all fields.
2. Soak the rice straw overnight in irrigation water or in the rain during

the rainy season. You may also water them with sprinklers before they are piled, until saturated.

3. Make a simple platform in the middle of the paddy. The size will depend on the amount of rice straw.
4. Loosely pile up the water-saturated rice straw in layers on the platform. Each layer may be 10 – 15 cm thick
5. On top of each straw layer, broadcast one or two handfuls of the activator. Use 25 kg of activator for each hectare of Riceland.
6. Repeat steps 3 to 5 until all the straw is used up
7. Put manure and nitrogenous plants on top of the straw layers. The nitrogen substrate should be 15 – 25% of the total weight of all the substrates.
8. Cover the compost pile. It will heat up in 24-28 hrs.
9. Moisten the pile often. Water evaporates fast and since the compost pile is in an open field, it must be moistened regularly