

Waste Decomposer-A Step towards Natural Farming

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ABSTRACT

“Natural Farming is a chemical-free traditional farming method. It is considered as an agroecology based diversified farming system which integrates crops, trees and livestock with functional biodiversity. It is expected to reduce dependency on purchased inputs such as chemical fertilisers. It is considered as a cost-effective farming practice with scope for increasing employment and rural development. Now-a-days waste decomposer emerged as an important component of natural farming. It is eco-friendly and farmers in many states are using it such as Telengana, Chhatishgarh, Bihar, Odisha, Karnataka, etc. As an alternative to currently available, commercial biocontrol agents and biofertilizers, waste decomposer was released for farmers by National Centre of Organic Farming for enhancing the crop productivity and plant disease management.

INTRODUCTION

After green revolution it has been seen that farmers produce has increased to a profitable level as such to fulfill countries growing population. But in other hand the hybrid seeds, HYVs seed require high dose of chemical fertilizers for their production. By application of high dose of chemical fertilizers soil health became deteriorating day by day. Thus the concern is to maintain soil health .so concept of organic farming came

NCOF launched waste decomposer culture in 2015 which is proving as miracle all over the country. It is used for quick composting from

organic waste, soil health improvement and as plant protection agent. It is a consortium of microorganism extracted from desi cow dung. As on date waste decomposer is solid in a bottle of 30 gms costing Rs. 20/- per bottle directly through NCOF and RCOF to 1 lakh farmers. The waste decomposer is also validated by ICAR. A single bottle decomposes bio-waste of more than 10000 metric tons just in 30 days.

How to prepare waste decomposer?

- Take 2 kg jaggery and mixed it in a plastic drum containing 200 liters water.
- Now take 1 bottle of waste decomposer and pour all its contents in a plastic drum containing jaggery drum.
- Mix it properly with a wooden stick for uniform distribution of waste decomposer in a drum.
- Cover the drum with a paper or cardboard and stir it every day once or twice.
- After 5 days the solution of drum turns creamy.

Note 1: Farmers could prepare the waste decomposer solution again and again from the above formed solution. For this, 20 liter of waste decomposer solution is added to a drum with 2 kg of jaggery and 20 liter water added.

Note 2: Farmers can prepare continuously this solution from this waste decomposer for lifetime.

USES: Waste decomposer application 1000 liter per acre changes biological and physical properties of all type of soil (acidic, and alkaline) within 21 days of application and it helps to generate earthworm population in the soil upto 4 lakh in 1 acre land in just six months.

Composting

- 1) Spread 1 ton of compost as layer on a plastic sheet placed under shade
- 2) Sprinkle 20 liter of the above prepared solution over the compost layer
- 3) Spread one more layer of compost above the existing layer
- 4) Sprinkle 20 liter of the solution over the compost layer
- 5) Use the solution for 10 compost layers
- 6) Maintain 60% moisture during entire period of composting

- 7) Turn over the compost at 7 day interval
The compost is ready to use after 30 days

Foliar Spray

Spray the preparation on the standing crop for 4 times at 10 days interval. Foliar spray with waste decomposer controls all type of bacterial, fungal and viral diseases effectively in different crops.

In-Situ Composting of Crop Residue- Spray the preparation on the post-harvest stalks of crop plants of 1 acre land and leave it for decomposition.

Seed Treatment

- 1) Wear gloves
- 2) Content of 1 bottle is thoroughly mixed with 30g jaggery and used to treat 20 kg seeds
- 3) Leave the treated seeds under shade for 30 minutes
- 4) After 30 min. the seeds are ready for sowing.

For regular disease control, spray the preparation on standing crop once in a month.

Seed treatment with waste decomposer shows 98% early and uniform germination and provides protection before seedling emergence.

Farmers can do farming with the use of waste decomposer without using chemical fertilizer and pesticides. There is no need of urea, DAP or MOP when waste decomposer is applied.

How to make waste decomposer at home?

If you do not have farm land but you have your own terrace or balcony garden then also you can prepare and use this solution in your plants to get good results.

For home gardening purpose you can prepare this solution in a smaller amount. If you have large space then you can try the process mentioned above.

But to prepare this solution for home garden for very small-scale purpose you will need,

- 25 Litres capacity plastic bucket,
- Jaggery (200 grams)
- Waste decomposer (3 grams)
- Water (20litres)

Process

- Fill the plastic bucket with 20 litres of water, add 200 grams jaggery in the bucket and 3 grams of waste decomposer.
- Stir the solution with the help of a wooden stick and cover the drum properly with plastic and wooden cover.
- Stir the solution twice in a day for 5 minutes daily. After 6 days this solution will become ready to be used.
- Mix 3 parts of this solution in 10 parts of water i.e. 30% solution. You can spray this solution in the form of a spray once after every 7 days on your plants.
- Once you have prepared this solution you can use it again and again to prepare more solution. To prepare more solution take 2 litres of the prepared solution and mix it in 20 litres of water with 200 grams of jaggery and 3 grams of waste decomposer.
- Stir the solution daily and after 7 days you can use this solution again.

Waste decomposer Advantages-

- Waste decomposer can be used in the form of bio-pesticides. Dilute the prepared solution with water in 1:3 and apply as a foliar spray to control pest and diseases.
- It increases soil health and improves fertility of the soil. This prepared solution can be used for seed treatments before sowing.

- Regular use of the solution improves crop yield and quality.
- Crop sprayed by this solution are not eaten by Blue bulls.
- This solution can be used for all crops and is cost effective, time saving and easy to use. In comparison to other manures that takes months to be prepared, you can prepare this solution within a week.
- Dependency of various types of manures, fertilizers, pesticides, insecticides and fungicides is reduced to zero after using waste decomposer.
- One small bottle of the starter culture can help to produce 1 lakh metric tonne organic manure in a year.
- It is simple and reliable to use.

Demerits of Composting:

- The composting process can emit unpleasant odors if not managed properly.
- The composting process requires proper monitoring of moisture and oxygen levels, which can be time consuming.
- Composting is not suitable for some types of waste, such as plastics, metals, and other inorganic materials.

CONCLUSION

Use of waste decomposer in rice fields helped farmers to get relatively higher yields. This technology has also reduced the input cost and use of chemical fertilizers that improved the profitability of rice cultivation. It's application can eliminate about 90% uses on all types of pesticides, fungicides, insecticides since it controls both root diseases and shoot diseases.

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