



## Preparation of Coir Pith Compost

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Coir pith compost, also known as coco peat compost, is a nutrient-rich organic material derived from coconut husks. It is widely used in gardening, horticulture, and agriculture as a sustainable alternative to traditional peat moss. The process of preparing coir pith compost involves various stages, starting from the collection of coconut husks to the final decomposition of the material. These steps are crucial to ensure the transformation of coir pith into a valuable and nutrient-rich compost that can enrich the soil and support plant growth. A potting mix containing coco peat moss is essential to promote root growth. Mulch is very helpful in maintaining soil moisture and promoting aeration. Instead of using coir pith directly, we can also use it in the form of compost. But making compost using coir pith is not that easy. The reason for that is the organic compound called 'Lignin'. This compound found in the cell walls of the fungus is not easily expressed. But mushrooms are one of the few organic resources capable of making this happen. Therefore, mushrooms play an important role in composting. Lignin is reduced from 31 to 5 percent, and the C:N ratio from 112:1 to 24:1. This properly decomposed coir pith compost is good for the growth of crops.

### How to make coir pith compost (1000 kg)?

**Necessary materials:** coir pith (1000 kg), *Pleurotus* spawn (7.5 kg), urea (5 kg) or FYM (200 kg).

A shaded place of 5 m x 3 m dimension is selected and leveled after removing weeds.

100 kg coir pith is spread uniformly. Spread 1.5 kg (5 packets) of *Pleurotus* spawn on this and cover with a second layer of 100 kg coir pith. Then nitrogenous source in the form of urea or FYM is applied. Spread 1 kg urea on the surface of the second layer uniformly. Repeat this sandwiching process of one layer of coir pith with spawn followed by another layer of coir pith with urea up to 1 m height. Then the bed is plastered with cow dung slurry and deep holes are made in the composting bed using long sticks for providing aeration.

Sprinkle water if necessary to keep the heap moist. Allow the heap to decompose for 30 to 40 days. When the compost has reached maturity the compost heap height will be reduced by 30% and will be turned to black in colour with earthy odour

### How to store compost?

Store the sifted compost in an open and shaded area. Then water every month to maintain moisture.





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### Key Benefits of coir pith compost

- Increases air circulation in the soil.
- Water is retained in the soil for crop growth.
- Increases irrigation efficiency.
- Helps the seeds to germinate quickly.
- Increases microbial activity in the soil.
- Increases crop nitrogen availability from 0.26 to 1.06 percent.
- Increases the availability of micronutrients like calcium, magnesium and sulphur.

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### Application of coir pith compost

- Irrespective of the crop, 5 kg of compost per hectare is recommended.
- Add compost as a base.
- Use 20 percent compost as a potting mix for nursery purposes.

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### Dose of coir pith compost for different crops (in annual terms)

- **Coconut, Kamuk:** 12 kg per crop
- **Rice:** 150 kg per acre
- **Legumes:** 300 g per crop
- **Tomatoes, chillies, vanda and eggplant:** 300 g per crop
- **Banana:** 5 kg per crop
- **Ginger and Turmeric:** 100 g per crop
- **Pepper:** 5 kg per flag
- **Cardamom:** 5 kg per lid
- **Coffee:** 5 kg per crop
- **Tea:** 300 g per crop

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### Limitations of coir pith compost

- For large farmers Buying compost is not practical. They should make compost in the farms themselves.
- Use good quality sandpaper.
- Completely Do not use compost that has not decomposed.

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## **Conclusion**

In conclusion, coir pith composting offers a sustainable and efficient solution for organic waste management and soil enrichment. Throughout this process, coir pith, which is a byproduct of coconut processing, is transformed into nutrient-rich compost that can be used to enhance soil health and support plant growth. The composting of coir pith not only diverts organic waste from landfills, reducing environmental pollution, but also promotes the utilization of a renewable resource, contributing to a circular economy. In summary, coir pith composting provides an effective and environmentally friendly approach to organic waste management and soil enrichment. By harnessing the potential of coir pith, we can promote sustainable agriculture, reduce waste, and contribute to the creation of healthier and more resilient ecosystems. Embracing coir pith composting as a standard practice can lead us towards a more sustainable and greener future.