



Accelerated process for composting of cotton stalks—CIRCOT's viable solution for additional income to farmers and soil fertility management



Salient features of CIRCOT's Accelerated Cotton Stalk Composting Process:



Composting heaps



Bioenriched compost

- Using CIRCOT microbial consortia, about 15 days for wet cotton stalks and 30 days for dry cotton stalks can be saved for the preparation of compost from cotton stalks
- Prepared compost is enriched with nutrients, plant growth promoting microorganisms and stable for the period of up to one year
- Considering the less availability of FYM in the country, compost from cotton stalks is a viable solution for soil fertility management.
- Effective way of on-farm management of cotton crop wastes
- Additional income to farmers due to high quality compost
- Reduces environmental pollution that may arise due to burning of cotton stalks in the field

Cotton stalk compost: An suitable alternative for Farm Yard Manure (FYM)



Field Evaluation trial

- Cost of production of cotton compost is similar to FYM
- Saving of 60 – 75 days for the preparation of compost compared to FYM
- NPK content (%) is higher in cotton stalk compost compared to FYM
- At par with FYM on growth and yield of cotton

Parameters	Compost from cotton stalks	FYM
Cost (Rs.) per tonne	3200	3000 to 3500
NPK content (%)	1.1, 0.9, 0.5 (wet cotton stalks); 1.43, 0.78, 1.82 (dry cotton stalks)	0.5, 0.2, 0.5
Duration of preparation	45 days (wet cotton stalks) 60 days (dry cotton stalks)	120 days

Comparison between Compost from cotton stalks and FYM

Economic viability of CIRCOT's Accelerated Composting process

S. No.	Input	Unit cost (Rs.)	Requirement per tonne	Cost per tonne (Rs.)
1.	Chipped cotton stalks	900 per tonne	One tonne	900
2.	Cow dung	200 per 100 kg	100 kg	200
3.	Alkali	Rs. 20 per kg	2 kg	40
4.	DAP	Rs. 1000 per 50 kg	20 kg	400
5.	Urea	Rs. 275 per 50 kg	12 kg	70
5.	Polythene sheets	-	-	50
6.	Labour charges	Rs. 300 per man day	2 man days	600
7.	Microbial cultures	Rs. 10 per litre	20 litres	200
8.	Miscellaneous	-	-	500
Total cost				2,960

- The cost of production of compost through accelerated process is Rs. 2960/- per tonne
- The return would be Rs. 3200/- considering compost yield of 800 kg from 1 tonne cotton stalks and selling cost of Rs. 4 per kg
- The benefit cost ratio (BCR) is 1.08



For further details, please contact:

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