

SOIL & WATER MANAGEMENT

ENRICHED COMPOST PRODUCTION TECHNOLOGY

Most of the Indian soils are deficient in Phosphorus and also are under continuous cropping. The yearly removal of Phosphorus is more than its addition. If the traditional technology of compost making is improved in terms of nutrients content, it can help in minimizing nutrient depletion to a greater extent. The Indian Institute of Soil Science (IISS), Bhopal has developed phospho-compost/N-enriched phospho-compost technology. In this technique, phosphate solubilising microorganisms (*Aspergillus awamori*, *Pseudomonas straita*, and *Bacillus megaterium*), phosphate rock, and bio-solids are used to enrich manurial value compared to FYM and ordinary compost.

- The phospho-compost and N-enriched phospho-compost are prepared by windrow method and in the pits prepared for NADEP compost.
- For the production of one ton of phospho-compost, 1900 kg organic/vegetable wastes/straw, 200 kg cow dung (on dry weight basis), and 250 kg phosphate rock (18% P_2O_5) are used.
- The compost becomes ready for field application within 90–100 days period.
- The phospho-compost contains 2–3% P_2O_5 .

Since there is multi-nutrient deficiency in Indian soils, the IISS, Bhopal has also developed N-enriched Phospho-compost technology to enrich manurial value, particularly Sulphur and Nitrogen content of the compost. For this add Nitrogen as urea @ 0.5–1% (w/w) and Pyrites @ 10% (w/w) to the composting mixture. The N-enriched phospho-compost normally contains 1.4–1.6% N and 15–20 C: N ratio

ECONOMICS

The cost of supplying one Kg of super phosphate through phospho-compost is around Rs 9 as compared to Rs 16–17 supplied through Single Super Phosphate or Diammonium phosphate.

For more details contact:

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