

Litter Digestion Program – Coffee

Effective Conversion of Leaf Litter & Crop Residues into Humus & Plant Nutrients

Maintaining soil health is essential for sustainable farming, and converting crop residues into valuable humus ensures improved soil fertility and long-term productivity. This process accelerates the natural breakdown of organic matter, releasing essential nutrients for future crops. Proper soil moisture and direct contact between plant residues and soil are crucial for achieving the best decomposition results.

Objective:

To efficiently convert excessive leaf litter and crop residues into **humus and plant nutrients**, enriching soil health and fertility.

Application Guidelines:

1. **Ensure Proper Soil Conditions:**
 - **Maintain good soil moisture** to facilitate microbial activity and decomposition.
 - **Ensure plant residues are in direct contact with the soil** to promote effective breakdown and nutrient absorption.
2. **Prepare the Nutrient-Enriched Mixture:**
 - **DIY 6% Liquid Humate** – 20 L per acre (Enhances microbial activity and organic matter breakdown).
 - **Molasses or Jaggery** – 4 kg per acre (Provides an energy source for soil microbes).
 - **Urea** – 5 kg per acre (Speeds up decomposition and provides nitrogen for microbial growth).
 - **NBS Microshield** – 400 g per acre (Promotes beneficial microbial activity for efficient residue breakdown).
 - **NBS Pseudotech** – 400 g per acre (Aids in organic matter decomposition and soil health improvement).

Method of Application:

1. **Apply as a Soil Drench:**
 - Mix the prepared solution in a **minimum of 400 L of water per acre** to ensure even distribution.
 - This application supports rapid microbial colonization, improving organic matter decomposition into humus.
2. **Enhance the Mixture for Better Results:**

- **Borax or Boric Acid** – 500 g per acre (Enhances nutrient uptake and supports plant metabolism).
 - **Ammonium Molybdate** – 125 g per acre (Aids nitrogen fixation and plant growth processes).
 - **Kelp** – 200 g per acre (Provides natural growth stimulants and enhances microbial activity).
3. **Application Flexibility:**
- The prepared mixture can be applied **both to the soil and as a foliar spray**, ensuring comprehensive nutrient availability and soil enrichment.

By following these steps, leaf litter and crop residues are efficiently recycled, leading to improved **soil structure, microbial diversity, and nutrient availability**, ultimately supporting higher crop productivity.