

Training Module on Preparation and use of Fish Amino Acid

Background Information

Fish Amino Acid (FAA) is a highly effective organic fertilizer made from fermented fish or fish waste. It is rich in essential amino acids, proteins, vitamins, and minerals, which are vital for plant growth and development. FAA enhances soil fertility, promotes healthy plant growth, and improves resistance to pests and diseases. It is an integral component in natural and sustainable farming practices due to its nutrient density and beneficial effects on soil and plants.

Materials Needed

Fish Waste or Fish Scraps- 5 kg (such as fish heads, bones, and entrails), Molasses or Jaggery- 500 g (to aid fermentation and provide sugars for microbial activity), Water-10 liters (or as needed for the fermentation process), Container- Large, non-reactive container for fermentation

Method of Preparation

1. Chop the fish waste into smaller pieces to speed up the fermentation process.
2. In a large container, mix the fish waste with molasses or jaggery. This mixture provides the necessary sugars to facilitate the fermentation process.
3. Add water to the mixture, ensuring the fish waste is fully submerged. Cover the container with a lid or cloth to protect it from contaminants while allowing air circulation.
4. Allow the mixture to ferment for 30–45 days, stirring it every few days to ensure even fermentation and prevent spoilage.
5. After fermentation, strain the mixture to remove solid particles, and collect the liquid extract.

Application Method

- **Soil Application:** Dilute Fish Amino Acid with water at a 1:10 ratio (1 liter of FAA in 10 liters of water). Apply the diluted solution to the soil around the base of the plants or through irrigation systems. Use approximately 10–20 liters of diluted FAA per acre.
- **Foliar Spray:** Dilute Fish Amino Acid at a 1:20 ratio (1 liter of FAA in 20 liters of water) for foliar application. Spray the solution evenly on plant leaves and stems, ensuring good coverage.

Application in Crop Cultivation

- **Soil Fertility:** Fish Amino Acid enriches the soil with essential nutrients, improving soil health and increasing the availability of nutrients for plants. It promotes root development and overall plant vigor.
- **Growth Stimulation:** Regular application of FAA supports robust growth of cotton plants, leading to better boll formation, fiber quality, and overall yield.
- **Pest and Disease Resistance:** FAA enhances plant immunity, making plants more resilient to pests and diseases, reducing the need for chemical treatments.

