

# Training Module on Preparation and use of Neemastram

## Background Information

Neemastram is a traditional organic bio-pesticide widely used in natural and organic farming. Made primarily from neem leaves and cow-based products, Neemastram effectively controls various pests, including aphids, whiteflies, jassids, and caterpillars. Neem's active compounds, such as azadirachtin, act as repellents, antifeedants, and growth inhibitors for pests, making Neemastram a valuable and eco-friendly input in sustainable agriculture.

## Materials Needed

Cow Urine- 10 liters, Cow Dung-5 kg, Neem Leaves- 5 kg (fresh), Green Chilies- 500 g, Garlic- 500 g, Water- 200 liters

## Method of Preparation

1. Crush or grind the neem leaves, green chilies, and garlic into a coarse paste using a grinder or mortar and pestle.
2. In a large container, mix the crushed ingredients with cow urine and cow dung.
3. Add 200 liters of water to the mixture and stir it well. Let the mixture ferment for 3–4 days, stirring daily to promote fermentation and microbial activity.
4. After fermentation, strain the mixture through a fine cloth or sieve to remove solid particles, and collect the liquid solution.
5. Neemastram is ready for use. Before application, dilute it with water at a 1:5 ratio (1 liter of Neemastram in 5 liters of water).

## Application Method

- **Foliar Spray:** Spray the diluted Neemastram on crops, ensuring good coverage of both the upper and lower surfaces of the leaves, where pests typically reside.
- **Frequency:** Apply every 10–15 days during pest infestations or as a preventive measure during critical crop growth stages.

## Application in Crop Cultivation

- **Pest Control:** Neemastram is highly effective in controlling sucking pests like aphids, whiteflies, jassids, and chewing insects like caterpillars in crops. The neem compounds disrupt pest feeding and reproduction, reducing crop damage.
- **Plant Health:** Regular application of Neemastram strengthens the plant's resistance to pests and supports healthier crop growth, resulting in higher yields.
- **Sustainable Farming:** Neemastram reduces the need for chemical pesticides, promoting eco-friendly pest management practices in farming. It helps maintain the balance of beneficial organisms in the farm ecosystem.

