

Training Module on Preparation and use of Neem Seed Kernel Extract (NSKE) 5%

Background Information

Neem Seed Kernel Extract (NSKE) is a widely used natural pesticide in organic farming. Neem contains azadirachtin, which is a powerful compound that acts as an insect repellent, antifeedant, and growth inhibitor for various crop pests. NSKE 5% is particularly effective against sucking pests like aphids, whiteflies, and leafhoppers, as well as caterpillars and other chewing insects. It is eco-friendly, non-toxic to humans, and safe for beneficial insects like pollinators.

Materials Needed

Neem Seeds- 5 kg (ripe seeds with kernels intact), Water: 100 liters, Soap (Optional): 200 g (mild soap for better spreading)

Method of Preparation

1. **Dehulling the Seeds:** Remove the outer shell of the neem seeds to extract the kernels. Ensure the kernels are fresh for optimal effectiveness.
2. **Grinding:** Crush or grind the neem seed kernels into a fine powder using a grinder or mortar and pestle.
3. **Soaking:** Soak the ground neem kernel powder in 10 liters of water for 12–24 hours to extract the active ingredients.
4. **Straining:** After soaking, strain the mixture using a cloth or sieve to remove the solid particles.
5. **Dilution:** Add the strained neem extract to 90 liters of water, making a total of 100 liters of solution. If needed, dissolve 200 g of mild soap in the solution to help it spread more evenly on plant surfaces.

Application Method

- **Spraying:** Spray the NSKE 5% solution on the affected plants, ensuring good coverage on both the upper and lower surfaces of leaves. Apply during the early morning or late evening to avoid rapid evaporation.
- **Frequency:** Spray every 7–10 days, or as needed, depending on the level of pest infestation.

Application in Crop Cultivation

- **Pest Control:** NSKE 5% is highly effective in controlling pests in crops, including sucking pests like aphids, whiteflies, and jassids, as well as bollworm caterpillars. Its antifeedant and repellent properties reduce pest damage without harming beneficial insects.
- **Yield Improvement:** Regular application of NSKE 5% in cotton fields results in reduced pest pressure, better plant health, and ultimately higher yields due to less crop damage.
- **Eco-friendly Pest Management:** Using NSKE helps cotton farmers minimize chemical pesticide usage, promoting a safer environment for farmers and the ecosystem.

