

Preparation of Neem extract for control of whiteflies in Pumpkins

Recognize the problem

Plant pests are a major problem to crop performance under field and greenhouse conditions. Generally, the majority of the farmers have relied on the use of chemical pesticides to overcome pest problems, but these are expensive and have been condemned for their negative effects on the environment, human and animal health. This makes use of environmentally friendly biorationals such as neem extract a handy alternative. Unfortunately, the use of these botanical extracts is limited due to the lack of knowledge on effective preparation.

Background

Neem tree leaves should be ground to release the active ingredients such as azadirachtin from the plant cells. A soap solution should be added to the extract in optimum proportions to help stick the active ingredient onto the target plant part after application. The time for which the leaf suspension should be left to stand should not exceed 5 days as it will form liquid organic manure rather than a pest control solution. Target the extract against pests such as whiteflies and aphids amongst others.

Management

- Gently grind 1-2 kg of healthy and disease-free neem leaves using clean utensils.
- Add 2-4 litres of water and stir the mixture well and leave under a cover for 3 days.
- Strain with a cloth to get a clear extract.
- Dilute 1 litre of neem leaf extract with 10 litres of clean water.
- Dissolve soap in a small quantity of water to make a soap solution. Ensure the solution foams up before use.
- Add 100 ml of soap solution to the extract. Stir the extract-soap solution well before use.
- Apply to pest infested crops in the field using a spray pump.
- Make sure not to apply when is likely to rain so as to prevent wash off of the extract from the plants.

Neem plant leaves before (a) and after grinding (b). (Photo by Dreamstime)



Young neem tree. (Photo by Healthguruada, 2016)



Scientific name(s) > *Bemisia tabaci*

The recommendations in this factsheet are relevant to: All Countries



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