

Neem extract to control powdery mildew in okra

Recognize the problem

Powdery mildew (Bungbunga in Bemba) is a fungal disease and a common problem in the dry and hot seasons. During the initial stages, whitish powdery fungal spots can be seen on the leaves. When severe, the leaves become totally covered with the whitish powder, and then yellow, dried or brownish. Stems can also be affected.

Background

Neem is a fast growing tree that can reach a height of 20m. It is evergreen but in severe drought it may shed nearly all of its leaves. The branches are wide and spreading. The tree reaches maturity at 2-3 years. The leaves have an anti-fungal effect. Neem produces chemicals that reduce growth of the fungus and the formation of fungal spores, which spread the disease. Neem also forms a film on the leaves that prevents the fungus from settling.

Neem solution can be used to prevent and control powdery mildew in okra. When 6-10 out of 100 okra plants are showing the initial spots of whitish powdery growth on the leaves, neem solution may be sprayed. When the problem is expected to become severe, neem extract sprays may not be efficient enough. When most leaves are covered with the mildew, all actions, even chemical sprays, are too late.

Management

- Wear gloves
- Pound 1.5 kg of fresh neem leaves in a mortar and soak them in a 16 litre bucket of water for 24 hours
- Sieve and squeeze the mixture using a clean old cloth to get a clear solution for use in the sprayer.
- Add 50g of soft soap e.g. Sunlight™ or 20 drops of a liquid soap as a sticker. Do not use perfumed soaps.
- Wear gloves and mask, put the solution into a knapsack sprayer and spray the whole plants covering their leaves well.
- Repeat the process after 2 weeks if the symptoms still spread.
- Do not spray 10- 14 days before harvest because it might be toxic as food.
- If you do not have a knapsack sprayer you can use a broom, putting it into the bucket with the solution, and then transferring the solution over the plants.

Whitish powdery mildew attack on okra leaves. (Photo by Scot Nelson)



Neem leaves. (Photo by Forest and Kim Starr)



Scientific name(s) > *Podosphaera* spp., *Erysiphe* spp.

The recommendations in this factsheet are relevant to: Malawi, Tanzania, Zambia



Authors: Brian Siame, Dorcas Kabuya, Jacqueline Mweembe
Department of Agriculture, Ministry of Agriculture Zambia
tel: +260979611267 email: briansiame1@yahoo.com

Edited by Plantwise.