

Neem against early blight in tomato

Recognize the problem

Early blight is a fungal disease that can occur at any stage of the tomato plant. The fungus makes brown to black spots on leaves. The spots are concentric (layered rings that grow outwardly). If it attacks the plants early, no fruits are produced. If it attacks after flowering, then the fruits are also affected. Early blight spots are brown to black whereas those of late blight are grey to black.

Background

The fungus moves from diseased to healthy plants by wind or water splashes. Chemicals can be used to prevent fungal spread but they may not be environmentally friendly or safe. Some extracts from plants are known to kill fungi. For example, neem tree extracts are known to have some anti-fungal effects. Neem produces products that reduce growth of the fungus and the formation of spores, which are the disease causing stage of the fungus. Neem also forms a film on the leaves that prevents the fungus from settling (colonisation).

Management

To control and to prevent further infections of early blight, Neem leaf extracts can be sprayed on tomato:

- Get neem seeds or leaves from fellow farmers who grow it, or from Zambia Agricultural Research Institute stations such as Nanga and Mt Makulu Research
- 500 grams of fresh neem leaves are pounded and soaked in 5 litres of water in a 10 litre bucket for 24 hours
- The mixture is then sieved and mixed with water in a 2:1 ratio where two portions of the mixture is mixed with one portion of water
- A sticker is then added to allow the mixture to stick on the leaves. The sticker may be 2 table spoons of dishwashing liquid or dissolved powdered washing soap.
- Spray neem when the first symptoms are observed because the fungus spreads very quickly
- Spraying can be done early in the morning or late afternoons
- Spraying can be repeated every week until the fungus spread stops. This is especially useful in the rainy season when the disease incidence is high. In the dryer seasons, spraying can be done every two weeks.

Early blight spots on tomato leaves. (Photo by Gerald Holmes, California Polytechnic State University at San Luis Obispo, via Bugwood, CC BY-NC)



Neem leaves can be used against blight. (Photo by D. Prabhu, CC BY-SA)



Scientific name(s) > *Alternaria solani*

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



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