

Controlling bacterial wilt of enset using cultural methods

Recognize the problem

Enset supports the livelihoods of nearly 20 million smallholder farmers in Ethiopia and bacterial wilt is a major threat to the production of this staple crop. The disease starts to attack the plant at the seedling stage. Initial symptoms of the disease on enset include the presence of bacterial ooze in the leaf petioles and leaf sheaths, excretion of a yellowish bacterial ooze, internal yellow discoloration of vascular bundles and progressive wilting and yellowing of the leaves from the top downwards. Eventually, the whole plant wilts, the leaves dry out and the plant dies.

Yellowing and wilting of enset leaves caused by bacterial wilt disease. (Photo by K. Sadessa, EIAR)



Background

The disease can cause losses of 70 – 100% in enset and can also affect bananas. There are no chemical management methods for this disease so management relies on cultural methods of control. The pathogen that causes bacterial wilt of enset is found in association with plants or plant material and the soil in which it grows. The disease is transmitted from infected plants to healthy plants by mechanical means, mainly through contaminated tools used for land preparation and pruning.

Management

Practice sanitation by:

- Tools such as knives and machetes have to be sterilised. This can be done by disinfecting with 70% alcohol or washing with sodium hypochlorite (bleach) or heating them in a fire until they get red. This must be done before and after cutting each plant and before returning back to the household.
- Wooden materials also need to be disinfected using 70% alcohol or sodium hypochlorite (bleach)
- Rogue out diseased enset plants by digging them out carefully so they do not infect other plants, then put them into a pit and bury them by covering with soil
- Use disease free seedlings taken from an area not affected by the disease
- Rotate with any cereal and pulse crops but not with banana or similar families
- Avoid entry of animals to the field by constructing fencing as animals can spread the disease from one plant to another

Scientific name(s) > *Xanthomonas campestris* pv. *musacearum*

The recommendations in this factsheet are relevant to: many countries where this pest or problem is present



Authors: Melese Haile, Yifru Hailegiorgis, Leulseged Mekonen
Ministry of Agriculture and Natural Resources
tel: +251 116461147 email: tefhai@gmail.com

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