Sunflower crop breaks against powdery mildew

**Recognize the problem**
Powdery mildew is known as “ubwiri mweupe” in Swahili. It is a fungal disease which affects sunflower leaves severely. It is first seen as whitish powdery spots on the upper side of leaves. Then, the whitish powder spreads and can coat entire upper sides of leaves. Severe infection covers both sides of leaves, stem and heads. Infested leaves curl, become pale and die. Often they dry out and shed prematurely. Infection starts from older, lower leaves and spreads upwards.

**Background**
Powdery mildew is prevalent in hot and humid seasons/conditions. Dense sunflower growing causes low air movement and creates a good microclimate for mildew. Powdery mildew spores are dispersed by winds. This fungus survives in crop residues and volunteer sunflowers or wild sunflower, okra and *Bidens spinosa* weeds (mashona nguo). Powdery mildew has many different species, but each is usually specialised for one crop so when the crop is not grown for some seasons and residues are destroyed, the disease cannot survive for long. Therefore, breaks in sunflower cropping are recommended. Chemical control of mildew with fungicides is expensive and is not always practical.

**Management**
Reducing the likelihood of a disease outbreak is more effective than trying to control the disease once it is established.
- Breaking the cropping season of sunflower cultivation is a tool to reduce powdery mildew
- After the sunflower harvest, remove all crop residues as many fungal spores are found on the plants and soil
- Also remove volunteer sunflowers that grow between the next crop
- Bury residues and pulled out volunteer sunflowers outside the new field
- Have a break of 3 cropping cycles (at least 2 years), where no sunflower is grown
- Instead of sunflower you can grow other oil crops such as safflower, or any other cereal or vegetable crop, except cucumbers
- This management practice requires participation of neighbouring farmers as mildew disease spores can be carried by wind from afar

**Scientific name(s)** > *Golovinomyces cichoracearum*

The recommendations in this factsheet are relevant to: Tanzania