

Partners

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Natural Resources Institute-UK

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Sarah identifies and controls the whiteflies



CASSAVA WHITEFLY
PROJECT
WHITEFLY CONTROL FOR AFRICAN SMALLHOLDERS



MAAIF
Ministry of Agriculture
Animal Industry and Fisheries



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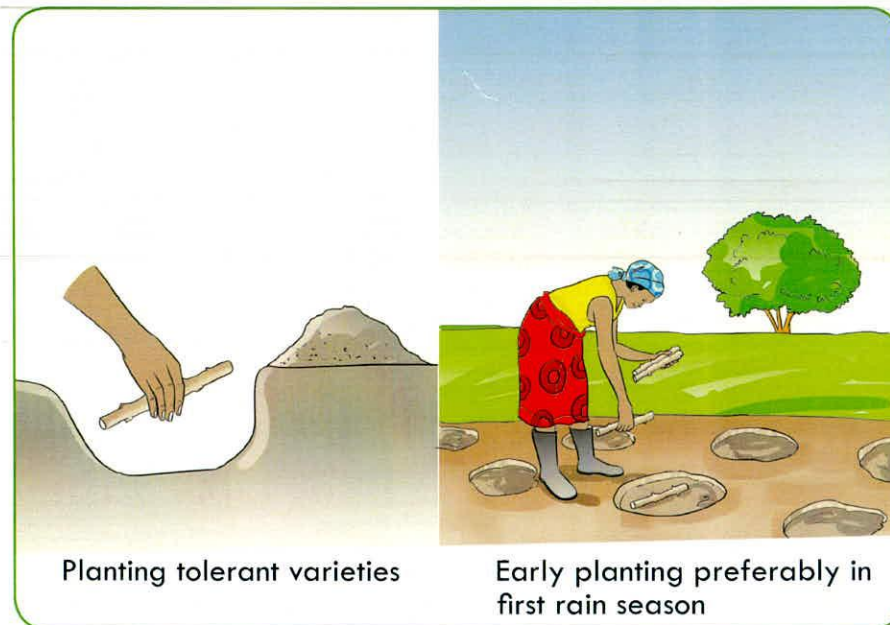
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Sarah finds the whiteflies in her garden



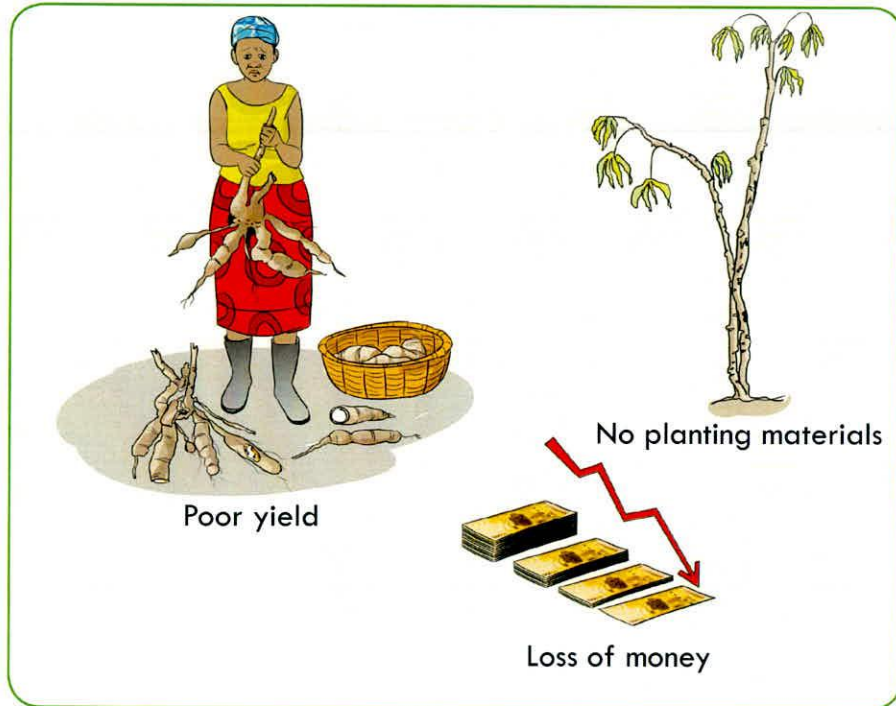
- Sarah woke up one day and went to her cassava garden
- While in the garden, she discovered that some of the leaves have small white insects and are flying around
- So she decided to inspect the entire garden and found out that many plants have these insects especially at the back of the leaves
- She observed the garden for the next few days and realized that the insects were increasing in number

Control and management of whiteflies



- Use whitefly tolerant varieties e.g NAROCASS 2
- Apply systemic insecticide (e.g Imidacloprid) at one and three months after planting
- Early planting preferably in first rain season

Losses due to whitefly problem



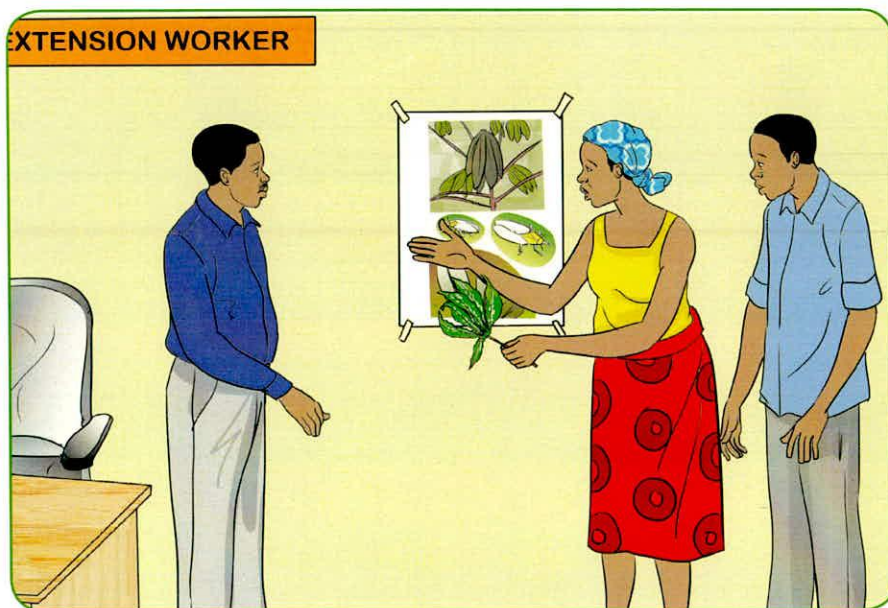
- Poor yield leading to little or no food for consumption by families
- Loss of income because of low yield and rotten cassava roots
- Less planting materials due to feeding damage and the two diseases
- Abandonment of varieties that are susceptible to viral diseases spread by whitefly

Sarah shares her problem with neighbor John the village agent



- Sarah was worried and decided to visit her neighbor to share the problem with him
- Together with her neighbor, they visited the nearby cassava gardens and discovered a similar problem
- The village agent together with her neighbors agreed to contact the agricultural officer for assistance

Sarah and John seek advice from Peter, the agricultural officer



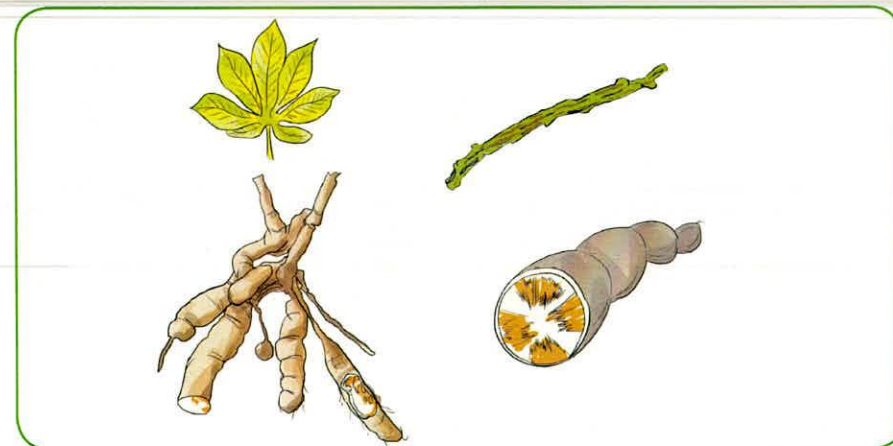
- Sarah and John went to Peter to seek for help
- They explained to Peter and he showed them a poster to confirm if the insects they had seen in the garden were similar to those displayed on the poster
- Sarah and John said that the insects were similar
- Peter explained that this is a dangerous insect which can cause serious damage by feeding on cassava as well as spread cassava mosaic and cassava brown streak diseases



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Whiteflies spread Cassava Brown Streak Disease (CBSD)



- When the whitefly feeds on a sick plant, it carries the disease to a healthy plant

Signs of CBSD are;

- Yellowing along the veins for the infected leaves
- Dark brown scratches (streaking) on the infected stems.
- Dark brown, dried and hard rotting on the inside of the infected roots. These roots may also become wrinkled or twisted
- CBSD can also be spread through the use of infected planting materials
- CBSD can lead to rotting of roots that makes the roots unsuitable for food or feed
- CBSD can lead to 100% yield loss of a cassava crop in susceptible varieties
- To reduce the spread of this disease;
 - (i) Don't use stems from infected plants
 - (ii) Plant stems from CBSD resistant/tolerant varieties



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Whiteflies spread Cassava Mosaic Disease (CMD)



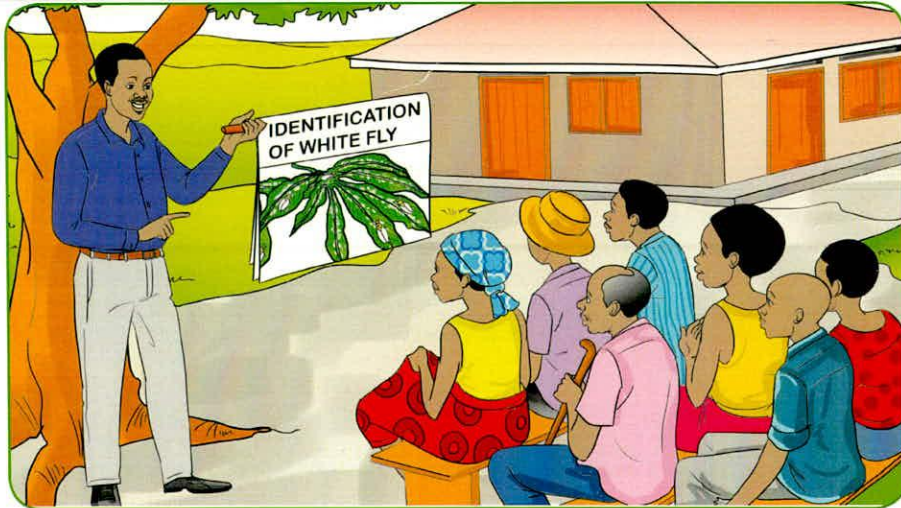
- When the whitefly feeds on a sick plant, it carries the disease to a healthy plant
- Signs of CMD are; yellowing, curling of the leaves, stunting of the plant leading to “candle – stick” appearance
- CMD can result into yield loss of up to 100% if not controlled
- CMD can also be spread through the use of infected planting materials
- To reduce the spread of this disease;
 - (i) Don't use stems from infected plants
 - (ii) Plant CMD resistant varieties

Peter inspects Sarah's garden



- Peter went with both Sarah and John to the garden where he confirmed to them that their garden was infested with cassava whiteflies
- He said management measures have to be put in place immediately to stop losses
- Peter instructed the farmer and the Village Agent to mobilise their neighbors for a training on whitefly identification and management the following day

How to identify cassava whitefly



- The farmer and the Village Agent mobilized their neighbors for the training at the community center the next day
- Whiteflies are tiny white insects that are usually found feeding on the underside of young cassava leaves
- They lay many eggs on the leaves and these take about one month to develop into adults
- Whiteflies are most destructive on cassava especially when 1-4 months after planting
- Whiteflies can cause serious damage by feeding on cassava as well as spread cassava mosaic and cassava brown streak diseases
- Whitefly feeding damage alone can cause upto 60% yield loss on susceptible varieties



Damage caused by whiteflies on cassava



Sooty mold



Yellowing of leaves due to whitefly feeding.



Leaves begin to wilt and drop off as a result of heavy whitefly feeding

Peter explained that in order to be able to manage the whiteflies, the farmer must know how to tell the damage symptoms caused by the pest. Which are;

- Black sooty mold on the surface of the cassava leaves
- Yellowing and curling of young top-most leaves
- Drying and dropping off as a result of heavy whitefly feeding

