Introduction
Sorghum and millets are highly adaptable to the stressful semi-arid environments of Kenya. They are the traditional food security crops. However, crop damage by insect pests reduces their yields. Prevention

Major insect pests

Shoot fly
- Affects both sorghum and millets

Crop damage
The larva causes drying of the central growing shoot (dead heart) on sorghum and pearl millet seedlings. The plant might produce tillers which may also be destroyed.

Control
- Early uniform planting
- Spray with insecticides (Duduthrin and Bulldog)
**Stem borer**
- Attacks sorghum and pearl millet.

**Crop damage**
- Elongated "windows" and shot holes in the stem
- Dead hearts
- Damaged leaves
- Low yields

**Control**
- Early uniform planting
- Spray with insecticides or apply in funnels such as Ambush granules
- Field sanitation by removing plant remains from the previous season
- Plant resistant varieties like KARI-Mtama 1

Stem borer larva (left) and damaged leaves (right)

**Control**
- Early uniform planting
- Spray with insecticides or apply in funnels such as Ambush granules
- Field sanitation by removing plant remains from the previous season
- Plant resistant varieties like KARI-Mtama 1
Sorghum midge
- Mainly attacks sorghum heads.

Symptoms
Red brown feeding punctures on grain, shriveled chaffy grain and presence of bugs on sorghum panicle at milky stage.

Control
- Early uniform planting
- Spraying with insecticides
- Plant early maturing varieties like gadam
**African boll worm**

- Attacks sorghum and millet.

**Crop damage**

The caterpillars feed on the panicles of both crops during the milky stage.

**Control**

- Spray with insecticides (Duduthrin, Dimethoate)
- Plant resistant varieties such Serena and Seredo
Birds
Both crops are eaten but pearl millet is more prone to bird damage. Birds feed on the grains mainly during milky stage, causing great yield losses.

Control
- Early uniform planting of the similar maturity varieties
- Bird scaring using devices such as cassette tapes, aluminum foils
- Avoid isolated fields
- Plant brown sorghums which are resistant due to tannin content such as Serena and Seredo