MANAGEMENT OF GADAM SORGHUM PESTS

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Introduction
Gadam is a sorghum variety which is highly adapted to the stressful semi-arid environments of lower eastern Kenya. It is used in the beer brewing industry and as a food security crop. Its production is affected mainly by the following pests leading to reduced yields. Management of these pests is important.

Major insect pests

Shoot fly
- Adult shoot flies lay eggs on leaves of gadam seedlings
- Larvae hatch in 2-3 days and enter the plant through the growing point
- Larval feeding cause the central leaf to wilt and later to dry up, giving the “dead heart” symptom
- The plant may produce side tillers that may also be attacked. Attack results in great yield losses or total crop failure
**Control**
- Early uniform planting to avoid the active period of shoot fly population
- Plant high seed rate then thin the seedlings with dead hearts
- Remove off-season volunteer sorghums and plant remains
- Spray with insecticides (Duduthrin, Bulldock)

**Stalk borer**
- Larvae feed on growing point of seedlings, causing dead hearts
- Larvae burrow in stem, weakening them leading to breakage
- Reduced water and food supply to head leads to reduced yields

**Control**
- Burn stalks after grain has been harvested or spread them thinly in the field throughout the dry season to kill diapausing larvae
- Spray with insecticides (Bulldock) or apply ambush or Bulldock granules in funnels
**Aphids**

- Aphids suck juices from gadam tissue, causing leaves to start browning at the outer edges and ultimately to die

Heavy infestations of aphids may cause failure of heads to completely emerge from the boot

Stunting and poor filling of heads can result

**Control**

- Early uniform planting, spraying with insecticides (Karate, Dimethoate, Dududthrin)

- From farmer experience extracts from Neem plant, hot pepper, Lantana, chillies and Tephrosia can be sprayed
African bollworm

- The caterpillars feed on the gadam grains during the milky stage

Caterpillars feeding on gadam sorghum grain

Gadam sorghum plants damaged by African boll worm caterpillars

Control

- Spray with insecticides (Duduthrin, Dimethoate)
- Field sanitation
- Crop rotation
Birds

- Birds, especially *Quelea quelea* feed on the grains mainly during milky stage causing a lot of damage and great yield losses.

Control

- Early uniform planting using gadam cluster farming model to share damage
- Bird scaring using cassette tapes, aluminum foils, among other methods
- Avoid isolated fields