

Sorghum Farming

Introduction

For a very long time, sorghum has been the mostly cultivated cereal crop especially in semi arid areas. It is rich in vitamins and carbohydrates which keep families strong and healthy.

Sorghum can be used for floor, for brewing and also as a livestock fodder.

It has been considered an important crop in tackling food insecurity. This is because the crop:

- Is drought tolerant so can grow even in dry areas
- Can stop growing if the rains fail as it waits for rain
- Matures quickly- ready for harvest after 3 months
- Grows again after harvesting so you get food for the whole year.



Ecological requirements

Sorghum grows best under the following ecological conditions:

- An altitude range of 0-2500M above the sea level
- Can grow even in regions receiving as low rainfall as 250mm per year, but does well in areas receiving rainfall above 900mm per annum
- Requires well drained clay loam, clay and silt soils

Varieties

Sorghum varieties are categorized as per the ecological zones that it does well:

- Moist-mid-altitude(1200-1600M a.s.l.): **Serena, Seredo, Dobbs, Gadam & KARI Mtama**

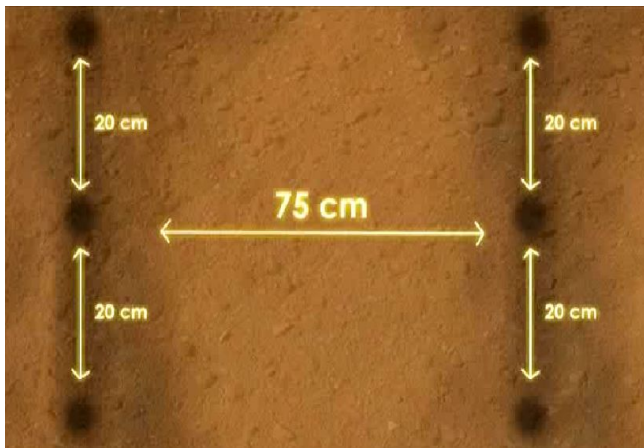
- Semi-Arid Low altitude areas: **E 1291, Gadam, 1576, E 6518 & KARI Mtama 1**
- Humid coastal regions: **Serena & Seredo.**

Always use quality seeds i.e certified, has 99% germination percentage and grows uniformly.

Key aspects to note:

Seed rate: You need 3 – 4 kgs/acre or 7-10kgs/ha of certified sorghum seeds.

Spacing: The recommended spacing for sorghum after thinning is 75cm between furrows and 20cm between plants in a row. You can intercrop sorghum with legumes like beans, cowpeas and green grams.



Use a spacing of 75cm by 20cm when planting sorghum

Planting

Follow these steps when planting sorghum:

1. Plough and harrow the land to a fine tilth before the onset of rains. At harrowing, broadcast well-decomposed manure into the field at the rate of 10t/ha to improve the soil structure.
2. Make furrows 75cm apart with dips between the furrows to catch rain water



3. Mix planting fertilisers like DAP/NPK with soil and put along the furrows. You need 2 bags



per acre.

4. Make drills 2-3cm along the furrows and sow seeds thinly



5. After 2-3 weeks, weed and thin to leave a space of 20cm between sorghum plants



Management of sorghum in the field

1. Weed and thin 2 weeks after germination (when the plant has 2-3 leaves).

Hand weeding of sorghum is much encouraged.

2. Top-dress with nitrogenous fertiliser e.g 1 bag/acre of CAN or NPK 20:20:0 when at knee high. Always put nitrogenous fertiliser in a 15cm ring around the sorghum plant

Foliar feeds can be used when the plant is knee-high.



When top-dressing, put fertilisers in a 15cm ring around the sorghum plant

Pests and Disease Control

(a) Pests

Birds

The birds eat sorghum causing a huge loss e.g Quelea, weavers, starling and bishop's birds.

To control:

- Use coloured grains that have bitter tasting coats which keep away birds
- Use goose necked varieties that are slightly to bird attack
- Scare them away and attack their nesting sites. Contact Ministry of Agriculture for quelea control unit. They have flamethrowers, explosives or poison sprays in breeding zones.

Sorghum shoot fly

Shootfly is a pest which eats the youngest leaves. The leaf rots and gives a bad smell.

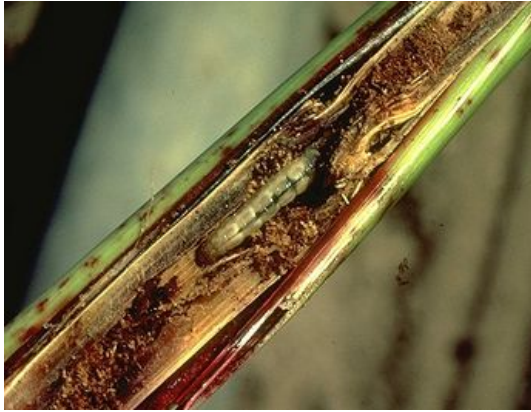
To control, plant early, observe proper field sanitation and spray with pyrethrum based insecticides.



Dying of the young leaves is a sign of sorghum shoot fly

Stalk borers

Also known as stem borers. It is a caterpillar which eats the stalk and leaves especially when the crop is 1 month old. When you see rows of holes on the leaves or purple marks on the stalks, this is stalk borer. Stem borers are controlled by use of insecticides and proper disposal of crop remains after harvesting.



Stalk borer eats up the stem



Holes on leaves is a sign of stem borer attack

(b) Diseases

The common diseases attacking sorghum are:

Leaf blight

Anthraxnose- It is common during wet conditions. You will see circular dark spots with masses

Rust- You will see red-brown spots

Head smut- Makes large, dark brown smut galls that emerge in place of the panicle

Covered kernel smut- Destroys all kernels in a head and replaces them with a cone shaped gall.

To control most of the diseases:

- Rotate your crops with non-cereals
- Plant tolerant varieties
- Manage the crop well in the field
- Smuts are controlled by seed dressing before planting
- For fungal infections, spray with the appropriate fungicide.

Harvesting

Most of the sorghum varieties mature after 3-4 months. Harvest when grain heads does not produce milk when crushed. Time to be when the rains have stopped to avoid aflatoxin caused by mouldy heads.

When harvesting, cut the heads with sickles or a sharp knife, put on a clean tarpaulin and dry to leave a moisture content of 12-13%. When well dried, put in bags ready for store.
You can contract buyers like NCPB or brewers like Smart Logistics for sorghum market.
Under good management and good variety, the yield potential is about 15 - 20 bags of 90kg/acre.

Ratooning

After harvesting, you can cut the stalks so that new suckers grow. This is know as ratooning. It allows you to have more than one harvests after sowing.

