Management

- Early planting.
- Remove and destroy crop debris from previous season
- Use tolerant/resistant varieties
- Several chemicals e.g. sprays, granulated forms of Bulldock can be applied in plant whorls (at 4 weeks) to control stemborers

Diseases of finger millet

The most important disease affecting finger millet is blast caused by *Pyricularia grisea*. Blast affects leaves, neck and even the head of the crop resulting to significant yield loss.

Lesions on foliage are elliptical or diamond-shaped often surrounded by a chlorotic halo, which will turn necrotic giving the appearance of concentric rings. The disease is favoured by hot, humid conditions.

Figure 4. Finger millet neck and stem blast

Striga hermontheca

Figure 5. Striga spp affecting finger millet

Control

- Hand pull and burn before flowering
- Enhance soil fertility especially Nitrogen using either inorganic or organic sources.
- Inter-crop/rotate with trap crops e.g. cowpea, cotton, groundnut, sunflower.
- Use of herbicides e.g. Dicamba

Other pests such as rats and birds may destroy a considerable part of the harvest.

Abiotic constraints

The most important abiotic constraints include drought and low soil fertility severely affect finger millet production.

Management for drought

- Early planting, if possible dry plant
- Use of short duration varieties like U15
- Planting on ridges
  - For low soil fertility, apply fertilizer as recommended above.

Parasitic weeds

The most endemic types are *Striga hermontheca* (purple witch weed) and *S. asiatica* (red witch weed). This devastating parasitic weed damages the plants before it emerges.
Introduction
Finger millet is a major component of food security and livelihood of many farmers in semi arid areas in Sub-Saharan Africa. Practising improved crop husnbady practices would improve finger millet productivity.

Land preparation
Early land preparation is recommended. Fine seedbed suitable for small grains is required, to ensure good germination, plant population density and effective weed control. Plant before or at the onset of rains by either drilling in furrows or hills. Most soils except course sand are suitable for its cultivation.

Figure 1. Fine seedbed for finger millet sowing

Spacing and seed rate.
If the population is too high at emergence, thin when plants are about 15 cm tall, 2 weeks after emergence. Seed rate (when planted in furrows): 3 kg/ha with spacing of 10 cm between seeds and 30 cm between rows.

Figure 2. Crop planted in rows, thinned to 10 x 30 cm

Fertilizer
Application of farmyard manure at 8-10 tons/ha is recommended in order to improve the soil organic matter content, moisture retention ability and soil structure. Phosphorous should be applied in form of rock phosphate. For conventional farmers please use the fertilizer recommendations of the local extension office.

Weeding
Weeding should be done twice; 2-3 weeks after emergence and about two weeks later.

Harvesting
Harvesting takes place 2-4 months after sowing, when the grain has a moisture content of 14-15%. Avoid delayed harvesting, as the seed shatters easily. If Millet is harvested during the rainy season with high relative humidity, the grain must be dried to 14% moisture content. In households, millet is usually dried above the domestic fire.

Finger millet production constraints
Both biotic and abiotic challenges affect finger millet production.

Biotic constraints
Biotic factors include insect pests, diseases and parasitic weeds.

Major insect pest
Stem borers (chilo partellus)
This is the most important stem borer affecting finger millet. Symptoms appear as small windows in young whorl leaves. Larvae then bore into the stem. Young plants develop deadhearts.