8. SWEET SORGHUM *(Sorghum bicolor)*

Climate Requirement

T_Max°C	T_Min°C	Optimum °C	Rainfall mm	Altitude m MSL
40	7 - 8	27 - 35	300 - 600	up to 2300

Tropical and sub tropical crop. It can tolerate drought conditions as well as water logging condition. Short day plant. Soil temperature should be above 18°C.

CROP MANAGEMENT

1. TREATMENT OF SEED

Step 1: Treat the seeds 24 hours prior to sowing with Captan or Thiram 2 gm/kg of seed or Metalaxyl 4 gm / kg of seed to control downy mildew.

Step 2: Treat the seeds required for one hectare with 3 packets (600gm) of Azospirillum using rice gruel as binder.

Note: Dissolve 0.5 gm of gum in 20 ml of water. Add 4 ml of Chlorpyriphos 20 EC or Monocrotophos 35 WSC or Phosalone 35 EC. To this add 1.0 kg of seed, pellet and shade dry to control shootfly and stemborer.

2. FARM LAND PREPARATION

- Form ridges and furrows at a spacing of 45 cm apart

3. SOWING

- Seed rate of 10 kg/ha
- Adopt a spacing of 45 x 15 cm (population 1,48,000/ha)
- Sow the seeds at a depth of 2 cm and cover with soil

Note: Use increased seed rate upto 12.5 kg per hectare and remove the shoot fly damaged seedlings at the time of thinning or raise nursery and transplant only healthy seedlings.

4. IMPORTANCE OF INM (Integrated Nutrient Management)

Application of inorganic nutrients alone in the long run will lead to soil and environmental pollution. Hence integration organic and inorganic fertilizer will sustain the soil heath and improve the cane yield of the sweet sorghum crop.

5. IMPORTANCE OF BALANCED NUTRITION

Application of balanced fertilizer at recommended dose in the right stage of the crop will not only improve the productivity but also improve the soil fertility and reduce the environmental pollution.

6. EVALUATION OF FERTILIZER REQUIREMENT

Soil testing is suggested tool for evaluating the fertilizer requirement. It has to be done before the cropping season well in advance so as to ascertain the native fertility of the soil and to recommend the correct dose of fertilizer which will reduce the fertilizer cost.

7. RECOMMENDED INM

- Apply 12.5 tons of FYM/ha at last ploughing.
- Soil application of Azospirillum @ 10 packets (2.0 kg/ha) after mixing with 25 kg of FYM + 25 kg of soil may be carried out before sowing/planting.
- 12.5 kg /ha of MN mixture mixed with enough sand to make a total quantity of 50 kg and applied over the furrows and on top 1/3 of the ridges.
- Apply NPK fertilizers as per soil test recommendations. If soil test recommendation is not available adopt a blanket recommendation of 120 : 40: 40 kg of NPK/ha

8. STAGES OF APPLICATION OF FERTILIZERS

- Apply azospirillum and MN mixtures as basal
- Apply half dose of N and full dose of P_2O_5 and K_2O basally before sowing.
- Apply the balance N in two splits of 25% each on 15th and 30th day of sowing.

CROP PROTECTION

Downy mildew

- Rogue downy mildew infected plants up to 45 days after sowing
- Spray any one of the fungicides like Metalaxyl 500 g or Mancozeb 1000g/ha after noticing the symptoms of foliar diseases, for both transplanted and direct sown crops.

Leaf diseases: *Cercospora* leafspot, Rust, *Colletotrichum* leaf spot

- Spray Mancozeb @ 1kg/ha. Repeat fungicidal application after 10 days if necessary

Grain mould

- Spray any one of the fungicides like Mancozeb @ 1000g/ha in case of intermittent rainfall during earhead emergence and repeat if necessary another spray 10 days later

Ergot

- Spray any one of the following fungicide at emergence of earhead (5 - 10% flowering stage) followed by a spray at 50% flowering and repeat the spray after a week if necessary