Charcoal rot: Charcoal rot is the significant rabi sorghum disease, which is serious in the shallow soils in dry areas of Maharashtra and Karnataka. Grow resistant cultivars; apply minimum dose of nitrogenous fertilizers with low plant density in infected soils; adopt inter-cropping rather than sole cropping; resort to moisture conservation practices like mulching with wheat straw; and soil treatment with Thiram @ 4.5 kg/ha at the time of sowing.

Drought mitigation through contingency planning

Early onset of monsoon: Sowing with the onset of monsoon is recommended for assured high yields.

Early onset of monsoon followed by a long gap: Repeated inter-cultivation operations like hoeing, weeding and mulching are suggested to conserve moisture. Under severe moisture stress, reduce the plant population by 2/3 by thinning for judicious use of moisture. Limited plant population assures normal growth of the crop.

Delayed onset of monsoon: In case there is delay in monsoon by 2-3 weeks, short duration cultivars such as CSH 23 can be preferred. Increase seed rate to 1.5 times of the recommended rate and apply 20 Kg of Carbofuran or Phorate (3 g) granules in the seed rows before sowing to safeguard against the shoot fly attack. Other shoot fly control measures (spraying of Endosulfan 2ml/litre of water after sowing) can also be followed if soil application is not adopted.

Prolonged monsoon and excessive rainfall at maturity: These situations at seed development stage are likely to cause heavy grain mold infestation. Harvesting of the crop at physiological maturity to avoid damage by grain mold alternatively spraying fungicidal mixture containing 0.3% Dithane M-45 three times at 10 days interval starting from 50% flowering onwards are recommended.

Failure of monsoon: If monsoon fails after sowing of the crop, plant population should be reduced proportionately to 1/2 either by uprooting alternate plants or alternate rows. However, in case of partial failure and extremely delayed monsoon alternative crops like castor, Pearl millet and horse gram may be sown in light soils.

For further details contact:
Director, 
Directorate of Sorghum Research,
Rajendranagar, Hyderabad-500 030 
Tel: 040-2401 5225, 2002 0077 
Fax : 040-2401 6378 
E.mail: dsrhyd-ap@nic.in 
Web: www. sorghum.res.in

Prepared by : Dr. Chari Appaji, Dr. KV Raghavendra Rao 
Page setting & Photo credits: HS Gawali.
Kharif Sorghum

Seed-bed preparation: Sorghum requires a well prepared seed bed for good crop establishment. Proper tillage reduces weeds by killing the germinating seedlings and burying deep the weed seeds. Seed bed preparation are governed by local conditions such as weed intensity, moisture availability and soil erosion risks.

Planting time: Sowing of sorghum should be undertaken with the onset of monsoon. Dry sowing about one week in advance of monsoon (firm forecast) is also practiced in black cotton soils.

Varietals recommendation:

Hybrids: Early maturing: CSH 23, Medium duration: CSH 16, CSH 18, CSH 21 Varieties: CSV 17 , CSV 20

Seed rate, spacing and plant density: The optimum plant population depends upon the available moisture, soil fertility status and morphology of genotypes being cultivated.

The optimum plant population recommended is 1,80,000 plants/ha. This can be achieved by using 8 kg seed and planting at 45 cm x 12.5 cm or 60 cm X 9.5 cm.

Fertilizer management: Application of 10 tons/ha FYM at the last ploughing and 40 kg N /ha fertilizer is advised. In the absence of FYM, 80 kg of N and 40 kg P2O5/hectare is recommended. One half i.e 40 kg N and full P2O5 is to be applied at sowing, while remaining 40 kg N is to be applied 30-40 days after sowing. In case of light soils with low rainfall, 60kg N and 30 kg P2O5 is recommended.

Weed management: Summer ploughing for destroying stubbles and perennial weeds. Timely sowing of crop to minimize weed competition. Proper spacing to facilitate inter weeding operation. Keep the field free from weeds.

Inter cultivation: Two weeding with one shallow hoeing up to 3 weeks after sowing will keep the field free from weeds. To check severe weed infestation apply Atrazine @ 0.5 kg a.i. per ha followed by hand weeding within three weeks of sowing.

Harvesting: Ideally Kharif sorghum should be harvested at its physiological maturity to gain about one weeks time in planting the winter crop.

Fodder Sorghum

General cultural practices for forage sorghum are variable but are similar to those used for grain sorghum production in an eco-geographical region. Pattern of utilization forage influences the choice of variety and cultivation practices.

Varietal recommendation: The available varieties are distinctly of two types- single cut and multi cut. The single cut varieties are PC 6, PC 23, MP Chari 1&2, HC 171 & 260, multi cut types are SSG 59-3, X 988, MFSH 3 and Hara Sona, CSV 20 MF and the dual purpose types are CSV 15, PC 5, SPV 462 and hybrid CSH 13.