

JOWAR

S. No	Operation	Details
1	Varieties along with recommended area	<p>KHARIF Varieties: PSV-1, Palem-2, CSV-10, CSV-11, CSV-13, CSV-1, Srisaila (PSV 56), N-15 and NTJ- 5 Normal rainfall areas of Coastal districts: CSV 10, CSV 11, CSV 13, CSV 15, PSV 1, Palem-2, Srisaila (PSV 56), CSV 17, CSV 20, CSV 23, N-15 and NTJ -5 Hybrids: CSH-10, CSH-11, CSH-14, CSH-16, CSH- 18, CSH-21, PSH 1, CSH 23, CSH 25 and CSH 30 Normal rainfall areas of Coastal districts: CSH 10, CSH 11, CSH 16, CSH 18. CSH 21 MAGHI, RABI and SUMMER Varieties : NTJ-2, NTJ-4, NTJ-5, CSV 216R, CSV 14R, M35-1, Kinnera and N-15 Normal rabi areas of Coastal districts :</p>
		<p>CSV 14R, CSV 216R, M35-1, NTJ-4, N14, NTJ-5, N-15, CSV 18 and CSV 22 Hybrids: CSH-15 R, CSH-16 Normal rabi areas of Coastal districts: CSH 15R, CSH 19R Rice fallows: CSH-13 R, CSH15 R, CSH-16 Sweet Stalk Sorghum: SSV 84, CSV 19SS and CSH 20SS</p>
2	Land preparation	One deep ploughing with mould board plough followed by ploughing with wooden plough twice in summer season. Before sowing, secondary tillage with cultivator to prepare smooth seed bed. Minor land smoothening before sowing helps in better insitu moisture conservation
3	Seed treatment	Treat the seed with Thiomethaxam @ 3 g/kg seed and Thiram or Captan @ 3 g/kg seed.
4	Sowing time	<p>Kharif: 1st week of June to 2nd week of July, Maghi: September Rabi: 2nd fortnight of September to October end, Summer: January</p>
5	Seed rate and Spacing	3 - 4 kg/acre 45 x 12-15 cm Remove excess plants at 15-20 days age of the crop.
6	Fertilizer doses and time of application	<p>FYM : 4 t/acre Light soils with low rainfall Basal : 12N + 16P + 12K kg/acre Top : (30-40 days crop) : 12 N kg/acre Fertile soils with assured rainfall Basal : 16N + 24P + 16K kg/acre Top : (30-40 days crop) : 16 N kg/acre</p>

7	Weed control (name of chemical and mechanical)	<p>Two manual weedings along with two intercultural operations with danti are effective.</p> <p>Pre emergence application of Atrazine @ 4 g/litre with in 48 hrs of sowing coupled with one manual weeding and one intercultural operation is also economical.</p> <p>Witch weed:</p> <p>Pre emergence spray of Atrazine @ 4 g/L.</p> <p>Spray Ammonium sulphate @ 50 g/l or Urea 200 g/l on striga plants.</p> <p>Destroy the parasites before flowering.</p>
8	Intercropping	2:1 or 3:3 Sorghum : cowpea / redgram / sunflower / chickpea
9	Major disease and pest control	<p>Pests:</p> <p>1. Shoot fly:</p> <ul style="list-style-type: none"> • Deep ploughing to expose larval and pupal stages present in the stubbles. • Sowing with the onset of monsoon before 15th July. • In the late sown crop, use high seed rate of 4-6 kg/acre and thinning out the affected and extra plants at 4 weeks after sowing. • Seed treatment with Imidacloprid @ 4 ml/kg of seed Carbosulfan 50 sp @ 100 g/kg seed. • In heavy infested areas, soil application of carbofuran 3G at 8 kg/acre in seed furrows. <p>2. Stem borer:</p> <ul style="list-style-type: none"> • Deep ploughing to expose larval and pupal stages present in the stubbles. • Sowing with the onset of monsoon. • Removal and destruction of dead hearts • Intercropping with the non cereal crop. • Whorl application of Carbofuran 3G @ 4 kg/acre at 25 and 35 days after emergence. <p>3. Corn leaf Aphid :</p> <ul style="list-style-type: none"> • Lady bird beetles and horse flies devour Aphids • Spraying of Methyl demeton or Dimethoate @ 2 ml/litre. <p>4. Ear head bug:</p> <ul style="list-style-type: none"> • Early sowing minimizes bug damage. • Application of carabaryl 5% Malathion 5D @ 8kg/acre at pre bloom and again at milk stages. <p>5. Panicle worm :</p> <ul style="list-style-type: none"> • Application of Malathion 5D @ 8kg/acre • Spraying of Monocrotophos 1.6 ml/l. <p>6. Mite:</p> <ul style="list-style-type: none"> • Spray Dicofol @ 3 ml/l or Monocrotophos @ 1.6 ml /l. <p>7. Sorghum midge :</p> <ul style="list-style-type: none"> • Application of Malathion 5D @ 2ml / l at 90 % ear head emergence stage. <p>8. Fall Army Worm</p>

		<ul style="list-style-type: none"> • Egg masses and larvae should be hand picked and destroyed. • Intercropping with legumes. • Napier grass can be grown as trap crop • Arrangement of pheromone traps @ 10 per acre. • Releasing Trichogramma and Telenomus on crop. • Spraying of 5% neem oil to control egg masses and first instar larvae or spraying of chlorpyrifos 25 EC 400 ml or Quinolphos 25EC 400ml in 200 liters of water per acre. The spray should be directed into whorls. • When the infestation is heavy, imamectin benzoate 5SG @80g or Spinosad 45SE @60ml in 200 lit of water should be sprayed per acre. • Poison baiting is effective in controlling later instar larvae. 10 kg rice bran + 2kg jaggery in 2 lit of water are mixed and fermented for 24 hrs. Next day 100g thiodicard is mixed and dropped in the whorls of the plants. <p>Diseases:</p> <ol style="list-style-type: none"> 1. Grain molds: Spray Propiconazole (Tilt) @ 0.5 ml/l twice at 50% flowering and 10-15 days later. 2. Smuts: Seed treatment with Thiram @ 3 g/kg seed. 3. Ergot: Mechanical removal of sclerotia from seeds by washing in 2% salt solution followed by rinsing with plain water before sowing. Spraying with benlate @ 1 g/l or Propiconazole (Tilt) @ 0.5 ml/l or mancozeb @ 2 g/l at 10% flowering and another spray at 50 % flowering
10	Irrigation schedule along with critical	In irrigated crop, irrigation should be given at sowing, 20-25 days after sowing, ear head emergence / flowering and grain filling