

Package of Practices of Bajra

Bajra is an important kharif crop of Mathura which occupies more than 40000 ha area and grown in almost every block of Mathura. Its productivity as reported by department of agriculture is 14.65q per hectare. Its production and productivity can be enhanced by using scientific management practices.

1. **Selection of Soil** : Sandy loam and light or loam soils with proper drainage are considered as best.
2. **Field Preparation** : Prepare the field by doing 1st ploughing with mould-bold plough followed by 2-3 ploughing with cultivator to pulverise the soil.
3. **Important Varieties** : Two types of varieties remain available for sowing of Bajra commonly referred as Composite and hybrid varieties. The important composite varieties suitable for the district are : ICMB-155, WCC-75, ICTP-8203, Raj-171,NDFB-3,and Dhanshakti etc. Among hybrid Pusa-322,Pusa-23, ICMH-451,Kaveri(KSB),Super Boss,Boss-65 Fauzi, Pioneer 86M84,Tata-Dhanya, GK-1111,GK-1200 Bullet and MP-7888 etc.
4. **Seed Rate**: 4-5 kg seed per hectare is required.
5. **Sowing Time and Method** : For grain Bajra should be sown from july to mid august and for fodder purpose it can be sown from last week of june to first week of july'. Bajra should be sown at the depth of 4cmin lines with a spacing of 45cm.
6. **Seed treatment** : Treat the seed with thiram or cabendazim @2-2.5gm per 1kg of seed before sowing to avoid seed borne diseases. To manage Ergot treat the seed in 20% salt solution.
7. **Fertilizer Management** : Use balance fertilizers as per the soil test basis. Generally for hybrid varieties 80-100kg nitrogen,40-50kg phosphorous ,and 40kg potash is recommended, while composite varieties needs 40-50kg nitrogen, 25kg phosphorous ,and 25kg potash per hectare. Use full dose of phosphorous and potash and half dose of nitrogen as basal dressing and the remaining dose of nitrogen should be applied after 25-30 days after sowing as top dressing.
8. **Thinning and Gap filling** : It is an important operation to be done after 10 days of sowing. Transplant the plant from high density area to poor germination area and fill the gap to maintain crop geometry and population.
9. **Weed Management** : Weeding and earthing is done manually with khurpi after 15 and 30-35 days of sowing It helps in proper aeration and good establishment of crop. TO control weed in with chemicals, the following weedicides can be used : Use Atrazine @1.25kg per hectare in light to medium soils within 48 hours of sowing. For very hardy weeds add Pendamethylene 30EC @2.5 litres with atrazine to control weeds.

10. **Irrigation Management** : Bajra crop is highly susceptible to moisture specially at the times of flowering and grain formation ,thus, if rain fails two irrigations on these stages must be provided.

11. **Plant Protection** : (Major Diseases): Ergot : It is a serious disease of bajra in which sclerotia are developed in the ears and black powder is formed in grains with the eruption of slesma (honey like sticking liquid) from the affected ears. To manage this disease treat the seed before sowing with chemicals or 20% salt solution. Use Zeerum 80% WP or Zeneb 75% WP 2kg or Mencozeb 75% WP @ 2kg per hectare.

Bajra Smut : Black powder is formed in grains. To manage this disease treat seed and use fungicides as recommended for ergot.

Ear Kokkle/green ear disease: In this disease the whole bajra ear converts into green leave and de-shaped which finally looks like a broom. To control this disease use 2 sprays of carbendazium 50% WP or Thiophinate methyl 70% WP @ 2gm per litre of water at an interval of 10 days.

Important Insects & Pests : Termites: Use chloropyriphos 20% EC @ 2.5 litre in standing crop with irrigation water.

Nematodes : Use 10kg forate 10G before one week of sowing in soil.

Stem borer : Use Cabofuron 3G or Forate 10G @ 20kg or spray Di methoate 30%EC 1 litre or Quiolphos 25%EC 1.50 litre per hectare.

Shoot borer : Use Cabofuron 3G or Forate 10G @ 20kg or spray Di methoate 30%EC 1 litre or Quiolphos 25%EC 1.50 litre per hectare.

Thrust Points : Select the variety suitable for your condition.

Treat the seed before sowing.

Use fertilizers as per soil test basis.

Irrigate the crop at flowering if rain fails.

Proper management of Insects pests and diseases in time.