

FINGER MILLET



Post-emergent spray: 2, 4-D sodium salt @ 0.75 kg a.i./ha Spraying around 20-25 days after sowing effectively control weeds.

Irrigation: Depending on soil type, weather condition and duration of variety, 8-14 irrigations are necessary.

Diseases: Finger millet is affected by a variety of diseases of which blast caused by *Pyricularia grisea* is the major problem.

Symptom: The symptoms appear as circular lesions that are pointed towards either ends. The centre of the spots appears grayish and the borders become brownish. In susceptible genotypes, several of such spindle shaped spots coalesce together, leading to drying of the entire leaf. When the fungus infects the neck region, a few inches of neck just below the finger turns brownish black ultimately leading to breakage of the peduncle.

Management:

The disease can be controlled by adopting resistant cultivars (GPU 28, GPU 48, GPU 45, VL Mandua 348, VL 379), Seed treatment with Carbendazim @ 2 g /kg seed and Spraying of kitazin (0.1%) or Ediphefos (0.1%) or Saaf (0.2%) at 50 per cent flowering.

Pests: Finger millet attracts several pests, of which army worm, cutworm, stemborer, shootfly and ear caterpillars are important.

Stemborers: The larva bores into the stem, resulting in dead heart.

Control: Spray the crop with Dimethioate (0.05%) or Phosphamidon (0.05%) or Monocrotophos (0.04%).

Ear caterpillars: Ear caterpillars appear at dough stage on ears and persist till harvest. The caterpillars bite the maturing seeds and make a fine web out of their casting and half eaten grains. This further attracts saprophytic fungi.

Control: Dust Malathion 5% @ 24 kg/ha or Quinolfos 1.5% @ 24 kg/ha or Endosulfan 4% @ 24 kg/ha or Phosalone 4% @ 24 kg/ha.

Harvesting: Harvest is done once the ear-heads are physiologically mature. Short duration varieties matures in 95-105 days while medium to late varieties matures in 110-125 days.

Yield: Grain 25-30 q/ha and 60-70 quintals of straw per hectare.

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Finger Millet (*Eleusine coracana*) commonly known as ragi, is one of the important millet crops grown for grain and fodder purpose under varied agro-climatic conditions in India. The crop requires low input and less affected by major pests and diseases and matures in 90-120 days. The high rejuvenation capacity after alleviated stress conditions makes this crop ideal for dry land farming. The major finger millet growing states in India are Karnataka, Uttarkhand Tamil Nadu, Andhra Pradesh, Orissa, Jharkhand and Maharashtra. Finger millet contains about 65-75% carbohydrates, 8% protein, 15-20% dietary fiber and 2.5-3.5% minerals. Grains of finger millet are highly nutritive and is known for its highest amount of calcium (344mg /100g grain), iron, zinc, dietary fiber and essential amino acids. The grains are highly resistant to storage insect pests and under minimum attention the crop can stay in good condition upto 50 years. These attributes plus its high market value compared to other cereals makes finger millet one of the salient crops among resource poor communities living in food insecure areas.

Local Names of Finger Millet

Language	Local Names
Hindi	Ragi, Mandika
Bengali	Marwa
Punjabi	Mandhuka, Mandhal
Telugu	Ragi Chodi
Oriya	Mandia
Kannada	Ragi
Gujarati	Nagli, Bavto
Tamil	Keppagi, Ragi, Kelvaragu
Marathi	Nagli, Nachni

State wise Varieties of Finger millet

Karnataka	GPU 28, GPU-45, GPU-48, PR 202, MR 1, MR 6, Indaf 7, ML365, GPU 67, GPU 66, KMR 204, KMR 301, KMR 340
Tamil Nadu	GPU 28, CO 13, TNAU 946 (CO 14), CO 9, CO 12, CO 15
Andhra Pradesh	VR 847, PR 202, VR 708, VR 762, VR 900, VR 936
Jharkhand	A 404, BM 2, VL 379
Orissa	OEB 10, OUAT 2, BM 9-1, OEB 526, OEB-532
Uttarakhand	PRM-2, VL 315, VL 324, VL-352, VL 149, VL 146, VL-348, VL-376, PES 400, VL 379
Chhattisgarh	Chhattisgarh-2, BR-7, GPU 28, PR 202, VR 708 and VL 149, VL 315, VL 324, VL 352, VL 376
Maharashtra	Dapoli 1, Phule Nachani, KOPN 235, KoPLM 83, Dapoli-2
Gujarat	GN 4, GN 5, GNN 6, GNN 7
Bihar	RAU 8, VL 379, OEB 526, OEB 532

Climate:

Finger millet is a short day plant and grows best in an environment with day temperatures of 30 to 34°C and 22 to 25°C night temperatures along with good sunshine. It thrives best in the areas where annual rainfall is about 1000 mm.

Soils:

Finger millet is cultivated on a variety of soils ranging from rich loam to poor shallow upland soils. It prefers porous and well drained loam to light red loam and sandy loam soils of good fertility and water holding capacity. The soil should be rich

in organic matter. It withstands and thrives well on slightly alkaline soils too.

Time of Sowing:

Kharif - June- July with the onset of monsoon

Rabi - September to October

Spacing: 225-30 cm (row to row), 8 – 10 cm (plant to plant). The seed should be planted 2-3 cm in depth.

Seed rate: 8-10 kg/ha for direct sowing
5 kg/ha for Transplanting (Seedling of 20-25 days old are ideal for transplanting. 150 m²)

Manuring and fertilization:

Apply Compost or farmyard manure @ 7-10 tonnes/ha about a month before sowing. Generally fertilizer recommended to get a good crop in rainfed condition is 40:20:20 kg NPK / ha, and for irrigated is 60:30:30 kg NPK / ha. Soil test based fertilizers application is recommended. Apply entire quantity of P₂O₅ and half of Nitrogen at the time of sowing and remaining half of Nitrogen at first irrigation.

Manuring and fertilization:

Two inter cultivations and one hand weeding in line sown crop is recommended. Intercultural operation using a tyne-harrow when crop is 30 days old is also recommended. In broadcast crop 1st weeding after 15-20 days after emergence of seedling and 2nd weeding 15-20 days after 1st weeding is recommended.

In assured rainfall and irrigated areas: Pre-emergence spray: Isoproturon @ 0.5 kg a.i./ha. (Rainfed areas), Oxyflurofen @ 0.1 lta.i /ha (Irrigated areas)