

Cultivation of Kodo Millet

(*Sanjeev Pandey¹, Ashok Kumar Bajja², Shivani Sharma³ and Ankit Singh⁴)

¹Agronomy, L.N.C.T. College, Bhopal, Madhya Pradesh

²Horticulture, B.C.A. College, Nokha, Rajasthan

³Soil Science and Applied Chemistry, L.N.C.T. College, Bhopal, Madhya Pradesh

⁴Soil Science and Applied Chemistry, L.N.C.T. College, Bhopal, Madhya Pradesh

*Corresponding Author's email: sanjeev.pandey1993@gmail.com

Kodo millet is magical millet as compared to other millet because it is high drought tolerant and gives good yield in short duration as compared to other millet. Kodo millet is an old millet crop. Kodo millet grains well according to nutrition point of view. Kodo millet is cultivated in the kharif season. Kodo millet is locally known by different names such as kodra in Marathi, araka in Telugu, ditch millet, cow grass in English etc. Kodo millet grain ranges from light red to dark grey in color. Kodo millet is mostly grown in Andhra Pradesh, Maharashtra, Tamil Nadu, Karnataka, Gujarat, Chhattisgarh and some other parts of India. Kodo millet is grown commercially in India.



Nutrition Value:- Kodo millet grain contains Protein 9-11 %, fiber 14%, fat 4%, rich in vitamins, especially niacin, B6 and folic acid, as well as the minerals such as potassium, calcium, iron, magnesium and zinc. Kodo millet grains do not contain gluten protein. Kodo millet dehusked grain is usually cooked like rice and eaten along with vegetables.



Climate:- Kodo millet requires warm and dry climate. Kodo millet is mainly grown in dry land and rain-fed dependent areas because it is highly drought tolerant. It can be grown in areas where annual rainfall is 400 mm to 500 mm. For better growth and development, a temperature range of 26 to 29°C is good.

Soil:- Kodo millet can be grown in poor upland to gravelly fertile loamy soil but the best soil for good production is alluvial, loamy and sandy soil with good drainage. Soil pH range is 5.5 to 7 pH.

Varieties:- Different suitable varieties are given below according to states.

Andhra Pradesh - Jk48, Jawahar Kodo 439.

Gujarat- JK48, GK1, GK2, JK13, JK65.

Maharashtra - GPUK3.

Madhya Pradesh- JK62, JK48, RBK155, RK286.

Chhattisgarh - Indira kodo-1, Indra Kodo-48, JK48, Rk286, GPUK3.

Tamil Nadu - TNAU86, KMV20, RK390-25, RK286, JK48, GPUK3.

Uttar Pradesh - KK2.

Sowing time:- Sowing of kodo on the onset of monsoon is beneficial but the suitable sowing time is the second week of June to the second week of July in northern India but in south India it is mainly grown in September to December as a rain-fed crop.

Field Preparation: - In kodo field preparation start first ploughing after onset of monsoon by deep turning plough or country plough for prepares fine tilth for good germination and crop establishment purpose.



Sowing Method: - sowing is done by broadcasting and line to line sowing but line to line sowing is beneficial because weed management and plant growth complete properly with the help of spacing between plant to plant. Row to row spacing is 22.5 to 30 cm. and plant to plant 10 cm. sowing depth is 3-4cm deep. Line to line sowing beneficial for intercultural activities.

Seed Rate: - For line to line sowing seed rate is 10 kg/ha. But in broadcasting method of sowing seed rate is 15 kg/ha.

Manure and fertilizer: - application of manure is good for soil and plant because manures increase water holding capacity of soil, increase aeration in the soil, control soil erosion also and provide essential plant nutrients. In kodo millet crop apply 5 to 10 tonnes per hectare farm yard manure. In case chemical fertilizer application Nitrogen 40 kg, Phosphorus 20 kg and Potash 20 kg per hectare. In rainfall areas at the time of sowing half dose of nitrogen and full dose of phosphorus, potash should be apply and remaining should be apply 35 to 40 days after sowing.

Cropping system: - Kodo millet crop inter cropping with pulse crop such as pigeon pea, cowpea, or green gram to increase soil fertility and reduce weed growth.

Madhya Pradesh: - Kodo millet + Soybean (2:1 ratio).

Kodo millet + Pigeon Pea (2:1 ratio).

Kodo millet + Green gram (2:1 ratio).

Kodo millet + black gram (2:1 ratio).

In hilly areas kodo millet is grown mixed with soybean crop.

Water management: - kodo millet is kharfi season crop so generally it does not require irrigation. But under drought condition irrigation apply every 4 to 7 days depending on drought condition and soil type. First irrigation should be apply 25 to 30 days after sowing and second irrigation apply 40 to 45 days after sowing. Drainage facility is required for remove excess water from the field.

Weed Management:-

Important weeds: - In kodo crop among weeds are grow in which grasses weeds are *Echinochloa colonum*, *Echinochloa crusgulli*, *Cynodon dactylon*, *Cyperus rotundus*, *Sorghum halepanse*, *Elusine indica* etc. and broad leaf weeds are *Phyllanthus niruri*, *Solanum nigram*, *Amaranthus viridis*, *Commelina benghalensis* etc.

Weed control: - It is important to control weed in initial stage for crop growth. In this situation generally two weeding at an interval of 15 days are sufficient. Weeding activity is done with the help of hand hoe and wheel hoe in line sowing crop. We can use herbicide for weed control. Generally for post-emergence application of 2, 4-D sodium salt (80%) @ 1.0 kg a.i. /ha at 20 to 25 days after sowing and Isoproturon @ 1.0 kg a.i. /ha as pre-emergence.

Harvesting: - When timely sowing is done crop ready for harvesting in the month of September or October in northern India.

Yield: - Proper timely sowing crop can obtain 15 to 18 quintals of grain and 30 to 40 quintals of straw per hectare.