

Kodo millet varieties

released in India for cultivation

Deepika Cheruku*, Swarna Ronanki and B Amasiddha

ICAR-Indian Institute of Millets Research, Rajendranagar, Hyderabad, Telangana 500 030

Kodo millet a small seeded annual cereal grass, is one of the oldest crops cultivated in India. It is one of the hardiest crops among the small millets. In this article information on released varieties of kodo millet from 1977–2012 is collected from the report on compendium on released varieties of small millets prepared by Porject Coordinating unit, All India Coordinating small millets improvements project, GKVK, Bengaluru and also updated with information on recently released varieties up to 2021. The following information will be helpful in selecting the varieties suitable for particular agro-climatic zones.

Keywords: Disease resistance, High yielding, Kodo millet, Varieties

KODO millet (*Paspalum scrobiculatum*) is widely distributed in damp habitats of tropics and subtropics of the world. It is indigenous cereal of India mainly grown in Madhya Pradesh, Chhattisgarh, Uttar Pradesh, Tamil Nadu, Maharashtra, Karnataka and some parts of Andhra Pradesh. It is also known as kodo (Hindi), Varagu (Tamil), Arika (Telugu), Harka (Kannada), Kodra (Gujarati, Marathi and Punjab) and Kodua (Oriya). In India, it is wide spread and grown in about 2.44 lakh ha (2005–06) in many states in south, west, central and north, producing about 0.73 lakh tonnes of grains with a productivity of about 312 kg/ha. Madhya Pradesh (0.50 lakh tonnes) and Chhattisgarh (0.17 lakh

tonnes) accounts for nearly 80% area under this crop followed by Tamil Nadu (0.12 lakh tonnes), Maharashtra (0.08 lakh tonnes), Uttar Pradesh (0.07 lakh tonnes) and Gujarat (based on mean production during 2001–06). The crop possesses a number of valuable characteristics such as more herbage, branched ear, large number of seeds per raceme, high fertility and unique storage ability. It has considerable production potential in marginal, low fertility soils and chronic moisture deficit areas of the country. These characteristics of kodo millet are mainly responsible for its existence and survival in many parts of recent modernized agricultural systems. Varieties of kodo millet released from 1977–2021 are given in Table 1.



Improved varieties of kodo millet (TNAU 86, RK 390-25; released in 2012)

Table 1. Released varieties of kodo millet from 1977–2021

Name	Pedigree	Year	Days to maturity	Yield (q/ha)	Recommended area	Salient features
CKMV 1 (ATL 2)	Pure line selection from DPS 63/58	2021	106–110	28	Andhra Pradesh, Chhattisgarh, Gujarat, Jharkhand, Karnataka, Madhya Pradesh, Tamil Nadu and Telangana	High yielding, early maturity, drought tolerant, resistant to diseases and pests
CKMV 2' (GAK 3/Dahod Kodo)	Pure line selection from germplasm RK 286	2020	105–110 days	25	Andhra Pradesh, Chhattisgarh, Gujarat, Madhya Pradesh and Tamil Nadu	High yielding, resistant to shoot fly and moderately resistant to head smut, non-shattering
GK4	Pure line selection from locally collected germplasm of Hilly regions of Dahod district of Gujarat and maintained with code No. DK-159	2020	106–113	27	Madhya Pradesh, Gujarat, Maharashtra, Tamil Nadu, Chhattisgarh, Andhra Pradesh and Karnataka	High yielding
KMV-543	Mutant of CO-3	2019	105–110	25–27	Andhra Pradesh, Chhattisgarh, Gujarat, Jharkhand, Karnataka, Madhya Pradesh and Tamil Nadu	High yielding
Jawahar Kodo 137	Mutant of RK 390	2018	100–105	26–29	Madhya Pradesh	High yielding and drought tolerant
RK 390-25	Mutant of RK 390	2012	100–105	25–28	All states	Moderately resistant to head smut, high yielding, non shattering and non lodging
TNAU 86	Pure line selection from IPS 85	2012	95–110	27–30	All states	Resistant to head smut, sheath blight, brown spot and tolerant to drought, Early duration, non-lodging, high yielding and milling recovery (52–53%)
INDIRA KODO1	Pure line selection	2012	100–105	22–25	Chhattisgarh	Highly responsive to fertilizers, suitable for late sown condition
DPS 9-1	Pure line selection	2011	105–110	26–28	Madhya Pradesh	Resistant to head smut, high yielding
JK 98	Pure line selection from 317	2010	100–105	25–30	Madhya Pradesh	Moderately resistant to head smut, tolerant to shoot fly, early duration, high yielding
JK 36	Pure line selection	2009	75–80	10–12	Madhya Pradesh	Moderately tolerant to Shoot fly, very early duration
JK 65	Pure line selection	2009	105–110	25–30	All states	Resistant to head smut, Fodder yield 6.2–6.3 t/ha, high yielding
JK 106	Pure line selection	2009	100–105	19–20	Madhya Pradesh	Resistant to head smut, Fodder yield 4.7–4.8 t/ha, high yielding
JK 13	Mutant of JK 76	2007	95–100	22–30	All states	Resistant to head smut, Fodder yield 4.5–4.6 t/ha, high yielding
JK 439	Pure line selection	2004	100–110	22–23	Chhattisgarh and Madhya Pradesh	Suitable for shallow soil with marginal fertility (specially hill top soil), high yielding
KK 2	Pure line selection	2002	80–85	20–23	Uttar Pradesh	Resistant to head smut, tolerant to shoot fly and drought, suitable for saline condition, early duration, non lodging, high yielding

Name	Pedigree	Year	Days to maturity	Yield (q/ha)	Recommended area	Salient features
JK 48	Pure line selection	2001	95–100	26–27	All states	Resistant to head smut, tolerant to drought, non lodging, non shattering, high yielding
JK 155 (RBK 155)	Selection from GPLMP 251	2000	80–100	20–22	Karnataka and Madhya Pradesh	Resistant to head smut, early duration
KK 1 (ICK 7125)	Pure line selection from Deoria district of UP	1999	80–85	18–20	Uttar Pradesh	Resistant to head smut, tolerant to drought and salinity, synchronous tillering, non-lodging
KMV 20 (VAMBAN 1/ VARGU 1)	Pure line selection from pali	1996	100–110	16–18	Tamil Nadu	Resistant to head smut and tolerant to drought
GK 2 (GUJARAT KODRA 2)	Pure line selection	1993	110–115	15–18	GAU, Waghai, Gujarat	Tolerant to drought, non shattering, non lodging
APK 1 (VARAGU)	Pure line selection from PSC 5	1993	100–105	18–20	Tamil Nadu	Resistant to ergot, smut and tolerant to stem borer, high yielding, non-lodging and non-shattering
GPUK 3	Pure line selection from GPLM 826	1991	100–105	18–20	All states	Resistant to head smut and moderately tolerant to low moisture stress, photo insensitive, high yielding
JK 76	Pure line selection from local germplasm of Sidhi	1991	85–90	18–22	Madhya Pradesh	Moderately tolerant to shoot fly and tolerant to drought, early duration, high yielding and non-lodging
JK 62	Pure line selection	1986	90–100	20–22	All states	Resistant to head smut and bacterial blight, non lodging, high yielding
JK 41	Pure line selection	1986	105–110	20–22	Plains of Madhya Pradesh, Gujarat and South India	Resistant to head smut and moderately drought tolerant, non lodging, stay green character, suitable for inter/mixed cropping
PSC 1	Pure line selection from IPS 115	1986	100–105	18–20	All states	Moderately tolerant to shoot fly and drought, high yielding, non lodging
JK 2 (DINDORI 73)	Pure line selection	1982	110–120	20–22	Madhya Pradesh	Profuse tillering, high yielding
JK 1 (PALI)	Pure line selection from local bulk	1982	110–120	18–20	Madhya Pradesh	Profuse tillering, high yielding
CO 3	Pure line selection from PS175	1980	115–120	12–13	Tamil Nadu	high yielding
K 1	Pure line selection from KPS 209 (IPM 600)	1982	100–105	12–14	Tamil Nadu	Profuse tillering, high yielding
JNK 364	Pure line selection	1977	95–100	18–20	Madhya Pradesh	Tolerant to drought, early duration
GK 1 (GUJARAT KODRA 1)	Pure line selection from IPS 19	1977	115–120	20–25	Western Ghats of Gujarat	High yielding

SUMMARY

Varietal information is useful for selecting high yielding kodo millet varieties suitable for different agro-climatic zones with various key features such as resistance to head smut, sheath blight, brown spot

and shoot fly, drought tolerance, non-lodging, non-shattering, early maturity and high milling efficiency.

*Corresponding author's e-mail: deepika@millets.res.in