



Millet Natural fortified cereals

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What are millets

Millets are a group of small seeded grasses belonging to the family poaceae. They are categorized into major and minor or small millets based on the area occupied for cultivation. Sorghum, bajra, ragi are the three major millets and Foxtail, Barnyard Kodo, Proso and Little are the five minor millets.

Importance of millets

Millets (Sorghum, bajra and small millets) are important food and the fodder crops in semi-arid regions which are gaining importance in countries facing climatic uncertainties, increasing population and malnutrition. These crops are storehouses of nutrients and are adapted to a wide range of temperature, moisture regimes and input conditions. They provide food, feed and fodder to millions of dryland farmers, particularly in developing countries, in addition to being the raw material for alcohol and starch production. These crops are primarily grown in agro-ecologies subjected to low rainfall and drought. Most such areas are unsuitable for the production of other grains unless irrigation is available. Following is the general information on major and minor millets and their nutritional composition.

Nutritive value of millets

Nutritive value of millets (per 100g)

Crop / Nutrient	Protein (g)	Fat (g)	Fibre (g)	Minerals (g)	Iron (mg)	Calcium (mg)	Phosphorus (mg)
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Rice	6.4	0.4	0.2	0.7	1.0	9.0	143
Wheat	11.8	1.5	1.2	1.5	5.3	41	306
Sorghum	10.4	1.9	1.6	1.6	4.1	25	222
Bajra	11.6	5.0	1.2	2.3	8.0	42	296
Finger millet	7.3	1.3	3.6	2.7	3.9	344	283
Foxtail millet	12.3	4.3	8.0	3.3	2.8	31	290
Proso millet	12.5	1.1	2.2	1.9	0.8	14	206
Kodo millet	8.3	1.4	9.0	2.6	0.5	27	188
Little millet	7.7	4.7	7.6	1.5	9.3	17	220
Barnyard millet	6.2	2.2	9.8	4.4	5.0	20	280

General information on Millets

	Sorghum	Pearl millet	Finger millet	Foxtail millet
Scientific name	<i>Sorghum bicolor</i>	<i>Pennisetum glaucum</i> (L.)	<i>Eleusine coracana</i> (L.)	<i>Setaria italica</i> (L.) P. Beauv.
Common name	Sorghum	Pearl millet	Finger millet	Italianmillet and setaria
Family	Poaceae	Poaceae	Poaceae	Poaceae
Vernacular name	Jwari, Juara, Jowar, Cholaṁ, Jonna,Jola	Bajri, Bajra, Sajjalu, Kambu,sajje	Marwa Nagli, Keppai,Ragulu,Ragi Mandia, Mandhuka	Korralu Kaon Kang Kakum Navane Tenai Kangni
Origin	northeastern Africa	Sahelian Africa	East Africa (Ethiopia)	Central Asia(China)
Ploidy	Diploid(2n = 20)	Diploid(2n = 14)	Allopolyploid2n = 4x = 36	Diploid2n=18
Genome size	~ 700Mbp	~1.79Gb	1,593 Mb	~490 Mb
Season	Kharifand Rabi	kharif(June–September), summer (February–May), Rabi (November–February)	Kharifand Rabi	Kharif

Major states	Maharashtra			
	Karnataka		Karnataka	Tamil
	Madhya Pradesh	Rajasthan, Maharashtra	Nadu, Uttarakhand	A.P.,
	Andhra Pradesh,	Gujarat, Uttar Pradesh and	Maharashtra	Karnataka
	Rajasthan, and Tamil Nadu	Haryana	Andhra Pradesh, Orissa, Gujarat	Rajasthan, M.P.,
			West Bengal and Bihar	Chattisgarh
Uses	Food (unleavened bread, Sankati, thin porridge, Pops, Atta, flaking and Biscuits), Feed (Poultry), Fodder, Biofuel	food (leavened and unleavened flat breads and porridge\$, feed and fodder (dry and green)	roti (unleavened flat breads), kazhi (finger millet balls), and kanji (thin porridge)	Cooked rice, Kheer, Mudde, Roti, Thin Porridge, Dosa, , Sattu, Halwa
	Kodo millet	Barnyard millet	Proso millet	Little millet
Scientific name	<i>Paspalum Scrobiculatum</i>	<i>Echinochloa frumentacea</i>	<i>Panicum miliaceum</i> L	<i>Panicum sumatranum</i> Roth
Common name	Kodo millet	Indian Barnyard millet	Common millet	Little millet

Family	Poaceae	Poaceae	Poaceae	Poaceae
Vernacular name	Kodo, Kodra, Kodon Arikelu Varagu, Harka	Udalu, Kuthiraivolly, Sanwa Khira, Shyama, Oodalu	Varigalu Chena Baragu Pani, varagu Baragu, Vari	Samal Kutki, Same,
Origin	India	India	Central Asia-India	India
Ploidy	Tetraploid $2n=4x=40$	Hexaploid $2n=6x=54$	$2n=4x=36$	$2n=4x$
Genome size	Not available	Not Available		Not Av
Season	Kharif	Kharif and Rabi	Kharif (onset of monsoon), summer	Kharif
Major states	M.P., Chattisgarh, T.N., & Maharashtra	Karnataka M.P., Uttarakhand, U.P., North East	Bihar, North East, Maharashtra	Karna A.P., M.P., Jh Orissa Mahar Chatti
Uses	Cooked rice	Cooked rice, Kheer, Roti,	Cooked rice, Kheer, Roti, Thin	Cooke Kheer,

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Source: <https://data.vikaspediain/shorturl?k=2VAFoKFqxJEfSdIQkmGgdQ>

