

## International Year of Millets-2023



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### MILLETS:THE NUTRI-CEREALS

Millets are collective group of small seeded annual grasses that are grown as grain crops, primarily on marginal land in dry areas of temperate, sub tropical and tropical regions. (<http://www.fao.org/3/w1808e/w1808e0c.htm>)

### MAJOR MILLETS



Pearl Millet  
(Bajra)



Sorghum  
(Jowar)



Finger Millet  
(Ragi)

### MINOR MILLETS



Foxtail Millet  
(Kangni)



Barnyard Millet  
(Sawan)



Kodo millet  
(Kodo)



Little Millet  
(Kutki)



Proso Millet  
(Cheena)



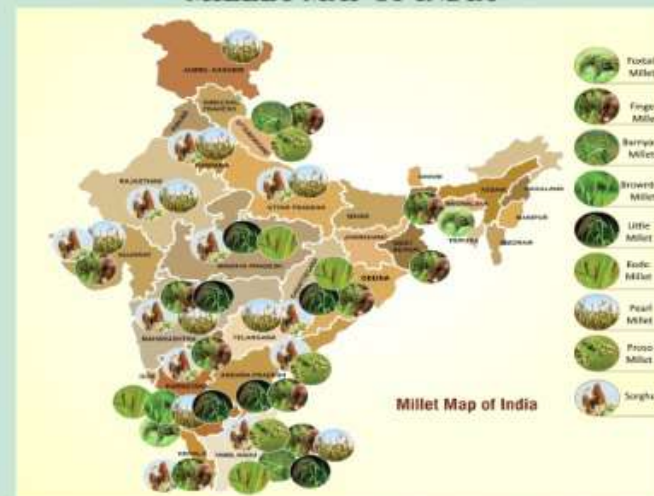
Buck Wheat  
(Kuttu)



Amaranthus  
(Chaulai)

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### MILLET MAP OF INDIA



- Earliest evidence found in Indus civilization : 3000 BC.
- Ancient food grains first plants domesticated for food.
- Grown in 131 countries. Millets traditional food for 59 crore people in Asia & Africa.

**Nutritive value of Millets:** These crops contains substantially high amount of protein, fibre and minerals in comparison to fine cereals like wheat and rice. The protein content in millets like *Jowar* (10.4), *Bajra* (11.6), *Proso millet* (12.5), *foxtail millet* (12.5) and *barnyard millet* (11.6) is comparable with wheat (11.8) and much higher than rice (6.8). Through the finger millet contains lesser protein (7.3), but it is rich in mineral matter and calcium (344 mg/100 gm grains). All the millets contain more fibre than fine cereals, particularly, the small millets namely barnyard millet (14.7), Kodo millet (9) little millet (8.9) and foxtail millet (8.0) are the richest in fibre in comparison to wheat (1.2) and rice (0.2). Therefore, these crops are now being pronounced as "*Miracle grains/AdbhutAnaj and Nutri-cereals*".

### Health benefits of Millet:

- Gluten free and non- allergic and a substitute for wheat or gluten containing grains for celiac patients.
- Act as a pro-biotic feeding for micro-flora in our inner ecosystem.
- High dietary fibre provides hunger satisfaction & helps to reduce obesity and reduce the risk of Type II diabetes.
- Decreases triglycerides and C-reactive protein, thereby preventing cardiovascular disease.
- Beneficial in treating and preventing gall stones and stomach ulcer.
- Reduce anemia, liver disorder and asthma.
- It hydrates our colon to keep us from being constipated.
- Rich in anti-oxidants, hence reduce oxidative stress.
- Reduce the occurrence of hypertension.
- Effective in reducing blood pressure and risk of gastro-intestinal conditions like gastric ulcers or colon cancer.
- Eliminate problems like constipation, excess gas, bloating and cramping.

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### Normal Area, Production & Yield of Nutri cereals

State/ UT	Average: 2016-17 to 2020-21		
	Area (Lakh ha)	Production (Lakh tonnes)	Yield (Kg/ha)
Rajasthan	48.23	46.33	961
Maharashtra	31.12	23.58	758
Karnataka	18.47	23.19	1255
Uttar Pradesh	10.84	20.75	1915
Madhya Pradesh	5.84	10.83	1855
Tamil Nadu	5.41	8.23	1521
Haryana	5.25	10.09	1921
Gujarat	5.18	10.67	2062
Andhra Pradesh	2.22	4.28	1926
Uttarakhand	1.51	2.07	1369
Chhattisgarh	0.92	0.29	314
Telangana	0.91	1.14	1251
Odisha	0.80	0.51	639
Others*	0.47	0.55	1183
Jammu & Kashmir	0.30	0.14	464
Jharkhand	0.21	0.18	858
Bihar	0.13	0.12	942
West Bengal	0.11	0.11	1013
Himachal Pradesh	0.06	0.06	879
Assam	0.05	0.03	612
Punjab	0.01	0.01	619
Kerala	0.004	0.004	976
<b>All India</b>	<b>137.94</b>	<b>163.11</b>	<b>1182</b>

\*NE-States, D&N Haveli, Delhi, Daman & Diu and Puducherry

**CONSUME MILLETS, ENJOY HEALTHY LIFE**

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### BENEFITS OF MILLETS PRODUCTION AND CONSUMPTION

#### 1. GOOD FOR CONSUMER

- Low glycemic index
- Rich in minerals, vitamins and antioxidants.
- Prevents lifestyle diseases.

#### 2. GOOD FOR FARMERS

- Short crop duration
- Resource efficient-minimal use of resources
- Hardest, resilient and adaptable to harsh climate

#### 3. GOOD FOR PLANET

- Low water footprint.
- Zero carbon footprint.
- Energy-efficient crops

#### States and Districts of One District One Produce under Millets crop

Pradhan Mantri Formalisation of Micro food processing Enterprises (PMFME) Scheme adopts one district one product approach to reap the benefits of scale in terms of procurement of inputs, availing common services and marketing of products. 18 Districts of 10 states covered under One District One Produce (ODOP) under Millets crop.

S.No	State	District (Products)
1	Arunachal Pradesh	Tirup (Millets)
2	Chhattisgarh	Sukma (Millets)
3	Gujarat	Tapi (Sorghum)
4	Jammu and Kashmir	Poonch (Millets)
5	Karnataka	Davanagere (Millets)
6	Madhya Pradesh	Balaghat (Small Millets) Bhind (Bajra), Dindhori (Small Millets), Mandla (Small Millets)
7	Maharashtra	Nandurdar (Millets), Solapur (Sorghum), Thane (Millets)
8	Odisha	Malangiri (Millets) Nuapada (Millets)
9	Tamil Nadu	Dharmapuri (Millets) Virudhnagar (Millets)
10	Telangana	KomaramBheem (Millets) Mahbubnagar (Millets)

**CULTIVATE MILLETS, SAVE NATURAL RESOURCES**

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### STEPS TAKEN FOR PROMOTING MILLETS SINCE 2018

- ✓ National Year for Millets 2018 -notified as Nutri cereals.
- ✓ Launched "Sub Mission on Nutri cereals" in 2018 under National Food Security Mission.
- ✓ State Missions launched in Karnataka, Odisha, Tamil Nadu and Chhattisgarh.
- ✓ Millets included under POSHAN MISSION ABHIYAN.
- ✓ Over 500 Start-ups in millet value chain supported.
- ✓ Indian Institute on Millets Research (IIMR), under RKVY-RAFTAAR, has incubated 250 start-ups.
- ✓ INR 6.2 crores distributed to over 66 start-ups with additional of 20-25 startups approved for further funding.
- ✓ Start-ups spread across the entire value chain of millets- Primary Processing, RTE, RTC like Breakfast Cereals, Millet Coffee, Pizza Flours, Porridge, Flakes, Puff etc.

#### Millets: An approach for sustainable agriculture and healthy world

➔ <b>Food Security</b>	Sustainable food source for combating hunger in changing world climate Resistant to climatic stress, pests and diseases
➔ <b>Nutritional Security</b>	Rich in micronutrients like calcium, iron, zinc, iodine etc. Rich in bioactive compounds Better amino acid profile
➔ <b>Safety from diseases</b>	Gluten free; a substitute in wheat in celiac diseases Low GI: a good for diabetic persons Can help to combat cardiovascular diseases, anemia, calcium deficiency, etc.
➔ <b>Economic security</b>	Climate resilient crop Sustainable income source for farmers Low investment needed for production Value addition can lead to economic gains.

**MILLETS, THE KEY OF SUSTAINABLE AGRICULTURE.**