

## Millet Status in India - Production and Consumption

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### Introduction

Millets are one of the traditional grains that have been used for food, animal feed and fodder. They are also popularly known as “Nutri-Cereals” because of their abundant nutritional content. They are the species of small-seeded grasses in the family Poaceae. The word millet comes from the French word “Mille” which means “thousand”, meaning that a handful of millet can hold up to a thousand grains (Dayakar Rao *et al.*, 2022). They can be grown in arid and semi-arid tropics in the world. Most of the millets are endemic to India. Based on the grown area and grain size, the millets are divided into two types: major millets and minor millets. The major millets include sorghum (*Sorghum bicolor*), pearl millet (*Pennisetum glaucum*), and finger millet (*Eleusine coracana*). The minor millets include foxtail millet (*Setaria italica*), little millet (*Panicum sumatrense*), kodo millet (*Paspalum scrobiculatum*), proso millet (*Panicum miliaceum*), barnyard millet (*Echinochloa frumentacea*) and browntop millet (*Brachiaria ramosa*). There are other three types of millets namely fonio (*Digitaria exilis*), tef (*Eragrostis tef*), and job’s tear millet (*Coix laeryma*), which are of minor importance in India because they are grown mostly in Africa. The Ancient author Strabo advised around 20 BC that “Millet is the greatest preventive of famine, since it withstands every unfavourable weather, and can never fail, even though there be a scarcity of every other grain”.

### Millet Production and Consumption

According to FAOSTAT (2021), the global millet production in 2019-20 was 84.17 million metric tonnes from an area of 70.75 million hectares, of which 20.50% is produced in India. Currently, millets are used in the diets of about 90 million people in Africa and Asia. Africa accounts for more than 55 per cent of global production, followed by Asia, which accounts for almost 40 per cent, while Europe accounts for around 3 per cent of the global

market. It has been reported that the African continent was the largest in terms of area and production of millets followed by Asia, North America, South America, Europe and Australia (Table 1.1.).

**Table 1.1. Global Scenario of Millets Production**

S.no.	Regions	2018-19		2019-20	
		Area (Million Hectare)	Production (Million Tonnes)	Area (Million Hectare)	Production (Million Tonnes)
1.	Africa	50.6	46.1	47.0	41.3
2.	Asia	17.6	23.5	18.6	25.0
3.	Europe	0.49	1.40	0.85	1.98
4.	North America	2.21	9.53	2.26	9.68
5.	Australia	0.50	1.30	0.24	0.43
6.	South America	1.71	5.10	1.80	5.88
7.	<b>World</b>	<b>73.11</b>	<b>86.96</b>	<b>70.75</b>	<b>84.17</b>

(Source: FAOSTAT, 2021)

Sorghum is the major millet grown globally constituting 65.8% of total millet production. The sorghum and pearl millet are combined, they account for 92.6% of global millets production, followed by finger millet, foxtail millet, proso millet, little millet and kodo millet, which altogether account for 7.94% of global millet production. Unfortunately, witnessed a gradual decline in the area and production of millets globally. The area covered under millets declined from 74.6 million hectares in 2018 to 72.3 million hectares in 2020, while production decreased from 91.8 million metric tonnes to 89.2 million metric tonnes. The declining trend in area and production between 2010 to 2018 was also reported in recently published studies (ASSOCHAM, 2021; Dayakar Rao *et al.*, 2018).

Despite India being the world's largest producer of millets, more than 40% of millet consumption has been reported in African countries, particularly in Niger, Mali, Nigeria, Burkina, and Sudan. Global consumption has declined at a rate of 0.9% and is predicted to rise between 2019-2024 (Research and Markets, 2019).

In India, Millets are largely cultivated, with a production of 17.26 million metric tonnes, of which 4.77 million tonnes are sorghum and rank 5<sup>th</sup> in the world in terms of

sorghum production. India is the world's largest producer of pearl millet, finger millet, little millet, kodo millet and barnyard millet with an annual production of around 12.46 million metric tonnes from an area of 8.87 million hectares. Rajasthan leads the first in millet production, with 7.29 million tonnes produced from 5.91 million hectares followed by Karnataka (6.45 MT), Madhya Pradesh (4.82 MT), Maharashtra (4.73 MT), Uttar Pradesh (4.47%), Tamil Nadu (3.33%) and Telangana states (3.12%). The Karnataka state is well-known for cultivating minor millets in India, with finger millet (Karnataka awarded with Geographical Indication (GI) tag for finger millet by the central government) serving as a staple meal in the southern portion of the state (Ashok *et al.*, 2020). Telangana stands 7<sup>th</sup> in rank in the production of millets, 3.12 million tonnes with an area of 0.66 million hectares (Table 1.2.). On the other hand, the data showed that there was a decrease in the area under millets from 1950 – 1955 to 2015 – 2019 at a Crop Growth Rate (CGR) of 16.21 per cent; in the same manner, production was also dropping at a CGR of 13.58 per cent (Lokesh *et al.*, 2022).

**Table 1.2. Indian Scenario of Millets Production**

States	2018-19		2019-20	
	Area (Million Hectares)	Production (Million Tonnes)	Area (Million Hectares)	Production (Million Tonnes)
Rajasthan	5.83	6.99	6.13	7.29
Karnataka	3.01	5.52	3.13	6.45
Madhya Pradesh	1.84	5.15	1.84	4.82
Maharashtra	3.32	3.10	4.33	4.73
Uttar Pradesh	1.91	3.95	1.99	4.47
Tamil Nadu	0.92	3.71	0.96	3.33
<b>Telangana</b>	<b>0.61</b>	<b>2.16</b>	<b>0.66</b>	<b>3.14</b>
Andhra Pradesh	0.49	1.86	0.56	2.68

Source: Agriculture Statistics at a glance, 2021

Although there is a considerable proportion of millet production and availability, consumption has declined over the years. A downward trend in per capita consumption of sorghum was seen in both rural and urban India, with consumption dropping from 19.1 to 5.2

kg per year in rural India and from 8.5 to 2.7 kg per year in urban India, indicating 68 per cent and 70 per cent declines, respectively (Rao *et al.*, 2010). A similar study also stated that there was a decline in millet consumption and the difference in total millet consumption between rural and urban was 10 kgs in 2004-05 and 4 kgs in 2011-12 (Umanath *et al.*, 2018). Assam (18.82 kg/hsh/m) and Bihar (18.69 kg/hsh/m) states had the highest consumption of small millets in India, with rural areas contributing the most, while other states consumed less than 10 kg/hsh/m, which was lower than Assam and Bihar. Finger millet was highly consumed in Bihar state (12.02 kg/hsh/m, followed by Karnataka (10.03 kg/hsh/m) (Anbukkani *et al.*, 2017).

Telangana is situated in a semi-arid region. Sorghum, pearl millet, finger millet, and minor millets are the most commonly grown millets in Telangana. According to Telangana Statistical Abstract-2021, the total production of millets was 1.72 lakh tonnes in 2020-21. With 1.58 lakh tonnes, the sorghum contributed the most, followed by pearl millet, finger millet, and other minor millets. In comparison to the previous year, it reported a slight increase in production and a decline in the cultivated area. The major millet-producing states are Mahabubnagar, Adilabad, Medak, Ranga Reddy and Nizamabad (Agricultural statistics at a glance, 2017).

**Table 1.3. Telangana Scenario of Millet Production**

Crop	Area (Lakh Hectares)		Production (Lakh Tonnes)	
	2019-20	2020-21	2019-20	2020-21
Sorghum (Jonna)	2,22,841	2,24,017	1,36,824	1,58,297
Pearl millet (Sajja)	23,037	24,759	10,804	11,423
Finger millet (Ragi)	4,702	3,254	3,023	1,661
Minor millets	3,465	1,394	2,186	881
<b>Total</b>	<b>2,54,045</b>	<b>2,53,424</b>	<b>1,52,837</b>	<b>1,72,262</b>

Source: Telangana Statistical Abstract, 2021

Paddy is the largest producer and staple food for the state. Millets are also consumed in several areas of the state. Apart from the taste and preferences, food intake is influenced by various factors such as family income, degree of urbanization, availability of food items, self-cultivation and many more. The major millets such as jowar, ragi and bajra were consumed at the rate of 500g, 20g and 70g per month. Adilabad had the highest consumption of major



millets (2.5 kg/m), followed by Kamareddy (670g/month), Wanaprthy (350g/month), Jogulamba (140g/month) and other remaining districts reported less than 140g/month (Sanjiv Kumar *et al.*, 2017).

### **Reasons for decline in Millet consumption**

During the 1960s, the Green Revolution was introduced to reduce poverty and hunger. This led to a larger growth in food grain production, particularly wheat and rice, which made it more accessible and affordable to consumers. The overdependence on rice and wheat has resulted in a decline in millet consumption over time. Therefore, millets are underused and neglected crops due to a lack of awareness among the general public and several constraints such as lack of cooking techniques, taste, texture, and affordability. The factors contributing to the decline in millets area and production are rapid urbanization, changing consumer tastes and preferences due to rising per capita incomes, government policies favouring other crops such as output price incentives and input subsidies, supply of Public Distribution System (PDS) rice and wheat at cheaper price introduced in non-traditional areas of fine cereals, poor social status and inconvenience in their preparation (especially sorghum), low-shelf life of grain and flour, low remuneration and lack of incentives for millet production (Indian Institute of Millet Research, 2018).

### **Conclusion:**

Millet production and consumption have declined over the years, whereas the consumption of other cereals such as rice and wheat has increased. Lifestyle disorders have increased as consumption of other cereals has increased. Millets are traditional crops with abundant nutritional benefits, they are not only nutritionally rich but also can withstand severe weather conditions. Therefore, millets need to be encouraged to include in the diet by providing through PDS at a cheaper price. Moreover, a holistic approach needs to be implemented to create awareness in society.

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