



INTERNATIONAL YEAR OF MILLETS (IYOM)-2023

National Conference on Kharif Campaign, 2022

19th April, 2022



Ministry of Agriculture & Farmers Welfare

MILLETS: THE NUTRI-CEREALS





Foxtail Millet



Finger Millet



Barnyard Millet



Browntop Millet



Little Millet



Kodo Millet



Pearl Millet





- 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.

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)

Top 5 States	Millet Crops
Rajasthan	Bajra/Sorghum
Karnataka	Jowar/Ragi
Maharashtra	Ragi/Jowar
Uttar Pradesh	Bajra
Haryana	Bajra

GLOBAL SCENARIO OF MILLETS

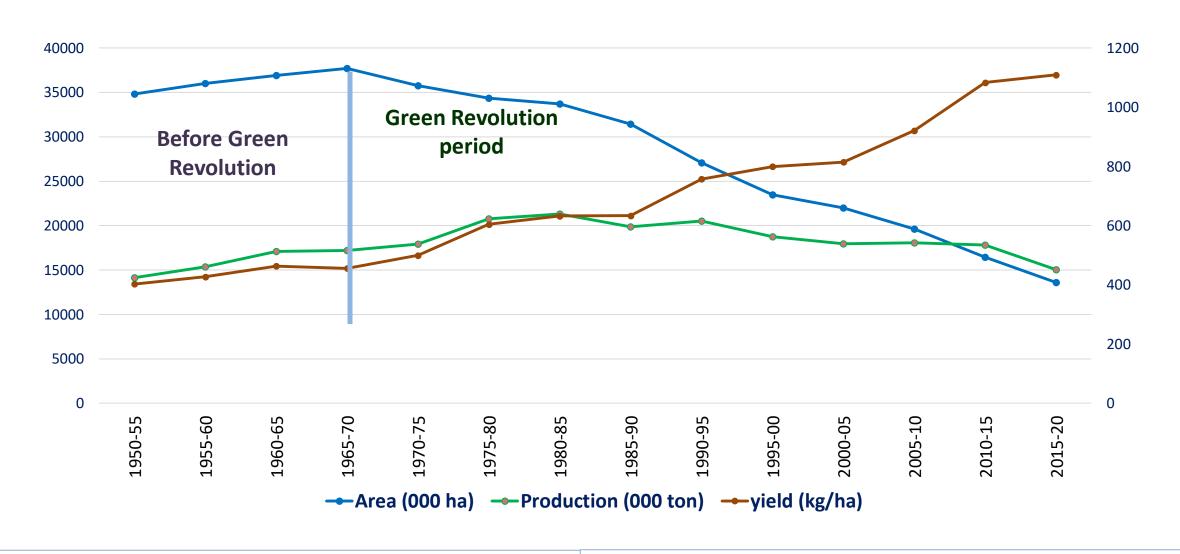
Millets area and production region wise (2019)

(Source: FAO Stat 2021)

Regions	AREA (lakh ha)	Production (lakh ton)
Africa	489	423
Americas	53	193
Asia	162	215
Europe	8	20
Australia & New Zealand	6	12
<u>India</u>	138	173
WORLD	718	863

- India produces >170 lakh ton (80% of Asia's & 20% of global production)
- Global average yield: 1229 kg/ha, India (1239 kg/ha)

QUINQUENNIAL MEAN AREA, PRODUCTION & YIELD OF MILLETS IN INDIA



Area decreased (56%), productivity has increased (228%) High adoption of high yielding varieties/ hybrids

Up to 1965-70: Millets- 20% of total food grain basket, now only 6% dominated by rice & wheat.

STEPS TAKEN FOR PROMOTING MILLETS SINCE 2018

- ✓ National Year for Millets 2018 as Nutri cereals Sorghum (Jowar), Pearl Millet (Bajra), Finger Millet (Ragi/Mandua), Minor Millets i.e. Foxtail Millet (Kangani/Kakun), Proso Millet (Cheena), Kodo Millet (Kodo), Barnyard Millet (Sawa/Sanwa/ Jhangora), Little Millet (Kutki) and two Pseudo Millets (Buck-wheat (Kuttu) and Ameranthus (Chaulai).
- ✓ "Sub Mission on Millets" under National Food Security Mission since 2018.
- ✓ Several State launched mission on Millets.
- ✓ Millets included under POSHAN MISSION Abhiyan by Ministry of Women & Child Development.

- ✓ ICAR released one variety Quinoa (Him Shakti).
- ✓ Quinoa A new crop: ICAR has been referred to suggest for declaring Nutri-cereals.
- ✓ 200 Start-ups supported: (turnover of > Rs. 320 cr) through IIMR, Hyderabad.
- ✓ Technology backstopping for 400+ Entrepreneurs (turnover of >Rs 900 cr)
- ✓ 67 Value added Technologies developed at Centre of Excellences.
- ✓ Export of Millets increased from \$ 24 million (2017) to \$ 26 million (2020).
- ✓ Release of 13 <u>High Yielding varieties</u> including 4 bio-fortified varieties of millets.

International Year of Millets (IYoM)-2023

 Government of India had proposed to United Nations for declaring 2023 as International Year of Millets (IYOM). The proposal of India was supported by 72 countries and United Nation's General Assembly (UNGA) declared 2023 as International Year of Millets on 5th March, 2021.

 Now, Government of India has decided to celebrate IYOM, 2023 to make it peoples' movement so that the Indian millets, recipes, value added products are accepted globally.

Preparatory Steps of Government of India for International Year of Millets (IYoM), 2023

- Core Committee has been formed
- Consultation held with States, Processors, Chefs/ Nutritionists, Farmers/FPOs in June, 21.
- <u>Position paper</u> on millets prepared by IIMR, Hyderabad and shared with stakeholders.
- Institute- Indian Institute of Millet Research (IIMR) to be Nodal Institute.
- Knowledge partner for IYoM 2023- International Crops Research Institute for the Semi-Arid Tropics (ICRISAT).
- <u>6 Task forces</u> constituted.
- Hon'ble Agriculture Minister letter to all Chief Ministers and Lt. Governors (Oct, 21) requested celebration of IYoM 2023 will focus on Millets
- Recipe book sent to all Chief Ministers, Cabinet Ministers, Ministers of State and Governors & Lt. Governors.

- Blueprint for 19 Ministries of Govt. of India prepared.
- Millet Movement in India published by ICRISAT
- Millets displayed in India International Trade Fair, New Delhi (Nov,21).
- Millets showcased in **Dubai Expo (Feb 2022)** along with FPOs & Startups on Millets.
- Millets announced in the Budget Speech- Webinar held involving stakeholders
- Millets showcasing in Surajkund Mela (March to April 2022)
- Karnataka and Odisha models highlighted in VC held with all major states
- Millets to be displayed in AAHAR, New Delhi (26th -30th April, 2022)

<u>Perspective</u>: The initiatives of Government of India in association with the States to create demand of Millets for health benefits in India at Global level for better remuneration to the farmers, protection of resources (soil and water) and creation of direct and indirect employment.

SEVEN SUTRAs : THEMES Govt. of India level launches



Enhancement of Production/ Productivity:

DA&FW & DARE



Nutrition & Health benefits:

Health/FSSAI



Value-addition, Processing & Recipe Development:

MOFPI& Tourism



Entrepreneurship / Startup/Collective Development:

Commerce &DA&FW



Awareness creation – Branding, Labelling & Promotion:

ALL



International outreach:

Commerce and MEA



Policy interventions for mainstreaming:

Dept of Food and PD and DA&FW

Enhancement of Production & Productivity of Millets

- Strengthening quality seed chain :
 - Fully Support to Breeder Seed procurement
 - Support Foundation and Certified Seeds
 - Encourage PPP mode
 - Seed Hubs
- Frontline technology demonstrations/ cluster demonstrations.
- Demand creation through awareness and increase in consumption.
- Crop Diversification focus in favour of millets.
- States to take steps for procurement

Nutritional & Health benefits

Generate awareness regarding Health and Nutrition benefits: Eat Right Campaign

Steps to avail technology support for ICAR, SAUs and other like ICMR, NIN, AYUSH, IIMR, Central Food Technological Research Institute (CFTRI) & ICRISAT to research and collate evidence

Promote bio fortification of millets.

Digital publication of Papers on Millets.

To commission studies by National/International reputed organizations (Task Force-II)

Awareness among mothers through Mothers Committees of Anganwaadi

Value addition, Processing & Recipe Development

Value Addition:

- Strengthening of 3 Centres of Excellence with advanced infrastructure.
- Helping Start-ups with technical backstopping.

Processing:

- Development of primary processing clusters at Farm Gate.
- MoFPI included Production Linked Incentive (PLI) scheme for millet products.
- Task force for bringing all processors, stakeholders under one umbrella (Corporate Led).

Recipe Development:

- R&D on traditional/contemporary millets recipes by IIMR, CFTRI & National Institute of Food Technology, Entrepreneurship and Management (NIFTEM) with higher shelf life with proper packaging & branding & ready to use products.
- Development of recipes, books & online modules through chef's & hotel management schools.
- Partnership of Hospitality Industry in popularizing recipes

International Outreach

Integral part of Azaadi Ka Amrit Mahotsav

Global promotion- (FAO) Action Plan for IYoM 2023

Global Conference/Symposium on Millets,

Study on Millet genetics

Global case studies

Global Recipes Project

International Exhibitions on Millets.

Embassies to play key role

Indian diaspora involvement for food festivals.

Food & Cooking Shows.

International food influencers as brand ambassadors.

Engage the UN bodies such as World Food Programme, IFAD & institutional donors.

Launch Day Event in January 2023

Launch Day Conference on production and productivity- led by DA& FW and DARE-Major millets producing countries, Ministerial participation.

Showcasing millet recipes in hotels 3-7 days starting from launch of IYoM 2023.

Distribution of millets for mid day meal on day of launch.

Distribution of millets through Anganwadi Centres on day of launch.

All Indian Embassies across the globe to have millets food festival on launch day.

Celebrity endorsements/ social outreach leaders.

Stakeholders involvement in all major millet producing districts.

Railways/Airlines to serve millet cuisines

Launch of Cookbook with millet recipes

Domestic Outreach

Integral part of Azaadi Ka Amrit Mahotsav

Involvement of Students / Youth : Cyclothons, Marathons

Hackathons/ Start Up challenges (Mechanization, Supply chain and Logistics, Post Harvest, Food Technology& Value Addition)

Food festivals: : Millet recipe awareness – Millet of the Month

Millet recipes food festivals - Eat Right India.

Cooking workshops and competitions.

Conference by Industry Associations: Food processing, Hospitality

Millet Export Promotion - APEDA workshops –focus on branding

National consultation on Millets policy mainstreaming.

Activities by the States

Distribution of millets through ICDS once a week.

Each state to adopt one focus millet to showcase.

Panchayats/ ULBs to be involved with events in millet producing districts.

Conferences at district & state level for promotion of millets

Establish Centers of Excellence on nutri-cereals across the length and breadth of Indialink industries with these centres.

Suggestions invited from States

Mass Awareness

Mid Day Meal in schools & Anganwadis at least one day a week,

Buffets at hotels to have millet focus at least one millet dish during 2023.

Chefs to give on line training modules-build up to one platform for sharing dishes.

Appeal to eat millets at least once a week, food influencers to share best experiences with millets

Promote "Vrat" recipes of millets and its compilation.

Online platforms and delivery agents to popularize millets.

Organize events in various groups (using NSS, NCC SHGs/FPOs), schools, colleges, universities, industry and civil societies.

FSSAI to develop standards.

Organize monthly 'Millet Challenge'

Mass Awareness

Millet Vending Machines in all public places.

Ministries to serve only millet snacks in 2023.

Improve the nutritional and status of communities by including millets in breakfast and evening snacks for 10 lakh women and children in select districts.

Mobile teaching kitchens and encourage nutrition on wheels concepts.

Engage Industry bodies: Confederation of Indian Industry (CII), Federation of Indian Chambers of Commerce and Industry (FICCI),

Encourage and support the print, social and electronic media

Defence Food and Research Lab to promote millets in Defence, Police forces canteens.



THANK YOU

SPLIT UP OF 154 VARIETIES RELEASED (2014-21)

- Sorghum-43
- Pearl Millet -52
- Little Millet-11
- Proso Millet-4
- Kodo Millet-4
- Finger Millet-28
- Foxtail Millet-8
- Barnyard Millet-4

GoM: IYoM 2023

- MINISTER, M/O OF AGRICULTURE & FARMERS WELFARE, CHAIRMAN
- MOS, M/O OF AGRICULTURE & FARMERS WELFARE, MEMBER
- MOS, M/O OF AGRICULTURE & FARMERS WELFARE, MEMBER
- MINISTER, M/O FOOD & PUBLIC DISTRIBUTION, MEMBER
- MINISTER, M/O OF FOOD PROCESSING INDUSTRIES, MEMBER
- MINISTER, M/O OF WOMEN & CHILD DEVELOPMENT, MEMBER
- MINISTER, M/O OF EXTERNAL AFFAIRS, MEMBER
- MINISTER, M/O OF HEALTH & FAMILY WELFARE, MEMBER
- MINISTER, M/O INFORMATION AND BROADCASTING, MEMBER
- MINISTER, M/O TOURISM, MEMBER
- MINISTER, M/O EDUCATION, MEMBER
- MINISTER, M/O COMMERCE & INDUSTRY, MEMBER
- MINISTER, M/O CONSUMER AFFAIRS, MEMBER
- MINISTER, M/O RURAL DEVELOPMENT, MEMBER
- SECRETARY, DEPTT. OF AGRICULTURE & FARMERS WELFARE, MEMBER SECRETARY

CoS: IYoM 2023

- CABINET SECRETARY, CHAIRMAN
- CEO, NITI AAYOG, MEMBER
- SECRETARY (DA,&FW), MEMBER SECRETARY
- SECRETARY (DARE), MEMBER
- SECRETARY, D/O FOOD PROCESSING INDUSTRIES, MEMBER
- SECRETARY, D/O FOOD & PUBLIC DISTRIBUTION, MEMBER
- SECRETARY, D/O WOMEN & CHILD DEVELOPMENT, MEMBER
- SECRETARY, D/O HEALTH & FAMILY WELFARE, MEMBER
- SECRETARY, D/O EXTERNAL AFFAIRES, MEMBER
- SECRETARY, INFORMATION AND BROADCASTING, MEMBER
- SECRETARY, TOURISM, MEMBER
- SECRETARY, D/O RURAL DEVELOPMENT, MEMBER
- SECRETARY D/O CONSUMER AFFAIRS, MEMBER
- SECRETARY, D/O COMMERCE & INDUSTRY, MEMBER
- SECRETARY, EDUCATION, MEMBER
- CEO, FSSAI : MEMBER



Core Committee: IYoM 2023

- SECRETARY (DA&FW) CHAIRMAN
- SECRETARY (DARE), CO-CHAIRMAN
- ADDITIONAL SECRETARIES (DA&FW), MEMBER
- AGRICULTURE COMISSIONER (DA&FW), MEMBER SECRETARY
- JOINT SECRETARY, CROPS (DA&FW), MEMBER
- JOINT SECRETARY (IC) (DA&FW), MEMBER
- ADG, SEED, ICAR, MEMBER
- DIRECTOR, IIMR, ICAR, HYDERABAD, MEMBER
- CEO NUTRIHUB, IIMR, ICAR, MEMBER
- NODAL OFFICER, MINISTRY OF EXTERNAL AFFAIRS, MEMBER
- NODAL OFFICER, MINISTRY OF TOURISM, MEMBER
- MINISTRY OF FOOD PROCESSING INDUSTRIES, MEMBER
- NODAL OFFICER, DEPARTMENT OF COMMERCE, MEMBER
- NODAL OFFICER, DEPARTMENT OF HEALTH AND FAMILY WELFARE, MEMBER
- NODAL OFFICER, DEPARTMENT OF FOOD & PUBLIC DISTRIBUTION, MEMBER

6 Task Forces for IYoM 2023

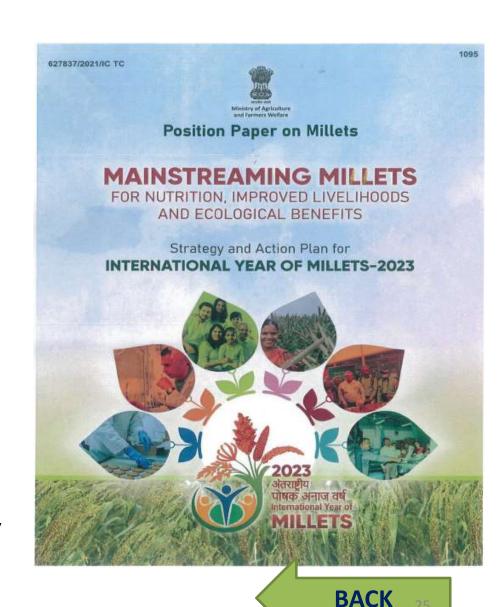
- 1) "Task Force-I for enhancing production and productivity Agri Commissioner, DA&FW & Dr. T R Sharma, DDG (Crop Science), ICAR
- 2) "Task Force-II for Nutrition & Health Dr Hemalatha, Director, ICMR-NIN, and Ms Pallavi Aggarwal, IAS, JS, Poshan Abhiyan, MoWCD
- 3) "Task Force-III for Enhancement of Shelf Life Dr Sridevi A Singh, Director, CFTRI (CSIR) and Dr. Dayakar Rao, IIMR, Hyderabad
- **4)** "Task Force-IV for Processing and Value Addition & Recipe Dr B Dayakar Rao, CEO, Nutrihub, ICAR-IIMR and Chef Manjit S Gill, President, IFCA
- **Task Force-V** for International Events development Dr. Abhilaksh Likhi, Additional secretary, DAFW, Md. Noor Rahaman Shaik, JS Econ. Diplomacy, MEA (International) and Dr. A K Singh, DDG (Extension) ICAR.
- **6) "Task Force-VI** for Millet Promotion Council Addl. Secy. DA& FW and Sh. PK Swain, Addl Secy, DAFW.

BACK

POSITION PAPER on Millets based on theme areas

Outline of position paper

- Geographical mapping of millets growing areas
- Examine possibilities of wider use of millet in food items
- Examine introduction of millets as part of POSHAN Abhiyaan
- Study possibilities of millets in the global market
- Gaps in studies on nutrition of millets
- Look at linkages of markets and promotion as healthy food
- Recent initiatives in Millets promotion in the country
- Summary of Recommendations



Shortlisted Logo and Slogan for IYoM-2023







पोषक अनाज है गुणों का खज़ाना, सस्ता-सुगम है इसे खेतों में उगाना ||

स्वस्थ थाली मिलेट वाली

स्वास्थ्य राज , पोषक अनाज

Launching of Nutri-cereals stakeholders convention, initiative of Nutri-gardens and tree plantation in context to the International Year of Millets 2023

ICAR-IIMR, Hyderabad, 17-18 September, 2021





Participants of Stake holder conventions

- Total Registered Delegates: 339
- Farmers 100
- FPOs 27
- Startups 82
- Chefs, Nutritionists and Doctors 38
- NGO and Self help Groups 65
- Policy makers, Credit institutions,
 Exporters 27

Participants of Nutri-gardens and Tree Plantation Initiative

- KVKs 688, Member of parliament 38
- MLAs -69; Union Ministers 07
- State Ministers 09; VIPs 2271
- Kanya millet meals 40038; Farmers 62700
- Total participants 104745
- Plants distributed 607027
- Vegetable seed packets distributed 77879
- Total 684906





BIG Ticket Activities- 2023

Workshops

©Thematic Workshops

- Nutrition and Health benefits of Millets for Immunity and Nutritional security
- Food processing interventions
- Millet Export opportunities
- National consultation on Millets policy mainstreaming
- Workshops with dieticians, doctors, nutritionists, civil society, students;

Conferences

- International Chef/ Nutrition Conference -India
- Food festivals: Cyclothons: Marathons: Millet recipe awareness: Farmer's fairs: Stakeholder meets
- Cooking contests;
- Nutricereals conclave with FAO;
- Conference by Industry Associations
- States to hold conferences and district and state level for promotion of millets.

Events during 2023

- Each state to adopt one millet to showcase.
- Celebrity Endorsements.
- Training of chefs.
- Distribution of cook books
- Worldwide Conferences with Roadshows for 2023
 - Africa
 - Middle East
 - Europe
 - USA

ACTION POINTS OF MINISTRY/ DEPARTMENT (1/6)

SN	Department	Actions	
1	Department of Agriculture & Farmers Welfare	 Strategy for Production & Productivity of Millets. Organic millets production Production and distribution of high yielding varieties of seeds Availability of millets upto village level- upscaling state millet missions. Seed chain for North Eastern Region FPOs establishment and Incentives to Start ups Production centric films. Each state to adopt 1 millet for showcasing. Adoption of Nutri Gardens. 	
2	Department of Agricultural Research and Education	 Crop improvement, development of seeds , Conducting Studies about Value Addition of Millets Good agricultural practices- KVKs outreach Development of Millet Production and Processing machinery R&D, technical support : IIMR,SAUs, CIPHET Capacity building and Entrepreneurship development NEXT	

ACTION POINTS OF MINISTRY/ DEPARTMENT (2/6)

SN	Department	Actions	
3	Ministry of Tourism	 Popularizing recipes/ cuisine of millets by organizing chefs from hotel industry. Training of Chefs on millets recipes. Millet recipe books to be printed. Designing coffee table books. Holding webinars /seminars for popularizing millet cuisines Cooking competitions 	
4.	Department of Food Processing Industries	 International Conference on Millet Processing (January, 2023) - 01 Industry Meet (October, 2023) - 01 Millet expo at Metro cities in India (one expo on each quarter of 2023) - 04 National Conference on Millet Processing (July, 2023) - 01 Millet festivals in ODOP districts (March to December, 2023) - 10 	
5	Department of Commerce & APEDA	 Promotion of millets during Gulfood 2023 (February, 2023) - 01 Buyer Seller Meet and Road shows in Indonesia (April, 2023) - 01 Promotion of millets during Summer Fancy Food Show (June/July, 2023) - 01 Buyer Seller Meet and Road Shows in Japan (September, 2023) - 01 Promotion of millets during Anuga Food Fair (October, 2023) - 01 Buyer Seller Meet and Road Show in UK (December, 2023) - 01 Further, with regard to the Export Trade Promotion Strategy Task Force, APEDA is in process of finalizing the Export Trade Promotion Strategy Force within two months. 	

ACTION POINTS OF MINISTRY/ DEPARTMENT (3/6)

SN	Department	Action	
6	Ministry of External Affairs	 International advocacy for millets - FAO activities. Indian Missions – 3 day millets recipes fairs. 1 week awareness campaign on Indian millets – road shows. International conference in Africa - South South Cooperation 	
7	Department of Food & Public Distribution	Inclusion of millets under PDS system.	
8	Department of Higher Education	 Awareness through Universities /colleges/ Institutes Consumption in campuses Organizing workshops/seminars/ conferences on millets 	
9	Department of Women & Child Development	 Millets for ICDS Mid Day Meal – at least one day in MDM Aanganwadi- nutri gardens to be set up Poshan Abhiyan 	
10	Department of Consumer Affairs	 ❖ BIS- to develop grades and standards for millets and carry out certification ❖ Jago grahak jago campaign NEXT 31	

ACTION POINTS OF MINISTRY/ DEPARTMENT (4/6)

SN	Department	Action required
11	Department of Health and Family Welfare/FSSAI	 Recipe Ravivar-4 recipes every month shared on every Sunday October, 2021 to July, 2022 - (40 recipes) Indi-Genius Food Challenge October, 2021 - 01 Scroll Messages on Doordarshan August, 2021 to March, 2022 - 7 Months 75 Walkathon and Eat Right Mela August, 2021 to August, 2022 Eat Right Challenge for Cities and Districts (188 cities) July 2021-Dec 2022 -188 Cities Eat Smart Cities Challenge (108 cities) June 2021 - June 2022 -108 Cities Eat Right Research Awards Sep 2021 - Sep 2022 & Eat Right Research Challenge Sep 2021 - Sep 2023 Research project on-Biotic Impact and Carbon Footprint of Food Commodities on Environment by NIFTEM Sep 2021 - Feb 2023 International Conference on the Eat Right India initiatives Dec 2021-Jan 2022 - 01

ACTION POINTS OF MINISTRY/ DEPARTMENT (5/6)

SN	Department	Action	
12.	Department of School Education & Literacy	 Issue of Joint D.O. letter of Secretaries A quiz competition on MyGov Portal may be organized for school children Cooking competition among cook cum helpers may be organized by using millet based recipes by following COVID protocols Talks/Group discussion may be scheduled during online/offline classes involving children Use and goodness of millets may be discussed in PTMs and SMC meetings Review meeting with States and UTs under the Chairmanship of Bureau Head 	
13	Department of Rural Development	 Rural Livelihoods Mission – Promotion at local level. Village level awareness and training 	
14	NITI Aayog	 Studies on nutritional value of millets. Policy framework related to Government schemes. 	
15	Ministry of Tribal Affairs	Awareness and connecting with incomeEstablishment of FPOs and Value chain	
16	Department of Information and Broadcasting	 Awareness Campaign of millets and IYoM 2023: Electronic DDKs, Pvt TV and Radio and print media Brand Ambassadors , Coffee Table Book 	

ACTION POINTS OF MINISTRY/ DEPARTMENT (6/6)

SN	Department	Action required	
17.	My Gov	 For webcast & Webpage of all Central Ministries Wider publicity; My Gov – logo and slogan contest : All social media 	
18.	Ministry of Railways	 Meals and snacks Advertisement on train compartments and railway stations 	
19.	Ministry of Civil Aviation	 Pamphlets in seat jackets of all flights Meals and snacks Advertisement and announcements at Airports & aircraft 	

State Initiatives: Millet development

Odisha

- Odisha Millet Mission (OMM):2018, tag line farm to plate, reviving millets in 15 districts
- Ragi included under PDS 2018-19 (7 districts)

Karnataka

- Initiatives for Millets as "The Food of the Future" (incentive to farmers Rs. 10000/ha for cultivation of millets)
- Organic farming & millet promotion "Savayava Bhagya Yojana".
- Organized National and International trade fair.

Maharashtra

• Promoting Millets through Project on Climate Resilient Agriculture.

Telangana

• Raithu Bandhu Samithi, exclusive FPOs for millets.

Impact of Steps taken since 2018

- Production has increased from 164 lakh ton in 2017-18, to 176 lakh tons in 2020-21.
- Productivity increased from 1163 kg/ha in 2017-18, to 1239 kg/ha in 2020-21.
- Export of Millets increased from 21.98 million US \$ in 2017 to 24.73 million US \$ in 2020.
- Release of 154 high yielding verities, disease resistant, including 10 Nutri-Cereal crops and 9 bio fortified varieties.
- Increased availability of quality seed of new high yielding varieties and hybrids- 5780 qtls produced in 2020-21.

- 10 traditional varieties (like ma...) branded for quality and organoleptic qualities.
- Start-ups Supported: 175 with turnover of Rs 250 crore.
- 400+ Entrepreneurs; handheld: with an total estimated turnover of Rs 1000 crore.
- Indian Institute of Millet Research (IIMR) provides technical support to 14 states on State Millets mission.
- 67 Value added Technologies developed.

Allocation, Release of funds of Nutri Cereals under NFSM from 2018-19 to 2021-22 (Central share)

		(Rs. In crores)
Year	Allocation	Release
2018-19	132.15	87.51
2019-20	200.42	114.16
2020-21	183.90	102.66
2021-22*	200.31	69.32
As on 28.01.2022	716.78	373.65

GLOBAL SCENARIO OF MILLETS

Millets area and production region wise (2019)

(Source: FAO Stat 2021)

Regions	AREA (lakh ha)	Production (lakh ton)
Africa	489 (68%)	423 (49%)
Americas	53 (7%)	193 (23%)
Asia	162 (23%)	215 (25%)
Europe	8 (1%)	20 (~2%)
Australia & New Zealand	6 (~1%)	12 (~1%)
India	138 (20%)	173 (20%)
WORLD	718	863

- India produces >170 lakh ton (80% of Asia's & 20% of global production)
- Global average yield: 1229 kg/ha, India (1239 kg/ha)

Nutrition and health benefits studies

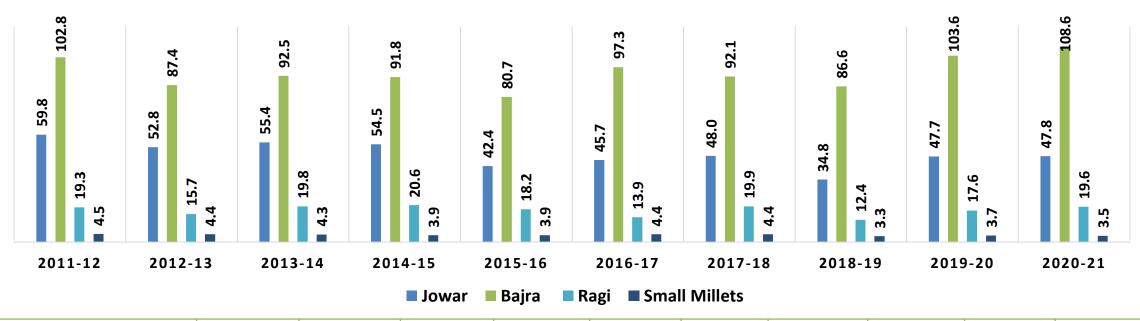
R&D Studies	National		International	
	Subjects	Organisation	Subjects	Organisation/Country
Done so far	Nutrition & bioavailability of nutrients 10 biofortified varieties developed	Nutrition Profiling of cultivars (IIMR, CFTRI) Bioavailability (harvest Plus India), ICAR –AICRP-IIMR	Nutritional profiling Antioxidants Amino acid profiling	Academia in US, Africa, Asia R&D from Canada, Sri Lanka China, & Niger
	Health benefits & clinical evidences	Diabetics (IIMR & ICRISAT) Suitability for School children (NIN & IIMR) Bone Health (ICRISAT) Metabolic syndrome (Ramaiah Medical College, BLR)	CVD Cancer Hypertension Obesity	R&D from South Korea Academia China R&D from China & ICRISAT
	Degree of polishing	CFTRI, IIMR & MDRF (current project); G.B. Pant University of Agriculture		
	Nutrigenomics	ICAR-VIHA, Almora	Nutrigenomics	Nil
	Effect of Processing on nutrition	CFTRI, UAS, Dharwad		
In Future	Gut microbiome & Liver diseases	ILBS & IIMR	Studies to be identified by Task force on Nutrition (submit by 18 February, 2022); functional & therapeutic studies	John Hopkins, USA London school on Hygiene & tropical medicine, UK Emory Medical university, US
	Bioavailability	NIN, IIMR & CFTRI	Clinical studies for evidences of health benefits	Indian Insts: NIN, IIMR
			Gut microbiome & Bioavailability studies	ICRISAT; FAO-Nutrition Wing, GAIN

Millet Estimates 2021 of major countries

Country	Estimates (Lakh Ton)
Russia (Europe)	3.60
Ukraine (Europe)	1.80
Australia (Europe)	0.37
Peru (America)	0.15
India (Asia)	115
China (Asia)	27
Pakistan (Asia)	3.15
Nepal (Asia)	3.14
Burma (Asia)	2.40
Yemen (Asia)	0.30
Bangladesh (Asia)	0.07

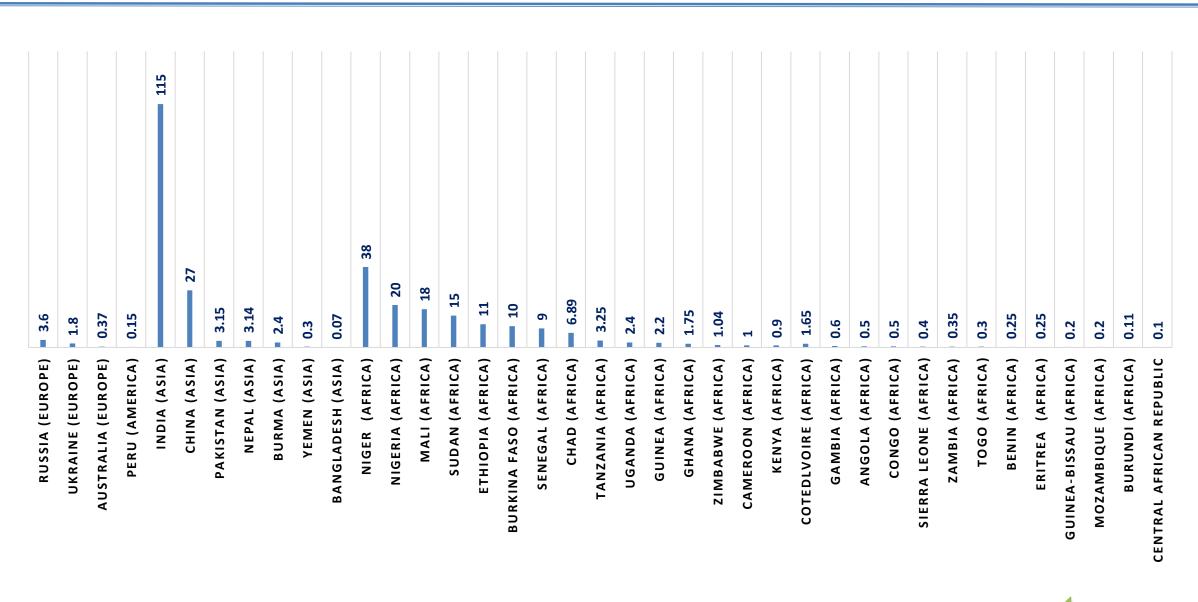
Africa Country	Estimates (Lakh Ton)	Africa Country	Estimates (Lakh Ton)
Niger	38	Kenya	0.9
Nigeria	20	Cotedlvoire	1.65
Mali	18	Gambia	0.60
Sudan	15	Angola	0.50
Ethiopia	11	Congo	0.50
Burkina Faso	10	Sierra Leone	0.40
Senegal	9	Zambia	0.35
Chad	6.89	Togo	0.30
Tanzania	3.25	Benin	0.25
Uganda	2.4	Eritrea	0.25
Guinea	2.20	Guinea-Bissau	0.20
Ghana	1.75 Mozambique		0.20
Zimbabwe	1.04	Burundi	0.11
Cameroon	1.00	Central African	0.10
		Republic	BACK

Production of Nutri Cereals during last 10 yrs (India)



Crop	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
Jowar	59.8	52.8	55.4	54.5	42.4	45.7	48.0	34.8	47.7	47.8
Bajra	102.8	87.4	92.5	91.8	80.7	97.3	92.1	86.6	103.6	108.6
Ragi	19.3	15.7	19.8	20.6	18.2	13.9	19.9	12.4	17.6	19.6
Small Millets	4.5	4.4	4.3	3.9	3.9	4.4	4.4	3.3	3.7	3.5
Total Nutri Cereals	186.4	160.3	172.0	170.8	145.2	161.2	164.4	137.1	172.6	179.6

Millets Estimates of major countries (lakh ton)



Millet Vending Machines



Millet Vending Machines installed in Krishi Bhawan





Varieties of Millets

S/No.	Variety	CVRC	Salient features
	Pearl Millet		
1	HHB 299	79th 2018	Rich in iron (73.0 ppm) and zinc (41.0 ppm) in comparison to 45.0-50.0 ppm iron and 30.0-35.0 ppm zinc in popular varieties/hybrids
2	AHB 1200	79th 2018	Rich in iron (73.0 ppm) in comparison to 45.0-50.0 ppm in popular varieties/hybrids
3	AHB 1269Fe	81st 2018	Rich in iron (91.0 ppm) and zinc (43.0 ppm) in comparison to 45.0-50.0 ppm iron and 30.0-35.0 ppm zinc in popular varieties/hybrids
4	ABV 04	81st 2018	Rich in iron (70.0 ppm) and zinc (63.0 ppm) in comparison to 45.0-50.0 ppm iron and 30.0-35.0 ppm zinc in popular varieties/hybrids
5	RHB 233 (MH 2173)	82 nd 2019	High iron (83ppm) and high Zn (46ppm)
6	RHB 234 (MH 2174)	82 nd 2019	High iron (84 ppm) and high Zn (41 ppm)
7	HHB 311 (MH 2179)	83 rd 2019	High iron content (83 ppm)
8	Phule Mahashakti	81 st 2018	Rich in iron (87.0 ppm) and zinc (41.0 ppm) in comparison to 45.0-50.0 ppm iron and 30.0-35.0 ppm zinc in popular varieties/hybrids

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	Finger Millet		
1	Vegavathi (VR 929)	82 nd 2019	High in grain Zn content (199.1%). It is high in Fe, Ca, protein content, dietary fibre and low in Tannin content.
2	CFMV 1 (Indravathi)	2020	Rich in Ca (428 mg/100g), Fe (58 mg/kg) and Zn (44 mg/kg) in comparison to Ca (200 mg/100 g), Fe (25 mg/kg) and Zn (16 mg/kg) in popular varieties
3	CFMV 2	2020	Rich in protein (6.41%), Ca (654 mg/100g), Fe (39 mg/kg) and Zn (25 mg/kg) in comparison to Ca (200 mg/100 g), Fe (25 mg/kg) and Zn (16 mg/kg) in popular varieties
	Little millet		
1	CLMV 1	2020	Rich in protein (14.4%), Fe (59 mg/kg) and Zn (35 mg/kg) in comparison to Fe (25 mg/kg) and Zn (20 mg/kg) in popular varieties
2	SreeNeelima	2020	Rich in anthocyanin (50.0 mg/100g), crude protein (15.4 %) and zinc (49.8 ppm) in comparison to negligible anthocyanin, 2.7 % crude protein and 22-32 ppm zinc in popular varieties