



DIRECTORATE OF AGRICULTURE AND FOOD PRODUCTION,
GOVT. OF ODISHA



ANNUAL REPORT 2020-21

Special Programme for Promotion of Millets in Tribal Areas
A Government of Odisha Initiative



ODISHA

MILLETS MISSION

Reviving millets in farms and on plates

ANNUAL REPORT

2020-21

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Message from the Director, Directorate of Agriculture & Food Production, Bhubaneswar, Odisha



Dr. M Muthukumar, IAS

Director of Agriculture and Food Production,
Odisha, Bhubaneswar.



The Special Programme for Promotion of Millets in Tribal Areas is an initiative of the Department of Agriculture and Farmers' Empowerment, Government of Odisha for reviving millets in farms and on plates by promoting them in an extensive manner in the tribal populated rainfed areas of the state.

The programme was budgeted in the State Agriculture Budget of 2017-18 and implementation got started in the Kharif of 2017-18. The programme focuses on providing support to the millet grower in every possible way starting from introducing improved agronomics practices in order to increase yield, addressing nutritional issues by promoting household consumption, promoting millets in urban areas by doing value addition and procuring finger millet at minimum support price. The procurement of Ragi has been one of the major and fruitful initiatives under Odisha Millets Mission which has given a ray of hope to the tribal farmers to revive millets in their farms.

The program has expanded to 7681 Blocks in 14 districts with some of the Districts joining by converging with the District Mineral Fund Foundation. It has an outreach of over 100,000 millet farmers supported by partner NGOs/CSOs in the state. In 2020-21, the procurement of finger millet was done in 76 blocks of 14 districts.

Key highlights of the Ragi procurement during KMS 2020-21 are as follows:

- 203843.72 quintals of ragi have been procured against the target of 232560
- Rs.65.84 lakh credited to 24945 farmers under minimum support price (MSP).

Ragi Laddoos have been introduced as morning snacks for preschool children in the Supplementary Nutrition Programme (SNP) under ICDS in Keonjhar and Sundargarh districts. Department of Women & Child Development and Mission Shakti supported this initiative. Odisha Millet Mission provided technical support; financial support came from District Mineral Foundation of the respective district. Initially it was piloted in Anganwadi Centres (AWCs) of Keonjhar Sadar in 2020; subsequently

scaled up in 3254 AWCs across 13 blocks in Keonjhar district, benefitting 86,917 Pre-school children. Each child was given two Ragi Laddoos per week in these AWCs.

In Sundargarh, 62495 children from 3809 AWCs of 17 blocks were benefited. Here, each child was given four Ragi Laddoos per week. Local SHGs were roped in for preparation of a premix for Ragi Laddoos. They were trained on aspects like storage of Ragi, preparation of Ragi flour and premix for the Laddoos. When Anganwadi Centres (AWCs) were closed due to lockdown, premix was supplied at the doorstep of the enrolled pre-school children. Odisha Millets Mission featured as a success story in Health and Nutrition Practice Insights Report of Niti Aayog. Efforts for increasing the area of Millets, Inclusion of Ragi in PDS and Anganwadi Menu etc. have been highly appreciated.

This annual report 2020-21 shall take you through a detailed journey of the revival of forgotten millets by highlighting the role of farmers in bringing back millets in the farms and on plates.



Dr. M Muthukumar, IAS
Director of Agriculture and Food Production, Odisha, Bhubaneswar.

Glossary

AAO- Assistant Agriculture Officer

ATMA- Agriculture Technology Management Agency

CB- Capacity Building

CBO- Community Based Organization

CCE- Crop Cutting Exercise

CHC- Custom Hiring Centre

CMSS- Community Managed Seed System

DAFE- Department of Agriculture and Farmers' Empowerment

DAFP- Directorate of Agriculture and Food Production

DAO- District Agriculture Officer

DBT- Direct Benefit Transfer

DDA- Deputy Director of Agriculture

FA- Facilitating Agencies

FAQ-Fair Average Quality

FPO- Farmers' Producer Organization

FRA- Forest Rights Act

ICAR- Indian Council for Agriculture Research

ICDS- Integrated Child Development Services

IIMR-Indian Institute of Millets Research

LT- Line Transplanting

LS- Line Sowing

MDM- Mid Day Meals

MSP- Minimum Support Price

NABARD- National Bank for Agriculture and Rural Development

NBPGR- National Bureau of Plant Genetic Resources

NCDS- Nabakrushna Choudhury centre for Development Studies

NFSM- National Food Security Mission

NGO- Non-Governmental Organization

NIN-National Institute of Nutrition

OLM- Odisha Livelihoods Mission

OMM- Odisha Millets Mission

OTELP- Odisha Tribal Empowerment and Livelihoods Programme

OUAT- Orissa University of Agriculture and Technology

PD- Project Director

PDS- Public Distribution System

PVT- Participatory Varietal Trial

SMI- System of Millet Intensification

SSTL- State Seed Testing Laboratory

TDCCOL- Tribal Development Co-Operation Corporation of Odisha Limited

UC- Utilization Certificate

VAW- Village Agriculture Worker

WASSAN- Watershed Support Services and Activities Network

Introduction

Understanding Millets, its decline and background of the programme

Millets are a group of small, grained cereal food crops which are highly nutritious and are grown under marginal/ low fertile soils with exceptionally low inputs. These crops largely contribute to food and nutritional security of the community. Most of the millet crops are native and are popularly known as Nutri-cereals as they provide essential nutrients required for the wellbeing. Millets are rain-fed crops and are grown in regions with low rainfall and thus resume greater importance for sustainable agriculture and food security.

Millets were the oldest foods known but their importance and cultivation reduced due to large scale cultivation of rice and wheat because of urbanization and industrialization. Despite their extraordinary qualities,, the area under millet production has been shrinking over the last five decades, rapidly, since the Green Revolution period. The emphasis on rice and wheat production for decades has steadily reduced the importance of millets. India dropped to the fifth position in global trade in millets, as its export - mostly to Nepal, UAE and Saudi Arabia - fell to \$26.73 million in 2020 from \$30.82 million in 2019.

The programme “Special Programme for promotion of Millets in Tribal Areas of Odisha”, was culminated from the state level consultation on the subject “Comprehensive revival of Millets securing nutrition and mitigating droughts in southern Odisha” held on 27th January 2016 at NCDS, Bhubaneswar organised by Planning and Convergence Department, Government of Odisha.



About the Programme:

The “Special Programme for Promotion of Millets in Tribal Areas of Odisha” is a flagship programme, popularly known as Odisha Millets Mission (OMM), launched by the Department of Agriculture and Farmers Empowerment, Govt. of Odisha. The broad aim of the programme is to revive millets, widely consumed in tribal belt and other parts of the state traditionally, in farm and plates, after observing a changing pattern in agronomic practices and consumption pattern owing to government schemes and programmes.

The intent to revive millets came from the environment sensitive approach that realizes millet as a climate resilient crop and has higher survival rate in rain fed areas. Comparatively higher nutrition value of the produce is also an added factor contributing to the movement. The programme intends to revive millets in rainfed farming systems and household consumption with specific objectives that include inclusion of millets in State Nutrition Programmes such as Integrated Child Development Scheme (ICDS), Mid-Day Meal (MDM), Integrated Tribal Development Agency (ITDA) supported Welfare Hostels and in Public Distribution System (PDS).



Objective of the Programme:

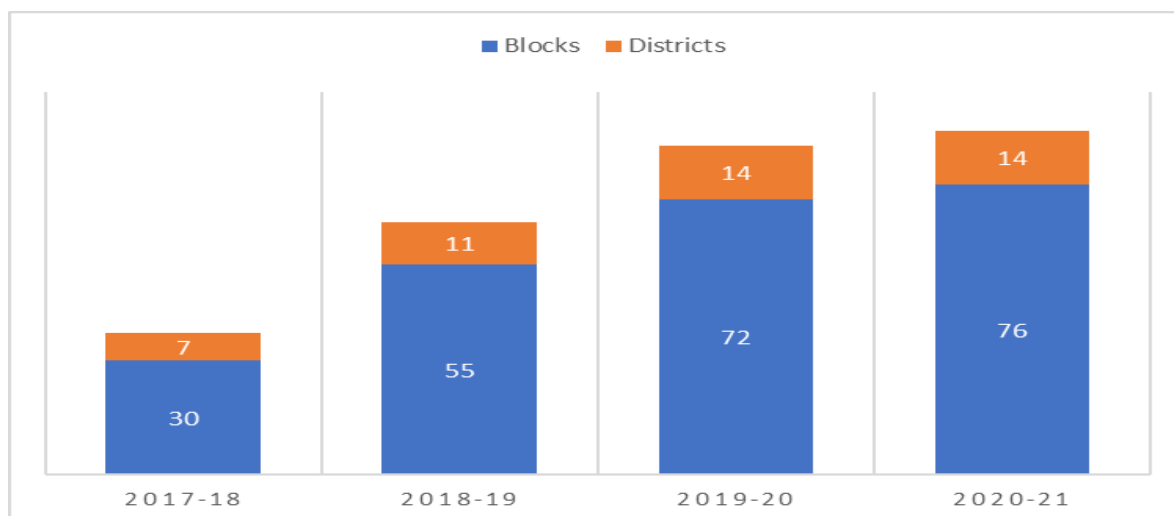


- 1 Increasing household consumption by setting up decentralized processing units at Panchayat and Block level
- 2 Improving productivity through adoption of improved agronomic practices
- 3 Increased availability of millet seeds through community managed/ community owned seed centres with focus on local varieties
- 4 Strengthening of farmer Cooperatives/ Farmer Producers Organizations (FPO) for better marketing of millets
- 5 Inclusion of Millets in State Nutrition Programmes and the PDS

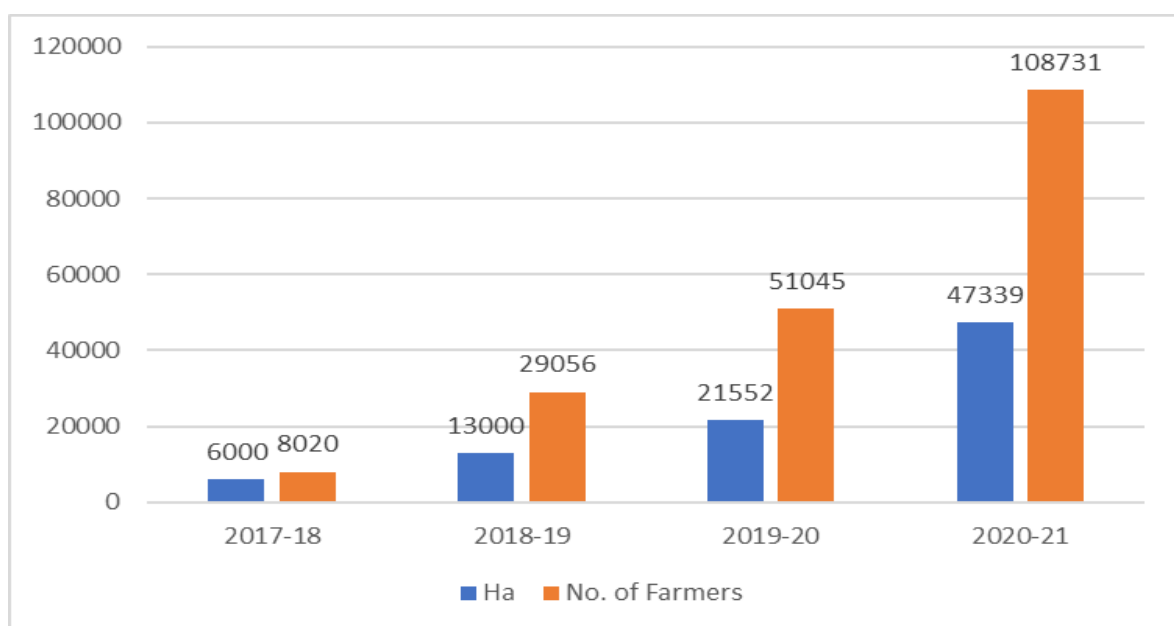
Programme Outreach:

The OMM programme was initially launched in the year 2017 in 30 blocks of the 7 tribal populated districts of southern Odisha. In the same year, it achieved 6000 ha of area coverage under improved agronomic practices of millet cultivation, covering 8030 farmers. In the following year, 2018-19 the programme was expanded to 55 blocks in 11 districts covering 13000 ha of area coverage and including 29056 farmers. Subsequently, the programme was expanded to 72 blocks in 14 districts of Odisha in the year 2019-20, covering 21552 ha and reaching out to 51045 farmers. The programme was further expanded to 76 blocks in 14 districts during the financial year 2020-21, covering 47339 ha and including 108731 farmers. During the reporting year, the programme was cumulatively implemented across 5845 villages of 1018 panchayats in 14 districts of Odisha.

Year wise expansion of OMM programme:



Year wise area coverage and inclusion of farmers:



Budget Allocation in FY 2020-21

The Department of Agriculture and Farmer Empowerment, Government of Odisha has allocated following budget for the programme for 5 years since inception.

Abstract of Approved Budget under Odisha Millets Mission for 65 Blocks of Odisha							
SL.	Particulars	Budget Provisions (Amount in Lakh)					
		For 5 Years	Year 1	Year 2	Year 3	Year 4	Year 5
1	Restoring and improving Household level consumption	7.85	1.57	3.23	2.73	0.32	0.00
2	Support to Enterprises on processing and value addition of millets	34.30	1.46	18.92	12.92	1.00	0.00
3	Improving productivity						
3.1	Establishing Community Managed Seed System	27.56	3.15	11.98	9.04	1.83	1.56
3.2	Improved agronomic practices	76.28	10.12	13.56	26.90	19.70	6.00
3.3	Support for Protective Irrigation to prevent crop failures during dry spells	35.75	7.18	15.55	10.63	2.39	0.00
	Subtotal "Improved Productivity"	139.59	20.45	41.09	46.57	23.92	7.56
4	Appropriate farm mechanisation through custom hiring centres	13.00	2.00	6.70	3.30	1.00	0.00
5	Block level community resource persons (CRP)	17.80	3.06	4.87	4.87	3.00	2.00
6	Promotion of millets in urban and small towns	12.50	3.50	6.90	1.10	1.00	0.00
7	Promotion and Strengthening of Community Based Organisations	14.00	1.20	9.20	1.20	1.20	1.20
	Grand Total of Program Costs and Capacity Building Costs	239.04	33.24	90.91	72.69	31.44	10.76
8	Program Facilitation costs for the NGO including travel & others	22.11	3.20	4.28	4.70	4.73	5.20
9	Program Secretariat: technical support, program Facilitation and M&E Costs including travel and others	13.39	1.84	2.63	2.85	2.91	3.16
10	Research Documentation & policy development Costs including travel and others (anchored by NCDS)	5.02	0.74	0.98	1.05	1.08	1.17

11	Capacity Building Costs - Program Secretariat & Research Secretariat	3.20	0.64	0.64	1.12	0.80	0.00
12	Centralised coordination meetings, Review Meetings and learning events	1.00	0.20	0.20	0.20	0.20	0.20
13	Budget for experiments & innovation with program secretariat	1.50	1.50	0.00	0.00	0.00	0.00
	Total Budget per Block in Lakhs	285.26	41.36	99.64	82.61	41.16	20.49
	Total 1st Batch 30 blocks (in Lakh)	8557.80	1240.80	2989.20	2478.30	1234.80	614.70
	Total 2nd Batch 25 blocks (in Lakh)	7035.75	1606.50	2336.00	1681.25	900.00	512.00
	Total 3rd Batch 10 blocks (in Lakh)	2582.90	123.90	995.50	594.50	474.10	394.90
14	PMU Cost (Additional HR and PMU/ DPMU establishment and admin expenses)	1508.02	287.00	295.00	295.00	308.02	322.99
15	Additional new components	289.00	52.00	63.00	58.00	58.00	58.00
	Grand Total (in Lakh)	19973.47	3310.20	6678.70	5107.05	2974.92	1902.59
	Grand Total (in Crore)	199.73	33.10	66.79	51.07	29.75	19.03

Abstract of Budget Components under DMF Keonjhar (7 blocks) and Sundargarh (4 Blocks) for 5 years:

SL	Particulars	Budget Provisions (Amount in Lakh)		
		For 5 Years Total for both district	Keonjhar DMF 2018-19 5yr Budget	Sundargarh DMF 2020-21 5yr Budget
1	Restoring and improving Household level consumption	13.74	7.85	5.89
2	Support to Enterprises on processing and value addition of millets	89.10	58.55	30.55
3	Improving productivity	185.90	110.45	185.90
4	Appropriate farm mechanisation through custom hiring centres	26.00	13.00	13.00
5	Block level community resource persons (CRP)	36.10	17.80	18.30

6	Promotion of millets in urban and small towns	16.50	8.50	8.0
7	Promotion and Strengthening of Community Based Organisations	25.00	11.00	14.00
8	Program Facilitation costs for the NGO including travel & others	69.87	33.10	36.77
9	Programme Secretariat - Facilitation, M&E Costs	26.94	12.77	14.17
10	Research Secretariat Costs	9.54	4.77	4.77
11	Capacity Building Costs- Program Secretariat & Research Secretariat in Rs. Lakhs	6.40	3.20	3.20
12	Centralised coordination meetings, Review Meetings and learning events in Rs. Lakhs	2.00	1.00	1.00
13	Budget for innovation	3.00	1.50	1.50
	Grand Total of Programme costs and Capacity Building costs in Rs. Lakhs per blocks	620.54	283.49	337.05
	Total for 7 Blocks in Keonjhar and 4 Blocks in Sundargarh (Rs. Lakhs)	2559.48	1211.28	1348.2
14	Millet Outlet in the District	30.00	20.00	10.00
15	Food festivals/Cooking Sessions/Training of AWCs	30.00	20.00	10.00
16	Start-ups/Urban Campaigns	30.00	25.00	5.00
17	Piloting new millet recipes in AWCs/MDMs/ST SC Hostels	30.00	10.00	20.00
18	Publications/Printing - Documentation materials / Video Documentation	35.00	25.00	10.00
19	IT system and maintenance & Mobile phones (40 mobiles phones)	37.00	22.00	15.00
20	Roadshows/Hoardings/Media events	55.00	50.00	5.00
21	Need based consultancy	70.00	50.00	20.00
22	Additional Budgets for innovation	50.00	50.00	0.00
23	DPMU Costs	89.72	45.47	44.25
	Total Programme Budget for the Programme period	3789.35	2301.9	1487.45
24	Additional Research Pilots	181.98	106.98	75.00
	Grand Total	3971.33	2408.88	1562.45

Abstract of Budget under OMM:

SL	Particulars	Amount in Crores
1	Programme Implementation Budget for 65 blocks in 13 districts	199.73
2	Programme Budget for Keonjhar and Sundargarh under DMF for 11 blocks	39.7
3	Programme Budget for Additional Components	3.3
4	TDCCOL for Procurement (State Procurement Agency):	300.62
5	ICDS (For Ragi Laddus to pre-school children):	11.45
6	PDS (For Ration Card holders):	0.9
	Total	555.7



Phase Wise Scale up Information in terms of Block and District:

District	Programme Blocks	2017-18	2018-19	2019-20	2020-21
Bargarh	5	—	—	5	—
Bolangir	4	—	4	—	—
Gajapati	4	4	—	—	—
Ganjam	4	—	4	—	—
Kalahandi	4	4	—	—	—
Kandhamal	7	4	3	—	—
Keonjhar	7	—	—	7	—
Koraput	10	7	3	—	—
Malkangiri	4	4	—	—	—
Mayurbhanj	3	—	3	—	—
Nabarangpur	5	—	—	5	—
Nuapada	3	3	—	—	—
Rayagada	8	4	4	—	—
Sundergarh	8	—	4	—	4
Total	76	30	25	17	4



1. Improved Agronomic Practices and the area coverage

One of the prime objectives of the Odisha Millets Mission programme is to improve the productivity of millets by adopting standard and improved agronomic practices such as System of Millets Intensification (SMI), Line transplanting (LT) and Line Sowing (LS). These improved agronomic practices have the potential to increase the crop yield, crop coverage area and ensure profitability of millet cultivation for the farmers.

SMI	LT	LS
System of Millet Intensification, is an improved package of practice for Millet intensification with less resource utilization and higher yield potentials	Line Transplanting, is an improved package of practice with less resource utilization and higher yield potentials ideal for all millet crops.	Line Sowing, is an improved package of practice with less resource utilization and higher yield potentials ideal for all millet crops and intercropping of pulses etc with millets

Under the Odisha Millets Mission, these improved practices have substantially improved the soil quality with efficient usage of water thereby promoting better crops and overall cropping system that is environment friendly. Farmers in the operational districts have reported several benefits of improved agronomic practices such as decreased input costs, significant increase in quality and quantity of the yield, reduced environmental pollution, reduced water usage barring its exploitative use and maintenance of the quality of soil that has resulted in higher crop productivity.



Seed Beds prepared in standard size



Marking using wooden marker for SMI planting



Transplanting under SMI method using rope marker



Weeding using cycle weeder



Preparation of Handi Khat (Organic Manure)



Harvesting Ragi produce

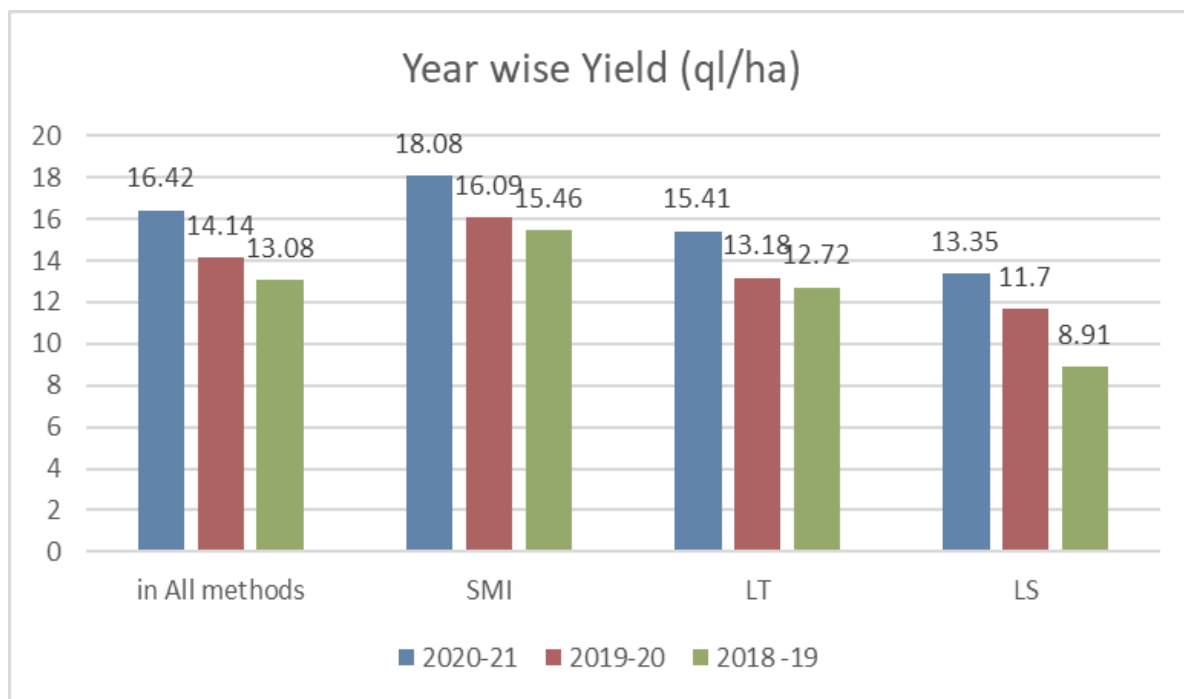
Table Showing Summary of area coverage under Improved Agronomic Practices in Kharif 2020-2021

Districts	Blocks	Farmer Covered	Method wise achievement (Area in Ha.)				
			SMI	LT	LS	Inter-Cropping	Total
Bargarh	5	8349	1315.9	224.5	711	4	2255.4
Bolangir	4	7698	2196.43	499.7	266	4	2966.13
Gajapati	4	6140	494.1	945.3	1402.21	53.4	2895.01
Ganjam	4	4847	1655.08	288.7	57.1	3	2003.88
Kalahandi	4	6923	1916.14	299.4	1491.93	2.5	3709.97
Kandhamal	7	11964	1220.9	893	2382	511.1	5007
Keonjhar	7	2236	768.57	58.4	252.7	18.6	1098.27
Koraput	10	18047	4598.5	1848.2	1098.26	170.6	7715.56
Malkangiri	4	8426	251.4	3865.9	304.8	14.7	4436.8
Mayurbhanj	3	3335	713.6	459.4	231.8	11.1	1415.9
Nabarangpur	5	5283	558.5	773.9	708.3	4.6	2045.3
Nuapada	3	3472	792.26	598.14	233.4	5.4	1629.2
Rayagada	8	10694	1993.2	2400.5	1637.8	31.7	6063.2
Sundargarh	8	6317	235.57	1625.53	661.36	122.6	2645.06
Total	81	103731	18710.15	14780.57	11438.66	957.3	45886.68

Table Showing Summary of area coverage under Improved Agronomic Practices in Rabi 2020-2021

Districts	Blocks	Farmers	Method wise achievement (Area in Ha.)				Total
			SMI	LT	LS	Inter-Cropping	
Bargarh	5	782	94.6	0.6	0	0	95.2
Bolangir	4	206	14.7	0	0	0	14.7
Gajapati	4	1169	46	57.2	12	0	115.2
Ganjam	4	710	162.18	93.68	0	0	255.86
Kandhamal	7	600	60.2	11	0	0	71.2
Keonjhar	7	400	35.1	0	2	0	37.1
Koraput	10	375	58	66.5	0	0	124.5
Mayurbhanj	3	275	33.6	3.4	0	0	37
Nabarangpur	5	323	38.6	31	19.3	0	88.9
Nuapada	3	820	164.8	85.5	149.6	0	399.9
Rayagada	8	841	187.88	68.02	0	0	255.9
Sundargarh	8	216	6.68	10.32	0	0	17
Total	81	6717	902.34	427.22	182.9	0	1512.46

Comparative Average Crop Cutting Analysis (All Crops):



Crop Cutting Analysis of Millets

SL	Crop	Methods	No. of CCE (2020-21)	2020-21	2019-20	2018-19
				(ql/ha)	(ql/ha)	(ql/ha)
1	SORGHUM	LS	39	20	10.19	0
2	BAJRA	LS	1	11.58	9.64	0
3	BROWNTOP	LS	1	4.4	0	0
4	KODO MILLET	LS	8	7.09	0	9.4
5	BARNYARD	LS	5	2.56	8.44	0
6	LITTLE MILLET	in All methods	66	15.18	0	14.26
7	Little Millet	LT	1	22.4	0	17.5
8	Little Millet	LS	63	14.63	10.88	14.15
9	Little Millet	BROADCAST	2	13.17	0	0
10	FOXTAIL	LS	14	10.56	7.35	0
11	RAGI	All methods	1194	16.42	14.14	13.08
12	RAGI	SMI	568	18.08	16.09	15.46
13	RAGI	LT	391	15.41	13.18	12.72
14	RAGI	LS	223	13.35	11.7	8.91
15	RAGI	BROADCAST	1	13.6	0	0
	ALL MILLETS	ALL METHODS	1329	16.32	10.42	0

2. Capacity Building Programmes

In the absence of best practices and technical know-how, farmers often use low-quality agricultural inputs. Lack of opportunities for capacity building programmes remains a major challenge for the effective design and implementation of sustainable agricultural programs. Under Odisha Millets Mission, the productivity enhancement business model provides farmers with access to low-cost techniques, quality inputs, and capacity building services. It is achieved through dissemination of farm information, training of farmers and extension functionaries, educating the farmers through field-based activities such as demonstration, field visits, field days, farm advisory services, exposure visits and capacity building of extension personnel, etc. The programme secretariat (WASSAN) conducted advanced level training programmes at state, districts, sub-district level for community resource persons (CRPs), progressive farmers, Facilitating Agencies (FAs) and FPO team and field functionaries from line departments.

Following are the CB activities budgeted and achieved at Block Level by FA/FPOs:

Sl.	Types of CB Programme	Up to 2019-20	During 2020-21	Cumulative Achievement	Farmers/ Households Covered
1	Residential & Non-Residential trainings (Agronomic Practices, Recipes, Value Addition, Seed etc)	1375	1273	2648	53500
2	Awareness Campaigns	347	422	769	615200
3	Block Level Convergence Workshops	65	36	101	2040
4	Field Days	436	275	711	35550
5	Community Food Festivals	374	156	530	212000
6	District/ State Level Events				
	Total	2597	2162	4759	918290

FPO as Block level procurement agency

Government of Odisha approved the procurement of Ragi through Tribal Development Cooperative Corporation of Odisha Limited (TDCCOL). In order to increase the outreach of ragi procurement initiative of Government of Odisha and as an attempt to promote farmers organisations in agriculture value chain development, FPOs supported under the Odisha Millets Mission were empanelled as procurement agencies for Ragi Procurement in addition to LAMPCS and PACS in selected blocks during the first phase of Odisha Millets Mission.

To empanel FPO as a block level procurement agency, first, a grading exercise is undertaken to identify potential FPO which could deliver their role. FPO are scored on a set of parameters to assess the Institutional and Financial health of the FPO. During the reporting period, only those blocks were chosen for the pilots where the surplus of Ragi available for procurement was sufficient for FPO to generate a net profit. Consent was also taken from FPO whether they would be interested to become the Ragi Procurement Agency.

The selection process was conducted by a district level committee headed by the District Collector with officers from the agriculture department, TDCCOL and Watershed Support Services and Activities Network (WASSAN).



Table indicating the empanelled FPOs for Ragi Procurement

Sl No	District	FPO Blocks	No. of Farmers Registered -2020-21	Final Procurement of Ragi (Achievement in Qntls)	No. of Farmers Sold in Mandi
1	Kalahandi	Lanjigarh	2889	4328	557
2		Narla	1265	1359.35	284
3		Bhawanipatna	1081	839.11	175
4		Th. Rampur	2861	4911.5	740
5	Malkangiri	Mathili	3331	6720.69	1232
6		Chitrakonda	3613	4753.85	1084
7	Rayagada	Chandrapur	1349	6645.81	897
8		Gunpur	1148	3400	355
9	Koraput	Nandpur	3004	10384.46	1293
10		Boipariguda	2936	15784.93	1515
11		Lamtaput	3407	10063.06	1059
12		Kundra	1338	3817	452
13	Kandhamal	Daringbadi	2117	838	742
14	Gajapati	Mohana	1960	2520.58	678
15		R. Udaygiri	1255	1725.68	322
16	Nuapada	Komna	1196	1900	503
			34750	79992.02	11888

Strengthening of FPOs:

Major emphasis has been given on organising farmers for ensuring forward and backward linkages enabling the supply of quality inputs to ensure a better collective bargaining power for the farmers. This is done through strengthening of Farmers Producer organisations under Odisha Millets Mission.

- During the reporting period, 26 numbers of Farmers Producer Organisations have been registered under the special programme of millets in the tribal areas.
- Out of these, 14 FPOs are in the pipeline for registration.
- Total 24108 members/shareholders are associated with these FPOs.
- 10 FPOs have been registered under e-NAM for marketing their surplus.
- 16 FPOs participated in the KMS-2020-21 for ragi procurement.
- 79992 quintals of ragi has been procured through FPOs.

3. Ragi Procurement at Minimum Support Price

Government of Odisha has approved the procurement of Ragi through Tribal Development Cooperative Corporation of Odisha Limited (TDCCOL). The TDCCOL procured ragi with the support of PACS/LAMPCS/FPO as per the FAQ specification laid down by Government of India and in accordance with the guidelines issued by the Agriculture and Farmers Empowerment department from time to time under the scheme. TDCCOL procured ragi from all the blocks under Odisha Millets Mission. The government of India has announced the minimum support price for Ragi to be Rs. 3295.00 only per quintal confirming to fair average quality norms for KMS 2020-2021.

During the KMS 2020-21, a total amount of 204000 quintals of ragi has been procured against the target of 200000. The following table shows detailed information of the procurement.

Sl. No.	District	Farmer	Produce (in Quintals)	Amount released to Farmer
1	Bargarh	680	3989.46	13145270.7
2	Bolangir	1320	7981.55	26508637.5
3	Gajapati	1428	7594.57	25024108.2
4	Ganjam	685	3565.82	11752671.9
5	Kalahandi	1281	14767.73	48659670.4
6	Kandhamal	1898	14388.78	47439334.2
7	Keonjhar	526	1129.94	3723152.3
8	Koraput	6271	71401.84	221665392
9	Malkangiri	4238	23237.35	76567068.3
10	Mayurbhanj	476	2073	6831688.25
11	Nabarangpur	659	4985.98	16428804.1
12	Nuapada	1373	7148.36	23553846.2
13	Rayagada	2633	34596.13	113934938
14	Sundargarh	1477	7019.92	23130636.4
	Total	24945	203880.43	658365218.45

4. Ragi distribution under PDS

The Government of Odisha initiated the procurement of millets from farmers and distributed through PDS in 2018-2019 which was one of the key commitments of the programme. Considering the nutrition benefits of millets, it has been decided to integrate locally grown millets as part of public food systems such as PDS. Ragi based entitlements were included in PDS in the year 2020-2021. In this year, 94,745 quintals ragi was targeted for distribution in 14 districts covering 50,60,460 households. A 1.5 kg Ragi per ration card in Ganjam, Mayurbhanj and Keonjhar and 2kg ragi per ration card in Bargarh, Bolangir, Gajapati, Kalahandi, Kandhamal, Koraput, Malkangiri, Nabarangpur, Nuapada, Rayagada and Sundergarh were distributed as substitute of rice. Till 31st March 2021, a sum of 3,474.24 Quintals of Ragi from the state pool were distributed among the eligible beneficiaries under the State Food Security Scheme (SFSS) for the month of January 2021.

The district wise allocation of Ragi under PDS is given below:

Sl	Name of District	Quantity of Ragi Allocated in Quintals	Kg of Ragi distributed in PDS	No. of Beneficiary
1	Bargarh	7284.98	2	364249
2	Bolangir	9052.58	2	452629
3	Gajapati	2891.66	2	144583
4	Ganjam	11516.46	1.5	767764
5	Kalahandi	8090.16	2	404508
6	Kandhamal	3618.86	2	180943
7	Keonjhar	6286.26	1.5	419084
8	Koraput	7435.62	2	371781
9	Malkangiri	3135.72	2	156786
10	Mayurbhanj	9175.6	1.5	611550
11	Nabarangpur	6372.32	2	318616
12	Nuapada	3436.78	2	171839
13	Rayagada	5134.04	2	256702
14	Sundargarh	8788.52	2	439426
	Total	92219.56		5060460

5. Inclusion of Ragi in State Nutrition Programmes

Ragi ladoos have been introduced as morning snacks for pre-school children in Supplementary Nutrition Programme (SNP) under ICDS in Keonjhar and Sundargarh districts with support of Women & Child Development and Mission Shakti with technical support from Odisha Millets Mission and financial support from District Mineral Foundation of the respective district.

The programme has been piloted in 335 AWCs of Keonjhar Sadar in 2020 and subsequently scaled up in 3254 AWCs across 13 blocks benefitting 86917 pre-school children in Keonjhar district. The provision includes 2 ragi ladoos per week per child in the district. In Sundargarh district it was piloted in Hemgiri block and universalised to all blocks covering 21 ICDS project locations, 62495 children from 3809 AWCs from all 17 blocks were benefited with provision of 4 Ladoos per week.

Local SHGs have been roped in for preparation of a pre-mix for the ragi ladoos. They have been trained on storage of ragi, preparation of ragi flour and pre-mix for the ladoos. Due to closure of Anganwadi Centres (AWCs) during the nationwide covid-19 lockdown, the Ladoo premix is being provided at the doorstep of the enrolled pre-school child. Mothers have been counselled to prepare the ladoos and serve the same to their children. The inclusion of Ragi Ladoo in ICDS programme also supports livelihood activity of 59 WSHGs involved as Ladoo mix preparation unit and cleaning unit in Keonjhar and Sundargarh.

The initiative provided an additional source of income to Women's SHGs, an assured price to farmers for ragi and boosted local production of ragi and other millets. This joint initiative shall potentially enhance the nutritional status of the pre-school children and the nutrition scenario of these districts.



6. Community Seed Centres

To ensure the accessibility of superior quality seeds of different varieties locally, community managed seed centres (CMSCs) were set up in each block under OMM programme. These CMSCs are managed by registered Farmer Producer Organisations (FPOs). Training programme were organised for FPOs on the process of storing/preserving quality seeds through using storage bins, tarpaulin sheets, weighing machines and moisture meters. Besides, FPOs are also supported with a working capital for acquiring seeds and overseeing the operational costs.

Role and responsibilities of FPOs at the cluster level in the village:

- Production: Procurement and distribution of subsidised seeds to selected farmers.
- Processing and procurement: post-harvest seed processing, packaging, storage, payment to the farmers and supply of seeds during Kharif (in May-June).
- Distribution: Taking indents, distribution of seeds for Kharif, payment of subsidy and related documentation.

Tarpaulins are used at the local level to collect seed. Storage bins and weighing machines are utilized during harvesting of seed production and seed multiplication plots by the Seed centres. Moisture meters are utilized to calculate moisture within the seed during procurement from the freshly harvested seed. It is additionally utilized in the procurement season during the sale at mandi.

Seed Multiplication

Seed is the crucial and basic input to increase crop yields. Quality seed ultimately increases the efficiency of the factor of crop multiplication. There is an acute need for the improvement of millets' productivity without disturbing the fabric of biodiversity in this region. In this regard, seed multiplication of Ragi was undertaken during Kharif, 2021. Agreements were made between FPOs of the concerned block and thewith selected farmers who came forward for seed multiplication. This agreement defined the mutually agreed terms and conditions of seed production and the agreeable price at which seed to be purchased along with quality and quantity parameters. Agricultural officials/workers at Block and Village level provided the needed guidance and support for this process. The seed multiplication plot is treated with organic inputs such as cow urine, FYM, Jeevamruta, Handikhat, Neemastra etc as per the guideline of organic farming along with a compulsory 3 times weeding done with spraying of Jeevamrutha. Guidance and support were given by BAO, AAO & VAWs.

Purpose:

- To ensure easy access and availability of quality seeds for the farmers under community managed seed centres (CMSS).
- To strengthen the FPOs/CBOs on quality seed production and sale

Status of ragi seed multiplication and selling by FPO:

Sl. No	District	Block	FA	FPO	Name of variety	Price offered to farmers (Rs/Kg)	Actual seed volume Procured (QTL)	Sold quantity (QTL)
1	Rayagada	Rayagada	OPDSC	Arati Farmers Producer Company LTD	Karkati	37	4	4
2		Rayagada	OPDSC	Arati Farmers Producer Company LTD	Telangan a	37	2	2
3		Gunpur	ASHA	Gunpur Farmers Producer Company LTD.	Bada Mandia	35	20.25	20.25
4	Kalahandi	Narla	Sahabagi Vikas Abhiyan	Maa Manikeswari Farmers Producer Company LTD.	Lalsaru	33	21	15
5	Nuapada	Sinapali	Sahabagi Vikas Abhiyan	Udanti FARMERS PRODUCER COMPANY LTD	Bada Mandia	35	5	5
6	Koraput	Kundura	MSSRF	Bamandei Producer Company LTD	Bati Mandia	35	8	3
7		Boipariguda	CYSD	Sabujima Farmers Producer Company LTD.	Kala Kerenga	35	23.5	23.5

8		Nandpur	Pragati	JAI SHREE FARMERS PRODUCER COMPANY LTD	Bada Mandia	34	20	20	
9		Semiliguda	Dhan Foundation	Deomal Kalanjiam Maha Sangha	Kerenga	35	15	15	
Total								118.75	

Purpose of Seed Purification Programme under OMM:

- Mainstreaming the ragi landraces into public domain
- Ascertaining the performance of selected varieties of ragi landraces under different multi-locational agro-climatic zones.

Nursery and transplantation was done in panicle to row separately for mother and tillers of the bulk seeds of Mami, Kalia, Bharati and Bati varieties in Koraput, Nayagarh, Puri and Mayurbhanj districts to study the phenotypical variability. For further purification, true plant types of 4 varieties were planted in Dandamukundpur village of Pipili block in Puri district. At the flowering stage, experts visited the trial plots and shared their technical inputs.

Multi-locational Trial in Ragi

Decision was taken to conduct confirmation trial of selected Ragi landraces in their place of origin of Malkangiri and Koraput districts along with its parent and other promising varieties of State, National and Local check. Chitrakonda block of Malkangiri and Kundra and Boipariguda blocks of Koraput were selected based on the availability of water resources and crop security. Total 17 varieties (4 purified ragi varieties + parent varieties of 4 purified + 2 local check + 2 state check + 5 National Check) were grown in Randomised Block Designed (RBD) method with three replications. For data recording AICRPSM data sheets have been used.

Results of multi-locational trial in ragi: Rabi

- From the preliminary data of the Malkanigiri trial, all the check varieties are performing better than traditional varieties.
- Purified BATI variety can easily be differentiated from traditional BATI. But in case of MAMI and BHARATIBHADI there were no much differentiation observed
- Janha, Dasarakhai and Pankakhai are not competing with others due to early mature.
- Among the check variety GPU – 67 performed well with more uniformity
- The 4 selected varieties are late in duration, so the seed setting was poor.
- The vegetative and reproductive growth of crops at Malkangiri was better than other two places of Koraput due to proper water management.

Suggestions:

- Exploration information of MLT varieties
- Consolidation of data of MLT for 3 years (Visual, Quantitative data)
- Nutritional profiling of MLT varieties (EUREKA Analytical Services Private Ltd. , HaryanaCentral University, Koraput and IIMR, Hyderabad)
- MLT varieties yield data cultivated by farmers (both traditional & check) should be compile from OMM tracking sheet & CCE
- Discussion with SSTL for seed testing of MLT varieties
- DNA finger printing (if required).

7. Custom hiring centres

Agriculture is experiencing a slow move from reliance on human control and animal power mechanised control. Utilization of mechanised control encompasses a direct bearing on the efficiency in crop processing in addition to reduction in drudgery thereby encouraging convenience in agrarian operations. To facilitate farmers adopting agronomic practices, drudgery reduction tools and farm equipment and make available to small and marginal growers covering all production cluster, Custom Hiring Centres (CHCs) are being promoted under the special program for promotion of millets in tribal areas of Odisha.

FPOs are backed with costs to be able to lease a workspace and agricultural equipment to be used on sharing basis. These centres are managed by Farmer Producer Organisations and WSHGs who maintain inventory and records for day-to-day operations.

Objectives:

- To ensure availability of various farm machineries /equipment' to small and marginal farmers
- To offset the adverse economies of scale due to high cost of individual ownership
- To improve mechanization in places with low farm power availability
- To provide hiring services for various agricultural machinery/implements applied for different operations.
- To expand mechanized activities during cropping seasons in large areas especially in small and marginal holdings.
- To provide hiring services for various high value crop specific machines applied for different operations.



8. Bio-input centre

These are promoted to increase the organic input manure production and to promote its use at the block and GP level. The intention is to reduce the use of chemical fertilizers and pesticides in the nutrient and pest management in millet cultivation and relatively reduce the input costs in agriculture by promoting the use of locally available raw materials for preparation of organic inputs. These centres are promoted through Farmer Producer Organizations in 10 blocks of the 7 districts. Initially these centres focused on producing and marketing of 5 products - Jeevamrutha, Jibamruta, Haandikhata, Nimastra, Agniashtra, and Bijamruta. FPOs handled all the campaigns on Bio Inputs, to create awareness among the farmers at the block level. Village-level gatherings boosted the collection of raw materials in their territories.

Primarily 5 items were produced and sold i.e.

Bijamruta

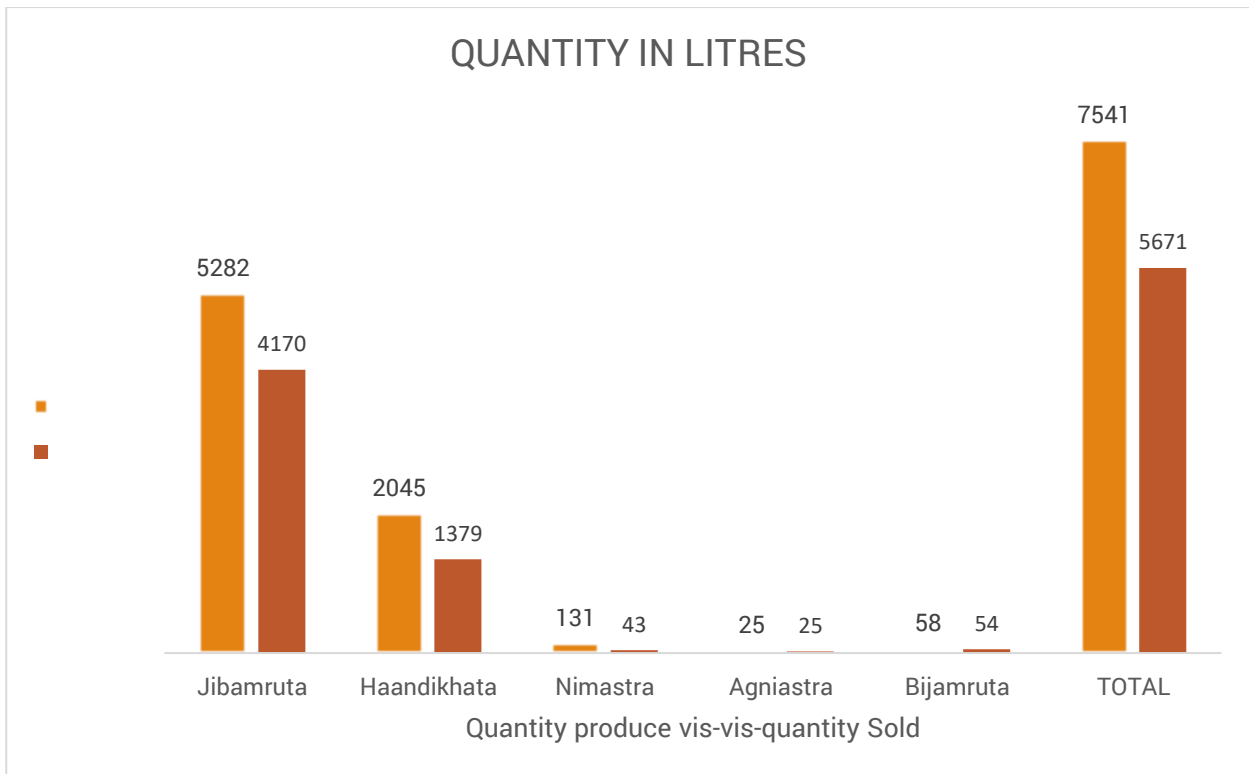
Jibamruta

Haandikhata

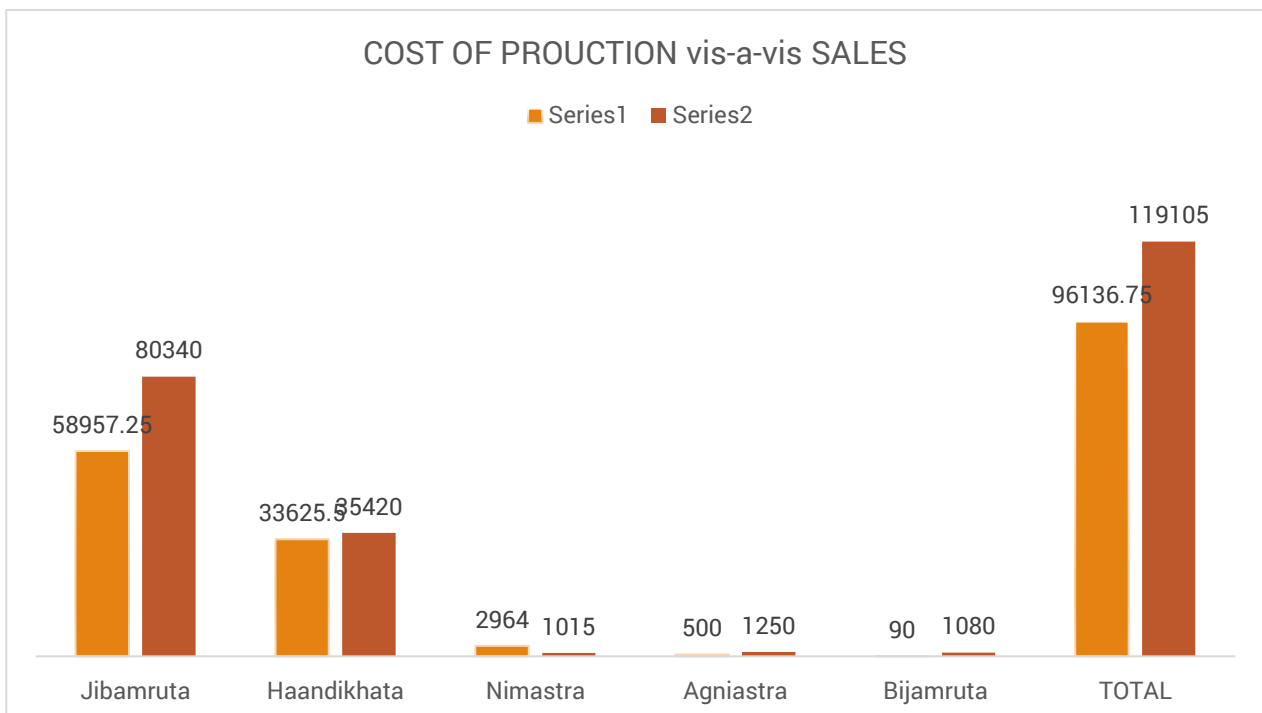
Nimastra

Agneastra

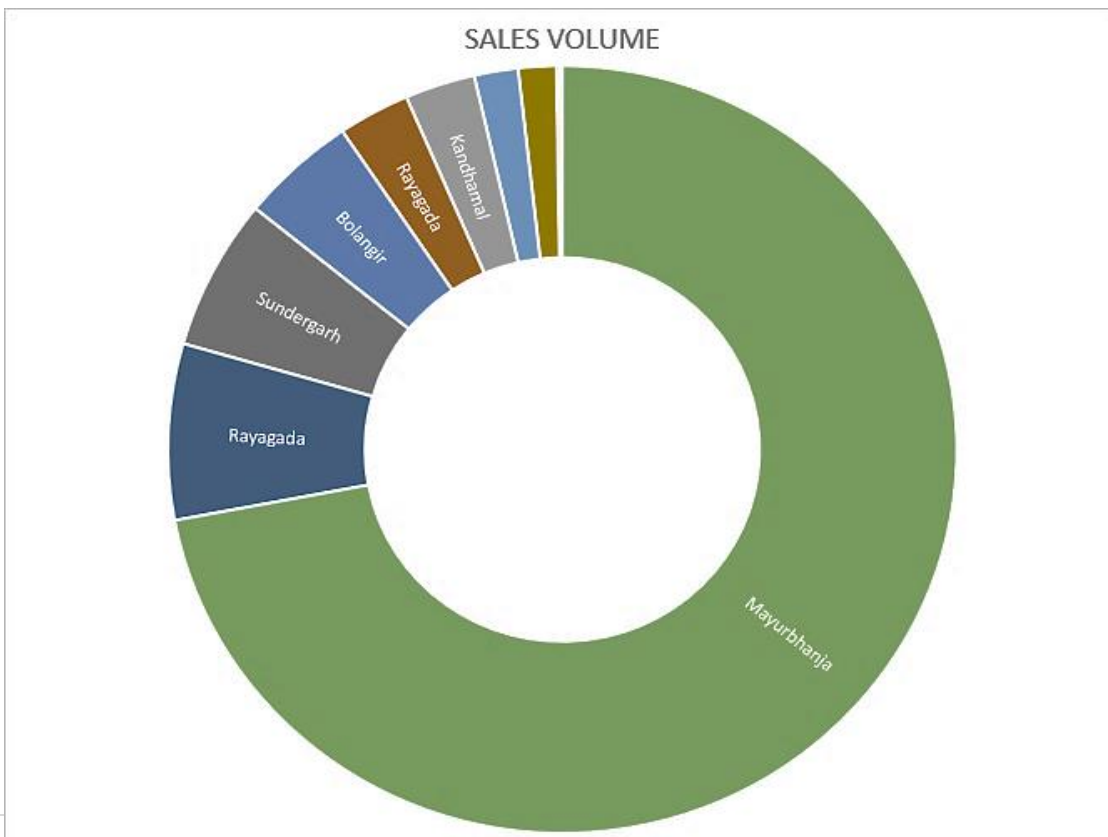
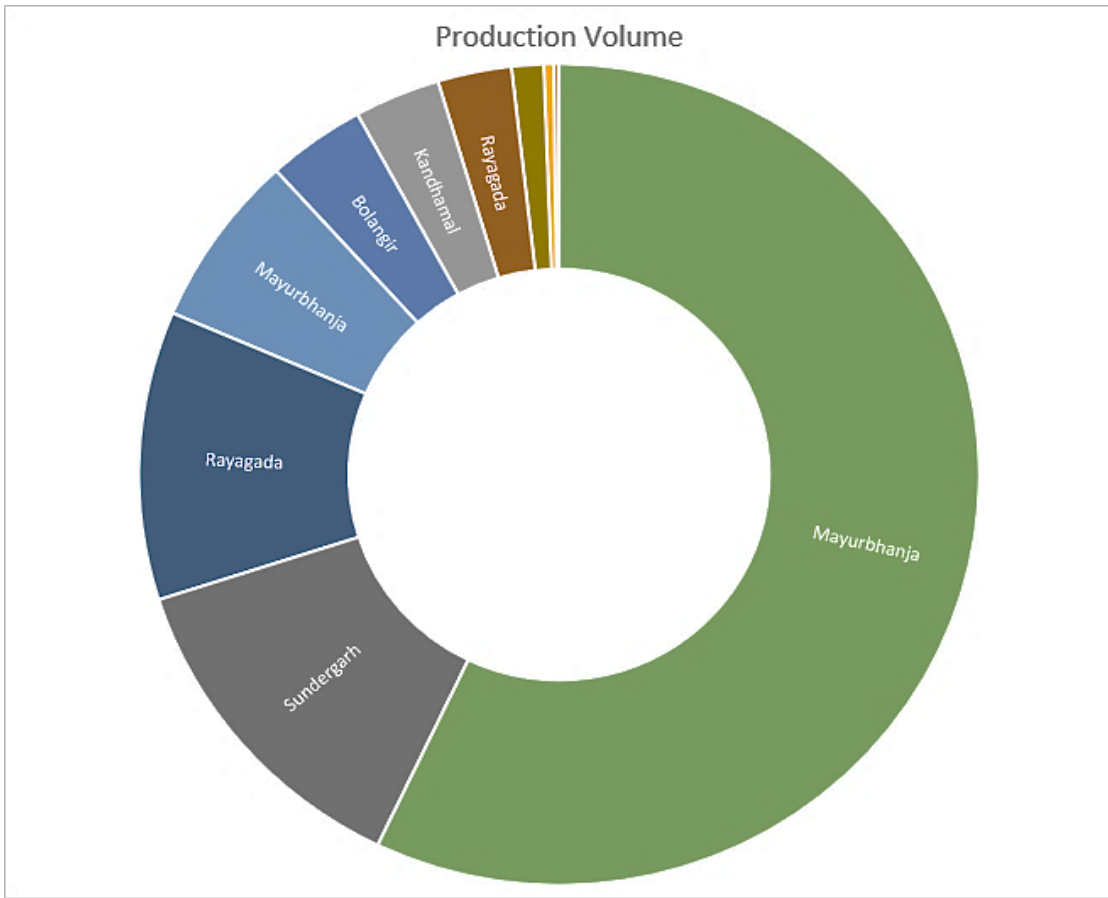




A total of 7541 litres of bio-input were produced across the districts in the piloting phase, and 5671 litres were being sold in the locality.



The total cost incurred for the production was Rs. 96136.75 and the revenue earned was Rs.119105.



9. Millet shakti tiffin centres



Millet tiffin centres were launched to create a demand for millet recipes and ensure access to diet diversity that is locally acceptable and highly nutritious. The WSHGs entirely manage these centres and prepare a range of millet-based hot cooked items and ready to cook products. It is designed to promote WSHGs as entrepreneurs by providing them financial support and making millets-based value-added products as a profitable business and to create a brand of millets/value added products. Following food items are available in Millet Tiffin Centre, Idli, samosa Chana, Chakuli, Little Millet Kheer, Finger millet pakoda, Ladoo, Vada and Aloo curry.

Financial support: The WSHG contribute the cost of minor construction material, printing of flex and framing, fascia, etc. at the location of the tiffin centre in case of stationary Kiosk and for renovation/purchase/decoration in case of a Movable Kiosk up to Rs. 20,000 and contribute Rs. 10,000 as start-up working capital. A one-time support of Rs. 30,000 per unit is provided by the Odisha Millets Mission. This fund is utilized by the WSHG for purchasing brand new Cooking and Serving vessels, Gas Stove & Cylinder, and lighting equipment.

Expenditure and income:

The price per plate ranges from 20 to 30 rupees and the price per piece for some items range from 10 to 20 rupees. The major expenses were incurred towards buying groceries, vegetables, and transportation. Per month average income earned by the WSHGs ranges between Rs.10000-15000.

Establishment of Millet Tiffin Centres:

In the reporting period, 19 millet tiffin centres were established in Bolangir, Ganjam, Mayurbhanj, Malkangiri, and Sundargarh districts. Out of these, only 2 tiffin centres are managed by FPOs, while the remaining have been managed by WSHGs.

Sl. No.	District	Block	Name of Managing Unit	Date of Establishment	
1	Bolangir	Khaprakhol	Maa Bhagabati WSHG	01.01.2021	
2			Premamayi Shakti SHG	22.10.2020	
3			Jayshree WSHG	22.10.2020	
4			Maa Laxmi WSHG	26.01.2020	
5	Ganjam	Dharakot	Dharakote Farmers Producer Company Ltd	15.04.2021	
6	Mayurbhanj	Bangiriposi	Binodini WSHGs	30.09.2020	
7			Baba Simleswar WSHG	30.09.2020	
8			Maa Sitala WSHG	25.03.2021	
9			Maa Tareni WSHG	25.03.2021	
10		Jashipur	Marry WSHG	12.12.2020	
11			Sunamandir WSHG	12.12.2020	
12			Nijhari Badam SHG	12.12.2020	
13			Jashipur Farmers Producer Company Ltd.	01.10.2020	
14		Bisoi	Shiva Shakti SHG	09.10.2020	
15			Maa Laxmi SHG	27.11.2020	
16			Laxminarayan SHG	09.10.2020	
17			Matrushakti SHG	25.03.2020	
18		Sundargarh	Nuagaon	Kuni WSHG	17.12.2020
19		Malkangiri	Malkangiri	Maa Santoshi SHG	02.10.2020

10. Millet on wheels



"Millets on Wheels", a millets-based food truck was inaugurated on 13.01.2021 at Collectorate campus, Baripada by Collector & District Magistrate, Mayurbhanj, as part of the Odisha Millets Mission. The food truck is managed by Jashipur Farmers Producer Company Ltd. in Jashipur block. Locally preferred hot cooked millet recipes like chakuli bara, idli, jilapi, and dry snacks like biscuits, namkeen, etc are available. Clean millets and dry products are supplied by different WSHGs supported by Mission Shakti. This is expected to generate a buzz and increase millet consumption in urban pockets as well as provide livelihoods to women through millet based entrepreneurship.

Financial support: Odisha Millets Mission has supported Rs. 2,00,000 to Jashipur Farmers Producer Company Ltd for vehicle designing and Rs. 2,00,000 for equipment and working capital. As a self-contribution, the Farmers Company Ltd invested Rs.90,000 for the vehicle.

Manpower and supply: The Millets on Wheels is operated by 1 driver-cum-manager and 1 cook. FPO engages additional 1 person in special occasions or mega events. The unit does weekly basis stock maintenance of all raw materials. The supply of items is supported by WSHGs through Jashipur Farmers Producer Company Ltd. The target for sale is Rs. 3000/- per day.

Total sale: The total sale reported in January and February in 2021 Rs. 14,400 and Rs. 12,600 respectively. In March, the Farmers Company participated in the Krushi Mela held at Bhubaneswar and sold items amounting Rs. 41,200.

11. Promotion of household level consumption and value



Cooking competitions were promoted at neighbourhood level to mark a sense of cultural importance and celebration by indulging in the activity of utilisation and consumption of millets. The affair also included food festivals and campaigns. Promotion of ready-to-eat foods with millets such as ladoos, murukku, pastry etc. including other innovative new dishes also came to limelight through neighbourhood enterprises. Besides all of this, there were awareness building programs held on wholesome nutritional values of millets to women and convergence workshops with locale/ block level authorities for incorporation of millet in several supplementary sustenance programs by Govt. such as ICDS.

12. Partnerships and collaboration

Research/Technical/Knowledge Partners

- Indian Institute of Millets Research
- Central Food Technological Research Institute
- University of Cambridge
- World Food Programme

Multi department convergence

- Mission Shakti
- Odisha PVTG Empowerment and Livelihoods Improvement Programme
- Food and Agriculture Organisation
- National Rainfed Area Authority

List of Facilitating Agencies district wise:

Sl. No.	Districts	Blocks	Name of FAs
1	Rayagada	Gunpur	ASHA
		Guddari	Jagarana
		Kalyansinghpur	NIRMAN
		Bissamcuttack	OPDSC
2	Nuapada	Koman	CPSW
		Boden	Pallivikas
		Sinapali	SVA
3	Nabarangpur	Jharigam	Harsha Trust
		Kosagumda	RCDC
		Nabaranpur	Govindalaya
		Papdahandi	DOST
		Umerkote	SAHARA
4	Koraput	Boipariguda	CYSD
		Lakhimpur	CYSD
		Dasmantpur	Dhan Foundation

		Semiliguda	Dhan Foundation
		Boriguma	Harsha Trust
		Koraput	KFA
		Pottangi	LAVS
		Kundura	MSSRF
		Nandpur	Pragati
		Lamtaput	Pradan
5	Malkangiri	Khairput	Madhyam Foundation
		Korkunda	TSRD
		Chitrakonda	SOMKS
		Mathili	Parivartan
6	Mayurbhanj	Jashipur	CREFTDA
		Bangiriposi	Gram Swaraj
		Bisoi	Gram Swaraj
7	Kandhamal	Phiringia	Aragamee
		Daringbadi	Jagruti
		Kotagarh	NIRMAN
		Tumudibandh	NIRMAN
		Baliguda	SHANTI MAITREE
		K.Nuagaon	KZVS
		Raikia	SWATI
8	Ganjam	Dharakote	SACAL
		Patrapur	VIEWS
		POLOSARA	INDIA
		Sorada	PROGREESS
9	Gajapati	Gumma	CCD
		Mohana	SACAL
		R. Udayagiri	Surakshya

		G. Rayagada	SWWS
10	Bolangir	Muribahal	ASA
		Bangomunda	Lokashakti
		Turekela	Vikalpa
		Khaprakol	YCDA
11	Bargarh	Bijepur	Mahashakti Foundation
		Gaisilet	Debadutta Club
		Jharbandh	Satarka
		Padampur	Triranga Yuvak Sangha
		Paikmal	Ahinsa Club

13. Financial achievement

Sl. No.	Scheme/Activity	Year 2020-21			
		PHY		Financial (Rs. In Crore)	
		Target	Achieved	Target	Achieved
1	Restoring and improving Household level consumption.	785	770	5.65	5.65
2	Incentive for improved package of practices	56118 Ha.	47399.14 Ha.	13.48	13.48
3	Support to Enterprises on processing and value addition of millets	488	425	4.5	2.6
4	Promotion and Strengthening of Community Based Organizations (FPO)	76	76	1.7	1.7
S	Ragi Procurement and distribution	200000 Qntl.	203843 Qntl.	83.22	78.76
6	Miscellaneous, administrative Cost and others activity			12.96	1277
Grand Total				121.5	114.3



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