BASELINE SURVEY

ANGUL DISTRICT-2021-22, Phase- V

Special Programme for Promotion of Millets in Tribal-cum-Mines Areas of Angul, Odisha or Odisha Millets Mission (OMM)

Nabakrushna Choudhury Centre for Development Studies, Bhubaneswar, Odisha
(An ICSSR Institute in Collaboration with Government of Odisha)

2022

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STUDY TEAM

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FOREWORD

The "Special Programme for Promotion of Millets in Tribal Areas of Odisha" or Odisha Millets Mission (OMM) originated at a consultation meeting held on 27 January 2016 at Nabakrushna Choudhury Centre for Development Studies (NCDS) under the Chairmanship of the then Development Commissioner-cum-Additional Chief Secretary (DC-cum-ACS), Government of Odisha, and Chairperson, NCDS, Mr. R. Balakrishnan (currently, Chief Advisor, Government of Odisha). The consultation meeting had representatives from different line departments of the Government of Odisha, members of different civil society groups from across the country and from within the state [which, among others, included the Alliance for Sustainable and Holistic Agriculture (ASHA), the Millets Network of India (MINI), the Revitalizing Rainfed Agriculture (RRA) Network of India], that brought in their experiences, and the academia that included among others the then Chairperson of Karnataka Agricultural Price Commission, Dr. T. Prakash. As per the decision taken at the consultation meeting, NCDS submitted a proposal to the Government of Odisha on the revival of millets. Following the decisions of the meeting, there was an announcement in the budget speech of 18 March 2016 conveying that the Government of Odisha intends to revive millets. This led to a series of interactions and a Memorandum of Understanding (MoU) was signed on 27 February 2017 between the Directorate of Agriculture and Food Production (DAFP) as the state-level nodal agency that would monitor and implement the programme, NCDS as the state secretariat that would also anchor the research secretariat, and Watershed Support Services and Activities Network (WASSAN) that would anchor the Programme Secretariat as part of the state secretariat.

In 2017-18, the budget was apportioned for 30 selected blocks, Phase I for five years. In principle, the decision was taken to extend the programme to another 35 blocks from 2018-19 to 2023-2024 implemented under DAFP funding support, Government of Odisha. Out of 35 blocks in Phase II, 25 blocks of Bolangir, Kandhamal, Koraput, Mayurbhanj, Rayagada and Sundargarh were implemented in the year in 2018-19 and another 10 blocks of Bargarh and Nabarangpur were implemented during the year 2019-2020.

A memorandum of agreement was signed on 29th January 2021 among District Mineral Foundation (DMF), Angul, Nabakrushna Choudhury Centre for Development Studies

(NCDS), Watershed Support Services and Activities Network (WASSAN) and Agriculture Technology Management Agency (ATMA) for extension of Odisha Millets Mission Programmes, OMM under DMF Sundargarh for a minimum period of five years from 2020 – 2025, and an additional 5 blocks under DMF, Sundargarh in Kharif 2021, the Phase V blocks, i.e. Angul, Athmallik, Chhendipada, Kishorenagar and Pallahara blocks.

The objectives were to promote millets in Tribal-cum-Mining areas of the Districts; to increase nutritional security and improve tribal livelihoods by increasing household consumption by about 25%; improving production and productivity of millets to make them profitable; by promoting millet processing enterprises at Panchayat/block level for value-added markets, developing millet enterprises through establishing market linkages to rural/urban markets focusing on women enterprises and inclusion of millets in State nutritional programmes and Public Distribution System (PDS).

The baseline study report of Angul is prepared by the team of Researchers of NCDS under the guidance of Dr. C.R. Das Senior Research Officer and with the help of Miss. Subhashree Lenka and Mr. Pratap Kumar Rout. I compliment all the members for their efforts.

Director, NCDS

ACKNOWLEDGEMENTS

The Baseline Survey of the Angul district is an outcome of dedicated teamwork. Preparation of this report required concerted efforts of several individuals and institutions. First and foremost, we would like to express our sincere gratitude to the farmers, farmers' representatives/ associations, senior officers from the state Government particularly to Mr. Suresh Kumar Basistha (Principal of Agriculture), Dr. M. Muthu Kumar, IAS, Director, Ms. Priyanka Mohanty (Livelihood Expert, DMF), Mr. Debraj Mohanty, CDAO, Ms. Priyanka Priyadarshini (Scheme Officer of Agriculture department), DAFP, Shri H. Mahant, Joint Director, Mrs. Kalpana Pradhan, Scheme officer, OMM, Dr. Chita Ranjan Das, Sr. Research Officer, NCDS and Dr. Biswabas Patra, Research Officer, NCDS for their valuable guidance and constructive suggestion helped us to complete this report.

Subsequently, we would like to express thanks to the Coordinator of Angul district Mr. Harihar Pradhan, Mr. Rashmi Ranjan Sahu (Block coordinators of Angul block) Ms. Kalpaniaka Tripathy and all team members of Foundation for Ecological Security (FES); Ms. Shradhanjali Sahoo (Coordinator, Pallalhara block), Mr. Santosh Kumar Pradhan (Assistant block coordinator) and all team members of Joint Endeavour For Emancipation Training and Action for Women (JEETA); Mr. Santosh Kumar Behera (Coordinator, Chhendipada block), Mr. Manas Ranjan Pradhan (Additional block coordinator) and all team members of Youth Council for Development Alternatives (YCDA); Mr. Ranjit Kumar Lenka (coordinator Athmallik block), Mr. Debilal Bhuyan (Additional block coordinator) and all team members of VIRD organisation; Mr. Debabrata Mishra (Coordinator Kishorenagar block), Mr. Chandan Biswal (assistant block coordinator) and all team members of PRABHAT organisation.

We are thankful and express our gratitude to Sri Manish Agarwal, IAS, Former Director NCDS, Smt. Niyati Pattnaik, Director NCDS, Shri Prabhat Kumar Kujur, OFS (SB-I), Secretary, NCDS, Ms. Sumati Jani (Odisha Finance Service, OFS-1 (JB), former Secretary, Mr. Niranjan Mohapatra, Librarian, Ms. S. M. Pani, Computer Programmer, Mr. D.B. Sahoo, P.A. to Director, P.K. Mishra, Senior Assistant, Mr. P.K. Mohanty, Junior Accountant, Mr. N. K. Mishra, Stenographer and Mr. P. K. Mallia, Mr. Ramachandra Tosh (Regional Co-ordinator of WASSAN), District Co-ordinator of WASSAN, All CRPs, Nitin Kumar Hota (Research Assistant, OMM). Bikash Kumar Pradhan (Research Assistant, IF), Computer literate Typist, Mr. Sisir Ranjan Swain, Accounts Assistant, Mr. S. B. Sahoo, Xerox Operator for their support, help and cooperation.

Miss. Subhashree Lenka
Mr. Pratap Kumar Rout

EXECUTIVE SUMMARY

1. **Study Area**

1.1. Angul is one of the eight districts where the "Special Programme for Promotion of Millets in Tribal and Mines Areas of Angul, Odisha (hereafter, Odisha Millets Mission, OMM)" was started in *Kharif* 2020 in five blocks of the district namely, Angul, Pallahara, Chhendipada, Athmallik and, Kishorenagar.

1.2. 400 households (HHs) were covered under the baseline survey in Kharif 2020 under OMM constituting80 HHs from each block surveyed. In addition, there were some HHs, who were not cultivating millets during the period 2020-2021.

2. **Status of Agricultural Activities**

2.1. The surveyed five blocks occupy 48.98 percent of the total geographical areas of the district. Agricultural labourers constitute 28 percent of the total workers in the district. The net area sown of this district is 105156 ha.

3. **Socio-Economic Profile**

3.1. From the total surveyed HHs, 32.4 percent HHs are engaged in agriculture activities, 0.65 per cent HHs in Govt. services, 2.53 per cent HHs in business and, 2.34 per cent HHs in private services such as mining work, truck driver, and wage work. Agriculture is the main occupation of all blocks.

4. **Production**

4.1. Production of millets constitutes a minuscule of total crop production in the district. As per the findings of this report, the production of millets is mostly for household consumption. Out of 400 HHs, only 38 HHs (9.5 per cent) in surveyed blocks cultivated ragi during the baseline survey. The productivity of ragi is ranging from 1.47qtls to 2.43 qtls per acre and 1.05 to1.83 qtls per HH. Other millets are conspicuously absent. Besides paddy the main crop, other crops grown in the locality includes maize, green gram, sugar cane, ground nut and mustard.

5. **Consumption**

5.1. Consumption of millets among the HHs in all blocks is highest in breakfast i.e. 34.22 percent, 28.82 percent in lunch and 13.63 percent in dinner. Additionally, 43.5 percent of HHs are consuming millet in the summer season and 16 percentage are during the winter season.

5.2. These are consumed in all meal times but relatively more in breakfast and lunch in the form of jau, cake,torani and handia.

6. Processing and Marketing

6.1. The distribution of surveyed HHs by the method of processing (Dehusking and Grinding) indicates that 81.57% process manually, 13.16 use machines and, 2.63% process by both. There are 2.63 % HHs who has not spelt out any processing method.

6.2. In terms of selling millets by HHs surveyed, 21.43% HHs sold Millets to middlemen, 28.57% sold Millets to Local Businessmen and, 50.0 % sold Millets to traders in the Weekly Hat / Local market. The study found none of the HHs sold Millet directly to mill owners & money lenders due to low production.

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ABBREVIATIONS

AAO	Assistant Agriculture Officer
ACS	Additional Chief Secretary
APL	Above Poverty Line
ASHA	Alliance for Sustainable and Holistic Agriculture
ATMA	Agricultural Technology Management Agency
BPL	Below Poverty Line
DAFE	Department of Agriculture and Farmers' Empowerment
DAFP	Directorate of Agriculture and Food Production
DC	Development Commissioner
DDA	Deputy Director Agriculture
FGD	Focused Group Discussion
HH	Household
ha	Hectare
ac	Acre
IAS	Indian Administrative Service
JDA	Joint Director Agriculture
km	Kilometre
MoU	Memorandum of Understanding
MINI	Millets Network of India
NCDS	Nabakrushna Choudhury Centre for Development Studies
OFS	Odisha Finance Service
OMM	Odisha Millets Mission
OSG	Other Social Groups
PD	Project Director
QTLs	Quintals
RRA	Revitalizing Rainfed Agriculture
SC	Scheduled Caste
SHG	Self-help Group
ST	Scheduled Tribe
WASSAN	Watershed Support Service and Activities Network

1. INTRODUCTION

1.1 Background

Angul district is one of the thirty districts of Odisha in eastern India. The District of Angul is situated at the heart of Odisha. The locational advantage and abundant stock of manpower and raw materials have played an important role in the industrial development of the district. The important PSUs of the district are the NALCO, NTPC & MCL etc. Besides various kinds of handicraft work like dhocra casting, bell metals, textile products have been developed by the skilled workers and artisans of the district. To revive and improve cultivation, the District Mineral Foundation (DMF) has taken up many initiatives.

One such initiative is the "Special Programme for Promotion of Millets in Tribal-cum-Mining Areas of Angul, Odisha {hereafter, Odisha Millets Mission, (OMM)} " which was started in Kharif 2021-2022 in Angul with five (05) blocks namely Angul, Chhendipada, Kishorenagar, Athamallik and Pallahara. Millets are small-seeded grains, which are now considered nutri-cereals. This programme intends to revive millets in rainfed farming systems and household consumption with specific objectives including (I) inclusion of millets in State Nutrition Programme such as ICDS, MDM, ITDA, Welfare Hostels and PDS (II) improving productivity through improved agronomic practices and organic inputs (III) strengthening of farmer cooperatives/ Farmer producers Organizations for better marketing of millets. Some of the millets cultivated in Angul at the time of implementing OMM are *ragi* or finger millet (*Eleusinecoracana*), *gurji* or *suan* or little millet (*Panicumsumatrense*), and *kodo* millet (*Paspalumsetaceum*) Sorghum or Gangai (Sorghum Bicolour).

OMM has a novel organisational architecture with the joint partnership of the Government of Odisha with the involvement of functionaries in the concerned departments at the state and the district levels, the State Secretariat comprising the Programme Secretariat and the Research Secretariat, and the Non-Governmental Organisations as facilitating agencies at the Block level Under OMM, which focused has been given to production (including the agronomical package of practices to be adopted by the farmer HHs), consumption, processing, and marketing of millets.

This baseline survey is an attempt to provide necessary information on some aspects of the production, consumption and marketing of millets before the implementation of the

programme. Before elucidating the details from the baseline survey, we now provide some information on the district profile of Angul.

1.2 District Profile

Angul district came into existence as a separate district consequent upon the reorganization of districts in Orissa on 1st April 1993, clothed with lush green forests. The district is rich in wildlife. The river Mahanadi passes through the district forming a 22 km long narrow gorge, one of the mistiest gorges in India, popularly Satakosia. The district is surrounded by Cuttack and Dhenkanal in the east, Sambalpur and Deogarh in the west, Sundergarh and Keonjhar in the north and Boudh in the south.

Angul district lies between 84° 16' to 85° 23' East longitude and between 20º 3 31' N to 21º 41' N latitude. The district has an area of 6375 sq. km. The district accounts for 4.1 percent of the state territory and shares 3.0 percent of the state population. The density of the population of the district is 200. per sq. km. as against 270 persons per sq. km. of the state. Angul district in Odisha is densely populated as per the 2011 Census. The District has a 1273821 population. The total population comprises 655718 males population and 618103 females population. District's rural population is more compared to its urban population. The total rural population of the District is 1067275 while the total urban population is 206546. as per the 2011 census. It has 1910 villages (including 249 uninhabited villages) covering 8 blocks. 8 Tahasils and 4 Subdivisions. As per the 2011 Census, the Schedule Caste population is 2,39,552 (18.80 %) and the Schedule Tribe population is 1,79,603 (14.10.%). The literacy percentage of the district constitutes 77.50 against 72.90 of the state.

The climate condition of the district is generally hot and high humidity from April to May and cold from November to December. The monsoon generally breaks during July. The average annual rainfall of the district was 1344.9 m.m in 2011, which is less than the normal rainfall of 1401.9 m.m. During the year 2010-11 the net area sown was 105 thousand hectares against 4681 thousand hectares of the state. The production of paddy was 729024 quintals, Wheat 529 quintals, Maize 8906 quintals, Ragi 22 quintals, Mung 6702 quintals, Biri 8490 quintals, Kulthi 13083 quintals, Till 6687 quintals, Groundnuts 29524 quintals, Mustard 499 quintals, Potatoes 46373 quintals and Sugarcane 55385 quintals. During 2010-11 the total fertilizers used in Angul district is about 10027 MT with breakage of 5881 M.T. nitrogenous, 2790 M.T. phosphatic, 1356 MT potassic and the consumption of fertilizer per hectare is 34 Kg. During the year 2013-14, it is reported by District Agriculture Officer, Angul and

Talcher that the irrigation potential created in Angul district from various sources during Kharif and Rabi are 57458 and 30515 hectors respectively (ref; district irrigation plan of Annual, Pradhanmantri Krishi Sinchayee Yojana (PMKSY). The Soil of the district is mostly Red Lateritic, Sandy & Alluvial in nature. The total cultivable land of Angul district is 2,11,291ha (32% of the Geographical area). Among these high land is 1,23,831 ha (58% of the cultivable area), medium land is 53, 942 ha (26% of the cultivable area) and low land is 33, 518 ha (16% of the cultivable area). Black soil with more clay content is 3825.16 ha.

Fig 1.2 Map of Angul district with blocks

Source: www.mapsofindia.com

Table 1.2: Key Indicators of Angul (Census 2011)

Indicators	**Value**
Population	12,73,821
Male	6,55,718
Female	6,18,103
Scheduled Caste	239552
Scheduled Tribe	179603
Others	1213872
Household (HH)	230711
Villages	1551
Sex Ratio	943
Total Worker	526520
Main Worker	317547
Marginal Worker	208973
Non-worker	837826
Work Participation Rate (WPR, %)	41.3
Cultivator as % of Total worker	20.44
Agricultural Labourers as % of Total worker	75.9
Literacy Rate (%)	77.50
Total Geographical Area (sq. km)	6,375
Land use pattern (Area in '000 ha), 2010-2011	
Forest	139512
Land put to Non-agricultural use	40118
Barren and Non- Cultivable Land	13931
Permanent Pasture and Other Agricultural Land	20486
Net Area Sown (ha)	105156
Cultivable Waste Land	19206
Old Fallow	32767
Current Fallow	46151
Miscellaneous Trees and Groves not included	5354
Total Area under Survey	422681

Source: Census, 2011

1.3 Objectives

The objectives of the baseline survey were to obtain information on proposed interventions under OMM around production, consumption, processing and marketing. It is also pertinent to have some background information on the HHs surveyed. The objectives are as follows.

- ❖ To assess the socio-economic condition of the HHs
- ❖ To outline millet production, productivity and package of practices
- ❖ To examine the consumption pattern of millets
- ❖ To elucidate the method of processing and mode of marketing

1.4 Methodology

1.4.1 Sample design

All the HHs who were covered under OMM, as per the list provided by Programme Secretariat, formed the universe. From the 2938 HHs covered under the programme, only 400 HHs have been surveyed. From these, some HHs who have cultivated millets in 2020-2021, that is, in the year before the intervention under OMM. From each block, 80HHs have been covered for the survey. Only 5.00% HHs are cultivating millets in Angul block, 2.50% HHs cultivating millets in Athamallik block, 5.00% HHs cultivating millets in Chhendipada block, 15.00% HHs cultivating millets in Kishorenagar block and 6.25% HHs cultivating millets in Pallahara block.

Table 1.4: Surveyed Households In Angul

Sl. No.	Block	Planned HHs.	Surveyed Of HHs	% Of HHs Covered	HHs Cultivated Millets In 2020-21		HHs Did Not Cultivated Millets In 2020-21	
		No	No		No	%	No	%
1	Angul	732	80	10.93	05	6.25	75	93.75
2	Athamalik	428	80	18.69	04	05.00	76	95.00
3	Chhendipada	490	80	16.33	09	11.25	71	8.75
4	Kishorenagar	573	80	13.97	08	10.00	72	90.00
5	Pallahara	715	80	11.19	12	15	68	85.00
Total		2938	400	13.61	38	09.50	362	90.50

1.4.2 Data Collection

This baseline survey report is based on both secondary and primary data. The primary data was collected from the respondents in the concerned districts by using a pre-tested interview schedule (Annexure 1) and Focus Group Discussion (Annexure 2). The secondary data has been collected from different published and unpublished sources.

1.5 Limitations

- From the 2938 programme HHs as per the list provided by the Programme Secretariat, only 400 HHs were surveyed.
- As some of the information was based on memory, there could be some recall errors. This is particularly so for the actual quantity of consumption, expenditure, investment, and marketing among others.
- In some cases, a particular HH might have consumed or sold millets, but they did not produce. This was large because they might have obtained the same through barter, gift, exchange, or stocks from production in an earlier year, which have not been detailed in the baseline survey.

1.6 Chapterisation

The baseline survey has been divided into seven chapters including the current introductory chapter 1, which provided district profile, objectives, methodology and limitations. Chapter 2 provides Status of Agricultural Activities in Angul. Chapter 3 provides the socio-economic profile of surveyed HHs. Chapter 4 provides details on the production and productivity of millets. Chapter 5 discusses the consumption pattern of millets. Chapter 6 elucidates the processing and marketing of millets. Chapter 7 summarizes the findings.

2. STATUS OF AGRICULTURAL ACTIVITIES IN ANGUL

2.1 Introduction

Angul is renowned for its advantageous location and a large supply of labourers and raw materials, both of which have been crucial to the district's industrial growth. However, in the district, agriculture continues to be the most common occupation. Therefore, it is necessary to increase the agricultural activity in the district to strengthen the livelihood and food security of the people.

2.2 Land Utilization pattern of Surveyed blocks:

The land utilisation pattern in the Angul district has been discussed in table-2.1. The total geographical area of the district spreads over 6375 sq. km. The surveyed five blocks occupy 48.98 percent of the total geographical areas. Barren cultivable land is 80.23 percent. Agricultural labourers constitute 57414 numbers of the total workers in the district. The total cultivable area of this district is 2,16,403 ha constituting 32.7 percent of the total geographical area of the district. The Kharif crops include paddy, maize, ragi, small millets, arhar, biri, mung, ground nut, til, and vegetables like brinjal, tomato, and early cauliflower. On the other hand, rabi crops include paddy, wheat, maize, field pea, sunflower, safflower, ginger, potato, onion, garlic, coriander, vegetables, tobacco, sugar cane etc.

Seed Replacement Rate (SRR) has increased up to 40 percent through the production of quality seeds in own farmlands through seed villages and other programmes. SRI (System of Rice Intensification) is adopted in most of the potential areas, reducing the cost of rice cultivation and also ensuring an environment-friendly agricultural practice. Organic farming is promoted with easy certification. Organic farm products are subsidized and necessary market linkages are provided with a due advantage to export. Expansion of organic villages is promoted. Production and productivity of pulses have increased through the intervention of improved technology. The area under aromatic rice has increased in feasible areas for better returns from small landholdings.

Table 2.1 land utilisation pattern of Angul district and Surveyed blocks

Indicators	District	Angul	Chhendipada	Pallahara	Kishorenagar	Athamalik
Geographical Area (Sq. Km)	6375	4713.38	615.48	810.90	602.09	674.75
Forest (Hect.)	139512	13026	17474	44115	22699	21190
Land Under Misc. Tree, Crop & Groves Not Included Net Area Sown (Hect)	5354	927	1582	144	524	331
Permanent Pastures & Other Grazing Land (Hect)	20486	3345	2986	2028	2160	4922
Cultural Waste Land (Hect)	19206	2749	3208	1420	2295	3382
Land Put To Non-Agricultural Uses (Hect)	40118	3160	3684	4111	2583	6136
Barren Uncultivable Land (Hect)	13931	831	1319	266	5582	3180
Current Fallow(Hect)	46151	6272	5875	5041	6659	7883
Old Fallows(Hect)	32767	7036	5548	1631	3773	4918
Net Area Sown(Hect)	105156	10749	18251	12560	13769	15983

Source: Census data (2010-2011)

3. SOCIO-ECONOMIC PROFILE OF SURVEYED HOUSEHOLDS

3.1 Introduction:

This chapter looks into the social and demographic profile of HHs surveyed - their distribution by social group, religion and the distribution of the population by gender. In addition, for the HHs surveyed, it provides the distribution by poverty status (proportion below the poverty line and proportion above), distribution by economic activities (not mutually exclusive, as a HH can have multiple economic activities), and distribution by house structure.

3.2 Social and Demographic Profile:

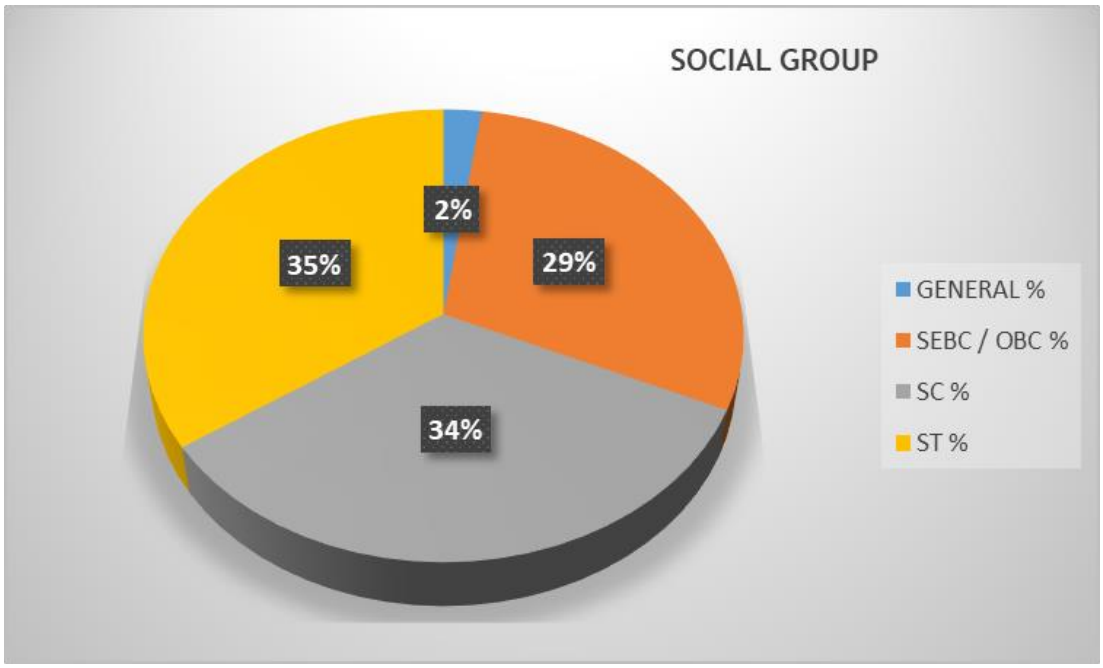
Out of 8 blocks in Angul District, OMM is functional in 5 blocks, viz., Angul, Chhendipada, Pallalhara, Kishorenagar and Athamallik. A total of 400 HHs have been surveyed in these blocks. The distribution across social groups (Table 3.2 and Fig 3.2) indicates that 138 HHs (34.5%) belong to Scheduled Tribes (STs), 118 HHs (29.5%) belong to SEBC/OBC, and 135HHs (33.75%) belong to Scheduled Castes (SCs).

Table 3.2: Distribution of Households by Social Groups Across Blocks of Angul district

Sl. No.	Block	General		SEBC / OBC		SC		ST	
		No	%	No	%	No	%	No	%
1	Angul	3	3.75	31	38.75	11	13.75	35	43.75
2	Athamalik	2	2.5	34	42.5	34	42.5	10	12.5
3	Chhendipada	3	3.75	20	25	39	48.75	18	22.5
4	Kishorenagar	1	1.25	21	26.25	23	28.75	35	43.75
5	Pallahara	0	0	12	15	28	35	40	50
TOTAL		9	2.25	118	29.5	135	33.75	138	34.5

Source: Field Survey

Fig. 3.2Distribution of Households by Social Groups



3.3 Educational Status:

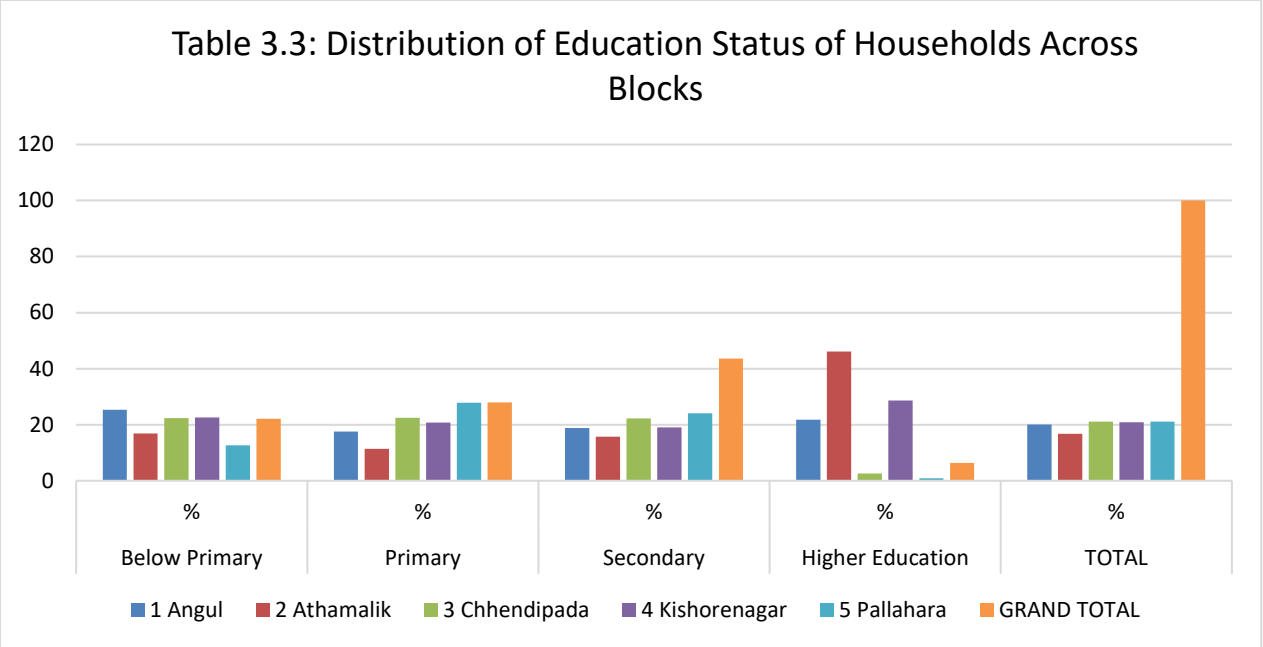
The Surveyed HHs (Table 3.3) reflect that out of the total 1816 surveyed population only 6.33 percent are in higher education, 43.61 percent are under secondary education and 22.14 percent are in the primary level of education. Among the blocks, the educational status is considerably low at 16.74 percent in the Athamallik block of the Angul district.

Table 3.3: Distribution of Education Status of Households Across Blocks

Sl. No.	Block	Below Primary		Primary		Secondary		Higher Education		Total	
		No	%	No	%	No	%	No	%	No	%
1	Angul	102	25.38	89	17.55	149	18.81	25	21.74	365	20.09
2	Athamalik	68	16.91	58	11.44	125	15.78	53	46.08	304	16.74
3	Chhendipada	90	22.39	114	22.48	176	22.22	3	2.62	383	21.09
4	Kishorenagar	91	22.64	105	20.72	151	19.07	33	28.69	380	20.93
5	Pallahara	51	12.68	141	27.81	191	24.12	1	0.87	384	21.15
GRAND TOTAL		**402**	**22.14**	**507**	**27.92**	**792**	**43.61**	**115**	**6.33**	**1816**	**100**

Source: Field Survey

Fig. 3.3Distribution of Education Status of Household



3.4 Religion Status:

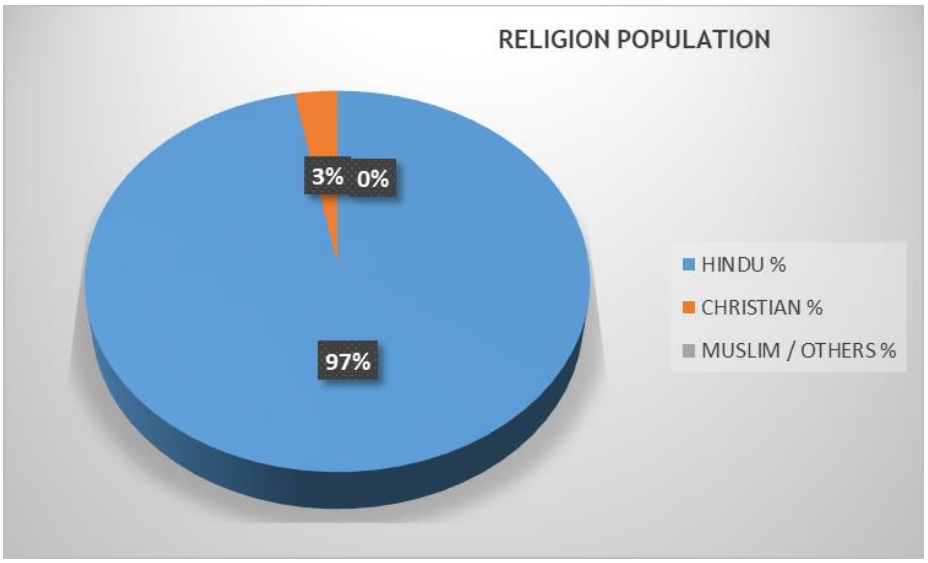
The surveyed HHs belong to three religious communities: Hindu, Muslim & Christian. The religious status of surveyed HHs from the table indicates that the majority of the population belongs to the Hindu community 388 HHs (97%) as against only 12 HHs(3% of the population) as Christian. (Table 3.4)

Table 3.4: Distribution of Households by Religion Across Blocks

Sl. No.	Block	Hindu		Christian		Muslim / Others		Total	
		No.	%	No.	%	No.	%	No.	%
1	Angul	76	95	4	5	0	0	80	100
2	Athamalik	78	97.5	2	2.5	0	0	80	100
3	Chhendipada	77	96.25	3	3.75	0	0	80	100
4	Kishorenagar	79	98.75	1	1.25	0	0	80	100
5	Pallahara	78	97.5	2	2.5	0	0	80	100
GRAND TOTAL		**388**	**97**	**12**	**3**	**0**	**0**	**400**	**100**

Source: Field Survey

Fig. 3.4Distribution of Households by Religion



3.5 Gender Status:

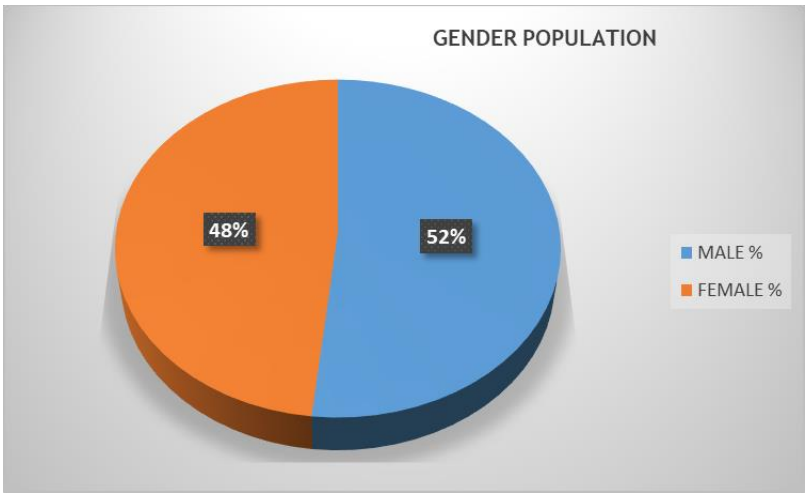
The total population of surveyed HHs is 1816 (Table 3.5). The share of the male population is a little higher than the female population. From the total population, 50.41 per cent belong to Angul block, 53.29 per cent belong to Athamallik block, 53.27 per cent belong to Chhendipada block, 50.79 per cent belong to Kishorenagar block and 51.05 percent belong to Pallalhara block.

Table 3.5: Distribution of Population by Gender Across Blocks

Sl. No.	Block	Male		Female		Total	
		NO.	%	NO.	%	NO.	%
1	Angul	184	50.41	181	49.59	365	100
2	Athamalik	162	53.29	142	46.71	304	100
3	Chhendipada	204	53.27	179	46.73	383	100
4	Kishorenagar	193	50.79	187	49.21	380	100
5	Pallahara	196	51.05	188	48.95	384	100
Grand Total		**939**	**51.71**	**877**	**48.29**	**1816**	**100**

Source: Field Survey

Fig. 3.5Distribution of Households by Gender



3.6 Poverty Status:

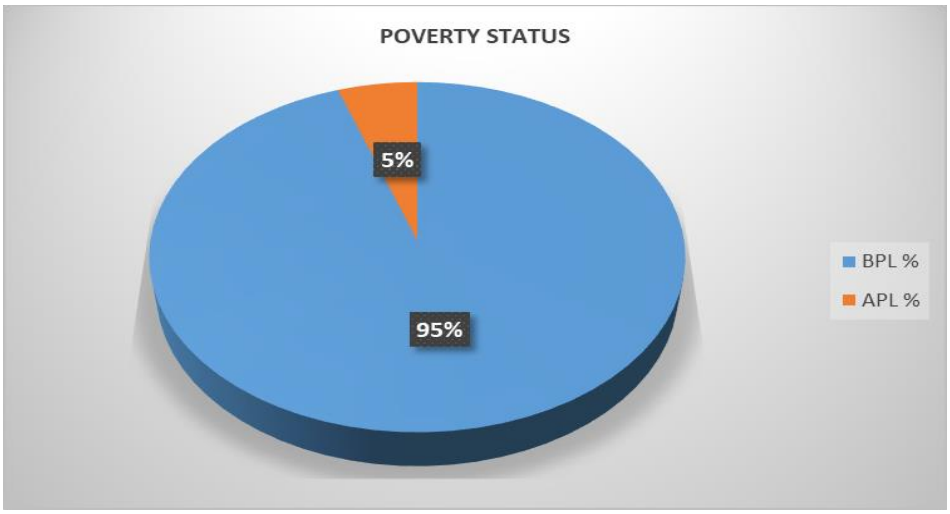
Our field survey data (Table.3.6) show that more than four-fifths of the HHs (85.50 %) live below the poverty line (BPL). The incidence of poverty is more than 80 per cent in all the blocks. The block-wise and social group-wise distribution of BPL and above-poverty line (APL) HHs have been given in Table 3.6.

Table 3.6: Distribution of Households by Poverty Status Across Blocks

Sl. No.	Block	BPL		APL		Total	
		NO.	%	NO.	%	NO.	%
1	Angul	68	85.00	12	15.00	80	100
2	Athamallik	71	88.75	09	11.25	80	100
3	Chhendipada	64	80.00	16	20.00	80	100
4	Kishorenagar	66	82.50	14	17.50	80	100
5	Pallahara	73	91.25	07	08.75	80	100
	TOTAL	342	85.50	58	14.50	400	100

Source: Field Survey

Fig. 3.6: Distribution of Households by Poverty Status



3.7Economic Activities:

Economic activities of surveyed HHs (Table 3.7)indicate that out of the total population 32.36 percent HHs are engaged in agriculture activities, 0.65 per cent HHs in Govt. services, 2.53 per cent HHs in business and 2.34 per cent HHs in private services such as mining work, truck driver, and wagon work. Agriculture is the main occupation of the HHs surveyed in all the blocks.

3.8 Structure of House:

House structure is another important indicator to assess the economic condition of HHs (Table 3.8 and Fig 3.8). Out of the total 400 HHs surveyed, the majority from Athmallik block (63.75 percent) have kutcha houses. Only 6.25 per cent of HHs have pucca houses from the Pallalhar block as compared to the majority(60 percent) who have semi-pucca houses in the Pallalhara block. In the Athmallik block, 8.75 percent HHs are in better housing conditions than having pucca houses.

Fig. 3.8Distribution of Structure of House

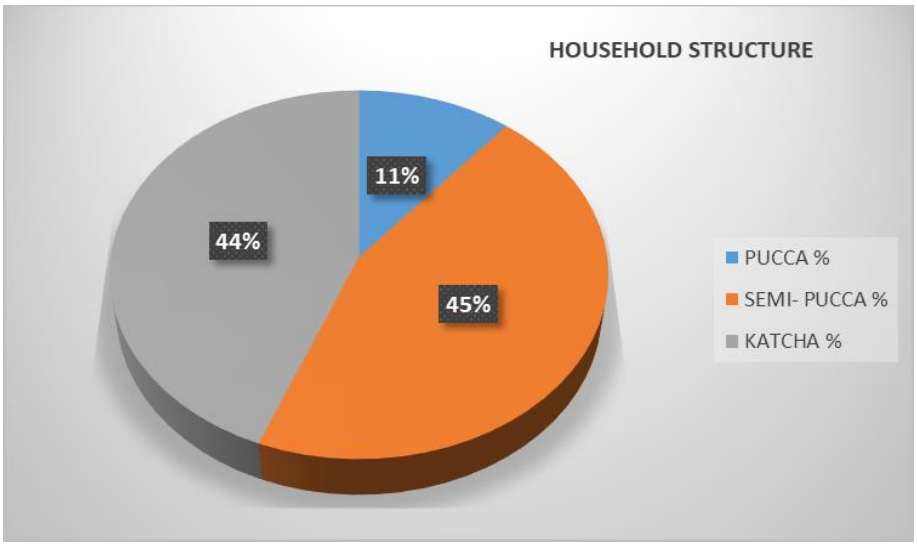


Table 3.7: Distribution of Members of Households By Occupational Status Across Blocks													
Sl. No.	Occupation	Angul		Athamalik		Chhendipada		Kishorenagar		Pallahara		Total	
		No	%	No	%	No	%	No	%	No	%	No	%
1	Agriculture	148	40.5	106	30.9	165	31.7	115	27.6	169	32.1	703	32.4
2	Labour	28	7.66	45	13.1	74	14.2	59	14.2	89	16.9	295	13.6
3	Business	21	5.75	10	2.92	13	2.49	7	1.68	4	0.76	55	2.53
4	Govt. Service	4	1.2	1	0.29	4	0.77	4	0.96	1	0.19	14	0.65
5	Pvt. Service	10	2.7	6	1.75	22	4.23	8	1.93	5	0.96	51	2.34
6	Migrants	4	1.07	3	0.88	11	2.12	5	1.19	10	1.9	33	1.52
7	Student	92	25.2	93	27.1	151	29	111	26.6	181	34.4	628	28.9
8	House Wife	40	10.9	69	20.1	64	12.3	70	16.8	56	10.7	299	13.8
9	Others (Child/ Oldage/ Etc)	18	4.93	10	2.91	17	3.26	38	9.12	11	2.09	94	4.33
Grand Total		365	16.8	343	15.8	521	24	417	19.2	526	24.2	2172	100

Source: Field survey

Table 3.8: Distribution of Households by Structure of House across Blocks									
Sl. No.	Block	Pucca		Semi- Pucca		Katcha		Total	
		No	%	No	%	No	%	No	%
1	Angul	8	10	33	41.25	39	48.75	80	20
2	Athamalik	7	8.75	22	27.5	51	63.75	80	20
3	Chhendipada	13	16.25	42	52.5	25	31.25	80	20
4	Kishorenagar	11	13.75	35	43.75	34	42.5	80	20
5	Pallahara	5	6.25	48	60	27	33.75	80	20
	Total	44	11	180	45	176	44	400	100

Source: Field survey

3.9 Conclusion

The socio-economic profile of the HHs surveyed indicates that above one-third of them (34.5%) are STs and nearly one-third (29.5%) belong to another social category. The majority (97%) ofHHs are Hindus. More than four-fifths of HHs are under the poverty line. All surveyed HHs have indicated cultivation as their important economic activity. About 44% of the HHs stay in kutcha houses, 45% HHs reside in semi-pucca houses and 11% of HHs resides in pucca houses. The next chapter i.e. Chapter 2, looks into aspects related to the production of millets.

4. PRODUCTION

4.1 Introduction

In this chapter, an attempt has been made to throw some light on the status of production and productivity of millets, usage of seeds, and the package of practices in the Angul district. These are based on baseline data for 2020-2021 from HHs surveyed in Angul, Athamallik, Chhendipada, Kishorenagar and Pallahara blocks where OMM has been operational since *Kharif* 2020.

4.2 Area, Production:

In Angul, only Ragi is cultivated, other millets are not cultivated as reported by respondents HHs during 2020-2021. Out of a total of 400 surveyed HHs, 224 acres in Angul, 211 acres in Athmallik, 218 acres in Chhendipada, 221 acres in Kishorenagar and 215 acres in Pallalhara blocks are coming under non-millet cultivated area. It is reported that five households have cultivated ragi in 4 acres of land in Angul block, four HHs cultivated ragi in 3 acres of land in Athmallik, nine HHs in Chhendipada block cultivated ragi in 12 acres of land, eight HHs cultivated ragi in 10 acres of land in Kishorenagar block and 12 HHs in Pallalahara block reported cultivation of ragi in12 acres of land. It is ascertained that other millets are not cultivated in surveyed HHs.

Table 4.2: Area, production of millets across blocks

Sl. No.	Block	Indicators	Total	Ragi	Other Millets	Non-Millets
1	Angul	No. of Sample HHs	80	5	0	80
		Area (in Acres)	228	4	0	224
		Quantity Production (Qntl.)	511.89	6.50	0	505.39
2	Athamallik	No. of Sample HHs	80	4	0	80
		Area (in Acres)	214	3	0	211
		Quantity Production (Qntl.)	490.15	4.20	0	485.95
3	Chhendipada	No. of Sample HHs	80	9	0	80
		Area (in Acres)	230	12	0	218
		Quantity Production (Qntl.)	544.93	16.4	0	528.53
4	Kishorenagar	No. of Sample HHs	80	8	0	80
		Area (in Acres)	231	10	0	221
		Quantity Production (Qntl.)	883.57	14.6	0	868.97
5	Pallahara	No. of Sample HHs	80	12	0	80
		Area (in Acres)	227	12	0	215
		Quantity Production (Qntl.)	513.21	14.8	0	498.41

Source: Field Survey

4.3 Package of practices Ragi seeds:

Seed is an important input for the production of any millets. The germination test and availability of seeds significantly determine the production of the crop. During the survey, in this district, 31 HHs out of 38 were using 111kgs of their own seeds and seven HHs used 15 kgs of seed from other sources.

The germination test of ragi seeds was not done by any HH. A total of 31 no. of HHs have cultivated ragi manually and 7 HHs have cultivated ragi by using a weeder machine. 37 HHs have cultivated land by using organic practices and only 1 HH is using both organic and chemical inputs for his cultivation (Table 4.3).

4.4 Method of Ragi cultivation:

In this section, different agronomic practices used by HHs in the surveyed blocks of Angul district, such as broadcasting, line sowing, transplanting, System of millets Intensification (SMI) methods etc have been discussed. Out of a total, 15 HHs cultivated ragi by adopting the broadcasting method, 15 HHs have adopted line sowing, 07 HHs have cultivated millet in line transplanting and only 01 HH have cultivated ragi in multiple methods. It is pertinent to note that the System of Millets Intensification (SMI) method of cultivation was absent in the surveyed HHs in the district (Table 4.4).

Table 4.4: Method of Ragi cultivation across blocks

Sl. No.	Package Of Practices	Angul	Athamallik	Chhendipada	Kishorenagar	Pallahara	Total
1	Broadcasting	1	1	4	4	5	15
2	Line Showing (LS)	3	3	4	3	2	15
3	Line Transplanting (LT)	0	0	1	1	5	7
4	SMI	0	0	0	0	0	0
5	Multiple Method	1	0	0	0	0	1

Source: Field Survey

Table 4.3: Package of practices of Ragi seeds used across blocks								
Sl. No.	Practices	Package Of Practices	Angul	Athmallik	Chhendipada	Kishorengar	Pallahara	Total
1	Availability of Seeds	Own Seeds (No of HHs)	4	4	7	6	10	38
		Quantity use of own seed (Kg)	15	16	25	18	37	111
		Seeds from other sources (No of HHs)	1	0	2	2	2	7
		Quantity used from other sources (Kg)	2	0	5	4	4	15
		Total no. of HHs seed used	5	4	9	8	12	38
		Total quantity (Kg)	17	16	30	22	41	126
2	Seed Germination Test	Yes / No	No	No	No	No	No	No
3	Weeding	Manual	4	4	8	6	9	31
		Weeder	1	0	1	2	3	7
		Both Manual & Weeder	0	0	0	0	0	0
		No. of weeding	2	2	2	2	2	10
4	Use of Fertilizer/ Pesticides	Organic	5	4	9	8	11	37
		Chemical	0	0	0	0	0	0
		Both Organic & Chemical	0	0	0	0	1	1

Source: Field Survey

4.5 Conclusion:

The above information indicates that the production of ragi was 1.48 quintals per acre and 1.61 quintals per household in the surveyed households. The block-wise production figures of ragi indicate that in the Angul block 1.625 quintals of ragi per acre and 1.30 quintals per household were produced. In Athmallik block 1.473 quintals per acre and 1.05 quintals per household, in Cheendipada block 1.367 quintals per acre and 1.82 quintals per household, in Kishorenagar block 2.43 quintals per acre and 1.825 quintals per household and in Pallalhara block 1.48 quintals per acre and 1.23 quintals per household were produced. The lowest area i.e. 211acres crop area of Athamallick block is coming under non-millet cultivation. The farmers across blocks have not done germination tests of ragi seeds. Only one HH of the Pallalhara block is using both organic and chemical inputs in his cultivation. None of the HH has cultivated ragi using the SMI method. Only one HH of the Angul block has cultivated ragi using multiple methods.

5. CONSUMPTION

5.1 Introduction

Consumption is a vital factor to generate demand for any product, particularly for agricultural output. Hence, consumption determines production and demand enhances the scope for marketing. Efforts are being made in this chapter to assess the consumption of millets across seasons and the factors affecting the consumption of millets.

5.2 Different meals in a day

Consumption of millet by HHs revealed that 34.22 percent of HHs consumed millet during breakfast, 28.82 percent for lunch, 23.33 percent consumed it as evening snacks and 13.63 percent consumed it during dinner. The picture of different blocks in the districts has been presented in Table 5.1.

5.3 Season-wise consumption:

In the surveyed blocks, people are consuming millet in different forms, like porridge, bread, cake, snacks, steamed goods and beverages. It is observed that the highest percentage of people (43.5 percent) are consuming millets in the summer season by making Pitha, Jau or Mandiatorani and handia as their food items as against 16 percent consuming millets in the winter season, 25 percent consuming millets in the rainy season (Table 5.2).

5.4 Millet Recipes consumed:

Respondents were found consuming millets in several ways including in forms of Jau, pitha, tampo, mandiatorani, handia etc. Findings provide some of the major millet dishes prepared and consumed by farmer HHs in the selected blocks have been presented in Table 5.3. Across the blocks, out of 388 millets consuming HHs, the majority of them (126 No.) are consuming ragi by preparing Jau. No number of HH are consuming Tampo. Across the blocks, 74 HHs are consuming ragi by preparing mandiatorani, and 94 HHs consume ragi by preparing other recipes.

Table- 5.1: Millets Consumption during different Meals in a Day													
Sl. No.	Food Pattern	Angul		Athamalik		Chhendipada		Kishorenagar		Pallahara		Total	
		No	%	No	%	No	%	No	%	No	%	No	%
1	Breakfast	82	45.05	111	47.84	49	20.17	77	40.96	55	22.19	374	34.22
2	Lunch	44	24.18	59	25.44	84	34.57	48	25.54	80	32.25	315	28.82
3	Snacks	52	28.57	46	19.83	52	21.39	49	26.06	56	22.58	255	23.33
4	Dinner	4	2.2	16	6.89	58	23.87	14	7.44	57	22.98	149	13.63
	Total	182	16.65	232	21.22	243	22.23	188	17.21	248	22.69	1093	100

Source: Field Survey

Table- 5.2: Season Wise Millets Consumption													
Sl. No.	Food Pattern	Angul		Athamalik		Chhendipada		Kishorenagar		Pallahara		Total(N=400)	
		No	%	No	%	No	%	No	%	No	%	No	%
1	Summer	32	40	28	35	38	47.5	31	38.75	45	56.25	174	43.5
2	Rainy	18	22.5	20	25	26	32.5	15	18.75	21	26.25	100	25
3	Winter	12	15	10	12.5	18	22.5	08	10	16	20	64	16

Source: Field Survey

Table 5.3 Recipe-wise Consumption of Households across the Block							
Sl. No.	Types Of recipe	Angul	Athamallik	Chhendipada	Kishorenagar	Pallahara	All OMM Blocks
1	Jau	18	22	28	22	36	126
2	Tampo	0	0	0	0	0	0
3	Pitha	11	9	22	11	31	84
4	Khiri	0	0	0	0	1	1
5	MandiaTorani	9	14	18	9	24	74
6	Handia	1	3	2	1	2	9
7	Others (Specify)	13	18	23	19	21	94
	Total	52	66	93	62	115	388

Source: Field Survey

5.5 Conclusion:

Millets are consumed across all seasons, but relatively more in summer (43.5 percent HHs). These are consumed at all meal times, but relatively more at Breakfast &Lunch. There were four types of Millets recipes consumed by the households i.e., Jau, pitha, toraniand handia. The highest number of HHs (126 No) are consuming ragi by making jau across all blocks. The surveyed HHs do not know the consumption of the Tampoo recipe.

6. PROCESSING AND MARKETING

6.1 Introduction:

This chapter looks into the methods used for processing Millets by traditional/ manual and by machines, the availability/accessibility of processing and the mode of selling Millets. Also, it attempts to understand whether the machines are available for processing and accessible to HHs.

6.2 Processing units:

Processing of Millets is necessary for the storage and preparation of different recipes for consumption. The processing of grains may be in the form of Grinding, Malting, Fermentation & Roasting to improve their edible, nutritional & sensory properties. Traditionally, the burden of processing grains and the associated drudgery have largely been borne by women. The distance of the processing unit from 12 HHs inhabited villages in the Pallahara block is within 1-2 km or above. Across the blocks, as high as 20 HHs (52.63 per cent) have to cover more than 2 km distance to reach the processing unit for processing of millets (Table 6.2).

6.3 Method of processing of Millets:

Two locally available traditional instruments used for processing are Dhinki (made up of wooden logs)&Chakki(used for Grinding). Both these instruments are operated manually. The distribution of surveyed HHs by the method of processing (Dehusking and Grinding) showed that 81.57 % of them process manually, 13.16% use machines, 2.63% process by both traditional and machines&2.63% have not spelt out any processing method of millets. FGDs point out that the reasons for not processing Millets by machines, are the nutritional &taste advantages of millets processed in Dhinki and Chakki, the inaccessibility of villages to the processing unit located at a long distance and the smaller quantity of produce (Table 6.3).

6.4 Marketing:

Marketing of Millets is important for millet-producing HHs to earn income by selling their surplus produce. Better marketing opportunities can generate hope and interest to cultivate Millets. Across the surveyed HHs, the pattern of selling Millets indicated that21.43% of them sold Millets to middlemen, 28.57% sold Millets to Local Businessmen, and 50.00% sold

Millets in Weekly Hats / Local markets. None of them sold Millets directly to mill owners & money lenders due to low production (Table 6.4).

Table 6.2 Distance to Access Processing Unit by households						
Distance Covered (KM)	Angul	Athmallik	Chhendipada	Kishorenagar	Pallalhara	All OMM Blocks
0.00 to 0.50	0	0	0	0	0	0
0.50 to 01.00	0	0	1	0	0	1
01.00 to 02.00	3	3	4	3	4	17
02.00 above	2	1	4	5	8	20
Total	5	4	9	8	12	38

Source: Field survey

TABLE- 6.3: Method of Processing Millets													
SL. NO.	Processing Unit	Angul		Athamalik		Chhendipada		Kishorenagar		Pallahara		Total	
		No	%	No	%	No	%	No	%	No	%	No	%
1	Manually	4	80.0	4	100.00	7	77.78	7	87.5	9	75.00	31	81.57
2	Machine	0	0	0	0	1	11.11	1	12.5	3	25.00	5	13.16
3	Both	1	20.0	0	0	0	0	0	0	0	0	1	2.63
4	No response	0	0	0	0	1	11.11	0	0	0	0	1	2.63
Grand Total		5	100.0	4	100.0	9	100.0	8	100.0	12	100.0	38	100.0

Source: Field survey

TABLE- 6.4: Distribution of Households by Mode of Selling Millets across Block													
SL. NO.	Selling Centre	Angul		Athamalik		Chhendipada		Kishorenagar		Pallahara		Total	
		No	%	No	%	No	%	No	%	No	%	No	%
1	Mill Owner	0	0	0	0	0	0	0	0	0	0	0	0.00
2	Middleman	4	80.0		0	0	0	1	8.34	1	20	6	21.43
3	Local Businessman	0	0	1	50	1	25	5	41.7	1	20	8	28.57
4	weekly Hat / Market	1	20.0	1	50	3	75	6	50	3	60	14	50.00
5	Money Lender	0	0	0	0	0	0	0	0	0	0	0	0.00
Grand Total		5	100	2	100	4	100	12	100	5	100	28	100.00

Source: Field Survey

6.5 Conclusion:

Before the implementation of OMM, more than 81.57 % HHs are found processing millets manually due to the matter of taste and preference and unavailability and inaccessibility of the processing machine/unit. They are bound to process their Millets manually through traditional equipment (Chakki&Dhinki). The farmers sold their millets through different channels/ selling points such as middlemen, local businessmen, weekly hats/local markets. None of them sold Millets to mill owners& money lenders due to low production.

7. MAJOR FINDINGS

7.1 Agriculture is one of the important economic activities of 32.4 % of the surveyed HHs. Across the blocks, 40.5 percent of HHs are engaged in agricultural activities in Angul, 30.9 percent in Athamail, 31.7 percent in Chendipada, 27.6 percent in Kishorenagar and 32.1 percent in Pallalahada.

7.2 Ragi is the main millet crop grown by surveyed HHs in all the blocks, especially in the mining-affected area or DMF operation area with productivity ranging from 1.47qtls to 2.43 qtls per acre and 1.05 to1.83 qtls per HH. None of the surveyed HH cultivated ragi using the SMI method.

7.3 Millets are consumed in all the seasons but relatively more in summer (43.5 %). These are consumed in all meal times but relatively more in breakfast and lunch in the form of jau, cake,torani and handia.

7.4 Farmers undertake millet production in marginal land particularly ragi to meet the food requirements during the lean period. Government's incentive for paddy cultivation and PDS rice at lower prices helped the people to meet the food requirements at the HH level.

7.6 Before the implementation of OMM, farmers were processing their millets using traditional methods.

7.7 The middlemen, local businessmen, and weekly hats/local markets constitute the marketing channels for the millet-producing HHs.

7.8 Facilitating agencies working for millet promotion admit to the following challenges faced while motivating farmers to introduce millet in their farmland, i) farmer's inhibition to adopt to a new crop; ii) convincing farmers to cultivate millets in agricultural land as they presume it as an upland crop.

7.9 Farmers agree to cultivate millets on their farmland if govt. provides handholding support in terms of finance, technical and other inputs. They also accept advanced processing units to process millets as the traditional/ manual method of processing millets is tedious. Marketing facilities need to be available to them as previously millets were produced mainly for HH consumption.

ANNEXURE I

Confidential for Research Purpose Only

HOUSEHOLD SCHEDULE
ON

SPECIAL PROGRAMME FOR PROMOTION OF MILLETS IN TRIBAL AREAS OF ODISHA

Nabakrushna Choudhury Centre for Development Studies, Odisha, Bhubaneswar-751013

1. Identification of the HHs

a. Name of the (i) Village _____

(ii)Gram Panchayat: _____

(iii) Block: _____

(iv) District: _____

b. Category i) SC ii) ST iii) OBC iv) SEBC v) Others (Specify)

c. Sub-caste/ Sub-tribe: _____

d. Religion i) Hindu ii) Muslim iii) Christian iv) Animism v) Others

e. Category of HH: BPL/APL

f. House structure: Pucca/Kutcha/Semi-Pucca

2. Are you indebted? Yes/ No. If yes, what is the amount: Rs. _____

3. Land Details (last year, Acre) i) Owned_____, ii) leased in _____

iii) Leased out _____iv) Encrosed_____

v) FRA _____v) Other_____

vi)Cultivable Land _____

4. Total irrigated land owned (last year, Acre): _____

5. Cropping systems i) Mono ii) Mixed [specify the crop(s)] _____

iii) Inter cropping [specify the crop(s)]_____

6. Seed (last year) i) Quantity of seed used (in kg): _____

ii) Is it the quantity adequate? (Yes/No)

iii) Seed Treatment (Yes/No)

iv) Seed quality: Good/Average/Bad

7. Package of practices for millets (Last Year, put tick mark)

i)Germination test: Yes/No

ii)Weeding: Weeder/Manual/Both

iii)Number of weeding: 1/2/3/4

iv)Application of Fertiliser: Organic/ chemical/Both

v)Application of Pestisides: Organic/chemical/Both

8. Production and Utilization of Millets (2019-20)

Type of Millet	Total Production (QTL.)	Family consumption (QTL)	Kept for Seed (QTL)	Marketed (QTL)	Selling Price (Rs/QTL)
Mandia					
Suan					
Kangu					
Gurji					
Any other (Specify)					

9. Season-wiseAverage Requirment/Consumption (in kg)

Season	Summer	Winter	Rainy
Requirement			
Consumption			

10. Time of consumption: Breakfast/Lunch/Evening snacks/Dinner

11. Whether Purchased: Yes/No

12. Whether received from friends/relatives: Yes/No

13. Processing millets: Manually/ Machine/ Both

14. If by machine, is it your own machine: Yes/No

15. Food items prepared: i) Jau ii) Tampo iii) Pitha iv) Mandis Torani v) Handia v) Others

16. Sale of millets/Distance: a) Mill _____ b) Middle-man/Local trader_____

d) Market_____ e) Money lender_____

f) Any Other (Specify) _____

17: Household Particulars

Sl. No.	Name starts with Respondent of the HH	Relationship with HH (Use Code)	Marital Status	Sex M-1 F-2	Age	Education (Use Code)	Occupation/Income (Use Code)			Millet Based Activities (Use Code)
							Main	Subsidiary	Avg. annual income	

Note: **Relationship:** 1-Self, 2-Spouse, 3-Son, 4-Daughter, 5- Daughter-in-law, 6-Son-in-law, 7-Father, 8-Mother, 9-brother, 10-Sister, 11-Grand-son, 12- Grand-daughter, 13-Father-in-law, 14-Mother-in-law, 15-(Specify)

Marital Status: 1- Married, 2- Unmarried, 3- Widow, 4- Widower, 5- Divorced, 6-Separated, 7-(Specify)

Education: 1-Illiterate, 2-Just literate, 3-Upto Class 5, 4-Class 6-10, 5-Higher Secondary, 6-Graduate, 7- Post Graduate, 8- Technical (Diploma), 9- Technical (Degree), 10-Professional/Management, 11-Other (Specify)

Occupation: 1- Agriculture, 2- Daily labour/ Wage labour, 3- Business/ Entrepreneurship, 4-Government Servant, 5- Private service, 6-Migrants,7- Artisans, 8-Service Provider,9- MFP collection, 10-Student, 11-Housewife, 12-Other (Specify)

Millet Based Activities: 1=Production, 2=Consumption, 3= Processing, 4= Marketing

18: Crop-wise and Method-wise Details of Production (Last Year i.e. June 2019-May 2020):

(Area in Acre, Production in Quintal)

Sl.No	Name of the Crop	SMI		Line Transplanting		Line Sowing		Broadcasting		Any other (Specify)	
Kharif		A	P	A	P	A	P	A	P	A	P
1	Mandia										
2	Suan										
3	Kangu										
4	Koda										
5	Gurji										
6	Jawar										
7	Bajra										
8	Any other										
9	Any other										
Rabi	Mandia										

Note: A stands for Area and P stands for Production (Use additional sheets for Rabi)

19: Expenditure pattern

Sl.No	Sources	Annual Expenditure (In Rs)
1	Food	
2	Clothes	
3	Education	
4	Medicine	
5	Social Function	

6	Marriage & Ceremony	
7	Agriculture	
8	Construction	
9	Durable Assets	
10	Others	

20: Sources of Income

Sl.No	Sources	Annual Income (In Rs.)
1	Agriculture	
2	Millets	
3	Horticulture	
4	Forest	
5	Ag.Labour	
6	Salary	
7	Pension	
8	Remittance	
9	Livestock	
10	Others (Specify)	

Remarks:

Signature of the investigator