BASELINE SURVEY: PHASE VII

DEOGARH DISTRICT

Special Program for Promotion of Millets in Odisha
(Shree Anna Abhiyan)

Submitted to
Directorate of Agriculture and Food Production,
Government Of Odisha
2025

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Nabakrushna Choudhury Centre for Development Studies
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Citation: *'Baseline Survey - Deogarh District 2023, Phase VII', Special Programme for Promotion of Millets in Odisha or Shree Anna Abhiyan, SAA", Nabakrushna Choudhury Centre for Development Studies, Bhubaneswar.*

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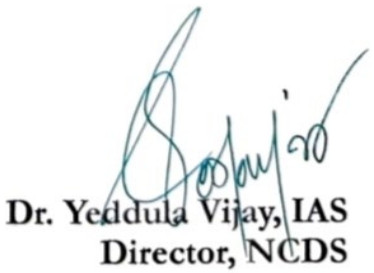
FOREWORD

Sustainable Development Goal 2 seeks to end hunger, achieve food security, improve nutrition, and promote sustainable agriculture. Millets offer a promising solution to help accomplish these objectives. The Shree Anna Abhiyan (SAA) is a great initiative of Odisha government that shows the state's commitment to reviving the cultivation of millets that are not only climate-resilient but has significant implications on health and nutrition of people. The programme has brought different stakeholders to work together to reinstate the significance of millets in Odisha's agricultural landscape. I am delighted to have the opportunity to write this foreword for the 'Special Programme for Promotion of Millets in Odisha.'

The SAA programme has emerged from a consultation with diverse array of stakeholders including NCDS. A memorandum of understanding (MoU) was signed on February 27, 2017, bringing together key stakeholders including the Directorate of Agriculture and Food Production (DAFP), NCDS, and the Watershed Support Services and Activities Network (WASSAN). This MoU delineated the framework for concerted efforts towards implementing the SAA, with NCDS assuming the pivotal role of anchoring the research secretariat. NCDS embarked on a comprehensive survey initiative encompassing Baseline, Midterm, and End-line assessments in the designated blocks of the SAA. These surveys, designed to provide a situational analysis of the status of millet production, marketing, consumption, represent a critical step towards informed intervention and strategic decision-making. The findings of the baseline survey presented in the report would provide a situational analysis of the current status of the millet at the time of survey and a reference point to analyse the impact of intervention.

As the Director, I commend all the dedicated team members of NCDS for their unwavering commitment and tireless efforts in achieving the objectives of the SAA. Your hard work and perseverance have played a crucial role in turning our shared vision into reality. I also extend my heartfelt gratitude to our partners, stakeholders, and collaborators for their invaluable support and steadfast dedication in this direction.



Dr. Yeddula Vijay, IAS
Director, NCDS

ACKNOWLEDGEMENT

It gives me immense pleasure to extend my heartfelt gratitude to all those who contributed to the successful completion of the “Baseline Survey Report of Phase VII, 2023”. This endeavour was truly a collaborative effort, and I am deeply grateful for the unwavering support and dedication demonstrated by each individual and organization involved. First and foremost, I would like to express my sincere appreciation to the research team of Nabakrushna Choudhury Centre for Development Studies (NCDS), Bhubaneswar, for spearheading the preparation of this report. Your commitments to excellence and tireless efforts have been instrumental in ensuring the quality and accuracy of the findings presented.

I extend my heartfelt thanks to the related government departments, organizations, and stakeholders, including farmers' associations, whose invaluable support and cooper action played a pivotal role in the successful completion of this study. Special mention goes to Dr. Arabinda Kumar Padhee, Principal Secretary to the Government, Department of Agriculture & Farmers' Empowerment (DA&FE), Mr. Prem Chandra Choudhury, Director of Agriculture DA&FE, and the Joint Director of Agriculture for their invaluable contributions.

I would like to extend my sincere appreciation to our esteemed Director, Dr. Yeddula Vijay (IAS) Additional Secretary to the Government, Planning and Convergence Department, Government of Odisha, and Director of Nabakrushna Choudhury Centre for Development Studies (NCDS). Your guidance, wisdom, and valuable suggestions have been invaluable in shaping the direction of this study. Many thanks to NCDS administration for their continuous support for smooth functioning of the research work. I want to acknowledge here to the contributions of research team (Research Associate, Project Associate and Research Assistant) for their valuable insights and assistance.

I would also like to express my appreciation to the members of the Programme Secretariat (Watershed Support Services and Activities Network, WASSAN), particularly Mr. Dinesh Balam, Programme Secretariat, and the facilitating agencies and staff of the concerned areas under study for their support and cooperation. I am particularly grateful to Mr. Sushil Kumar Senapati, Ms. Kalpana Pradhan and Mr. Bikash Pradhan, along with the dedicated staffs of the State Project Monitoring Unit (SPMU), for their unwavering support and assistance throughout the duration of this project.

My sincere gratitude goes out to the Chief District Agricultural Officer (CDAO) of Deogarh district, the Scheme Officer, District Programme Coordinator, Block Coordinators, and other block-level officials for their invaluable support in providing crucial information. Once again, thank you all for your invaluable contributions, dedication, and support. It has been a privilege to work alongside each of you, and I look forward to continued collaboration in our future endeavours. I extend my best wishes for the success of the publication.

Dr. Sandhya R Mahapatro
Project Director, SAA

EXECUTIVE SUMMARY

Deogarh district is one of the 17 districts where the 'Special Programme for the Promotion of Millets in Odisha or (hereafter) Shree Anna Abhiyan (SAA)' Phase VII has begun in the Kharif 2022 in Tileibani Block. Under Shree Anna Abhiyan (SAA) in Deogarh district, 382 target households are identified for the programme and out of these, 80 households were selected through the random sampling method and the Baseline Survey 2023 is conducted. The survey revealed that among the surveyed households, 87.5 per cent belonged to Scheduled Tribe (ST) follow by Other Backward Class (OBC)/ Socially and Educationally Backward Class (SEBC) which is 7.5 per cent, and 5 per cent belong to Scheduled Caste (SCs).

As revealed in the Baseline Survey, the total population of the surveyed households is 286, out of which 54.90 per cent are male and 45.10 per cent are female. The religious composition of the surveyed households indicates that 93.75 per cent are Hindu and 6.25 per cent are Christian. It is also found that out of 80 sample households, all households possess Ration Cards. Another significant observation on their occupation is that out of the total, 35.31 per cent are Agriculture, followed by 24.83 per cent students, 13.64 per cent wage labourers, and the Private employees constitute 0.70 per cent. House wife comprises of 17.83 per cent, about 3.50 per cent of the sample population in the working age group are also found to be unemployed. As far as their type of houses is concerned, out of the total of 80 households, 38 (47.5 per cent) have *Semi-Pucca* houses, 40 households (50 per cent) have *Kutcha* houses, and 2 households (2.5 per cent) have *Pucca* houses.

It is also revealed that out of total population, 86.37 per centare literate (13.63 per cent are illiterate). Land is considered as a vital asset and as observed out of the total 61.25 per cent HHs having small land ownership and followed by 33.75 per cent marginal land owners, rest 3.75 per cent HHs are medium land owners. It also found that only 2.5 per cent HHs have their annual income above 2 Lakhs. The most significant findings are that none of the sample farmers were having any agricultural loan. From the Baseline survey it is found that not a single sample household cultivated millets in the year 2022 and no household is consuming millets either. In the entire Block no sample household is either processing or marketing millets.

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ABBREVIATIONS

AAO	: Assistant Agriculture Officer
AL	: Agricultural Labour
ATMA	: Agricultural Technology Management Agency
AWC	: Anganwadi Centre
CBOs	: Community Based Organization
CCD	: Centre for Community Development
CRPs	: Cluster Resource Persons
CSOs	: Civil Society Organizations
DAFP	: Directorate of Agriculture and Food Production
DDA	: Deputy Director, Agriculture
FA	: Facilitating Agencies
FGD	: Focused Group Discussion
FPC	: Farmer Producer Company
FPO	: Farmer Producer Organizations
GP	: Gram Panchayat
FAQ	: Fair Average Quality
Ha	: Hectares
HHs	: Households
ICDS	: Integrated Child Development Scheme
ITI	: Industrial Training Institute
LS	: Line Sowing
LT	: Line Transplantation
MDM	: Mid-Day Meal
MFP	: Minor Forest Produce
MGNREGA	: Mahatma Gandhi National Rural Employment Guarantee Act
MGNREGS	: Mahatma Gandhi National Rural Employment Guarantee Scheme
MSP	: Minimum Support Price
NCDS	: Nabakrushna Choudhury Centre for Development Studies
OBC	: Other Backward Classes
SAA	: Shree Anna Abhiyan
PDS	: Public Distribution System
SC	: Scheduled Castes
SMI	: System of Millets Intensification
SP	: Sale Price
ST	: Scheduled Tribes
WASSAN	: Watershed Support Service and Activities Network

Chapter I

INTRODUCTION

1.1 Background

Millets have been a staple food for millions of people in India for centuries, especially in the central tribal belts. They are drought-resistant, highly nutritious, and can be cultivated in a wide range of soil and climatic conditions. Millets are also low in Glycemic index and gluten-free, making them an ideal choice for people with various health conditions. In recent times, there has been a shift of interest from other crops to millets cultivation due to its numerous health benefits and its potential to address food security challenges in the country. The Government of India has been promoting the cultivation of millets as part of its efforts to increase the income of farmers, reduce dependency on water-intensive crops like rice, and promote sustainable agriculture. In this context, it is essential to understand the significance of millets cultivation and its associated challenges and opportunities.

Millets are small round whole cereal grain belongs to the Poaceae family, commonly known as the grass family, and grown in India, Nigeria, and other Asian and African countries. It is considered an ancient grain, used both for human consumption and livestock. It is also used as bird feed. Millets have multiple advantages over other crops, including drought and pest resistance. It's also able to survive in harsh environments and less fertile soil. These benefits stem from its genetic composition and physical structure — for example, its small size and hardness. This crop is also divided into two categories — major and minor millets, with major millets being the most popular or commonly cultivated varieties. Major millets include: pearl, foxtail, Proso (or white), finger (or ragi) and Minor millets include Kodo, barnyard, little, Guinea, brown top, fonio, adlay (or Job's tears). Like most cereals, millet is a starchy grain rich in carbs. Notably, it also packs several vitamins and minerals. Therefore, it may have multiple health benefits. In the state of Odisha, millets have always been an integral part of the traditional diet and have been cultivated for centuries, primarily among the tribal population. But in last couple of decades, the popularity of millets has been declined due to the increasing demand of fast foods and modern food habits. To address the importance of millet as staple food and its nutritional value, the Government of Odisha has taken several initiatives to promote the cultivation of millets. In this connection the Special Programme for Promotion of Millets in Odisha (also known as Shree Anna Abhiyan "SAA") was initiated by the Government of Odisha in 2017-18 emphasising production, consumption, processing, and marketing of millets. The main objective of the programme was to increase production, consumption, processing, and marketing of millets in tribal areas. The Shree Anna Abhiyan tried to revive these nutrient-rich millets in the agricultural landscapes. The program had a unique structure that emphasized cultivating traditional millets such as Ragi, Gurji, Kosla (small millets), Kodo, Kangu (foxtail millets), and Jowars. In 2022, the Baseline Survey of Phase VII conducted in 17 districts, including Deogarh district, and aims to provide information on the program dimensions in the district.

1.2 District Profile

Deogarh district is one of the 30 districts of the state of Odisha in Eastern India.On January 1, 1994,

Deogarh of Odisha was separated from the formerly bigger Sambalpur District to become an independent Administrative Unit. Abode of Divinity is how Deogarh (Debagarh) is translated literally into English. Deogarh district is a major chunk of the former Bamanda or Bamara State. This District is the home of a vibrant cultural heritage. This area has been blessed with mountains, springs, falls, woods, a clean environment, and a wide variety of flora and animals.

There are several myths, legends, apocryphal stories, and folktales concerning where the name Bamanda came from. According to one tradition, a couple by the names of "Bama" (or "Baha") and "Manda" governed this territory. Many names, including Bamanda, AkhojBamanda, Sankhajyoti Mandal, Sripunji Mandal, Ganga Rajya, Bamanda Pati, Jadav Desh, Singhan Rajya, Baghar Kota, and Bamanda Mandal, are given to this territory in the Brahmani River basin. According to several copper inscriptions discovered in this region, the Brahmani River was known as "Sankha Jyoti Nadi" until the eleventh century. Due of this, the first king of the Ganga dynasty, Saraju Deb, chose the Conch (Shankha) to represent his dynasty and gave the country the name "Sankha Jyoti Mandal," which later came to be known as "Bamanda". The sub-division created out of a bigger chunk of the old princely state upon the merger of Bamanda state with Odisha became known as Deogarh, the capital city of Bamanda. The spelling of Deogarh, which the British adopted in their records, remained consistent with other geographical names. Even after the former Sambalpur Sub-Division was given the rank of a district in 1994, that very name persisted.

1.2.1 Geography and Climate

Deogarh district is one of the 30 administrative districts in the state situated in the northwest and has its administrative centre at the town of Debagarh. The area of the district is 2781.66 km2. According to the 2011 Census, the district contains 312,520 residents. It is Odisha's least populous district (out of 30) as of 2011. "Pradhanpat" and "Kurudkut" waterfalls are among many biodiversity-rich and ecologically balanced areas with historical significance and a pleasant ambiance around them. One of the first places in Asia where hydroelectricity was produced was Kurudkut. The district primarily comprises of hills. Deogarh's hill system has mostly been divided into four ranges: The Khajuria Range in Badbar-Pragana of Deogarh Police Station is located in the north and has a maximum height of 745 metres. The Pradhanpat and Kaidanta Ranges are located in the north and have maximum heights of 743 and 816 metres, respectively, the 678-meter-tall Pawri Range, which is located on the Brahmani River's eastern bank. The Ushakothi Range is at the police stations in Kansar and Reamal. The hill ranges are elevated between 610 and 762 metres above mean sea level. The predominant soil types in this district include sandy, loamy, and red soil.

The hot, dry summer, wet winter, and scattered rainfall during the South-West monsoon season define the Deogarh district's climate. Beginning in late November and lasting through the end of February is the winter season. Mid-March through mid-June is considered the summer season. Midway through June, the Southwest monsoon strikes the Deogarh district, and rains last until the end of September. The Post-Monsoon Season is defined by the months of October and November, which is followed by the harvesting season. The district receives 1582 mm of rain on average per year, 86per cent of which falls during the South-West monsoon season. The remaining rains are erratic and fall during the Pre and Post-Monsoon periods and July and August are the raining months.

1.2.2 The Economy

The main source of income is agriculture. With the execution of several development initiatives and diversity in the occupational structure of the workforce, the district's economy is progressively growing. Approximately one-fourth of the district's GDP comes from agriculture, and more than 75per centof all workers are employed in the sector. The region contains abundant natural resources. A sizable portion of the district's tribal people relies on the forest for their livelihood, which covers 53.06 per cent of the district's total land area. Additionally, the district has an abundance of water resources. The livelihood of the inhabitants has greatly benefited from the contributions of rivers like the Brahmani and Tikira as well as reservoirs like the Rengali and GohiraDams. Many individuals support themselves by cultivating minor minerals and building materials for use in quarries and mines.

Although there are not any large-scale enterprises in the area, there are 144 cottage industries and 18 small-scale ones that rely on forest products and other accessible natural resources to employ and support a huge number of people. Agriculture, horticulture, and forestry in the Deogarh area have good growth and development potential for offering the local population a variety of livelihood options. Governmental initiatives aim to boost these endeavours and make them reliable sources of income.

1.2.3 The Population and their Culture

Deogarh district has 312,520 populations, according to the 2011 census. As a result, it is ranked 571thout of 640 overall in India. The district's population density is 106 people per SquareKilometre (270 people per square mile). Its population grew at a 13.88per centannual rate between 2001 and 2011. In Deogarh, there are 976 girls for every 1000 males and 73.07per centof people are literate. 7.16 per cent of people reside in urban areas. The population is made up of 16.67per centScheduled Castes and 35.33per cent Scheduled Tribes, respectively. Deogarh district languages (2011) Odia (89.88per cent), Munda (3.31per cent), Kisan (2.60per cent), Sadri (1.83per cent) andOther(2.38per cent). Festivals serve as a window into the socio-anthropological evolution of living styles, and several occasions call for the use of vibrant folk dances, folk melodies, and community dances accompanied by traditional musical instruments. In the Deogarh district, ritual acts such as Nuakhai, Karamasani, PuoJiuntia, Rakhi Bandhani (Rakhi Purnima), Janmashtami, Dasahara, Deepabali, and Puspuni are clearly recognized as common festivals, with each event having an impact on the people's lives, way of life, and sense of religion and belief. Among other festivals, Purunagarh's Car Festival of Lord Jagannath, Kalla's ChandanYatra, Jhadeswar Temple's Shiva Ratri, Basaloi'sThakurani Yatra, Kandhal'Laxmi Puja, Ballam's Durga Puja, Barkot's Kali Puja, Deogarh's MakarYatra, Gayatri Jagyan, and Geeta Jagyan are celebrated.

1.2.4 Administration

Out of the former bigger Sambalpur district of Odisha, the district of Deogarh was created as a separate administrative unit. The district covers an area of 2,490 Sq. Km. There are total 875 villages in the district comprising 312, 520 populations as per 2011 census. In the present scenario of administrative set up, there are 3 Blocks, 4Tahsils, 1 Sub-division (Deogarh) in the District. There is 70 gram Panchayats, 4 Police stations. The literacy rate in the Deogarh District is 72.6 per cent with a total of 158,230 males and 154, 290 female literates. Particularly in the area of education, the district has

Deogarh College, Deogarh, Kalla Panchayat Degree College, Panchayat Junior College, Barkote, Panchayat Samiti Junior Higher Secondary School, Danra, Womens' Degree College and the Women's Junior College, Deogarh. There are 706 nos. of villages so far electrified. In the district total no. of Job card issued was 0.65 Lakh.

Table 1.1: Socio-economic and Demographic Features of Deogarh District

Indicators	**Value**
Population (in Lakh.) (as per Census 2011)	3,12,164
Male	1,58,017
Female	1,54,147
ScheduledCastes(in Lakh.)	42,117
Scheduled Tribes (in Lakh.)	92,103
Total Households (inLakh.)	58,324
Sex Ratio (Females per 000' males)	975
Workers	
Total Worker (in Lakh)	165435
Main (in Lakh)	83408
Marginal (in Lakh)	82027
Literacy Rate	72.6
LandUse Pattern2018-19(Area in Hectares)	
Total Geographical Area (Sq. Km.)	2940
Forest (Sq. Km.)	79263
Land Put to Non-Agricultural Use	14363
Barren and Non-Cultivatable Land	3449
Permanent Pasture and Other Agricultural Land	6347
NetArea Sown (in '000 Ha)	811
Cultivable Wasteland	10168
Old Fallow	6806
Current Fallows	4664
Miscellaneous Trees and Groves	811
Average Fertilizer Consumption per ha. (in Kg/ Ha)	34
Irrigation Potential Created in 2017-2018* (Areain'000Hec)	
Kharif (areas in Ha)	26273
Rabi (areas in Ha)	11757
Other Information	
No. of Village Electrified	706
No. of AWC	788
No. of PDS Shops (2011)	78
No. of Job Card issued (since inception in Lakh)	0.65
No. of HHs employed under MGNREGS during2017-2018(in Lakhs)	0.34

Source: District Statistical Handbook, Deogarh 2020

1.2.5 Agriculture and Irrigation

The net area seeded in 2017–18 was 45 000 hectares, compared to the state's 3863 000 hectares. 1299709 quintals of paddy, 1824 quintals of maize, 6279 quintals of mung, 4195 quintals of Biri, 972 quintals of Horse gram, 2041 quintals of till, 1690 quintals of groundnuts, 438 quintals of mustard, 18508 quintals of potato, and 1328 quintals of sugarcane were produced. In the years 2017–18, the Deogarh district used roughly 3644 MT of fertilisers overall, of which 2093 MT were nitrogenous, 1091 MT Phosphatic, and 460 MT Potassic. The consumption of fertilizer per hectare was 34 Kg. According to the Deputy Director of Agriculture for the year 2017–2018, the district's large and medium irrigation projects contributed to the creation of 26273 hectares and 11757 hectares of irrigation potential during the Kharif and Rabi seasons, respectively.

1.3 Objectives

The baseline survey was conducted to obtain information on proposed interventions under Odisha Millets Mission for production, consumption, processing and marketing of millets. The objectives areas follows:

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

1.4 Methodology

1.4.1. Sample Design

Multi-stage sampling method has been followed to select the sample households. In the first stage, one block Tileibani has been selected purposively. From the list provided by the SAA Programme Secretariat, there were 382 target households covering the block in the Deogarh district. In the second stage, two GPs Dholapada and Kansar have been selected for the study in consultation with district Programme coordination of Programme secretariat, WASSAN and block Agriculture Officer, the Facilitating Agencies (FAs) and District level Officials of the Agriculture Department, Govt of Odisha. In the third stage, two villages from each GP have been randomly selected for the study and in the final stage 20 households from each village have been randomly selected for the study. Therefore, a total of 80 HHs from four villages, covering two GPs and one Block have been selected for the present Baseline Study (Table 1.2).

Table: 1.2: Sample Households in Tileibani Block of Deogarh District

Blocks	Programme HHs	Sample HHs	HHs covered under the Baseline Survey (in %)
Tileibani	382	80	20.94
Total	382	80	20.94

Source: Block Agriculture Office and Baseline Survey 2023

1.4.2 Data Collection, Compilation and Analysis

This baseline survey is based on both secondary and primary data. The primary data was collected from the sample households by using a pre-tested interview schedule (Annexure 1). The secondary data on the geographical information, population, agriculture, education, irrigation, forest and institutions was collected from secondary sources such as books, journals, reports and the Census.

1.5 Limitations of the Study

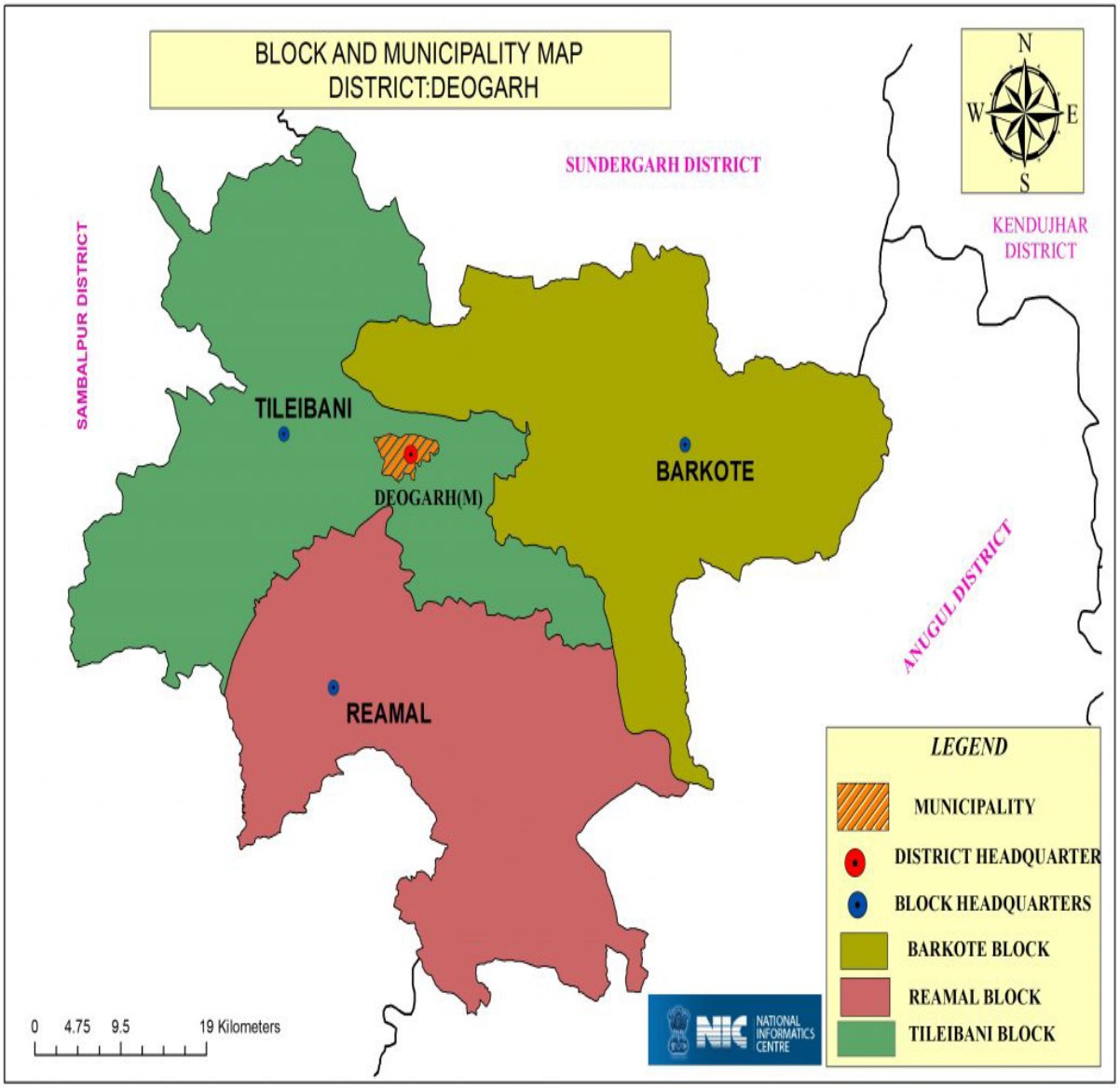
The present Baseline Survey focuses solely on the block of the Deogarh district. However, due to the onset of the harvesting season, coupled with both in and out-migration, some household heads and female respondents were found to be absent during the data collection process. Despite these challenges, it is important to acknowledge the limitations of the present study. Firstly, due to logistical reasons and other difficulties, such as the non-availability of respondents, the study was limited to a random sample of 80 households. Secondly, there is the possibility of recall error, especially in cases involving the actual quantity of consumption and marketing, among others. Lastly, in some instances, sample households, particularly non-participant farmer households, consumed millets without producing them. This was made possible by past stock and acquiring of millets through exchange and barter. Unfortunately, these details were not captured during the survey.

It is essential to consider these limitations while interpreting the findings of the survey. Future studies can address these gaps and improve the accuracy of the data collection process. Despite these limitations, the present survey provides valuable insights into the socio-economic conditions of the selected households and serves as a baseline to measure the progress made in the future.

1.6 Chapters

There are six Chapters. The Introductory Chapter contains the District Profile, Objectives, Methodology and Limitations of the Study. Chapter II covers the Socio-economic Profile of the Sample Households. Chapter III provides details on Production and Productivity of Millets. Chapter IV discusses the Consumption Pattern. Chapter V annotates on the Processing and Marketing of Millets.

Figure1.1: Map of Deogarh District



Source: https://gisodisha.nic.in/Block/DEOGARH.pdf

Chapter II

SOCIO-ECONOMIC PROFILE

2.1 Introduction

This chapter investigates the social and demographic profile of households under Baseline Survey 2023, Phase VII, which includes composition of social groups, the distribution of the population by gender, age, Education and Income, occupation and so on in the blocks of Deogarh district.

2.2 Social Category

This section discussed on social status of sample households in Deogarh district. From the baseline survey it was found that, a significant majority of households (87.5 per cent) belong to the Schedule Tribe, followed by 7.5 per cent of other backward classes and 5 per cent of Schedule castes. None of the households belong of the General caste (Fig.2.1 and Table 2.1).

Fig.2.1: Sample HHs by their Social Category (in %)

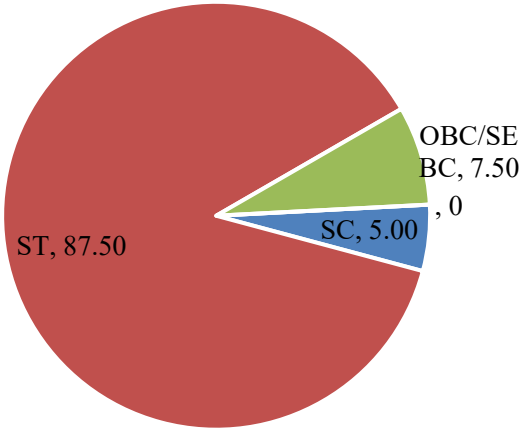


Table 2.1. Distribution of Sample Population by their Social Category

Blocks	*SC*		*ST*		*OBC/ SEBC*		*Others*		*Total*	
	N	*%*	*N*	*%*	*N*	*%*	*N*	*%*	*N*	*%*
Tileibani	4	5	70	87.5	6	7.5	0	0	80	100

Source: Baseline Survey 2023

2.3Distribution Sample Population by their Sex

The term gender refers to various involvement, behaviours, and activities that men and women engage in within economic and social sectors. The present survey data revealed that out of total 286 population of sample households 157 (54.90 per cent) are male and 129 (45.10 per cent) are female (Fig. 2.2 and Table 2.2).

Fig: 2.2 Distribution of Sample Population by their Sex(in %)

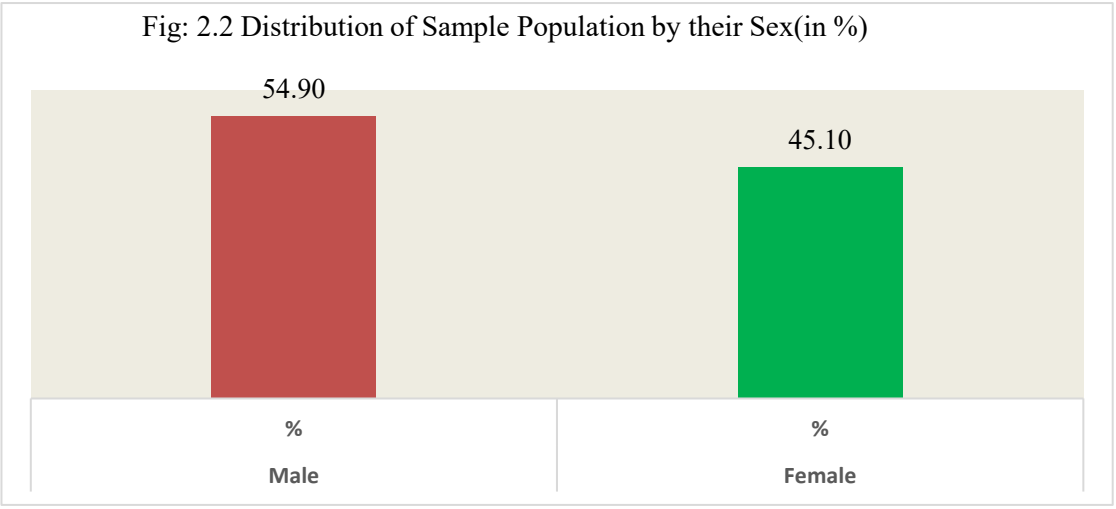


Table 2.2 Distribution of Sample Population by their Sex

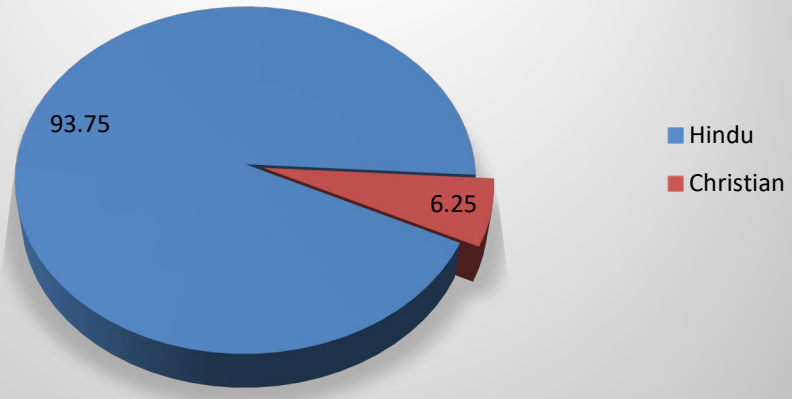
Block	*Male*		*Female*		*Total*	
	N	*%*	*N*	*%*	*N*	*%*
Tileibani	157	54.90	129	45.10	286	100

Source: Baseline Survey, 2023

2.4Religion

Distribution of religion data shows that out of 80 sample households in the district 75 sample HHS (93.75 per cent) belong to Hindu religion and another 5 sample HHs (6.25 per cent) are from Christian religion Fig 2.3. Not a single sample HH belong to any other religion.

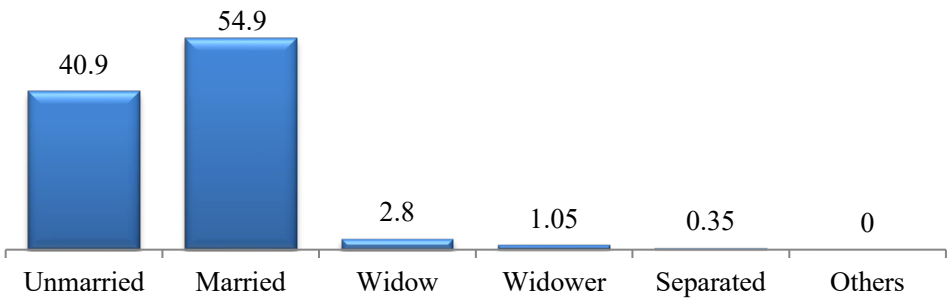
Fig. 2.3: Distribution of Sample Population by their Religion



2.5 Marital Status

According to the findings 54.90 per cent of the people are married in the study area, 40.91 per cent are single. Widow and widower constitute of 2.80 per cent and 1.05 per cent, respectively. However, separated people constitute of a minimal per cent of 0.35 per cent Fig. 2.4.

Fig. 2.4: Distribution of Sample Population by their Marital Status



2.6 Sample Population by their Age Group

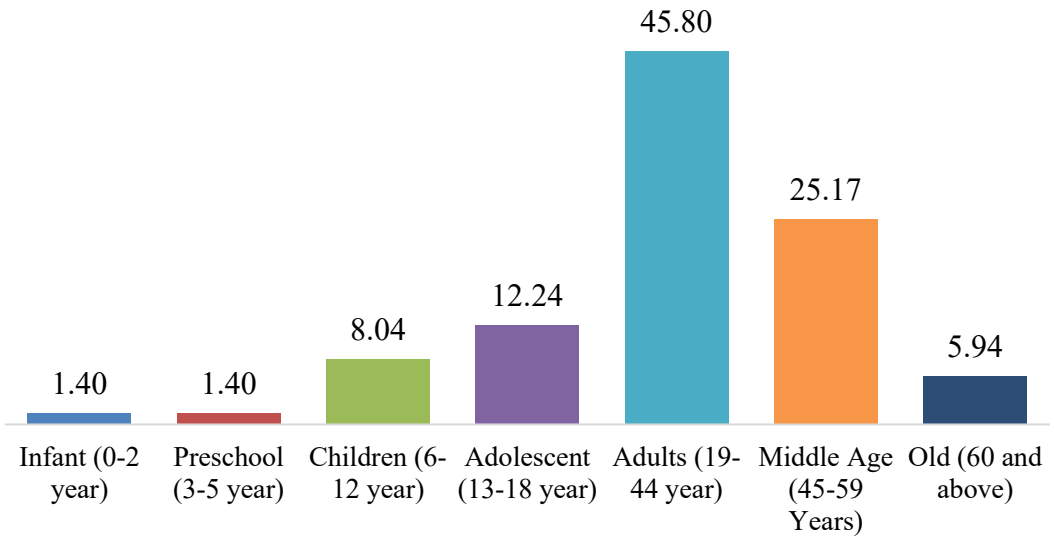
Age stratification is the hierarchical grouping of people into ages within a society. According to the Baseline Survey data, out of the 286-samplepopulation of the sample HHs, 45.80 per cent are adults followed by 25.17 per cent of middle-aged, 12.23 per cent adolescents and 8.04 per cent who are children, 5.94 per cent were elderly people, 1.39 per cent account for infant and Pre-School children (Fig. 2.5 and Table 2.3).

Table 2.3: Distribution of Sample Population by Age group

Age Groups	Tileibani Block	
	N	***%***
Infant (0-2 year)	4	1.39
Preschool (3-5 year)	4	1.39
Children (6-12 year)	23	8.04
Adolescent (13-18 year)	35	12.23
Adults (19-44 year)	131	45.80
Middle Age (45-59 Years)	72	25.17
Old (60 and above)	17	5.94
Total	286	100

Source: Baseline Survey 2023

Fig 2.5: Distribution of the Sample Population by their Age group (in %)



2.7 Education among the Sample HHs

In Table 2.4 education is vital among the sample households in Tileibani block of Deogarh district. The data reveals that sample population having education up to Class 6 to 10 is 34.61 per cent followed by 32.16 per cent up to class 5. In the Higher Secondary level there are 10.13 per cent, Graduation (5.59 per cent), post-graduate (2.44per cent), other degrees like Technical and Management constitutes 1.04 and 0.34 per cent respectively. Out of total households 13.63 per cent were illiterate.

Table 2.4: Distribution of Sample Population by their Education

Education	N	%
Illiterate	39	13.63
Up to class 5	92	32.16
Class 6-10	99	34.61
Higher Secondary	29	10.13
Graduation	16	5.59
Post-Graduate	7	2.44
Technical (Diploma/Degree)	3	1.04
Professional/ Management	1	0.34
Others	0	0
Total	286	100

Source: Baseline Survey, 2023

2.8. Type of Family

Family is the most significant primary group. People adopted nuclear family system in these days. It can be characterized as a small unit that is distinct from the rest of the community and is made up of a husband and wife and their children. In the present Baseline Survey, it was found that out of the total 80 sample households, a majority i.e., 96.25 per cent belong to nuclear family in contrast 3.75 per cent were having Joint family. (Table2.5)

Table 2.5: Distribution of sample Households by their type of Family

Block	Nuclear		Joint		Total	
	N	%	N	%	N	%
Tileibani	77	96.25	3	3.75	80	100

Source: Baseline Survey, 2023

2.9 Possession of Ration Card

As found in the Baseline Survey the distribution of sample households by their possession of Ration Card in the Tileibani Block of Deogarh District – out of the total 80 sample households, all HHs (100 per cent) possess Ration Card.

2.10 Occupations

Economic activities are based on the production, distribution, exchange and consumption of goods and services. The distribution of economic activities across the district shows that 35.31 per cent of the population has accepted agriculture as primary occupation, followed by those who are continuing their study (24.83 per cent), Housewives (17.83 per cent), 13.64 per cent of them work as Daily Wage Labourers and 3.50 per cent were unemployed. Children contribute 2.45 per cent, pension holders are only 1.40 per cent, and the people working in private sector constitutes 0.70 per cent. Population engaged in government sector is 0.35 per cent. There are no businesses holders among the sample HHs in the block (Table 2.6).

Table 2.6: Distribution of Sample Population by their Occupations

Occupations	Tileibani	
	N	%
Agriculture	101	35.31
Daily Wage Labour	39	13.64
Business/Entrepreneurship	0	0
Govt. Sector	1	0.35
Private Sector	2	0.70
Pension/Remittances	4	1.40
Student	71	24.83
Housewife	51	17.83
Unemployed	10	3.50
Others	7	2.45
Total	286	100

2.11 Type of House among the Sample HHs

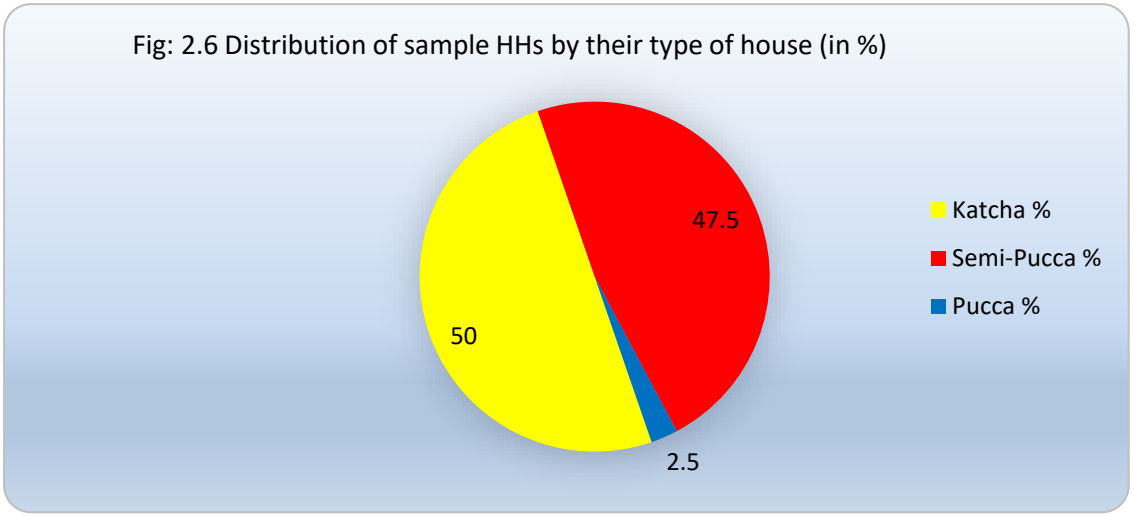
The structure of the house often considered as an important indicator of the social and economic status of the family. Data collected under the Baseline Survey 2023, Phase VII shows that out of 80 sample households in the Tileibani block of Deogarh district, 50 per cent have *Kutcha* houses, while47.5 per cent of the sample HHs has Semi-Pucca house and only 2.5 per cent of the sample HHs have Pucca house (Fig. 2.6 and Table 2.7).

Table 2.7 Distribution of Sample HHs by their Type of House

Block	Kutcha		Semi-Pucca		Pucca		Total	
	N	%	N	%	N	%	N	%
Tileibani	40	50	38	47.5	2	2.5	80	100

Source: Baseline Survey, 2023

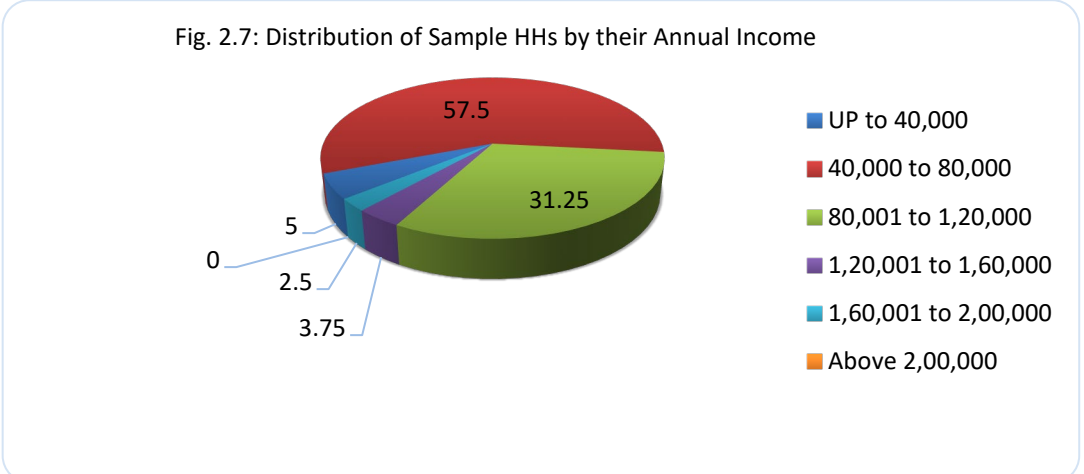
Fig: 2.6 Distribution of sample HHs by their type of house (in %)



2.12 Annual Income

Income is the net sum of all payments received over a specific period. Since findings of the present study 57.5 per cent of households had income between Rs.40001/- to Rs.80000/-, households having annual income Rs 80,001 to Rs.120000/- is 31.25 per cent, households having income is 5 per cent. Only 3.75 per cent of households had an annual income of Rs.120001/- to Rs.160000/-, and 2.50 per. cent households' annual income between Rs 160001/- to Rs.200000/-. (Fig. 2.7)

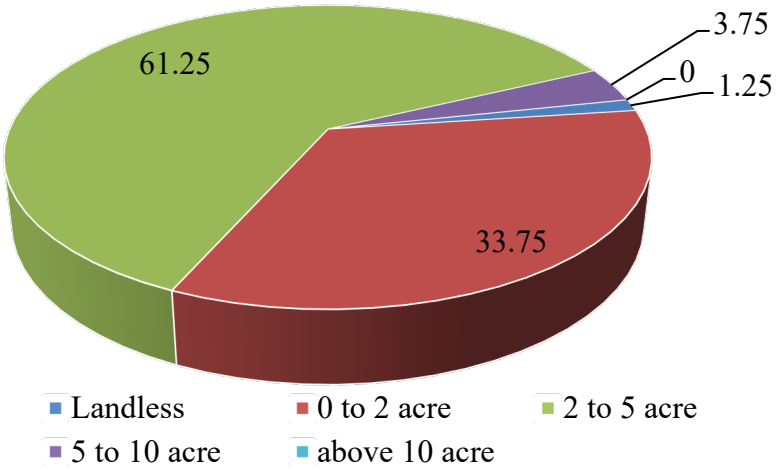
Fig. 2.7: Distribution of Sample HHs by their Annual Income



2.13 Land Ownership by the Sample HHs

Fig. 2.8 depicts that in the block of the Deogarh District; out of total 80 sample households 61.25 per cent of households had more than 2 to 5 acres of land, while only 33.75 per cent owned less than 2 acres. 3.75 per cent had land sizes of between 5 and 10 acres, and 1.25 per cent had no land.

Fig. 2.8: Distribution of Sample HHs by their Land Ownership



2.14 Agricultural Credit

Agricultural loans are availed by a farmer to fund seasonal agricultural operations or related activities like animal farming, purchase of land or agricultural tools. This type of loan also helps buying inputs such as fertilizers, seeds, insecticides etc. Due to the limited resources, most of the farmers must choose to take out loans to meet their needs. Agricultural loans are available for a variety of agricultural activities, including animal husbandry etc. It is found in the Baseline Survey that not a single household in the sample had availed any agricultural loan.

2.15 Conclusion

Majority of the sample households in the block belongs to ST Category. Majority 93.75 per cent of sampled households are all Hindu. 54.90 per cent were married, and most of the population consists of adults (45.80 per cent). In the sampled houses, 34.61 per cent of the household had education from class 6-10, Agriculture is the primary occupation for most of the people. 50 per cent of the households had Kutcha houses, while 57.5 per cent of households earn between Rs.40001/- and Rs.80000/- annually and none have taken out loans for agriculture. Majority 61.25 per cent of the sample Households have more than 2 acres to 5acres.

Chapter III

PRODUCTION OF MILLETS

3.1 Introduction

The Baseline Survey 2023 was conducted to assess the situation of millets production in the target villages before the implementation of the programme. This chapter analyses the data collected from the Tileibani block of Deogarh district. The analysis focuses on the distribution of area under millets and other crops, the usage of seeds and agronomic practices, as well as the production and yield of millets in the sampled villages. This chapter also highlights the challenges and opportunities for promoting millets in the district.

3.2 The Cropping Pattern

Generally, farmers cultivate varieties of crops for both domestic and commercial purposes. Large-scale crops are rice, wheat, and vegetables. The distribution of operational area under millets and other crops in the sample block in the Deogarh district reveals that major portion of the operational area in the district is under paddy. All the sample households cultivate paddy (100 per cent) whereas there are no millets cultivating farmers (Table 3.1).

Table 3.1: Distribution of the sample HHs by their different crops

Block	*Paddy*		*Millets*		*Vegetables*	
	N	*%*	*N*	*%*	*N*	*%*
Tileibani	80	100	4	5	13	16.25

Source: Baseline Survey, 2023

3.3 Sample HH's Area under Different Crops

Crop area refers to the actual area of land used for planting and harvesting crops. The table shows that the total area covered for paddy cultivation is 204 acres, whereas millet cultivated only in 2 acres of land and rest 8 acres is cultivated by vegetables (Table 3.2).

Table 3.2: Distribution of Sample HHs by Area Under Different Crops

Block	Paddy		Millets		Vegetables		Others		Total
	N	Acre	N	Acre	N	Acre	N	Acre	Acre
Tileibani	80	204	4	2	13	8	0	0	214

3.4 Sample HHs by their Expenditure on different Crops

The Baseline data illustrates that the average expenditure for paddy is higher than that of millet. According to Table 3.3, the average annual expenditure for paddy in the block is Rs.8715.69 per acre, where compare to that average annual expenditure of millet is 1850 per acre.

Table 3.3: Sample HHs by their annual expenditure on different crops

Block	*Paddy*		*Millets*		*Vegetables*		*Others*	
	Acre	*Avg.*	*No*	*Avg.*	*No*	*Avg.*	*No*	*Avg.*
Tileibani	204	8715.69	4	1850	13	2450	0	0

Source: Baseline Survey, 2023

3.5 Area, Production and Yield

The surveyed HHs in Deogarh district indicated production of millets only in form of *Mandia.* The total productions of millets are 2.2 quintal. Mandia was cultivated by 4HHsin an area of 4 acre of land. The yield quintal per acre is 0.55 in survey area of Tileibani block.

Table 3.4: Distribution of Sample HHs by their Area, Production and Yield

Block	Kharif			
	No of HHs Cultivating Millets	Mandia Area (in Acre)	Mandia Production (in Qtls.)	Yield (Qtls. / Acre)
Tileibani	4	2	2.2	0.55

Source: Baseline Survey, 2023

3.6 Cultivation of Millets and types of land Use

Generally, millets are cultivated in low fertility land, or in others word millets require less rainfall, moderate temperature, and an adequate amount of sunlight. All4 HHs is cultivating millet in upper land acquiring 2 acres. 100 per cent of sample households cultivated millets in Upper land in both Kharif and Rabi seasons.

3.7 Type, Source and Quality of Seeds Used

This section presents the distribution of sample millets cultivating sample households by the types of millets seeds they used for cultivation. It is found that all the millets cultivating sample households (4 HHs) used local seed, in both Kharif and Rabi seasons. All the HHs is using their seed. From the baseline survey it reported that all of them are satisfied with the quality of seeds they used.

3.8 Methods of Cultivation

Millet cultivating farmers use various methods like Broadcasting, SMI, Line Transplantation, and Line Sowing. As found in the Baseline Survey (Table 3.5) out of the total, only four sample households are cultivating millet during the Kharif season, and 2 HHs each (50 per cent) of them followed both Broadcasting and LT methods.

Table 3.5: Distribution of sample households by Methods of Cultivation					
Block	No of HHs	Methods of Cultivation			
		Broadcasting	LT	LS	SMI
Tileibani	4 (5.00)	2 (50.00)	2 (50.00)	0	0
Source: Baseline Survey, 2023					

Source: Baseline Survey 2023

3.9 Fertilizer and Pesticides Use

It presents the distribution of millets cultivating sample households by type of fertiliser they used for millets cultivation. In Tileibani dist. all of them use organic manure during both Kharif as well as Rabi seasons. While none of the sample households use any types of pesticides for millets cultivation.

3.10 Storage of Seeds

Millets can be stored in various processes. The storage options for millet include paddy rope, open hanging, jute bags, bamboo baskets, and earthen pots. As revealed in the Baseline Survey, in the Tileibani, out of the total 2 sample HHs (50 per cent) stored their millet seeds in earthen pot and another 2 sample HHs stored their millet seeds in Jute bag.

3.11 Reasons for Not Cultivating Millet

There might be a few reasons why millet is not cultivated. In the district of Deogarh, as many as 26 sample HHs (34.21 per cent) shared those millets production is not profitable, another 21 sample HHs (27.63 per cent) cited the reason of shortage of land, lack of irrigation was cited as a major reason by 15 sample HHs (19.74 per cent) and non- availability of seed was shared by as many as 14 sample HHS (18.42 per cent).

Table 3.6 Distribution of sample HHs by their reason for not cultivating millets								
Block	*Not Profitable*		*Shortage of Land*		*Non-availability of Seeds*		*Lack of Irrigation*	
	N	*%*	*N*	*%*	*N*	*%*	*N*	*%*
Tileibani	26	34.21	21	27.63	14	18.42	15	19.74

Source: Baseline Survey 2023

3.12 Conclusion

As revealed in the Baseline Survey 2023, out of the total 80 sample HHs in Tileibani block of only 5 per cent sample HHS are cultivating *Mandia* during 2022. Those cultivating millets also shared that they are adopting Line Sowing as well as Broadcasting method. In the next chapter, analysis of the findings on the consumption pattern of the respondent households is discussed.

Chapter IV

CONSUMPTION OF MILLETS

4.1 Introduction

The chapter has tried to explore the diversity of millet varieties, recipes and dishes that are consumed by these households and how they prepare them. By doing so, the chapter aims to provide a comprehensive picture of the millet consumption patterns and preferences among the sample households in Deogarh district, which is one of the focus areas of SAA.

4.2 Consumption of Millets

According to the survey, the millets consumption rate in Tileibani block of Deogarh district nearly15.00 per cent.

Table 4.1: Distribution of Sample HHs by their Consumption of Millets

Block	Yes		No		Total	
	N	%	N	%	N	%
Tileibani	12	15	68	85	80	100

Source: Baseline Survey, 2023

4.3 Millets Consumption by the Sample Population

We found from (Table 4.2) millets are being consumed by the sample by different age groups. It is clear that 48 (16.78 percent) consume millets in the block. The rate of millets consumption is highest among the adult's population which is 19.85 per cent and followed by middle age group (18.06 per cent). 17.65 per cent consume millets by old age groups. The rate of millets consumption among the Adolescents sample population is 11.43 per cent.

Table 4.2: Millets consuming sample population by their age group

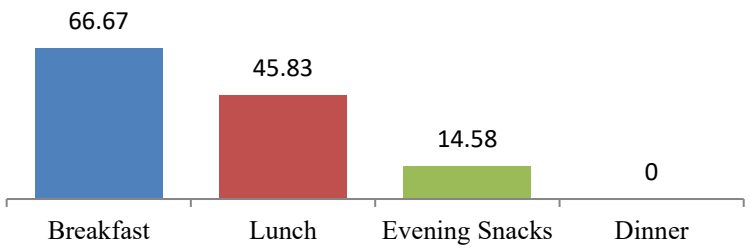
Sl.	Age Group	Tileibani		
		Population	N	%
1	Infant (0-2 year)	4	0	0
2	Preschool (3-5 year)	4	0	0
3	Children (6-12 year)	23	2	8.70
4	Adolescent (13-18 year)	35	4	11.43
5	Adults (19-44 year)	131	26	19.85
6	Middle Age (45-59 year)	72	13	18.06
7	Old age (60 years and above)	17	3	17.65
Total		286	48	16.78

Source: Baseline Survey, 2023

4.4 Consumption of Millets during Different Meals of the Day

Consumption of millets by sample households during different meals of the day reveals that 66.67 per cent of households consumed it in their breakfast, followed by 45.83 per cent of households consumed it in their lunch, and 14.58 per cent households at evening time (snacks). Households did not like to consume dinner time Fig.4.1.

Fig 4.1: Millets Consumption in Different Meals of the Day

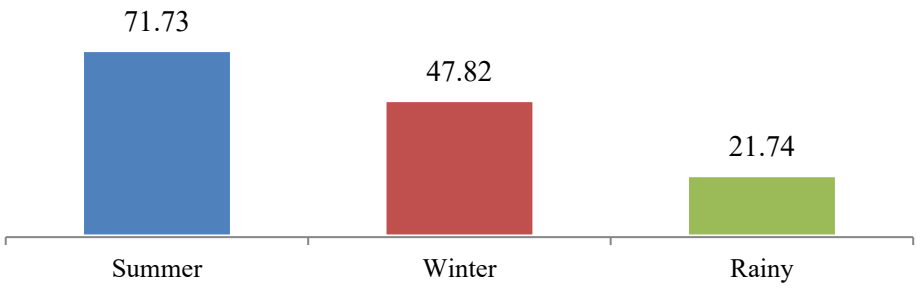


Source: Baseline Survey, 2023

4.5 Millets Consumption across Seasons

Seasons-wise consumption pattern of sample households shows that consumption of millet is more demanded in summer season compared to rainy and winter season (65.21 per cent). Most of the households prefer to consume millet in summer. It is observed that in winter millet consumption rate is 47.82 per cent and 21.74 per cent in rainy seasons Fig 4.2.

Fig 4.2: Millets Consumption across Seasons



Source: Baseline Survey, 2023-24

4.6 Sources of the Millets Being Consumed by the Sample HHs

According to the base line survey, all the sample households purchased millets from outside (Table 4.3).

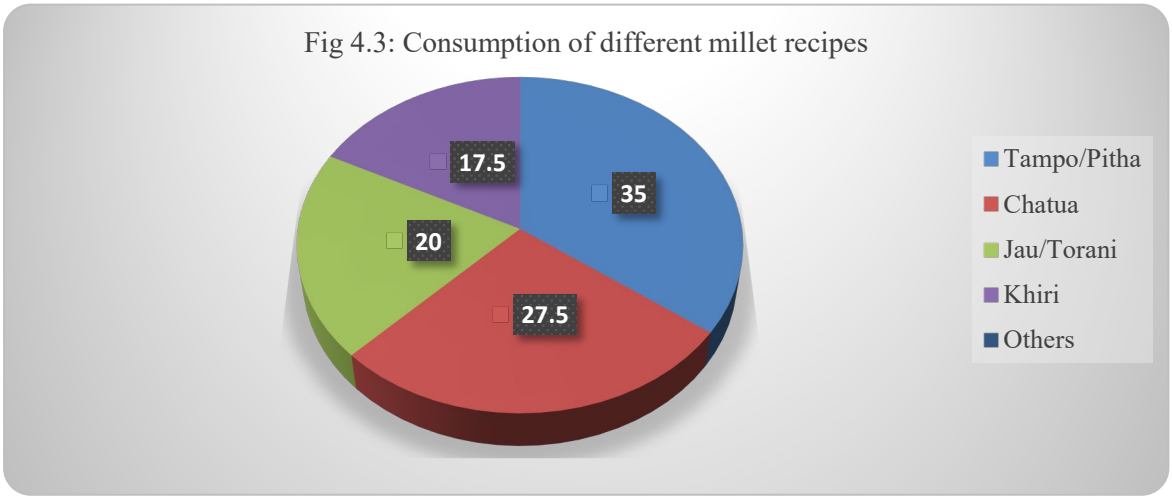
Table 4.3: Sample HHs by their Sources of the Millet being Consumed										
Block	Own Production		Purchased		Borrowed/ Exchange		Others (specify)		Total	
	N	%	N	%	N	%	N	%	N	%
Tileibani	0	0	8	10	4	5	0	0	12	15

Source: Baseline Survey, 2023

4.7 Consumption of Different Millet Recipes

From this baseline study it was found that people were consuming millets in several forms like, *Tampo/Pitha, Khiri, Chhatua, Jau, and Upma* and so on. Fig. 4.4 shows that 35 per cent of households consumed millets as a Tampo or Pitha and follow by Chhatua which is 27 per cent. Other receipts of millets known as Jau or Torani which is of 20 per cent and 17.5 per cent consume as Khiri.

Fig 4.3: Consumption of different millet recipes



Source: Baseline Survey, 2023

4.8 Conclusion

Findings of the Baseline Survey 2023 about the pattern of millets consumption among the sample households in Tileibani block of Deogarh district shows that Millet consumption is higher in the summer season. Most of the respondents, except for infants and preschool children, reported consuming millets. The lower rate of millet consumption among infants may be due to the dietary restrictions for new-borns or young children. Most of the respondents consume millets during lunch time. *Jau/Torani* is the most common millet recipe across the two blocks of Deogarh district, followed by *Tampo/Pitha, Khiri and Idli/Upma*.

Chapter V

PROCESSING AND MARKETING OF MILLETS

5.1 Introduction

Marketing of millets is largely depending on the extent of millets production in the locality and other accessible places in the State. This chapter discusses the various methods of farming and processing being adopted by the sample households and its marketing.

5.2 Processing of Millet

Cleaning and grading the grains is virtually all that is required to prepare the millets before grinding and getting ready for human consumption. As revealed in the Baseline Survey, out of the total four sample millet cultivating HHs is processing their millets by adopting the traditional method (use of Chaki/ Dhinki, where ever it is available). No sample HH is using any technology or machines to process their produces.

5.3 Marketing of Millets

As found in the Baseline Survey, all are consuming their millets and it is also revealed that not a single household is marketing their produces. In the Tileibani block of Deogarh district it is also found that none of the households sell millets are preparing the value added products either for own consumption or even for sale.

5.4 Conclusion

Millets have thin husk and sometimes small stone particles are found hence, that need to be properly removed before processing for consumption. The processing and marketing of millets in the sample households in the Tileibani block of Deogarh district under Baseline Survey 2023, reveals that there are four households are processing their millets by adopting traditional method by using Chaki and Dhinki. It is found that none of the millet producers sell millets.

Annexure1

Mapping of Baseline Survey of Deogarh District

Sl. No	Indicators	Unit	Baseline Value	
			Tileibani	Total
1	% of Sample households Cultivating Millets	%	5.00	5.00
2	Types of Millets Cultivated (2023-24)			
	a) Mandia	%	100	100
3	Avg. Area under Millets/HH (Acre)	Acre	2.1	2.1
4	Millets/Ragi Production per HHs	Qtls	0.50	0.50
5	% per of millets area to total cultivated area	%	0	0
6	Package of Practice	%	0	0
Kharif	a) Broadcasting	%	50	50
	b) LS	%	50	50
	c) LT	%	0	0
	d) SMI	%	0	0
Rabi	a) Broadcasting	%	0	0
	b) LS	%	0	0
	c) LT	%	0	0
	d) SMI	%	0	0
Summer	a) Broadcasting	%	0	0
	b) LS	%	0	0
	c) LT	%	0	0
	d) SMI	%	0	0
7	Yield Rate (Qnt./Acre)	Qtl	1.1	1.1
8	% of HHs Consuming Millets	%		
	a) Breakfast	%	66.67	66.67
	b) Lunch	%	45.83	45.83
	c) Evening Snacks	%	14.58	14.58
	d) Dinner	%	0	0
9	Popular Millets Recipes (%HHs)			
	a) Tampo/Pitha	%	35	35
	b) Jau/Torani	%	20	20
	c) Khiri	%	17.5	17.5
	d) Idli/Upma	%	0	0
10	% of HHs using Processing Ragi			
	a) Manually	%	100	100
	b) Machines	%	0	0
	c) Both	%	0	0
11	% of HH Selling Millets			
	a) Middleman	%	0	0
	b) Mandi	%	0	0
	c) Hat	%	0	0
	d) Money lender/Sahukar	%	0	0
	e) Sahukar	%	0	0
12	% of distress sale (% of Households)	%	0	0

Source: Baseline Survey, 2023

Annexure 2

Confidential and to Be Used for Research Purpose Only

Households Schedule

for

Baseline Survey 2023-24, Phase VII of SHREE ANNA ABHIYAN (SAA)

Serial No..……... Date……...

Part-I: Socio-Economic Status

1. Profile of the Households

1.1. Name of the Households' Head: .....

1.2. Name of the Respondent: .....

1.3. Name of the (i) Village: (ii) GP

(iii) Blocks: (iv) District:

1.4. Category: (i) SC (ii)ST (iii) OBC/SEBC (iv) Others (specify)

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

1.6. Ration Card Holding: (i) Ration Card (ii) Antyodaya Card (iii) Other (iv) No Card

1.7. Type of Family: (i) Nuclear (ii) Joint (iii) Extended (iv) Others (specify)

1.8. House Structure: (i) Katcha (ii) Semi-Pucca (iii) Pucca

3. HHs' Land ownership in Acre:…….

4. Operational Holdings Under Different Crops (in Acre)

Sl No.	Name of the Crops	Yes/ No	Own Land*	Leased-in*	Sl. No.	Name of the Crops	Yes/ No	Own Land*	Leased-in*
a	Paddy				c	Vegetables			
b	Millets				d	Any Others Crops			
Total Operational Holding									

5. Annual Expenditure:

Sl. No	Source	Expenditure Heads						Total Amount (in Rs.)
1	Agriculture	Land Preparation	Transplantation/ Sowing	Weeding	Fertilizers/ Pesticides	Harvesting	Others	
	a) Millet							
	b) Paddy							
	c) Vegetables							
	d) Any Other Crops (Specify)							
3	Households Expenses							
4	Other HH Expenses							
	Total							

6. Annual income of the HH (last year. .....)

7. Have you taken any agricultural loan? 1-Yes 2- No

If yes, please provide details……

2. Household Particulars:

Sl. No	Name of the HH Members	Relationship with HoH (Use Code)	Age	Sex	Marital Status (Use Code)	Educational Qualification (Use Code)	Main		Subsidiary		Consume Millet (Yes/No)
							Occupation (Use Code)	Annual Income	Occupation (Use Code)	Annual Income	
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											

Codes: Marital Status: 1- Married, 2- Unmarried, 3- Widow, 4- Widower, 5- Divorced, 6- Separated, 7- Any Others (pl specify)
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- Grandson, 12- Granddaughter, 13- Father- in-Law, 14- Mother-in-Law, 15- Any Other (Specify)
Education: 1- Illiterate, 2- Up to Class 5, 3- Class 6-10, 4- Higher Secondary, 5- Graduate, 6- Post-Graduate, 7- Technical (Diploma/Degree), 8- Professional/Management, 9- Any Other (Specify)
Occupation: 1- Agriculture, 2- Daily Wage Labour, 3- Business/Entrepreneurship, 4- Govt sector, 5- Private Sector, 6- Pension/Remittances 7- Student 8- Housewife, 9- Unemployed, 10- Others (pl. specify)

Part-II: Production of Millets

8. **Do you cultivate millets?** 1-Yes 2-No

If yes, give millet-wise production details

Sl. No.	Millet Crops	Season	Area (in Acre)	Land Type Used	Sources of Irrigation	Type of Seed Used	Source of Seed	Quality of Seeds	Method of Cultivation	Use of Fertilizer	Use of Pesticides	Production (Qnt.)	Kept for Seed (Qnt.)	Kept for Consumption (Qnt.)	For Marketing (Qnt.)
a	Mandia	Kharif													
		Rabi													
		Summer													
b	Suan/ Kosla /Gurji	Kharif													
		Rabi													
		Summer													
c	Koda	Kharif													
		Rabi													
		Summer													
d	Any other (specify)	Kharif													
		Rabi													
		Summer													

Land Type Used: 1-Upperland, 2-Slope Land, 3-Middle Land, 4-Low Land.
Sources of Irrigation: 1. Rain, 2. Farm Pond, 3- Stream, 4- MIP/WS, 5-River, 6- Canal, 7- Bore well, 8-Others (Specify).
Type of Seed Used: 1-Local, 2- Certified, 3-HYV. Source of Seeds: 1-Own Seed, 2- Relatives, 3-Market, 4- NGO, 5- Govt./ Community Seed Centre, 6-Others (pl. specify)
Quality of Seeds: 1. Good, 2. Average, 3. Bad
Method of Cultivation: 1) SMI- System of Millets Intensification, 2) LT- Line Transplantation, 3) LS- Line Showing, 4) Broadcasting, 5) Others (specify)
Use of Fertilizer: 1) Organic Manure, 2) Chemical Fertilizers, 3) Both, 4) No Use. Pest Control: 1) Bio-Pesticides, 2) Chemical Pesticides, 3) Both, 4) No Use

9. Whether you follow mixed farming or mono farming system? **1. Mixed 2 . Mono**
If mixed, with which are the crops(s)?

10. How do you store your seed and grain?

(i) Jute Bag (ii) Earthen Pot (iii) Bamboo Basket (iv) Pura (paddy rope)
(v) Open Hanging (vi) Other (Specify)

11. Had your seed or grain got damaged during last year? **1. Yes 2 . No**

12. Have you done weeding for the millets cultivation? **1. Yes 2 . No**

13. If Yes, Number of times you do weeding in your millet fields, by each method?

1) Manually_____ 2) By Weeder_____3) Both_____

14. If By Weeder, Sources of weeder?

i) Own ii) Rental iii) Borrowed from Neighbours iv) Govt. Provided v) Other

15. If HH is not cultivating any of the millets, what is the reason?

(i) Not profitable (ii) Shortage of land (iii) Non-availability of Seeds
(iv) Lack of Irrigation (v) Others (pl. specify) ……

16. How many years have you not cultivated Millets ..... ?

17. Do you like to cultivate Millets under this programme? **1.Yes 2.No**

Part-III: Consumption of Millets

18. Does your households consume millets? **1. Yes 2 . No**
If Yes, Types of millets your HH consumed in different seasons (Put Tick Mark)

Sl. No.	**Name of the Millets**	**Winter**				**Summer**				**Rainy**			
	Times	Breakfast	Lunch	Evening Snacks	Dinner	Breakfast	Lunch	Evening Snacks	Dinner	Breakfast	Lunch	Evening Snacks	Dinner
a	Mandia												
b	Suan/ Kosla / Gurji												
c	Koda												
d	Any Other Millets (Specify)												

19. **Millets Requirements of the HH:**

Sl. No.	Seasons	Millets Consumed (in Kg.)	Total Requirement of Millets (Kg.)	Sources of Millet Consumed by HH (in Kg)				Total
				Produced	Purchased	Borrowed/ Exchanged	Other Sources	
a	Winter							
b	Summer							
c	Rainy							
d	Total							

20. **Consumption of Millets in different Recipes** (Put Tick Mark)

Sl. No.	Name of The Millets	Pitha/ Tampo	Chhatua	Jau/ Torani	Khiri	Idli/ Upama	Sweets Items	Others (Specify)	Remarks
a	Mandia								
b	Suan/ Kosla/ Gurji								
c	Kodo								
d	Any Other Millets (Specify)								

21. Is there any special occasion when you prepare millets based items? **1. Yes 2 . No**

    If yes, what is/are the occasion(s) (specify)? _____

22. For this what type of millet is required (specify)?_____

23. Do you purchase Millet Based Products from market for consumption? **1.Yes 2.No**

24. If Yes, what are the millets-based items you usually purchase from the market?

    1. Biscuit/Mixture 2. Idli/Upama 3. Chhatua 4.Pakoda 5. Others (Specify)

25. How do you like the taste of millet-based products you purchased from market?

    1. Liked it 2. So-so 3. Do not Like it

Part-IV: Processing of Millets

26. Do you process the millet products in your house? **1.Yes 2.No**

27. If Yes, who among your family members involved in the processing of millets?

    i). Nos. of Male members_____. ii). Nos. of Female members_____

28. How do you process the millets? a) Traditionally b) Machinery c) Both d) Others (Specify)

29. If traditionally, pleases elaborate the methods of processing.

30. If Machinery, how far is the location of the processing unit from your village? _____km

Part-V: Marketing of Millets

31. Do you sell millets? 1. Yes 2 . No

Sl. No.	Millet Crops	Yes /No	Sources of Millets You Sale	Quantity	Price / Kg.	Govt. Price (MSP)	Where did you sell your millets	Distance in Km	Mode of Transportation Used for Millets Sale	Reason for Sale
a	Mandia									
b	Suan/ Kosla /Gurji									
c	Koda									
d	Any other (specify)									

Sources of Millets You Sell: 1. Own Produced, 2. Purchase from Farmers, 3. Others (Specify)
Where Sold Your Millets: 1. Govt. *Mandi, 2.* Middlemen/ Local Businessman, 3. Moneylender/ *Sahukar, 4.* Daily market/ Haat 5. Others (pl. specify)
Mode of Transportation: 1. Headload, 2. Cycle, 3. Cart, 4. Own Vehicle, 5. Hired Vehicle, 6. Public Transport, 7. Others (Specify)
Reason for Sale: 1. Better Price, 2. Immediate Need of Cash, 3. Loan Repayment, 4. Non-Availability of Market, 5.Any Others (specify)

32. Types of Millets, you Sell and Quantity

33. Any instance of distress sale (less than the market price) of Millets? **1.Yes 2.No**
34. If yes, what is the sale price.....and what is the market price.....
35. What are the marketing processes followed by you? a) Barter b) Money c) Others (specify)
36. Do you sell any millet based value-added products? **1.Yes 2.No**
37. If yes, provide the details about the Millet Based Value Added Products you sale.

38. Remarks

Contact no of Respondent ……. **Signature of the Researcher/Field Investigator**

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About NCDS, Bhubaneswar

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