BASELINE SURVEY:

GAJAPATI DISTRICT-2016-17, Phase 1

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

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

2019

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FOREWORD

The seeds for the "Special Programme for Promotion of Millets in Tribal Areas of Odisha" (or, Odisha Millets Mission, OMM) were sown at a consultation meeting held on 27 January 2016 at Nabakrushna Choudhury Centre for Development Studies (NCDS) under the Chairmanship of the Development Commissioner-cum-Additional Chief Secretary (DC-cum-ACS), Government of Odisha, and Chairperson, NCDS, Mr. R. Balakrishnan. 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 Dr. T. Prakash, Chairperson, Karnataka Agricultural Price Commission.

As per the decision taken at the consultation meeting, NCDS submitted a proposal to the Government of Odisha on the revival of millets. Lo and behold, 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.

It was in 2017-18 that budget was apportioned and after the selection of facilitating agencies, the programme was implemented in *kharif* 2017 in 27 of the 30 blocks that were selected to be part of OMM. To help us better assess OMM, the baseline scenario of 2016-17, that is, prior to intervention in *kharif* 2017 is important.

After obtaining a list of farmers households (HHs) that were growing millets, as part of the programme in *kharif* 2017, a survey design was firmed up, and a baseline survey was conducted among 7000+ HHs during October/November of 2017. The information collected from these HHs in 27 blocks spreads across seven districts are being put up as baseline reports.

The current baseline report is that of Gajapati and the lead author for this has been Dr Biswabas Patra, Research Officer, NCDS. As Principal Investigator, I compliment him and all the members of the team for taking up this arduous work and in bringing the results into completion.

The preliminary results from the baseline survey and the outcome from *kharif* 2017 has been encouraging. Production, yield and returns from millets have more than doubled in areas under OMM. It is this and a demand from the communities that led the government to increase the scope of OMM from 30 blocks in 2017-18 to 55 blocks (an addition of 25 blocks in the second phase) in 2018-19 and will have 72 blocks (a further addition of another 17 blocks in the third phase) in 2019-20. It is for this that the seven district-specific baseline survey reports and an aggregate state-level report are being referred to as first phase baseline survey reports.

Concurrently, the scope of OMM has also led to convergence with other departments. Some of these being the involvement of women self-help groups (SHGs) in putting up a stall of *Mandia Café* at the Hockey World Cup 2018, the procurement of *ragi* (finger millets) in *kharif* 2018, the plans to pilot millet meals and provide millet *ladoos* in *Aanganwadis* in 2019. There has been interest in OMM from the central as also other state governments. OMM has also raised curiosity among scholars within the country as also abroad. And, so they say, the proof of OMM is in its reverberation.

Srijit Mishra
Director, NCDS

ACKNOWLEDGEMENTS

Preparation of this report required concerted efforts of a number of individuals and institutions. First and foremost, we would like to express our sincere gratitude to farmers, farmers' representatives/associations, senior officers from the state Government, particularly to Mr. R. Balakrishnan, Indian Administrative Service (IAS), former Development Commissioner cum Additional Chief Secretary (DC-cum-ACS) and former Chairman, Nabakrushna Choudhury Centre for Development Studies (NCDS); Mr. Asit Kumar Tripathy, IAS, DCcum ACS, Government of Odisha and Chairman, NCDS; Mr. Manoj Ahuja, IAS, former Principal Secretary, Department of Agriculture and Farmers' Empowerment (DAFE); Dr. Saurabh Garg, IAS, Principal Secretary, DAFE; Mr. Bhaskar Jyoti Sarma, IAS, Special Secretary, DAFE; Mr. Hari Ballav Mishra, IAS, former Director, Directorate of Agriculture and Food Production (DAFP); Dr. M. Muthukumar, IAS, Director, DAFP; Ms. Manasi Nimbhal, IAS, former collector; Mr. Anupam Saha, IAS, Present Collector, Gajapati District, Mr. Kashinath Khuntia, Joint Director Agriculture (JDA), Millets & Integrated Farming, DAFP; Dr. Anda Chandra Sasmal, Agronomist, DAFE; Mr. Ansuman Pattnayak, Assistant Agriculture Officer (AAO), Farm, Millets, DAFP; and Mr. Sanjay Kumar Pani, AAO,DAFP

We also express our sincere thanks and gratitude to district level officers of Gajapati District, particularly to Mr. Promod Ku. Mishra, Deputy Director Agriculture; Mr. Bijaya Ku Pradhan, District Agriculture Officer; Mr. Chaitanya Charan Sahoo, Scheme Officer; Mrs Sanghamitra Pradhan, AAO, Gumma block; Mr. Bhabendra Murmu, AAO, Mohana block; Mr. Suryakanta Sethy, AAO,R. Udayagiri block and Mr. Dibyaswarup Panda, AAO, Rayagada block

We also express our gratitude to Mrs. Sumati Jani, Odisha Finace Service (OFS), former Administrative Officer, NCDS; Mr. Sridhar Reddy, Mrs. S.M. Pani, Computer Programmer; Mr. D. B. Sahoo, P.A to Director; Mr. P. K. Mishra, Senior Assistant; Mr. P. K. Mohanty, Jr. Accountant; Mr. N. K.Mishra, Jr. Stenographer and Mr. P. K. Mallia, Computer literate Typist; Mr. Niranjan Mahapatra, Librarian; Mr. S. B. Sahoo, Xerox Operator for their support, help and cooperation.

Special thanks to the members of the Programme Secretariat Watershed Support

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Consultant, Programme Secretariat; Mrs. Aashima Choudhury, State Coodinator; Mr. Ramani Ranjan Nayak, Regional Coodinator; and Mr. Paresh Kumar Behera, Former District Coordinator and Mr. Raghunath Sahoo, Present District Coordinator, who have helped in data collection work and addressing other queries.

Last but not least, credit and special thanks are due to the members of the Facilitating Agencies working in these four blocks of the district, namely, Centre for Community Development (CCD), Social Action for Community Alternative Learning (SACAL), SURAKSHA, and Society for the Welfare of the Weaker Section (SWWS)

We thank Mr. Sarat Kumar Khandai who has helped in data entry work. We also thank Mr. Manoranjan Mishra, Ms Rajadarshini Patra and Mr. Lokanath Sahoo , who worked in the Project as Research Assistants. We would like to sincerely thank all farmer households, without their cooperation, collection of data would not be possible. Our sincere thanks to all of them

Biswabas Patra
ChitaRanjan Das

EXECUTIVE SUMMARY

§1. Study Area

Gajapati is one of the seven districts where the "Special Programme for Promotion of Millets in Tribal Areas of Odisha (hereafter, Odisha Millets Mission, OMM)" was started in *kharif* 2017 in four blocks, namely, Gumma, Mohana, R. Udayagiri and Rayagada.

§1.2 From 1364 surveyed HHs, 346 HHs are from 16 villages of 5 Gram Panchayats (GPs) in Gumma block, 138 HHs are from 20 villages of 5 GP in Rayagada block, 362 HHs are from 44 villages of 8 GP in Mohana block and 518 HHs are from 51 villages of 9 GP in R. Udayagiri block.

§2 Socio-Economic Profile

§2.1 From the surveyed HHs, 94.4 per cent are engaged in cultivation, 24.5 per cent in non-agricultural work, 9.9 per cent in agricultural labour, 0.5 per cent in service sector and 4.4 per cent in business activities.

§3 Production

§3.1 Broadly, there are four types of millets cultivated in Gajapati district during 2016-17, such as *ragi, janha*, *kangu* and *suan* and total millet production was 2264.24 quintals. *kangu* and *suan* cultivated HHs were found to be very small

§3.2 From total 1289 HHs, *ragi* was cultivated by highest 1227 HHs (95.2%), *janha* 108 HHs (8.4%), *kangu* 31 HHs (2.4%) and *suan* 28 HHs (2.2%).

§3.3 From total millets area of 459.8 hectares, *ragi* was cultivated in 432.2 hectares (92.0%); *janha* in 26.5 hectares (5.8%), *kangu* in 6.2 hectares (1.4%) and *suan* in 3.9 hectares (0.8%).

§3.4 From the total production of 2264.2 quintals, the share of *ragi* was 2111.5 quintals (93.3%), *janha* was 142.7 quintals (6.3%), *kangu* was 5.4 quintals (0.2%) and *suan* was 4.6 quintals (0.2%).

§3.5 Per HH production of *ragi* is 1.7 qtls/HH and that of *janha* is 1.3 qtls/HH. The average HH production is equal in case of *kangu* and *suan* i.e. 0.2 qtlss/HH.

§3.6 The yield rate of *ragi* was 5.0 qtls/ha, *janha* was 5.4 qtls/ha, *kangu* was 0.9 qtls/ha and *suan* was 1.2 qtls/ha.

§3.7 For *ragi* cultivation, most of the HHs adopted line sowing method (46.5%) followed by broadcasting method (15.7%), transplanting method (6.9%) and

System of Millets Intensification (SMI) method (4.2%). The rest 26.9 per cent HHs have adopted more than one method of cultivation.

§3.8 For *janha* cultivation most of the HHs have adopted multiple methods of cultivation (71.3%), particularly broadcasting and transplanting methods. Among the HHs who have adopted single method, Line sowing is the most preferred method (11.1%) broadcasting (8.3%), transplanting (7.4%) and SMI (1.9%) are preferred by HHs.

§3.9 For *kangu* cultivation, most of the HHs (45.2%) adopted multiple methods of cultivation such as broadcasting and transplanting. Broadcasting is the most preferred method (32.3%) followed by transplanting method (19.4%) and line sowing method (3.2%).

§3.10 For *suan* cultivation, half of the surveyed HHs have adopted multiple methods. Among the single methods, broadcasting is the most preferred one (28.6%) followed by line sowing and transplanting methods (10.7% each).

§4 Consumption

§4.1 - Consumption of millet is more during summer season, compared to other seasons of the year. Almost all the HHs (97%) consume millets in summer season. About two fifths of the HHs consume it in winter (41%) and rainy (40%) seasons.

§4.2 Most of the HHs take millets items in thier breakfast (98%) and lunch (94%). However, few HHs also take millet items in evening snacks (8%) and dinner (2%).

§4.3 Porridge (*jau*) is the most sought after millet recipe as 99 per cent of the HHs consume it as *jau* The other important millet recipes are c ake/bread (*pi tha*,56% HHs), *tampo* (53% HHs) and *mandia t orani* (28% HHs). Very few HHs are also use millet as beverage in the form of millet beer locally called as '*handia*'.

§5 Processing

§5.1 About half of the HHs (49 %) process millet manually with the help of *chakki*. Only two-fifth of the HHs (38%) processes it by pulveriser. The remaining HHs (13%) process it both manually and with the help of pulveriser.

§5.2 Only six HHs have their own pulverising machine The others are using the pulverising machine for processing millet on payment basis.

§5.3 Only 3.2 per cent HHs have access to the processing machines within 100 meters distance from their houses. 45.7 per cent HHs have access to these units between

100 meters and 2 kms distance. 41.4 per cent have access to processing units between a distance of 2 kms and 5 kms . About 9.7 per cent HHs have to cover a distance of 5 kms and above to process their millets.

§6 Marketing

§6.1 From the 1364 surveyed HHs, 47.4 per cent HHs have sold it in markets in 2016-17. Among them, 626 HHs (96.8%) sold it from their current production and 21 HHs (3.3%) sold it from their storage.

§6.2 From the 647 HHs who sold millet in the year 2016-17, highest 77.4 per cent sold it to the local traders.

§7 Conclusion

The HHs level production of millet is very low as most of the people are cultivating it only for their own consumption. The productivity is also low and about 90 per cent people are practising broadcasting method of cultivation. There are limited processing units in the district and more than half of the people are doing it manually which is the main factor for drudgery among women. Though 60 per cent HHs sold their millet products, the volume of sale is meagre. They also sold it to the local traders with distress sale.

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ABBREVIATIONS

AAO	: Assistant Agriculture Officer
AL	: Agricultural Labour
AP	: Andhra Pradesh
ATMA	: Agricultural Technology Management Agency
CCD	: Centre for Community Development
CCI	: Cotton Corporation of India
FGD	: Focused Group Discussion
FCI	: Food Corporation of India
GP	: Gram Panchayat
ha	: Hectare
HH	: HHs
LS	: Line Sowing
LT	: Line Transplanting
MT	: Metric Tonne
MSP	: Minimum Support Prices
NAL	: Non Agricultural Labour
NTFP	: Non Timber Forest Produce
OBC	: Other Backward Classes
OFS	: Odisha Finance Service
PDS	: Public distribution system
PMFBY	: Pradhan Mantri Fasal BimaYojana
PKVY	: Paramparagat Krishi Vikas Yojana
qtl	: Quintal
SACAL	: Social Action for Community Aternative Learning
SC	: Scheduled Caste
SMI	: System of Millet Intensification
ST	: Scheduled Tribe
SWWS	: Society for the Welfare of the Weaker Section
SP	: Sale Price
WASSAN	: Watershed Support Services and Activities Network

1

INTRODUCTION

Background

Gajapati is one of the backward districts in the state of Odisha. In terms of incidence of rural poverty, Gajapati is the second ranked district in the state, next only to Koraput. It is also a tribal dominated district as more than half of the total population of the district are Scheduled Tribes (ST) (54%). The important sub tribes in the district are Khond, Savar, Soura, Lodha, Koya, Jatapu and Bhuiya. Agriculturally the district is backward, though it is the primary occupation of most of the people. Lack of irrigation facility is one of the important reasons for the backwardness in agriculture. Most of the area in the district are rainfed. Rice, pulses and oilseeds are the important agricultural crops in the district. Some people also cultivate cotton. It is one of the districts of the state where people traditionally cultivate millet. Though millet cultivation area has reduced to a great extent in recent times due to various reasons, people are still cultivating it in some pockets. Considering these factors, the district has been selected under the scheme "Special Programme for Promotion of Millets in Tribal Districts of Odisha". The main objectives of this programme are i) improving production of millet crops by increasing the area under millet crops as well as productivity through adopting improved agronomic practices, ii) promoting HHs level consumption by creating awareness and introducing new millet based recipes and by introducing millets in State Nutrition Programmes and Public Distribution Systems (PDS), iii) setting up of decentralised processing facilities to reduce drudgery and iv) promoting famer colletives and exploring better marketing channels.

From seven blocks in the district, four blocks such as Gumma, Mohana, R. Udayagiri and Rayagada blocks have been covered under the scheme .The present study aims to make an assessment of the situation in terms of production, consumption, processing and marrketing of millets in Gajapati district before implimentation of the programme.

District Profile

The geographical area of the district is of 4325 sq.kms. The district accounts for 2.78 per cent of the state's territory and shares 1.38 per cent of the state's population. The density of population of the district is 134 sq.kms as against 270 people per sq.kms

for the state. The total population of Gajapati District is 5.7 lakh populations comprising

with 2.8 lakh male populations and 2.9 lakh female populations. Total SC population of the District is 0.4 lakh (6.8%) and total ST population of the District is 3.1 lakh (54.3%) that shows that the district is dominated by tribal people. Block wise the share of ST population is highest in Rayagada Block followed by Gumma, R. Udayagiri and Mohana. In all the four blocks their share is more than 50 per cent of the total population. In the blocks like Rayagada and Gumma their share is even more, i.e. more than three-fourth of the total population. The share of SC population is very low compared to that of the ST population. Their share varies between 3.8 per cent and 2.4 per cent in four Blocks.

Educationally, Gajapati district is considered as a backward district. If we look at the literacy rates in the intervened blocks the literacy rate is arround 50 per cent. The female literacy rate is even lower. It is around 40 per cent. Educationally, Gumma is the most backward block, followed by Rayagada, R.Udayagiri and Mohana.

Gajapati District gains a major amount of its revenue through the agricultural sector. Also agro–processing and horticulture industries add to the economic wealth of this region. Economy of Gajapati District is agrarian in character. Except a few agro–processing units, there is no major industry in the District. In the year 2010-11, the net area sown in the district was 56.4 thousand hectare against 5421 thousand hectare of the state.

Block-wise land distribution pattern shows that the net area sown is highest in Mohana block and lowest in Gumma block. The barren and non-cultivable land which can be converted to millet cultivation is found in all the four blocks. This type of land is highest in Mohana block. Besides this, there are also cultivable waste land, old fallows and current fallows, which can be considered for millet cultivation.

During the year 2010-11, it is reported that the irrigation potential created in the district during kharif and rabi were 24482 hectares and 9415 hectares respectively. There is no major/medium irrigation project in the four intervened blocks. The area under irrigation is highest in Gumma block followed by Rayagada and Mohana. It is lowest in R. Udayagiri block.

Table 1.1: Key Indicators of Gajapati District

Indicators	Value
Census 2011	
Population (In Lakh)	5.7
Male (In Lakh)	2.8
Female (In Lakh)	2.9
SC (In Lakh)	0.4
ST (In Lakh)	3.1
Others	2.2
Total HHs (In '000.)	128.8
Average HHs Size	4.5
Sex Ratio (In %)	1032
Workers	
Total Worker (In Lakh)	2.9
Main Worker (In Lakh)	1.7
Marginal Worker (In Lakh)	1.2
Non-Worker (In Lakh)	2.8
Literacy Rate (In %)	53.5
Land Use Pattern (Area in '000 ha.) (2014-15)*	
Total geographical Area (Sq.km.)	4325
Forest	51
Land put to Non-agricultural use	11
Barren & Non-Cultivable Land	141
Permanent Pasture & Other Agricultural Land	15
Net Area Sown	59
Cultivable waste Land	6
Old Fallow	8
Current Fallows	13
Misc. Trees and Groves	5
Average Fertiliser Consumption per hectare (In Kg)	31.5
Irrigation Potential Created (Area in '000 ha.)*	
Kharif	33.6
Rabi	9.1
Other Information	
No. of Village Electrified	1324
No. of Banks	44
No. of AWC	1442
No. of BPL Families	68763
No. of Job Card Issued	121191
No. of Beneficiaries provided employment in MGNREGA	74391
Source: District Statistical Hand book, Gajapati District 2011 *District at a Glance-2016	

Objectives

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

To assess the socio economic condition of farmers in the study area

To understand millet production, productivity and package of practices

To examine the consumption pattern and utislisation of millets

To elucidate different method of processing and mode of marketing

Methodology

Universe

To elucidate the method of processing and mode of marketing, the Programme Secretariat, WASSAN has given a list of 1368 HHs from four selected blocks (Gumma-346 HHs, Mohana-362 HHs, R. Udayagiri 522 HHs and Rayagada-138 HHs) which are supposed to be covered under the Programme, but four HHs from R. Udayagiri block could not be surveyed due to various reasons. Out of total 1364 surveyed HHs, 346 HHs are from 16 villages of five Gram Panchayats in Gumma block, 138 HHs are from 20 villages of five Gram Panchayats in Rayagada block, 362 HHs are from 44 villages of eight Gram Panchayats in Mohana block and 518 HHs are from 51 villages of nine Gram Panchayats in R. Udayagiri block.

Out of the 1364 surveyed HHs, 1289 HHs (94%) have cultivated millet (atleast one type) in 2016 17 and 75 HHs (6%) have not cultivated any type of millet during the same year The block wise break up has been given in Table 1.2

Table 1.2: HHs Surveyed in Gajapati District

Block	Programme HHs (No.)	Surveyed HHs (No.)	Millets Cultivated in 2016-17 (No.)	Millets not Cultivated in 2016-17 (No.)	% of HHs covered
Gumma	346	346	330	16	100.0
Mohana	362	362	304	58	100.0
R. Udayagiri	522	518	517	1	99.2
Raygadaa	138	138	138	0	100.0
Total	1368	1364	1289	75	99.7

Source: WASSAN & Field Survey.

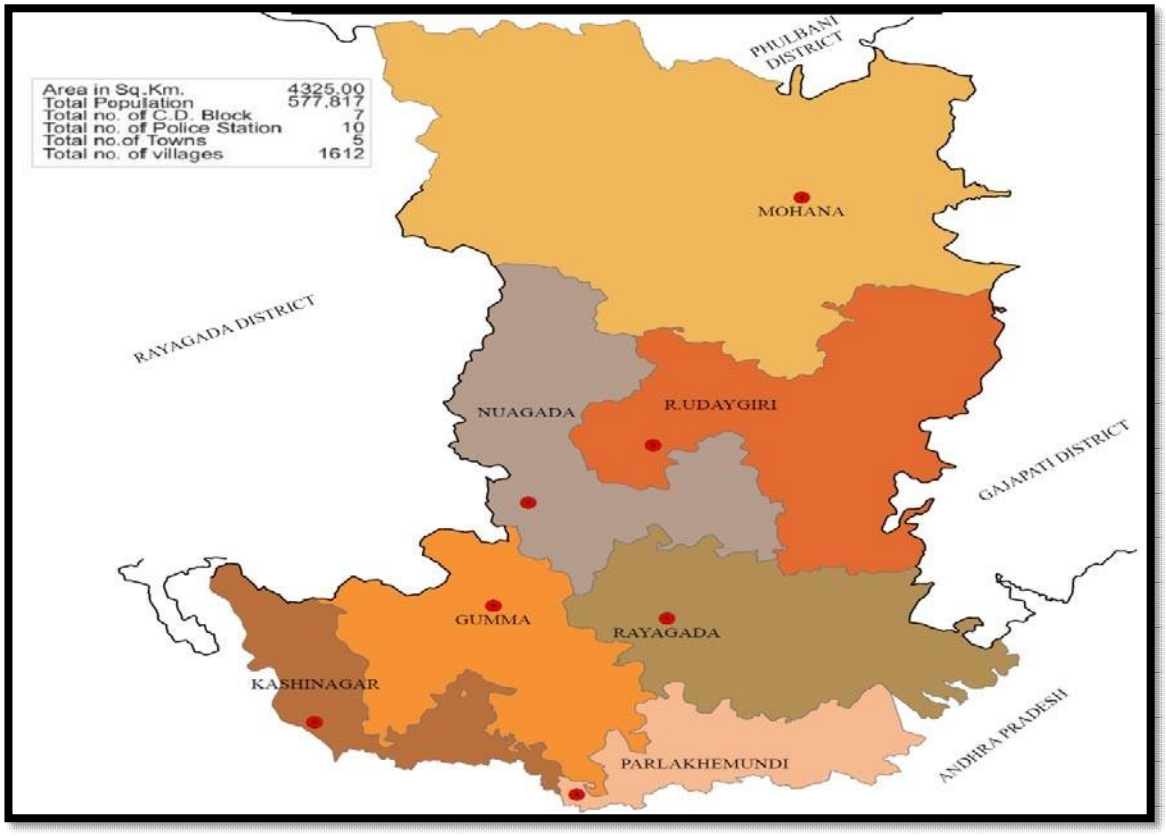
Data Collection

Both primary and secondary sources of information were used for the study. The primary information was collected from the respondents in Gjapati district by using pre-tested interview schedule. The basic information from all the intervened HHs was collected through HHs schedule. In addition to this, Focused Group Discussions (FGDs) were also conducted in the study blocks to capture qualitative informations.The secondary data was also collected in order to get the geographical information, population detail, agricultural and food practices from books, reports, journals, census reports and internet sources.

Chapterization

The baseline survey has been divided into six chapters including the current introductory chapter, which provided district profile, objectives and methodology. The second chapter provides socio-economic profile of HHs surveyed, the third chapter provides details on production and productivity of millets, the fourth chapter discusses the consumption pattern of millets, the fifth chapter elucidates on processing and marketing of millets and the last chapter summarizes the findings.

Fig-1.1: Map of Gajapati District with Blocks



Source: http://gisodisha.nic.in/Block/GAJAPATI.pdf

2
SOCIO-ECONOMIC PROFILE OF HOUSEHOLDS SURVEYED

Introduction

This chapter looks into social and demographic profile of HHs surveyed i.e. distribution by social group and religion and distribution of population by gender. In addition, it provides the distribution by poverty status (proportion below 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 for the HHs surveyed.

Social and Demographic Profile

Out of seven blocks in Gajapati district, the OMM operate in Gumma, Mohana, R. Udayagiri and Rayagada. Total numbers of 1364 HHs from these four blocks have been taken for the purpose of this study. The socio-economic condition of HHs has been discussed below. The total population of 1364 surveyed HHs is 4686. Out of this, 50.1 per cent are males and 49.9 per cent are females (Table 2.1). Block-wise share of population is highest in R. Udayagiri block, followed by Gumma, Mohana and Rayagada blocks. Among the four blocks, the share of male population is little more than female population in three blocks, namely; R. Udayagiri, Rayagada and Mohana. However, in Gumma block, the share of female population is more than that of the male population.

Table 2.1: Distribution of Population by Gender across Blocks

Gender	Gumma		Mohana		R. Udayagiri		Rayagada		Total	
	No	%	No	%	No	%	No	%	No	%
Male	614	48.3	615	50.7	901	51.0	220	50.6	2350	50.1
Female	657	51.7	598	49.3	866	49.0	215	49.4	2336	49.9
Total	1271	100.0	1213	100.0	1767	100.0	435	100.0	4686	100.0

Source: Field Survey

STs are the major social category in the study area and they constitute 95.7 per cent of the surveyed HHs. The share of SC is only 3.4 per cent of the surveyed HHs. Very few HHs (0.8%) belong to Other Caste. Block-wise, it is revealed from the table that all the surveyed HHs in Gumma and Rayagada blocks are ST. SC and OC HHs are found only in Mohana and R. Udayagiri blocks.

Table 2.2: Distribution of HHs by Social Groups across Blocks

Social	Gumma		Mohana		R. Udayagiri		Rayagada		Total	
Groups	No	%	No	%	No	%	No	%	No	%
SC	0	0.0	18	5.0	29	5.6	0	0.0	47	3.4
ST	346	100.0	337	93.1	485	93.6	138	100.0	1306	95.7
OC	0	0.0	7	1.9	4	0.8	0	0.0	11	0.8
Total	346	100.0	362	100.0	518	100.0	138	100.0	1364	100.0

Source: Field Survey
Note: ST is Scheduled Tribe, SC is Scheduled Caste and OC is Other Caste.

Poverty Status

The economic status of most of the surveyed HHs is poor as three-fourths of them live below the poverty line (BPL). Block-wise, more percentages of BPL HHs are found in Rayagada and R. Udayagiri blocks compared to Gumma and Mohana blocks.

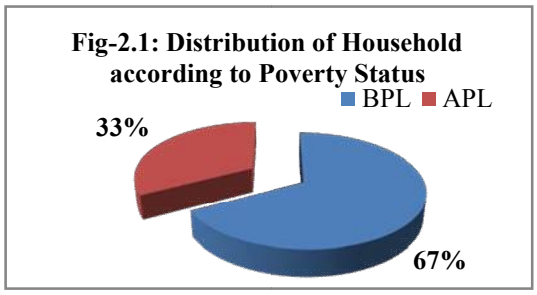


Table 2.3: Distribution of HHs by Poverty Status across Blocks

Economic	Gumma		Mohana		R. Udayagiri		Rayagada		Total	
Category	No	%	No	%	No	%	No	%	No	%
BPL	151	43.6	176	48.6	464	89.6	124	89.9	915	67.1
APL	195	56.4	186	51.4	54	10.4	14	10.1	449	32.9
Total	346	100.0	362	100.0	518	100.0	138	100.0	1364	100.0

Source: Field Survey
Note: BPL is below poverty line and APL is above poverty line

Economic Activities

Economic activities of sample HHs have been shown in table 2.3. Most of the HHs are engaged in cultivation (94.4%), followed by non-agricultural work (24.5%), agricultural labour (9.9%), service sector (0.5%) and business activities (4.4%). Cultivation is the main occupation of the surveyed HHs in all the four blocks. All the surveyed HHs in Rayagada block are doing cultivation work. In R. Udayagiri block 99.8 per cent HHs, in Gumma block 95.4 per cent HHs and in Mohana block 83.7 per cent HHs are doing this activities. In Gumma block, no HH is doing non-agricultural work or business. Similarly, in Rayagada block, no HH is doing service, business or agricultural labour work.

Table 2.4: Distribution of HHs by Economic Activities across Blocks

Economic activity	Gumma		Mohana		R. Udayagiri		Rayagada		Total	
	No	%	No	%	No	%	No	%	No	%
Cultivation	330	95.4	303	83.7	517	99.8	138	100.0	1288	94.4
Non-Agricultural work	0	0.0	42	11.6	288	55.6	4	2.9	334	24.5
Service holder	2	0.6	2	0.6	3	0.6	0	0.0	7	0.5
Business	0	0.0	28	7.7	32	6.2	0	0.0	60	4.4
Agricultural Labour	40	11.6	102	28.2	32	6.2	0	0.0	135	9.9
Total *	346	100.0	362	100.0	518	100.0	138	100.0	1364	100.0

Source: Field Survey

Note: Nos and figures are rounded up to the first decimal, and hence, may not add up to all values across activities.

Structure of House

House structure is another important indicator to assess the economic condition of the HHs. Out of the total surveyed HHs in the district, highest 56.6 per cent HHs have semi-*pucca* house, followed by 22.9 per cent with *pucca* house and 20.5 per cent with *kutcha* house. Block-wise, the percentage of *pucca* houses is 39.1 in Rayagada block, 33.2 in Mohana, 17.4 in R. Udayagiri and 13.9 in Gumma.

Fig-2.2 : Distribution of HHs by house structure

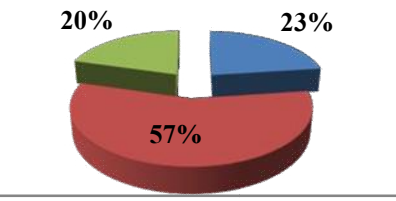


Table 2.5: Distribution of HHs by House Structure across Blocks

Housing Structure	Gumma		Mohana		R. Udayagiri		Rayagada		Total	
	No	%	No	%	No	%	No	%	No	%
Pucca	48	13.9	120	33.1	90	17.4	54	39.1	312	22.9
Semi-Pucca	184	53.2	221	61.0	343	66.2	25	18.1	773	56.7
Kutcha	114	32.9	21	5.8	85	16.4	59	42.8	279	20.5
Total	346	100.0	362	100.0	518	100.0	138	100.0	1364	100.0

Source: Field Survey

Conclusion

STs are the major social category in the study area and they constitute 95.7 per cent of the surveyed HHs. Cultivation is the main occupation of the surveyed HHs in selected blocks. About 56.6 per cent HHs have semi-*pucca* house, 22.9 per cent HHs have *pucca* house and 20.5 per cent HHs have *kutcha* house.

The next chapter throw some light on millet production area, productivity and agronomical practices adopted by the surveyed HHs.

3
PRODUCTION

Introduction

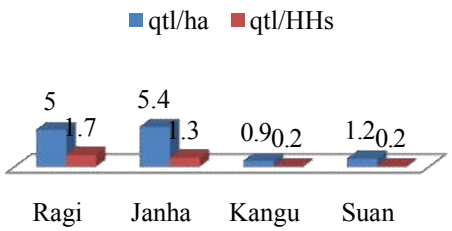
In this chapter an attempt has been made to throw some light on the status of production and productivity of millets, usage of seeds, and package of practices in Gajapati district. These are based on baseline data for 2016-17 from HHs surveyed in Raygada, R. Udayagiri, Mohana and Gumma, the blocks where OMM has been operational since *kharif* 2017.

Area, Production and Yield

In Gajapati district broadly there are four types of millets cultivated during 2016-17 viz. *ragi*, *janha*, *kangu* and *suan*. The total production of different types of millets by these 1289 HHs comes to around 2264.24 quintals.

Maximum 95.2 per cent HHs have cultivated *ragi*. *Ragi* is also called as *mandia* in the local language. There are different types of *mandia* such as *bada mandia, sana mandia*, *kala mandia*, etc. are cultivated in the district. The next important millet produced by the people was *janha*. Around 108 HHs (8.4%) cultivated *janha*. 31 HHs (2.4%) have cultivated *kangu* and 28 HHs (2.2%) have cultivated *suan*.

Fig-3.1: Yield rate of Millets in Gajapati District



From the total production of 2264.2 quintals, the share of *ragi* is 2111.5 quintals (93.3%), *janha* is 142.7 quintals (6.3%), *kangu* is 5.4 quintals (0.2 %) and *suan* is 4.6 quintals (0.2%). The average production of *ragi* per HHs is calculated as 1.7 quintals and *janha* is 1.3 quintals. Surveyed HHs cultivated *kangu* and *suan* in very small quantity. They cultivated it only for their own consumption. The average production per HH is equal in case of *kangu* and *suan* i.e. 0.2 qtls/HH. About 24 HHs cultivated more than one type of millet.

From total millets area of 459.8 hectares, *ragi* was cultivated in 432.2 hectares (92.0%); *janha* in 26.5 hectares (5.8%), *kangu* in 6.2 hectares (1.4%) and *suan* in 3.9 hectares (0.8%) of land.

The yield rate is more in case of *ragi* compared to other types of millets. In case of *ragi*, the yield rate was 5.0 qtls/ha, whereas, it was 5.4 qtls/ha, 0.9 qtls/ha and 1.2 qtl/ha, in case of *janha, kangu* and *suan* respectively. The table 3.1 shows the area, production and yield rate of different types of millets during 2016-17 in the district.

Table 3.1: Area, Production and Yield of Millets in Gajapati District

Millets	HHs		Area		Production		Yield	
	No	%	ha	%	qtl	%	qtl/ha	qtl/HH
Ragi	1227	95.2	423.2	92.1	2111.5	93.3	5.0	1.7
Janha	108	8.4	26.5	5.8	142.7	6.3	5.4	1.3
Kangu	31	2.4	6.2	1.3	5.4	0.2	0.9	0.2
Suan	28	2.2	3.9	0.8	4.6	0.2	1.2	0.2
Total	1289	100.0	459.8	100.0	2264.2	100.0	4.9	1.8

Source: Field Survey

Note: The area and production figures are rounded up to the first decimal, and hence, may not add up to all values across crops.

Gumma Block

The millet production in Gumma block was less as compared to other blocks of Gajapati district. From total production of 224.5 quintals, the share of *ragi*, *janha, kangu* and *suan* was 97.5 per cent, 1.8 per cent, 0.5 per cent and 0.2 per cent, respectively. Similarly, from total millet land of 154.2 hectares, the land under *ragi* was 148.6 hectares (96.4%) and *jahna* was 4.1 hectares (2.7%). The area under *kangu* and *suan* is very meagre. In this block, the yield rate of millets is low (1.5 qtl/ha) compared to other study blocks in the district. The details of area, production and yield rate in Gumma Block have been shown in Table 3.2

Table 3.2: Area, Production and Yield of Millets in Gumma Block

Millets	HHs		Area		Production		Yield	
	No	%	ha	%	qtl	%	qtl/ha	qtl/HH
Ragi	329	99.7	148.6	96.4	218.9	97.5	1.5	0.7
Janha	18	5.5	4.1	2.7	4	1.8	1.0	0.2
Kangu	8	2.4	1.1	0.7	1.1	0.5	1.0	0.1
Suan	1	0.3	0.4	0.3	0.5	0.2	1.3	0.5
Total	330	100	154.2	100.0	224.5	100.0	1.5	0.7

Source: Field Survey

Note: The area and production figures are rounded up to the first decimal, and hence, may not add up to all values across crops.

Mohana Block

The geographical and climate condition of Mohana block is very conducive for millet cultivation. In this block, around 304 HHs cultivated millets in 78.8 hectares of land which produced 427.0 quintals of millet. The cultivation of *ragi* was in 52.2 hectares of land (66.8 %) with the production of 285.1 quintals (66.8 %) which gives 5.4

qtl/ha yields. *janha* was cultivated in 22.5 hectares of land (28.7%) with the production of 137.8 quintals (32.3%) with 6.1 qtls/ha yield. However, *suan* was cultivated in 3.5 hectares of land with production 4.1 quintals, 1.2 qtl/ha yield. No HH cultivated *kangu* in this block.

Table 3.3: Area, Production and Yield of Millets in Mohana Block

Millets	HHs		Area		Production		Yield	
	No	%	ha	%	qtl	%	qtl/ha	qtl/HH
Ragi	243	79.9	52.8	67.0	285.1	66.8	5.4	1.2
Janha	89	29.3	22.5	28.6	137.8	32.3	6.1	1.5
Suan	27	8.9	3.5	4.4	4.1	1.0	1.2	0.2
Total	304	100	78.8	100.0	427.0	100.0	5.4	1.4

Source: Field Survey

Note: The area and production figures are rounded up to the first decimal, and hence, may not add up to all values across crops.

R. Udayagiri Block

Only two types of millets, viz. *ragi* and *jahna* were cultivated in R. Udayagiri block of Gajapati district. *Ragi* was cultivated by all the surveyed HHs in R. Udayagiri block. *Ragi* was cultivated in 138.9 hectares of land (99.9%) with the production of 1250.5 quintals (99.9%). The yield rate of *ragi* was nine qtls/ha during 2016-17. Only one HH cultivated *janha* in 0.2 hectare of land and the production was 1.0 quintal. No HHs in this block cultivated *kangu* or *suan*. The details of production, area and yield rate of this block has been shown in table 3.4.

Table 3.4: Area, Production and Yield of Millets in R. Udayagiri Block

Millets	HHs		Area		Production		Yield	
	No	%	ha	%	qtl	%	qtl/ha	qtl/HH
Ragi	517	100	138.9	99.9	1250.5	99.9	9.0	2.4
Janha	1	0.2	0.2	0.1	1.0	0.1	5.0	1.0
Total	517	100	139.1	100	1251.5	100.0	9.0	2.4

Source: Field Survey

Note: The area and production figures are rounded up to the first decimal, and hence, may not add up to all values across crops.

Rayagada Block

So far as millet cultivation is concerned, the entire 138 surveyed HHs in this block cultivated only *ragi* in 2016-17. None of them has cultivated *janha*, *kangu* or *suan*. The total area under *ragi* was 82.8 hectares and the production was 357.1 quintals. The average production was 2.6 qtls/HH with the yield rate of 4.3 qtls/ha.

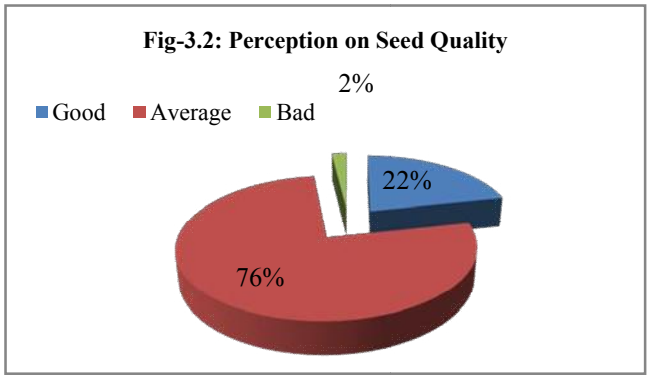
Table 3.5: Area, Production and Yield of Millets in Rayagada Block

Millets	HHs		Area		Production		Yield	
	No	%	ha	%	qtl	%	qtl/ha	qtl/HH
Ragi	138	100.0	82.8	100.0	357.1	100.0	4.3	2.6
Total	138	100.0	82.8	100.0	357.1	100.0	4.3	2.6

Source: Field Survey

3.3 Perception on Quality of Seeds Used

Seed is an important component of production process. The volume and quality of production are very much dependent on the quality of seed. The farmers in the district used the traditional varieties of seed as there is no government supply. Farmer's perception given in table 3.6 revealed that 76.5 per cent HHs used average quality of seeds and 21.6 per cent HHs used good quality of seeds. About 1.9 per cent HHs opined that the quality of seed was bad.



The average seed used per hectare of millet cultivation was 10.0 kg. In this regard, there is wide variation among the blocks. In Rayagada block it was 4.6 kg/ha, whereas, in R. Udayagiri Block it was 12.9 kg/ha. The Block-wise details of quality of seed used and the average quantity of seed used per hectare of land have been given in Table 3.6.

Table 3.6: Perception of Respondents regarding Quality of Seeds Used

Blocks	Seed	Avg. Seed	Good		Average		Bad		Total	
	qty	Kg	HHs	%	HHs	%	HHs	%	HHs	%
Gumma	40.4	10.6	8	2.4	322	97.6	0	0.0	330	100.0
Mohana	19.1	9.3	151	49.7	141	46.4	12	3.9	304	100.0
R. Udayagiri	44.3	12.9	68	13.2	439	84.9	10	1.9	517	100.0
Rayagada	9.3	4.6	51	37.0	84	60.9	3	2.2	138	100.0
Total	113.1	10.0	278	21.6	986	76.5	25	1.9	1289	100.0

Source: Field Survey

Package of Practices

In this section different agronomic practices (broadcasting, line sowing, transplanting and SMI method) used by the farmers in the four surveyed blocks of Gajapati district has been discussed.

` Package of Practices for Ragi

From total sample of 1364 HHs, 1227 HHs (90%) cultivated *ragi* in 509.6 hectares of land. Out of them 570 HHs (46.5%) have adopted line sowing method in 266.6 hectares of land (52.3%), 192 HHs (15.6%) have adopted broadcasting method in 80.5 hectares of land (15.8%), 84 HHs (6.8%) have adopted transplanting method in 29.5 hectares of land (5.8%) and 51 HHs (4.2%) have adopted SMI method in 24.2 hectares of land (4.7%). About 330 HHs (26.9%) have adopted more than one method i.e. one method in one patch of land and another method in the other patch of land. The total area of *ragi* under multiple methods was 108.9 hectares (21.4%).

Table 3.7: Package of Practices for Ragi Cultivation in Gajapati

Package of Practice	HHs		Area		Production		Yield
	No	%	ha	%	qtl	%	qtl/ha
Broadcasting	192	15.6	80.5	15.8	404.8	11.6	5.0
Line Sowing	570	46.5	266.6	52.3	2144.6	61.5	8.0
Transplant	84	6.8	29.5	5.8	84.5	2.4	2.9
SMI method	51	4.2	24.2	4.7	250.6	7.2	10.4
Multiple Methods	330	26.9	108.9	21.4	603.9	17.3	5.5
Total	1227	100.0	509.6	100.0	3488.4	100.0	6.8

Source: Field Survey

Note: The area and production figures are rounded up to the first decimal, and hence, may not add up to the total values across package of practices.

Package of Practices for Janha

The surveyed HHs in Gajapati district has adopted several packages of practices for *janha* cultivation. This includes broadcasting, line sowing, transplanting and SMI method. Out of the total 108 HHs who have cultivated *janha* in 2016-17, nine HHs (8.3%) have adopted broadcasting method in 2.1 hectares land (7.8%), 12 HHs (11.1%) have adopted line sowing method in 2.2 hectares land (8.4%), eight HHs (7.4%) have adopted transplanting method in one (1) hectare land (3.7%) and only two HHs (1.9%) have adopted SMI method in one hectare of land (1.5%). About 77 HHs (71.3%) have adopted more than one method. They have adopted one method of cultivation to cultivate one patch of land and another method of cultivation to cultivate other patch of land. The land under this multiple methods was 20.8 hectares, which is 78.7 per cent of the total land under *janha* cultivation in the district.

Table 3.8: Package of Practices for Jahna Cultivation in Gajapati

Package of practice	HHs		Area		Production		Yield
	No	%	ha	%	qtl	%	qtl/ha
Broadcasting	9	8.3	2.1	7.8	7.6	5.3	3.7
Line Sowing	12	11.1	2.2	8.4	5.4	3.8	2.4
Transplant	8	7.4	1.0	3.7	4.2	2.9	4.3
SMI	2	1.9	0.4	1.5	0.2	0.1	0.5
Multiple Method	77	71.3	20.8	78.7	125.3	87.8	6.0
Total	108	100.0	26.5	100.0	142.7	100.0	5.4

Source: Field Survey

Note: The area and production figures are rounded up to the first decimal, and hence, may not add up to the total values across package of practices.

Package of Practices for Kangu

The surveyed HHs have used four packages of practices i.e. broadcasting, line sowing and transplanting method for *kangu* cultivation. Broadcasting method was adopted by 10 HHs (32.3%) to cultivate 1.9 hectare of land (30.1%).The total production in this method was 1.7 quintal with yield rate 0.9 qtl/ha. The line sowing method was adopted by only one HHs (3.2 %) in 0.4 hectare of land (2.6%). The total production under this method was 0.1 quintal with yield rate of 0.6 qtl/ha. The Transplant method was adopted by six HHs (19.4%) in 1.6 hectare of land (25.5%). The total production under this method was 0.9 quintal with yield rate 0.6 qtl/ha. Multiple methods of cultivation were adopted by 14 HHs (45.2%) in 2.7 hectares of land (43.1%). The total production under this method was 2.6 quintals with yield rate 1.0 qtl/ha.

Table 3.9: Package of Practices for Kangu Cultivation in Gajapati

Package of practice	HHs		Area		Production		Yield
	No	%	Ha	%	qtl	%	qtl/ha
Broadcasting	10	32.3	1.9	30.1	1.7	32.1	0.9
Line Sowing	1	3.2	0.2	2.6	0.1	1.9	0.6
Transplant	6	19.4	1.6	25.5	0.9	17.0	0.6
Multiple Method	14	45.2	2.7	43.1	2.6	49.1	1.0
Total	31	100.0	6.2	100.0	5.3	100.0	0.9

Source: Field Survey

Note: The area and production figures are rounded up to the first decimal, and hence, may not add up to the total values across package of practices.

Package of Practices for Suan

Different package of practices such as broadcasting, line sowing and transplanting methods were adopted by the surveyed HHs for cultivation of *suan* in the study area. Broadcasting method was adopted by 8 HHs (28.6%) in 1.6 hectare of land

(40.6%). The total production under this method was 1.8 quintal with yield rate of 1.1 qtl/ha. Similarly, line sowing method was adopted by three (3) HHs (10.7 %) in 0.2 hectare (6.3%). The total production under this method was 0.9 quintal (19.6%) with yield rate 3.7 qtls/ha. The transplanting method was adopted by three (3) HHs, in which production was 0.2 quintal and the yield rate was 0.8 qtl/ha. About half of the surveyed HHs have adopted multiple methods to cultivate *suan*. The total area under this multiple method was 1.8 hectare and the total production was 1.7 quintal with the yield rate 0.9 qtl/ha.

Table 3.10: Package of Practices for Suan Cultivation in Gajapati District

Package of practice	HHs		Area		Production		Yield
	No	%	ha	%	qtl	%	qtl/ha
Broadcasting	8	28.6	1.6	40.6	1.8	39.1	1.1
Line Sowing	3	10.7	0.2	6.3	0.9	19.6	3.7
Transplant	3	10.7	0.2	6.3	0.2	4.3	0.8
Multiple Method	14	50.0	1.8	46.9	1.7	37.0	0.9
Total	28	100.0	3.9	100.0	4.6	100.0	1.2

Source: Field Survey

Note: The area and production figures are rounded up to the first decimal, and hence, may not add up to the total values across package of practices.

3.5 Conclusion

The yield rate of *ragi* is more compared to other types of millets. About 330 HHs (26.9 %) have adopted multiple methods i.e. one method in one patch of land and other methods in the other patches of lands. Millet consumption has been discussed in the next chapter.

4

CONSUMPTION

Introduction

In Gajapati district people consume millet, particularly *ragi* since time immemorial. In recent years, millet consumption has reduced to a great extent due to change in food preference of people and decrease in production. In this chapter, we are trying to throw some light in the millet consumption of the surveyed HHs in four blocks of the district. Different aspects of consumption such as season of consumption, pattern of consumption in a day, different millet recipes are discussed in this chapter.

Season-wise Consumption

Consumption of millet is more in summer season compared to rainy and winter seasons. During summer season, the availability of other food item reduces and consuming millets keeps them fuller for longer and hydrated. It is observed that 97.3 HHs consume millets in summer season, 41.3 per cent HHs consume millet in winter season and 39.9 per cent HHs consume it in rainy season, Table 4.1.

Table 4.1: Season-wise Consumption of Millets

Seasons	Gumma		Mohana		R. Udayagiri		Rayagada		Total	
	HHs	%	HHs	%	HHs	%	HHs	%	HHs	%
Summer	325	93.9	353	97.5	511	98.6	138	100.0	1327	97.3
Rainy	189	54.6	334	92.3	30	5.8	11	8.0	564	41.3
Winter	250	72.3	256	70.7	36	6.9	2	1.4	544	39.9
Total	346	100.0	362	100.0	518	100.0	138	100.0	1364	100.0

Source: Field Survey

Note: Column totals are not additions across seasons, as a household can consume millets in all seasons.

Millet Consumption during different Meals of the Day

The people in this district are habituated to consume millet based items. The tribal people normally consume more millet based items as compared to non-tribals. In Gajapati district, 97.9 per cent HHs take millet items in their breakfast and 94.0 per cent HHs take it in their lunch. However, consumption of millet is low in evening snacks and dinner. Only 8.1 per cent HHs take millet items as their evening snacks and 2.5 per cent HHs consume in the dinner. Similar trend has been found in all the four surveyed blocks (Table 4.2).

Table 4.2: Pattern of Millets Consumption of the Day

Food Pattern	Gumma		Mohana		R. Udayagiri		Rayagada		Total	
	HHs	%	HHs	%	HHs	%	HHs	%	HHs	%
Breakfast	344	99.4	359	99.2	499	96.3	133	96.4	1335	97.9
Lunch	338	97.7	334	92.3	483	93.2	127	92.0	1282	94.0
Evening snacks	4	1.2	93	25.7	2	0.4	2	1.4	111	8.1
Dinner	1	0.3	32	8.8	1	0.2	0	0.0	34	2.5
Total*	346	100.0	362	100.0	518	100.0	138	100.0	1364	100.0

Source: Field Survey

Note: Column totals are not additions across meals, as a household can consume millets during all meals of the day.

Millet Recipes Consumed

People consume millet based items like porridge, bread, cake, snack, steamed items and beverages since long. But specifically this study covered only major millet items consumed by different surveyed HHs in Gajapati district. Around 98.7 per cent HHs consume millets as porridge which is locally known as *jau*. *mandia jau* (finger millet porridge) is very popular item among the local people. More than half of the population (56.5%) consume millet in form of cake/bread. Basically, finger millet is used to make flat bread and cake, locally it is called *pitha*. Around 52.9 per cent HHs consume it as *tampo*. *Tampo* is a semi liquid recipe prepared by adding sugar or jaggery, coconut chips, etc. People from all ages particularly children preferred this recipe. It is consumed more by the surveyed HHs in R. Udayagiri block, as compared to other three surveyed blocks. Another popular millet recipe is *mandia torani* (finger millet water). This recipe is prepared by adding water to the cooked finger millet. It is a common food for 28.2 per cent of surveyed HHs.

Table 4.3: Consumption of Millet Recipes

Millet Recipes	Gumma		Mohana		R. Udayagiri		Rayagada		Total	
	HHs	%	HHs	%	HHs	%	HHs	%	HHs	%
Jau	345	99.7	350	96.7	515	99.4	136	98.6	1346	98.7
Pitha	18	5.2	146	40.3	499	96.3	107	77.5	770	56.5
Tampo	2	0.6	233	64.4	484	93.4	2	1.4	721	52.9
MandiaTorani	340	98.3	38	10.5	5	1.0	1	0.7	384	28.2
Handia	0	0.0	5	1.4	0	0.0	0	0.0	5	0.4
Others	0	0.0	4	1.1	0	0.0	0	0.0	4	0.3
Total	346	100.0	362	100.0	518	100.0	138	100.0	1364	100.0

Source: Field Survey

Note: Column totals are not additions across recipes, as a household can prepare all recipes.

Very few people use millet as beverages in form of millet beer locally called *handia*. It is prepared by adding different types of herbs to the cooked *ragi* and kept for fermentation.

Conclusion

Millets are consumed across all seasons, but relatively more in summer. There are different types millet based recipes and normally people consume it in their breakfast and lunch. The next chapter looks into processing and marketing of millets.

5
PROCESSING & MARKETING

Introduction

This chapter looks into processing of millets by traditional manual methods and by machines, and the mode by which millets are sold. It also attempts to make an analysis of millets produced, consumed, sold and stored.

Processing Units

Proper processing of millet grains is necessary before making it suitable for final consumption. Processing of millet is relatively difficult than paddy and wheat. In the surveyed HHs, Millets are processed either manually or with the help of machine. Manual processing of millet is burdensome and normally it is done by female members of the HHs. They do it manually with the help of the local equipments made up of either stone or wood. The stone equipment is locally called as *chakki* and the wooden equipment known as *dhenki kuta*. The processing of *suan* involves more drudgery than other types of millets.

Block-wise processing of millets has been shown in Table 5.1. It is revealed that nearly half of the surveyed HHs process it manually (48.7%) and around two-fifth of them process it through machine (37.8%). Around 13.3 per cent HHs process it both manually and through machine. The rest three HHs (0.2%) couldn't answer this question. The table also revealed that in Rayagada block, all the surveyed HHs processes it manually and no HHs processes it through machine. In Gumma block, nearly three-fourth of the HHs (81.2.0%) processes it manually and in Mohana block more than half of the HHs (54.3%) processes it manually. Among the four blocks, the percentage of manual processing HHs is lowest in R. Udayagiri. In this block, only 12.0 per cent HHs process it manually.

So far as processing of millets through machine is concerned, it is highest in R. Udayagiri block (81.8%), followed by Gumma (18.2%) and Mohana (8.9%). It is also revealed from the table that in Mohana block, about 36.8 per cent HHs process it both by manually and by machine.

Table 5.1: Method of Processing of Millets

Processing	Gumma		Mohana		R. Udayagiri		Rayagada		Total	
	No	%	No	%	No	%	No	%	No	%
Manually	268	81.2	196	54.3	62	12.0	138	100.0	664	48.7
Machine	60	18.2	32	8.9	423	81.8	0	0.0	515	37.8
Both	17	5.2	133	36.8	32	6.2	0	0.0	182	13.3
No Response	3	0.9	0	0.0	0	0.0	0	0.0	3	0.2
Total	330	100.0	361	100.0	517	100.0	138	100.0	1364	100.0

Source: Field Survey

Note: Column totals are not additions across method of processing, as a household can adopt all method.

Millet processing is little difficult in Gajapati district mainly due to insufficient number of processing units and long distance of the processing units from the millet producing HHs. It is revealed from table 5.2 that only six HHs (0.9%) have their own processing machines. Out of this, four are in R. Udayagiri block and one each in Gumma and Mohana blocks. In Rayagada block no HH has own processing machine.

This indicates that all the surveyed HHs process millets through machines by paying charges for it. The situation is almost same across all the blocks.

Table 5.2: Availability of Processing Unit

Processing units	Gumma		Mohana		R. Udayagiri		Rayagada		Total	
	HHs	%	HHs	%	HHs	%	HHs	%	HHs	%
Own machine	1	1.3	1	0.6	4	0.9	0	0.0	6	0.9
In other pulveriser	77	98.7	163	99.4	451	99.1	0	0.0	691	99.1
Total	78	100.0	164	100.0	455	100.0	0	0.0	697	100.0

Source: Field Survey

The accessibility of machine for millet processing in Gajapati district is quite difficult as only 3.2 per cent HHs processes millets through machines, have access to the processing machines within 100 meters distance from their houses. About 21 HHs in R. Udayagiri block and one (1) HHs in Mohana block come under this category. Nearly half of the HHs (45.7%), who process millets by machine, have access to these units between 100 meters and two kms distance. The percentage of these HHs is more in Gumma followed by R. Udayagiri and Mohana blocks. Nearly two-fifths of the machine processing HHs has access to these processing units between distances of 2 kms to 5 kms. The percentage share of these HHs is highest in Mohana block, followed by R. Udayagiri and Gumma blocks. About 9.7 per cent of the HH has to cover a distance of 5

kms and above to process their products. Their percentage is also highest in Mohana block, followed by R. Udayagiri and Gumma blocks. The block-wise distance of the processing units from the surveyed HHs has been given in Table 5.3.

Table 5.3: Distance to Access Processing Unit

Distance (In Km)	Gumma		Mohana		R. Udayagiri		Rayagada		Total	
	HHs	%	HHs	%	HHs	%	HHs	%	HHs	%
Up to 0.1	0	0.0	1	0.6	21	4.7	0	0.0	22	3.2
0.1-2	57	74.0	34	20.9	225	49.9	0	0.0	316	45.7
2-5	12	15.6	104	63.8	170	37.7	0	0.0	286	41.4
5 &Above	8	10.4	24	14.7	35	7.8	0	0.0	67	9.7
Total	77	100.0	163	100.0	451	100.0	0	0.0	691	100.0

Source: Field Survey

Marketing

During the year 2016-17, out of the 1364 surveyed HHs, 47.4 per cent sold millets in markets. Among them, 626 HHs (96.8%) sold it from their current production and 21 HHs (3.2%) sold it from their stored millets. The HHs who sold it from their previous stock are found only in Gumma (45.7%) and Mohana (12.5 %) blocks. The block-wise details have been given in Table 5.4.

Table 5.4: Distribution of Millets Marketing HHs across Blocks

Blocks	No of Surveyed HHs	Marketed HHs from current Production (2016-17)	Marketed HHs from Previous Stock	Total (Col. 3+ Col. 4)	% Of Col.5 to Col.2
1	2	3	4	5	6
Gumma	346	19	16	35	10.1
Mohana	362	35	5	40	11.1
R. Uadayagiri	518	511	0	511	98.7
Raygada	138	61	0	61	44.2
Total	1364	626	21	647	47.4

Source: Field Survey

From 647 HHs who sold millet in the year 2016-17, highest 77.4 per cent opined that they sold it to the local traders in the village itself. Other HHs sold their products in the weekly market (8.8 %), to village money lenders (8.2 %), to middle-man (6.49 %) and to mill-owners (5.3 %). The block-wise picture has been given in Table 5.5.

Table 5.5: Mode of Millet marketing across Blocks

Block	Mill-owner		Middle-man		Local Trader		Weekly Market		Money-Lender		Total	
	HHs	%	HHs	%	HHs	%	HHs	%	HHs	%	HHs	%
Gumma	3	8.8	5	11.9	34	6.8	14	24.6	0	0	35	5.4
Mohana	7	20.6	5	11.9	12	2.4	15	26.3	1	1.9	40	6.2
R. Uadayagiri	17	50	32	76.2	452	90.2	22	38.6	6	11.3	511	79
Raygada	7	20.6	0	0	3	0.6	6	10.5	46	86.8	61	9.4
Total	34	100	42	100	501	100	57	100	53	100	647	100

Source: Field Survey

Note: The row totals are not additions across mode of selling millets, as a household can sell in multiple ways.

Conclusion

Nearly half of the surveyed HHs process millets manually (48.7%) and around two-fifth of them processes it through machine (37.8 %). Around 13.3 per cent HHs process it both manually and through machine. Only six HHs (0.9%) have their own processing machines. From 1364 surveyed HHs, 47.4 per cent have sold it in markets in 2016-17. The next summarises the findings of this study.

6
MAJOR FINDINGS

Broadly, there are four types of millets (*ragi*, *janha*, *kangu* and *suan*) cultivated by the 1289 surveyed HHs in Gajapati District during 2016-17. The area and production of *ragi* was more as compared to that of the other types of millets.

Ragi was cultivated by 95.2 per cent HHs, *janha* by 8.4 per cent HHs, *kangu* by 2.4 per cent HHs and *suan* by 2.2 per cent HHs.

Out of total millets cultivated area, the share of *ragi* was 92.1 per cent, *janha* 5.8 per cent, *kangu* was 1.4 per cent and *suan* was 0.8 per cent.

Out of total millets production of 2264.2 quintals, the share of *ragi* was highest 2111.5 quintals (92.3 %), followed by *janha* 142.7 quintals (6.3%) , *kangu* 5.4 quintals (0.2 %) and *suan* 4.6 quintals (0.2 % .)

Per HHs production of *ragi* is calculated as 1.7 quintal and that of the *janha* is 1.3 quintal and 0.2 quintal for both *kangu* and *suan*.

The yield rate of *ragi* was highest as compared to other types of millets. In case of *ragi*, it was 2.0 qtls/ha, whereas it was 2.2 qtls/ha, 0.4 qtl/ha and 0.5 qtl/ha in case of *janha, kangu* and *suan* respectively.

For *ragi* cultivation, most of the HHs adopted line sowing method (46.5%), broadcasting method (15.7%), transplanting method (6.9%) and SMI method (4.2%). The rest 26.9 per cent HHs have adopted more than one method of cultivation.

For *janha* cultivation most of the HHs have adopted multiple methods of cultivation (71.3%), particularly broadcasting and transplanting methods. Among the HHs who have adopted single method, line sowing is the most preferred method (11.1%) followed by broadcasting (8.3%), transplanting (7.4%) and SMI (1.9%).

For *kangu* cultivation, most of the HHs (45.2%) adopted multiple methods of cultivation such as broadcasting and transplanting. Among the single methods, broadcasting is the most preferred method (32.3%) transplanting method (19.4%) and line sowing method (3.2%) are also practised.

For *suan* cultivation, half of the surveyed HHs have adopted multiple methods. Among the single methods, broadcasting is the most preferred one (28.6%) followed by line sowing (10.7%) and transplanting method (10.7%).

Consumption of millet is more during summer season, compared to other seasons of the year. Almost all the HHs (97%).

Most of the HHs take millets items in thier breakfast (98%) and lunch (94%). However, some HHs also take millet items in evening snacks (8%) and dinner (2%).

Porridge *jau*) is the most sought after millet recipe as 99 per cent of the HHs consume it. The other important millet recipes are cake/bread (*pitha*,56% HHs), *ambo* (53% HHs) and *mandia dorani* (28% HHs). Very few HHs also prepare *Handia* from millet.

About half of the HHs (49 %) process millet manually. Only two fifth of the HHs (38%) process it by pulveriser. The other HHs(13%) process it both manually and with the help of pulveriser.

Only six HHs have their own pulversing machine The others (691 HHs) pulverise it inthe processing units.

Only 3.2 per cent of the HHs have access to the processing machines within 100 meters distance from their houses. Nearly half of the HHs have access to these units between 100 meters and two kms distance. Nearly two-fifth of the machine processing HHs has access to these processing units between a distance of 2 and 5 kms. About 9.7 per cent of the machines processing HHs have to cover a distance of 5 kms and above to process their products.

About 47.4 per cent HHs have sold it in markets during the year 2016-17. Among them, 626 HHs (96.8%) sold it from their current production and 21 HHs (3.3%) sold it from their storage.

From 647 HHs who sold millet in the year 2016-17, highest 77.4 per cent sold it to the local traders.

ସଂଯୁକ୍ତ ଗୃହ - ୧

ଓଡିଶାର ଆଦିବାସୀ ଅଞ୍ଚଳରେ କ୍ଷୁଦ୍ରଶସ୍ୟର ବିକାଶ ନିମିତ୍ତ ସ୍ୱତନ୍ତ୍ର କାର୍ଯ୍ୟକ୍ରମ

ପରିବାର ସମ୍ବନ୍ଧୀୟ ପ୍ରଶ୍ନାବଳୀ

୧. ପରିବାରର ଚିହ୍ନଟ: ସାଙ୍କେତିକ ସଂଖ୍ୟା:

(କ) ଚାଷୀଙ୍କ ନାମ:

ଉତ୍ତରଦାତାଙ୍କ ନାମ:

(ଖ) ଗ୍ରାମ: ଗ୍ରାମପଞ୍ଚାୟତ: ବ୍ଲକ: ଜିଲ୍ଲା:

(ଗ) ବର୍ଗ: (i) ହରିଜନ (ii)ଆଦିବାସୀ (iii) ଅନ୍ୟାନ୍ୟ ପଛୁଆବର୍ଗ(iv) ସାମାଜିକ ଏବଂ ଆର୍ଥିକ ଅନଗ୍ରସର ଶ୍ରେଣୀ (v ସାଧାରଣ(ଉଲ୍ଲେଖକର)

(ଘ) ଉପଜାତି (ଉଲ୍ଲେଖକର) _____

ଙ) ଧର୍ମ: (i) ହିନ୍ଦୁ (ii) ମୁସଲମାନ (iii) ଖ୍ରୀଷ୍ଟିଆନ(iv) ଅନ୍ୟାନ୍ୟ(ଉଲ୍ଲେଖକର)

(ଚ) ବି. ପି.ଏଲ ଶ୍ରେଣୀରେ ଅନ୍ତର୍ଭୁକ୍ତକି ? ହଁ/ ନା

(ଛ) ଘରରପ୍ରକାର ଏବଂ କୋଠାରୀ ସଂଖ୍ୟା: ପକ୍କା- ଆଶିଂକପକ୍କା - ମାଟି-

୨. ସରକାରଙ୍କ କ୍ଷୁଦ୍ରଶସ୍ୟ ମିଶନରେ ଭାଗୀଦାର ଅଛନ୍ତିକି? ହଁ/ ନା

୩. ପରିବାରର ମୋଟ ସଦସ୍ୟଙ୍କ ସଖ୍ୟା:

ଲିଙ୍ଗ	ବୟସବର୍ଗ(ବର୍ଷରେ)		
	୧୪ବର୍ଷ ପର୍ଯ୍ୟନ୍ତ	୧୫-୬୦ବର୍ଷ ମଧ୍ୟରେ	୬୦ବର୍ଷରୁ ଉର୍ଦ୍ଧ୍ୱ
ମହିଳା			
ପୁରୁଷ			

୪. ପରିବାରର ଅର୍ଥନୈତିକ କାର୍ଯ୍ୟକ୍ରମ (ଗତବର୍ଷ):

(କ) ଚାଷ/ଆନୁସଂଗିକ କାର୍ଯ୍ୟ/ ଚାକିରୀ (ସରକାରୀ/ଘରୋଇ)/ବ୍ୟବସାୟ/ଜଙ୍ଗଲଜାତ ଦ୍ରବ୍ୟ ସଂଗ୍ରହ/ଅନ୍ୟାନ୍ୟ (ଉଲ୍ଲେଖକର)

(ଖ) ପରିବାରର ଆନୁମାନିକ ବାର୍ଷିକ ଆୟ (ଟଙ୍କାରେ):_____

୫. ଆପଣ କୌଣସି ଠାରୁରଣ କରିଛନ୍ତିକି? ହଁ/ ନା

ଯଦି ହଁ, କେତେ ଟଙ୍କା ---------- କେଉଁ ସଂସ୍ଥାରୁ ଆଣିଛନ୍ତି ? ----------

୬. ମୋଟ ଜମିର ପରିମାଣ (ଗତବର୍ଷ) (ହେକ୍ଟରରେ):

(କ) ନିଜସ୍ୱ----------ସ୍ଥାନୀୟ ଏକକ----------

(ଖ) ଚାଷ କରିଥିବା ଜମିର ପରିମାଣ (ସ୍ଥାନୀୟ ଏକକରେ) ----------

(ଗ) ମୋଟ ଜଳସେଚିତ ଜମିର ପରିମାଣ (ସ୍ଥାନୀୟ ଏକକରେ) ----------

୭. କ୍ଷୁଦ୍ରଶସ୍ୟ କିପରି ଚାଷ କରିଥିଲେ? (କ) କେବଳ ଗୋଟିଏ ଶସ୍ୟ (ଖ) ଅନ୍ୟଶସ୍ୟ ସହିତ (ଅନ୍ୟଶସ୍ୟର ନାମଲେଖ)

୮. ବିହନର ବ୍ୟବହାର (ଗତବର୍ଷ)

(କ) ବ୍ୟବହାର କରିଥିବା ବିହନର ପରିମାଣ (କିଲୋଗ୍ରାମରେ) ----------

(ଖ) ବିହନର ପରିମାଣ ଯଥେଷ୍ଟଥିଲା କି? ହଁ/ ନା

(ଗ) ବିହନକୁ ବିଶୋଧନ କରିଥିଲେ କି? ହଁ/ ନା

(ଘ) ବିହନରମାନ କିପରିଥିଲା? i) ଭଲii) ସାଧାରଣiii) ଖରାପ

୯. କ୍ଷୁଦ୍ରଶସ୍ୟଚାଷପ୍ରଣାଳୀ(ଗତବର୍ଷ)

ଚାଷ ପ୍ରଣାଳୀ	ଠିକ ଚିହ୍ନ ଦିଅନ୍ତୁ	ଚାଷ ପ୍ରଣାଳୀ	ଠିକ ଚିହ୍ନ ଦିଅନ୍ତୁ
ଅଙ୍କୁରୋଦ୍ଗମ ପରୀକ୍ଷଣ		ମେସିନ୍ ଦ୍ୱାରାଘାସବଛା	
ଛଟାବୁଣା		କେତେଥର ଘାସବଛା ହୋଇଥିଲା(ସଂଖ୍ୟାରେ)	
ଧାଡିବୁଣା		ଜୈବିକ ସାରର ବ୍ୟବହାର	
ରୁଆ		ଜୈବିକ କୀଟନାଶକର ବ୍ୟବହାର	
ଏସ.ଏମ.ଆଇ ପ୍ରଣାଳୀ		ରାସାୟନିକ ସାରର ବ୍ୟବହାର	
ହାତରେ ଘାସବଛା		ରାସାୟନିକ କୀଟନାଶ କରବ୍ୟବହାର	

୧୦ .କ୍ଷୁଦ୍ରଶସ୍ୟରଉତ୍ପାଦନଏବଂବ୍ୟବହାର(ଗତବର୍ଷ)

କ୍ଷୁଦ୍ରଶସ୍ୟର ପ୍ରକାର	କେତେ ଜମିରେ ହୋଇଥିଲା (ଏକରରେ)	ମୋଟଉତ୍ପାଦନ (କ୍ୱିଣ୍ଟାଲରେ)	ଘରେ ବ୍ୟବହୃତ (କ୍ୱିଣ୍ଟାଲରେ)	ବିହନପାଇଁରଖିଥିବା ପରିମାଣ (କିଲୋଗ୍ରାମରେ)	ବିକ୍ରିକରିଥିବା ପରିମାଣ (କ୍ୱିଣ୍ଟାଲରେ)	ମୂଲ୍ୟ (କ୍ୱିଣ୍ଟାଲପିଛା/ ଟଙ୍କାରେ)

୧୧. ଗତବର୍ଷ ଆପଣଙ୍କ ଘରେ କ୍ଷୁଦ୍ରଶସ୍ୟର ପରିମାଣ ଯଥେଷ୍ଟ ଥିଲା କି? ହଁ/ ନା

(କ) ହାରାହାରି ବାର୍ଷିକ ବ୍ୟବହୃତ ପରିମାଣ ---------- ଖ) ହାରାହାରି ବାର୍ଷିକ ଆବଶ୍ୟକତା----------

୧୨. କେଉଁ ସମୟରେ କ୍ଷୁଦ୍ରଶସ୍ୟର ବ୍ୟବହାର କରିଥାଆନ୍ତି? i) ସକାଳେ ii) ଖରାବେଳେ iii) ସଂଧ୍ୟାବେଳେ iv) ରାତିରେ

୧୩. କେଉଁ ଋତୁରେ କ୍ଷୁଦ୍ରଶସ୍ୟର ବ୍ୟବହାର କରିଥାଆନ୍ତି? i) ଗ୍ରୀଷ୍ମଋତୁ ii) ବର୍ଷାଋତୁ iii) ଶୀତଋତୁ

୧୪. ଆବଶ୍ୟକ ପଡିଲେ କେଉଁଠାରୁ କ୍ଷୁଦ୍ରଶସ୍ୟ କିଣିଥାଆନ୍ତି?

i) ବାହାରୁ ii) ପଡୋଶୀ/ ସାଙ୍ଗସାଥୀ/ ସମ୍ପର୍କୀୟଠାରୁiii) ଅନ୍ୟାନ୍ୟ(ଉଲ୍ଲେଖକର)

୧୫. ଆପଣ କ୍ଷୁଦ୍ରଶସ୍ୟକୁ କିପରି ପ୍ରସ୍ତୁତ କରନ୍ତି? i) ହାତରେii) ମେସିନ୍ ସାହାଯ୍ୟରେ

ଯଦି ଉତ୍ତର, ମେସିନ୍ ସାହାଯ୍ୟରେହୋଇଥାଏ ? ନିଜର ମେସିନ୍ ଅଛି କି? ହଁ/ ନା

୧୬. ଆପଣ କ୍ଷୁଦ୍ରଶସ୍ୟରେ କିପ୍ରକାରର ଖାଦ୍ୟ ପ୍ରସ୍ତୁତି କରିଥାଆନ୍ତି ?

ଜାଉ-୧, ପିଠା-୨, ତମ୍ବୋ-୩, ମାଣ୍ଡିଆ-ଡୋରାଣୀ-୪, ହାଣ୍ଡିଆ-୫, ଅନ୍ୟାନ୍ୟ (ଉଲ୍ଲେଖକର)-୬

୧୭. ମହିଳାମାନେ କ୍ଷୁଦ୍ରଶସ୍ୟ ପ୍ରସ୍ତୁତି କରିବାରେ କିଛି ଅସୁବିଧାର ସମ୍ମୁଖୀନ ହେଉଛନ୍ତିକି? ହଁ/ ନା

୧୮. କ୍ଷୁଦ୍ରଶସ୍ୟର ବିକ୍ରୟ ପ୍ରଣାଳୀ:

i) ମିଲ୍ଲମାଲିକଙ୍କୁ ii) ମଧ୍ୟସ୍ଥଙ୍କୁ iii) ସ୍ଥାନୀୟ ବ୍ୟବସାୟୀଙ୍କୁ iv) ବଜାର v) ହାଟରେ/ସାହୁକାରଙ୍କୁ vi) ଅନ୍ୟାନ୍ୟ(ଉଲ୍ଲେଖକର)

୧୯. ବିକ୍ରୟସ୍ଥାନ ଏବଂ ଗ୍ରାମ ମଧ୍ୟରେ ଦୁରତ୍ୱ (କିଲୋମିଟରରେ)

ତଦନ୍ତକାରୀଙ୍କ ସ୍ୱାକ୍ଷର

ସଂଯୁକ୍ତ ଗୃହ -୨

ନବକୃଷ୍ଣ ଚୌଧୁରୀ ଉନ୍ନୟନ ଗବେଷଣା କେନ୍ଦ୍ର ଭୁବନେଶ୍ୱର

ଗୋପନୀୟ, କେବଳ ଗବେଷଣା ନିମିତ୍ତ

ଓଡିଶାର ଆଦିବାସୀ ଅଞ୍ଚଳରେ କ୍ଷୁଦ୍ରଶସ୍ୟର ବିକାଶ ନିମିତ୍ତ ସ୍ୱତନ୍ତ୍ର କାର୍ଯ୍ୟକ୍ରମ

ଗୋଷ୍ଠୀ ଏବଂ ଦଳ ମାନଙ୍କ ସହିତ ଆଲୋଚନା

ଗ୍ରାମ:_____ ଗ୍ରାମପଞ୍ଚାୟତ:_____

ବ୍ଲକ:_____ ଜିଲ୍ଲା:_____

ତାରିଖ:_____ ସମୟ: _____

୧ .ଆଲୋଚନାରେ ଅଂଶଗ୍ରହଣ କରିଥିବା ବ୍ୟକ୍ତି ମାନଙ୍କ ତଥ୍ୟାବଳୀ:

କ୍ରନଂ.	ନାମ	ଲିଙ୍ଗ	ବୟସ	ଜାତି/ଗୋଷ୍ଠୀ	ଶିକ୍ଷା	ବୃତ୍ତି	ସ୍ୱାକ୍ଷର/ଟିପଚିହ୍ନ

ବି. ଦ୍ର: ଗ୍ରାମମୁଖିଆ, ଗ୍ରାମର ଶିକ୍ଷିତ ବ୍ୟକ୍ତି, ପଞ୍ଚାୟତର ନିର୍ବାଚିତ ସଭ୍ୟ,କ୍ଷୁଦ୍ରଶସ୍ୟ। ଚାଷୀ ଏବଂ ଅନ୍ୟାନ୍ୟ ପ୍ରମୁଖ ତଥ୍ୟ ପ୍ରଦାନକାରୀ

ବିଭାଗ-୧: କ୍ଷୁଦ୍ରଶସ୍ୟର ଉତ୍ପାଦନ

୧ . ଗ୍ରାମର କେତେ ଘର କ୍ଷୁଦ୍ରଶସ୍ୟ ଚାଷ କରନ୍ତି :

ମାଣ୍ଡିଆ ,☐ ଶୁଆଁ ☐ କାଙ୍ଗୁ ☐ କୋଦୋ ,☐ ଅନ୍ୟାନ୍ୟ ଉଲ୍ଲେଖକର ☐

୨. କ୍ଷୁଦ୍ରଶସ୍ୟ ଚାଷର ପରିବର୍ତ୍ତନ:

ସୂଚାଙ୍କ	ପୂର୍ବରୁ	ଗତବର୍ଷ
ଜମିର ପରିମାଣ (ଏକରରେ)		
କିସମ		
ଅଧିକ ଅମଳକ୍ଷମ		
ପାରମ୍ପରିକ		
ଚାଷପ୍ରଣାଳୀ		
ଛଟାବୁଣା		
ଧାଡିବୁଣା		
ଏସ.ଏମ.ଆଇ		
ବଛାବଛି (ଲୋକମାନଙ୍କଦ୍ୱାରା)		

ବଛାବଛି (ମେସିନ୍ ସାହାଯ୍ୟରେ)		
କେତେଥର ବାଛନ୍ତି		
କେଉଁ ଖତସାର ବ୍ୟବହାର କରନ୍ତି (କମ୍ପୋଷ୍ଟଖତ)		
ରାସାୟନିକସାର		
କ୍ଷୁଦ୍ରଶସ୍ୟ ବୁଣାଠାରୁ ଅମଳ ପର୍ଯ୍ୟନ୍ତ କେତେ ସମୟ ଲାଗେ(ଦିନ)		
କେଉଁ ଋତୁରେ		
ଖରିଫ ଋତୁ		
ରବି ଋତୁ		
ସମର ଋତୁ		
ଅମଳର ମାତ୍ରା (ହେକ୍ଟରପିଛାକ୍ୟୁଣ୍ଟାଲରେ)		
ପ୍ରକାର-୧		
ପ୍ରକାର-୨		

ବିଭାଗ:- ୨ (କ୍ଷୁଦ୍ରଶସ୍ୟର ବ୍ୟବହାର)

୧. କ୍ଷୁଦ୍ରଶସ୍ୟ ସମ୍ପର୍କିତ ପାରମ୍ପରିକ ଉତ୍ସବ କିଛି କରାଯାଏ କି? ହଁ/ ନା

ଯଦି ହଁ: ୧) ପାରମ୍ପରିକ ଉତ୍ସବ, ୨. ବିହନ ବଦଳ, ୩. ବିଭିନ୍ନ ପ୍ରକାରର ଖାଦ୍ୟପ୍ରସ୍ତୁତି, ୪. ପ୍ରଦର୍ଶନୀ କିମ୍ବା ମେଳାର ଆୟୋଜନ

୨. କେଉଁ ମାସ/ଋତୁରେ କ୍ଷୁଦ୍ରଶସ୍ୟର ଅଧିକ ବ୍ୟବହାର କରାଯାଇ ଥାଏ? ମାସ_____ଋତୁ_____

କାରଣ କଣ - ଉଲ୍ଲେଖକର

୩. କ୍ଷୁଦ୍ରଶସ୍ୟରୁ ପ୍ରସ୍ତୁତ ଖାଦ୍ୟକୁ ଅଙ୍ଗନୱାଡି ମାନଙ୍କରେ ଦିଆଯିବା ପାଇଁ ଆପଣ ଚାହୁଁଛନ୍ତି କି? ହଁ/ ନା

ଯଦି ହଁ, କାରଣ କଣ ଉଲ୍ଲେଖକର

୪. କ୍ଷୁଦ୍ରଶସ୍ୟରୁ ପ୍ରସ୍ତୁତି ଖାଦ୍ୟକୁ ବିଦ୍ୟାଳୟ ମାନଙ୍କରେ ଦିଆଯିବାପାଇଁ ଆପଣ ଚାହୁଁଛନ୍ତି କି? ହଁ/ ନା

ଯଦି ହଁ, କାରଣ କଣ ଉଲ୍ଲେଖକର

୫. କ୍ଷୁଦ୍ରଶସ୍ୟରୁ ପ୍ରସ୍ତୁତି ଖାଦ୍ୟକୁ ଛାତ୍ରାବାସ ମାନଙ୍କରେ ଦିଆଯିବା ପାଇଁ ଆପଣ ଚାହୁଁଛନ୍ତି କି? ହଁ/ ନା

ଯଦି ହଁ, କାରଣକଣ ଉଲ୍ଲେଖକର

୬. କ୍ଷୁଦ୍ରଶସ୍ୟକୁ ସହାୟକମୁଲ୍ୟ କେନ୍ଦ୍ରମାନଙ୍କରେ ଲୋକମାନଙ୍କୁ ବିତରଣ କରାଯିବାପାଇଁ ଆପଣ ଚାହୁଁଛନ୍ତିକି? ହଁ/ ନା

ଯଦି ହଁ, କାରଣକଣ ଉଲ୍ଲେଖକର

ବିଭାଗ: ୩ – କ୍ଷୁଦ୍ରଶସ୍ୟର ପ୍ରସ୍ତୁତିପ୍ରଣାଳୀ

୧.ସାଧାରଣତଃ ଲୋକମାନେ କିପରି କ୍ଷୁଦ୍ରଶସ୍ୟକୁ ପ୍ରକ୍ରିୟା କରଣକରନ୍ତି* ? ☐

୨.କେତେ ପରିବାର କ୍ଷୁଦ୍ରଶସ୍ୟର ପ୍ରକ୍ରିୟାକରଣ ନିଜ ହାତରେ କରନ୍ତି?

୩.ଗ୍ରାମରେ କିମ୍ବା ପଞ୍ଚାୟତରେ କ୍ଷୁଦ୍ରଶସ୍ୟକୁ ପ୍ରସ୍ତୁତ କରିବାପାଇଁ ମେସିନ୍ ଅଛିକି ? ହଁ/ ନା

ଯଦିହଁ, ତେବେ କେତୋଟି ମେସିନ୍ ଅଛି?_____

ଯଦିନା, ତେବେ କେତେ ଦୁରତ୍ୱରେ ମେସିନ୍ ଉପଲବ୍ଧ ହେଉଅଛି,(କିଲୋମିଟରରେ)_____

୪.ଗ୍ରାମଠାରୁ କେତେଦୂରରେ କ୍ଷୁଦ୍ରଶସ୍ୟକୁ ପ୍ରସ୍ତୁତି କରିବାପାଇଁ ଯନ୍ତ୍ରାଂଶ ଉପଲବ୍ଧ ଅଛି? (କିଲୋମିଟରରେ)

(i*ହାତରେଗୁଣ୍ଡକରିମେସିନ୍ଦ୍ୱାରାବଛାବଛିକରିବାଚୋପାଛଡାଇ (iv ,ହାତରେବଛାବଛିକରିବାଚୋପାଛଡାଇ (iii ,ମେସିନ୍ଦ୍ୱାରାଗୁଣ୍ଡକରି(ii ,

ବିଭାଗ: ୪ -ବିକ୍ରୟ ପ୍ରଣାଳୀ

୧ .ବର୍ତ୍ତମାନ ବିକ୍ରୟ କରାଯାଉଥିବା କ୍ଷୁଦ୍ରଶସ୍ୟର ପ୍ରଣାଳୀ* ☐

i*ଚାଷ ଜମିରୁ ସିଧା ବିନା ପ୍ରକ୍ରିୟା କରଣରେ,ii)ବଛାବଛିକରି,iii) ଚୋପା ଛଡାଇ, iv) ଗୁଣ୍ଡକରି, v) ଅନ୍ୟାନ୍ୟଉଲ୍ଲେଖକର

୨. ଚାଷୀମାନେ ସାଧାରଣତଃ କେଉଁଠାରେ କ୍ଷୁଦ୍ରଶସ୍ୟକୁ ବିକ୍ରୟ କରିଥାଆନ୍ତି?* ☐ ☐ ☐ ☐

ମିଲ୍ଲାଲିକଙ୍କୁ ii) ମଧ୍ୟସ୍ଥଙ୍କୁ iii) ସ୍ଥାନୀୟବ୍ୟବସାୟୀଙ୍କୁ iv) ବଜାର/ ହାଟରେ v) ସାହୁକାରଙ୍କୁ vi) ଅନ୍ୟାନ୍ୟ(ଉଲ୍ଲେଖକର)

୩. ପାଖ ବିକ୍ରୟ କେନ୍ଦ୍ରର ଦୂରତ୍ୱ କେତେ? (କିଲୋମିଟରରେ)_____

୪. ପରିବହନର ମାଧ୍ୟମ (କିଲୋମିଟରରେ) _____

ବିଭାଗ: - ୫

୧ । କୃଷିରେ ବିକାଶ ନିମନ୍ତେ କୌଣସି ସରକାରୀ ଅଧିକାରୀ ଆପଣଙ୍କ ଗ୍ରାମକୁ ପରିଦର୍ଶନରେ ଆସିଥିଲେକି ? ହଁ/ ନା

ଯଦି ହଁ, କେଉଁ ସ୍ତରର ଅଧିକାରୀ ଆସିଥିଲା ?

i) କୃଷକ ସାଥି, ii) ଗ୍ରାମ୍ୟ କୃଷି କର୍ମଚାରୀ, iii) ବ୍ଲକ ସ୍ତରୀୟ (ସହକାରୀ କୃଷି ଅଧିକାରୀ),

iv) ଜିଲ୍ଲା ସ୍ତରୀୟ (ଜିଲ୍ଲା କୃଷି ଅଧିକାରୀ / ଜିଲ୍ଲା ଉପ କୃଷି ନିର୍ଦ୍ଦେଶକ),

v) ଅନ୍ୟାନ୍ୟ ଉଲ୍ଲେଖକର_____

୨ । କ୍ଷୁଦ୍ରଶସ୍ୟର ଉତ୍ପାଦନ / ବ୍ୟବହାର / ପ୍ରସ୍ତୁତି ଏବଂ ବିକ୍ରିୟାର ଉନ୍ନତିପାଇଁ ଯଦି କିଛି ମତାମତ ଥାଏ, ତେବେ ଉଲ୍ଲେଖ କରନ୍ତୁ

ଦଳଗତ ଆଲୋଚନା ସଂଚାଳନ କରିଥିବା ବ୍ୟକ୍ତିଙ୍କ ସ୍ୱାକ୍ଷର

13th February 2020

Errata

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