BASELINE SURVEY:

KORAPUT 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 then 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 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+ households during October/November of 2017. The information collected from these households in 27 blocks spread across seven districts are being put up as baseline reports.

The current baseline report is that of Koraput and the lead author for this has been Mr. Arakshit Patra, Research Assistant, NCDS. As Principal Investigaor, I compliment him and all the members of the team for taking up this arduous work and in bringing the results into completion.

The prelimnary results from the baseline survey and the outcome from kharif 2017 has been encoouraging. 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 reverbration.

Srijit Mishra
Director, NCDS

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Arakshit Patra
Chita Ranjan Das
Biswabas Patra

EXECUTIVE SUMMARY

§1 Survey Area

§1.1 Koraput 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 seven blocks, namely, Boipariguda, Boriguma, Dasamantapur, Kundra, Lamataput, Nandapur and Semiliguda**.**

§1.2 Out of 2733 Households (HHs) covered under baseline survey because they cultivated millets (or were enrolled to cultivate millets) in Kharif 2017 under OMM, 360 HHs are from Boipariguda, 202 HHs from Boriguma, 339 HHs from Dasamantapur, 484 HHs from Kundra, 713 HHs from Lamataput, 491 HHs from Nandapur and 144 HHs from Semiliguda. From these, 128 HHs reported not cultivating millets in 2016-17, the period covered under baseline survey, which is the year preceeding intervention under OMM.

§2 SOCIO-ECONOMIC PROFILE

§2.1 From the surveyed HHs, 74.8 per cent belong to Scheduled Tribe (ST), 6.9 per cent belong to Scheduled Caste (SC) and 18.3 per cent belong to other castes.

§2.2 From the surveyed HHs, 96.5 per cent are found engaged in agriculture activities, followed by 11.6 per cent in Minor Forest Collection, 4.2 per cent in allied activities such as agricultural labour and non-agricultural labour, one per cent HH in service, one per cent engaged in business and 10.1 per cent in other activities such as cow grazing and household activities.

§2.3 From the surveyed HHs, 82.7 per cent have pucca houses, 15.1 per cent have Kutcha houses and only 2.3 per cent have semi-pucca houses.

§3 PRODUCTION

§3.1 In Koraput district, from 2605 millets cultivated HHs, *ragi* (finger millets) was cultivated by 2597 HHs and *suan* (little millets) was cultivated by 323 HHs. From 1311.9 ha of millets cultivated land, *ragi* was cultivated in 1147.5 ha (87.5%) of land and *suan* was cultivated in 164.4 ha (12.5%) of land. From total millet production of 10565.37 qtls, the share of *ragi* was 9481.82 qtls (89.8%) and 1083.55 (10.3%) qtls was Suan production. The average yield in seven blocks is 8.1 qtls/ha. In case of Ragi, the yield rate was 8.3 qtls/ha, whereas 6.6 qtls/ha Suan

was yielded. Per HH average millets yield in seven blocks is 4.1 qtls/HH. The average production of Ragi is 3.7 qtls/HH and that of Suan is 3.4 qtls/HH.

§3.2 In Boipariguda Block, from total millets cultivated HHs, Ragi was cultivated by 348 HHs (99.7%) and Suan was cultivated by 29 HHs (8.3%). In case of area cultivated, from total area (193.3 ha of land), Ragi was cultivated in 181.6 ha of land and *Suan* was cultivated in 13.5 ha of land. In case of production, from total production (1274.4 qtls), production of ragi was 1189.9 qtls and production of Suan was 84.5 qtls. In the context of per ha yeild, the total yeild was 6.5 qtls/ha, out of that the yeild of ragi was 6.6 qtls/ha and Suan was 6.3 qtls/ha. Again yeild of ragi and Suan was 3.4 qtls/HH and 2.9 qtls/HH respectively.

§3.3 In Boriguma block, from total 136 millets cultivated HHs, Ragi was cultivated by 135 HHs (9.3%) and Suan was cultivated by only two HHs (1.5%). In case of area cultivated, from total area (71.5 ha of land), Ragi was cultivated in 70.7 ha of land and Suan was cultivated in 1.6 ha of land. In case of production, from total production (442.4 qtls), production of ragi was 432.4 qtls and production of Suan was 10 qtls. In the context of per hectare productivity, total productivity was 6.1 qtls/ha, out of that productivity of ragi was 6.1 qtls/ha and Suan was 6.2 qtls/ha. Again productivity of ragi and Suan was 3.2 qtls/HH and 5 qtls/ha respectively.

§3.4 In Dasamantapur block, from total 328 millets cultivated HHs, Ragi was cultivated by 322 HHs (98.2%) and Suan was cultivated by 215 HH (65.6%). Again six HHs have not cultivated ragi and 209 HHs have cultivated both crops. In case of area cultivated, from total area (252.3 ha of land), Ragi was cultivated in 134.3 ha of land and Suan was cultivated in 118 ha of land. In case of production, from total production (1750.3 qtls), production of ragi was 945.8 qtls and production of Suan was 804.5 qtls. In the context of per hectare productivity, the total productivity was 6.9 qtl/ha, from that productivity of ragi was 7 qtls/ha and Suan was 6.8 qtls/ha with 2.9 qtls/HH and 3.7 qtls/HH respectively

§3.5 In Kundra block, from total 446 millets cultivated HHs, Ragi was cultivated by all HHs and Suan was cultivated by only 8 HHs (1.8%) and eight HHs cultivated Suan with ragi crops in this block. In case of area cultivated, from total area (165.1 ha of land), Ragi was cultivated in 161.3 ha of land and Suan was cultivated in 3.8 ha of land. In case of production, from total production (1011.3 qtls), production of ragi was 989.9 qtls and production of Suan was 21.5 qtls. In the context of per

ha productivity, the total productivity was 6.1 qtls/ha, from that the productivity of ragi was 6.1 qtls/ha and Suan was 5.7 qtls/ha with productivity was 2.2 qtls/HH and 2.7 qtls/HH respectively.

§3.6 in Nandapur block, from total 491 millets cultivated HHs, Ragi was cultivated by all and Suan was cultivated by only 54 HHs (11.0%) in this block and among them some HHs was cultivated double crops. In case of area cultivated, from total area (251.1 ha of land), Ragi was cultivated in 228.6 ha of land and Suan was cultivated in 22.5 ha of land. In case of production, from total production (2482.8 qtls), production of ragi was 2357.2 qtls and production of Suan was 125.6 qtls. In the context of per hectare productivity, total productivity was 9.9 qtl/ha, out of which, productivity of ragi was 10.3 qtls/ha and Suan was 5.6 qtls/ha with per HH productivity 4.8 qtl/HH and 2.3 qtls/HH respectively.

§3.7 In Semiliguda block, from total 144 millets cultivated HHs, Ragi was cultivated by all HHs and no HH cultivated Suan in this block. Ragi was cultivated in 63.9 ha of land with production 701.1 qtls, per hectare productivity was 11 qtls/ha and per HH productivity of ragi was 4.9 qtl/HH.

§3.8 In Lamataput block, from total 711 millets cultivated HHs, Ragi was cultivated by all HHs and Suan was cultivated by only 15 HHs (2.1%). In case of area cultivated, from total area (312.1 ha of land), Ragi was cultivated in 307.1 ha of land and Suan was cultivated in 5.1 hectare of land. In case of production, from total production (2903 qtls), production of ragi was 2865.5 qtls and production of Suan was 37.5 qtls. In the context of per hectare productivity, total productivity was 9.3 qtl/ha, out of that productivity of ragi was 9.3 qtls/ha and Suan was 7.4 qtls/ha with per HH productivity 4 qtls/HH and 2.5 qtls/HH respectively.

§3.9 64.3 per cent HHs used good quality seeds, 34.7 per cent HHs used average quality seeds and only one per cent HHs was used bad quality seeds.

§3.10 Information related to Package of practices for Ragi crops indicates that 953 HHs have adopted broadcasting method in 411.2 ha of land with production 2962.2 qtls and yield rate 7.2 qtls/ha, 240 HHs have adopted Line Showing method in 100.9 ha of land with production 1070.7 qtls and yield rate 10.6 qtls/ha, 744 HHs have adopted Transplanting method in 302.7 ha of land with production 2582.1 qtls and yield rate 8.5 qtls/ha , 374 HHs have adopted SMI Method in 191 ha land with 1689.8 qtl production and with yield rate 8.8 qtls/ha and 286 HHs have adopted

1+ Method in 141.6 ha land with 1177 qtl production and with yield rate 8.3 qtls/ha

§3.11 Information related to package of practices for *suan* crop suggest that 221 HHs have adopted broadcasting method in 119.4 ha of land with production 811.5 qtls and yield rate 6.8 qtls/ha, 23 HHs have cultivated through Line showing in 10 ha of land with production 51.8 qtls and yield rate 5.2 qtls/ha, 8 HHs have adopted transplanting method in 3 ha of land with production 23.5 qtls and yield rate 7.8 qtls/ha, 51 HHs have adopted SMI Method in 20.2 ha land with 121 qtl production and with yield rate 6 qtls/ha and 20 HHs have adopted 1+ Method in 11.8 ha land with 75.7 qtl production and with yield rate 6.4 qtls/ha

§4 CONSUMPTION

§4.1 The season wise distribution (not mutually exclusive) on consumption of millets indicates that 95 per cent HHs consumed millet during summer season, 90.7 per cent HHs consumed during winter season and 80.9 per cent HHs consumed millets during rainy season.

§4.2 Pattern of millet consumption during different meals of the day (not mutually exclusive) indicates that 86.1 per cent HHs consumed millet items in their breakfast, 97 per cent HHs consumed in their lunch, 41.4 per cent HHs consumed millets for evening snacks and 65 per cent HHs consumed millet items in their dinner.

§4.3 Findings related to forms in which millets was consumed (not mutually exclusive) suggest that 96 per cent HHs take it as *jau* (porridge), particularly *ragi jau*, 56 per cent HH in form of *roti/pitha* (bread/pancakes and other forms), 20 per cent HHs in form of *tampo* (a semi-liquid recipie), and 34.6 per cent HHs in form of *mandia torani* (fermented *ragi*).

§5 PROCESSING & MARKETING

§5.1 Processing of millets were done as follows: manually by 36.1 per cent HHs, through machines by 42.7 per cent HHs, and both manually as also machines by 21.2 per cent HHs.

§5.2 From responses of 1654 HHs, 82.7 per cent HHs had access to processing unit within ten kilometre, 15.3 per cent HHs covered within 11-20 km distance

and remaining two per cent HHs covered distance more than 20 km from their village.

§5.3 information related to marketing of millets (not mutually exclusive) indicates that 43 per cent HHs sold their millet in weekly hat, 38.7 per cent HHs sold to local traders and 20.2 per cent HHs to money lender as they have received money before production and given words to sell them after production. It also suggests that 7 per cent HHs sold their millet to middlemen and 5.5 per cent HHs sold to Mill owners.

CONTENTS

LIST OF TABLES

LIST OF FIGURES

ABBREVIATION

AAO	: Assistant Agriculture Officer
AL	: Agricultural Labour
AP	: Andhra Pradesh
ATMA	: Agricultural Technology Management Agency
CYSD	: Centre for Youth and Social Development
DDA	: Deputy Director Agriculture
FGD	: Focused Group Discussion
ha	: Hectare
HH	: Household
MT	: Metric Tone
MSP	: Minimum Support Prices
NAL	: Non Agricultural Labour
NAM	: National Agriculture Market
NFSM	: National Food Security Mission
NSSO	: National Sample Survey Organisation
NTFP	: Non Timber Forest Produce
OC	: Other Caste
PDS	: Public distribution system
SC	: Scheduled Caste
ST	: Scheduled Tribe
WASSAN	: Watershed Support Service and Activities Network

I
INTRODUCTION

1.1 Background

Evolution of millets dates back to prehistoric period and its farming system is primitive. It has been favoured by people largely because of its potentiality to meet consumption, nutrient value, short duration crop, climate resilience and drought adopted capacity. Long back, millet crop was main food next to paddy. Now-a-days, the crop is subsistence to consumption and ignored by many HHs due to advent of high economic transformation, adoption of modern cash crops, subsidized PDS and use of modern foods. However, its existence is found sustained among poor HHs in tribal areas.

1.2 District Profile

Koraput is the 3rd district in the state of Odisha in terms of geographical area and 15th in terms of population. The geographical area is of 8807 sq kms, which constitutes 5.7 per cent of the total geographical area of the State. As per 2011 Census, the population of the district is 13.8 lakh. Total population in Borigumma block is highest among 7 blocks so also in case of SC and ST population. Lowest population is found in Lamtaput block and also with lowest ST population. Semiliguda block witnesses lowest SC population. As per 2011 Censu, the literacy rate of the district is 49.2%, out of which male 60.3 per cent and female 38.6 per cent. Block-wise data reveals that the literates are highest in Koraput block and lowest in Bandhugaon Block. Male literates are higher than the female literates in all blocks.

The district is bounded by Nawarangpur district in North, Vishakapatnam district of Andhra Pradesh in South, Rayagada district and Srikakulam district of Andhra Pradesh in the east and Malkangiri district and Bastar district of Chhatisgarh in the west and the district in between 82°5’ E to83°13’ E longitude and 18°13’ N to 19°10’ N latitude.

During the year 2010-11, the net area sown was 206 thousand ha against 4681 thousand ha of the state. The production of maize was 84513 qtls and ragi was 259845 qtls. During 2010-11, the total fertilizers used in the district was about 15171 MT with a breakage of 7847 MT nitrogenous 4383 MT phosphetic and 2941 MT pottasic and the consumption of fertilizer per ha is 38kg. Land distribution pattern shows that net area sown and cultivable waste land is more in Borigumma and less in Semiliguda block.

Table 1.1: Key Indicators of Koraput District	
Indicators	Value
Population (In Lakh.)	
Person	13.8
Male	6.8
Female	7.0
SC	2.0
ST	7.0
Others	4.8
Total HHs	3.4
Average HH Size (In Nos.)	4.1
Sex Ratio (In %)	1032
Workers (In Lakh)	
Total Worker	6.9
Main Worker	4.0
Marginal Worker	3.0
Non-Worker	6.9
WPR (In %)	50.3
Literacy Rate (In %)	49.2
AGRICULTURE (2014-15)*	
Total geographical Area (Sqkm)	8807
Land Use Pattern (Area in '000 ha.)	
Forest	81
Land put to Non-agricultural use	47
Barren & Non-Cultivable Land	144
Permanent Pature & Other Agricultural Land	20
Net Area Sown	192
Cultivable waste Land	16
Old Fallow	24
Current Fallows	50
Misc. Trees and Groves	33
Average Fertiliser Consumption per ha (In Kg)	43.6
Irrigation Potential Created (Area in '000 ha.)*	
Kharif	110.2
Rabi	43.5
No.of Village Electrified	1205
No.of Banks	78
No.of AWC	1488
No.of BPL Families	12688
No.of Job Card Issued	276537
No.of Beneficiaries provided employment in MGNREGS	178459
Source: District Statistical Hand book, Koraput-2011 *District at a Glance-2016	
Note: MGNREGS is Mahatma Gandhi National Rural Employment Guarantee Scheme	

During the year 2010-11, it is reported that the irrigation potential created during Kharif and Rabi from all sources were 117.9 thousand ha and 56 thousand ha respectively through major/medium/minor (Flow, lift irrigation projects and other sources).

1.3 Objectives

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

To assess the socio-economic condition of Millet HHs in the survey area.

To outline the millet production Productivity and Package of Practices in the survey area

To assess the consumption pattern of millets

To examine the method of processing and mode of Marketting

1.4 Methodology

1.4.1 Universe

To undertake the survey, Koraput District has been selected by OMM as it is one of the seven districts where state Government has introduced this programme in first phase of implementation. In the second stage, the seven blocks namely Boriguma, Dasamantapur, Semiliguda, Kundra, Boipariguda, Lamataput and Nandapur block have been selected. In the third stage, all the beneficiaries HHs (Millet HHs) from these blocks have been selected in consultation with district Agriculture officials, Facilitating Agencies and local people.

Out of total list of 2911 millet HHs provided by WASSAN, we have covered 2733 millet HHs. Among them 2605 HHs have cultivated millets in the year 2016-17 particularly, 360 HHs from Boipariguda, 202 HHs from Boriguma Block, 339 HHs from Dasamantapur Block, 484 HHs from Kundra Block, 713 HHs from Lamataput Block, 491 HHs from Nandapur Block and 144 HHs from Semiliguda Block and 128 HHs have not cultivated millet crops during 2016-17 (Table 1.2)

1.4.2 Data Collection

The survey is based primarily on the primary data obtained from the field. Focus Group Discussion (FGD) was used for qualitative information. The primary data was

collected from the respondents of selected blocks by using pre-tested interview schedule. Two types of schedules are used to collect the information. The basic information from all the intervened HHs was collected through structured schedule. The secondary data was also used to get the geographical information, population details, agriculturel, education, irrigation, primary Agricultural Societies and forest from district statistical Hand Book 2011.

Table 1.2: Households Surveyed in Koraput District

Block	Programme HHs (No.)	Surveyed HHs (No.)	Millets Cultivated in 2016-17 (No.)	Millets not Cultivated in 2016-17 (No.)	% of HHs covered
Boipariguda	363	360	349	11	99.2
Boriguma	298	202	136	66	67.8
Dasamantapur	353	339	328	11	96.0
Kundra	484	484	446	38	100.0
Lamataput	729	713	711	2	97.8
Nandapur	500	491	491	0	98.2
Semiliguda	184	144	144	0	78.3
Total	2911	2733	2605	128	93.9

Source: WASSAN & Field Survey.

1.5 Limitation

The survey is limited to seven blocks of Koraput District. We could not get information from 178 HHs from the list provided by WASSAN. Due to non-availability of respondents during the period of the survey, completion of report required longer time.

1.6 Chapterisation

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

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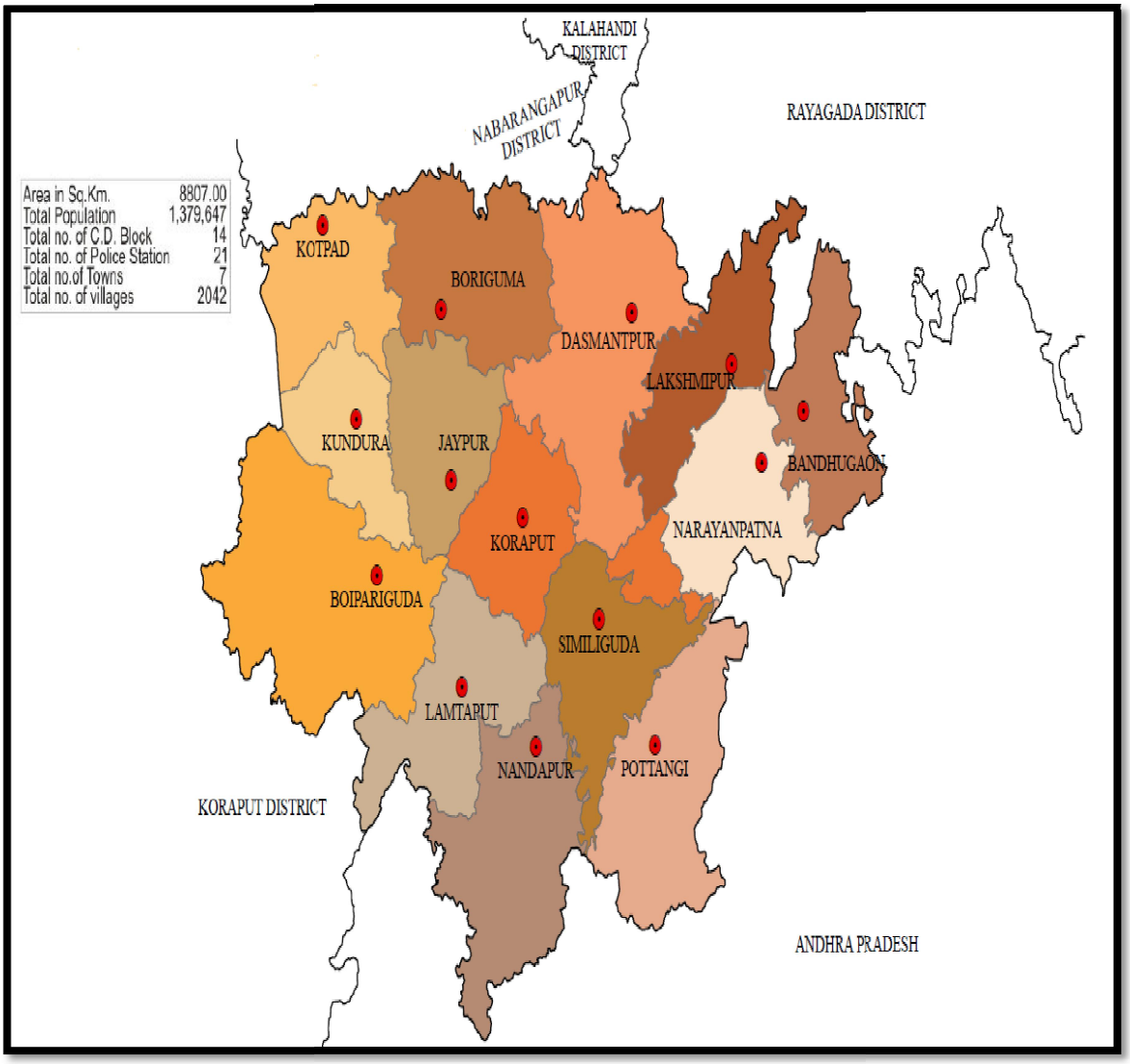
Fig-1.1: Map of Koraput District with Blocks



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

2

SOCIO-ECONOMIC PROFILE OF MILLET HOUSEHOLDS

2.1 Introduction

This chapter looks into social and demographic profile of HHs surveyed that is their distribution by social group and religion and the distribution of population by gender. In addition, for the HHs surveyed, 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.

2.2 Demographic Profile

Koraput District is consisted of 14 blocks. In 2016-17, OMM started its first phase programme in seven blocks such as Boipariguda, Boriguma, Dasamantapur, Kundra, Lamataput, Nandapur and Semiliguda block. It is enumerated that 2733 millet HHs are covered under this programme. Millet HHs on the basis of social category have been shown in Table 2.1. It is found that out of 2733 Millet HHs, 2045 HHs belong to ST (74.8%), 188 HHs belong to SC (6.9%) and 500 HHs belong to OC (18.3%). It is found that these seven blocks of Koraput Districts are major tribal dominant area**.**

Fig-2.1: Percentage distribution of HHs

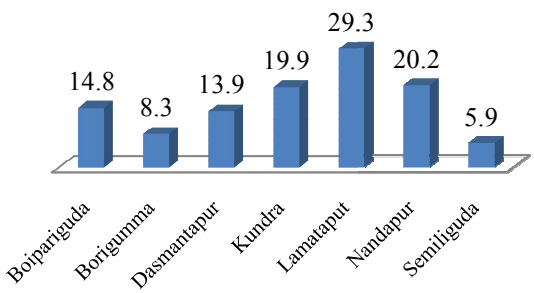


Table 2.1: Distribution of Households by Social Groups across Blocks

Block	SC		ST		Others		Total	
	No.	%	No.	%	No.	%	No.	%
Boipariguda	17	4.7	260	72.2	83	23.1	360	100.0
Borigumma	14	6.9	188	93.1	0	0.0	202	100.0
Dasmantapur	28	8.3	249	73.5	62	18.3	339	100.0
Kundra	49	10.1	368	76.0	67	13.8	484	100.0
Lamataput	61	8.6	456	64.0	196	27.5	713	100. 0
Nandapur	12	2.4	416	84.7	63	12.9	491	100.0
Semiliguda	7	4.9	108	75.0	29	20.1	144	100.0
Total	188	6.9	2045	74.8	500	18.3	2733	100.0

Source: Field Survey

Block-wise data reveals that highest millet HHs are from Lamataput block (29.3%), 20.2 per cent from Nandapur block, 19.9 per cent from Kundra Block, 14.8 per cent from Boipariguda Block, 8.3 per cent from Boriguma Block and 5.9 per cent from Semiliguda block (Fig-2.1).

The total population as per the surveyed HHs comes to around 13453, from which 23.79 per cent belong to Lamataput block, 19 per cent belong to Kundra block, 17.8 per cent belong to Nandapur Block, 13 per cent belong to Boipariguda Block, 12 per cent belong to Dasamantapur Block, 8 per cent belong to Boriguma Block and 6 per cent belong to Semiliguda block. The share of female population is little higher than the male population.

Table 2.2: Distribution of Population by sex across Blocks

Block	Male		Female		Total	
	No.	%	No.	%	No.	%
Boipariguda	888	49.3	914	50.7	1802	100.0
Borigumma	513	49.1	532	50.9	1045	100.0
Dasmantapur	835	50.9	806	49.1	1641	100.0
Kundra	1302	49.9	1309	50.1	2611	100.0
Lamataput	1587	49.6	1614	50.4	3201	100.0
Nandapur	1174	49.1	1218	50.9	2392	100.0
Semiliguda	378	49.7	383	50.3	761	100.0
Total	6677	49.6	6776	50.4	13453	100.0

Source: Field Survey

Except Hindu religion, Muslim religious communities are found in only Boipariguda Block and Christian community is found in Bopiariguda, Dasamantapur and Lamataput. The major religious community is Hindu whose share is higher than Muslim and Chrstian community. The religious community wise distribution of HHs in different blocks of the district has been shown in Table 2.3.

Table 2.3: Distribution of Households by Religion across Blocks

Religion	Hindu		Muslim		Christian		Total	
	No.	%	No.	%	No.	%	No.	%
Boipariguda	353	98.1	1	0.3	6	1.7	360	100.0
Borigumma	202	100.0	0	0.0	0	0.0	202	100.0
Dasmantapur	330	97.4	0	0.0	9	2.7	339	100.0
Kundra	484	100.0	0	0.0	0	0.0	484	100.0
Lamataput	712	99.9	0	0.0	1	0.1	713	100.0
Nandapur	491	100.0	0	0.0	0	0.0	491	100.0
Semiliguda	144	100.0	0	0.0	0	0.0	144	100.0
Total	2716	99.4	1	0.0	16	0.6	2733	100.0

Source: Field Survey

2.3 Economic Category

Our field survey data also shows that the incidence of poverty is very high in selected district as nine-tenth of the population lives below poverty line (BPL) (91.2%). The incidence of poverty is highest in Dasamantapur block (96.5%) and lowest in Semiliguda Block (84.7%) who lives below the poverty line. Block wise distribution of BPL and APL HHs has been given in the Table 2.4.

Table 2.4: Distribution of Households by economic category across Blocks

Block	BPL		APL		Total	
	No.	%	No.	%	No.	%
Boipariguda	331	91.9	29	8.1	360	100.0
Borigumma	133	65.8	69	34.2	202	100.0
Dasmantapur	327	96.5	12	3.5	339	100.0
Kundra	440	90.9	44	9.1	484	100.0
Lamataput	669	93.8	44	6.2	713	100.0
Nandapur	469	95.5	22	4.5	491	100.0
Semiliguda	122	84.7	22	15.3	144	100.0
Total	2491	91.2	242	8.9	2733	100.0

Source: Field Survey

2.4 Economic Activities

Economic activities of selected HHs have been shown in Table 2.5. It is evident that highest 96.5 per cent HHs are engaged in agriculture activities, followed by 11.6 % HHs in Minor Forest Collection, 10.1 per cent HHs in other activities such as labour, cow grazing and HH activities etc, 4.2 per cent HHs in allied activities such as agricultural labour, 1.2 per cent HHs are in service and remaining 1.1 per cent are engaged in business. The data revealed that more than 96 per cent are engaged in agricultural activities as main occupation of HHs in all blocks and other activities are very less.

Table 2.5: Distribution of Households by Economic Activities across Blocks

Block	Cultivation		Allied		Service		Business		MFP		Others		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Boipariguda	355	98.6	7	1.9	7	1.9	20	5.6	212	58.9	78	21.7	360	100.0
Borigumma	198	98.0	4	2.0	0	0.0	1	0.5	0	0.0	0	0.0	202	100.0
Dasmantapur	331	97.6	14	4.1	3	0.9	1	0.3	16	4.7	0	0.0	339	100.0
Kundra	470	97.1	26	5.4	5	1.0	5	1.0	0	0.0	194	40.1	484	100.0
Lamataput	688	96.5	18	2.5	14	2.0	1	0.1	1	0.1	0	0.0	713	100.0
Nandapur	451	91.9	45	9.2	4	0.8	2	0.4	34	6.9	0	0.0	491	100.0
Semiliguda	143	99.3	1	0.7	1	0.7	1	0.7	53	36.8	5	3.5	144	100.0
Total	2636	96.5	115	4.2	34	1.2	31	1.1	316	11.6	277	10.1	2733	100.0

Source: Field Survey

N.B.: Horizentally totals are not additive

2.5 Structure of House

House structure is another important indicator to assess the economic condition of the HH. From total surveyed HHs in the district, highest 82.7 per cent have pucca houses 15.1 per cent HHs have Kutcha house and only 2.3 per cent HHs have semi-pucca house. All HHs of Boriguma block have pucca houses. Block-wise detailed information has been given in Table 2.6 and Fig-2.2.

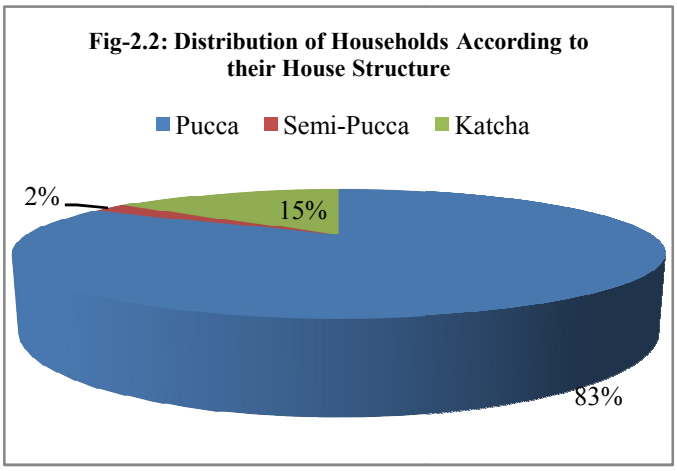


Table 2.6: Distribution of Households by House Structure across Blocks

Block	Pucca		Semi-Pucca		Katcha		Total	
	No.	%	No.	%	No.	%	No.	%
Boipariguda	83	23.1	62	17.2	215	59.7	360	100.0
Borigumma	202	100.0	0	0.0	0	0.0	202	100.0
Dasmantapur	208	61.4	0	0.0	131	38.6	339	100.0
Kundra	480	99.2	0	0.0	4	0.8	484	100.0
Lamataput	705	98.9	0	0.0	8	1.1	713	100.0
Nandapur	491	100.0	0	0.0	0	0.0	491	100.0
Semiliguda	90	62.5	0	0.0	54	37.5	144	100.0
Total	2259	82.7	62	2.3	412	15.1	2733	100.0

Source: Field Survey

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2.6 Conclusion

Socio-economic factors indicate that from the total HHs, 74.8 per cent are ST HHs, more than two third of the population are of BPL category (91.2%), more than 96.5 per cent are engaged in agricultural activities as the main occupation of HHs in all blocks and other activities are very less and 82.7 per cent have pucca houses, 15.1 per cent HHs have Kutcha house and only 2.3 per cent HHs have semi-pucca house.

Millet production area, productivity and agronomical practices adopted by the surveyed HHs have been discuseed in next chapter.

3

PRODUCTION

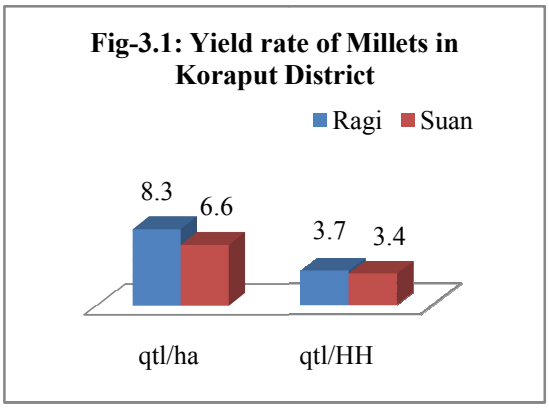
3.1 Introduction

For the promotion of millets, main importance has been given to the production and productivity which extend to generate sustainable and subsistence income to family income and mitigate consumption need with nutritional value. This chapter deals with block-wise and crop-wise area, production, productivity (Yield), seed use and package of practices, which have been discussed in lucid manner.

3.2 Area, Production and Yield

Broadly there are two types of millets such as Ragi and Suan cultivated in Koraput District. The total production of different types of millets by 2605 HHs is around 10,565.37 qtls. From total HHs, 2597 HHs have cultivated Ragi and 323 HHs have cultivated Suan and among them some HHs have cultivated both crops. Out of the total production of 10565.4 qtls, share of Ragi is 9481.8 qtls (89.7%), then 1083.6 qtls Suan (10.3%). Per HH average millet yield rate in seven blocks is 4.1 qtl/HH. The average production of Ragi per HH is calculated as 3.7 qtls/HH and that of Suan is 3.4 qtls/HH. It is found that Suan cultivation is very low.

Fig-3.1: Yield rate of Millets in Koraput District



Again, from total cultivated area, Ragi was cultivated in 1147.5 ha (87.5%) of land and Suan was cultivated in 164.4 ha (12.5%) of land. The average millet yield rate in seven blocks is 8.1 qtls/ha. In case of Ragi, the yield rate was 8.3 qtls/ha, whereas 6.6 qtls/ha yield rate for Suan (Table 3.1 and Fig 3.1)

Table 3.1: Area, Production and Yield of Millets by Millet in Koraput District

Millet Crops	HHs		Area		Production		Yield	
	No	%	ha	%	Qtl	%	qtl/ha	qtl/HH
Ragi	2597	99.7	1147.5	87.5	9481.8	89.7	8.3	3.7
Suan	323	12.4	164.4	12.5	1083.6	10.3	6.6	3.4
Total	2605	100.0	1311.9	100.0	10565.4	100.0	8.1	4.1

Source: Field Survey
N.B: HHs total is not aditive as farmers are doing multiple crops

Production and productivity of millets in Boipariguda block has been shown in Table 3.2 and Fig 3.2. From total millets cultivated HHs, 348 HHs (99.7%) have cultivated ragi and 29 HHs (8.3%) have cultivated Suan in this block. In case of area cultivated, out of total area (195.1 ha of land), Ragi was cultivated in 181.6 ha of land and Suan was cultivated in 13.5 ha of land. In case of production, out of total production (1274.4 qtls), production of ragi was 1189.9 qtls and production of Suan was 84.5 qtls. In context of per ha productivity, the total productivity was 6.6 qtls/ha, out of that productivity of ragi was 6.6 qtls/ha and Suan was 6.3 qtls/ha. Again productivity of Ragi and Suan was 3.4 qtl/HH and 2.9 qtls/HH respectively in Boipariguda block.

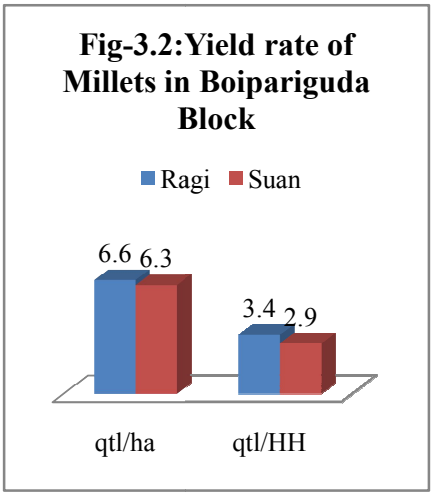


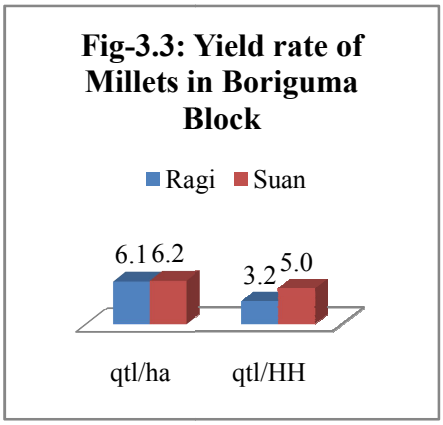
Table 3.2: Area, Production and Yield of Millets by Millet in Boipariguda Block

Millets	HHs		Area		Production		Yield	
	No	%	ha	%	qtl	%	qtl/ha	qtl/HH
Ragi	348	99.7	181.6	93.1	1189.9	93.4	6.6	3.4
Suan	29	8.3	13.5	6.9	84.5	6.6	6.3	2.9
Total	349	100	195.1	100	1274.4	100	6.5	3.4

Source: Field Survey

N.B: HHs total is not aditive as farmers are doing multiple crops

Production and productivity of millets in Boriguma block has been shown in Table 3.3 and Fig 3.3. From total 136 millets cultivated HHs, 135 HHs (9.3%) have cultivated ragi and only two HHs (1.5%) have cultivated Suan in this block. In case of area cultivated, out of total area (72.3has of land),



Ragi was cultivated in 70.7 ha of land and Suan was cultivated in 1.6 ha of land. In case of production, out of total production (442.4 qtls), production of ragi was 432.4 qtls and Suan was 10 qtls. In the context of per ha productivity, total productivity was 6.2 qtls/ha, productivity of ragi was 6.1 qtls/ha and Suan was 6.2 qtls/ha with productivity of Ragi and Suan amounting to 3.2 qtls/HH and 5 qtls/HH respectively in Boriguma block.

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

Millets	HHs		Area		Production		Yield	
	No	%	ha	%	Qtl	%	qtl/ha	qtl/HH
Ragi	135	99.3	70.7	97.8	432.4	97.7	6.1	3.2
Suan	2	1.5	1.6	2.2	10.0	2.3	6.2	5.0
Total	136	100.0	72.3	100.0	442.4	100.0	6.1	3.2

Source: Field Survey
N.B: HHs total is not aditive as farmers are doing multiple crops

Production and productivity of millets in Dasamantapur block has been shown in Table 3.4 and Fig 3.4. From total 328 millets cultivated HHs, 322 HHs (98.2 %) have cultivated ragi and 215 HHs (65.6%) have cultivated Suan in this block. Again six HHs have not cultivated ragi and 209 HHs have cultivated both crops in this block In case of area cultivated, from total area (252.3 ha of land), Ragi was cultivated in 134.3 ha of land and Suan was cultivated in 118 ha of land. In case of production, out of total production (1750.3 qtls), the production of ragi was 945.8 qtls and production of Suan was 804.5 qtls. In the context of per ha productivity, the total productivity was 6.9 qtls/ha, out of that the productivity of ragi was 7 qtls/ha and Suan was 6.8 qtls/ha with productivity of Ragi and Suan was 2.9 qtls/HH and 3.7 qtls/HH respectively in Dasamantapur block.

Fig-3.4: Yield rate of Millets in Dasamantapur Block

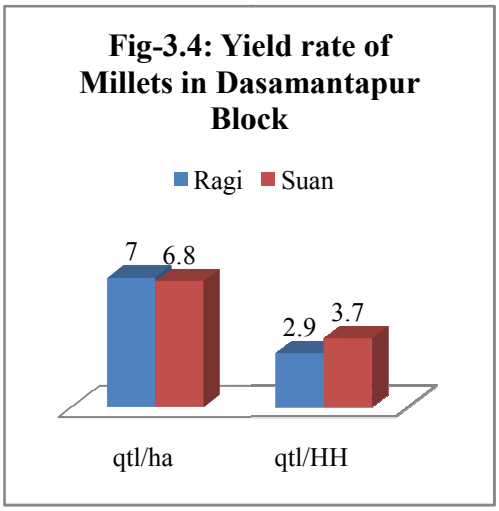


Table 3.4: Area, Production and Yield of Millets in Dasamantpur Block

Millets	HHs		Area		Production		Yield	
	No	%	ha	%	Qtl	%	qtl/ha	qtl/HH
Ragi	322	98.2	134.3	53.2	945.82	54.0	7.0	2.9
Suan	215	65.6	118.0	46.8	804.47	46.0	6.8	3.7
Total	328	100.0	252.3	100.0	1750.29	100.0	6.9	3.3

Source: Field Survey
N.B: HHs total is not aditive as farmers are doing multiple crops

Production and productivity of millets in Kundra block has been shown in Table 3.5 and Fig 3.5. From total 446 millets cultivated HHs, all HHs have cultivated ragi and only eight HH (1.8 %) have cultivated Suan and eight HHs have cultivate Suan with ragi crops in this block. In case of area cultivated, from total area (164.6 ha of land), Ragi was cultivated in 161.3 ha of land and Suan was cultivated in 3.8 ha of land. In case of production, from total production (1011.3 qtls), the production of ragi was 989.9 qtls and production of Suan was 21.5qtls. In the context of per ha productivity, the total productivity was 6.1 qtls/ha, out of that productivity of ragi was 6.1 qtls/ha and Suan was 5.7 qtls/ha with productivity of Ragi and Suan was 2.2 qtls/HH and 2.7 qtls/HH respectively in Kundra block.

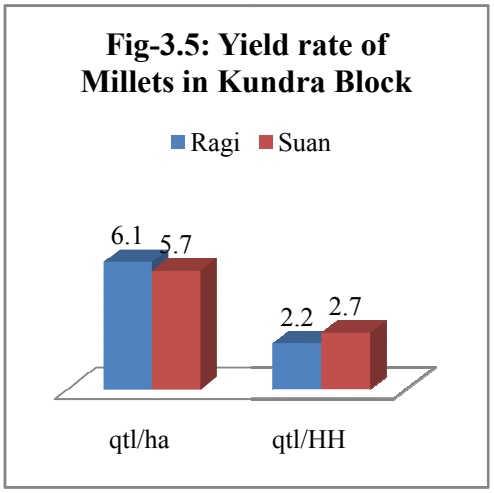
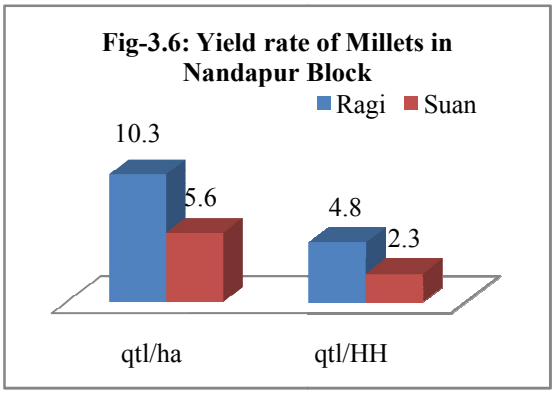


Table 3.5: Area, Production and Yield of Millets in Kundra Block

Millets	HHs		Area		Production		Yield	
	No	%	ha	%	qtl	%	qtl/ha	qtl/HH
Ragi	446	100.0	161.3	97.7	989.9	97.9	6.1	2.2
Suan	8	1.8	3.8	2.3	21.5	2.1	5.7	2.7
Total	446	100.0	165.1	100.0	1011.3	100.0	6.1	2.2

Source: Field Survey
N.B: HHs total is not aditive as farmers are doing multiple crops

Production and productivity of millets in Nandapur block has been shown in Table 3.6 Fig 3.6. From total 491 millets cultivated HHs, all HHs have cultivated ragi and only 54 HHs (11.0 %) have cultivated Suan in this block and among them some HHs have cultivated double crops. In case of area cultivated, out of total area (251.1 ha of land), Ragi was cultivated in 228.6 ha of land and Suan was cultivated in 22.5 ha of land. In case of production, from total production (2482.8 qtls), the production of ragi was 2357.2 qtls and Suan was 125.6 qtls. In the context of per ha productivity, the total productivity was 9.9 qtls/ha, out



of that the productivity of ragi was 10.3 qtls/ha and Suan was 5.6 qtls/ha with productivity of Ragi and Suan was 4.8 qtls/HH and 2.3 qtls/HH respectively in Nandapur block.

Table 3.6: Area, Production and Yield of Millets in Nandpur Block

Millet Crops	HHs		Area		Production		Yield	
	No	%	ha	%	qtl	%	qtl/ha	qtl/HH
Ragi	491	100	228.6	91.1	2357.2	94.9	10.3	4.8
Suan	54	11	22.5	8.9	125.6	5.1	5.6	2.3
Total	491	100	251.1	100	2482.8	100	9.9	5.1

Source: Field Survey
N.B: HHs total is not aditive as farmers are doing multiple crops

Production and productivity of millets in Semiliguda block has been shown in Table 3.7 Fig 3.7. From total 144 millets cultivated HHs, all HHs have cultivated ragi and no HH have cultivated Suan in this block. Ragi was cultivated in 63.9 ha of land with production 701.1 qtls, per ha productivity was 11 qtls/ha and productivity of ragi was 4.9 qtls/HH in Semiliguda block.

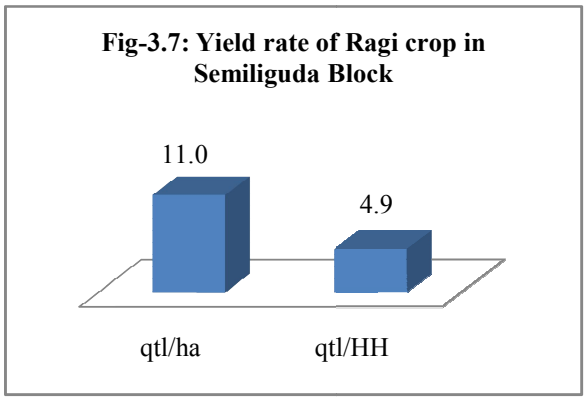
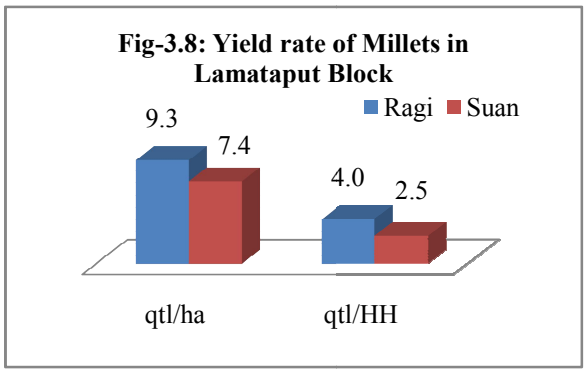


Table 3.7: Area, Production and Yield of Millets in Semiliguda Block

Millets	HHs		Area		Production		Yield	
	No	%	ha	%	qtl	%	qtl/ha	qtl/HH
Ragi	144	100	63.9	100	701.1	100	11.0	4.9
Total	144	100	63.9	100	701.1	100	11.0	4.9

Source: Field Survey
N.B: HHs total is not aditive as farmers are doing multiple crops

Production and productivity of millets in Lamataput block has been shown in Table 3.8 and Fig 3.8. From total 711 millets cultivated HHs, all HHs have cultivated ragi and only 15 HHs (2.1%) have cultivated Suan in this block. In case of area cultivated, from total area (312.1 ha of land), Ragi was cultivated in 307.1 ha of land and Suan was cultivated in 5.1



ha of land. In case of production, from total production (2903 qtls), the production of ragi was 2865.5 qtls and production of Suan was 37.5 qtls. In the context of per ha productivity, the total productivity was 9.3 qtls/ha, out of that the productivity of ragi was 9.3 qtls/ha and Suan was 7.4 qtls/ha with productivity of Ragi and Suan was 4 qtls/HH and 2.5 qtls/HH respectively in Lamataput block.

Table 3.8: Area, Production and Yield of Millets in Lamtaput Block

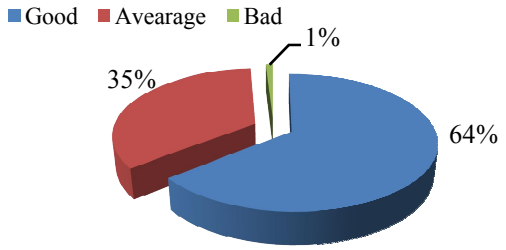
Millets	HHs		Area		Production		Yield	
	No	%	ha	%	qtl	%	qtl/ha	qtl/HH
Ragi	711	100	307.1	98.4	2865.5	98.7	9.3	4.0
Suan	15	2.1	5.1	1.6	37.5	1.3	7.4	2.5
Total	711	100	312.1	100	2903	100	9.3	4.0

Source: Field Survey
N.B: HHs total is not aditive as farmers are doing multiple crops

3.3 Percption on Quality of Seeds Used

Seed is an important component of production process. The volume of production and quality of production are very much dependent on the quality of the seed. The HHs in Koraput District used locally available good quality seeds for better yeild. All the HHs have reported about the quality seed with their perception on good, average and bad quality seed used in their fields for millet cultivation.

Fig-3.9: Perception on quality of seeds



From surveyed HHs, 64.3 per cent HHs have used good quality seeds, 34.7 per cent HHs have used average quality seeds and only one per cent HH has used bad quality seeds. Block-wise data indicates that highest 86 per cent of HH used good quality seeds in Boriguma Block for their millet cultivation, 57.6 per cent HHs used average quality seeds in Boipariguda Block and 2.3 per cent HHs in Boipariguda Block have used bad quality seeds for millet cultivation. The qualities of seeds used by the HHs are completely based on the locally availability and accessibility (Table 3.9 and Fig 3.9).

Table 3.9: Perception of Respondents regarding Quality of Seeds Used

Block	Good		Average		Bad		Total	
	No.	%	No.	%	No.	%	No.	%
Boipariguda	140	40.1	201	57.6	8	2.3	349	100
Borigumma	117	86	19	14	0	0	136	100
Dasmantapur	224	68.3	98	29.9	6	1.8	328	100
Kundra	315	70.6	127	28.5	4	0.9	446	100
Lamataput	344	48.4	365	51.3	2	0.3	711	100
Nandapur	412	83.9	74	15.1	5	1	491	100
Semiliguda	123	85.4	21	14.6	0	0	144	100
Total	1675	64.3	905	34.7	25	1	2605	100

Source: Field Survey

3.4 Package of Practices

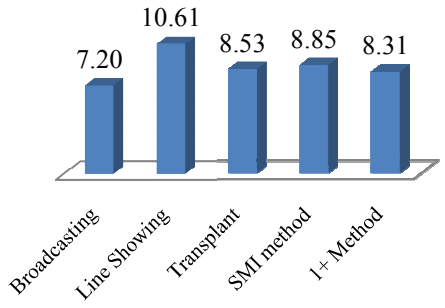
In this section the different agronomic practices used by the HHs in the selected blocks of Koraput District, such as broadcasting, line sowing, transplanting, SMI method etc has been shown in Table 3.10 and Fig 3.10.

Table 3.10: Package of Practices for Ragi Cultivation in Koraput District

Package of practice	HHs		Area		Production		Yield
	No	%	Ha.	%	qtl	%	(qt/Ha)
Broadcasting	953	36.7	411.2	35.8	2962.2	31.2	7.2
Line Showing	240	9.2	100.9	8.8	1070.7	11.3	10.6
Transplant	744	28.6	302.7	26.4	2582.1	27.2	8.5
SMI method	374	14.4	191.0	16.6	1689.8	17.8	8.8
1+ Method	286	11.0	141.6	12.3	1177.0	12.4	8.3
Total	2597	100.0	1147.5	100.0	9481.8	100.0	8.3

Source: Field Survey

Fig-3.10: Per hectare Yield rate of Ragi crop (In qtl)



From the total millet cultivated HHs of 2605, 2597 HH (99.7%) cultivated ragi in 1147.5 ha of land. From them, 953 HHs have used broadcasting method in 411.2 ha of land with production 2962.2 qtls and yield rate 7.2 qtls/ha, 240 HHs have used Line Showing method in 100.9 ha of land with production 1070.7 qtls and yield rate 10.6 qtls/ha, 744 HHs have used Transplanting method in 302.7 ha of land with production 2582.1 qtls and yield rate 8.5 qtls/ha , 374 HHs have used SMI Method in 191 ha land with 1689.8 qtl production and with yield rate 8.8 qtls/ha and 286 HHs have used 1+ Method in 141.6 ha land with 1177 qtl production and with yield rate 8.3 qtls/ha

HHs in selected blocks have adopted various packages of practices for Suan cultivation. From total millet cultivated HHs of 2605, 323 HHs (12.4%) cultivated Suan in 164.4 ha of land with 1083.6 qtl production and 6.6 qtls/ha productivity. Among them, 221 HHs have adopted broadcasting method in 119.4 ha of land with production 811.5 qtls and yield rate 6.8 qtls/ha, 23 HHs have cultivated through Line showing in 10 ha of land with production 51.8 qtls and yield rate 5.2 qtls/ha, 8 HHs have used transplanting method in 3 ha of land with production 23.5 qtls and yield rate 7.8 qtls/ha, 51 HHs have used SMI Method in 20.2 ha land with 121 qtl production and with yield rate 6 qtls/ha and 20 HHs have used 1+ Method in 11.8 ha land with 75.7 qtl production and with yield rate 6.4 qtls/ha (Table 3.11 and Fig 3.11).

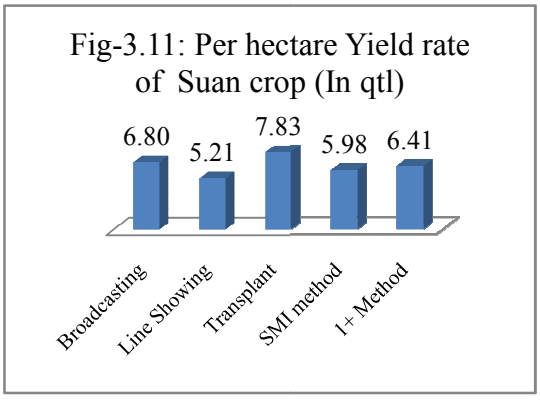


Table 3.11: Package of Practices for Suan Cultivation in Koraput District

Package of practice	HHs		Area		Production		Yield
	No	%	ha	%	qtl	%	(qtl/ha)
Broadcasting	221	68.4	119.4	72.7	811.5	74.9	6.8
Line Showing	23	7.1	10.0	6.1	51.8	4.8	5.2
Transplant	8	2.5	3.0	1.8	23.5	2.2	7.8
SMI method	51	15.8	20.2	12.3	121.0	11.2	6.0
1+ Method	20	6.2	11.8	7.2	75.7	7.0	6.4
Total	323	100.0	164.4	100.0	1083.6	100.0	6.6

Source: Field Survey

3.5 Conclusion

Two types of millets, viz, *ragi* and *Suan* were cultivated in Koraput during the period covered under baseline survey, 2016-17. Ragi was cultivated in 1147.5 ha (87.5%) of land and Suan was cultivated in 164.4 ha (12.5%) of land. The average millet yield rate in seven blocks is 3.3 qtls/ha. In case of Ragi, the yield rate was 8.3 qtls/ha, whereas 6.6 qtls/ha yield rate of Suan. 86 per cent of HH used good quality seeds in Boriguma Block for their millet cultivation, 57.6 per cent HHs used average quality seeds in Boipariguda Block and 2.3 per cent HHs in Boipariguda Block have used bad quality seeds for millet cultivation. Most HHs cultivated millets through broadcasting and some by line sowing or transplanting. Some HHs had adopted SMI in Koraput for the period covered under baseline survey. In the next chapter we will discuss consumption of millets.

4

CONSUMPTION

4.1 Introduction

This chapter deals with consumption pattern of millets in different season, in different time of a day and different types of millet recipes on the basis of the responses received from the field.. Besides marketing, consumption is the important utilastion not only for consumption need, but also for nutritional benefit greatly for rural people. Now-a-days, urban people have started consuming milletsin order to escape from fatal diseases like diabatics and other nutritional deficiency.

4.2 Season-wise Consumption

Season-wise information indicates that the consumption of millet is more in summer season compared to rainy and winter seasons. This may be due to the fact that a person who consumes millet requires less amount of water and do not feel thirsty. From surveyed HHs, 95 per cent HHs were found consuming millet during summer season, 90.7 per cent HHs during winter season and 80.9 per cent HHs during rainy season (Table 4.1 and Fig 4.1).

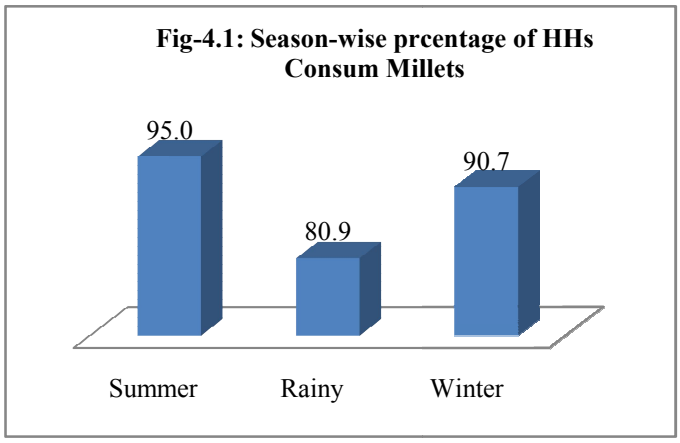


Table 4.1: Season-wise Consumption of Millets

Block	Summer		Rainy		Winter		Total	
	No.	%	No.	%	No.	%	No.	%
Boipariguda	354	98.3	140	38.9	294	81.7	360	100.0
Borigumma	75	37.1	69	34.2	195	96.5	202	100.0
Dasmantapur	336	99.1	321	94.7	309	91.2	339	100.0
Kundra	483	99.8	465	96.1	474	97.9	484	100.0
Lamataput	712	99.9	583	81.8	576	80.8	713	100.0
Nandapur	491	100.0	491	100.0	491	100.0	491	100.0
Semiliguda	144	100.0	141	97.9	139	96.5	144	100.0
Total	2595	95.0	2210	80.9	2478	90.7	2733	100.0

Source: Field Survey
N.B.: Horizental figures are are not additive to totals

4.3 Consumption during Different Meals of the Day

The food pattern of Koraput District suggests that millet is a part of daily diet for the local tribals. It indicates that especially tribal people consumed more millet as compared to others. In the district, around 86.1 per cent HHs consumed millet items in their breakfast, 97.2 per cent HHs consumed in their lunch, 41.4 per cent HHs consumed millets for evening snacks and 65 per cent HHs consumed millet items in their dinner (Table 4.2 and Fig 4.2).

Fig-4.2: Perception of HHs for Millets Consumption in a Day

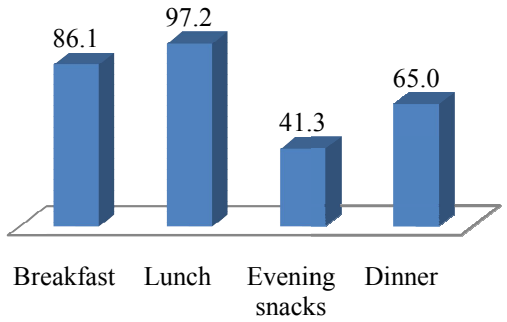


Table 4.2: Pattern of Millets Consumption in a Day

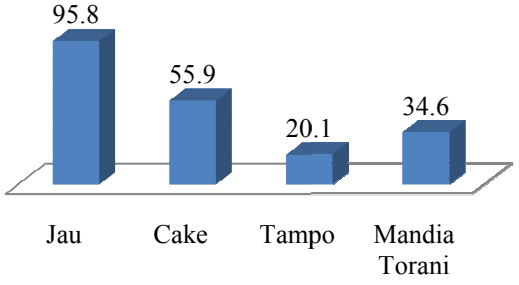
Block	Breakfast		Lunch		Evening snacks		Dinner		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Boipariguda	249	69.2	328	91.1	83	23.1	171	47.5	360	100.0
Borigumma	1	0.5	193	95.5	13	6.4	29	14.4	202	100.0
Dasmantapur	325	95.8	336	99.1	239	70.5	180	53.1	339	100.0
Kundra	445	91.9	478	98.7	387	80.0	440	90.9	484	100.0
Lamataput	701	98.3	687	96.4	181	25.4	496	69.6	713	100.0
Nandapur	490	99.8	490	99.8	169	34.4	323	65.8	491	100.0
Semiliguda	143	99.3	144	100.0	58	40.3	137	95.1	144	100.0
Total	2354	86.1	2656	97.2	1130	41.4	1776	65.0	2733	100.0

Source: Field Survey
N.B.: Horizental figures are are not additive totals

4.4 Millet Recipes Consumed

Consumption of millet in Koraput District is an ancient traditional practice. Thus, millet cultivation is still alive in this belt and forms a major food in their daily diet. People are consuming millets in varietal ways in form of porridge, bread, cake, snack, steamed goods and beverage. But specifically this survey covered major millet dishes used by different HHs in selected blocks. From surveyed HHs, 95.8 per cent HHs

Fig-4.3: Percentage of HHs on Consumption of Millet Recipes



consume millets as porridge, locally called as *Jau* which is popular around Odisha as *Mandia Jau* (*finger millet porridge).* More than half of the people i.e. 55.9 per cent consume millet in form of cake/bread. Basically finger millet is used to make flat bread and cake. Locally it is called *Pitha*. 20.1 per cent HHs consume millet in form of *Tampo* Mostly HHs from Boriguma, Dasmantapur and Semiliguda block consume this recipe. *Tampo* is a semi liquid recipe prepared adding sugar, jiggery, coconut chips, etc. People from all ages particularly children prefer this recipe compared to other food items. Another popular millet food recipe is 'Water finger millet'. This recipe is prepared by adding water with the cooked finger millet which is locally called *Mandia Torani.* It *is* a common food for 34.6 per cent HHs of selected blocks and very few people use millet as beverages in the form of *millet beer* locally called *Handia*. It is prepared by adding different types of herbs to the cooked *Mandia* and is kept for few days so that germination takes place. This recipe gives them physical and mental relaxation and people who do more physical work normally take this drink irrespective of age and sex (Table 4.3 and Fig 4.3)

Table 4.3: Consumption of Millet Recipes

Block	Jau		Cake		Tampo		Mandia Torani		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Boipariguda	327	90.8	151	41.9	39	10.8	340	94.4	360	100.0
Borigumma	199	98.5	160	79.2	125	61.9	94	46.5	202	100.0
Dasmantapur	304	89.7	177	52.2	184	54.3	226	66.7	339	100.0
Kundra	480	99.2	3	0.6	2	0.4	16	3.3	484	100.0
Lamataput	710	99.6	473	66.3	104	14.6	21	3.0	713	100.0
Nandapur	465	94.7	463	94.3	33	6.7	148	30.1	491	100.0
Semiliguda	133	92.4	101	70.2	63	43.8	101	70.1	144	100.0
Total	2618	95.8	1528	55.9	550	20.1	946	34.6	2733	100.0

Source: Field Survey
N.B.: Horizental figures are are not additive to totals

4.4 Conclusion

In summer season, HHs consume more millets in comparison to rainy and winter season and also they consume it for breakfast which manage their thirst during summer alongwith its nutrative value.and keep their body strong to work hard. They prefer to eat millets in form of *jau* which is easy to prepare and eat. The next chapter looks into processing and marketing of millets.

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5

PROCESSING AND MARKETING

5.1 Introduction

This chapter looks into method of processing, availability and accessiblty to processing unit, distance covered to processing unit, mode of marketing and per HH trend of millet utilisation.

5.2 Processing Units

Millet processing is an important aspect after cultivation to prepare the final product ready to use for marketing and consumption purpose. There are two types of processing in order to prepare the final product of millets, through machine and/or manually. As Koraput District is a remote rural tribal belt surrounded by mountains, processing of millet manually is normal. Data suggests that 36.1 per cent HHs process millets manually. In fact 42.7 per cent HHs processed millet by using machine, 21.2 per cent HHs processed by using both manual and machine means (Table 5.1 and Fig 5.1).

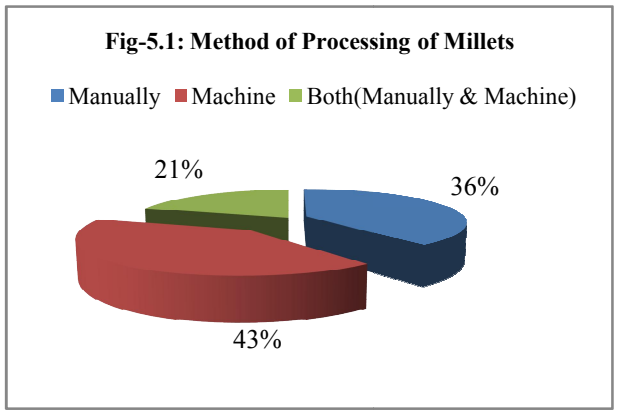


Table 5.1: Method of Processing Millets

Block	Manually		Machine		Both		Total	
	No.	%	No.	%	No.	%	No.	%
Boipariguda	234	67.0	14	4.0	101	28.9	349	100
Borigumma	106	77.9	29	21.3	1	0.7	136	100
Dasmantapur	189	57.6	103	31.4	36	11.0	328	100
Kundra	213	47.8	92	20.6	141	31.6	446	100
Lamataput	92	12.9	546	76.8	73	10.3	711	100
Nandapur	104	21.2	257	52.3	130	26.5	491	100
Semiliguda	3	2.1	72	50.0	69	47.9	144	100
Total	941	36.1	1113	42.7	551	21.2	2605	100

Source: Field Survey

The accessibility of machine for millet processing in Koraput District is quite difficult. Less than half of the total surveyed HHs used machine for processing, which are available far from their village. It is found that out of 1654 HHs (Machine+both, see Table 5.1), 82.7 per cent HHs access processing unit within ten kilometres. 15.3 per cent HHs access within 11-20 km distance and remaining two per cent HHs used machine which is more than 20 km away from their village (Table 5.2 and Fig 5.2).

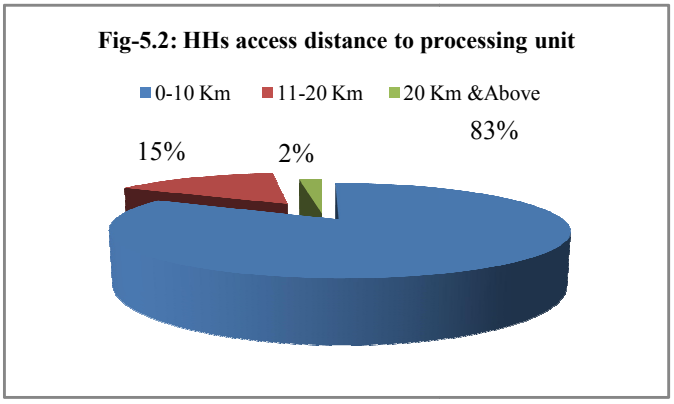


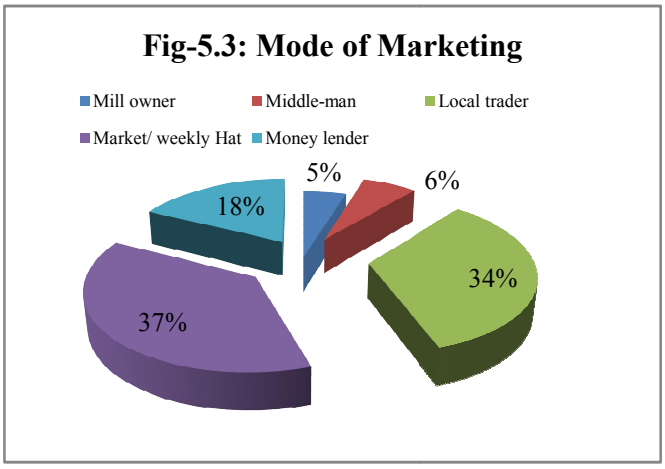
Table 5.2: Distance to Processing Unit

Block	0-10 Km		11-20 Km		20 Km &Above		Total	
	No.	%	No.	%	No.	%	No.	%
Boipariguda	107	93.0	7	6.1	1	0.9	115	100
Borigumma	25	83.3	4	13.3	1	3.3	30	100
Dasmantapur	128	92.1	2	1.4	9	6.5	139	100
Kundra	223	96.5	6	2.6	2	0.9	231	100
Lamataput	538	86.9	79	12.8	2	0.3	619	100
Nandapur	258	66.7	118	30.5	11	2.8	387	100
Semiliguda	97	68.8	37	26.2	7	5.0	141	100
Total	1368	82.7	253	15.3	33	2.0	1654	100

Source: Field Survey

5.3 Marketing

Production is meaningless without marketing. Efficiency of market extends the production and productivity which ultimately increase income, satisfy consumption need and shall help to reduce poverty. The HHs of Koraput District are selling millets in different markets. From



surveyed HHs, 43.1 per cent HHs sold their millet in weekly hat, followed by 38.7 per cent HHs who sold to local traders, 20.2 per cent HHs to money lender as they have received money before production and given words to sell them after production, 7.2 per cent HHs sold their millet to middlemen and remaining 5.5 per cent HHs to Mill owners (Table 5.3 and Fig 5.3).

Table 5.3: Distribution of Households by Mode of Selling Milletsacross Blocks

Block	Mill owner		Middle-man		Local trader		Market/ weekly Hat		Money lender		Total	
	No	**%**	**No**	**%**	**No**	**%**	**No**	**%**	**No**	**%**	**No**	**%**
Boipariguda	3	0.8	0	0	136	38.2	245	68.8	7	2.0	356	100.0
Borigumma	120	60.9	105	53.3	64	32.5	90	45.7	68	34.5	197	100.0
Dasmantpur	1	0.3	20	6.3	65	20.3	208	65.0	30	9.4	320	100.0
Kundra	6	2.0	49	16.2	119	39.3	36	11.9	121	39.9	303	100.0
Lamataput	4	0.6	2	0.3	496	72.4	110	16.1	81	11.8	685	100.0
Nandapur		0.0	2	0.4	50	10.2	248	50.7	198	40.5	489	100.0
Semiliguda	3	2.1	1	0.7	34	23.6	139	96.5	0	0.0	144	100.0
Total	137	5.5	179	7.2	964	38.7	1076	43.1	505	20.2	2494	100.0

Source: Field Survey

5.4 Conclusion

During baseline survey, before implementation of scheme, highest 36.1 per cent HHs are found processing their millets manually. Those processing through machine, 82.7 per cent HHs accessed within 10 kilometers. 43.1 per cent HHs marketed their millet products in local hat, 20.2 per cent HHs selling to money lenders, and 5.5 per cent selling to mill owners residing in that area.

6

MAJOR FINDINGS

6.1 In the survyed blocks of koraput district, 96 per cent HHs are engaged in agriculture activities which indicate that millet HHs are keen to produce millet as a part of their agricultural activities.

6.2 Highest millet HHs found in Lamataput block.

6.3 Production and productivity of Millets is not attractive as HHs are using traditional method i.e. broadcasting.

6.4 Most of the HHs cultivating millets through broadcasting method. They are lack of knowledge base regarding SMI method.

6.5 Due to intervention of WASSAN through Odisha Millet Mission, willingness of HHs has increased to cultivate millets and marketed the stored millets from previous year.

6.6 Most of the HHs use good quality of seeds which are locally available for millet cultivation.

6.7 From surveyed HHs, 89 per cent HHs are cultivating ragi in1147.5 ha of land in comparison to other millet crops with area, production and productivity.

6.8 Production and productivity of ragi is more than Suan in these selected blocks.

6.9 In this area, people are consuming millets in lunch time more in comparison to other day time.

6.10 Consumption of millets is more in summer season compare to other season as they have a social taboo that ragi receips create cold and cough during winter and rainy.

6.11 From surveyed HHs, 96 per cent of HHs consumes millets as porridge, locally called as **'**Jau**'.**

6.12 Till now most if the millet processing are done manually.

6.13 From surveyed HHs, 43 per cent HHs sold their millet in weekly hat, 38.7 per cent HHs to local traders, 18 per cent HHs to money lender as they have received money before production and given words to sell them after production, 7 per cent HHs sold their millet to middlemen and only 5.5 per cent HHs sold their millet to Mill owner.

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) _____

ଡ) 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 ଉର୍ଦ୍ଧ
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 ଠାରୁଋଣ 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 ଦ୍ୱାରା ଘାସବଛା	
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/ ସମ୍ପର୍କୀୟଠାରୁ iii) ଅନ୍ୟାନ୍ୟ (ଉଲ୍ଲେଖକର)

୧୫. ଆପଣ କ୍ଷୁଦ୍ରଶସ୍ୟକୁ କିପରି ପ୍ରସ୍ତୁତ କରନ୍ତି? i) ହାତରେ ii) 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		

ଏସ୍.ଏମ୍.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 ସହାୟକମୂଲ୍ୟ 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?* ☐ ☐ ☐ ☐

ମିଲ୍ଗାଲିକଙ୍କୁ 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

10 February 2020

Errata

Page	Section/Paragraph/Line	Table No/ Column/Row	Figure No	Earlier Version	Current Corrected Version
ix	Sec 3.1/Line 7	-	-	3.3 qtls/ha	8.1 qtls/ha
x	Sec 3.2/Line 7	-	-	6.5qtls/ha	6.6 qtls/ha
xii	Sec 5.1/Line 1	-	-	39.1	36.1
xii	Sec 5.1/Line 2	-	-	40.6	42.7
xii	Sec 5.1/Line 3	-	-	20.2	21.2
xii	Sec 5.2/Line 1	-	-	1664	1654
16	-	3.10/HHs (No.)/ Broadcasting	-	1099	953
16	-	3.10/HHs (No.)/Line showing	-	375	240
16	-	3.10/HHs (No.)/ Traansplant	-	749	744
16	-	3.10/ HHs (No.) /1+ method	-	-	286
17	-	3.11/ HHs(No.)/ 1+ Method	-	-	20
21	Sec 5.2/ Para 1/ Line 9	-	-	39.1	36.1
21	Sec 5.2/ Para1/ Line 10	-	-	40.7	42.7
21	Sec5.2/Para1/Line 11	-	-	20.2	21.2
21	-	-	Fig 5.1	39.1	36.1
21	-	-	Fig 5.1	40.7	42.7
21	-	-	Fig 5.1	20.2	21.2
22	Sec 5.2/ Para1/ Line 8	-		1664	1654

The corrections have been made by Dr. Abhisek Mishra and Mr. Bikash Pradhan under the supervision of Prof. Srijit Mishra.