Summer Training at
Aga Khan Rural Support Program (AKRSP)

Sustainable Agriculture

By
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Under the guidance of
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INSTITUTE OF HEALTH
MANAGEMENT RESEARCH
(WHO Collaborating Centre for District Health System Based on Primary Health Care)

IIHMR UNIVERSITY

CERTIFICATE

This is to certify that **Ms. Padmabati Bariha** has undergone summer training in **Agriculture** at **Aga Khan Rural Support Programme (India), Gujarat** from **3rd April 2018 to 24th May 2018.**

The candidate herself completed the project assigned to her during summer training. Her approach to the project was sincere and proactive. This summer training is in partial fulfillment of the course requirement recommended for the award of MBA in Rural Management.

I wish her success in all her future endeavors.

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AGA KHAN RURAL SUPPORT PROGRAMME (INDIA)

Date: 04th August, 2018

TO WHOMSOEVER IT MAY CONCERN

This is to certify that Ms. Padmabati Bariha from IIHMR University, Jaipur has completed Rural/Summer Internship placement with us on the topic *"To Study the Present Situation of Gundiya Village with respect to Agriculture Pattern, Understand the Income from SRI and Challenges faced by the Community in Implementing the SRI"* at Ahwa Taluka (Shamghan Cluster) of The Dangs district in Gujarat from 3rd April to 24th May'18.

She has submitted the final report as per the guidelines provided by the institute. We wish her all the best for her future!

Area Manager
Aga Khan Rural Support Programme (India)
Dangs

AKNOWLEDGEMENT

At the inception, I would like to express my special gratitude to Mr. Arun Adhikari, the programme specialist of AKRSP for his help to complete the summer training and his guide.

I would also like to acknowledge with much appreciation Ms. Maheswari Patel, the Cluster Manager, Mr. Dhannalal, the programme specialist, Mr. Suresh G Patel, the programme specialist, and all other staff of AKRSP Shamghan for their guide and suggestion which help me to complete my training.

I am very much thankful to BRLF for give opportunity to doing my summer training in AKRSPI (Gujarat) as well as for its guidance and suggestion.

I express my special gratitude to my mentor Mr. Hemant Mishra, Associate professor, IIHMR University Jaipur, for his able guidance and useful suggestion which help me to completing my project work.

IIHMR University, Jaipur Padmabati Bariha

Date

CONTENTs:

A. Part 1: About the organisation

Aga khan rural support programme India (AKRSPI)

AKRSPI Started its journey from Gujarat in 1986 in 3 District such as Surendranagar, Bharuch and Junagadh. Pass over the time now it is working in 12 District and 27 blocks of the Gujarat state by expanding the programme. Headquarter of the AKRSPI are situated at three distinct region such as coastal saline region in Mangrol, the drought-prone region in Sayla and the tribal south Gujarat region in Dangs and Netran. Beside Gujarat it also works in Madhya Pradesh and Bihar since 2004 and 2008 accordingly. AKRSP work in 242 village of 7 blocks in 5 districts of Madhya Pradesh and 350 villages of 12 blocks in 2 districts of Bihar.

Vision statement of AKRSPI

AKRSP (I) can contribute in India to the creation of an enabling environment in which rural people can identify their needs and priorities and with professional support, organize themselves to improve the quality of their lives.

Mission Statement of AKRSPI

AKRSP (I) aimed to enable the empowerment of rural communities and groups, particularly the underprivileged community and women, to take control over their lives and manage their environment, to create a better and equitable society.

Different intervention of AKRSPI

1) Sustainable agriculture
2) Sanitation
3) Community institution
4) Rural Governance (Panchayati raj)
5) Financial Inclusion
6) Education
7) Skill and entrepreneurship
8) Drinking water
9) Natural resource management
10) Irrigation
11) Renewable energy
12) Livestock

AKRSP (I) Dang, Gujarat

The headquarter of Dang district is situated in Ahwa. AKRSP of Ahwa agin divided into four cluster in differ block such as Subir cluster, Waghai cluster, Ahwa cluster and Shamghan cluster.

Shamghan cluster

Shamghan cluster is started on 2014. It consists of 9 staff members out of which 1 cluster manager, 1 programme specialist and rest are social workers. It works in 40 villages of 9 panchayat of Ahwa block. It mainly works on

- Agriculture
- Livestock
- Soil and water conservation
- Water resource development
- Village institution
- Micro finance
- Enterprise

Community Perspective

According to the community AKRSP is a good organisation doing works for the development of rural community. The organisation is showing as best as possible. It is responsive for the work and has good understanding towards the community. The community shows proactive participation in the interventions of AKRSP.

Observation in the field

The organisation works well. Farmers are interested to doing SRI system in agriculture. More female participation is required. Beside SRI system farmers are interested in poultry. They use hand pump for the drinking water. The road connectivity is good. They have facility of 24*7 hours electricity. Every household have toilets facility and they use it. There is a primary school with good infrastructure. There is no drop out student in the school. Migration also takes place but not in high quantity. Anganwadi worker and ASHA worker are doing their best for the village.

Learning from the organisational approach

Shamghan cluster office of the AKRSP opens from 9 AM to 5 PM. The staff members are very sincere. All members come to the office and after that they plan about the work of the day and go to the field. They finish their work according to the plan. There is no hierarchy system among the staff. Office infrastructure is good. Monthly meetings are held in the cluster in which they discuss about the project, problem solving, data collection etc. The cluster manager visits to the project site twice or thrice in a month or as per the requirement. The staff members are respectful of each other. I had studied about organisations but during my summer training programme I learn these things about an organisation.

B. The Study – Sustainable Agriculture

Introduction

Agriculture is the cultivation of land and breeding of animals and plants to provide food, fiber, medicinal plants and other products to sustain and enhance life. In our country it is done by two methods- (a) Traditional method and (b) Modern Method which includes (system of Intensification (SRI) method.

Traditional agriculture is a type of farming that uses techniques developed over decades or centuries to ensure good, sustainable yield over time in a specific area or region. Due to lack of money and education, traditional farmers are dependent on the traditional approach for agriculture. With changing time and awareness generation among small farmers now modern pattern of agriculture are used. SRI system is a such kind of systems which facilitates the poor farmers to get more production with a set of skill.

System of rice intensification (SRI):

- The system of Rice Intensification (SRI) is a scientific methodology aimed at increasing the yield of rice produced in farming, reduce inputs, conserve water, and improves soil structure.
- The seeding grown in the nursery beds are transplanted after just 8 – 10 days or at the 2 – leaf stage.
- Seedling are transplanted singly, not in a bunch.
- Seedlings are transplanted at a wide spacing, from 20 to 50 cm apart.

Moreover, it comprises of transplantation of seedling, water management, weed control, and soil erosion, together with the use of organic nutrients. Broadly, it speaks about changed management practices rather than expensive inputs.

The present study attempt to understand the pattern of cultivation in Dang district of Gujarat, where Aga Khan Rural Support Programme (AKRSP) is building capacity of the small farmers to produce more rice by adopting SRI system. The project was initiated in the year 1986 at Gujrat and now, they are replicating the model in Gundiya village of Ahwa Block currently since 2014.

OBJECTIVE OF THE STUDY

- To Study the present situation of Gundiya village with respect to agriculture pattern.
- To understand the factors which facilitate increase in the income generation of the families due to use of SRI pattern of agriculture
- To understand the challenges faced by the community in implementing the SRI pattern of agriculture in the village.

Research Questions

The village has been selected as it is an old implementation village where some outcome can already be seen. Following are some of the key questions for this study:

- What type of agriculture pattern is being used by the farmers of the villagers?
- What are the irrigation method they apply for agriculture?
- What are the current situation of the Gundiya village regarding agriculture?
- Whether the SRI system has been able to increase the income and production of grains?
- Which activities of the SRI system are facilitating more production of rice in the area?

Limitation of the study

This study was carefully undertaken during my internship at AKRSP. I am aware of its limitations and shortcomings.

The data collection of the study was conducted in the one village for fifty days. Fifty days is not enough for any researcher to observe all the farmer's experimentation and utility of the SRI system in depth.

As it is a very data of only one village and 35 number of respondent it may not give the understanding about agriculture in this region.

CHAPTER – 2

METHODOLOGY

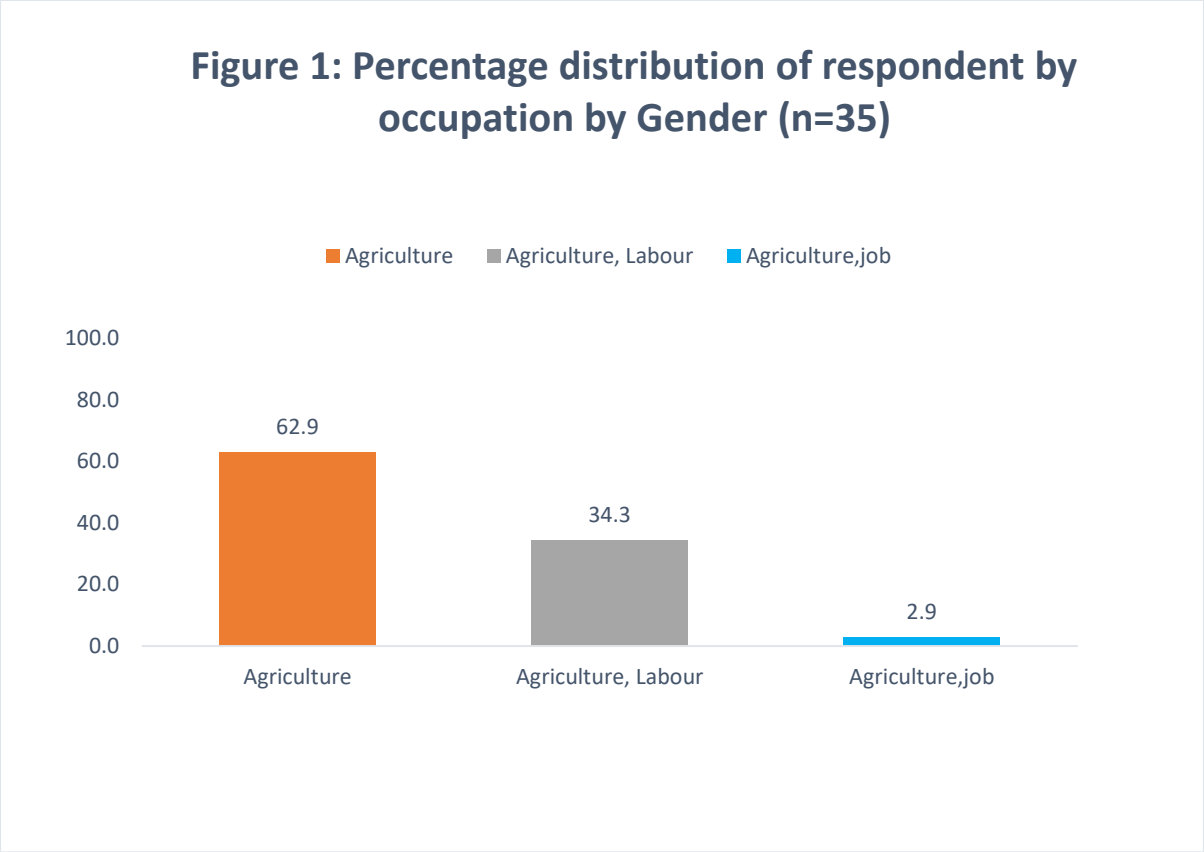
The study area is Gundiya village of Gotiyamal panchayat in Dang district of Gujarat, India which consist of 110 households. The population of this village is 738 out of which 368 (49.86%) are male and 370 (50.13%) are female. Mainly the income source of villagers are agriculture and labour. The geographical area of the Gundiya village is 286.81 Hectares. Sample size is 35 HHs (30% of total HHs +10% non-response rate). Simple random sampling is applying for the selection HHs. Descriptive and Explorative research design is applying for this study. Tools of Pre-tested semi structured questionnaire is applied for the study.

CHAPTER – 3

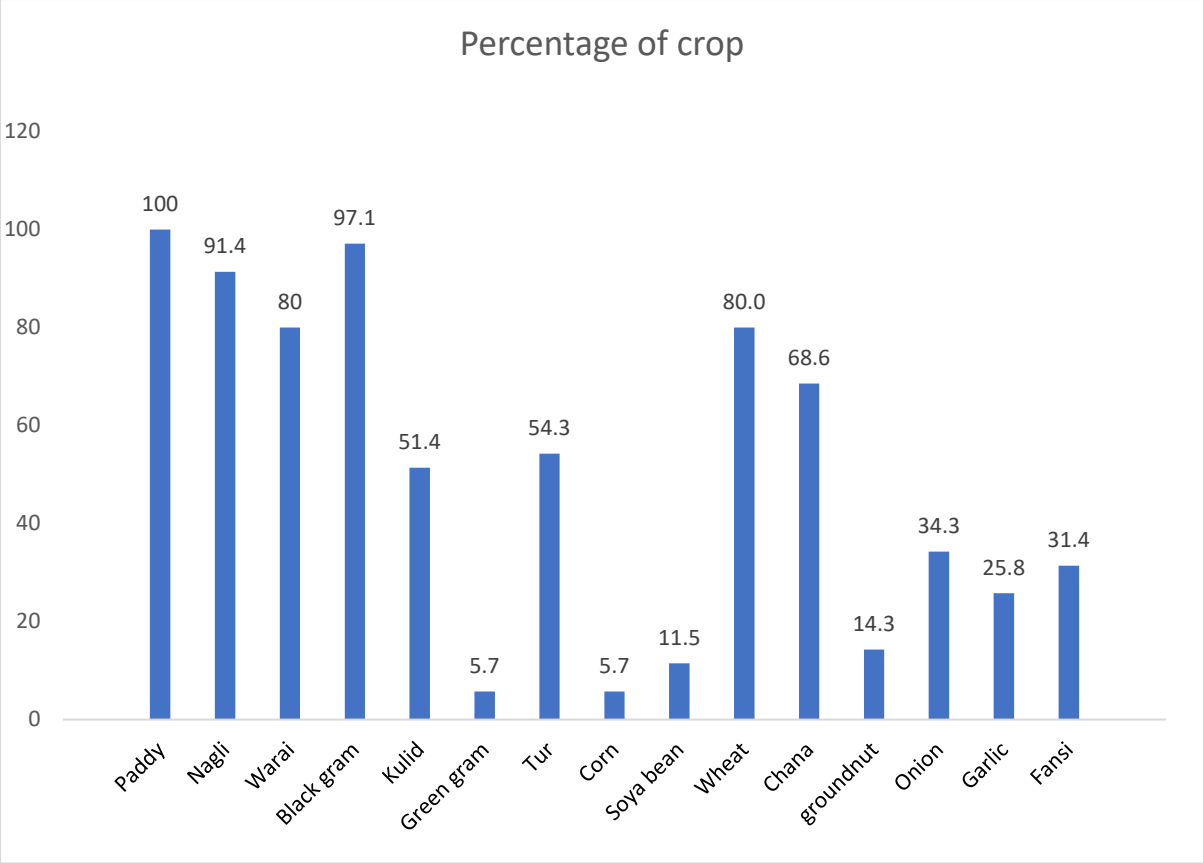
Table – 1

Percentage distribution of respondent by agriculture

Occupation	Frequency	Percentage
Agriculture	22	62.9%
Agriculture, Labour	12	34.3%
Agriculture, Job	1	2.9%
Total	35	100%



The above graph represents that out of 35 respondents, 62.9% of farmers depend on agriculture for their income, 34.3% of farmers depend on both agriculture as well as Labour and 2.9% of farmers depend on Agriculture and Job for the income generation.

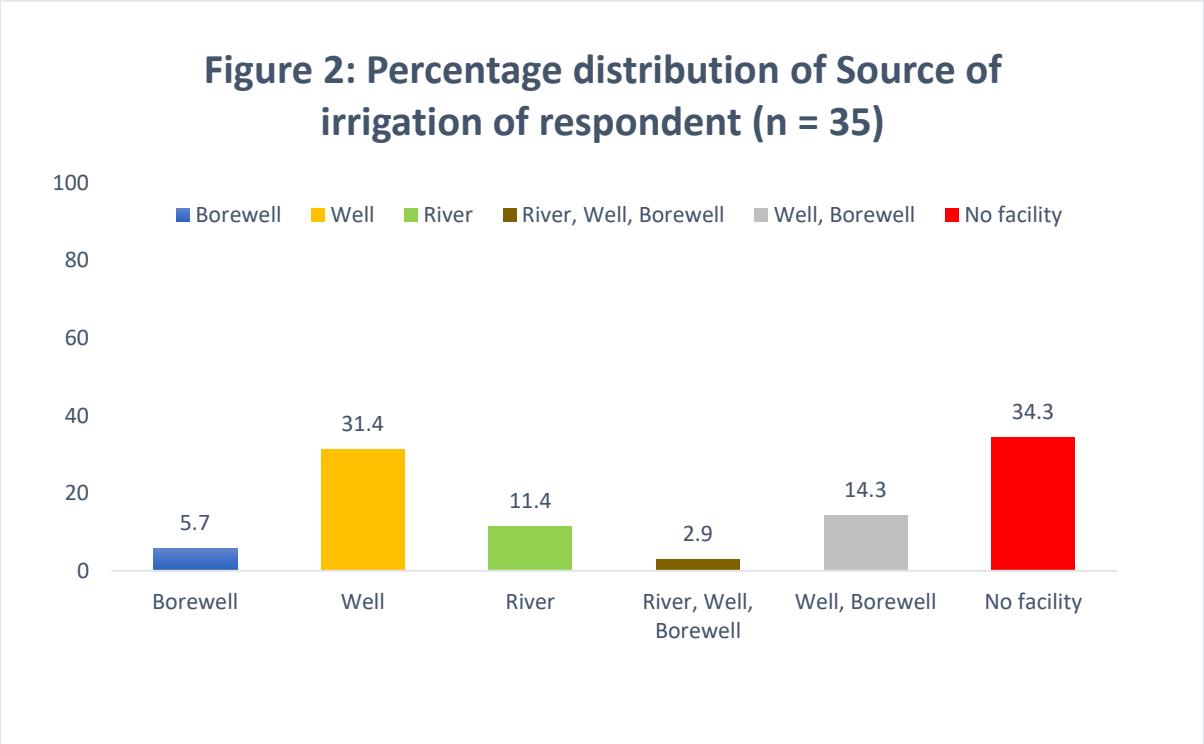


This graph represents that 100% of the household cultivate paddy. 91% of farmers cultivate Nagli. 80% of people cultivate Warai. 97.1% farmers cultivate Black gram. 51.4% of people cultivate Kulid. 5.7% of farmers cultivate green gram. 54.3% of farmers cultivate Tur. 5.7% farmers cultivate corn. 11.5% of farmers cultivate Soya bean. 80.0% farmers cultivate Wheat. 68.6% of farmers cultivate Chana. 14.5% of farmers cultivate groundnut. 34.3% of farmers cultivate onion.

Table – 2

Percentage Distribution of Source of Irrigation

Source	Frequency	Percentage
Borewell	2	5.7%
Well	11	31.4%
River	4	11.4%
River, Well, Borewell	1	2.9%
Well, Borewell	5	14.5%
No Facility	12	34.3%
Total	35	100%

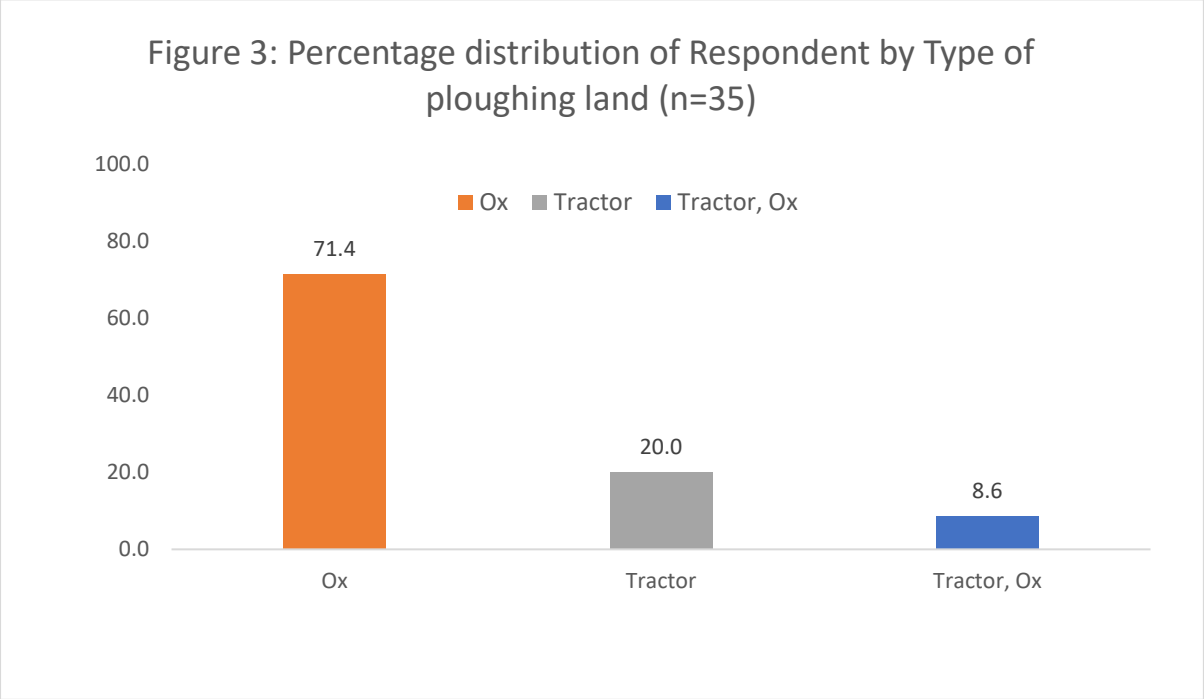


The above Graph represent that out of 35 respondents, 5.7% of farmers are having borewell for the irrigating their agricultural land, 31.4% of farmers having well, 11.4% of farmers having facility of river, well, and borewell, 14.3% of farmers having facility of both well and borewell, while 34.3% farmers have no any facility for irrigating their agricultural land.

Table – 3

Type of ploughing land

Type of land ploughing	Frequency	Percentage
Ox	25	71.4%
Tractor	7	20%
Tractor, Ox	3	8.6%
Total	35	100%

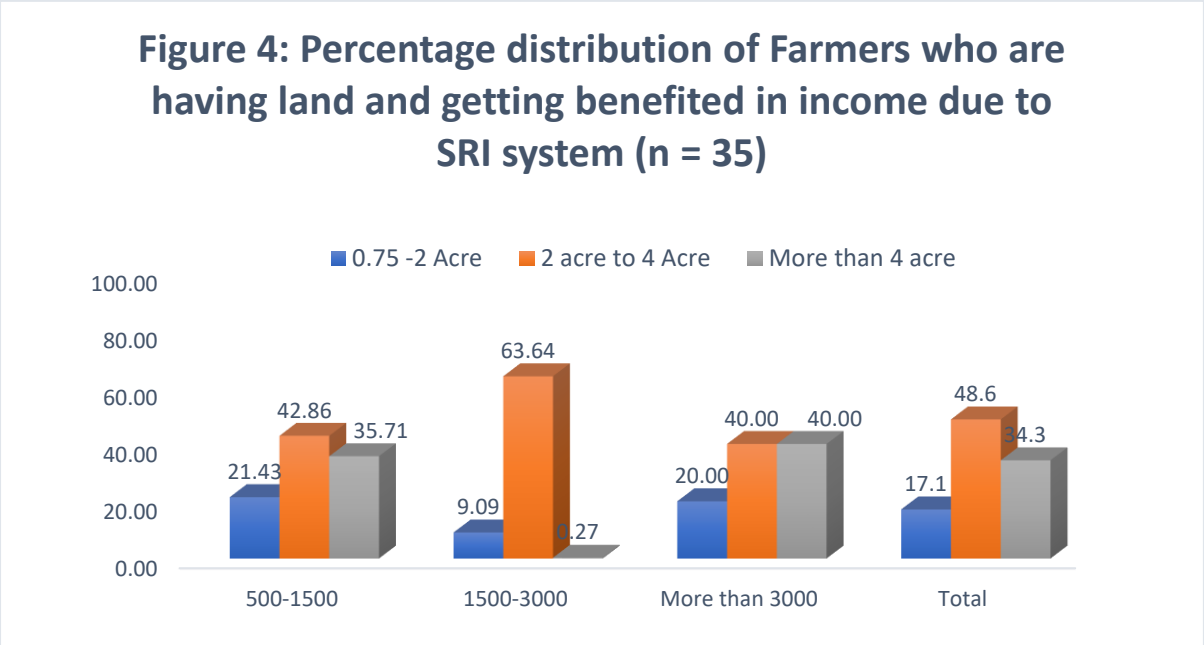


The above graph represent that out of 35 respondents, 71.4% of farmers use ox for the ploughing of their agricultural land, 20% of farmers using Tractor and 8.6% of farmers use both Tractor as well as ox for the ploughing of their land.

Table – 4

Farmers who are having land and getting benefitted in income due to SRI system

Size of Landholding	Benefitted amount of income		
	500 -1500	1500 - 3000	More than 3000
0.75 – 2 Acres	21.43%	9.09%	20%
2 – 4 Acres	42.86%	63.64%	40%
More than 4 Acres	35.71%	0.27%	40%

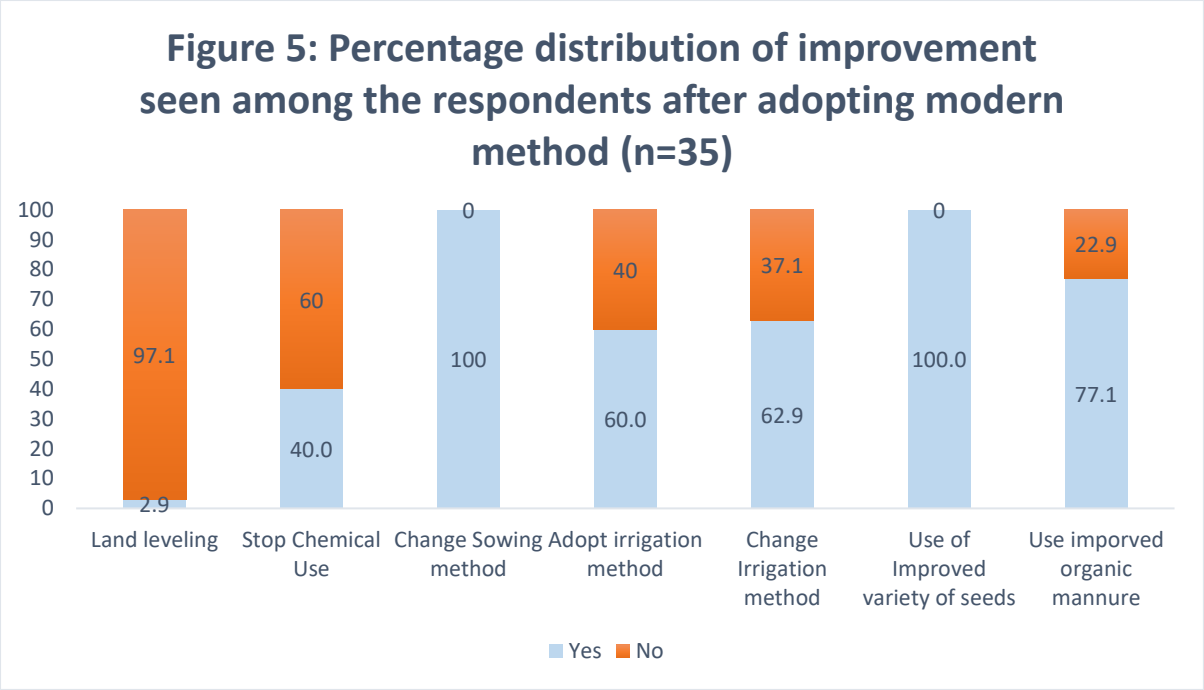


This graph shows out of 35 respondents 21.43%, 42.86%, 35.71% of farmers say that their increasing income is 500 – 1500 those who have land of 0.75 – 2 Acres, 2 Acres – 4 Acres and more than 4 Acres respectively. 9.09%, 63.64%, 0.27%, of farmers say that their increasing income is 1500 – 3000 who have land of 0.75 – 2 acres, 2 Acres – 4Acres and more than 4 Acres respectively. 20%, 40%, 40% of farmers say that their increasing income is more than 3000 who have land of 0.75 – 2 Acres, 2 acres- 4 Acres and more than 4 acres respectively.

Table – 5

Improvement seen among the respondents after adopting modern method

Efforts	Frequency		Total
	Yes	No	
Land levelling	2.9%	97.1%	100%
Stop chemical use	40.0%	60%	100%
Change sowing method	100%	0%	100%
Adopt irrigation method	60%	40%	100%
Change irrigation method	62.9%	37.1%	100%
Use of improved of variety of seeds	100%	0%	100%
Improved organic manure	77.1%	22.9%	100%

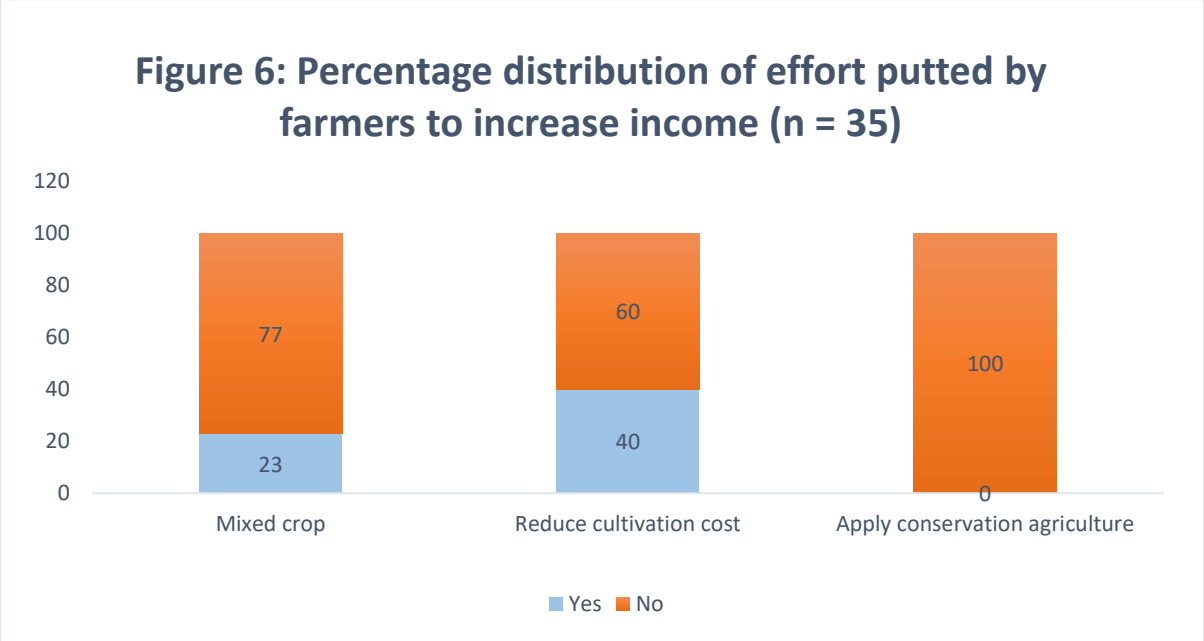


The above graph represents that out of 35 respondents 2.9% put efforts in land levelling, 40% have stopped using chemical fertilizers, 100% have adopted changed sowing method, 60% adopt irrigation method, 62.9% changed their older irrigation method, 100% use improved variety of seeds, 77.1% use improved organic manure.

Table -6

Efforts putted by farmers to increase income

Efforts	Frequency		Percentage	
	Yes	No	Yes	No
Mixed crop	8	27	23%	77%
Reduce cultivation cost	14	21	40%	60%
Apply conservation agriculture	0	35	0	100%



The above graph represent that 23% of farmers adopt mixed crop,40% of farmers reduce cultivation cost and no body adopted conservation agriculture to increase income.

KEY FINDING

- Most of the respondents were agricultural labourer and around one third of them do not have any source of irrigation. Those who have water sources they do it by Bore well, uncovered well, spring etc. throughout the Year. No connectivity with any irrigation canal system.
- Males are dominating the HHs and involved themselves in agriculture.
- Old technology is preferred in the community for cultivation. OX is used by almost 2 farmers out of every 3 farmers. However, only one fourth are using tractor for doing farming.
- Both organic and inorganic fertilisers are used by all of them, which leads to less production.
- They study envisage that with more productivity, the income of the farmers increases.
- Due to adaptation of SRI System, the income of the farmers has increased. Although it was seen that having more land is directly proportional to more income & Adaptation of SRI System. Around almost half of the farmers agreed that they have more income when land is 2 acres to 4 acres.

CHAPTER – 4

CHALLENGES

- Old practices continue
- Lack of irrigation facility in the land of the village
- Use of high quantity of chemical fertilizers by the farmers and Less use of organic fertilizers
- Slopes of the land which acts as a barrier to store water

SUGGESTION

- Make an agriculture committee by the farmers (each committee contain 20 members) and link them with the local market.
- Provide SRI pattern of training about the agriculture to the farmers
- Provide financial support to the farmers such as loan.
- Monthly visit by the agriculture committee for observe the situation and advice for further rectification.
- Exposure visit of farmers to successful sites.
- Introduce the farmers with a successful farmer who have the knowledge about the scientific method of farming he can joy the believe of farmers

CONCLUSION

- The SRI System of agriculture should be promoted for farmers having less amount of land.
- Communities are willing to adopt SRI system of agriculture in the villages and have started working. Females participation needs to be increase in the area.
- SRI System involves less cost and urges to change the managerial practices in agriculture.