

# TO STUDY THE IMPACTS OF EDUCATION AND DEMOGRAPHIC CHANGES ON AGRICULTURE IN REWARI DISTRICT OF HARYANA

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## Abstract

किस्मत पर नहीं, परिश्रम पर विश्वास रखने वाला किसान ही है जीवन दाता”

Things are not the same as it was before globalization when we were living in a slow and comparably peaceful life which was free of polluted air, water and altered food. Now we all are in race of development by avoiding the degradation of biodiversity. Sometimes I think that are we really educated? Having advanced technology we are missing a lot in this development race. Education has given us both favorable and unfavorable changes. Due to educational awareness within society we have benefited a lot but at the same time we have lost interest in agricultural practice. New generation is not keen and interested in agricultural practice. As we all know that in this modern era of education, the primary preference of each one is to enjoy the good life in the urban and agriculture is secondary. At the same time the new generation is not ready to cattle rearing of livestock (Cow, Buffalo, Goat etc.) which is an additional income source of families and also helps in environmental protection by using “Farali” as a food for livestock instead of burning it in the field by farmers hailing from Haryana and Punjab which creates smoke problems in nearby places like Dehli.

The population of our country is increasing but at the same time the per person within the family is restricted to one or two and the land is divided in small parts which results in new agricultural practices in society. Suppose a family is having four members (Father, Mother, Daughter and Son). After marriage the daughter lives with her husband in his home and the parents are aging and are not able to do agriculture while their only son is settled in an urban city. Thus, new social structures are forming which needs to be studied. People from other parts of India are coming to that area and are starting new agricultural practices by taking land from many farmers on lease for a long term period (5 to 10 years) and are plowing two crops at a time which is a combination of fruit trees with seasonal crops in between.

**Keywords:** Education, Demographic Changes, Agriculture, New Practices in Agriculture and Environment Pollution.

## INTRODUCTION

### History of Rewari (Area of Rewari District 1,594 km<sup>2</sup>)

The History of the district Rewari is contemporary to the history of Delhi. During MAHABHARTA period there was a king named Rewat, he had a daughter whose name was Rewati. But the king used to call her Rewa lovingly. The king founded and established a city named “Rewa wadi” after the name of her daughter. Later on Rewa got married with Balram, elder brother of Lord Krishna and the king donated the city “Rewa wadi” as dowry to her daughter. Later the city Rewa wadi became REWARI. The majority of the castes which lived in Rewari was Morya, Gupts and Gujjars. Although now the majority is of the Ahirs, all castes live with harmony. In the city the Punjabis and Guptas have hold on the business.

Rewari is a city and a Municipal Council in Rewari district in the Indian state of Haryana. It is located in south-west Haryana 82 km from Delhi and 51 km from Gurgaon. Rewari is famous for its traditional metalwork, particularly brass work. The brass industry began around 1535, with the help of Portuguese. During the time of Hemu, cannons were cast in Rewari for the army of Sher Shah Suri. Rewari district is one of the 22 districts in the state of Haryana, India. It was carved out of Gurgaon district by the Government of Haryana on 1 November 1989.



### Agricultural Practice in Rewari

The major source of the district income originates from the agriculture sector (73.25%) which is followed by animal husbandry (16.5%) and horticulture (9.1%). Mustard and wheat are the main crops in rabi and, bajra is of kharif.

### Main Crops of Rewari

The main crops of Agriculture of Rewari, Haryana are wheat, rice, sugarcane, cotton, oilseeds, gram, barley, corn, millet etc. There are two main types of crops in Agriculture of Rewari, Haryana: Rabi and Kharif. The major Kharif crops of Haryana are rice, jowar, bajra, maize, cotton, jute, sugarcane, sesame and groundnut. The farmers of Punjab, Haryana and Western Uttar Pradesh were the first to try out modern farming methods in India by using HYV (High Yielding Variety) seeds and modern equipment's for the growth of mainly wheat in North India and rice in South India.

### SIGNIFICANT OF THE STUDY:

Most of the previous studies focus on the use of fertilizer to increase agriculture production but did not understand the interest of people in agriculture. Some were focused to educate farmers about soil types and the suitable crops etc. but they did not try to correlate the relationship of modern education and agriculture. Agricultural production is affected by demographic changes such the growth of the nuclear family system due to modern education within the society in Rewari district of Haryana were not studied. Previous studies take finance as the major variable for agriculture but did not compare it with the nuclear social system.

### RESEARCH METHODOLOGY:

#### Area of Study:

The present study is related to the favorable and unfavorable impacts of education and demographic changes on agriculture and allied practices in the rural area of Rewari district of Haryana.

### Variables of the study:

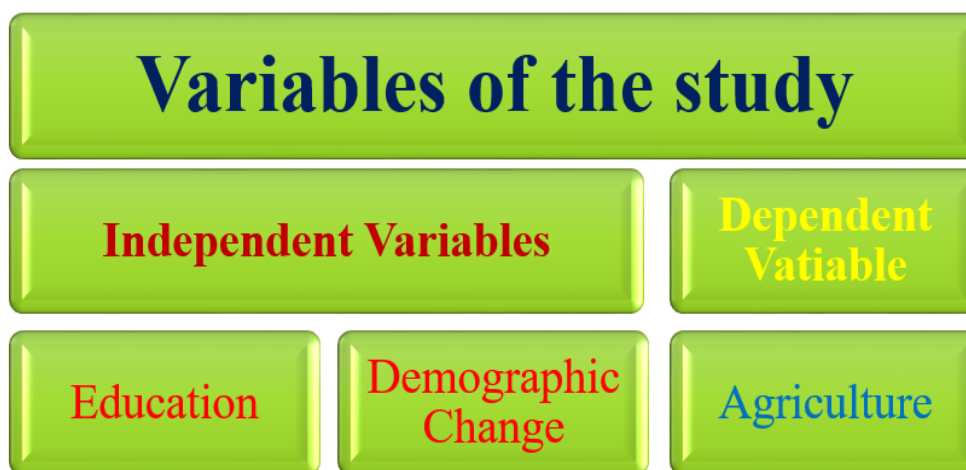


Fig. No.-1 Variable of the study

### Dependent Variable

If one variable depends upon or is a consequence of the other variable, it is termed as a dependent variable. In this study dispute agriculture is dependent variable because it is depends on education and demographic change.

### Independent Variable

The variable that is antecedent to the dependent variable is termed as an independent variable. In this study education and demographic change are taken as independents variables.

### Objectives of the Study:

- To study the new generation's keen interest in agriculture.
- To study the impact of demographic changes on agriculture.
- To study the impact of modern education on new agriculture pattern

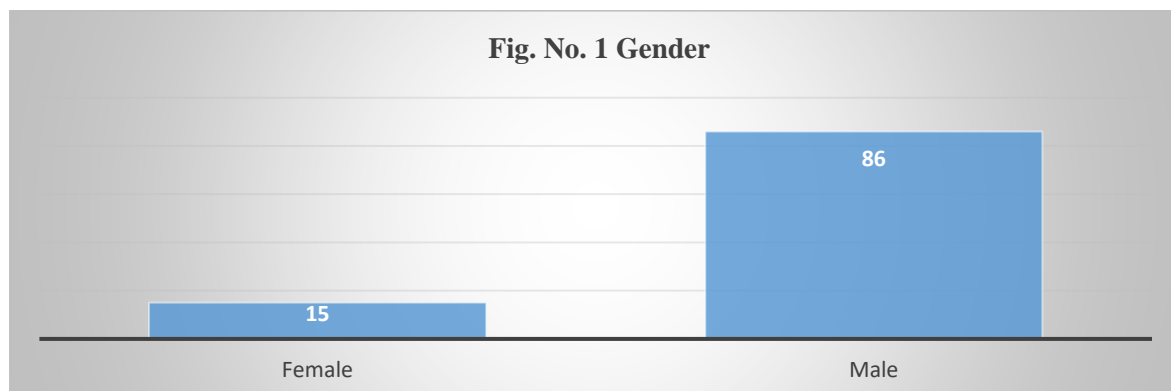
### Research Questions

- Q1- What are the Education qualification of "MALE" family members who are involved in agriculture?
- Q2- What are the Education qualification of "FEMALE" family members who are involved in agriculture?
- Q3- How many "MALE" family members are having private /public service?
- Q4- How many "FEMALE" family members are having private /public service?
- Q5- Do you have Agriculture land?
- Q6- How many family members (Father, Mother, Your Self, Wife, Brother, Sister) are doing agriculture?
- Q7- How many "MALE" family members have left their native place for employments?
- Q8- How many "FEMALE" family members have left their native place for employments?
- Q9- Have you given your agriculture land on rent?
- Q10- To whom the land is given on rent?
- Q11- How much rent you are receiving per acre?
- Q12- Which sources of irrigation you are using in Rewari district of Haryana?
- Q13- Which new technique is used by the renter?
- Q14- Are renter rearing animals with agriculture?
- Q15- Do you agree that air pollution is caused due to burning of farrali?
- Q16- Do you agree that modern society members are not interested to do animal husbandry?
- Q17- Do you agree that decreasing interest in animal husbandry is the main reason behind burning farrali because traditionally farrali was used as animal foods?

## RESEARCH METHODOLOGY

Survey method used to know the answer of the objectives. In the present study, the investigator divided whole research in the various parts. Investigator visited personally to collect the primary data from various farmers and tried to understand the new practice and their impact on the agriculture income. Investigator collected the educational data and their various impacts with population demographic changes

- **Methodology:** It is a type of Descriptive Research and Survey Method used.
- **Population:** In the present study, all farmers of Rewari district of Haryana were the population.
- **Sample Size:** 10 farmers and 101 respondents taken as sample in the present study.



- **Process of selection of sample:** Random sampling used in primary data collection.
- **Tool of the Study**

Any instrument used to collect data consistent with the objectives of the study is known as tool. In the research, the investigator used a questionnaire to collect the primary data from the farmers of various villages and websites of Rewari district agriculture authority for supportive secondary data

- **Tools:** A Questionnaire (Google Form) used for primary data collection.
- **Methods of Data collection**

Investigator, collected raw data through questionnaire via personal visit in about 10 villages of Rewari district of Haryana which will be supported by income receipts (sale of crops and money received in farmers Banks accounts and other receipts) due to changes in agricultural practice as well as secondary data from various websites of state and central governments.

- **Process of Analysis of Data:** All data analyzed using the percentage, measurement of central tendency, 't' test, correlation and Regression.

### EXPECTED BENEFITS OF THE STUDY

The present study will help to understand the impact in the Rewari district of Haryana due to modern education and demographic changes. Investigator will be able to suggest the benefits of new agriculture practice in that area and their adverse impact on the revenue of rural people who left the village and selected the urban lifestyle. It will provide information to government (State and Central) in future policies making on agriculture.

Table No. 1 Farmer Personal (Respondents) Details						
Sr. No.	Name	Gender	ID Number	Age	Place of Work	Native Place
1	Bachan Singh	Male	880622652900	54	Nand Rampurbass, Rewari, Haryana	Punjab
2	Asalam	Male	706424235825	40	Nikhri, Rewari, Haryana	Shahjahanpur, Uttar Pradesh
3	Kherunnisha W/o Asalam	Female	985719732561	39	Nikhri, Rewari, Haryana	Shahjahanpur, Uttar Pradesh
4	Yamin	Male	526212475381	30	Batsana, Rewari, Haryana	Tisua, Bareilly, Uttar Pradesh
5	Sayra Bano W/o Yamin	Female	306311642628	32	Batsana, Rewari, Haryana	Tisua, Bareilly, Uttar Pradesh

**Fig. No. 2** Investigator is Taking Responses from Respondent via live whatsapp video calling



**Fig. No. 3** Investigator is Taking Responses from Respondent via live whatsapp video calling



**Fig. No.4** Fencing all around Agriculture Field.





**Fig. No. 8** Well Decorative view of their Temporary Home kitchen



**Fig. No. 9** View of their Temporary Home latrine.



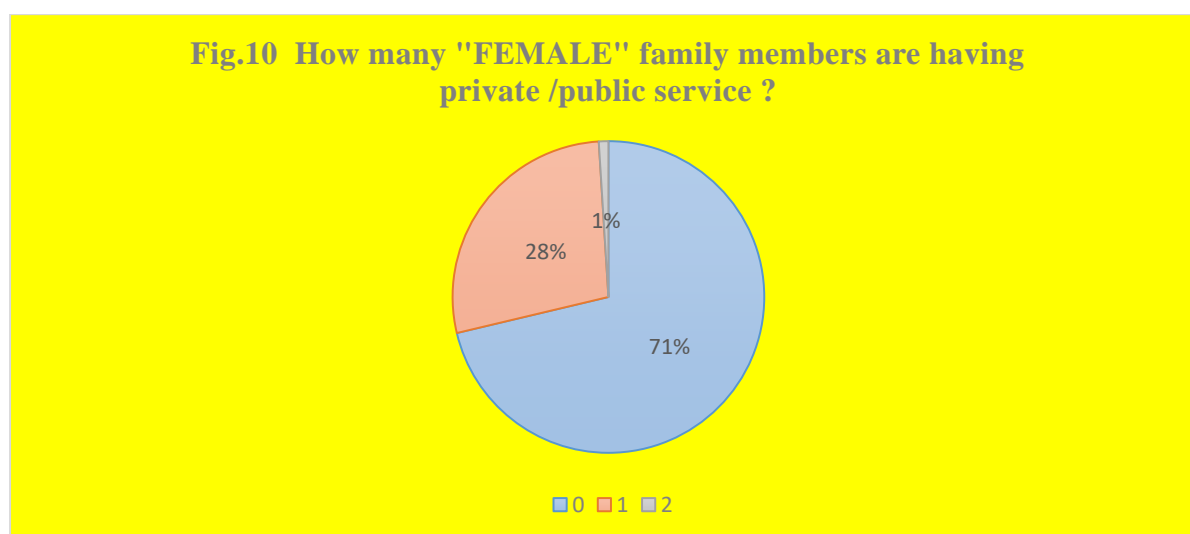
**DATA ANALYSIS**

**Table No. 2 (Kharif and Rabi Crops Average Cost and Average Selling price Details Per Acre)**

Sr. No.	Crop	Plowing & Leveling	Spray & Manure	Seeds	Light Bill	Labour	Other Labour	Binai	Farm er own Labour as per Min. Wage Act-2020	Land Rent 6 Months	Total Cost	Total Revenue	Net Margin / Loss
1	Cotton	3,600	4,500	1,500	900	4,500	1,800	9,600	176*= 26,400	10,000	62,800	60,000	(-) 2,800
2	Mustard	3,600	500	1,050	900	2,000	2,500	1,800	26,400	10,000	47,700	45,000	(-) 2,700
3	Wheat	3,600	3,000	1,200	900	6,000	1,500	2,200	26,400	10,000	54,800	38,520	(-) 16,280
4	Vegetables (Tomato, Butter Gourd, Watermelon, Muskmelon, Pumpkin, Bitter Guard etc.)	3,000	7,300	34,000	1,200	10,000	2,500	5,000	26,400	10,000	99,400	1,80,000	(+)80,600

**Table No. 3 (Kharif and Rabi Crops Average Cost and Average Selling price Details Per Acre)**  
**Expected increase in selling price if Crops stored for 3 months ( At Their Own Risk)**

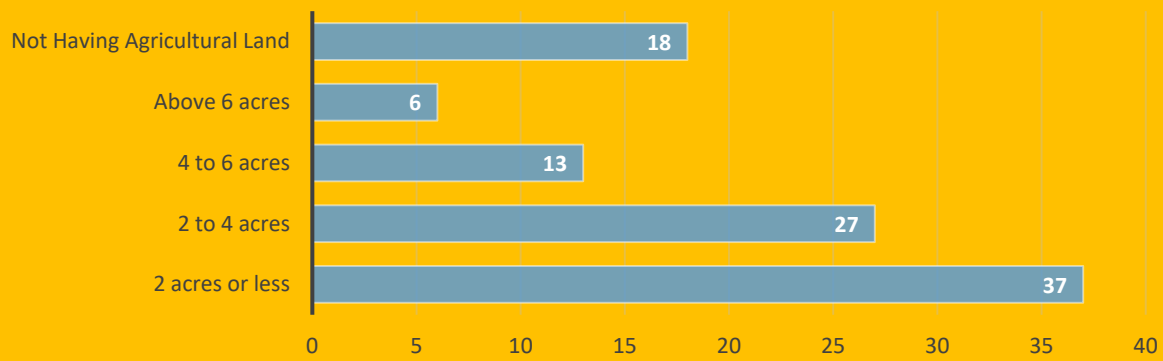
Sr. No.	Crop	Plowing & Leveling	Spray	Seeds	Light Bill	Labour	Storage Cost	Binai	Farm er own Labour as per Min. Wage Act-2020	Land Rent 6 Months	Total Cost	Total Revenue	Net Margin / Loss
1	Cotton	3,600	4,500	1,500	125	6,300	5,000	9,600	176*= 26,400	10,000	67,025	84,000	(+) 16,975
2	Mustard	3,600	500	1,050	125	4,500	4,000	1,800	26,400	10,000	50,925	63,000	(+) 12,075
3	Wheat	3,600	3,000	1,200	125	7,500	4,000	2,200	26,400	10,000	58,025	36,000	(-) 22,025



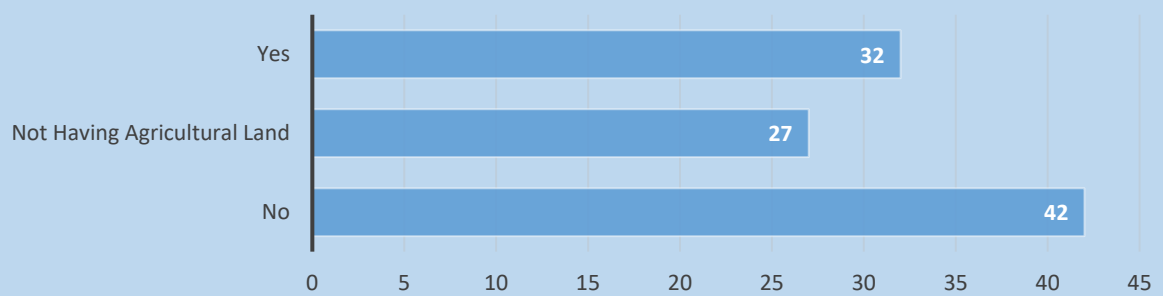
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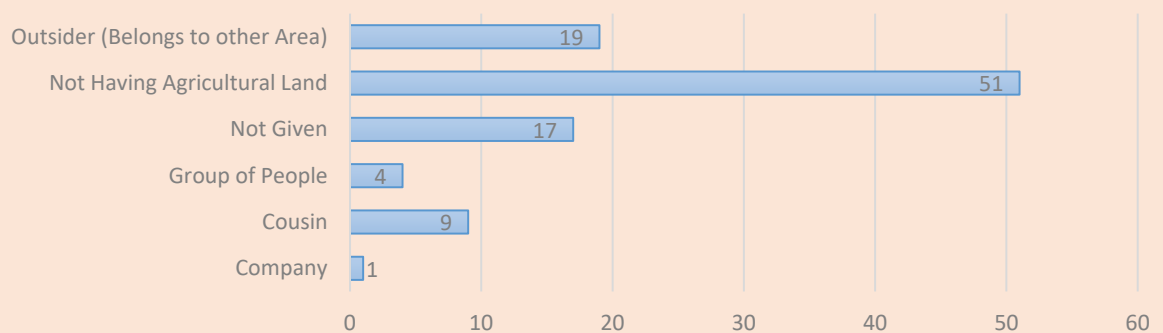
**Fig. No.-11- Do you have Agriculture land ?**



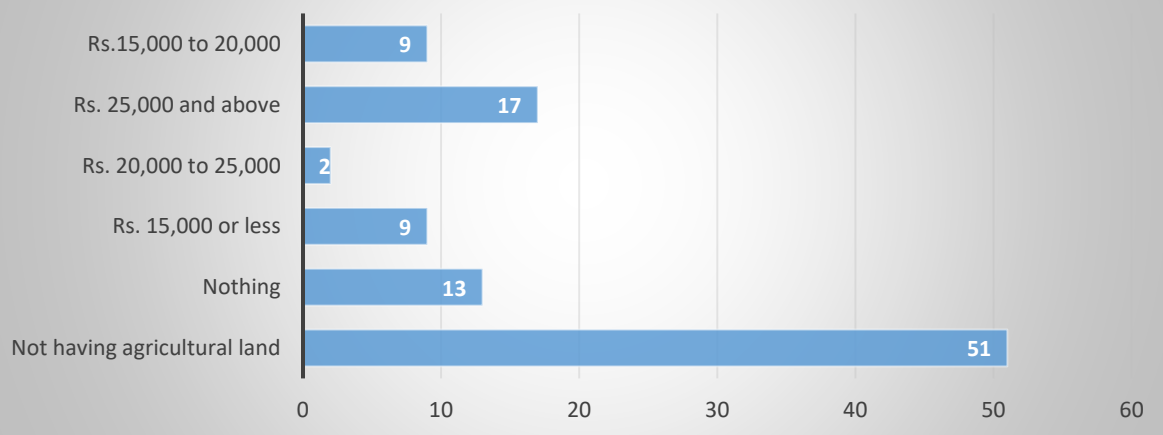
**Fig. No. 12- Have you given your agriculture land on rent ?**



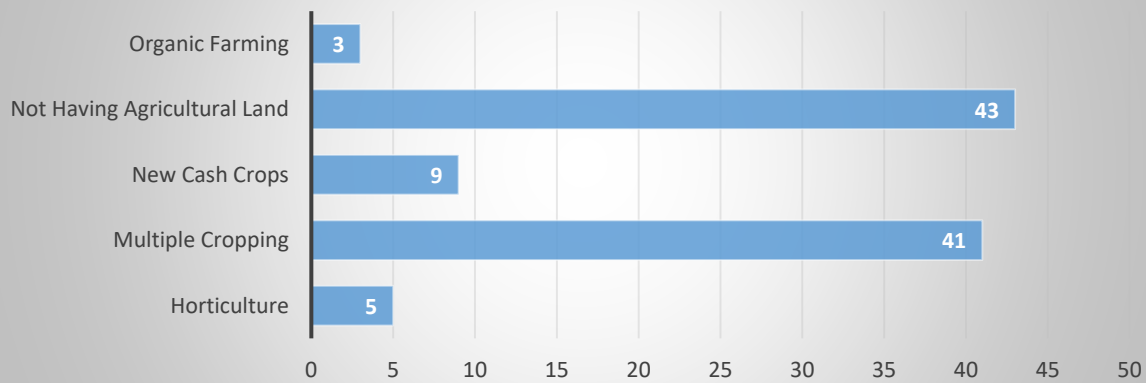
**Fig. No. 13- To whom the land is given on rent ?**



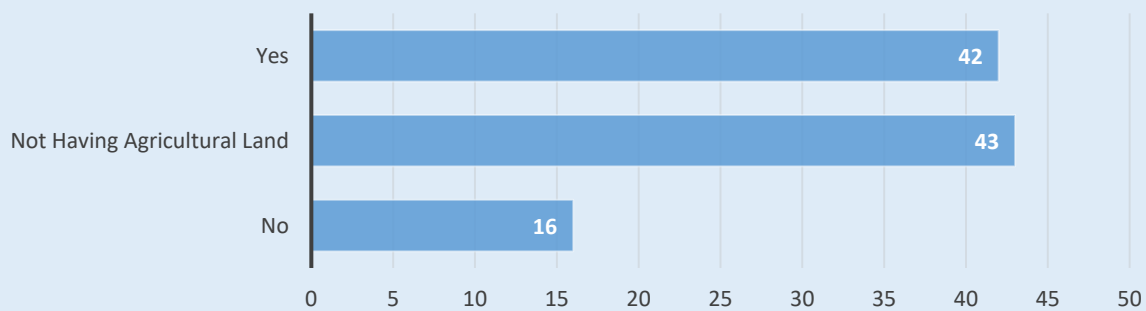
**Fig. No. 14- How much rent you are receiving per acre ?**



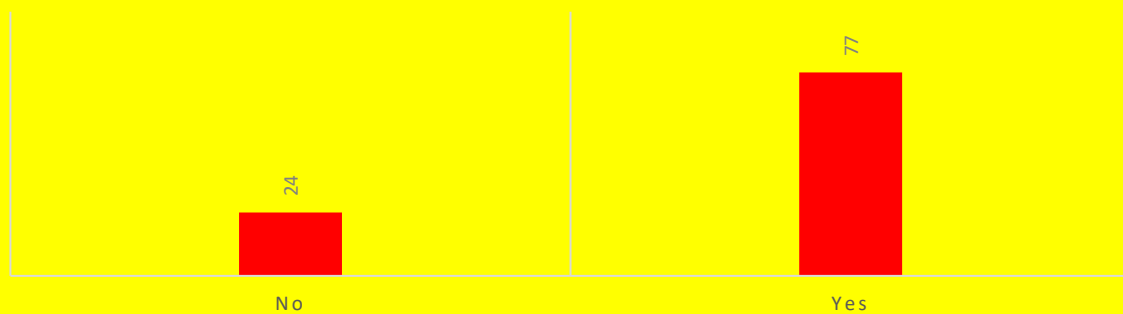
**Fig. No. 15- Which new technique is used by the renter ?**



**Fig. No. 16- Are renter rearing animals with agriculture ?**



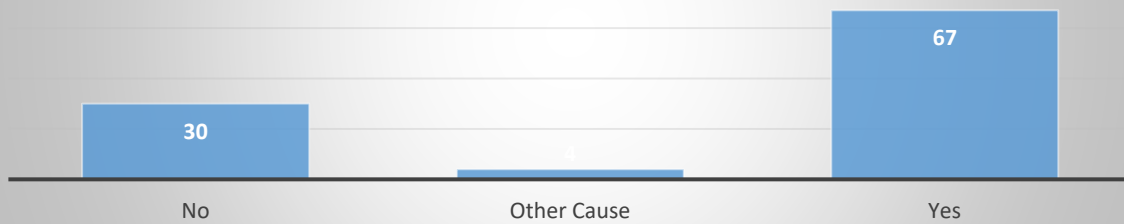
**Fig. No. 17- Do You Agree That Air Pollution Is Caused Due To Burning Of Farrali ?**



**Fig. No.18- Do You Agree That Modern Society Members Are Not Interested To Do Animal Husbandry ?**



**Fig. No. 19- Do you agree that decreasing interest in animal husbandry is the main reason behind burning farrali because traditionally farrali was used as animal foods ?**



#### Q18- Any other Views?

- Now we have good transportation to go nearby place for work so should not leave native place.
- One question? 1. What are problems that faced by the farmers during agriculture?
- In future I'm interested in organic agriculture.
- Farrali is being burnt with increasing area of rice crop in Haryana.
- It's main reason the population is increasing day by day and there is a shortage of housing.
- Air pollution is caused due to vehicle and industry.
- Organic farming and small farming like on trace should be educated and promoted.
- Over all agriculture is backbone of our country. But it seems that government doesn't give opportunity for farmers. So that they are left from this platform.
- New generation is not interested in agriculture and animal husbandry.
- You are doing well, hope my reply is helping for u.
- People now use modern technologies in agriculture and animal husbandry.
- It's good work.
- We must take care of environment and our motherland.
- Thanks for knowledge about land agriculture and thought about animal husbandry.
- खेती कार्यों में अधिक मेहनत और बचत कम होने के कारण युवा दूसरे क्षेत्रों की तरफ पलायन कर रहे हैं एवं कृषक ही नहीं चाहता कि उसके बच्चे बड़े होकर खेती-बाड़ी संभाल ले.

#### LIMITATION OF THE STUDY

The limitations of the study are those characteristics of design or methodology that impacted or influenced the interpretation of the findings from your research.

- Land rent was calculated on average basis.
- In this present study investigator took 2020-21 as normal year for all agricultural production cost and revenue.
- Except 10 farmers and 101 respondents were not included in the present study.

#### REALIBILITY

Typical methods to estimate test reliability in behavioral research are: test-retest reliability, alternative forms, coefficient correlation, split-halves, inter-rater reliability, and internal consistency.

The reliability coefficient correlation is (0.84) between two variables which shows high degree of reliability.

#### VALIDITY

- Investigator developed its own questionnaire, it was based on established theory and findings of previous studies, and the questions were carefully and precisely worded.
- To produce valid generalized results, investigator had a defined population (e.g. people from a specific age group, geographical location, or respondents) and this study has enough participants who were representative of the population.
- All participants were given the same information and tested under the same conditions.

## FINDINGS

- Other state farmer who came to Rewari district of Haryana are well equipped with unique housing technique having all modern amenities.
- People of that area has no biases on gender preference.
- Maximum family has only one member who is doing private/ public job.
- 71 % female are doing jobs.
- Per family land is reducing in that area.
- After Higher Education Male people of that area is not doing agriculture.
- After Higher Education Female people of that area is not doing agriculture.
- One person of maximum family has left their native place for job.
- Very few female member has left their native place for job.
- One third of family has given agricultural land on rent.
- People prefer to give land on rent to outsider, and maximum don't have agricultural land.
- Agricultural land average rent in that area is above Rs. 20,000 Fig. No. 33 is showing that main sources of irrigation is tube well.
- People of that area is preferring multiple cropping.
- 50 % renter is rearing animals with agricultural.
- Maximum respondents say, burring of farrali is the main cause of air pollution.
- Modern society members are not interested in doing animal husbandry.
- Maximum respondents believe, decreasing animal husbandry is the main cause of burning farrali.
- Right to education is violating as well as their children childhood also is spoiling as there are out of school and helping in agriculture.

## SUGGESTIONS

- MSP needs to be increased for each and types of agricultural commodity.
- Government required to provide basic infrastructure (Irrigation, Interest free loan, Quality seed free of cost etc.) to farmers like **Israel**.
- Need to find such children who left their native place with their parents for doing agriculture in Rewari district of Haryana and make plan for their basic school education which is the duty of state under directive principles of state.
- Instead of taking home on rent/ loan in urban area for job, educated people of that region should prefer to stay in village and enjoy healthy life with fresh air, pure water and hygienic food.
- Now a days, transportation infrastructure are good as compare to 15 to 20 years back so they should not involve in blind race of urbanization even all major cities (Rewari, Gurgaon, Dharuhera, and Delhi etc.) are nearer to their reach and many good education institution are not far away from their villages.
- Other state farmers are taking 20 to 30 acres land from different farmers of Rewari district of Haryana and doing multiple cropping which help them to generate more income.
- Educated people of that region should adopt the new pattern of agriculture like other state farmers are using in that area.
- Environmental degradation is also impacting adversely to agriculture production because it is noticed that during lockdown environment pollution reduced which had its positive impact on the production and there was a high yield seen in agriculture sector.
- More insurance scheme are required in agricultural field.

## CONCLUSIONS

Investigator heard that education makes a human being more civilized and superior to other animals on the planet but he found that education is also impacting adversely to the agricultural sector in Rewari district of Haryana. People of that region tend to leave their native places for jobs and have moved out to near urban areas even though good transportation facilities available are much superior to the past. Educated people of that region are not interested in doing agriculture and rather prefer to work in companies with different shifts which results in health complications and the major causes found are land scarcity, adverse environmental conditions and water depletion for irrigation, low & uncertain agriculture income etc. Which is adversely impacting the whole demographic condition of that region.

After 74 years of independence we moved forward in most of the fields but we are ignoring the agriculture field since long. A farmer is providing food to human beings, animals, and birds but investigator found many

heartbreaking stories about and their overburden of increasing debts due to high rate interest (24% p.a.) in the Rewari district of Haryana.

“आओ अब हम सम्मान करें - किसानों को भी सलाम करें”

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