

A Study on Farmers Perception and Attitude Towards Modern Farm Mechanization in Paddy Cultivation

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Abstract- Farm mechanization is an important element of modernization of agriculture. Agricultural mechanization not only enables efficient utilization of various inputs such as seeds, fertilizers, plant protection chemicals and water for irrigation but also it helps in poverty alleviation by making farming an attractive enterprise. In this paper we have mainly focused on modern farm mechanization in paddy cultivation, main objectives is to study the present status of farm mechanization in paddy cultivation, farm labourer's on various aspects of rice farm mechanization, and to identify the main modern farm machinery or tools used by the farmers in their fields. The scope of the study is limited to Yalugere village. The data for the present study have been collected from both primary and secondary sources. Primary data has been collected using survey method, to conduct survey among respondents; well-structured questionnaire has been prepared and collected information by meeting paddy cultivators from Yalugere village. Secondary data has been collected from various articles, journals, books, websites and other internet sources.

Key Words: farm mechanization, paddy cultivation, farmers etc

I. INTRODUCTION

Agriculture is the backbone of Indian economy as it provides direct employment to about seventy percent of the working people and a source of livelihood for them. Indian agriculture is now becoming more and more mechanized. Indian agriculture is undergoing a gradual shift from dependence on human power and draft animal power (DAP) to mechanical power because maintenance of DAP and manual labour becoming increasingly costly coupled with scarce availability of fodder and feed animals. The adoption of modern farm machinery or tools like tractors, power tillers, combine harvester, irrigation pumps, drip irrigation etc has brought a drastic change in India agriculture resulting in replacement of traditional means and methods used by the farmers for different operations.

Mechanization helps improvement in the quality and value adoption of the produce and also enabling the farmers to rise second crop or multi crop making the Indian agriculture attractive and a way of life by becoming commercial instead of subsistence and making the farming agreeable vocation of educated youth as well.

In recent years, non availability of farm labourers and fragmentation of land holding (smaller land holding) are forcing many farmers to mechanize their farms. This is mainly due to the fact that agriculture labour available in India farms is becoming scarce day by day due to rapidly industrialization, urbanization, and migration and employment quarantine programs. However, the present study has been undertaken to study the concept of farm mechanization in maize cultivation and farmer's attitude towards modern farm mechanization.

II. OBJECTIVES

- To study in detail about farm mechanization.
- To study the perception of farmers and farm laborers' on various aspects of rice farm mechanization.
- To identify the main modern farm machinery or tools used by the farmers in their fields.
- To study the present status of farm mechanization in paddy cultivation.
- To determine the attitude of farmers towards these modern farm machinery or tools and implements.

III. REVIEW OF LITERATURE

Pankaja Thakur, D D Sharma conducted "A study on Farmers attitude towards modern farm mechanization". Power sprayers, poly houses, micro irrigation system (Drip irrigation), power tillers and threshers etc, were the prominent agricultural implement or techniques possessed by them. Majority of them had natural attitude i.e., neither favorable nor unfavorable towards modern farm mechanization though they had good scientific orientation and economic motivation. Hence the study implies that the field level extension functionaries should make sincere and concerted efforts to change the neutral attitude of farmers into favorable one in order to promote the adoption of modern farm mechanization among them. It was found that majority of respondents had neutral attitude towards modern farm mechanization despite having good and scientific orientation.

Eniko lense, Istvan Takacs, Katalin Takacs- Gyorgy conducted "A study on farmer's perception of precision farming technology among Hungarian farmers". Many technologies have appeared in agriculture to reduce the harmful effects of chemical use. One these technologies are precision farming technologies. It is achieved only when the results of electronics and IT equipment are realized in the variable is treatment zone by zone. The advantages and disadvantages of this technology highly depend on the heterogeneity of soil the knowledge and attitude of the manager and the staff. We refer to them as user's planners and non users. According to the opinion of the user group of farmers the highest cost savings occurred in fertilizer and herbicide costs. It was found that the positive impact of precision farming technology, which is well communicated to farmers, may be experienced in agricultural practice. Both the size of the cultivated land of the farms and the age of the farmers correlate with the adoption of precision farming technology.

Krishna Gudadur, and Tahanara conducted "A study on paddy growers awareness on farm mechanization Uttarkannada, Karnataka". Farm mechanization implies the use of various power sources, Improved farm tools and equipment with a view to reduce the drudgery of the human beings and draught animals, which increasing the production and productivity. Mechanization in agriculture is predominantly taking place mainly for operations where traditional practices have failed to achieve the precision in operations. Most of the farmers were fully aware about improved machineries in certain implements. So one of the best way and to overcome this is to vigorously utilize the scientific expertise of "Krishi vijayaan kendras" for organizing field and farmers day and agricultural machine exhibition which help and encourage the farmers to know about the advantages of mechanization.

Sahana. S, Shashikiran, Kulkarni Neha percent, and Arun Kumar, conducted "A study on adoption and attitude of farmers on mechanization of paddy in command area of Karnataka". The study on adoption and attitude of farmers on mechanization of paddy was conducted in command areas of Karnataka state during 2014-15. The number of respondent select for the study was 180. The result indicate that 38.33 percent of respondents belonged to high adoption category followed by 34.45 percent and 27.22 percent of respondents belonged to low and medium adoption categories of farm mechanization in paddy cultivation. The farmers opined that the labour scarcity and reduced drudgery motivated them adopt machines in farm practices. Most of the farmers had most favorable attitude while 35.56 percent of farmers had least favorable attitude and remaining 28.33% of the farmers had favorable attitude about farm mechanization. It is need of the hour to promote mechanization. Further assistance is necessary for the farmers to adopt mechanization capacity building programs should also be formulated in order to enhance the skills of the farmers.

Md. Jasim uddin, K. M. Masum Billah, Rabbani Akanda, Mahamud Hasan Prince, Mohammed Rehman, MD. Masud parvez summon, Nazmul Hasan Antor conducted "A study on Farmers knowledge on modern rice cultivation techniques at Dumki upazila". The knowledge scares of the farmers ranged from 29 to 70 with a mean of 46.51 and 34.6 percent of the farmers had low knowledge compared to 66.2 percent having moderate knowledge and 5% high knowledge. Five out of nine characteristics namely education, family size, organizational participation, communication exposure and economic motivation of the farmers had significant negative relationship with their knowledge. Education develops the mind of a person and increase his/her power of observation, analysis interpretation and decision making. It may be concluded that rice production would continue to suffer unless proper care are not taken for the farmers with small and medium farm size.

IV. SCOPE OF THE STUDY

The scope of the study is limited to yalugere village only. The study analyses the farmer's perception and attitude towards modern farm mechanization in paddy cultivation. The numbers of respondents were limited to 50 only. The study has been carried out by using both primary and secondary sources.

V. RESEARCH METHODOLOGY

The data for the percent study have been collected from both primary and secondary sources.

5.1 Primary Data:

primary data has been collected using survey method. To conduct survey among respondents, well structured questionnaire has been prepared and collected information by meeting 50 paddy cultivators. Respondents for the present study were chosen by using random sampling technique. The area preferred for the percent study id limited to Yalugere village.

5.2 Secondary Data:

The secondary data has been collected from the various articles, journals, books, websites and other internet sources.

VI. RESULTS AND DISCUSSIONS

Table No: 1.1: Status of possession of modern agricultural implements.

Particulars	No of respondents	Percentage (%)
Tractors	49	31.21
Power Tillers	49	31.21
Power sprayers	24	15.29
Micro irrigation system	35	22.29
Poly house	00	24
Threshers	00	35
Total	157	100

Source: (field survey)

The above table clearly shows that 31.21% of the respondents prefer Tractors and power tillers, 22.29% of the respondents are using micro irrigation system, and 15.29% of the respondents are using power sprayers for possession of modern agricultural implements.

Table No: 1.2 new method of farming gives better results to a farmer than old method.

Particulars	No of respondents	Percentage (%)
Yes	48	96%
No	02	04%
Total	50	100

Source :(field survey).

The above table states that 48% of the respondents said new method of farming gives better results to a farmer than old method. 04% of the respondents said that new method of farming does not gives better results to farmer than old method.

Table No: 1.3 Modern mechanization has improved the socio economic status of farmers.

Particulars	No of respondents	Percentage (%)
Yes	39	78
No	11	22
Total	50	100

Source: (field survey).

From the above data it can be analyzed that 78% of respondent agree that modern mechanization improved the socio economic status of farmers, 22% of the respondents not agreed that modern mechanization improved the socio economic status of farmers.

Table No: 1.4 Attitude of paddy farmers towards farm mechanization

Particulars	No of respondents	Percentage(%)
Favorable	27	54
Most favorable	01	02
Least favorable	22	44
Total	50	100

Source (field survey).

From the above data it can be analyzed that 54% of respondents are having favorable attitude of paddy farmers towards farm mechanization,44% of the respondents are having least favorable attitude of paddy farmers towards farm mechanization, and 2% of respondents are having most favorable attitude of farmers towards farm mechanization.

Table No: 1.5: Best means of paddy cultivation

Particulars	No of respondents	Percentage (%)
Old cultivation technology	05	10
Modern farm mechanization	45	90
Total	50	100

Source: (field survey).

The above table clearly shows that out of 50 respondents, 90% of the respondents said that modern farm mechanization in paddy cultivation is best way, 10% of the respondents said that old cultivation technology is the best way.

VII. FINDINGS

Following are the findings drawn based on analysis and interpretation of survey data;

From the above study it was founded that 100% of the respondents are male.

While focusing the group of the respondents majority of the respondents belongs to the age group of 35-45 years and the above 45 years.

While considering the educational qualification of the respondents most of the respondents are with secondary educational backward and illiterate.

In this study most of the respondents are have annual income less than 50000. This show the most of respondents are living under poverty level.

From the above study it was founded that 98% of the respondents are married.

In our study majority of the respondents i.e. 78% of the farmers holding low acres of land.

Majority of the respondents i.e. 74% of the farmers holding own land.

While focusing towards family background of the study found that 100% of the respondents come under rural background.

It was found that majority of the respondents i.e. 66% are having 20-40 years of experience in rice growing.

In this study majority of the respondents are aware about the modern agricultural implements.

In this study majority of the respondents i.e. 31.21% respondents preferred tractors and power tillers.

In this study majority of the respondents i.e. 33.33% primary tillage equipment for the preparation of land.

In this study it was found that majority of the respondents i.e. 50.52% of the respondents preferred animal operated seeds cum fertilizers for sowing operations.

Most of the respondent's i.e. 50.52% and 41.24% of the respondents preferred tool operated sprayers and engine operated sprayers for spraying operations.

While focusing towards motivational factors influencing on adoption of farm mechanization, the study found that 26.77% of the respondents were influenced by the scarcity of laborers.

While considering the new farming gives better result to a farmer than old method, the majority of the respondent's i.e. 96% of the respondents accepted.

In this study it was found that majority of the respondent's i.e. 54% of the respondents wish towards changing the traditional method of forming modern technique to raise the level of living of a farmer.

94% of the respondents think that the modern mechanization has improved the crop yield of farmers.

VIII. SUGGESTIONS

The Government should provide credit facilities to those farmers who are willing to purchase the machines individually.

Complete mechanization should first be extended to the state farms.

It should be extended over to such lands where cooperative joint farming societies have been formed.

Private big farmers should be induced to adopt mechanization for the use of more equipment is one of the principle ways by which productivity per man per acre and hence living standard can be raised.

It should also be extended to the old cooperative farms which have enough areas in compact blocks and have enough scope for mechanization of agriculture.

IX. CONCLUSION

India is an agricultural based economy where a majority of people depend on agriculture, either directly or indirectly. A large number of agriculture products consider as food products and other become the inputs for industries. Further agriculture contributes to the capital income as well as national income of the country. From the above research data it can be concluded that complete mechanization should first be extended to the state farms

should be extended over to such lands where cooperative joint farming societies have been formed and government should provide credit facilities to those farmers who are willing to purchase the machines individually.

X. ARTICLES

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