J Krishi Vigyan 2023, 11 (Supple) : 210-214 DOI : 10.5958/2349-4433.2023.00113.7

Relationship Between Independent Variables of Beneficiary and Non-beneficiary Farmers with their Knowledge Regarding Onion Production Technology

Rekha Badhala[1] and K C Sharma[2]
Department of Extension Education, SKN College of Agriculture
(SKNAU) Jobner-Jaipur Rajasthan-303329

ABSTRACT

Onion is an important crop of Sikar district of Rajasthan. In the present study a total sample of 100 farmers (50 beneficiaries and 50 non-beneficiaries) was selected. The data were collected through an interview schedule to assess the knowledge level of farmers regarding onion production technology. Then correlation was find out between independent variables of respondents and their knowledge regarding onion production technology. The results showed that all the independent variables like age, education, land holding, farming experience, extension contact, occupation, annual income and market orientation were positively and significantly related with the knowledge of both beneficiary and non-beneficiary farmers. It explained that all the independent variables had affected the knowledge level of respondents.

Key Words: Correlation, Beneficiary Farmers, Interview Schedule, Knowledge, Onion Production Technology.

INTRODUCTION

Onion (*Allium cepa L.)* is one of the most important commercial vegetable crops of India as well as of Rajasthan state. Maharashtra ranks first in onion production. In India Onion is grown in an area of 1.62-m ha, production is 26.74 MT & its productivity is 16.40 tons per hectare (NHRDF,2020-21). In Rajasthan, the area of Onion is 74596 ha, Production is 1241783 tons and productivity is 16.56 t/ha. (Anonymous, 2020-21). Sikar district stands second in area and production of Onion in Rajasthan. The area of onion in sikar district is 10684 ha and production is 300579 t. In Sikar district, the cropping season for Onions begins in the months of September-October. Most of the farmers choose local cultivar for sowing in their field during *Rabi* season in order to get good returns during winter. Onion production is not always profitable for farmers owing to certain risks associated with it. Due to various constraints like poor knowledge about proper storage methods of Onion bulbs, poor keeping quality of local cultivars, negligible area under *Kharif* Onion, lack of storage facilities, etc. farmers sale their produce at a price below their cost of production. The farmers could increase their benefit through adoption of new technologies. The adoption of improved technologies requires high level of technical knowledge in areas of package of practices synchronized with needs and requirement of farmers like proper post-harvest handling, selection of suitable variety, proper nutrient management, insect-pest and diseases management, etc. Due to technological advancement in Onion cultivation, there is a strong need to train the growers to keep them abreast about improved technologies for

Corresponding Author's Email: badhalaskn@gmail.com

1M.Sc. Department of Extension Education, SKNCOA, Jobner, Jaipur Rajasthan-303329

2Professor & Head, Department of Extension Education, SKN College of Agriculture, Jobner, SKN Agriculture University, Jobner Jaipur Rajasthan-303329

improving their knowledge and income. So, looking to the above facts the present study was undertaken to assess the knowledge of farmers regarding onion production technology and therefore to determine the correlation between independent variables of beneficiary and non-beneficiary farmers with their knowledge regarding onion production technology.

MATERIALS AND METHODS

The present study was conducted in Sikar districts of Rajasthan. Out of 13 panchayat samities in Sikar district four panchayat samities namely Laxmangarh, Fatehpur, Khandela and Piprali were selected where front line demonstrations(FLD) on Onion were conducted by KVK, Fatehpur (Sikar) in last 5 yrs. In all 50 farmers where FLDs were conducted on their fields were selected and they were called as FLD beneficiaries. Similarly, 50 non-beneficiaries were also selected from the same area who were not benefitted by the FLD on Onion. Thus, the total sample size was of 100 respondents consisting of 50 beneficiary and 50 non-beneficiary farmers. An interview schedule was prepared and data were collected by using personal interview method. Then correlation was find out of between Independent variable and their knowledge regarding onion production technology

RESULTS AND DISCUSSION

Knowledge level of respondents & the relationship between independent variables of beneficiary andnon-beneficiary farmers

The knowledge of beneficiary and non-beneficiary farmers was tested by applying a knowledge test containing 10 packages of practices related with Onion production *viz.,* field preparation, improved variety, seed treatment, time of sowing, seed rate and spacing, fertilizer application, irrigation management, weed management, plant protection measure and harvesting. The result of knowledge test has been given (Table 1 and 2).

The data (Table 1) revealed that majority of beneficiary farmers (58.00%) had medium knowledge whereas, (22.00%) and (20.00%) were having high and low knowledge about Onion production technology, respectively. The findings of the study were similar to results the of Sou *et al* (2022) and Sharma *et al* (2022).

Table 1. Knowledge level of beneficiary farmers.

Sr. No.	Knowledge level	Frequency	Per cent
1	Low (below 54.32 score)	10	20.00
2	Medium (from 54.32to 70.72 score)	29	58.00
3	High (above 70.72 score)	11	22.00
	Total	50	100.00

Table 2. Knowledge level of non-beneficiary farmers.

Sr. No.	Knowledge level	Frequency	Per cent
1	Low (below 48.87 score)	15	30.00
2	Medium (from 48.87 to 60.41score)	28	56.00
3	High (above 60.41 score)	7	14.00
	Total	50	100.00

The data (Table 2) indicated that majority of non-beneficiary farmers (56.00%) had medium knowledge whereas (30.00%) and (14.00%) farmers were having low and high knowledge about Onion production technology, respectively. The findings of the study were similar to results of Sou *et al* (2022) and Sharma *et al* (2022). After applying the knowledge test the relationship between the knowledge level of farmers regarding Onion production technology and independent variables namely age, occupation, education, annual income, size of land holding, market orientation, farming experience and extension contacts was measured by computing "coefficient of correlation" (Table 3).

A perusal of the data (Table 3) revealed that the annual income, market orientation and occupation

Table 3. Relationship between personal attributes of the beneficiary and non-beneficiary farmers with their knowledge level. (n=100)

Sr. No.	Independent variable	Correlation coefficient	
		Beneficiary farmers (n_1=50)	Non – beneficiary farmers (n_2=50)
1	Age	0.352*	0.419**
2	Occupation	0.376**	0.306*
3	Education	0.356*	0.448**
4	Annual Income	0.480**	0.575**
5	Size of Land holding	0.280*	0.327*
6	Farming Experience	0.348*	0.498**
7	Market Orientation	0.494**	0.351*
8	Extension Contacts	0.309*	0.499**

* Significant at 5% level of significance; ** Significant at 1% level of significance

were positively and significantly correlated with the knowledge level of the beneficiary farmers regarding Onion production technology at 0.01 level of probability. Age, education, size of land holding, extension contacts and farming experience were positively and significantly correlated with the knowledge level of beneficiary farmers regarding Onion production technology at 0.05 level of probability. Further, age, annual income, education, extension contacts and farming experience variables were positively and significantly correlated with the knowledge level of non-beneficiary farmers regarding Onion production technology at 0.01 level of probability and size of land holding and occupation were positively and significantly correlated with the knowledge level of non-beneficiary farmers regarding Onion production technology at 0.05 level of probability.

The data also showed that the age was positively and significantly related with the knowledge level of beneficiary farmers regarding Onion production technology at 5 per cent level of significance and non- beneficiary farmers regarding Onion production technology at 1 per cent level of significance.It means that age had influenced the knowledge level of beneficiary and non- beneficiary farmers. The findings of the study were in conformity with the findings of Kumar (2019).

The occupation was related significantly with the knowledge level of beneficiary farmers and non-beneficiary farmers at 5 per cent level of significance. It explained that occupation had influenced the knowledge level of both beneficiary & non-beneficiary farmers. The findings of the study are in conformity with the findings of Chandran and Podikunju (2019). The education was related significantly with the knowledge level of beneficiary farmers at 5 per cent level of significance and non-beneficiary farmers at 1 per cent level of significance regarding onion production technology. It means that education had influenced the knowledge level of beneficiary and non- beneficiary farmers. This might be due to the fact that all the respondents both beneficiary and non-beneficiary farmers were educated which might have improved their knowledge regarding onion production technology and farmers might have gained more knowledge regarding onion production technology. The findings of the study were in conformity with the findings of Chandran and Podikunju (2019).

It was observed that the annual income was significantly related with the knowledge level of beneficiary and non-beneficiary farmers regarding onion production technology at 1 per

cent level of significance. It mean that annual income had influenced the knowledge level of beneficiary and non- beneficiary farmers. The findings of the study were in conformity with the findings of Prasad and Venkataramulu (2018).

The data regarding size of land holding was found significantly related with their knowledge level regarding at 5 per cent level of significance explained that land holding had influenced the knowledge of both beneficiary and non-beneficiary farmers. The findings of the study were in conformity with the findings of Prasad and Venkataramulu (2018).

Farming experience was positively and significantly related which influenced the knowledge level of both beneficiary and non-beneficiary farmers. These findingswere in accordance with the findings of Rajbhar *et al* (2017). It was found that the market orientation was positively and significantly related with the knowledge level of beneficiary farmersat 1 per cent level of significance and non- beneficiary farmers at 5 per cent level of significance. This might be due to the fact that the market orientation of respondents might have improved their knowledge regarding Onion production technology and farmers might have gained more knowledge regarding Onion production technology. The findings were in conformity with the findings of Chandran and Podikunju (2019). Likewise, the extension contact was positively and significantly related with the knowledge level of beneficiary farmers at 1 per cent level of significance and non- beneficiary farmers at 5 per cent level of significance. It mean that Extension contact had influenced theknowledge level of both beneficiary and non- beneficiary farmers. The findings of the study were in conformity with the findings of Manisha *et al* (2018).

CONCLUSION

It can be concluded that the age, education, land holding, farming experience and extension contact of the beneficiary farmers were positively and significantly correlated with their knowledge level about Onion production technology at 5% level of significance and occupation, income and market orientation were positively and significantly correlated with their knowledge level about Onion production technology at 1% level of significance. In case of non-beneficiary farmers, it was found that the age, education, income, farming experience and extension contacts variables were positively and significantly correlated with their knowledge level about Onion production technology at 1% level of significance and occupation, land holding and market orientation variables were positively and significantly correlated with their knowledge level about onion production technology at 5% level of significance. Significant difference was also found in the existing knowledge of both beneficiary and non-beneficiary farmers about onion production technology.

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Received on 30/10/2023 *Accepted on 7/11/2023*