

Level of Attitude towards Soybean Cultivation Practices by the Farmers'

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ABSTRACT

The present investigation was conducted in Kota region of Rajasthan purposively because this region stands first in area 822329 hectare and production 1197758 tonnes of soybean cultivation among all ten agriculture regions of Rajasthan. Kota region comprises four districts viz., Kota, Baran, Bundi and Jhalawar. Out of these two districts viz., Kota and Jhalawar were selected purposively for this study because of highest area and production. List of all the soybean cultivators was prepared from each of the selected village, with the help of patwari and agriculture supervisor, eight to twelve farmers were selected by using proportionate random sampling technique as per availability so as to make the sample size 220. The independent variables like age, education, and size of land holding were found to be positive and significantly associated with the knowledge level of farmers about recommended soybean cultivation practices at Significant at 0.01 per cent level of significance. While, the variables like extension participation were found to be positive and significantly associated with the knowledge level of farmers about recommended soybean cultivation practices at Significant at 0.05 per cent level of significance, whereas caste, family type and family size were found to be non-significantly associated with the knowledge level of farmers about recommended soybean cultivation practices.

Key words: Level of Attitude; Mean Per cent Score; Recommended soybean cultivation practices;

Soybean [*glycine max* (L.) Merrill] belongs to family leguminosae, sub family papilionaceae and genus glycine. It is mainly grown in kharif season. Soybean is reported to have originated in eastern Asia or China and has been to man over 5000 years. It was introduced in USA in the year 1804 and has since revolutionized the agriculture of that country. In India efforts have been made since 1969 to popularize its cultivation and consumption. Soybean has been known by various names in India such as Bhat, Bhatman, Ramkuithi etc. It is called the miracle crop of the twentieth century and is popularly known as “queen of pulses,” wonder crop, farmers’ friend and agriculture’s Cinderella. It is the cheapest source of high quality protein. It contains 20 per cent oil and 40 per cent high quality protein. Its oil is used for manufacturing vanaspati ghee and several other industrial products. Therefore, keeping this in view, the present study was under taken with objectives: To

find out the association between levels of attitude of recommended soybean cultivation practices by the farmers and their selected independent variables.

METHODOLOGY

The independent variables included in the study were selected on the basis of extensive review of literature, personal discussion with research scientists, extension personnel, and experts of recommended soybean cultivation practices. Only those independent variables which have relevance with the study were finally selected for this study. Seven variables namely age, caste, education level, size of land holding, family type, size of family and extension participation were identified as the important variables which might affect the knowledge and attitude towards recommended soybean cultivation practices by the farmers.

These variables were entered in multiple regression

models and computerized

$$Y = a + b_1x_1 + b_2x_2 + b_3x_3 + b_4x_4 + b_5x_5 + b_6x_6 + b_7x_7$$

Where,

Y = Estimated value of attitude of farmers towards recommended soybean cultivation practices

A = The intercept

B₁ = Coefficient of partial regression of Y on x₁ (age)

B₂ = Coefficient of partial regression of Y on x₂ (caste)

B₃ = Coefficient of partial regression of Y on x₃ (education level)

B₄ = Coefficient of partial regression of Y on x₄ (size of land holding)

B₅ = Coefficient of partial regression of Y on x₅ (family type)

B₆ = Coefficient of partial regression of Y on x₆ (size of family)

B₇ = Coefficient of partial regression of Y on x₇ (extension participation)

RESULTS AND DISCUSSION

Association between attitude level of farmers and their selected independent variables : The association between attitude of farmers towards recommended soybean cultivation practices and their selected 7 independent variables viz., age, caste, education level, size of land holding, family type, size of family, extension participation were tested with the help of ‘correlation coefficient’ and the results have been presented in Table 1.

Attitude and age : It is evident from the data given in Table 1 indicating that age was positively and significantly associated with the attitude of farmers towards recommended soybean cultivation practices at 0.01 per cent level of significance.

It could be inferred that when age increases the attitude of farmers changes in positive direction about recommended soybean cultivation practices by getting the benefits of new technology. This might be due to the fact that aged farmers’ responded to be conscious about spending the amount and also facilitates him to clearly comprehend the happenings in the societies. Therefore, experience paves way to judiciously invest on various farm inputs and also creates interest to know the intricacies involved in recommended soybean cultivation practices.

The findings of the study draw support from the finding of Kumawat (2015) who found that there is no association between the attitude of farmers towards recommended production technology of rapeseed and mustard crop and their age.

Table 1. Determine association between attitude level of recommended soybean cultivation practices and their selected independent variables (N=220)

Independent variables	Correlation coefficient
Age	0.280**
Caste	0.084NS
Educational level	0.206*
Size of land holding	0.359**
Family type	0.060NS
Size of family	0.100NS
Extension participation	0.240*

**Significant at 0.01 per cent level of significance

*Significant at 0.05 per cent level of significance

NS- Non-significant

Attitude and caste: It is evident from data given in Table 1 that the caste was non-significantly associated with attitude of farmers towards recommended soybean cultivation practices. The data so appeared might be due to the fact that cultivation of soybean crop by using recommended cultivation practices has no status symbol for a particular caste. The findings of the study draw support from the finding of Singh et al. (2014).

Attitude and education level : The data given in Table 1 reveal that the education was positively and significantly associated with attitude of farmers towards recommended soybean cultivation practices at 0.05 per cent level of significance.

It means that the education makes significant impact on attitude of farmers towards recommended soybean cultivation practices. Education makes an individual to be conscious about the happenings in latest technical knowhow i.e. the recommended soybean cultivation practices. Therefore, education paves way to judiciously invest on various farm inputs and also creates interest to know more about recommended soybean cultivation practices.

The findings of the study draw support from the finding of Bunkar (2011) who found that there is no association between the attitude of beneficiary farmers towards drip irrigation technology and their education level. The findings of the study draw support from the finding of Awasthi et al. (2002).

Attitude and size of land holding: The data given in Table 1 show that the size of land holding was positively and significantly associated with attitude of farmers towards recommended soybean cultivation practices at 0.01 per cent level of significance. The size of land

holding makes significant impact on attitude of farmers towards recommended soybean cultivation practices. As the size of land holding increases the farmers' willingness to acquire more knowledge related to recommended soybean cultivation practices. Thereby, they try to form an opinion or feeling towards better and fruitful utilization of borrowed amount. Moreover, size of their land holding permits to try or experiment the new technologies, thereby invariably they might gain maximum benefit from the crop grown in the field. The findings of the study draw support from the finding of *Uprikar and Mankar (2008) and, Kumawat (2015)* who found that there is no association between the attitude of farmers towards recommended production technology of rapeseed and mustard crop and their size of land holding.

Attitude and family type: The data given in Table 1 indicate that the family type was non-significantly associated with attitude of farmers towards recommended soybean cultivation practices. Family type did not make significant impact on forming the positive attitude of farmers towards recommended soybean cultivation practices. This might be due to the fact that all the cultivation practices are based on machinery (mechanized) which is not dependent on the family type so such type of relationship might have appeared.

Attitude and size of family: The data given in Table 1 indicate that the type of size of family was non-significantly associated with attitude of farmers towards recommended soybean cultivation practices. This might be due to the fact that all the cultivation practices are based on machinery (mechanized) which is not dependent on the size of family, so such type of relationship might have appeared.

The findings of the study draw support from the finding of *Kumawat (2015)*, who found that there is no association between the attitude of farmers towards recommended production technology of rapeseed and mustard crop and their size of family

Attitude and extension participation: The data given in Table 1 show that the extension participation was positively and significantly associated with attitude of farmers towards recommended soybean cultivation practices at 0.05 per cent level of significance. Extension participation makes significant impact on attitude of farmers towards recommended soybean cultivation practices. As the extension participation increases the farmers' willingness to acquire more

knowledge related to recommend soybean cultivation practices also increases. Thereby, they try to form an opinion or feeling towards better and fruitful utilization of borrowed amount. This might be due to the fact that farmers had participated in different types of KVK activities and the scientists provided them more information and facilities which might have helped the farmers to increase their knowledge level about recommended soybean cultivation practices. The findings of the study draw support from the finding of *Tarachand (2001)*.

Multiple regression of attitude level of farmers towards recommended soybean cultivation practices and their selected independent variables: Out of seven independent variables, only four independent variables had shown significant association with attitude of farmers towards recommended soybean cultivation practices in 'zero order' correlation analysis.

Table 2. Multiple regression analysis of the relationship between attitude of farmers towards recommended soybean cultivation practices with selected independent variables (N=220)

Independent variables	Standardized		
	coefficients Beta	SE	't' value
Age	0.277	0.082	3.962**
Caste	0.009	0.754	-.065NS
Educational level	0.177	0.442	2.327**
Size of land holding	0.230	0.996	3.640**
Family type	-0.082	1.719	0.952NS
Size of family	0.091	1.572	1.108NS
Extension participation	0.087	0.344	1.202**

**Significant at 0.01 per cent level of significance

NS = Non-significant

Coefficient of multiple determination (R^2) = 0.620**

Multiple correlation coefficient (R) = 0.840

The R^2 value (0.620) given in Table 2 indicates that seven independent variables jointly contributed towards 62.00 per cent of the variation in the attitude of farmers towards recommended soybean cultivation practices.

Thus, the results implied that all the seven independent variables would account for significant amount of variation in the attitude level of farmers about recommended cultivation practices of soybean.

Further the 't' test significance of expressed that

the coefficient of regression and 'b' values were found positively and significantly for "Age" "Education level", "Size of land holding" and "Extension participation" at 0.01 level of significance. Hence this proves that there is significant contribution of "Age" "Educational level", "Size of land holding" and "Extension participation" with attitude level as perceived by farmers about soybean cultivation on the contrary, coefficient of regression was non-significant for caste, family type, and size of family *i.e.* these variables are not much important in predicting the attitude level of farmers about recommended cultivation practices of soybean.

$$Y = 0.277** X_1 + 0.009 X_2 + 0.177* X_3 + 0.230 **X_4 \\ + -0.082 X_5 + 0.091 X_6 + 0.087 * x_7$$

The Table 2 depicts that the caste, family type, and size of family contributed positively and non-significantly. If one unit of age is increased the attitude level of farmers will increase by 0.277 units. If one unit

of education level is increased the attitude level of farmers will increase in 0.177units. If one unit of Size of land holding is increased the attitude level of farmers will increase in 0.230 units. Similarly if the Extension participation goes to change by one unit there will be changes in attitude of farmers about recommended cultivation practices of soybean in the proportion of 0.087 units.

CONCLUSION

The age, education, size of land holding and extension participation were found to be positive and significantly associated with the attitude level of farmers about recommended soybean cultivation practices. While, the variables like, caste, family type and size of family were found to be non-significantly associated with the attitude level of farmers about recommended soybean cultivation practices.

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