



Research Article

Relationship between personal variable of the respondents with adoption level of redgram growers

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SUMMARY : The research study was conducted in Bijapur district of Karnataka during the year 2013 with sample size of 140 respondents. The findings revealed that, independent variables *viz.*, education, mass media participation, extension participation and achievement motivation exhibited positive and significant relationship at one per cent level and extension contact at five per cent level, whereas age, family size, land holding, annual income and risk orientation exhibited non-significant relationship with adoption level of trained farmers. With respect to untrained respondents the independent variables like, education and extension participation exhibited positive and significant relationship at one per cent level and variables like mass media participation and extension contact exhibited positive and significant relationship at five per cent level, whereas family size, land holding, annual income, risk orientation and achievement motivation exhibited positive and non-significant relationship with adoption level. There was positive and significant relationship at one per cent level between knowledge and adoption level of the trained respondents and in case of untrained respondents, there was positive and significant relationship at five per cent level between knowledge and adoption level.

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KEY WORDS :

Extension contact,
Extension
participation, Mass
media participation,
Risk orientation,
Achievement
motivation.

BACKGROUND AND OBJECTIVES

Fast changing agricultural technology is very important to keep in pace with the ever increasing demand for food in a developing country like India. Eventually during the last few years, Indian agriculture has undergone tremendous changes by way of several technological breakthroughs.

It is well known fact that farmers training were instrumental in the quick spread of high yielding varieties throughout the country since 1966. A farmer training is an intensive learning situation in which one of the important principles of extension *i.e.*, learning by doing operates. The training situation can effectively create dissonance in the mind of the farmer which hopefully leads to adoption. Thus, the importance of farmers training in filling the gap between the land to lab cannot be in any doubt.

The training of farmers is a critical input for the rapid transfer of agricultural technologies. The present rate of agricultural production can be doubled if the available technologies are brought to bear with the production process and programmes focusing more and more on transferring our new technologies away from the confines of laboratories and research institutions to the farmers and make them more result and work oriented. In this context, training plays an important role to the farming community in boosting their farm production. Training for the farmer proved to be a significant input in accelerating our farm production. Information regarding agriculture inputs like improved seeds, suitable manures and fertilizers, plant protection measures, credit requirements etc. need urgent attention for fulfilment these tasks. DATC of Bijapur was started in the year 2006, earlier it was

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in the Aalmel of Sindagi taluk and it was started in the year 2001 then it was shifted to Bijapur. It is imparting the need based training to the farmers of Bijapur district. The important field crops of *Kharif*, *Rabi* and summer season *viz.*, red gram, sunflower, groundnut, sorghum and all the crops grown in Bijapur district.

Red gram or pigeonpea (*Cajanus cajana*) is most important pulse crop of tropics and sub-tropical regions of the world. It ranks second important pulse crops next to the Bengal gram.

Training is an important input which helps farmers to practice techniques scientifically. DATC conduct trainings on different aspects to transfer technology. There were no empirical studies in this regard; hence, the present study was designed with the following specific objective. To find out the relationship between personal characteristics and their adoption level of trained and untrained farmers.

RESOURCES AND METHODS

The present study was conducted in Bijapur district, the study aims at measuring the adoption level of trained and untrained farmers, trained by DATC. The DATC Bijapur was selected as there was no impact studies conducted since, its inception and particularly related to the effectiveness of the training imparted on improved redgram cultivation practices by the DATC. A list of trained farmers was obtained taluka wise and village wise from DATC Bijapur, who were imparted training on improved redgram cultivation practices. The talukas were arranged in descending order based on number of trainees and the first two talukas were selected for study based on highest number of trained farmers. The same procedure was followed for selection of villages in each taluka. From each taluk first five villages were selected. A list of trained farmers who were undergone training on improved redgram cultivation practices by DATC was obtained from DATC, Bijapur. 70 trained and untrained respondents from each village were randomly selected. Seventy trained and 70 untrained farmers were selected, Thus, constituting the total sample of 140 respondents for the present study.

In the light of the objectives set for the study, the variables *viz.*, adoption of improved cultivation practices of red gram were the main items of investigation. In the present study, adoption referred to the acceptance and practice of some or all the recommended cultivation practices of redgram. The questions covering full range of cultivation practices of the crop were framed. The actual practice followed by the respondents for the year 2012-13 was noted down. If the answer was correct, the score of two was given and for wrong answers score of zero was assigned. For some of the practices especially dosage of fertilizer and pesticides applied etc., the answer was related with the recommended dose and if

the practice adopted was fairly close to the recommendation, it was viewed as partially adopted. In such cases, score of one was assigned. The adoption test in all had 17 questions and the maximum possible scores were 34 and the minimum possible score were zero. The independent variables like age, education, family size, annual income, land holding, extension contact, extension participation, mass media participation, achievement motivation and risk orientation were the main items of investigation. A pre-tested interview schedule was used to collect the data through personal interview method. The data collected were tabulated and analyzed by using suitable statistical measures (Panse and Sukhatme, 1967).

OBSERVATIONS AND ANALYSIS

The experimental findings obtained from the present study have been discussed in following heads:

Relationship between independent variables with adoption :

Age with adoption :

Age showed non-significant relationship with adoption of red gram cultivation practices of both the categories of trained and untrained farmers.

This was in conformity with the research findings reported by Kharatmol (2006) who reported that age had non-significant and positively correlated with the extent of adoption.

Education and adoption :

Formal education level of trained and untrained farmers was found significantly related with adoption of improved redgram cultivation practices.

The possible reason could be that higher education of the farmers might have helped them to a larger extent in

Table 1: Relationship between independent variables with adoption (n=140)

Independent variables	Trained (n ₁ =70) 'r'	Untrained (n ₂ =70) 'r'
Age	0.144 ^{NS}	0.152 ^{NS}
Education	0.367 ^{**}	0.326 ^{**}
Family size	0.049 ^{NS}	0.038 ^{NS}
Land holding	0.099 ^{NS}	0.097 ^{NS}
Annual income	0.156 ^{NS}	0.102 ^{NS}
Extension contact	0.263 [*]	0.241 [*]
Extension participation	0.332 ^{**}	0.303 ^{**}
Mass media participation	0.334 ^{**}	0.282 [*]
Achievement motivation	0.296 ^{**}	0.184 ^{NS}
Risk orientation	0.212 ^{NS}	0.169 ^{NS}

r = Correlation co-efficient, NS = Non-significant

* and ** indicate significance of values at P=0.05 and 0.01, respectively

grasping and retaining the complex agriculture technology. The higher education of the farmers might have made them to get exposed to printed media and agriculture department contact *i.e.* subject matter specialist, scientist and private agency. Many of the redgram cultivation practices require certain amount of scientific knowledge and skills to adopt, which can be easily accepted by farmers who had better formal education than those who lack of it. Therefore, farmers who had better education, acquired information, resulting in the adoption of redgram cultivation practices. Hence, the significant relationship was observed with education and adoption, besides the trained and untrained respondents. The similar results were obtained by Kanavi (2000)

Family size with adoption :

Family size of the trained and untrained farmers was found non-significant relation with adoption of redgram cultivation practices.

The possible reason could be that, farmers with different family size had similar adoption level regarding recommended practices. Irrespective of family size farmers tend to have adoption about redgram cultivation practices in their field. The above findings were in conformity with Devalatha (2005) and Aski (2007).

Land holding with adoption :

A non-significant relationship between farm size and adoption level of respondents was evident from the result that farm size did not contribute significantly in enhancing the adoption level of farmers.

The probable reason for the above finding might be any technology requires adequate knowledge to adopt new practice irrespective of the farm size owned. Farm size might have not affected its adoption by small or large farmers because of necessity to reduce increasing costs of production. The results are in consonance with the findings of Kharatmol (2006).

Annual income with adoption :

A non-significant relationship was observed between the annual income and adoption of the respondents.

The possible reason for the non-significant relationship might be due to the fact that a redgram cultivation practices requires less inputs. Thus, income ceases to have much influence on the adoption of the practices. Similar results were obtained by Kharatmol (2006) and Binkadakatti (2008).

Extension contact with adoption :

The extension contact was found to have positive and significant relationship with the level of adoption. Through regular contact with the extension personnel of

developmental departments, NGOs and other organizations farmers come closer with change agents and try to confirm the results of new technology in fields. This might have contributed to some extent for significant relationship between the extension contact and the adoption level of redgram growers. The results are in consonance with the findings of Maraddi (2006).

Extension participation with adoption :

The relationship between extension participation and adoption of red gram cultivation practices among trained and untrained farmers was significant.

The possible reason for this trend may be that, the farmers who had participated in training course, attended meeting, field days, tours, krishimela might have come in closer contact with extension personnel and other farmers leading to increased knowledge about cultivation practices, which might have motivated them for positive action that is adoption. The other reason could be that extension participation provides opportunity for farmers to exchange their ideas based on their experience thus, leading to higher adoption. The similar results were obtained by Kharatmol (2006).

Mass media participation with adoption :

Mass media significantly related with adoption level of the respondents. This might be because of exposure to different mass media sources like newspapers, radio and television might have helped the respondents to gain recent information. The advent of mass media provided enormous opportunities for repeated exposure of farmer to new technology which motivated them to take further interest to learn about them. Hence, farmers who had higher exposure to mass media had exhibited higher adoption irrespective of trained and untrained farmers. This finding is in conformity with the results reported by Kharatmol (2006) and Binkadakatti (2008); Thippeswamy (2007) Gogoi *et al.* (2000).

Achievement motivation with adoption :

Achievement motivation was positive and significantly related to the trained farmers, but it is not significant with the untrained farmers with respect to the adoption level. Trained farmers have motive to achieve something, because they were influenced by the training courses but untrained farmers do not have much motive as compared to trained farmers. Training provides them to know about new practices, technologies and skills. Therefore, the middle and young age group of farmers have strong motive compared to older one to achieve and attain a higher status and their aspirations are comparatively higher which created an urge to excel in life. So achievement motivation and adoption level was significantly related with trained farmers but not to untrained farmers. The similar

results were obtained by Binkadakatti (2008).

Risk orientation with adoption :

Risk orientation was non-significantly related to the adoption level of the respondents. As discussed earlier that risk orientation depends upon individual's ability to face uncertainty. This is influenced by his financial position or economic conditions. In present study nearly half of the respondents were found in low and medium risk orientation category. Irrespective of their financial conditions respondents differed in their overall knowledge level. This might have contributed to a non-significant relationship between risk orientation and adoption. The results are in consonance with the findings of Kharatmol (2006); Vedomurthy (2002) and Panse and Sukhatme (1967).

Correlation between knowledge and adoption level of trained and untrained respondents :

From Table 2 it is clear that, there was positive and significant relationship at one per cent level between knowledge and adoption level of the trained respondents and in case of untrained respondents, there was positive and significant relationship at five per cent level between

Table 2: Correlation between knowledge and adoption level of trained and untrained respondents (n=140)

Group	'r'
Trained	0.795**
Untrained	0.255*

r =Correlation co-efficient

*and ** indicate significance of values at P=0.05 and 0.01, respectively

knowledge and adoption level. This implies that, as knowledge of individual increases regarding any technology or innovative on they tend to adopt the practices to the full extent and it was suitable for his field conditions.

The positive relationship could be attributed to the factors like innovativeness, scientific orientation, extension participation, mass media utilization, which directly or indirectly influence the thinking behaviour of an individual to acquire recent information regarding practice or innovation and intern influence his adoption decision process.

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