



Extent of Adoption of Farmers on Improved Bengalgram Production Technology

D Ambedkar, P Ram Babu, G BM Ram Naidu and V Srinivasa Rao

Department of Extension Education, Agricultural College, Bapatla 522 101, Andhra Pradesh

ABSTRACT

The study revealed that majority of the bengalgram farmers were of medium adoption (44.17%) followed by high (30.83%) and low (25.00%). The relationship between the profile characteristics of bengalgram farmers and extent of adoption was observed that the computed 'r' values of education, farming experience, socio-politico participation, extension contact, mass media exposure, innovativeness, scientific orientation, risk orientation and economic orientation were found to be significant at 0.01 level of probability. The multiple linear regression analysis revealed that all the selected 11 independent variables put together, explained about 64.03 per cent variation in the extent of adoption of recommended practices. The independent variables namely education, extension contact, scientific orientation and economic orientation were found to be positively significant with the extent of adoption.

Key words : Adoption, Bengalgram farmers, Production technology

Bengalgram is the major pulse crop in India with a cultivated area of about 7.58 million hectares and production of 6.91 million tones. In India, Andhra Pradesh occupies a prominent place in bengalgram cultivation with an area of about 6.38 lakh hectares with production of 9.37 lakh tonnes. Prakasam district of Andhra Pradesh has an area of 90,000 hectares with production of 91,200 tonnes in bengalgram cultivation has wide scope for increasing the productivity if farmers adopt the recommended package of practices. Though the area under bengalgram is more we could not meet the demand of people due to low production and productivity. Bengalgram yields have remained stagnant over a long time. Still there is big gap between achievable yields and achieved yields. This is mainly due to the fact that bengalgram is being mostly grown in traditional way by the majority of the farmers. Therefore, it is the most important task that the farmers must be educated for making them to acquire better knowledge and skill and at the same time their attitude should be changed favourably as a prelude for successful adoption of scientific innovation which inturn will be converted to higher production.

Therefore a study was conducted, to assess the extent of adoption and its relationship with selected profile characteristics of bengalgram farmers.

MATERIAL AND METHODS

The study was carried out in prakasam district of Andhra Pradesh through expost-facto research design. Prakasam district was purposively selected because of its largest area, production and productivity under bengalgram crop in coastal districts of Andhra Pradesh. Prakasam district has three revenue divisions out of which Ongole revenue division was selected purposively because of highest acreage of bengalgram crop in the district. Five mandals namely Parchur, Inkollu, Korisapadu, Nagulauppapadu, and Ongole were selected by following random sampling method. From each of the selected mandals, three villages were selected based on simple random sampling procedure. Thus fifteen villages were selected for the study. A total sample of 120 bengalgram growers were selected by selecting 8 farmers from each village by simple random sampling procedure. Keeping the objectives of the study in view, a well structured interview schedule was developed and pretested. This was administered to sample respondents through personal investigation. The data obtained was coded, classified, and tabulated. Finally statistical tools such as mean, standard deviation, frequency, percentage, correlation coefficient, and multiple linear regression were used.

contact, mass media exposure, innovativeness, scientific orientation, risk orientation and economic orientation were found to be significant at 0.01 level of probability. Whereas computed 'r' values of land holding and market orientation with the adoption of recommended practices of bengalgram were found to be non-significant.

Table 2 revealed that there was a positive and significant relationship between education and extent of adoption. The possible reasons for this trend might be that education will provide an opportunity to an individual to expose himself to written, print media and other sources for affecting improvement in farm business. Education develops mental activity to grasp, accept and adopt the new practices. The information gained through such exposures might have made them better aware of the recent advances in bengalgram cultivation. This observation was substantiated by the conclusions of, Maraddi and Shiva Kumar (2008).

An observation of Table 2 pointed out that there was a positive and non-significant relationship between land holding and adoption of respondents. The reason might be due to majority of the farmers were small farmers. Farmers with more land holding, they adopt more number of recommended practices compare to the farmers with less level of land holding. But in the investigation area, big farmers were leased out their lands. They do not have that much interest about bengalgram cultivation. Small and marginal and tenent farmers think of their investment and returns expected, before going for adoption of new practices. Majority of the farmers though had high school education, they don't have interest about the adoption of the new practices. Hence the above trend was noticed. The results were in accordance with the findings of Lakshmikant Sharma and Chandargi (2005) and Maraddi and Shiva Kumar (2008).

It was evident from Table 2 that there was a positive and significant relationship between farming experience and adoption of bengalgram farmers. Majority of the farmers had high farming experience. The probable reason for this might be the fact that as the farmers gain knowledge through their experience in farming they will try to adopt more in their field. Hence the above trend was noticed. Similar trend was reported by Lakshminarayan *et. al.*, (2001).

It was evident from Table 2 that there was positive and significant relationship between socio-politico participation and adoption of bengalgram farmers. The reason might be that the farmer having membership in social organization had more chance of getting exposed to different sources of agricultural

information which lead to adoption of new technology. The result was in consonance with the findings of Govinda Gowda *et. al.*, (2002).

An examination of Table 2 indicated that there was a positive and significant relationship between extension contact and adoption of recommended practices by the farmers. This might be due to the fact that farmers with more extension contact are in regular touch with extension officers, acquire more knowledge about advanced developments. It helps the farmer to adopt new agricultural technologies in his farm. The results were in conformity with Suresha *et. al.*, (2002).

A cursory view of the Table 2 witnessed that there was a positive and significant relationship of mass media exposure and adoption of bengalgram farmers. It is natural that increased mass media exposure broadens the understanding and awareness on the adoption of recommended practices. The advantage of mass media provides enormous opportunities for repeated exposure to new technology. The findings were in agreement with the findings of Rajendra Kumar(2002).

It was evident from Table 2 that there was a positive and significant relationship between innovativeness and adoption of bengalgram farmers. Innovativeness is associated with the individual's earliness in the use of new practices. The person who has more innovativeness acquires more knowledge from various sources and adopts the practices without any hesitation and this might be the reason for the above relationship. This result was in agreement with the result of Suresha *et al.*, (2002).

It was evident from Table 2 that there was a positive and significant relationship between scientific orientation and adoption of bengalgram farmers. Normally farmers with more scientific orientation would orient themselves with the latest innovations and check their validity and reliability with subject matter. Hence the above trend was noticed. The result was substantiated by the findings of Murmu (2003).

Table 2 indicated that there was a positive and significant relationship between risk orientation and adoption of bengalgram farmers. Farmers who are willing to take risk and able to face uncertainties in adoption of recommended practices could do well compared to others. This observation was substantiated by the findings of Murmu (2003).

Results in Table 2 revealed that there was a positive and significant relationship between economic orientation and adoption of recommended package of practices by the farmers. Farmers with

Table 3. Multiple linear regression analysis of the selected independent variables with extent of adoption of bengalgram farmers.

(n =120)				
S.No.	Independent variables	Regression coefficient	Standard error	't' value
1.	Education	0.6517	0.2301	2.8321*
2.	Land holding	0.5653	0.5095	1.1094 NS
3.	Farming experience	0.2643	0.2770	0.9543 NS
4.	Socio-politico participation	0.2465	0.2144	1.1499 NS
5.	Extension contact	0.4225	0.1523	2.7724*
6.	Mass media exposure	0.2063	0.1638	1.2599 NS
7.	Innovativeness	0.4215	0.2787	1.5124 NS
8.	Scientific orientation	0.6985	0.1892	3.6914*
9.	Risk orientation	0.3944	0.3074	1.2830 NS
10.	Economic orientation	0.5270	0.1846	2.8540*
11.	Market orientation	-0.5305	0.2849	-1.8619NS

a = 2.3473

R² = 0.6403

NS = Non significant

* Significant at 0.05 level of probability

more economic orientation would always try to increase the financial background through harvesting more yields from their farms for which adoption of recommended practices become essential. Hence the above relationship was noticed. This finding was in tune with the findings of Rajendra Kumar (2002).

From the Table 2 it could be clear that market orientation of the farmers did not show any significant relationship with adoption of bengalgram farmers. This might be due to the reason that inadequate transport facilities, poor communication within and outside the rural areas and inadequate marketing facilities. Hence, they had to go to a long distance to market their produce.

Table 3 revealed that the coefficient of determination "R² value was significant, as the value of "a" was found significant. The "R² value of 0.6403 indicated that all the selected 11 independent variables put together, explained about 64.03 per cent variation in the extent of adoption of recommended practices by the respondents. The regression coefficient given in Table 3 further revealed that the independent variables namely education, extension contact, scientific orientation and economic orientation were found to be positively significant as evident from their significant positive

(+) values. This implied that education, extension contact, scientific orientation and economic orientation had positively and significantly contributed to most of the variation in the extent of adoption of the respondents about the recommended practices of bengalgram.

LITERATURE CITED

- Govinda Gowda B, Anand T N and Krishna K S 2002** Relationship between selected characteristics of big and small Groundnut growers and their knowledge and adoption towards dryland farming technology. *Mysore Journal of Agricultural Sciences*, Vol. 36: 276-280.
- Lakshminarayan M T, Krishna K S, Manjunatha B N, Chandrasekhar S. Vaster and Anand T N 2001** Correlates of adoption of sustainable Sugarcane farming practices. *Mysore Journal of Agricultural sciences*, Vol. 35(2): 168-171.
- Lakshmikant Sharma and Chandargi D M 2005** A study on adoption behaviour of rainfed Maize growers in Jammu district of Jammu and Kashmir state. *Karnataka Journal of Agricultural sciences*, Vol. 18(4): 1133-1135.

- Maraddi G N and Shivakumar M C 2008** Extent of adoption of sustainable cultivation practices with respect to ratoon management by Sugarcane growers. *Mysore Journal of Agricultural sciences*, Vol. 42(4): 731-734.
- Murmu T S 2003** A study on the adoption of Aman Paddy technologies in tribal communities of Birbhum district of West Bengal. M.Sc.(Ag.) thesis, Bidhan Chandra Krishi Viswa Vidyalaya, Mohanpur, Nadia.
- Rajendra Kumar 2002** A Study on Knowledge and adoption of recommended practices of hybrid Jowar seed production in Kurnool district of Andhra Pradesh. M.Sc (Ag) Thesis, Acharya N.G Ranga Agricultural University, Hyderabad.
- Suresha S V, Jayaramaiah K M, Umamahesha A B and Anand T N 2002** Relationship between the characteristics of marginal and small contact farmers and their adoption behaviour. *Mysore Journal of Agricultural sciences*, Vol. 36(1):67-71.
- Vetriselvan M and Ravichandran V 2003** Extent of adoption of Groundnut technologies and constraints faced by growers. *Journal of Extension Education*, Vol. 14(3&4):3512-3516.

(Received on 16.03.2012 and revised on 04.04.2012)