

Adoption Behaviour of Saffron Growers in Pashtun Zarghon of Herat Province in Afghanistan

Khwaja Mohd. Shafi Seddeqi¹, J. P. Srivastava², Dipak Kr. Bose³

ABSTRACT

In Afghanistan, Saffron is one of the most important income and employment generating commercial crop, it occupies 700 hectares of land area. Saffron industry of the province is also improving the country's economy. Forty per cent of net incomes of the nation come from saffron. Pashtun Zarghon district of Herat province (Afghanistan) was purposively selected for the present investigation covering 6 villages and 120 respondents selected randomly. The study inferred that majority of respondents were of middle aged, illiterate, having joint family, larger family size, member of one organization, medium level of annual income, medium socio-economic status, mass media exposure, regular radio listener, TV viewer, occasional magazine reader, frequently participating in training programme and demonstration, seldom participating in field visit, group meeting, tours have high level of knowledge but found to be ignorant about some complex practices and to possess few adoption level as well. There was positive and significant correlation between selected independent variable under study viz. age, education, annual income, mass media exposure, knowledge and extent of adoption of saffron production technology.

Key words: Adoption behaviour, knowledge, extent of adoption, saffron growers

INTRODUCTION

Saffron (*Crocus sativus* L.) belongs to the large family of *Iridaceae* and to the genus *Crocus*, which includes about 80 species. Saffron is the most precious and most expensive spice in the world. It is a spice derived from the flower of Saffron (*Crocus sativus* L.) plant. The flower of this plant has three stigmas and these are often collected and dried to make the saffron spice. Saffron plant has a flashy bulb called corm or onion which is about 3 cm in diameter and weight approximately between 8 gm (minimum) and 15 gm (maximum) weights. Saffron has narrow leaves with the length of 6-10 cm and width of 2-3 mm. Saffron flower is light purple in colour with red or white strip sometimes (Qaraeen, A. and Malik N, 2012). In 1998 Government and some NGOs established saffron trials with local farmers in semi-arid villages of Pashtun Zarghon, as a result from 2002 the ministry of Agriculture and some NGOs began to distribute saffron corms to farmers and other saffron growers in the Provinces of Herat, Mazar-e-Sharif, Baghlan, Kabul, Wardak, Bamyan, Logar, Samangan, Faryab, Kapisa, Parwan, Paktya, and others. District of Herat province, by 2007 due to good results and high returns more than 1300 farmers are now growing saffron in this district, it is said to be tested and grown in about 26 provinces throughout Afghanistan. In spite of the continuous efforts made by extension functionaries the situation is still far from satisfactory keeping the facts in view the present

investigation was carried out in Pashtun Zarghon district of Herat province of Afghanistan to assess the adoption behaviour of the saffron growers and also correlates of adoption. Estimated total suitable area for saffron production in Afghanistan is about 7,000-10,000 hectares. Cultivation of this area accounts for total production 50,000 to 70,000 kg.

METHODOLOGY

The present study was conducted in Pashtun Zarghon district in Herat province of Afghanistan. In Herat province, there are 16 Districts. Out of these one district was selected purposively namely Pashtoon Zarghoon because this district is having maximum area under the saffron cultivation, moreover the researcher was well acquainted with the area, local dialect, geography, agriculture and other aspects of the area. There are 24 villages in the Pashtun Zarghon district. Based on highest area under saffron cultivation six villages namely Mir Abad, Char Burjak, Marwa, Dehe Draz, Chinaran, Sar-e-Asya were selected for the study randomly. The respondents were selected who had at least three years of experience of saffron growing. From each selected village, twenty respondents were randomly selected. Thus, a total number of 120 respondents constituted the sample size. The statistical tests were used like percentage and correlation coefficient were used to draw the valid conclusions.

¹ Ex. M.Sc. Student, ^{2, & 3} Professor Emeritus & Associate Professor, Department of Extension and Communication, SHIATS-Deemed University, Allahabad, U.P-211 007, India.

RESULTS AND DISCUSSION

Socio-economic status: The table 1 shows the level of Socio-economic status of respondents.

Table 1: Socio- economic status of the respondents.

Socio-economic status	Frequency	Percentage
Low (21-30)	43	36.00
Medium (31-40)	62	52.00
High (41-50)	15	12.00
Total	120	100.00

As it is evident from the above table that majority (52.00%) of respondents belonged to medium level socio-economic status followed by low and high level of socio-economic status accounted for 36 per cent and 12 per cent respectively. It can be concluded that majority of respondents belonged to medium level of socio-economic status. These results are supported by findings of Negbi, M. (1999).

Knowledge of respondents: Level of knowledge of respondents refers the information regarding improved practices of saffron cultivation, they possess at the time of interview. The distribution of respondents according to different level of knowledge is presented in table 2.

Table 2: Knowledge level of the respondents.

Knowledge level	Frequency	Percentage
Low (1-12)	0	0
Medium (13-25)	29	24
High (26-36)	91	76
Total	120	100.00

It is clear from the table 2 that overwhelming majority (76.00%) possessed high level of knowledge followed by 24 per cent medium level of knowledge, none was found in low level of knowledge. Almost similar findings are reported by **Shah, Ajaz A. (2012)**. The finding indicated the encouraging situation.

Extent of adoption of respondents: The table 3 shows overall level of adoption of respondents.

Table 3: Adoption level wise distribution of respondents.

Adoption level	Frequency	Percentage
Low (1-18)	0	0
Medium (19-36)	38	31.67
High (37-54)	82	68.33
Total	120	100.00

It is clear from the above table that majority of respondents (68.33%) belonged to high level of adoption where as 31.67 per cent respondents were having medium level of adoption; none of the respondents were found in low level of adoption.

Thus, it may be concluded that most of the respondents had high level of adoption followed by medium and none was found in low level of adoption. Similar findings are also reported by Sadeghi, Bahzad (2002). It clearly showed that farmers might have been motivated to adopt the recommended practices because of income generating enterprise.

Correlates of adoption behaviour of saffron growers: Several studies conducted in developing countries conclusively shown that socio-economic characteristics have a direct relationship with farmers adoption behavior. This implies that farmers have varying amount of adoption of modern farm technology. A question then arises what does account for this variability? Variability in respect of level of socio-economic characteristics of the farmers is a foregone conclusion. Do these variabilities, therefore, account for the variation in their adoption? The study under report proposes to investigate into this question.

Table 4: Correlation of selected factors with adoption.

Factor wise relationship has been narrated as under:

Variables	(r) Value	(t) value
Age	0.2008	2.226*
Education	0.165	10.903*
Size of family	-0.0418	-0.463 NS
Annual income	0.0223	0.243*
Mass media exposure	0.107	1.172*
Knowledge	0.203	2.89*
Socio-economic status	0.0121	0.1904*

**=Significant at 1%

*=Significant at 5%

NS = non significant

Thus, farmer's level of adoption of saffron production technology as dependent variable with selected independent variables in the investigation under reports. In order to test relationship between the independent and dependent variables the data were subjected to correlational analysis, the results of which are presented in table 4. There were seven independent variables i.e. age, education, size of family, annual income, mass media exposure, knowledge and adoption as dependent variable. A cursory perusal of table 4. reveals that all these

variables showed positive and significant relationship with extent of adoption except family size which could not influence the adoption of saffron production technology. Almost similar findings are reported by Khadijah. (2010). For reference the values are given in the table overhead

CONCLUSIONS

It is concluded from the study that majority of respondents were of middle age, illiterate, having joint family, large family size and having membership in one organization and medium level of annual income, regular radio listener and TV viewer and occasional magazine reader, frequently participating in training programme and demonstrations, seldom participating in field visit, group meeting, conducting tour and belonged to medium socio-economic status and mass media exposure. Respondents have had high level of knowledge about improved practices of saffron production technology and adoption level as well because of income and employment generating enterprise.

All the selected independent variables showed positive and significant relationship with extent of adoption. Non-availability of credit facility, labour and high labour charges and non availability of fertilizers at required time were the major constraints faced by respondents. However, corm availability in time, fertilizer availability at required time and credit facility availability were the major suggestions for greater adoption.

Paper received on : January 1, 2015

Accepted on : February 5, 2015

RECREANCE

Alam, A. 2007. Status and prospects of mechanization in saffron cultivation in Kashmir. *Act, A Horticulture* 739, 383-388.

Khadijah. 2010. A study on Saffron socio-economic stability analysis of the sample villages saffron Balavlayt, Torbat City, M.Sc Thesis, Geography Rural Planning, School Human Sciences, Zanjan University, Zanjan, Iran.

Katawazy, A. S. 2013. A Comprehensive Study of Afghan Saffron, Research, Planning and Policy Directorate, Afghanistan 12-13, 25 pp.

Manganaro 2001. Chemical investigation of gamma-irradiated saffron (*Crocus sativus L.*). *Journal of Agricultural and Food Chemistry* 49, 687-691

Maraddi 1999. Post harvest handling and processing of saffron. In: Proceedings of Seminar-cum-Workshop on Saffron (*Crocus sativus*), June 14, 2001. SKUAST-K, India, pp 75-82

Negbi, M. 1999. Saffron cultivation: past, present and future prospects. In: Negbi Saffron (*Crocus sativus L.*), Harwood Academic Publishers, Australia, pp 1-18

Qaraeen, A. and Malik N, 2012. Saffron Manual For Afghanistan, Planting, Maintenance, Harvesting and Processing, DACAAR, Heart, Afghanistan.

Sadeghi, Bahzad. 2002. Saffron, a heritage, a national concern, Proceedings of the Third National Conference, Saffron Mashhad, Ferdowsi University of Mashhad.

Shah, Ajaz A. 2012. Knowledge of saffron growers on saffron production technology in Kashmir. *Journal of Agricultural Extension and Rural Development*.