



ISSN (E): 2277- 7695
ISSN (P): 2349-8242
NAAS Rating: 5.23
TPI 2022; SP-11(3): 822-823
© 2022 TPI
www.thepharmajournal.com
Received: 23-01-2022
Accepted: 25-02-2022

Neeraj Kumar Prajapati
Ph.D. Scholar. Department of
Extension Education, JNKVV,
Jabalpur, Madhya Pradesh,
India

Nalin Kumar Khare
Professor and Head,
Department of Extension
Education, JNKVV, Jabalpur,
Madhya Pradesh, India

Deepak Jaiswal
Associate Professor,
Department of Extension
Education, JNKVV, Jabalpur,
Madhya Pradesh, India

Utilization of smart agricultural practices (SAPs) by farmer of Jabalpur district, Madhya Pradesh

Neeraj Kumar Prajapati, Nalin Kumar Khare and Deepak Jaiswal

Abstract

The present study was carried out to determine the utilization of smart agricultural practices (SAPs) by the farmers in selected farming area of Jabalpur district. Two development blocks were selected for the study based on highest cultivated and irrigated areas among the other block of Jabalpur district. Five villages were selected from each block. The total sample size was 170. The finding from the study indicates that education level, annual income, land holding, extension contact, mass media exposure information seeking behavior, economic motivation, innovative proneness, decision making ability, scientific orientation and perception of farmers towards SAPs were significantly associated with utilization of smart agricultural practices (SAPs).

Keywords: SAPs (Smart agricultural practices)

Introduction

Population growth rate of 1.58%, India is predicted to have more than 1.53 billion people by the end of 2030, whereas, natural resources such as land, water, forests, livestock are deteriorating and degrading at a very fast rate due to unmindful agricultural intensification, imbalanced use of fertilizers, overuse and inefficient use of irrigation water and deforestation. While inadequate marketing channels and infrastructure, long intermediation lack of accurate and timely market information system etc. are major challenges to the present scenario of farmers in country. Therefore, there is immense need of smart agricultural practices (SAPs) to enhance the production and productivity to feed the continuous increasing population through sustainable use of natural resources along with to reduce the input cost, increase the net profit and generate employment (Rohila *et al.* 2018) [7]. Smart agricultural practices for enhancing agricultural production based on improved practices like 'uses of HYVs seeds, improved cultivation, irrigation, integration with INM, IPM, and IWM, has contributed to enlarge in terms production and productivity.

To understand the scope of SAPs utilization by farmers, there is need to study the socioeconomics characteristics education level, family size, land holding, annual income and perception of farmers towards SAPs is also important. With this background, the present study undertaken with following specific objectives to assess the relationship between attributes of farmers and utilization of smart agricultural practices (SAPs).

Method and Material

The investigation was conducted in Jabalpur district of Madhya Pradesh. The district covers an area of 5,211 km² The Jabalpur district comprises of 7 blocks As Shahpura block has maximum irrigated area followed by Patan Block, from which 5 villages were selected from each according to maximum population and maximum cultivated area. The farmers were selected by using proportionate random sampling to make sample size 170. The present study was conducted to assess the relationship between attributes of farmers and utilization of smart agricultural practices (SAPs). An *ex-post facto* research design was used to carry out the research. Since the phenomenon has already occurred and continuing. The schedule was developed by helps of expertise reviews. The data were elicited from respondent through pre-tested, structured interview schedule by personal interview method. The correlation coefficient was analyzed with the help of statistical software SPSS 23.00.

Karl Pearson's coefficient of correlation equation

$$r = \frac{n(\sum xy) - (\sum x)(\sum y)}{\sqrt{[n\sum x^2 - (\sum x)^2][n\sum y^2 - (\sum y)^2]}}$$

~ 822 ~

Corresponding Author
Neeraj Kumar Prajapati
Ph.D. Scholar. Department of
Extension Education, JNKVV,
Jabalpur, Madhya Pradesh,
India

Result and Discussion

Relationship between attributes of farmers and utilization of SAPs by framers

Correlation coefficient was calculated to find out the relationship between independent variables with dependent variable (i.e. utilization of SAPs by farmers).

Table 1: Correlation between attributes of farmers and utilization of SAPs by the farmers

Notation	Independent variable	'r' value
X1	Age	-0.254**
X2	Gender	0.097NS
X3	Family size	0.072NS
X4	Education level	0.217**
X5	Farming experience	0.063NS
X6	Annual income	0.351**
X7	Land holding	0.214**
X8	Cropping pattern	0.102NS
X9	Irrigation facilities	0.163*
X10	Farm power	0.058NS
X11	Extension contact	0.506**
X12	Mass media exposure	0.301**
X13	Information seeking behavior	0.267**
X14	Economic motivation	0.432**
X15	Innovative proneness	0.277**
X16	Decision making ability	0.328**
X17	Scientific orientation	0.406**
X18	Perception of farmers toward SAPs	0.293**

* Correlation is significant at the 0.05 level, ** Correlation is significant at the 0.01 level, NS = Non significant

Table 1 indicated relationship between attributes of farmers and utilization of SAPs (Y1). Out of 18 variables.

It is evident from the table 1 that there was a negatively significant relationship between age and utilization of SAPs ($r=-0.254$). This is due to the fact that, in youth are relatively versatile, proneness towards innovation and new techniques and desire to learn. The present study is supported by finding of Pradhan *et al.* (2021) [21]. Gender and family size had non-significant relationship with utilization of SAPs ($r=0.097$) and ($r=0.072$) respectively.

Education level was found positively significant ($r=0.217$) relationship with utilization of SAPs. The reason might be that education increase the knowledge and understanding of person, which help to quick adoption of new technologies with confidence (Kumar *et al.*, 2019) [4] the finding is supported by (Mishra *et al.*, 2020) [5]. Farming experience had non-significant relationship with utilization of SAPs ($r=0.063$). The present finding finds support with the work of pradhan *et al.* (2021) [21]. With regard to relationship between annual income and utilization of SAPs, it was found to be positively significant ($r=0.351$). Thus, it can be said that annual income plays a significant role in increase or decrease of adoption. This finding is in agreement with result of (Chitra and Ramana, 2017) [1].

Table 1 shows that Land holding had highly positive and significant relationship with utilization of SAPs ($r=0.214$). Therefore, it may be inferred that level of utilization of SAPs among the farmers corresponds with the increase in land holding, which concluded that land holding had higher influence on utilization of farmers. Hossain (2003) [2] and Varma and Pande (2012) [8] observed the same results. Cropping pattern (0.102) and farm power ($r=0.058$) had no-significant relationship with utilization of SAPs. Irrigation facilities had ($r=0.163$) significantly correlated with utilization of SAPs at 5 per cent level of probability.

It is evident from table 1 that extension contact ($r=0.506$), Mass media exposure ($r=0.301$), economic motivation ($r=0.432$) and innovative proneness ($r=0.277$) had positively significant with utilization of SAPs. These findings supported with the work of pradhan *et al.* (2021) [21]. Information seeking behavior was positively correlated with utilization of SAPs ($r=0.267$). This indicated that utilization of SAPs in farmers was influenced by their information seeking behaviour. To epitomize the results of the study, it can be stated that highly innovative person will be more information seekers. This finding is in agreement with result of Jallarith and Pthak (2018) [3]. Decision making ability ($r=0.328$), scientific orientation ($r=0.406$), and perception of farmers towards SAPs ($r=0.293$) were significantly correlated with utilization of SAPs.

Conclusion

It is to be concluded that on the basis of findings that out of these 18 independent variables, education level, annual income, land holding, extension contact, mass media exposure information seeking behavior, economic motivation, innovative proneness, decision making ability, scientific orientation and perception of farmers towards SAPs were significantly associated with utilization of smart agricultural practices (SAPs). Gender, family size, farming experience, cropping pattern and farm power were non-significant relationship with utilization of smart agricultural practices (SAPs) while age had negatively correlated with utilization of smart agricultural practices (SAPs).

References

- Chitra BM, Ramanna KN. Adoption behaviour of farmers on improved practices in selected farming systems of Mandya district, Karnataka. International journal of livestock research. 2018;8(2):285-290.
- Hossain MM. Farmers' knowledge and Adoption of Modern Boro Rice Cultivation Practices. M.S. (Ag.Ext.Ed.) Thesis, Department of Agril. Ext. Edu., BAU, Mymensingh, Bangladesh, 2003.
- Jallarith V, Pathak KN. Association between attributes of the paddy growers and adoption of indigenous technological knowledge and their role in sustainable grassroot innovation in ecosystem of Bastar District in Chhattisgarh, India. Multilogic in Science. 2018;7:314-316.
- Kumar S, Sharma RC, Bankoliya MK, Singh SRK. Correlates of Improved Production Technology Adoption for Fetching Maximum Yield Potentials of Chickpea, Journal of Community Mobilization and Sustainable Development. 2019;12(2):216-222.
- Mishra BP, Kanwat M, Gupta BK, Meena NR, Mishra NK, Kumar PS. Correlates of Adoption of Improved Agriculture Practices in Arunachal Pradesh, Indian Journal of Extension Education. 2020;56(2):51-54.
- Pradhan S, Naberia S, Harikrishna YV, Jallarith V. Socio-Economic correlates of livelihood security of small farmers in Jabalpur district of Madhya Pradesh. Indian Journal of Extension Education. 2021;57(3):57-59.
- Rohila AK, Sherawat PS, Malik JS. Awareness, constraints and prospects of climate smart agricultural practices (CSAP). Journal of Agrometeorology. 2018;20:167-171.
- Varma R, Pande AK. Technological gap in chickpea production technology among tribal farmers of Mandla district Madhya Pradesh. JNKVV Res J. 2012;46(2):245-247.