Factors Influencing the Adoption of Recommended Package of Practices by Pepper Growers of Wayanad District, Kerala

Meenu Eliyas[1] and P. Sumathi[2]

ABSTRACT

The study aims to assess the relationship between the profile of the farmers with their adoption level on recommended package of practices on pepper cultivation. The study was conducted in Panamaram block of Wayanad district in Kerala and proportionate random sampling was employed to select a sample of 120 members from the selected three villages of the block. It was observed that the factors viz., educational status, farm size, area under pepper cultivation, income, social participation, extension agency contact, mass media exposure, innovativeness, trainings undergone, market decision and market potential showed positive significant correlation at one per cent level of probability and market perception showed positive significant correlation at five per cent level of probability towards adoption level. Results revealed that one unit increase in the independent variables viz., farm size, extension agency contact and market decision would increase the adoption level by 2.549, 1.033 and 1.159 units respectively.

Black pepper (*Piper nigrum* L.), called as 'Black Gold' and the 'King of Spices' has been an important agricultural commodity in India since pre-historic period. It is the most important and mostly widely used spice in the world. Pepper is a woody climber, grown in the South Western region of India, comprising the states Kerala, parts of Karnataka, Tamil Nadu and Goa, the entire region once known as Malabar, a name now used restrictively to mean only the northern part of Kerala. The humid tropical evergreen forests bordering the Malabar Coast (the Western Ghats, one of the hot spot areas of plant bio-diversity on earth) is the centre of origin and diversity of Pepper. The Malabar Coast was involved in the cultivation and trade of pepper from very early times. From here pepper was taken to Indonesia, Malaysia and subsequently to other pepper growing countries.

In pepper production, Vietnam is followed by Indonesia, India, Brazil and China. Improved levels of adoption in India might have contributed to its high pepper production. This emphasises the need to study the factors influencing adoption of pepper cultivation practices so that appropriate strategies may be designed to further improve the production and productivity levels. In India, Kerala has the maximum area (84,065 ha) under pepper

1- PG Scholar and 2- Professor (Agricultural Extension), Department of Agricultural Extension and Rural Sociology, TNAU, Coimbatore - 641 003, Tamil Nadu.

cultivation and stands first in its production (20,000 tonnes). Over 75 cultivars of pepper are being cultivated in India. Karimunda is the most popular cultivar in Kerala. A total of 18 improved varieties of pepper have been released for cultivation. Panniyur-1, Panniyur-3 and Panniyur-8 are hybrids evolved at the Pepper Research Station, Panniyur (Kerala Agricultural University). IISR Girimunda and IISR Malabar Excel are the two hybrids released from ICAR-Indian Institute of Spices Research (Department of Agriculture, 2013).

METHODOLOGY

The study was conducted in Wayanad district of Kerala as the district is one among those districts having more area under pepper cultivation and taking in to account the familiarity of the researcher with the socio-economic conditions of pepper growers, cultural milieu and local dialect of the people. Out of the four blocks in Wayanad, Panamaram bock was purposively selected for the reason that it had more area under pepper cultivation. Among the nine villages in Panamaram block, three villages namely Irulam, Padichira, Pulpally were purposively selected for the study considering maximum area under pepper cultivation. A sample of 120 farmers were selected using proportionate random sampling technique. Fifteen factors *viz.*, age, educational status, occupational status, farm size, area under pepper cultivation, farming experience in pepper cultivation, annual income, social participation, extension agency contact, mass media exposure, innovativeness, trainings undergone, market perception,

market decision and market potential found to influence adoption were considered for the study. Data were collected through a well-structured and pre-tested interview schedule. The statistical tools such as percentage analysis, mean and standard deviation, simple correlation and multiple regression were used to analyse the collected data.

FINDINGS AND DISCUSSION

The analysis on relationship between the profile characters and the adoption level of pepper growers in Wayanad district revealed that the variables *viz.*, educational status (X_2), farm size (X_4), area under pepper cultivation (X_5), income (X_7), social participation (X_8), extension agency contact (X_9), mass media exposure (X_{10}), innovativeness (X_{11}), trainings undergone (X_{12}), market decision (X_{14}) and market potential (X_{15}) showed positive significant correlation at one per cent level of probability and market perception (X_{11}) showed positive significant correlation at five per cent level of probability. Remaining three variables did not show any significant association with adoption level of pepper growers. Multiple regression analysis was taken up to find out contribution of independent variable to the adoption level of respondents. The R^2 value was 0.500. The R^2 value has shown that all variables contributed to 50.00 per cent of variation in the adoption level among the respondents.

Therefore the equation was worked out and given below.

Y_1 = 53.810 – 0.024 (X_1) + 0.287 (X_2) + 0.125 (X_3) + 2.549 (X_4)* – 0.050 (X_5) – 0.134 (X_6) –

0.00001268 (X_7) + 1.169 (X_8) + 1.033 $(X_9)^*$ + 0.287 (X_{10}) + 0.489 (X_{11}) + 1.526 (X_{12}) + 0.186 (X_{13}) + 1.159 $(X_{14})^*$ – 0.136 (X_{15})

The results indicated that the variables *viz.*, farm size (X_4), extension agency contact (X_9) and market decision (X_{14}) showed positive and significant contribution at five per cent level of probability. Results also revealed that one

unit increase in the following independent variables *viz.*, farm size (X_4), extension agency contact (X_9) and market decision (X_{14}) would increase the adoption level by 2.549, 1.033 and 1.159 units respectively.

Since pepper has got more importance in the study area, farm size (X_4) had shown positive and significant contribution

Table 1.
Relationship of Profile of the Farmers with Adoption level of Recommended Technologies

(n=120)

Sl. No.	Variables	'r' value	Regression co-efficient	Standard error	't' value
X_1	Age	-0.101	-0.024	0.078	-0.310 NS
X_2	Educational status	0.278**	0.287	0.439	0.655 NS
X_3	Occupational status	-0.075	0.125	0.475	0.262 NS
X_4	Farm size	0.340**	2.549	1.204	2.116*
X_5	Area under pepper cultivation	0.286**	-0.050	0.463	-0.108 NS
X_6	Experience	-0.059	-0.134	1.192	-0.113 NS
X_7	Income	0.342**	-0.00001268	0.000	-1.120 NS
X_8	Social participation	0.547**	1.169	0.641	1.824 NS
X_9	Extension agency contact	0.454**	1.033	0.487	2.123*
X_{10}	Mass media exposure	0.278**	0.287	0.439	0.655 NS
X_{11}	Innovativeness	0.387**	0.489	1.158	0.423 NS
X_{12}	Trainings undergone	0.540**	1.526	0.820	1.862 NS
X_{13}	Market perception	0.218*	0.816	0.562	1.452 NS
X_{14}	Market decision	0.454**	1.159	0.464	2.498*
X_{15}	Market potential	0.593**	-0.136	0.256	-0.530 NS

- Significant at five per cent level
*** - Significant at one per cent level*
NS - Non-significant

$R^2 = 0.500$
$F = 7.490$

with adoption level. Due to the need for technological guidance to understand the scientific cultivation practices of pepper, extension agency contact (X_9) among the farmers also had a positive significant contribution with adoption level. The findings are in line with the findings of Venkatesan (2000). The contribution of market decision (X_{14}) with adoption level was found to be positive and significant which is due to the knowledge that farmers had obtained through high level of experience in pepper cultivation.

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