



Measurement of psychological dimensions of apple growers in tribal district Kinnaur (Himachal Pradesh)

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ABSTRACT

Kinnaur- a predominated tribal district of Himachal Pradesh is well known for apple production. Though the production of apple has increased manifold during the last five decades yet the yield was not found up to the mark, due to less adoption of improved technology by the farmers. Besides other factors, some psychological parameters like Economic motivation, Scientific orientation and Risk orientation etc. also affect their adoption behaviour. Keeping this in view, the present study was conducted on 100 apple growers of Nichar block in district Kinnaur. The study revealed that the apple growers were good in all the above three psychological traits indicating thereby that these traits should be fully exploited by extension functionaries to enhance the rate of adoption regarding improved apple production technology among the apple growers. Lack of time, lack of information about the training programmes, road blockage and economic problems were the main reasons for non-attending of training programmes by them.

1. Introduction

Adoption of a farm technology is mental activity through an individual passes first from hearing about an innovation *i.e.* awareness to its final adoption. It is an innovation decision process which to a greater extent depends on the psychological make up of an individual farmer. Among the several psychological parameters, economic motivation, scientific orientation and risk orientation were identified as prominent psychological dimensions affecting the adoption of recommended technology by the farmers. Keeping this in view, the present study was undertaken with the following specific objectives:

1. To determine the economic motivation of the apple growers.

2. To elicit the response of apple growers on their scientific rationality.
3. To find out risk orientation among the apple growers.

2. Methodology

The study was conducted in randomly selected Pooh Block of district Kinnaur in the state of Himachal Pradesh. Out of the selected block, a random sample of five villages was taken. From the villages so selected, 20 apple growers were randomly selected, thus, constituting a total sample of 100 respondents. Respondents' economic motivation, scientific orientation and risk orientation were measured with the help of the scale developed for the purpose as per the procedure laid down by Edward and Kilpatrick, 1948. The response of the respondents on each scale was obtained on three-point continuum, *i.e.* Agree, Undecided, Disagree with respective scores of 3, 2 and 1 for positive statements and in case of negative statements

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the scoring was reversed. The total score of respondents on each scale was calculated by summing up of the scores of all statements. The data were collected with the help of well-structured and pre-tested interview schedule by personally interviewing the respondents.

3. Results and Discussion

The main findings of the study are given as under:

Respondents' perceived economic motivation:

How much relative value an individual places on economic ends *i.e.* the profit before adopting recommended practices for apple cultivation was measured with the help of economic motivation scale and the response has been depicted in Table 1.

As is clear from the data a majority of the respondents (more than 70%) were agreed on the statements I, III and VI, *i.e.* 'I like to invest in scientific cultivation of apple to get maximum profit', 'What I want is that my orchard should give me reasonable income sufficient enough for the survival of my family' and 'I don't like to borrow excessive money for investing in scientific cultivation of apple'.

A substantial percentage of the respondents were found to be undecided on whether to borrow money in order to purchase a good quality of apple plants (59%), maximization of monetary profits through adoption of recommended practices for apple cultivation (44%) and adopting improved techniques for apple cultivation (42%). This shows that he apple growers had mixed perception on economic motivation inclining towards low motivation.

Table 1. Perception on Economic Motivation

Sl. No	Statements	Response			Total Score	MEMS*
		Agree	Undecided	Disagree		
		F%	F%	F%		
I	I like to invest in scientific cultivation of apple to get maximum profit.	76	24	--	276	2.76
II	I don't hesitate to borrow money in order to purchase good quality of apple plants.	27	59	14	213	2.13
III	What I want is that my orchard should give me reasonable income, sufficient enough for the survival of my family.	73	27	--	273	2.73
IV	Instead of using local practices, I prefer to use improved techniques for apple cultivation	58	42	--	258	2.58
V	My main aim is the maximization of monetary profit through adoption of recommended practices for apple cultivation.	49	44	07	242	2.42
VI	I don't like to borrow excessive money for investing in Scientific cultivation of apple.	86	14	--	286	2.86

*Mean Economic Motivation Score

Scientific Orientation among the respondents

In order to measure the degree to which the respondents were oriented to the use of scientific methods of apple cultivation and decision making. The response of the respondents was measured through scientific orientation scale depicted in Table 2.

It has been observed from the Table that 91% of the respondents agreed that a farmer should experience with new ideas in his apple orchards. Similarly, 74% of the respondents perceived that a fruit grower even if he had lots of experience should use new techniques for apple growing. However, there were still a substantial percentage of them who supported that the way a farmer's forefathers cultivated apple was still the best way. Those who were undecided whether the new techniques of apple growing give better results to a farmer than the old conventional methods were found to be 55 percent.

Risk-Orientation among the respondents:

The degree to which the apple growers were oriented towards risk and uncertainty and found to have the courage to face the problem in scientific cultivation of apple was measured through risk orientation scale and the response has been given in Table 3.

A perusal of the data in Table 3 indicated that the majority of the respondents perceived that a farmer should grow other crops also in order to avoid risk in new venture/enterprise keeping in view the past experience (88%). However, those who agreed that in risky situation one learns a great about new practices and should not hesitate in taking risk in adopting new methods of apples

Table 2. Response on scientific orientation

Sl. No.	Statement	Perceived Perception			Total Score	MSOS*
		Agree	Undecided	Disagree		
		F%	F%	F%		
I	New techniques of apple growing give better results to a farmer than the old methods.	19	55	26	193	1.93
II	The way a farmer's forefathers cultivated apple is still the bestway.	64	27	09	145	1.45
III	A fruit grower even with lots of experience should use new techniques for apple growing.	74	26	--	274	2.74
IV	A good farmer experiments with new ideas in his apple Orchards.	91	09	--	291	2.91
V	Traditional methods of apple growing have to be changed in order to raise the level of living of apple growers.	58	42	--	258	2.58

*Mean Scientific Orientation Score

Table 3. Respondents' Risk Orientation

Sr. No	Statement	Perceived perception			Total score	MROS *
		Agree	Undecided	Disagree		
		F%	F%	F%		
I	Knowing that the chances of failure are high in adopting new methods of apple cultivation, I don't hesitate in taking risk.	94	06	--	106	1.06
II	I will continue to use improved methods of apple cultivation even if they are risky.	20	80	--	220	2.20
III	One should take decisions of starting new ventures/enterprise keeping in view the past experience.	88	12	--	288	2.88
IV	In order to excel, it is necessary to take risk.	67	33	--	267	2.67
V	In risky situation, one learns a great about the new practice.	94	04	02	292	2.92
VI	Only financially sound farmers can go for scientific cultivation of apple.	44	12	44	200	2.00
VII	A farmer should grow other crops also in order to avoid risk in new venture.	83	17	--	117	1.17
VII I	A farmer who is willing to take greater risk than the average Fruit grower, usually does better financially.	55	38	07	248	2.48

*Mean Risk Orientation Score

of apple cultivation even when the chances of failure in adopting these methods are high were found to be 12% each. On the basis of risk orientation score the statement numbers **V, III and IV and VIII** were found to be very prominent with their MROSs of 2.92, 2.88, 2.67, and 2.48 respectively. Sinha, 2019 reported that absence of motivating forces besides inappropriateness of available technologies was the major constraint in upholding research and extension.

Response on training program attended during the last five years and the main reasons for not attending any training program:

A dichotomous response on training attended during the last five years and the main reasons for not attending was taken from the respondents and the data have been presented in Table-4(a) and 4(b).

Table 4(a). Training program attended

Response	Frequency
Yes	21
No	79

It is evident from the data that a majority of the respondents (79%) did not attend any training program during the last five years.

Table 4(b). Reasons for not attending any training program (n = 79)

Sr.No.	Reasons	F	%
I.	Lack of time	24	30.38
II.	Transport problem	5	6.33
III.	Economic problem	8	10.13
IV.	Road blockage	11	13.92
V.	Unprecedented weather condition at the time of training	8	10.13
VI.	Lack of information about the training	14	17.72
VII.	Family problems	6	7.59
VIII.	Any Other (training not as per the need etc.)	3	3.80

Lack of time (30.38%), lack of information about the training (17.72%), road blockage (13.92%) and

unprecedented weather condition at the time of training (10.13%) etc. were found to be the main reasons for not attending the training program by the farmers.

Respondents' source of information:

The respondent apple growers were asked from where they obtained information about various aspects of apple cultivation; the data have been represented in Table 5. It is clear from Table 5 that Radio (Rank I) followed by newspaper (Rank II) and T.V. (Rank III) were the most prominent sources of information for them. The other sources of information in succession were magazine (Rank IV), Package of Practices for Fruit Crop (Rank V) and Scientists of Krishi Vigyan Kendra (Rank VI). It was quite astonishing to note that university scientists and extension field functionaries of State Department of Horticulture were least consulted for obtaining information about apple cultivation it may be due to distant location of KVK and lack of transportation facilities in the tribal areas. Hence, it is implied from the study that radio, television and newspaper should be fully exploited for disseminating information on apple cultivation to the apple growers.

4. Conclusion

The study concludes that the apple growers were found to be very good on all the three psychological dimensions viz. economic motivation, scientific orientation and risk orientation indicating thereby that these psychological traits must be fully exploited by the extension functionaries to enhance the rate of adoption of recommended technology for apple cultivation among the tribal farmers.

5. References

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Table 5. Frequency of information sources used:

Sr. No.	Information source	F	MeanScore	Rank
I.	Radio			
	Always	54	2.26	I
	Sometimes	18		
	Never	28		
II.	TV			
	Always	29	2.01	III
	Sometimes	43		
	Never	28		
III.	Newspaper			
	Always	27	2.10	II
	Sometimes	56		
	Never	17		
IV.	Magazines			
	Always	23	1.77	IV
	Sometimes	31		
	Never	46		
V.	Package of practices for Fruit Crops			
	Always	05	1.70	V
	Sometimes	60		
	Never	35		
VI.	HDO/HEO			
	Always	02	1.31	VIII
	Sometimes	27		
	Never	71		
VII.	Scientists of University			
	Always	06	1.41	VII
	Sometimes	29		
	Never	65		
VIII.	KVK Scientists			
	Always	06	1.58	VI
	Sometimes	46		
	Never	48		