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Research Article

Societal paradox about coriander production technology by the coriander growers

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SUMMARY : In the present study, attempt has been made to know the association between extent of adoption of the farmers (dependent variable and their selected characteristics as independent variables) the correlation coefficient ('r' value) were calculated on the basis of operational measures developed for the variables. The characteristics of the respondents like education, social participation, extension contact, irrigation potentiality, coriander crop intensity, risk orientation, extension participation, innovativeness, exposure to information source and production were positively significant associated with the adoption of recommended coriander production technology. While, age was negative and significantly associated with the adoption about recommended coriander production technology, respectively. Whereas marketing orientation was negative and non significant associated with the adoption about recommended coriander production technology.

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BACKGROUND AND OBJECTIVES

Coriander (*Coriandrum sativum* L.) is an annual aromatic herb, grown for its leaves, seed, essential oil and oleoresin. Coriander, also known as cilantro and Chinese parsley is a member of family Apiaceae (Umbelliferae). Its name is derived from the Greek world '*Koris*' meaning bedbug because of the unpleasant fetid bug-like odour of the green herb and unripe fruits, it was eventually loaned to Latin *Coriandrum*. Coriander has originated in the Mediterranean region from where it had moved eastward to Asia (Nawata *et al.,* 1995). It is commonly known as "Dhania" or "Dhana". India has been known as the "home of the spices" from very ancient times. Spices play pivotal role in human dietary as they give an agreeable flavour and aroma to food and add greatly to the pleasure of eating (Aiyanduai, 1966). They also constitute an important group of agricultural commodities which are virtually indispensable in culinary art.

Coriander is well known for its uses as medicine, oil, perfumery and culinary purposes, consumed in large quantities and earns a large sum of foreign exchange. It is probably the first spice to be used by man as common flavouring substance. The stem, leaves and fruits have a pleasant aromatic odour. The pleasant aroma of the fruits is due to the linalool containing essential oil (Pruthi, 1976). Which is used for medicinal and flavouring beverages and its residues are used for cattle feed. High quality coriander seed has essential oil content between 0.4 and 1.4 per cent.

The finest quality oils contain 60 to 70% linalool, a compound which produces much of the characteristic coriander flavour. The coriander seed contains an extractable vegetable oil fraction which may be blended with the essential oil (to form an oleoresin) for use in food and other non-food products.

RESOURCES AND METHODS

In order to realize the above objectives, a sample of 160 coriander growers, representing 8 villages of two talukas (Manderada and Keshod) of Junagadh district was drawn by using random sampling techniques. To find out the relationship between dependent and independent variables, the Pearson's product moment method of

computing correlation coefficient, which provides generally accepted means for measuring the relationship, was used (Chandel, 1975).

OBSERVATIONS AND ANALYSIS

In order to ascertain the association between the level of knowledge (dependent variable) of the farmers and each of their selected characteristics (independent variables), the correlation co-efficient ('r') was calculated on the basis of operational measures developed for the variables, empirical hypotheses was stated for testing the association and its significance on zero order correlation are given in Table 1.

Age and extent of adoption:

It's seen form the Table 1 that the calculated correlation co-efficient value of r = -0.1830 was found significant at 0.05 level. Thus, null hypothesis was rejected and it can be concluded that there was negative and significant association between coriander growers' adoption of recommended coriander production technology and their age.

The direction of association was negative and significant which indicated that coriander growers' adoption of recommended coriander production technology increased significant with decrease in their age. The probable reason for above finding might be that majority of the young coriander growers were educated and having more extension contact and social participation.

Education and extent of adoption:

The data presented in Table 1 revealed that the calculated co-efficient of correlation value of r = 0.2522 was positively highly significant at 0.01 level. Hence, the Null hypothesis was rejected and it could be inferred that there was positive and significant association between coriander growers' adoption of recommended coriander production technology and their education. It can be said that with increased in education the level of adoption also increased.

The probable reason may be that educated respondents understand the importance of innovations can be quickly and easily adopted by them. They also keep faith in new research and possess higher change proneness.

Social participation and extent of adoption:

The data in Table 1 revealed that the correlation co-efficient obtained r = 0.1801 was positive significant at 0.05 level. Hence, Null hypothesis was rejected and it can be inferred that there was positive significant association between coriander growers' adoption of recommended coriander production technology and their social participation. The adoption increased with an increase of social participation of the respondents. The probable reason for this might be that more social participation provides more in-depth information and better understanding to the respondents, which leads them to adopt the recommended coriander production technology in a better way.

Annual income and extent of adoption:

The data in Table 1 reveled that calculated correlation coefficient r = 0.0430 was non significant at 0.05 level. Hence, the Null hypothesis was accepted. It can be said that there was no association between farmers' level of adoption for coriander production practices on their annual income. This might be due to the fact that there were no more farmers adopting improved coriander production practices on their farm, so they think that the disparity in income is not because of the coriander production practices.

Extension contact and extent of adoption:

The data presented in Table 1 revealed that the computed correlation co-efficient value of r = 0.2059 was observed to be positive and significant at 0.05 level. Hence, the Null hypothesis was rejected. It can, therefore, be concluded that there was significant relation between coriander growers' adoption of recommended coriander production technology and their extension contact. The positive direction of relationship revealed that the adoption increased with an increase of extension contact of the respondents. This might be due to fact that participation in extension activities around the area of the respondents acquired higher knowledge; as a result farmers are ready to adopted recommended coriander production technology.

Size of land holding and extent of adoption:

The data presented in Table 1 reveled that the correlation co-efficient obtained r = 0.0697 was non significant at 0.05 level. Hence, the Null hypothesis was accepted. It can be concluded that there was no association between coriander growers' adoption of recommended coriander production technology and their size of land holding. This might be due to the fact that irrespective of size of land holding almost all the respondents inclined to adopt equally, the recommended coriander production technology for getting higher yield and income.

Irrigation potentiality and extent of adoption:

The data in Table 1 reveled that the computed correlation co-efficient value of r = 0.2847 was positive and significant at 0.01 level. Hence, Null hypothesis was rejected. It can be concluded that there was positive and significant association between adoption of recommended coriander production technology and their irrigation potentiality. The positive sign indicated that with increase in irrigation potentiality the adoption level of coriander growers also increased. This might

be due to the fact that with increase in irrigation potentiality the respondent might have irrigated their crop at different critical stages of crop which resulted in higher yield and income. As a result, this might have motivated them for more adoption of coriander production technology.

Cropping intensity and extent of adoption:

The data presented in Table 1 reveled that the calculated correlation co-efficient value of r = 0.2519 was found to be positive and significant at 0.01 level. Hence, Null hypothesis was rejected. It can, therefore, be said that there was positive and significant association between coriander growers adoption of recommended coriander production technology and coriander crop intensity. The positive direction of relationship indicated that coriander growers' adoption increased with an increase in their coriander crop intensity.

The probable reason might be that coriander is *Rabi* crop. Due to the increase in crop intensity the respondents might have received more production per unit area which might have generated more income.

Risk orientation and extent of adoption:

The data depicted in Table 1 reveled that the computed co-efficient of correlation value of r = 0.1703 was positive and significant at 0.05 level. Hence, Null hypothesis was rejected. Therefore, it can be said that there was positive significant association between coriander growers adoption of recommended coriander production technology and risk orientation. The positive direction of relationship indicated that with increase risk orientation the adoption is increased. The probable reason for this result could be that coriander growers secure benefits of high production while taking risk in adoption of recommended coriander production technology.

Extension participation and extent of adoption:

The data presented in Table 1 reveled that the computed co-efficient of correlation value of r = 0.3228 was positive and significant at 0.01 level. Hence, Null hypothesis was rejected. Therefore, it can be said that there was positive significant association between coriander growers' adoption of recommended coriander production technology and their extension participation.

The probable reason might be that due to more participation in extension activities the respondents acquired more knowledge and other facilities like credit, input supply at a time which facilitated higher adoption in coriander production technology.

Innovativeness and extent of adoption:

The data in Table 1 reveled that the computed co-efficient of correlation value of r = 0.3342 was highly positive and significant at 0.01 level. Hence, Null hypothesis was rejected. Therefore, it can be said that there was positive significant association between coriander growers' adoption of recommended coriander production technology and their innovativeness.The probable reason might be that due to more innovative they tried out different coriander production technology.

Market orientation and extent of adoption:

The data in Table 1 reveled that the computed correlation coefficient (r = - 0.0495) was found negative and non significant revealed that there was no association between market orientation and extent of adoption. Hence the Null hypothesis was accepted.

The probable reason for no influence of market orientation on adoption of coriander product practices can be

Table 1 : Correlation between adoption about coriander production technology followed by the farmers and the independent variables (n= 160)

Sr. No	Name of the independent variables	'r' value
1.	Age	-0.1830*
2.	Education	0.2522**
3.	Social participation	0.1801*
4.	Annual income	0.0430 NS
5.	Extension contact	0.2059*
6.	Size of land holding	0.0697 NS
7.	Irrigation potentiality	0.2847**
8.	Cropping intensity	0.2519**
9.	Risk orientation	0.1703*
10.	Extension participation	0.3228**
11.	Innovativeness	0.3342**
12.	Market orientation	-0.0495 NS
13.	Exposure to information sources	0.1783*
14.	Production	0.2111**

* and ** indicate significance of value at P=0.05 and 0.01 is r = 0.1600 and r = 0.2100, respectively
NS = Non-significant

explained to the reason that resources to be purchased from market are very less. On the other hand, for selling of coriander product market network has not yet been developed.

Exposure to information and extent of adoption:

The data in Table 1 reveled that the computed co-efficient of correlation value of r = 0.1783 was positive and significant at 0.05 level. Hence, Null hypothesis was rejected. Therefore, it can be said that there was positive significant association between coriander growers' adoption of recommended coriander production technology and their exposure to information sources.

Production and extent of adoption:

The data presented in the Table 1 reveled that the calculated value r = 0.2111 was highly significant at 0.01. Hence, the Null hypothesis was rejected and it can be inferred that there was positive and significant association between the level of adoption of farmers and their production.

Conclusion:

From the above discussion, it can be concluded that the characteristics of the respondents like education, social participation, extension contact, irrigation potentiality, coriander crop intensity, risk orientation, extension participation, innovativeness, exposure to information source and production were positively significant associated with the adoption of recommended coriander production technology. While, Age was negative and significantly associated with the adoption about recommended coriander production technology, respectively. Whereas marketing orientation was negative and non significant associated with the adoption about recommended coriander production technology.

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