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ASSOCIATION BETWEEN SELECTED CHARACTERISTICS AND OVERALL TECHNOLOGICAL GAP OF THE TRIBAL FENNEL GROWERS

H.A.Chaudhari[1], P.B.Chaudhary[2] and J. J. Mistry[3]

1 Ph.D. scholar, Department of Extension Education, C.P.C.A., SDAU, Sardarkrushinagar - 385506
2 Ph.D. scholar, Department of Extension Education, C.P.C.A., SDAU, Sardarkrushinagar - 385506
3 Senior Scientist & Head, KVK, Khedbrahma SDAU, Sardarkrushinagar - 385506
Email : charliechaudhari196@gmail.com

ABSTRACT

India with varied climatic and soil is natural home of spices. Spices may be defined as one of the very strongly flavored or aromatic substances of vegetable origin obtained from tropical or other plants. Among all the minor spices grown, fennel (Foeniculum vulgare P. Miller) locally known as "Variyali" is one of the important spices crop. The share of Banaskantha district in spice production is 12.24 per cent and in fennel production is 8.38 per cent in Gujarat. Thus, Banaskantha district was selected purposively. Two tribal dominating talukas viz; Amirgadh and Danta were selected purposively. Ten villages were selected randomly from each taluka having area covered under fennel cultivation. Thus, total twenty villages were selected. From each selected village, six respondents were selected randomly making a sample of 120 respondents. Ex-post facto research design was followed for carrying out the study. The independent variables studied viz., education and economic motivation had negative and significant correlation with overall technological gap of tribal fennel growers, whereas, variable viz., age of the tribal fennel growers had positive and significant correlation with overall technological gap. The two variables viz., social participation and size of family had positive and non-significant correlation with overall technological gap of fennel growers. Two variables viz., size of land holding and extension participation had negative and non-significant relationship with the overall technological gap in fennel production technology. The variable exhibited negative and highly significant correlation with overall technological gap of fennel growers, were: annual income, source of information and scientific orientation.

Keywords: *tribal fennel growers, characteristics, technological gap*

INTRODUCTION

A spice is substance of plant origin, primarily from various parts of the plant such as dried seed, fruit, root and bark which is used in very small quantities as a food additive for flavor, color and as a preservative. Many spices are also used for purposes of medicine and religious rituals in Asia and in cosmetics, perfumery and liquorices in other parts of the world.

Spices add color, flavor and zing to food, besides helping digestion. About 60 spices are cultivated, most of which are concentrated in the Mediterranean region and Asia, from where they most probably originated. Spices are grouped according to the type of plant, the part of the plant used, and growing time. Based on the last criterion, they can be subdivided into perennials and annuals.

Fennel is cultivated in China, Egypt, France, Italy, India, Japan, Russia, Czechoslovakia, Hungary and Germany. India is one of the major fennel producing countries in the world. Major producing states of fennel in India are Rajasthan, Andhra Pradesh, Punjab, Madhya Pradesh, Uttar Pradesh, Gujarat, Karnataka and Haryana. Fennel crop is mostly cultivated in Sabarkantha, Mahesana, Ahmedabad and Banaskantha district of North Gujarat. Fennel is an important spices crop of Banaskantha district.

The average yield of fennel crop in Banaskantha district is too low (i.e., 2160 kg/ha) as compared to average yield of Research station (i.e., 2400-3000 kg/ha). Considerable efforts have been made for increasing fennel area and production during last few years, but even then the yield per unit area is low in Banaskantha district. This might be due to the lack of scientific knowledge of fennel production technology. The study was undertaken with the following specific objectives.

OBJECTIVE

To find out the association between selected characteristics and overall technological gap of the tribal fennel growers

METHODOLOGY

This study was conducted in purposively selected Banaskantha district. According to area under fennel cultivation, Banaskantha district rank fourth in Gujarat state. The tribal farmers of the district have adopted the fennel cultivation. Thus, the study was confined to tribal region of the district. Banaskantha district has two tribal dominating talukas. Both the talukas of the district *viz;* Amirgadh and Danta were purposively selected as the study is confined to tribal fennel growers. Ten villages from each taluka having fennel under cultivation were selected randomly. Total 20 villages were selected for the study. From each randomly selected village of selected talukas, six fennel growing tribal farmers were selected randomly. Thus, total 120 respondents were selected for the study.

RESULTS AND DISCUSSION

The tribal fennel growers Personal, socio-economic, communication and psychological characteristics play very important role in the process of adoption and diffusion of innovations. With this hypothecation, it was thought appropriately to study their association with overall technological gap. To examine association, correlation coefficient was computed. The data in this respect are presented Table 1.

Table 1 : Association between the profile of tribal fennel growers and their overall technological gap in recommended fennel production technology

(n=120)

Sr. No.	Independent variables	Correlation Coefficient ('r' value)
X_1	Age	0.175*
X_2	Education	-0.183*
X_3	Size of land holding	-0.027 ^{NS}
X_4	Annual income	-0.646**
X_5	Social participation	0.012^{NS}
X_6	Size of family	-0.137^{NS}
X_7	Source of information	-0.360 **
X_8	Extension participation	-0.072 ^{NS}
X_9	Economic motivation	-0.178*
X_{10}	Scientific orientation	-0.312**

** = significant at 0.01 level

* = significant at 0.05 level NS = not significant

As seen from Table 1 that the independent variables studied *viz*., education (-0.183*) and economic motivation (-0.178*) had negative and significant correlation with overall technological gap of tribal fennel growers, whereas, variable *viz*., age (0.175*) of the tribal fennel growers had positive and significant correlation with overall technological gap. The two variables viz., social participation (0.012^{NS}) and size of family (-0.137^{NS}) had positive and non-significant correlation with overall technological gap of fennel growers. Two variables *viz*., size of land holding (-0.027^{NS}) and extension participation (-0.072^{NS}) had negative and non-significant relationship with the overall technological gap in fennel production technology. The variable exhibited negative and highly significant correlation with overall technological gap of fennel growers, were: annual income (-0.646**), source of information (-0.360**) and scientific orientation (-0.312**). Age finding is in line with finding of Kikon (2010). Education finding is in line with findings of Basanayak *et al.,* (2014) and Suman, (2017). Social participation finding is in line with findings of Basanayak *et al.,* (2014) and Suman, (2017). Extension participation finding is in agreement with the finding of Chaudhary (2016). Economic motivation finding is in line with the findings of Gadhavi, (2008), Chaudhari (2009) Sardhara *et al.,* (2020) and Pendam *et al.,* (2021)

CONCLUSION

The independent variables studied *viz*., education and economic motivation had negative and significant correlation with overall technological gap of tribal fennel growers, whereas, variable *viz*., age of the tribal fennel growers had positive and significant correlation with overall technological gap. The two variables viz., social participation and size of family had positive and non-significant correlation with overall technological gap of fennel growers. Two variables *viz*., size of land holding and extension participation had negative and non-significant relationship with the overall technological gap in fennel production technology. The variable exhibited negative and highly significant correlation with overall technological gap of fennel growers, were: annual income, source of information and scientific orientation.

CONFLICT OF INTEREST

The authors of the paper declare no conflict of interest

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