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RELATIONSHIP BETWEEN THE PROFILE OF GREEN MANURING GROWERS AND THEIR LEVEL OF KNOWLEDGE TOWARDS SUSTAINABLE AGRICULTURE

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ABSTRACT

The practice of green manuring is as old as that of the art of manuring crops. Crops grown for the purpose of restoring or increasing the organic matter content in soil are called green manure crops. Their use in cropping system is called green manuring. The present study was carried out in Navsari district of Gujarat State. Navsari district comprises of six talukas and out of these, two talukas viz., Jalalpore and Gandevi having higher number of green manuring growers were selected purposively. Total 120 green manuring growers were selected for the present study. In the correlation analysis it was found that age was non-significant correlated with their knowledge. Education, land holding, annual income, mass media exposure, economic motivation, innovativeness, crop produce, cropping intensity and irrigation facility were positively and significant. Moreover, such as social participation, extension participation and scientific orientation were positively and highly significant relationship with their knowledge.

Keywords : *green manuring, knowledge, cropping, growers, relationship*

INTRODUCTION

Agriculture was started as an activity very close to nature and in all living and non-living things on earth. It was dependent on the natural cycle of season and was sustainable in the past. Sustainable agriculture is the only possible way to meet the demands of the present generation, at the same time, preserving the natural capacity of the soil without any contamination for future generations. In other words, it is a system of production and cultivation practices, which can fulfil the food and nutrition needs of a particular society without depleting the essential natural resources of agriculture like water,soil fertility and diverse biological resources, making it economically, socially and ecologically sustainable. Natural and organic farming systems are linked with sustainable agriculture which considers the beneficial influence of organics on soil health and the environmental problems associated with the excessive and continuous use of chemicals. Green manuring is the practice of turning undecomposed green plant tissue into the soil, which adds organic matter to the soil, as a result the nitrogen supply of the soil increases and certain nutrients are made more readily available, thereby increasing the productivity of the soil. Green manure crop improve the condition of soils in several ways such as addition of organic matter, nitrogen with legumes, conservation of nutrients and protection of soil against erosion. Sun hemp, sesbania, cluster beans, senji, cowpea, green gram, black gram and fodder legumes are used as green manuring crops. Sesbania and sun hemp are most popular. In India, two methods are being practiced for green manuring.

The extent of determinants of farmers knowledge regarding green manuring for sustainable agriculture from the various information sources is presumed to be influenced by the personal, social-communication, psychological, and situational determinants of green manure growers.

OBJECTIVE

To ascertain the relationship between the profile of green manuring growers and their level of knowledge towards sustainable agriculture

METHODOLOGY

The present study was carried out in Navsari district of Gujarat State. Navsari district comprises of six talukas and out of these, two talukas viz., Jalalpore and Gandevi having higher number of green manuring growers were selected purposively. From each selected taluka, six villages were selected randomly. From each villages 10 green manuring growers were selected randomly. Thus, total 120 green manuring growers were selected for the present study. The research design followed in the study was ex-post-facto. Thirteen independent variables were chosen. In light of the objectives, the interview schedule was prepared and respondents were interviewed at their home and field. The collected data were analysed by correlation coefficient(r).

RESULTS AND DISCUSSION

Table:1 Relationship between the profile of green manuring growers and their level of knowledge towards sustainable agriculture. (n = 120)

Sr. No.	Characteristics	Coefficient of correlation ('r' value)
X_1	**Age**	-0.125^{NS}
X_2	**Education**	0.232*
X_3	**Land holding**	0.223*
X_4	**Annual income**	0.2421*
X_5	**Social participation**	0.55**
X_6	**Extension participation**	0.318**
X_7	**Mass media exposure**	0.219*
X_8	**Economic motivation**	0.197*
X_9	**Scientificorientation**	0.264**
X_{10}	**Innovativeness**	0.207*
X_{11}	**Crop produce**	0.253*
X_{12}	**Cropping intensity**	0.202*
X_{13}	**Irrigation facility**	0.198*

***** Significant at 0.05 per cent level of probability

****** Significant at 0.01 per cent level of probability

NS Non significant

The results in Table 1 shows the relationship between the characteristicz of respondents and their knowledge towards sustainable agriculture.

Age and knowledge

Age of the green manuring growers had negative and non-significant relationship with their knowledge. It means age of the green manuring growers were not linearly related to knowledge of green manuring. It can be concluded that age of green manuring growers were not important for increase knowledge of green manuring. These results are in line with the findings of Naik (2018).

Education and knowledge

Education of green manure growers had positive and significant relationship with their knowledge. It can be concluded that education give understanding about using technology. A well-educated green manuring growers had able to take decision in difficult situation. These findings are supported by Sharma (2016) and Naik (2018) and Patel *et al.* (2019).

Land holding and knowledge

Land holding of green manure growers had positive and significant relationship with their knowledge. Thus the study established the fact that the land holing had influence on knowledge of green manuring growers. Majority of green manuring growers are small and medium farmers with good education might be the proper reason for significant association with knowledge.

Annual income and knowledge

Annual income of green manuring growers had positive and significant relationship their knowledge. It means their annual income of the green manuring growers positive effect of their knowledge. This result was supported by Naik (2018).

Social participation and knowledge

Social participation of green manuring growers had positive and highly significant relationship with their knowledge. This indicates that social participation influence the knowledge of green manuring growers as it provides an opportunity to an individual to interact in an organizational way which resulted in acquisition of knowledge and likely to receive clues from other people that would serve, as further, reinforce supporting the concept of management which motivate them for better management. This result was supported by Jaganathan (2012).

Extension participation and knowledge

Extension participation of green manuring growers had positive and highly significant relationship with their level of knowledge. With increasing participation in different extension activity they become more experience and create more interest towards green manuring due to the increase their knowledge. This result was supported by Sharma (2016).

Mass media exposure and knowledge

Mass media exposure of green manuring growers had positive and significant relationship with their knowledge. Mass media exposure leads the green manuring growers towards higher knowledge and make them aware with the new technology. And higher mass media exposure makes them able to impart recent innovation as well as government subsidy for green manuring crops. This result was supported by Jaganathan (2012) and Patel and Vinaya (2022).

Economic motivation and knowledge

Economic motivation of green manuring growers had positive and significant relationship with their knowledge. From the findings it can be concluded that economic motivation is the basic character upon which other motives and drives are built. When one develops higher level of economic motivation and wants to achieve it, he would

strive hard and get internalize himself about different aspect of profit maximization. Operating motive of earning higher income naturally activities the individual in the direction of rational contributing with significant correlation. This result was supported by Jaganathan (2012).

Scientific orientation and knowledge

Scientific orientation of green manuring growers had positive and highly significant relationship with their knowledge. The probable reason might be that scientific orientation opened the mental horizon which acted as a catalyst I changing behavior of green manuring growers, which would have resulted into its significant influence on knowledge. Similar results obtained with Sharma (2016) and Chaudhary *et al.* (2019).

Innovativeness and knowledge

Innovativeness of green manuring growers had positive and significant relationship with their knowledge. The probable reason might be Mass media exposure and extension participation influence of green manuring growers towards sustainable agriculture. It can be directed them to grow the green manuring crops. This result was supported by Jaganathan (2012) and Sharma (2016).

Crop produce and knowledge

Crop produce of green manuring growers had positive and significant relationship with their knowledge. The probable reason green manuring growers use proper crop growing method due to they get more benefit. It shows positive effect on knowledge of green manuring growers for crop produce.

Cropping intensity and knowledge

Cropping intensity of green manuring growers had positive and significant relationship with their knowledge. The probable reason might be that green manuring growers have more aware about new technology and research due to they get 2-3 crops in one field in a year. That's why positive effect of cropping intensity with knowledge.

Irrigation facility and knowledge

Irrigation facility of green manuring growers had positive and significant relationship with their knowledge. Most of the green manuring growers using tube well and canal irrigation facility cover under irrigation area. Which is illustrated that positive effect on green manuring growers with their knowledge.

CONCLUSION

The independent variable like "education", "land holding", "annual income", "mass media exposure", "economic motivation", "innovativeness"," crop produce", "cropping intensity", "irrigation facility" were positively and significantly associated with the knowledge. Moreover, independent variable such as "social participation", "extension participation", "scientific orientation" were positively and highly significantly associated with knowledge. Whereas independent variable such as "Age" was negatively non significance associated with knowledge.

POLICY IMPLICATION

The results of the study will facilitate in knowing the characteristics of the green manuring growers which serve as guideline for the planners, policy makers and implementing agency related to promote sustainable agriculture.

CONFLICT OF INTEREST

No conflict of interest among researchers.

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