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Farmers Attitudes Towards Sustainable Agricultural Practice: A Descriptive Study

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A B S T R A C T

The agriculture sector is facing significant challenges, which may have an impact on entrepreneurs and livelihood activities in India. The mindset of practice that that leads to sustainable agriculture is one of the major issues. As per result, it's essential to look into the attitude of farmer's primary actors in agriculture. This study aims to assess the attitude of the farmers towards Sustainable Agricultural Practices (SAP). Study data were collected by face-to-face interview using a questionnaire tool from 50 farmers (practicing agriculture). The standard questionnaire consists of two parts. The independent variables in the first and standardized scales measured farmers' attitudes toward Sustainable Agricultural Practices (SAP) in the second part. A Non-parametric, Mann Whitney U Test was applied to understand the significance of the farmer's attitude. The study finding reveals that 26 percent of respondents have a low attitude, 74 percent of respondents had a medium attitude, and a had on high attitude towards SAP. Study reveals that there is a significance at the p=0.5 level between farmer's ages and education status towards SAP. Therefore, the study suggests that respondents should get proper training, field exposures, and capacity-building programs from production to marketing to alter their attitude towards SAP.

***Key words*:** Sustainable agriculture, Farmer, Attitude, Descriptive study, Sustainable agricultural practice

The agriculture zone does not extend whereby more countries must be highlighted essential to encourage an excellent sustainable farming practice that gives double benefits in terms of increase of food supply increases and the resuscitation of a greener economy. In general, sustainable farming is an approach to making sure socio-economic, environmental, and social sustainability is consistent. Ecological, economic, and ecological sustainability is achieved in three dimensions through the integration of the development processes, where the employment opportunities and income security push for financial stability, continued participation from the agricultural community will ensure social sustainability, and proper natural resources managed will ensure environmental sustainability [1]. Sustainable agriculture is center on issues such as soil erosion and agricultural land degradation, as well as the proper use of pesticides, fertilizers, and placing investments in agriculture research and extension services should all be considered [2].

As evidenced by a previous study [3], the acceptance of good sustainable farming practices has numerous advantages for formers, particularly in the long run. On the other hand, sustainable practices frequently provide significant benefits to the farming communities; acceptance and implement them in one's farm is a difficult task. The concept of sustainable agriculture practice in agriculture mainly depends on integrating three factors: environment health, economic profitability, and socio and economic equity [4].

"Sustainable agriculture as a practice that meets the current and long term needs for food, fiber and other related needs of society while maximizing net benefits through conservation of resources to maintain other ecosystem services and function and long-term human development" [5]. A system approach is required for sustainable agricultural practice. A system is a collection of interconnected rules arranged into a functional entity. Farming systems in which a number of agricultural activities are organized while maintaining the productivity of land and environmental quality and achieving the desired level of biological diversity and ecological stability. Sustainable agriculture in farming with efficient use of natural resources for increased productivity and production would increase agriculture income, maintain environmental balance, easy accessibility to food, and social benefits and enhance the quality of life for farming communities [6].

Sustainable agriculture is critical for increase agriculture input, which in turn aids in achieving food security. It also improves soil quality, reduces top layer erosion, and reduces reliance on chemical-based inputs.

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Currently, the world is promoting green and more sustainable environment through environmentally friendly farming, manufacturing, and production. As a result, it is critical to practices sustainable agriculture in order to improve the current situation [7]. Therefore, this article aims to understand farmer's attitudes as a basis for sustainable agricultural practices.

MATERIALS AND METHODS

The authors have studied sustainable agricultural practice factors and tried to incorporate their findings in this study. Financial condition, profit maintenance, lack of knowledge and skills, and federal forms programs were determinant barriers to adopt sustainable agricultural practices [8]. As a result, extra effort is required to focus on a specific group of farmers to assist in the transfer of sustainable agriculture practices information. The following factors influence farmers' attitudes towards sustainable practices; Farmer's age, education, household size, engagement in the organization, television exposure, communication behaviour, and environmental challenges [9]. As a result, while screening agricultural development programmes and strategies, these aspects should be taken into account. Farmer age, source of information, family member, cultivation of land, production amount, social status, access to inputs, participation in extension courses, and economic factors are positive and significant with sustainable agricultural practices [10]. Farmer's attitudes towards sustainable agriculture practices are influenced by extension contacts, farmer knowledge about sustainable agricultural practices, and agricultural work satisfaction. Farmer's attitude and perceived behavioural control towards sustainable farming, their age, the number of protective equipment they use, the method of storage chemical inputs, and their understanding and knowledge of good agricultural practices are all major determinants of farmers purpose to accept sustainable farming practices at the .05 level [11].

Orientations are required to support the safe usage of pesticides in the agricultural fields to reduce risk from pesticide exposure for farmers and their families [12]. Agricultural programs on television and radio, credit use, and cooperative partnership influenced farmer's perception of sustainable agricultural practice [13]. 21% of farmers had a low attitude towards sustainable agricultural practices, while 66% of farmers had a medium attitude, and 13.3% of farmers had a high attitude [14]. No such sustainable practice evidence of farmer's neutral attitude towards sustainable agricultural practices [15]. Further, there was no significant relationship between family size and Marital Status. Nonetheless, there was a strong relationship between farm sizes, farming experience, age, and educational level towards adopting sustainable agricultural practices.

Research method

The field study carried out during February 2021, followed by a descriptive survey design to describe the phenomenon of farmer attitude towards sustainable agriculture practice. The Purposive sampling method was used to select a sample size from Vaijapur village of Kalaburagi (Gulbarga) District. Primary data was collected from 50 formers by using face to face interview method.

Research tools

Farmer's attitude towards sustainable agriculture practice tool was used by Ghosh and Hasan [16] in their study. Item strongly agrees received a score of 5, while agreeing, neutral, disagree, and strongly disagree items received a score of 4, 3, 2, and 1. A reverse score was assigned to each response in the case of negative attitudinal statements. The respondent's scores have been divided into three categories according to Salawat *et al*. [17], i.e., low attitude (up to 82 scores), medium attitude (83 to 106 scores), and high attitude (107 and above scores). In the current study, the authors have used the same tool.

RESULTS AND DISCUSSION

Socio-demographic details

The socio-economic demographic information of the respondents was distributing in (Table 1). The total number of respondents in the study was 50. The village has different caste and religious, farmers and there are live harmoniously.

Table 1 Socio-demographic data

Variables	Value label	Numbers
Education	High school	22
	Degree	28
	Total	50
Age	Above-40	30
	Below-40	20
	Total	50
Size of land	Small	27
	Medium and above	23
	Total	50

Farmer's attitude towards sustainable agriculture practices

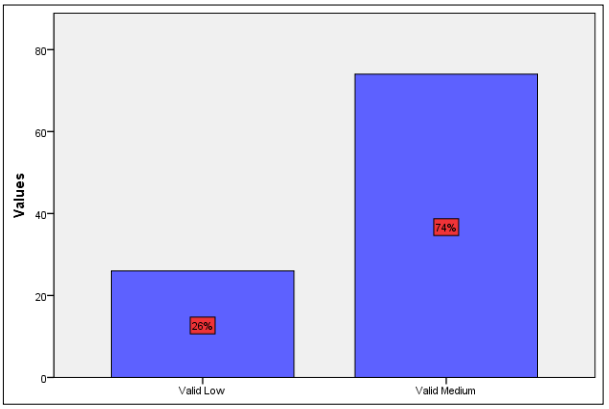

Fig 1 Attitude towards sustainable agriculture practices

Data depicted in (Fig 1) shows farmer's attitudes towards sustainable agriculture practices. The study includes 50 farmers. Out of it, 26% (n=12) of farmers had low attitudes, followed by 74% (n=38) of farmers with medium attitudes. Moreover, there was no high level of attitude towards sustainable agriculture practices found throughout the study in the village.

Significant between farmer's ages and attitude towards sustainable agriculture

Table 1 Farmer's ages, and sustainable agriculture practices

Ranks

	Age category	N	Mean Rank	Sum of Ranks
Sustainable attitude practice	Below 40	20	29.50	590.00
	Above 40	30	22.83	685.00
	Total	50		

Test-Statistics

	Sustainable attitude practice
Mann-Whitney U	220.000
Wilcoxon W	685.000
Z	-2.085
Asymp. Sig. (2-tailed)	.037

Data presented in (Table 1) shows that there were two age group of farmers, as below 40 and above 40 years old; among these two groups, blow 40-year farmers had 29.50 mean rank, while above 40 years old farmers had 22.83 mean rank, which means below the age group of farmers prepare more attitude and above the age of farmers prepare less attitude toward sustainable agriculture practice in the village, because below 40 were well educated and had good knowledge than above 40 years age group of farmer's. Therefore, the study found there is a significant between farmer's age and farmer's attitude towards sustainable agriculture practices at p=0.5.

Significant between farmer's education status and sustainable agriculture practices

Table 2 Farmer's education status, and sustainable agriculture practices

Ranks

	Educational qualification	N	Mean Rank	Sum of Ranks
Sustainable attitude practice average	Up to high school	22	21.77	479.00
	Up to degree	28	28.43	796.00
	Total	50		

Test statistics

	Sustainable attitude practice average
Mann-Whitney U	226.000
Wilcoxon W	479.000
Z	-2.109
Asymp. Sig. (2-tailed)	.035

The data depicted in (Table 2) shows that two education status groups of farmers, such as up to high school studied and up to a degree level studied farmers. Among these two groups, the high-school level studied farmers group had 21.77 mean rank. In contrast, the degree-level studied farmer group had 28.43 mean rank, which means up to high school level studied of farmers group shows low attitude, followed by degree level study of farmer group shows the high attitude towards sustainable agriculture practice among the farmer's group in the village, because high school level study farmers had less education and low knowledge than degree level studied of farmers group. Therefore, as a result, the study discovered significant relationships between farmer's educational status and their attitude towards community-wide sustainable agricultural practices at p=0.5.

Agriculture is one of India's most important sectors, contributing significantly to the country's Gross Domestic Product. Agriculture is the primary source of income for more than 58% of rural households [18]. However, as per [19], five lacks to 10 lacks people per year around the globe suffer from a health problem due to the use of more pesticide. Despite such harmful effects, people in various developing countries and even developed countries use unsafe agriculture methods to handle agriculture and pesticide practices.

Agriculture is the country's backbone, and each successive government has worked to promote sustainable agriculture practices and improve farm family's quality of life. This study an attempt to investigate farmer's attitudes towards sustainable agricultural practices in the village. In the village, 12 (26%) farmers had low attitudes, and 38 (74%) farmers had medium levels of attitude in the village.

Kalaburagi district 31.67% of farmers lack knowledge regarding sustainable agriculture practice, while 28.75% of farmers lack knowledge on pest and disease control in sterility mosaic diseases, and come to financial constraint 42.50% of farmers faced non-availability of credit in time [20].

The present study found 26% (n=12) of formers were had low attitudes, followed by 74% (n=38) of the farmer's had medium attitudes. Still, there is no high-level attitude toward sustainable agriculture practice in the village. The study reveals that socio-demographic variables age and education of farmers found a significant correlation at *p*=0.5 attitudes towards sustainable agriculture in the Vaijapur village. Stills, no sustainable agricultural practice in the village because, no contact with Krushi Vigyana Kendra, low knowledge, no awareness of programs and policies, no contact with progressive formers, and most of the formers are primary and high school level educated they do not know the recommended practice of sustainable agriculture.

According to Ghosh and Hasan (2013), a study from Bangladesh shown 21% of farmers had low attitude, 66% had medium attitude, and 13.3% had a high attitude toward sustainable agriculture practices; thus, the current study found that 26% of farmers had low attitude, 74% had a medium attitude, and no high attitude found throughout the study. This study shows that attitude of sustainable agriculture practice level in the small village of Gulbarga district of Karnataka state is quite similar to Bangladesh farmers attitude at a low and medium level of attitude, but not similar in a high level of attitude towards sustainable agriculture practice.

CONCLUSION

In this study, the researcher assessed farmer's attitudes toward sustainable agriculture practices in Vaijapur village of Kalaburagi district of Karnataka state in India. The village as a whole attitude to sustainable agriculture practices, which is similar to other developing counties. However, after analyzing the data, the study found in the village common knowledge, less sustainable agriculture method and practice, no extension contact, less awareness of

TV and Radio programs, credit use, and corporative partnership are reasons to have low attitude, medium attitude, and no high attitudes toward sustainable agricultural practices.

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