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Extent of adoption of improved pineapple cultivation practices by farmers in Thoubal District of Manipur

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Abstract

The study was on Extent of adoption of improved Pineapple cultivation practices by farmers in Thoubal District of Manipur conducted in the session 2023-2024. During the study, a total numbers of 120 respondents were taken randomly from Saram Village under Thoubal Block. Pre-structured interview schedule was used for collecting primary data and appropriate statistical analysis to obtain the results. The detailed analysis of the study shows that 35.83 percent of the respondents were middle age (35-55 years) and 39.17 percent of the respondents were educated up to high school. It was revealed that 49.17 percent are engaged in agriculture only with 43.33 percent of the respondents' income is below 80,000 rupees. It was found that 46.67 percent of the respondents land holding are less than 1 acre. It was also revealed that 36.67 percent of the respondents have <10 years of farming experience. It shows that (60.83%) of the respondents had medium level category adoption level towards improved pineapple cultivation practices. It revealed that all ten independent variables i.e., age, education, occupation, annual income, land holding, farming experience, extension contact, mass media exposure, risk bearing capacity and scientific orientation are positively and significantly correlated with knowledge and adoption of farmers towards improved pineapple cultivation practices.

Keywords: Pineapple, extent of adoption, improved cultivation practices, Thoubal, Manipur

Introduction

Pineapple (*Ananas comosus*) is an important fruit crop in India as well as in Manipur state. It is known as '*kihom*' in Manipur. Pineapple crop is cultivated widely in the adjoining areas of hills and valley in Manipur. The main pineapple cultivated districts in Manipur include Imphal East, Imphal west, Thoubal, Churachandpur, Chandel and Senapati district.

The pineapple fruits weighing nearly 1.2-1.7 kg with the TSS of 14-180 brix and acidity 0.9 to 1.2% and total sugar 0.7 to 1.75% depending on the stage of maturity and season. In the district pineapple are grown in hillocks with a slope of 30-40% as beyond that soil erosion is very high during rainy season and experienced moisture scarcity during winter (T. Chanu, 2014) [2].

Farmers in the Thoubal district of Manipur practice pineapple cultivation mainly by traditional method of cultivation. During the cultivation process, farmers didn't provide any type of irrigation instead they totally depend on rainfall for their pineapple crops to be irrigated. Also there is no application of any chemical fertilizers, insecticide, etc to the crop. Mostly they used only biological control methods to protect their crops from diseases that are associated with fungi, bacteria, nematodes and viruses.

Objectives

1. To access the socio-economic profile of the respondents.
2. To analyze the extent of adoption of improved pineapple cultivation practices by the respondents.

Research Methodology

Descriptive research design was used for the study. This design was followed as it is used to describe characteristics of a population or phenomenon being studied. It is a scientific method which involves observing and describing the behavior of the subject without influencing anyway. The study was conducted under Thoubal block of Thoubal district of Manipur. There are 3 blocks in Thoubal district of Manipur, out of which Thoubal block was selected purposively based on maximum area covered under pineapple cultivation. There are 49 villages in Thoubal block, out of which five villages namely Sallungbam, Saram, Heirok, Uyal and Thoubal Khunou were selected from Thoubal block for the present study. A total number of 120 respondents who were engaged in pineapple cultivation were selected randomly for the present study.

Results and Discussion

Socio Economic Profile of the respondents

Table 1: Profile characteristics of the respondents

Sl. No.	Variables	Intervals	Frequency	Percentage
1	Age	Young (Below 35 years)	35	29.17
		Middle (36-55 years)	43	35.83
		Old (Above 55 years)	42	35
2	Education	Illiterate	30	25
		Up to Primary	19	15.83
		High School	47	39.17
		Intermediate	13	10.83
		Graduate and Above	11	9.17
3	Occupation	Agriculture only	59	49.17
		Agriculture and Others	49	40.83
		Agriculture and Service	12	10
4	Annual Income	Up to 80,000	52	43.33
		80,001-1,60,000	50	41.67
		Above 1,60,001	18	15
5	Land holding	Up to 1 acre	56	46.67
		1-2 acre	51	42.5
		Above 2 acre	13	10.83
6	Farming experience	Up to 10 years	44	36.67
		11-20 years	43	35.83
		Above 20 years	33	27.5
7	Extension contact	Never	54	45
		Sometimes	49	40.83
		Always	17	14.17
8	Mass Media Exposure	Low	47	39.17
		Medium	48	40
		High	25	20.83
9	Risk bearing capacity	Low	56	46.67
		Medium	50	41.67
		High	14	11.66
10	Scientific orientation	Low	56	46.67
		Medium	47	39.17
		High	17	14.16

From the above table 1, it was revealed that 35.83 percent of the respondents were middle age (35-55 years) and 39.17 percent of the respondents were educated up to high school. It was revealed that 49.17 percent are engaged in agriculture only with 43.33 percent of the respondents' income is below 80,000 rupees. It was found that 46.67 percent of the respondents land holding are less than 1 acre. It was also revealed that 36.67 percent of the respondents have <10 years of farming experience. It found that 40.83 percent of the respondents contact with extension agents sometimes and also 40 percent of the respondents have medium level category towards mass media exposure. It was revealed that 46.67 percent of the respondents have low level category towards risk bearing capacity and again 46.67 percent of the respondents have low level category towards scientific orientation.

Adoption level of respondents on improved pineapple cultivation practices

Table 2: Adoption level of the respondents towards improved pineapple cultivation practices

Sl. No.	Statements	Adoption		
		Fully F (%)	Partially F (%)	Not F (%)
1.	Apply FYM	14 (11.67)	98 (81.67)	8 (6.66)
2.	Prepare field before cultivation	43 (35.83)	77 (64.17)	0
3.	Plant in a suitable climatic condition	57 (47.5)	63 (52.5)	0
4.	Use various equipments in planting	0	43 (35.83)	77 (64.17)
5.	Apply biological control	27 (22.5)	80 (66.67)	13 (10.83)
6.	Practice any intercultural operation	6 (5)	57 (47.5)	57 (47.5)
7.	Provide any type of irrigation	0	0	120 (100)
8.	Intercrop pineapple with other crops	2 (1.67)	43 (35.83)	75 (62.5)
9.	Apply fertilizers, pesticide, insecticide	0	0	120 (100)
10.	Use any post harvest technologies	0	0	120 (100)
11.	Follow any plant protection measures	4 (3.33)	71 (59.17)	45 (37.5)
12.	Get help from govt. or NGOs in adopting pineapple	2 (1.67)	61 (50.83)	57 (47.5)

F= Frequency, %= Percentage

Table 3: Adoption level wise distributions of the respondents

Sl. No.	Adoption	Frequency	Percentage
1	Low (16-18)	32	26.67
2	Medium (19-21)	73	60.83
3	High (22-24)	15	12.5
	Total	120	100

From the above table 3, it was revealed that majority (60.83%) of the respondents have medium level adoption level followed by 26.67 percent of the respondents have low level adoption level and 12.5 percent of the respondents have high level adoption level. Similar result was also reported by Mondal *et. al.*, (2023) [4].

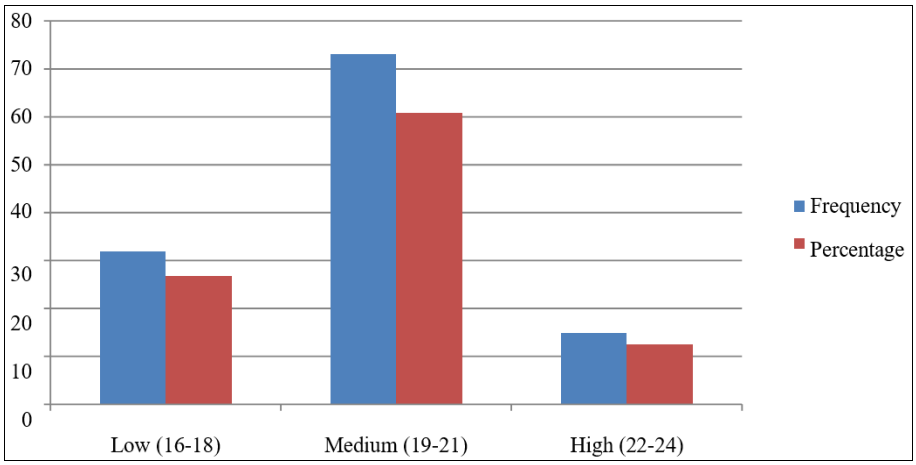

Fig 1: Adoption level wise distributions of the respondents

Relationship between Selected Independent Variables with the Adoption of the respondents towards improved pineapple cultivation practices

Table 4: Relationship between selected independent variables and adoption

Sl. No.	Variables	Correlation coefficient ('r' Value)
1	Age	0.3423**
2	Education	0.6747**
3	Occupation	0.5723**
4	Income	0.6891**
5	Land holding	0.6489*
6	Farming experience	0.6671**
7	Extension Contact	0.6348**
8	Mass Media Exposure	0.7520**
9	Risk Bearing Capacity	0.6289**
10	Scientific Orientation	0.5567**
** = Significant at 0.01 level of probability		
* = Significant at 0.05 level of probability		
NS = Not Significant		

The data presented in table 4 reveals that all the independent variables i.e. age, education, occupation, income, land holding, farming experience, extension contact, mass media exposure, risk bearing capacity and scientific orientation are positively and significantly correlated with adoption towards improved pineapple cultivation practices.

Conclusion

It was concluded that majority of the respondents had medium level of adoption followed by low and high level in respective to the recommended practices. The factors influencing the adoption towards improved pineapple cultivation practices were age, education, occupation, annual income, land holding, farming experience, extension contact, mass media exposure, risk bearing capacity and scientific orientation which were directly co-related with adoption towards improved pineapple cultivation practices. Farmers should be trained for better productivity, proper education on plant protection measure, and farm management practices should be ensure by Department of Agriculture.

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