Original Research Article

KNOWLEDGE OF FARMERS TOWARDS IMPROVED CULTIVATION PRACTICES OF GINGER IN SERCHHIP DISTRICT OF MIZORAM

ABSTRACT

The present study was undertaken to assess the knowledge of farmers towards improved ginger cultivation practices in Serchhip District of Mizoram in the year 2021-2022. Data collection was done on 120 respondents selected randomly. A pre-tested interview schedule was used for collection of data. The collected data was tabulated, analyzed and interpreted with the help of appropriate statistical analysis to draw out meaningful results. It was revealed through the study that themajority 50.83 per cent of the respondents were middle aged, 68.33 per cent male, 74.17 per cent married. It was also found that 58.33 per cent of the respondents were marginal farmers based on the size of their land holding with medium level of annual income. Majority of the respondents had medium level of sources of information, scientific orientation, risk orientation, mass media and extension contact. The level of knowledge regarding various improved practices for ginger cultivation was medium. Majority of the respondents had, full knowledge about soil type, varieties, time of planting, chemical fertilizers and harvesting. Also, majority of the respondents had partial knowledge about seed treatment, spacing, organic sources of nutrients, diseases and pests, control measures of pests and diseases and weeding. Annual income, sources of information utilized, scientific orientation, risk orientation, mass media exposure and extension contact had positive and significant correlation with the knowledge of the farmers towards improved cultivation practices of ginger.

KEYWORDSKnowledge, Ginger, Cultivation practices

INTRODUCTION

Ginger (*Zingiberofficinale*Rosc.) is an herbaceous perennial plant belonging to the order (Scitamineae) and to the family (Zingiberaceae). It is a root crop and a typical herb extensively grown across the world for its pungent aromatic under-ground stem or rhizome which makes it an important export commodity in world trade **(Ajibade&Dauda, 2005)**. The volume of ginger production in India in 2022 is estimated to have amounted to around 2.12 million metric tons **(Statista, 2022).**

Ginger prefers warm, humid climate with well-drained soils like sandy or clay loam, red loam or laterite loam for its successful growth. In North East region ginger is grown as rainfed crop while in other parts of the country it is grown both as rainfed and irrigated crop.In North East region, it is rotated with French bean or soybean, which not only improve the physical condition of the soil

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but also give additional income to the farmers **(Yadav *et al.*, 2004).**One of the most significant features of the agriculture in the NE region is the prevalence of jhum cultivation in large parts. In the hills of the region ginger is generally cultivated on raised bed (called bun) in the jhum fields **(Ghosh, 1984)**.

Ginger is one of the most important cash crops in Mizoram, and is generally grown in Jhum land. The agro-climatic condition of the state is favourable and Ginger is cultivated without the use of manures, fertilizers or pesticides in most cases. Its cultivation as a cash crop in the state is known to have started in late 1970s. There are three major varieties of Ginger grown in the state namely Thingpui, Thinglaidum and Thingria, of which Thinglaidum is the most popular. 'Thinglaidum' dominates in area having small in size, extremely pungent, less fibre with blackish ring and mainly used in the processing of dried ginger which has varied industrial uses. 'Thingpui' cultivar occupied second in an area having bold, light-yellow rhizome with less pungency that is used for table and domestic purposes. Mizoram got the geographical indication (GI) tag for these two ginger cultivars, collectively called "Mizo Ginger" **(Soni*et. al* 2022)**. However, this variety of ginger does not seem to have any implication in the price fetched; and hence, most of the farmers are unaware of the quality of the variety they grow (Loneitu).

METHODOLOGY

The study was conducted in Serchhip District of Mizoram, a state in the North Eastern part of India. It is an ideal location for ginger cultivation due to its favorable climatic conditions. With a subtropical climate, high rainfall, and temperatures ranging from 20-30°C, the region provides a conducive environment for ginger growth. The area is very suitable for ginger cultivation due to hilly terrain of the region. A descriptive survey research design was followed to conduct the present study. Serchhip and East Lungdar, the two blocks in Serchhip district, were purposivelyselected because they have a large number of farmers involved in ginger cultivation. A list of 12 villages was under selected block where 6 villages namely Hmawngkawn, Khawlailung, Hualtu, Mualcheng, Sailulak and Leng were selected again based on the highest number of production of ginger.A total number of 120 respondents were selected for the present study. The data were collected using a personal interview schedule.

Comment [D5]: Why not Random Selection ?

RESULTS AND DISCUSSION

Table 1: Socio-economic profile of the respondents.

Sl.No	Variables	Frequency	Percentage
01.	**Age**		
	Young (18-35)	38	31.67
	Middle (36-55)	61	50.83
	Old (56 and above)	21	17.50

02.	**Gender**		
	Male	82	68.33
	Female	38	31.67
03.	**Marital Status**		
	Married	89	74.17
	Unmarried	31	25.83
04.	**Size of family**		
	Upto 5 members	54	45.00
	More than 5 members	66	55.00
	Education		
05.	Illiterate	19	15.83
	Primary school	63	52.50
	High school	32	26.67
	Intermediate	4	3.33
	Graduate and above	2	1.67
	Land holding		
06.	Marginal	70	58.33
	Small	26	21.67
	Medium	23	19.17
	Large	1	0.83
	Annual income		
07.	Low (>1 lack)	41	34.17
	Medium (1 – 2lakhs)	56	46.67
	High(<2 lakhs)	23	19.16
	Source of Information utilized		
08.	Low (19-24)	26	21.67
	Medium(25-28)	56	46.67
	High(29-33)	38	31.66
	Scientific orientation		
09.	Low (6-8)	42	35.00
	Medium(9-11)	57	47.50
	High(12-13)	21	17.50
	Risk orientation		
10.	Low(12-13)	35	29.17
	Medium (14-15)	54	45.00
	High(16)	31	25.83
	Mass media exposure		
11.	Low(7-9)	31	25.83
	Medium(10-11)	66	55.00

	High(12-13)	23	19.17
12.	**Extension contact**		
	Low(4-5)	30	25.00
	Medium(6-7)	65	54.17
	High(8-9)	25	20.83

A majority of the respondents belonged to middle age group (50.83%). Similar result was reported by **Jakkawand*et al.* (2017)**. A clear majority (68.33%) were male, 74.17% were married and 55% of the respondents belonged to a family size of more than 5 members. It was concluded through this study that 52.50 % of the respondents were educated upto primary school while only 15.83% of the respondents were illiterate.Similar findings was reported by **Abdullahi*et al.* (2019)**. A majority of the respondents were marginal famers (72.50%). The annual income 54.17 per cent of the respondents was found to be low, i.e., below one lakh. The majority of farmers i.e., 54.17 per cent also had medium level of contact with extension agents and 46.67% has medium level of utilization of different sources of information. The scientific orientation was medium for the majority at 47.50 per cent and risk orientation at 45.00%. The majority, 55.00 per cent of the respondents exhibit a medium level of exposure to mass media.Similar findings was reported by **Kharjana*et al*. (2017).**

Comment [D6]: Were

Table 2: Distribution of respondents based on extent of knowledge towards improved ginger cultivation practices.

S. no.	Statements	Evaluation		
		FC (%)	PC (%)	NC (%)
1.	Soil type	115 (95.83)	05 (4.17)	0
2.	Varieties	111 (92.50)	09 (7.50)	0
3.	Seed treatment	27 (22.50)	63 (52.50)	30 (25.00)
4.	Time of planting	116 (96.67)	04 (3.33)	0
5.	Spacing	35 (29.17)	54 (45.00)	31 (25.83)
6.	Organic sourcesof nutrients	17 (14.17)	72 (60.00)	31 (25.33)
7.	Knowledge on diseases and pests	26 (21.67)	66 (55.00)	28 (23.33)
8.	Knowledge on control measures for diseases	23 (19.17)	77 (64.16)	20 (16.67)
9.	Knowledge on control	25	69	26

	measures for pests	(20.83)	(57.50)	(21.67)
10.	Chemical fertilizer	47 (39.17)	45 (37.50)	28 (23.33)
11.	Irrigation requirement-	24 (20.00)	26 (21.67)	82 (68.33)
12.	Weeding	24 (20.00)	89 (74.17)	7 (5.83)
13.	Harvesting	61 (50.83)	14 (11.67)	45 (37.50)
14.	Yield	30 (25.00)	48 (40.00)	42 (35.00)

Comment [D7]: What does the figures in the bracket mean ?

FC = Fully Correct, PC = Partially Correct, NC = Not Correct

Table 3: Overall level of knowledge of respondents towards improved Ginger cultivation practices.

S. no	Level of Knowledge	Frequency	Percentage
1.	Low (22-28)	29	24.17
2.	Medium (29-33)	67	55.83
3.	High (34-39)	24	20.00
	Total	120	100.00

The data presented in Table 3 indicated that 55.83 per cent of the respondents had a medium level of knowledge about ginger cultivation practices. A significant proportion of ginger farmers, approximately (24.17%), had a lowlevel of knowledge, while 20.00 per cent of the farmers who had taken part in the survey had a high level of knowledge about ginger cultivation practices. Similar finding by **Lotha and Jha (2022)** was reported.

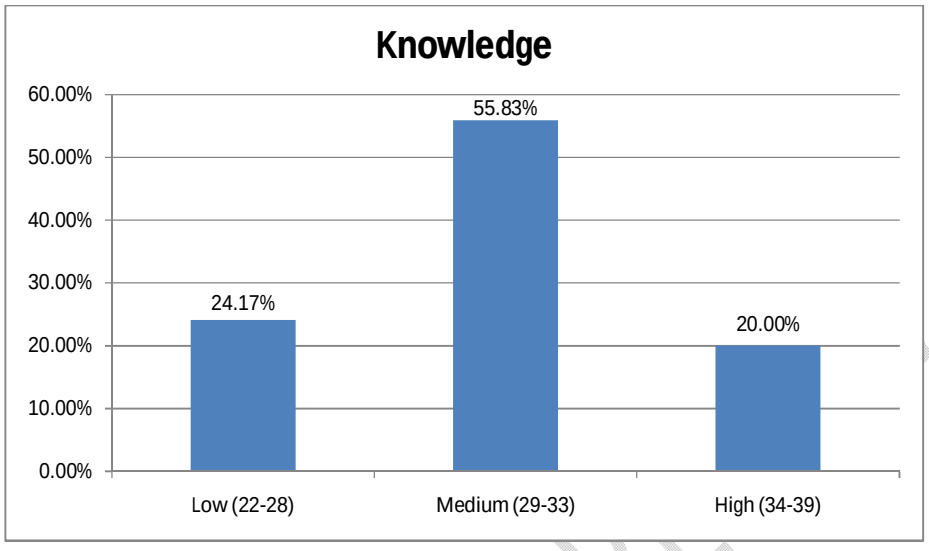

Fig 1: Graphical representation of the distribution of respondents towards improved Ginger cultivation practices.

Table 4: Relationship between personal profile and knowledge level of respondents

Sl. no	Independent variables	Correlation Coefficient
1.	Age	0.945*
2.	Gender	0.064 NS
3.	Marital status	0.066 NS
4.	Size of the family	0.718*
5.	Education	0.968*
6.	Size of land holding	0.301**
7.	Annual income	0.891*
8.	Extension contacts	0.999*
9.	Sources of information utilized	0.870*
10.	Scientific orientation	0.871*
11.	Risk orientation	0.998*
12.	Mass media exposure	0.997*

***= correlation is significant at 0.01% of probability**
****= correlation is significant at 0.05% of probability**
NS= correlationis Non Significant

Independent variables namely age (0.945), size of the family (0.718), education (0.968), annual income (0.891), extension contact (0.999), sources of information utilized (0.870), scientific

orientation (0.871), risk orientation (0.998) and mass media exposure (0.997) were positive and highly significant at 0.01% level of probability with the level of knowledge towards improved ginger cultivation practices. Size of land holding (0.301) is positively significant at 0.05% probability while gender (0.064) and marital status (0.066) had non-significant association with the level of knowledge towards improved ginger cultivation practices.

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CONCLUSION

It was concluded that majority of the respondents were middle-aged, male and married. Families were mostly nuclear type with family size of more than 5 members. The majority of the respondents were educated up to primary level, majority had medium level of annual income. It was also found that, sources of information, risk orientation, scientific orientation, mass media exposure and extension contact was of medium level.The majority of the respondents had medium level of knowledge with respect to improved ginger cultivation practices.Some independent variables like age, size of family, education, annual income, sources of information utilized, scientific orientation, risk orientation, mass media exposure and extension contact had positive and significant correlation with knowledge with ginger growers at 0.01% probability.

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Comment [D9]: Please add more references and cite them in the text.

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