

Analyzing the factors influencing the spread of Munduchilli cultivation in Tamil Nadu

ABSTRACT

Mundu chilli is a popular variety of chilli grown in Tamil Nadu, India. One of the key factors driving the spread of Mundu chilli cultivation in the region is the favorable agro-climatic conditions. The study was conducted in the Ramanathapuram district, where the most cultivable Mundu chillies are grown. An ex-post-facto research design was used for this study. Using a proportionate random sampling method, data were collected from 150 respondents across a major Mundu chilli-growing district. The results showed that the majority (98.67 percent) of the cultivators spread the cultivation from growers to growers due to high market demand and profitability, favorable conditions, and strong community networks facilitating peer learning and support. Various factors perceived by Munduchilli growers as influential in spreading the cultivation of Munduchilli. The primary factor is the suitability of the chilli for local growing conditions, perceived by 96.67% of the growers. Factors like less manure requirement, income from by-products, reduced pest attacks, and reduction in labor costs were also noted but ranked lower in influence. The analysis of these factors has shed light on the complex interplay of agricultural, economic, and environmental dynamics. This study provides valuable insights for policymakers and stakeholders to enhance the spread of Mundu chilli cultivation, thereby contributing to the agricultural development and economic well-being of farmers in Tamil Nadu.

Keywords: factors, Munduchilli, pathways, spread

1. INTRODUCTION

Munduchilli, also known as round chilli, is a popular variety of chilli grown in Tamil Nadu, India. The cultivation of munduchilli has been steadily increasing in the state over the past few years, with many farmers opting to grow this variety due to its high yield and market demand. The main regions for Munduchilli farming in Tamil Nadu include Ramanathapuram (15,000-18,000 ha), Sivagangai (8500 ha), Thoothukudi (22,000 ha) and Viruthunagar districts [1]. Ramanathapuram district leads all other districts in terms of area, production, and yield of chillies [2]. The blocks of Kadaladi, Mudhukulathur, Paramakudi, Ramanathapuram, Bogalur, Nainarkovil, and Thiruppullani in the Ramanathapuram district are used to grow Munduchilli, covering 15,000-18,000 hectares. One of the key factors driving the spread of munduchilli cultivation in Tamil Nadu is the favourable agro-climatic conditions in the region [3]. Tamil Nadu has a tropical climate with ample sunshine and moderate rainfall, which are ideal for the cultivation of chillies. The soil in Tamil Nadu is also well-suited for chilli cultivation, providing the necessary nutrients for the growth of the crop. These favourable conditions have encouraged many farmers to switch to munduchilli cultivation, leading to an increase in its production in the state. Another factor influencing the

spread of munduchilli cultivation in Tamil Nadu is the high market demand for this variety. Munduchilli is known for its unique round shape and spicy flavor, making it a popular choice among consumers [4]. The demand for munduchilli is not only high in the domestic market but also in the international market, with many countries importing this variety from Tamil Nadu. This high market demand has incentivized farmers to grow munduchilli, as it offers a lucrative income opportunity. In this paper, we will analyze the factors influencing the spread of munduchilli cultivation in Tamil Nadu. This study was carried out to observe the following objectives were:

1. To study the socio-economic characteristics of Mundu chilli growers
2. To investigate the pathways for the spread of Mundu chilli cultivation
3. To identify the factors that influence the spread of Mundu chilli cultivation

2. MATERIAL AND METHODS

The study was conducted in the Ramanathapuram district of Tamil Nadu, where Munduchilli is grown the most. In Ramanathapuram district area under Munduchilli cultivation is 12670.40 hectares during 2022-2023[5]. The blocks of Mudukulathur, Nainarkoil, Paramakudi, Kadaladi, and Kamuthi were selected purposefully for the study. Totally 15 villages, were chosen using a purposive random sampling technique. These areas were selected based on their significant contribution to Munduchilli production and their varying agro-climatic conditions. A total of 150 Munduchilli growers were selected as respondents for the study. The primary data was gathered with the use of an interview schedule that was designed in accordance with the investigation's objectives. The primary data were analyzed and tabulated using frequency, percentage, and ranking methods. Data were analyzed with the help of SPSS software.

3. RESULTS AND DISCUSSION

Finding obtained through data analysis were interpreted below.

3.1. Socio-economic characteristics of the Mundu chilli growers

This study aims to explore and document the socio-economic characteristics of Munduchilli growers, focusing on aspects such as age, education, occupation, farm size, and farming experience. By doing so, it seeks to provide insights into the challenges and opportunities faced by these farmers, thereby contributing to the overall understanding of Munduchilli cultivation and its impact on rural economies.

Table 1. Socio-economic characteristics of the respondents

S.No.	Socio-economic characteristics	Frequency	Per cent
A)	Age		
	Young	27	18.00
	Middle	52	34.70
	Old	71	47.30
B)	Educational status		

	Illiterate	14	09.30
	Functionally literate	16	10.70
	Primary education	13	08.70
	Middle education	21	14.00
	Secondary education	48	32.00
	Collegiate education	38	25.30
C)	Occupational status		
	Farming alone	90	60.00
	Farming + Wage earner	23	15.30
	Farming + Business	28	18.70
	Farming + Services	09	06.00
D)	Farm size		
	Small farmers	25	16.70
	Medium farmers	68	45.30
	Big farmers	57	38.00
E)	Farming experience		
	Up to 5 years	27	18.00
	5 to 10 years	52	34.70
	More than 10 years	71	47.30
(n=150)			

From the table 1, it could be inferred that less than half (47.30%) of the respondents were to old aged category, followed by middle (34.70%) and young (18.00%) aged groups. In educational status, slightly less than one third (32.00%) of the respondents were secondary education followed by collegiate education (25.30%), middle education (14.00%), functionally literate (10.70%), illiterate (09.30%), and (08.70%) of the respondents were primary education. In occupational status, two-third (60.00%) of the respondents were belonged to farming alone category, followed by (18.70%) farming + business category, (15.30%) farming + wage owner and (06.00%) farming + services. In farm size, two-fifth (45.30%) of respondents were medium farmers with farm size of above 2.5 to 5 acres, along with (38.00%) were big farmers with the farm size of more than 5.00 acres, and (16.70%) were small farmers with the farm size up to 1.25 acres. In farming experience, less than half

(47.30%) of the respondents had more than 10 years of farming experience, whereas (34.70%) of farmers had 5 to 10 years of experience, and the remaining (18.00%) of them had up to 5 years of experience as respondents.

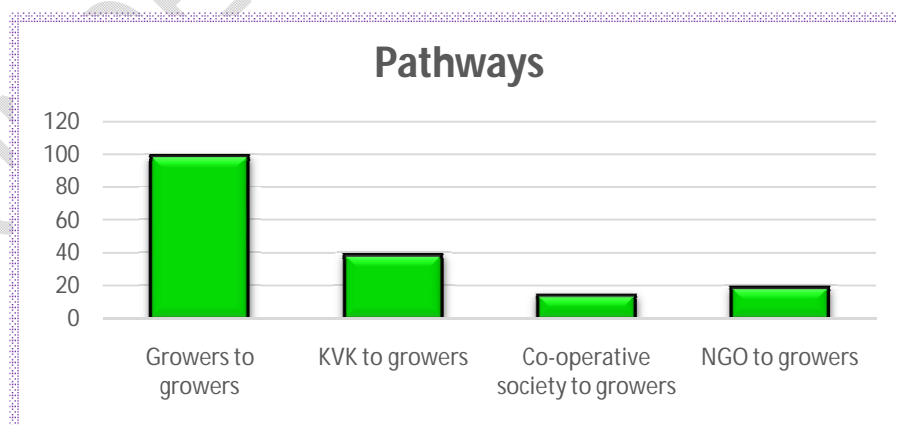
3.2. Pathways used for spread the Mundu chilli

The dissemination of Mundu chilli cultivation predominantly occurs through interpersonal networks among growers. According to Table 2, the majority (98.67 per cent) of the Mundu chilli growers spread the Mundu chilli cultivation from growers to growers, followed by (38.67 per cent) KVK to growers, (18.67 per cent) NGO to growers, and Co-operative Society to growers. Mundu chilli cultivation spreads among growers due to high market demand and profitability, favourable agro-climatic conditions, and strong community networks facilitating peer learning and support.

Table 2. Pathways used for spread the Mundu chilli

Pathways	Frequency	Per cent
Growers to growers	148	98.67
KVK to growers	58	38.67
Co-operative society to growers	21	14.00
NGO to growers	28	18.67

Figure 1: Pathways used for spread the Munduchilli



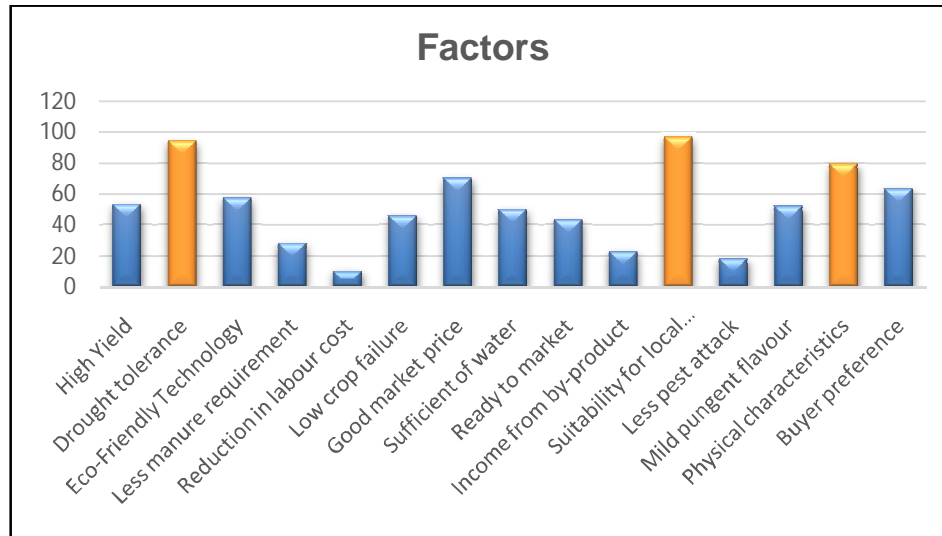
3.3. Factors influencing for spread the Mundu chilli

From the Table 3 shows the many factors, as perceived by Mundu chilli growers to spread the Mundu chilli cultivation. The majority of Mundu chilli growers perceived the factors, i.e. Suitability for local growing conditions (96.67%) ranked I, followed by drought tolerance (94.00%) ranked II, physical characteristics (79.33%) ranked III, good market price (70.00%) ranked IV, buyer preference (63.33%) ranked V, eco-friendly technology (57.33%) ranked VI, high Yield (53.33%) ranked VII, mild pungent flavour (52.00%) ranked VIII, Sufficient of water (50.00%) ranked IX, low crop failure (46.00%) ranked X, ready to market (43.33%) ranked XI, less manure requirement (28.00%) ranked XII, income from by-product (22.67%) ranked XIII, less pest attack (18.00%) ranked XIV, and reduction in labour cost (10.00%) ranked XV.

Table 3: Factors influencing for spread the Munduchilli

S. No.	Factors	Frequency	Per cent	Rank
1.	High Yield	80	53.33	VII
2.	Drought tolerance	141	94.00	II
3.	Eco-Friendly Technology	86	57.33	VI
4.	Less manure requirement	42	28.00	XII
5.	Reduction in labour cost	12	10.00	XV
6.	Low crop failure	69	46.00	X
7.	Good market price	105	70.00	IV
8.	Sufficient of water	75	50.00	IX
9.	Ready to market	65	43.33	XI
10.	Income from by-product	34	22.67	XIII
11.	Suitability for local growing conditions	145	96.67	I
12.	Less pest attack	27	18.00	XIV
13.	Mild pungent flavour	78	52.00	VIII
14.	Physical characteristics	119	79.33	III
15.	Buyer preference	95	63.33	V

Figure 2: Factors influencing for spread the Munduchilli



4. CONCLUSION

In conclusion, the analysis of factors influencing the spread of Munduchilli cultivation in Tamil Nadu has shed light on the complex interplay of agricultural, economic, and environmental dynamics. As our understanding of these factors evolves, it becomes increasingly crucial to consider sustainable practices and equitable access to resources in the cultivation and distribution of Munduchillies. Moving forward, it is imperative for policymakers, researchers, and farmers to collaborate in implementing strategies that support the responsible growth of Munduchilli cultivation, ensuring its continued prosperity while safeguarding the well-being of local communities and the environment. To further promote the cultivation of Munduchilli, it is essential to enhance extension services, improve market access, and continue supportive government policies. By addressing these factors, the sustainability and profitability of Munduchilli farming can be ensured, contributing to the overall agricultural development of the region.

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