Original Research Article

An appraisal of traditional rice cultivation in Kerala, India

Abstract

Rice cultivation is the mainstay agriculture in Kerala since centuries. But as times progressed, the rice cultivation using traditional varieties got confined to some pockets in the state.Traditional rice farmers are mainly unorganised and are followers of lineage. This study was taken up to attempt outlining the evolution of traditional rice farming, understanding farmers perception about its sustainability and looking into the legal protective measures available for these varieties. It was found that the centuries long presence of this system is now in peril. However, the farmers had more positive perception about its sustainability than negative. The cultivating farmers were largely unaware of the government measures to support traditional agriculture.

Key Words: Sustainabilty;traditional rice; culture; history

Introduction

Rice is Kerala's staple food. Rice cultivation is the mainstay agriculture in Kerala since centuries. Due to this, hundreds of landraces of rice have in the state according to the location, terrain and water availability evolved (Gopi and Manjula, 2018). With the advent of modernisation of agriculture in the later decades of 20th century, like in all other places, modern varieties of rice hit Kerala agriculture in a big way, which led to the sure and quick decline of the traditional rice varieties.

But, these indigenous varieties are innately high in nutritive value. Rice varieties like *Jeerakasala*, *Gandhakasala*, the indigenous scented varieties, once popularly cultivated almost everywhere in the State of Kerala, vanished from the scene as times changed (Sumalatha, 2010). Realising this, there have been efforts from governmental and non-governmental agencies to retrieve and retain traditional rice cultivation in their staunch places(Scialabba,2000). Because of the eco-friendly and organic nature of traditional rice cultivation practices, it is imperative that it should be conserved and maintained(Harrop ,2007).

This paper tries to answer the following questions.

a. How is the evolution process of traditional rice cultivation?

b. What is the farmer perception regarding its sustainability?

c. Is there any legal or government recognition for the traditional rice varieties and are the farmers aware of these?

Methodology

Wayanad and Malappuram districts of Kerala were purposively selected for the study as they were the districts having the highest number of traditional rice farmers. Sixty farmers from Wayanad district and thirty farmers from Malappuram district were randomly selected, from the list of farmers available in the KVK and District agricultural office respectively. Information was collected by personal interviews of respondents, key informant interviews and referring to secondary sources. Personal interviews were carried out using a pre tested well-structured interview schedule. Time line of traditional rice cultivation was summarized by key informant study and information from other secondary sources. Sustainability of traditional rice cultivation was analysed by a perception scale developed for the study. Information regarding legal recognition status of traditional varieties cultivated, was gathered from government records and websites.

Results and discussion

Table 1: History of traditional rice cultivation

Time	Wayanad	Malappuram
1500s	Indigenous agricultural practices started by migrants and tribes	
1600s	Cultivation of Ragi and Millets	
1700s	Cultivation of traditional rice varieties like *Thondi, Veliyan, Chomala, Kalladiyar, Ghandhakasala* and *Jeerakasala*	Indigenous agricultural practices started by migrants
1800s	Usage of implements for rice cultivation increased	Cultivation of traditional rice varieties started (*Thavalakkannan, Pothan*) along withragi and millets
1900s		Usage of implements increased
1960s	Introduction of high yielding short duration varieties	- Introduction of high yielding short duration varieties
1970-80s	Declining area under traditional rice cultivation	Declining area under traditional rice cultivation
1995-2000	MSSRF started to take efforts to conserve traditional rice varieties	
2008	PPVFR authority recognized conservation of 20 rice varieties by tribals in Kerala and titled them 'Genome Saviors'	PPVFR authority recognized conservation of 20 rice varieties by tribals in Kerala and titled them 'Genome Saviors'
2010	*Ghandhakasala* and *Jeerakasala* got GI certification by GoI	

Rice cultivation would have been there since millenniums ago, but detailed records of it seem to be available only from the 1700s. The indigenous people are the earliest proponents of rice cultivation and migrant people from the plains continued with the tradition, mostly in forest areas. Ragi and other millets were widely cultivated by the tribespeople in those times. Ragi occupied the largest area among the millets, perhaps because of its nutritive importance. By 1800s millets began to to be replaced by traditional rice varieties *like Thondi, Veliyan, Chomala, Kalladiyar, Thavalakkannan, Ghandhakasala and Jeerakasala.* They were cultivated mainly. The indigenous scented rice varieties *Jeerakasala* and *Ghandhakasala* were mainly being used for traditional functions and community feasts. Land preparation, sowing, crop management, harvesting and post-harvest practices were fully based on their traditional belief system. They had traditional tools and implements for crop management and postharvest practices. Cow dung and tree leaves were mostly used for manuring the crop. This system continued for long years, and it was only by the 1960s, high yielding and short duration rice varieties began to appear in Kerala (Gopi and Manjula,2018). Gradually, the modern variteties began to take the lead, and traditional varieties were pushed to the backseat. Most of the traditional farmers are aware of the importance and need of traditional rice varieties but they are largely unaware of the government and legal support for the traditional rice varieties.

Sustainability of traditional rice cultivation

Table 2: Perception of farmers about components of sustainability in traditional rice cultivation (N=90)

Sl.No	**Dimension**	**Positive (f)**	**%**	**Negative (f)**	**%**
1	Cultural lineage	70	77.78	20	22.22
2	Ease in management	74	82.22	16	17.78
3	Returns from the enterprise	35	38.89	55	61.11
4	Support from developmental agencies.	59	65.56	31	34.44
5	Renewed awareness	46	51.11	44	48.89
6	Compatibility	60	66.67	30	33.33

7	Adaptability	70	77.78	20	22.22
8	Competition from modern varieties	50	55.56	40	44.44

Among the eight dimensions, all seven drew more of a positive perception from the respondents than negative. Only the profitability or returns part drew more of a negative perception. Thus, it might be safe to deduce that if the marketing of traditional rice varieties is strengthened, or if farmers are supported with better market choices for their produce, sustaining and promoting traditional rice varieties might become smooth.

77.78 per cent of respondents felt that traditional rice cultivation was a cultural lineage. 82.22 per cent of respondents agreed, it was easy to manage and hence helpful for the farmers. 61.11 per cent of respondents felt that traditional rice cultivation was not remunerative enough but nearly 39 per cent felt that it was possible to continue in the long term. This is a positive note towards traditional rice, as there is a voice of hope.Still, around 35 per cent of the respondents felt that, in the current trend of low support from developmental agencies, this rice cultivation is difficult to survive. 51.11 per cent of respondents felt that there is a renewed awareness about the benefits of traditional rice varieties, which will help in their survival. 66.67 per cent of respondents saw the dimension compatibility as a sustaining factor. 77.78 per cent of respondents upheld the view that these varieties are the best suited for the location's special features. 44.44 per cent of the respondents believe that competition from modern high yielding varieties will adversely affect the sustainability of traditional rice cultivation.

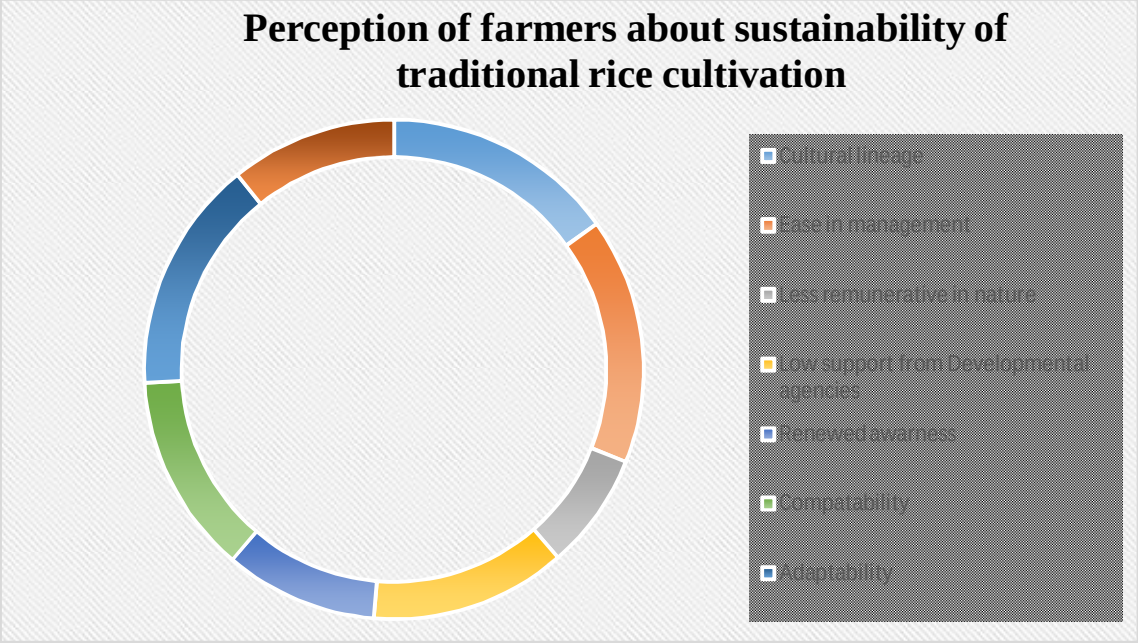

Fig 1: Perception of farmers about sustainability of traditional rice cultivation

More than 77.00 per cent of respondents felt that traditional rice cultivation was an integral part of their culture and easy to be managed. Location specific nature of traditional rice varieties will help in their survival also. In general, even though farmers had mixed perception about sustainability of traditional rice, the positive perception towards it (mean per cent = 72.22%)supersedes the negative (mean per cent= 56.67%). Therefore the study gives a positive note that, given enough support and market promotion, traditional rice cultivation might stay in Kerala.

Legal recognition

One of the main objectives of geographical indication was policy development for the traditional knowledge conservation (Blakeney ,2009). From the survey, no respondent was found to have any awareness on legal recognition status as registered farmer, GI tag or any other. However, all the respondents were members of farmer's association, namely *PadasekharaSamithi*of their respective areas.

The traditional varieties cultivated in the survey areas are given in Table3. Some of them (as shown in the table) were legally recognised varieties, but the cultivating farmers were not aware of this status.

Table 3: Details of legal recognition for the traditional varieties

District	Sl.No	Name of variety	Status
Wayanad	1	*Jeerakasala*	Geographical indication
	2	*Gandhakasala*	
	3	*Navara*	
	4	*Thonnnuranthondi*	Registered farmers variety
	5	*Valichoori*	
	6	*Thondi*	
	7	*Adakkan*	
Malappuram	1	*Navara*	Geographical indication
	2	*Chitteni*	Geographical indication
	3	*Kayama*	

Conclusion

The study reinforced that traditional rice cultivation is in peril in the state. The farmers who were in cultivation were predominantly in the senior group. And their perception about sustainability, even though was more positive than negative, was not stable. Lack of any proper governmental support or motivation from development agencies was one reason for this. The novel governmental legal support mechanisms for traditional agriculture like GI recognition or registering traditional varieties through PPVFRA do not reach the farmers as there is no grassroots level government agency entrusted to promote them.

But still, the superior qualities and value of traditional varieties do make farmers stick on to them. It is not the profit motive that leads these farmers. It is more of a cultural norm, a lineage and a way of life. But we have to say, such norms are difficult to last. When a generation passes, this system of cultivation can largely be lost

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