



## CONSTRAINTS EXPERIENCED BY THE TRIBAL FARMERS IN ADOPTING RECOMMENDED INDIGENOUS AGRICULTURAL PRACTICES

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### ABSTRACT

The study on Indigenous Knowledge of Tribals of Pachaimalai hills, was conducted to study the constraints experienced by the tribal farmers in adopting the indigenous agricultural practices. The study was conducted in Pachaimalai hills of Trichy district. A sample of one hundred tribal farmers (respondents) was selected from the tribal hamlets using proportionate random sampling technique. Nearly twenty one indigenous agricultural practices were identified in the crops like paddy, tapioca and sorghum. In addition ten common indigenous agricultural practices were also identified. The data were collected with the help of well structured and pretested interview schedule and suitable statistical tools were used to analyse the data. The important constraints reported were 'no reward for indigenous agricultural practices by Government Officials', 'youth's preference for urban life,' 'Lack of documentation', and 'poor income from agriculture'.

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### INTRODUCTION

Today's major effort of agricultural scientist and technocrats are focused on the term called sustainable agricultural development. Sustainable development involves producing goods for the needs of the present generation, while at the same time conserving resources in order to ensure continuous production in the future. (FAO 1993) It is strongly recommended that indigenous knowledge system is offering sustainable approaches to agricultural and rural development (Chambers, 1983; Richards, 1985). The term indigenous knowledge denotes a type of knowledge, that has evolved within the community and has been passed on from one generation to another. This knowledge is generated and transformed through systematic process of observing local conditions, experimenting with solutions and readopting previously identified solutions to modified environmental, socio economic and technological situations (Brouwers, 1993). Although an increasing amount of research on indigenous knowledge system, is now being done, reversing this negative trend, a review of literature shows that indigenous knowledge is still not always recognized as the product of holistic systems of perception, relationship and organizational arrangements as stated by Fernandez (1994). In Tamilnadu the total tribal population is rather small and scattered all over the state. Like the rest of India, the tribal

populations in the state is found to occur in and around hilly tracts. The tribal population in Tamilnadu state is about 5.2 lakhs, representing 1.10 per cent of the total population of the state. An Indian tribes is a small culturally distinct and economically self sufficient community with a language of its own and an autonomous political organisation. (Gosuvami, 1984). The various indigenous agriculture practices of Pachaimalai hills though existed for the last several decades has not been taken for systematic study. Such an attempt alone would bring out the complete picture of the profile characteristics of tribal farmers, identification of various indigenous agricultural practices, levels of adoption and constraints etc.

### METHODOLOGY

As the main objective to this study was centred around the tribal people, it was planned to select all the three blocks of Pachaimalai hills to have a unique representation. Accordingly, the three blocks viz., for the Vannadu, Thenpuranadu and Kombai were selected for the study. The three blocks in Pachaimalai hills having large area under paddy, tapioca, and sorghum cultivation were purposively selected. Twenty villages were selected based on their maximum area under paddy, tapioca and sorghum crop. Of the total villages selected, eight villages were selected each from Vannadu and Thenpuranadu and four were from Kombai block. From the twenty selected villages, five respondents from each were selected randomly for the purpose of data collection.

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A sample size of 100 respondents was considered adequate for the study. The total number of respondents to be selected from each block was arrived at on the basis of proportionate random sampling procedure.

## FINDINGS AND DISCUSSION

Constraints experienced by the respondents in adopting recommended indigenous agricultural practices in paddy cultivation are presented in Table 1.

**Table 1. Constraints experienced by the respondents in adopting indigenous agricultural practices in paddy**

(n=40)				
S.No.	Indigenous Agricultural practices	Constraints	Total No. Of respondents	Per cent
1.	Six ploughing are made in the main field for better yield	More cost	24	60.00
2.	Soaking of paddy seeds in water for sprouting	Laborious	10	25.00
3.	Storage of paddy grains in kudhirs	Damage by storage pests if not sealed properly	8	20.00
4.	Application of green leaf manure	Labour problem	7	17.50

It may be from the table 1 that four constraints were experienced by the respondents in the adoption of 4 recommended indigenous agricultural practices in paddy cultivation. Six ploughing are made in the main field for better yield was reported by 60.00 per cent of the respondents as more expensive. Doing six ploughing in the main field involve huge amount of expenditure and time. This may be reason for the non adoption of above practices in their cultivation. Soaking of paddy seeds in water for sprouting required skilled labour and technical knowledge and hence it was laborious to 25.00 per cent of the respondents. Though Kudhirs were available in all the houses for storage, 20.00 per cent of the respondents told that if the sealing was not proper, the grains would be affected by storage pests. High cost of labour and non-availability of skilled labourer were the constraints expressed by 17.50 per cent of the respondents while adopting the application of green leaf manures. The constraints experienced by the respondents in adopting indigenous agricultural practices in tapioca cultivation are presented in Table 2.

**Table 2. Constraints experienced by the respondents in adopting the indigenous agricultural practices in tapioca**

(n=40)				
S.No.	Indigenous Agricultural practices	Constraints	Total No. of respondents	Per cent
1.	Selection of setts with shorter inter nodes	Time consuming	6	15.00
2.	The setts are planted at one inch depth in the soil	Time consuming	10	25.00

Table 2 reveals that the two indigenous agricultural practices viz., 'setts planted at one inch depth in the soil' and 'selection of setts with shorter inter nodes' were reported by 25.00 and 15.00 per cent of the respondents as timing consuming

practices. The respondents felt that these two practices require skilled labour and involve much time. The constraints experienced by the respondents in adoption of indigenous agricultural practices in sorghum are presented in Table 3.

**Table 3. Constraints experienced by the respondents in adopting the indigenous agricultural practices in sorghum**

S.No.	Indigenous Agricultural practices	Constraints	Total No. of respondents	Per cent
1.	Cultivation of chencholam	Poisoning	5	25.00
2.	Mixed cropping in rainfed sorghum	Damage to main crop	6	30.00

The table 3 indicates that one third of the respondents (30.00 per cent) expressed 'mixed cropping in rainfed sorghum' will suppress the main crop results in poor yield. Hence the respondents were reluctant in doing the practice. 'Cultivation of chencholam' was not favourable to 25.00 per cent of the respondents because this particular variety contains some degree of poison intern would cause the death of cattle while consumption.

**Table 4. Constraint experienced by the respondents in adopting the common indigenous agricultural practices.**

(n=100)				
S.No.	Indigenous Agricultural practices	Constraints	Total No. of respondents	Per cent
1.	Beating drums to scare away the birds.	More cost for labour charge	45	45.00
2.	Displaying crow's carcass for scaring the crows.	Nuisance	30	30.00
3.	Sheep penning	Non-availability of sheep hards in time	15	15.00
4.	Tieing of polythene sheets to scare away the birds	Damage by winds, less effective	38	38.00

From the above table it could be observed that 'beating drums to scare away the birds' was reported by 45.00 per cent of the respondents as cost and labour involving process. More than one fourth of the respondents (30.00 per cent) felt that displaying crow's carcass would cause much nuisance and create lot of damage to the crops in and around the field. Sheep penning was one of the popular indigenous practices, but 15.00 per cent of the respondents found it difficult to get sheep herds in time, for sheep penning. Though tieing of polythene sheets in a long pole to scare away the birds was considered as a economical method. 38.00 per cent of the respondents reported that polythene sheets were damaged by winds, and thus it was less effective. Past research studies of Balasubramanian (1992), Somasundaram (1995), and Sivasankaran (1996) also reported that above constraints was responsible for non-adoption of certain recommended indigenous agricultural practices in their cultivation.

## Conclusion

The tribals also expressed practice wise constraints in various crops for the adoption of nineteen indigenous agricultural

practices. The practice wise constraints in general are high cost, labourious, time consuming, poor yield, lack of time, etc. in paddy, sorghum and tapioca cultivation.

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