INDIGENOUS PRACTICES FOLLOWED BY TRIBAL FARMERS FOR MAINTAINING ENVIRONMENTAL SUSTAINABILITY IN PACHAIMALAI HILLS, TAMIL NADU

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Abstract

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. Western technologies and methods generally do not generate sustainable development and their impact on environment is in fact negative. It is widely reported that indigenous knowledge systems are contributing significantly for sustainable development. In recent years indigenous knowledge is gaining significance and a number of scholars have shown considerable interest in the indigenous technical knowledge of rural people. Considering the significant contribution of indigenous knowledge practices for sustainable agricultural and rural development, the study was conducted at Pachamalai Hills in Trichy district of Tamil Nadu. It revealed that the rural tribal people were with rich indigenous wisdom. Ten common indigenous agricultural practices were also identified. The data were collected with the help of well structured and pre-tested interview schedule and suitable statistical tools were used to analyze the data. Sixty to ninety per cent of the respondents have been adopting almost all the identified indigenous agricultural practices.

Key words: Sustainable development, environmental sustainability, indigenous knowledge, etc.

1. Introduction

Indigenous knowledge is unique to a given culture or society. This knowledge is the information base for a society and it facilitates communication and decision making. It is dynamic and it changes through indigenous creativity and innovativeness as well as through contact with other systems. Indigenous knowledge systems are strategies and techniques developed by local people to cope up with the changes in the socio-cultural and environment conditions. Tribals are generally noted for the wealth of indigenous knowledge. In Tamil Nadu, the total tribal population is rather small and scattered all over the state. Like the rest of India, the tribal population in the state is found to occur in and around hilly areas/tract. The tribal population in Tamil Nadu state is about 5.2 lakhs representing 1.10 per cent of the total population of the state. The literacy rate of the tribes

in the state is 20.45 per cent an against the general literacy rate of 46.79 per cent in the state. The tribal farmers living at the 'Pachimalai Hills' of Trichy district of Tamil Nadu have their main occupation as agriculture.

2. Materials and methods

As the main objective to this study was centered on 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. A sample size of 100 respondents was considered one the basis of proportionate random sampling.

3. Results and discussion

TABLE 1

Extent of Adoption of various Common Indigenous Agricultural Practices

(n=120)

S. No.	Indigenous agricultural practices	No. of Respondents	Per cent
1	Tieing of polythene sheets to scare away the birds	97	97.00
2	Beating drums to scare away the birds	70	70.00
3	Displaying crow's carcass to scare away the crows	61	61.00
4	Summer ploughing	100	100.00
5	Shallow ploughing after summer rain	91	91.00
6	Dusting of ash to control pests	89	89.00
7	Digging the field burrows to kill the rats	83	83.00
8	Sheep penning and cattle penning	86	86.00
9	Adding organic waste and FYM in the soil	87	87.00
10	Fumigation in closed containers for ripening of fruits	65	65.00

The extent of adoption of various common indigenous agricultural practices are presented in Table 1.The findings reveal that almost all the common indigenous agricultural practices were found to be adopted by more than 80 per cent of the respondents except two practices viz. 'fumigation in closed containers for ripening of fruits' and 'displaying crow's carcass to scare away the bird's were adopted by 65 per cent and 61 per cent of the respondents respectively. Among the individual practices namely 'summer ploughing' was adopted by the 100 per cent of the respondents followed by 'tieing of polythene sheets to scare away the birds' (97 per cent), 'shallow

ploughing after summer rain' (91 per cent), 'dusting of ash to control pests' (89 per cent), 'adding organic waste in FYM in the soil' (87 per cent), 'sheep penning and cattle penning' (86 per cent), 'digging the field burrows to kill the rats' (83 per cent), 'beating drums to scare away the birds' (70 per cent), 'fumingation in closed containers for ripening of fruits' (65 per cent) and 'displaying crow's carcass to scare away the birds' (61 per cent). It may be inferred that, almost all the respondents adopted the summer ploughing practices in main field. It may be due to the fact that summer ploughing helps in moisture conservation, eradication of weeds and control of soil erosion during off season. Further, it was found that more than 97 per cent of the respondents followed the practices namely 'tieing of polythene sheets to scare away the birds' in field. It involves only less expenditure and it controls the bird damage during the maturity stage of the various crops in the hilly tracts. Because of these benefits, most of the farmers would have adopted these practices. The other two practices namely 'beating drums to scare away the birds', and 'displaying crow's carcass to scare away the birds' were followed by 70 per cent and 61 per cent of the respondents. These two practices are common and well established among the tribal farmers. Most of the respondents opined that beating the drums and displaying crow's carcass in their main field would result in scaring away the birds effectively and save the crops during matured grain stage and it is also a low cost technology. Hence, most of the respondents could have adopted this practice. 'Fumigation in closed container for ripening of fruit' was adopted by 65 per cent of the respondents. Since, most of the respondents reported that this practice is being followed traditionally and it leads to earlier ripening of fruits.

4. Conclusion

Most of the respondents were found to have medium to high level of adoption of indigenous agricultural practices. Hence, it is suggested that the extension workers to utilize the services of the farmers with indigenous knowledge in educating the other farmers.

5. Reference

Kanagasabapathi, K. (1988). Training Needs in Agriculture of Irulas of Attapady. Unpub. M.Sc. (Ag.) Dissertation Submitted to College of Agriculture Vellayani, Thiruvananthapuram.

Marimuthu, P. (2001). Indigenous Tribal Wisdom for Rural Development: A Multi-Dimensional Analysis. Ph.D. Thesis Submitted to Tamilnadu Agricultural University, Coimbatore.

Sivasankaran, G. (1996). Adoption of Indigenous Agricultural Practices in Kalrayan Hills. M.Sc. (Ag.) Dissertation Submitted to Annamalai University, Annamalai Nagar.

Somasundaram, S. (1995). Indigenous Knowledge in Farming System. Ph.D. Thesis Submitted to Tamil Nadu Agricultural University, Coimbatore.

Vasanthakumar, J. (1979). Tribal Leadership and Communication Behaviour in Progressive and Less Progressive Villages of Kolli Hills. M.Sc. (Ag.) Dissertation Submitted to Tamilnadu Agricultural University, Coimbatore.