

# Use of Traditional Knowledge among Irular Tribes in the Nilgiris District of Tamil Nadu

Rajasekaran.R<sup>1</sup> and K. Indumathy<sup>2</sup>

<sup>1,2</sup>Department of Agricultural Extension and Rural Sociology, Tamil Nadu Agricultural University, Coimbatore - 03.  
E-mail: <sup>1</sup>rajasekaranextension@gmailcom

**Abstract**—The present study highlights the use of traditional knowledge in agriculture and allied activities among Irulars in the Nilgiris district of Tamil Nadu. They have continuously being used till in this modern technology world. They have the capacity to search for number of use of traditional knowledge. **Methods:** The list of tribal respondents from the selected village was obtained from the Horticulture department. A sample size of 100 tribal respondents was fixed for the study. The technique proportionate random sampling was followed for the selection of respondents from three habitations from Nilgiris district viz., kunjappanai, mantharai and thuthikarai. The information on traditional knowledge and their utilization was collected by Focus Group Discussion (FGD) and personal interview. **Result:** Traditional knowledge on different categories has been documented. **Discussion:** The present study observed that, the Irular tribe of The Nilgiris district having good experience in use of traditional knowledge on different areas. **Conclusion:** This type of studies may help the policy makers to take efforts on conservation and restoration of agricultural biodiversity by practicing traditional agriculture and traditional knowledge in various dimensions.

**Keywords:** Traditional knowledge, Irular tribes.

## 1. INTRODUCTION

Traditional knowledge refers to the knowledge, innovations and practices of indigenous and local communities around the world. Developed from experience gained over the centuries and adapted to the local culture and environment, traditional knowledge is transmitted orally from generation to generation. Traditional knowledge is a valuable asset to indigenous and local communities who depend on traditional knowledge for their livelihood as well as to manage exploit their local ecosystem in sustainable manner. The traditional communities are intelligent and have made agriculture sustainable through their different agricultural practices. They create a balance between the environment and requirement. The knowledge of tribal people in traditional agriculture is invaluable. Their farming practices are truly sustainable in many ways. Tribal communities especially Irulars, living in Tamil Nadu have been cultivating the traditional cultivars viz. paddy, millets, pulses and vegetable crops. Their subsistence life style, local diet habits and dependence on rain fed irrigation have influenced them to cultivate and conserve the traditional cultivars or land races. Traditional knowledge is vital for sustainability of

natural resources including forests, water, and agro-ecosystems across landscape continuum spanning from households through farms, village, commons and wilderness.

## 2. METHODOLOGY

The list of tribal respondents from selected village was obtained from horticulture department. A sample size of 100 respondents was fixed for the study. The technique proportionate random sampling was followed for the selection of respondents from three habitations viz., kunjappanai, mantharai, thuthikarai. A separate interview schedule contain open ended questions were prepared for conducting focus group discussion (FGD). Maximum of twenty tribal respondents were selected for a focus group discussion. A total of 5 focus group discussion was conducted among 100 tribal respondents. The respondents were personally interviewed after every focus group discussion, with the help of checklist prepared for each objective. Traditional knowledge on different categories has been documented and presented below

## 3. FINDINGS AND DISCUSSION

The tribal community may possess traditional/ indigenous technical knowledge on agriculture and allied activities associated with agro biodiversity conservation. Such Indigenous Technical Knowledge (ITKs) may influence them in carrying out the different conservation measures of agro biodiversity effectively and efficiently. The ITKs identified are presented with different sub heads are given below.

**Table 1: Traditional/ indigenous storage methods and structures**

Sl. No	Traditional/Indigenous storage methods and structures
1.	Sun drying of pepper seeds for 2-3 days and storing the pepper in gunny bags over the platform made of bamboo sticks to avoid termite attack
2.	Storing of coffee seeds in gunny bags over the mud platform specially constructed for a maximum period of three months

3.	Keeping the best ragi ear head selected from their own field along with ash in earthen pot in dark place for 3-4 years for seed purpose during next season
4.	Storing the paddy grains with "Nochi" ( <i>vitex negundo</i> ) and 'Pungam' ( <i>pongamia pinnata</i> ) leaves in the storage godown called "Vallam" made of mud which is placed in the corner of the house
5.	Using small basket (Bethu Koodai) for storing the grains temporarily
6.	Storing the vegetables in their home by just spreading the vegetable on floor with good aeration
7.	Harvested ear heads of samai, thinai, varagu, ragi and other millet are buried under the soil (one meter depth pit painted with cow dung slurry) with the depth of one meter and can be stored up to one year
8.	Pulses are sun dried and then mixed with chilly seeds or "Neem" ( <i>Azadirachta indica</i> ) leaves
9.	Pulses after drying are smeared with any cooking oil preferably castor oil
10.	Pulses are sun dried and then stored in cotton bags
11.	Sorghum grains mixed with "Neem" ( <i>Azadirachta indica</i> ) leaves and then stored in gunny bags

The Irular tribes designed their own structures and methods for storing grains with locally available materials. Their storage structure specially designed to allow aeration protect insect and rodent infestation. These storage structures are all still using even today and the important advantage of these methods and they are eco-friendly and safe method of grain storage.

The findings of the present study is in line with Valeria lakra et al.,(2010) and Amuthavalluvan(2011), who had also reported that 'neem' leaves were used for storing food grains.

**Table 2: Traditional knowledge on climate, weather forecasting and rainfall prediction**

Sl. No.	Traditional knowledge on climate ,Weather Forecasting & rainfall prediction
1.	Thunder in summer and lightening in rainy season bring heavy rain.
2.	Appearance of rainbow in the east side during evening (or) west during morning being good rain
3.	Rainfall during 'marghali' (one of Tamil month) does not benefit the crop but affects the grains.
4.	Drizzles in July assures rain in September
5.	Farmers also forecasting rains by observing the direction of wind/ clouds.
6.	As soon as the Neem kernels ripens and start falling, it is expected that there will be rains after 10-15 days.
7.	Fast grazing by sheep's indicates occurrence of rainfall

8.	Ants shifting their eggs to safe place, foretells the occurrence of rain
9.	Dense fog in early morning indicates no rain
10.	Continuous drizzling indicates more pest and disease incidence
11.	Morning cloud and evening thunder indicates the occurrence of rain
12.	Dried appearance of neem tree in summer causes heavy drought
13.	Termite flying in the evening hours is an indication that there will be rain
14.	A ring around the moon is as indication of rain to be followed.
15.	When dragon flies fly low, it may rain.

Traditional knowledge and beliefs are abundant in tribal community. In many cases traditional beliefs are existing in the form of well-defined technologies which are valued much and followed in their farming system. Traditional knowledge includes both technical and non-technical fields covering various social and religious taboos, beliefs and customs, communication pattern, music, ecology, vegetation, climate and so on. This research finding draws supports from the result of Anandaraja et al., (2008).

#### 4. RESULT AND CONCLUSION

It could be observed from the research findings of the study that, tribal's were enriched with various traditional knowledge's related to agriculture and allied activities. It could be an evidence for the tribes had more indigenous knowledge. In order to conserve traditional knowledge effectively, more attention is needed on promotion of intellectual property rights of traditional people. Innovation projects may need to be developed that aim at the enhancement of the capacity of tribes and local communities to use, express and

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