



## Traditional Agricultural Practices in Paddy Among the Tribal Farmers on Kalrayan Hills of Tamil Nadu

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**Abstract** – This article delves into the expertise of indigenous farmers as it pertains to the conventional agricultural methods used by indigenous tribes. Research on tribal farmers' familiarity with TAPs was carried out in Tamil Nadu's Kalrayan District. Structured interviews, photo documentation, field observations, and participant observation were used to gather information from the study region. In order to merge traditional knowledge with scientific rationale into agricultural fields, this study contends that it is necessary to identify such knowledge. Sustainable food security, livelihoods, and ecological balance can be achieved through the application of traditional agricultural knowledge, and this paper also addresses the limitations of recommending such knowledge in the research arena. The survey included 120 participants in total. Lastly, this study shows that if the right extension intervention for traditional knowledge is done in the study area, food security with sustainability can be achieved through identification and documentation.

**Key Word** - Traditional Practices, Knowledge Level, Tribal Farmers, Paddy Cultivation

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### 1. Introduction –

Local communities rely on their traditional knowledge—a body of beliefs, practices, and practices—to make informed decisions about how to manage their land and its resources. People in a community develop and maintain their traditional knowledge to help themselves with basic necessities including food, housing, healthcare, religion, and financial planning. Local ecological factors and social and cultural attitudes of community members typically shape traditional knowledge. This information could be basic or advanced. Community members' inventiveness and creativity, as well as the impact of other cultures and technologies, cause it to change and adapt to shifting ecological, economic, and sociopolitical conditions. Traditional farmers, and especially those from indigenous communities, have come a long way from the days of crude farming practices. Over the centuries, they have experimented with new methods, mostly by trial and error, in an effort to solve the many challenges they have encountered. All of this information is based on the wisdom passed down through many generations of people who have lived in harmony with their physical and natural surroundings.

Traditional farming methods have relied heavily on the wisdom of tribal farmers. The agricultural methods used by farmers in tribal communities differ from the conventional wisdom taught in schools and are more grounded in logic. Ecological stability and productivity in resource-scarce conditions are sustained through the linkages that tribal farmers work in—the between spaces, the interstices of sectors, and the invisible ecological flows between sectors. Their knowledge is unique in agriculture. Kalrayan Hills residents primarily work in agriculture. All of the people living in the state make their living from farming. Geographically and climatically diverse, the state provides ideal circumstances for growing a vast array of food and ornamental crops. It has a lot of promise as a green agricultural zone. When it comes to farming, traditional wisdom is still very much in use in the Indian state of Tamil Nadu. The Villupuram District of Tamil Nadu, which includes the Kalrayan Hills, is well-known for its extensive application of traditional knowledge in farming and related fields. Quick urbanisation poses a threat to the preservation of traditional knowledge. In light of this, researchers in Tamil Nadu set out to answer the question, "What is the level of knowledge about traditional agricultural practices among the tribal farmers of Kalrayan Hills?" by conducting an exploratory study.

### 2. Methodology

The availability of tribal farmers practicing traditional agriculture led to the purposeful selection of Kalrayan Hills for the study. Out of the two blocks, Mel Kalvarayan and Kizh Kalvarayan, the researcher's knowledge with the local dialect and culture, as well

as the number of tribal farmers practicing traditional agriculture, led to the selection of Kizh Kalvarayan. The maximum population was used to pick four communities from each block.

Using a proportionate random selection procedure, 120 tribal farmers were found and data was collected from them. Two groups, "correct" and "incorrect," were used to collect data on how well people understood twenty-seven traditional, logical farming methods. The data were interpreted using a basic percentage. In order to gather information from the participants, a well-organised interview schedule was utilised. The percentage of farmers who were knowledgeable about each practice was determined.

### 3. Results

#### **Keeping puppet dolls to scare away birds**

When farmers wanted to keep birds away from their fields, they would sometimes employ scarecrows. This practice is still common today. In most cases, scarecrows are constructed in the shape of humans and are placed in the field to serve as bird scarers. It appears to be effective, as evidenced by the fact that you can still find them on farms to this day. Even some contemporary gardening guides recommend making use of them, and they recommend doing so by moving them about frequently rather than simply fixing them in one place. With that being said, it is an efficient way for scarecrows on rice farms located in mountainous zones.



#### **Storing harvested grains in a store room called “Thombai”**

The term "Thombai" refers to the process of drying the food grains that are obtained by harvesting the crops in the sun before storing them in order to reduce the amount of moisture that they contain. It is essential to take measures to prevent them from becoming bad. The increased moisture content of food grains encourages the formation of fungus and moulds on the grains that are stored, which ultimately causes the grains to become damaged. Additionally, it protects against diseases and pests that affect seeds.



#### **Paddy nursery is elevated in the paddy field**

The cultivation of paddy takes place at a relatively elevated location known as a nursery, and it is subsequently transferred to the main field for four primary reasons. Because of the ease with which a small area can be irrigated, seeds can be planted a significant amount of time before the monsoon season. As a result, the main monsoon season can be utilised for watering the transplanted crop in fields.



#### **A small pit is dug in each terrace in a series of terraces where paddy is grown**

The method of cutting flat sections out of a hilly or mountainous landscape in Kalrayan in order to cultivate paddy crops is referred to as small pit farming, sometimes known as terrace farming. Since the beginning of time, people have been using this method on the rice fields. In addition to reducing the amount of surface runoff and erosion that occurs, terraced fields can also be utilised to support the cultivation of crops that require irrigation, such as rice. Terrace farming is extremely advantageous due to the fact that it helps to reduce soil erosion and expands the amount of land available for agricultural purposes.



#### **Water outlet made up of bamboo**

There is a method in the Kalrayan hills that has been around for two hundred years and is called the Bamboo Irrigation method. This technique involves tapping into streams and spring water through the use of bamboo pipes and carrying water from higher to lower places through gravity. Through the manipulation of the pipe placements, the flow of water into the pipes can be controlled. The "Bamboo irrigation system" is utilised in a majority of situations. Bamboos are utilised by farmers for the purpose of irrigation in rice fields throughout the growing season. Providing the plants with water in order to hydrate them and ensure that they are healthy is the process that is known as irrigation.



#### **4. Conclusion**

Based on the findings of this study, it is possible to draw the conclusion that tribal farmers have a bigger responsibility in agriculture, which motivates them to engage with their surroundings an increased amount. It has been noticed that the use of traditional agricultural techniques leads to an environment that is more environmentally friendly. Therefore, it is essential to make promotional efforts for the preservation and dissemination of these traditions.

According to the results of the research, the majority of the tribal farmers in the area under investigation possessed a high level of knowledge regarding the traditional agricultural practices that were utilised in paddy production to a significant degree. The fact that this is the case demonstrates that there is a strong belief that tribal farmers had a broad understanding of the conventional farming methods. Consequently, extension workers, research associates, and policy makers ought to identify these individuals and incorporate them into the process of technology transmission in order to ensure the efficiency of farming methods in paddy technology.



**References**

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