



Short Communication

Indigenous Technical Knowledge in Tribal Areas of Eastern Ghats

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INTRODUCTION

Indigenous knowledge is, broadly speaking the knowledge used by local people to make their living in a particular environment. It can be defined as “A body of knowledge built up by a group of people through generations of living in close contact with nature. It is usually a mistake to think of indigenous knowledge as old fashioned, backwards, static or unchanging. Indigenous knowledge provides opportunities for designing development projects that emerge from priority problems identified within a community and which build upon and strengthen community level knowledge systems and organizations. Indigenous technologies in agriculture are low cost, organic and eco friendly in nature. They don't cause any damage to the air, water and soil, safe to human beings and free from causing environmental pollution.

Over generations of farming, farmers have been experimenting several indigenous alternatives to solve their problems in the farm and home. The in built “trail and error” mechanism of the farmers was the basis of the amassed wealth of indigenous knowledge.

Indigenous people are the original inhabitants of a particular geographic location, who have a culture and belief system distinct from the International system of knowledge eg., the tribal, native first or aboriginal people of an area. According to Indian anthropologists, a tribe identifies the people who live in Primitive or backward conditions under a head man or chief. The tribes are also known as adivasees i.e. aboriginals.

Tribal farmers of Eastern Ghats of Andhra Pradesh comprising the tribe of “Bhagatas, Konda

Doras, Muki Doras, Valmiki have been practicing indigenous knowledge since time immemorial. These tribal farmers are mostly marginal and small farmers. Maundu (1995) stated that indigenous knowledge is diminishing at an alarming rate with ageing of those in the indigenous population with strong links to the past.

The tribal farmers practice the ITK regardless of the crop and the ITK was considered as general practice. They practice agriculture with low input production system. It is often marginalized that, knowledge, skill and survival strategy of farmers operating with low, external input have often been ignored to promote modern agriculture. The enhancement of the quality of life of the Indians who in great majority live in and depend on agricultural production systems would be almost impossible if this rich tradition of ITK is kept inside (Berkes and Folke,1994). The collection of knowledge is of great significance in conserving and maintaining sustainability of the environment. Further it requires integration with modern scientific knowledge to generate a wide range of new ideas and practices of the betterment of mankind.(Mishra, Singh and Sarvesh Kumar)

MATERIALS AND METHODS

The study was carried out to document indigenous knowledge from the tribal farmers of Eastern ghats of Visakhapatnam district of High Altitude and Tribal Zone of Andhra Pradesh as a research proposal. Regional Agricultural Research Station is located at Chintapalle mandal of Visakhapatnam district, which is headquarters of High Altitude and Tribal Zone of Acharya N.G. Ranga Agricultural University, Andhra Pradesh. The total number of tribal farmers interacted was (92 male farmers). The information was collected

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with the help of interpersonal interaction and focus group discussion.

RESULTS AND DISCUSSION:

INDIGENOUS TECHNICAL KNOWLEDGE OF TRIBAL FARMERS

Indication of Rain

- Ants changing their eggs from one place to another which indicates initiation of rains.
- Fowl stretch its feathers in hot summery days which indicate rain.
- Hallow around the moon indicates occurrence of rains.
- Streaks of lightening in the east with rainbow in the west would lead to rain.
- If rainbow appears in the east in the evening or west in the morning, it will rain.

Post harvest technology

- Cowpea seeds are filled in earthen pots in mix with kitchen ash.
- Cucumber seeds are pasted to wall when they are wet to store for 4-6 months.
- Seeds of paddy are stored in indigenously constructed storage structures called *Jaadi* made up of clay.
- Paddy seed is stored in butta (in telugu) made with bamboo and seed covered with straw and cow dung paste.
- To prevent termite problem, mucidi leaves (*Strychnos nux-vomica*) are applied as green manure in direct sown paddy.

Soil nutrient improvement

- Tentemu leaf (*Cassia tora*) and jeelugu (*Caryota urens*) twigs are incorporated during second ploughing for better decomposition and utilization to improve soil fertility.
- Tribal farmers apply 50 kg of neem cake in paddy field during puddling to control insect pests and improve soil fertility.
- Tribal farmers incorporate ash in the soil which believed to reclaim the soil gradually and improves fertility.
- They apply soil from base of the hill to the cultivated fields to increase the water holding capacity and fertility of the soil.
- Laying of stone bunds around the fields across the slope for preventing soil erosion and for

conserving moisture is practiced.

Plant protection

- *Jatropha (Jatropha curcas)* is planted as fence around the crop which repels goats and can serve as a strong fence against animals.
- A man like effigy made up rice straw wearing a dress and head is covered with a earthen wear made like a human head is used to keep in the centre of the field. The birds fly away because of human appearance in the field.
- Leaves of vadisa plant (*Cleistanthus sp*) and cow dung are broadcast around field bund if leaf folder infestation is observed.
- In cashew orchards, during the months of October to November, tribals practice smoking of kodo millet straw to prevent tea mosquito bug which attack during these months.
- Tribal farmers dust the mixture of kitchen ash and turmeric powder on vegetables to prevent the aphid attack.

CONCLUSION

Blending of ITK with scientific knowledge system is vital for sustainable intensification of agriculture. Scientific procedures can identify the active ingredients and could come up with appropriate recommendations in terms of effective application rates. It could be said that ITK provides solutions for low external input but intensive agricultural production. A systematic documentation and blending of available ITK facilitate the process in which researchers and farmers learn one another. ITKs and blended technologies can be an alternative to modern technologies involving high external inputs.

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