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A REVIEW :

Indigenous technical knowledge (ITK) regarding agriculture and household practiced by the farmers in Reddypalem village of Kuthur Mandal of Telangana

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SUMMARY : Indigenous Traditional Knowledge (ITK) is local knowledge of community that is being used from generation to generation by the members of that community for agriculture, food production, food preservation and health etc. ITKs are plentiful in rural community and these are easy and its application iseconomic. ITK is acquired by the local people through practice, informal experiment and understanding of local climatic conditions.By this background, present study was conducted in Ranga Reddy district with the objective to documentationof Indigenous Technical Knowledge in Reddypalem village of Kothur mandal in Ranga Reddy. Data was collected from farmers of Reddypalem village with the help of well structured questionnaire and group discussion. We documented many ITKs in Reddypalem village for example application of neem leaves for storing pulse grains and poultry and goat manure for improving soil fertility.

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BACKGROUND AND OBJECTIVES

Indigenous Technical Knowledge (ITK) is a significant component of the indigenous knowledge base. Local orindigenous knowledge refers to the cumulative and complex bodies of knowledge, know-how, practices and representations that are maintained and developed by local communities, who have long histories of interaction with the natural environment (UNESCO, 2012).

India is a country having various traditional community which is having abundant indigenous technical knowledge from theses ITKs some are technical and some are non technical. Many of these ITKs having potential for new innovation which can replace modern technology and ITKs are appropriate resources for sustainable development. These ITKs have played significant role in the

development of Agriculture, Horticulture, Animal husbandry, textile, food preservation and health, thus it can be stated that ITKs having potential to enhance socio economic status of the communities.

Documentation of ITKs is essential to preserve traditional knowledge of various communities because due to influence urbanization and modernization many ITKs are at the border of disappearance and to conserve biodiversity and environment, to protect ITKs from biopiracy,to get intellectual property rights.

Objective :

To document of Indigenous Technical Knowledge in Reddypalem village of Ranga Reddy district.

RESOURCES AND METHODS

The study wasconducted to the document ITK in Reddypalem Village of Kothur Mandal in Ranga Reddy District. Reddypalem village is located about 36 kilometers from Hyderabad. We collected information regarding ITKs from farmers and farm women with the help of group discussion, well structured questionnaire and interpersonal interaction.

OBSERVATIONS AND ANALYSIS

The findings of the present study regarding Indigenous Technical Knowledge are as following.

Application of ITKs at household level and in agricultural practices:

ITKsat household level:

Datura paste:

Farmers reported that they were using paste of Datura leaves(*Datura stramonium*)for treatment of knee and joint pain.

Turmeric paste:

Farmers reported that they were using turmeric pastefor wound to stop flow of blood Mishra *et al.* (2011) also reported thatfarmers used to apply a luke warm paste of Turmeric, onion, dubgrass and mustard oil for pain relief of any kind of external injury.

Storing of drinking water in copper vessel:

Women were using copper vessels to store drinking water over night, drink in the morning they believed that will be good for their health.

Use of Tamarind and salt in Ghee:

Women used tamarind and salt in ghee as preservatives to improve and keeping quality.

Usage of lemon juice over the stain on cloths:

For removal of stain on clothes women wereusing lemon juice.

Usage of Turmeric in milk:

Farmers revealed that for curing cough and cold they use to drink milk with a small tea spoon of turmeric powder added intoone glass milk.

Murky thumaku leaf paste:

Villagers were using murky thumaku leaf (*Bellis pernnis*) paste to cure join pain.

Usage of salt to store eggs:

People of Reddypalem village were using salt for storage eggs. They are believing that this helps to keep eggs in fresh condition.

Nava Dhanya Powder:

Nava dhanya powder is prepared by people in their home. Nava dhanya in a day. Scientists also agreed this is a good source of all the nutrients which helps to growth and development of infants.

ITKs in agricultural practices:

To prevent bird damage in field at crop maturity stage:

Putting bamboo sticks attached with birds feathers in the crop field at maturity stage of crop to prevent crop damage by birds. Farmers believe that birds will not eat in the field if birds feathers are present there, Earlier research findings Prasad (2009) have revealed that the farmers erect bamboo sticks tied with feathers in the field at grain maturity stage to avoid bird damage of the crop. Farmers felt that birds do not feed in fields where bird feathers are present. Several farmers erect sticks with colored polythene sheets to generate sound caused by wind, in order to scare away birds.

Storage binpasted with mud and cowdung:

Farmers used to paste mud with cow dung on storage baskets, farmers believe that mud and cow dung protect food grains from insect and pest attack.

Application of Neem Leaves for storage of Wheat, Rice and pulses:

The farmers used to add neem leaves with wheat, rice and pulses for storage purpose to protect food grains and pulses from insect and pests. These findings are accordance to Mishra *et al*. (2011) who reported that farmers were using 'Neem' (*Azadirachta indica)* leaves while storing wheat grain in order to protect from insect-pests.

Application of poultry manure in the field to increase the fertility of soil:

The farmers were using poultry manure in the field they believes that poultry manure will increase the fertility of soil, this finding were accordance with Prasad (2009), applicationof sheep/goat/poultry manure (FYM)- farmers were following this practice by heaping the sheep/goat/ poultry manure from the daily collections. Farmers felt that use of FYM adds good nutrients to the soil. Similar findings also reported by Mukuandan (1990). They felt that produce obtained by using FYM (*i.e.* cobs, leaves and stalks) is having a better consumption value. Some farmers explained that manure makes the soil more friable and rich in nutrients which help in root development. All the scientists felt that this practice is rational and farmers must continue it.

Usage of cow dung in flower trees:

Farmers were using cow dung in flower trees to improve the fertility of soil and to increase the water holding capacity of the soil and to prevent pest and disease in flower trees.

Clipping the seedling tip of paddy:

Farmers were practicing clipping seedling tipsto control stem borer attack in paddy field.

Spraying of ash in the soil:

Farmers sprayed ash in the field to control powdery mildew disease. Nyando *et al.* (2013) also reported that application of ash by the farmers to control pest and weeds in their fields.

Application of ITK for livestock:

Preparation of laddu with the mixture of onion, Jaggery and Jowar:

Farmers used to keep laddu mixture (laddu prepared with mixture of onion, Jaggery and Jowar) to buffalos to control stomach pain of buffalos.

Conclusion :

Farmers and farmwomen have been practicing indigenous technical knowledge from centuries handed over from their ancestors. Documentation of ITKs is having significance for sustainable development. Some ITKs having scientific rational which can replace modern technology and also can give new innovative ideas for future betterment.

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