INDIGENOUS TECHNICAL KNOWLEDGE PREVAILING IN THE NORTHERN HILLS OF CHHATTISGRAH

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ABSTRACT

This paper outlines the salient feature of traditional practices in relation to agricultural field as well as livestock management. The study was carried out in the villages of district Balrampur-Ramanujganj, Chhattisgarh, revealed that the villagers use indigenous knowledge in their farming system. So far as, technical knowledge in agricultural practice in the village is concerned, the insect and pest control in some of the important crops like Pigeon-pea and Cucumber is found to be important one. Besides, it has been also found that there exists some of the important traditional knowledge for storage, fuel and drudgery reduction.

Key words: Indigenous technical knowledge, traditional agricultural practices, insect control, drudgery reduction.

The traditional knowledge is based on necessities, instinct, observation, trial and error and long experience of indigenous societies of different region. In recent years, there has been a resurgence of interest in traditional practice in the developing world. It is well recognized that the introduction of standardized technological packages has contributed a lot to the development of crop and animal sectors. These packages are based on the logic of top down technology transfer, which resulted in the weakening of local knowledge. It is observed that only limited number of technologies generated by National Agricultural Research System is being adopted by farmers, which indicate that the farmers are still in touch with their Indigenous Technical Knowledge (ITK). In this context, it is pertinent to identify and preserve these traditional technologies in order to sustain the productivity and protect the ecosystem. It will also help to develop alternatives to ecologically damaging agricultural practices, which will lead to sustainability in the long run. With this backup, a study was undertaken to identify, document and validate the ITKs practiced by the farmers in the northern hills of Chhattisgarh.

RESEARCH METHODOLOGY

The study was carried out in different villages viz. Changro, Santoshinagar and Kodaura of Balrampur-Ramanujganj district of Chhattisgarh during April 2012 to March 2013. The investigation is Ex-post-facto research, which is a systematic empirical enquiry in which the researcher does not have direct control of independent variables because their manifestation has already occurred or because they are inherently not manipulatable. All the respondents of different villages were interviewed through a questionnaire.

RESULTS AND DISCUSSION

Indigenous technical knowledge involves innovative practices evolved by the farmers on their own experiences, which are passed from generation to generation. Many of the modern agricultural practices based on indigenous agricultural knowledge are prevailing in the farming community. The ITK may vary from region and place-to-place based on the farmers need. This may prove a low cost ideal tool for sustainable agriculture. The ITKs prevailing in the studied village are as follows:

Blister beetle control: Blister beetles (Mylabris phalerata) are posing a great threat for the production of pigeon-pea by feeding the flowers. Subsequently checking the fertilization and lowering the yield drastically for couple of years in Shankargarh and Ramchandrapur blocks of district Balrampur-Ramanujganj, Farmers of the area growing pigeon-pea as a major pulse crop in rainfed uplands have evolved a indigenous technique, however they are not aware about the scientific logic behind the response they are getting in controlling of blister beetle. A number of blister beetles are tugged into a piece of stick and tied to the branches of pigeon-pea. These blister beetle releases an acid which has repellent action towards other blister beetles and probably because of this acid secretion these beetle is also called as Phaphola Beetle. Pest management of crop is also reported by other workers by other indigenous technology.

Cucumber preservation/value addition: Cucumber is an important cash crop and farmers of Kodaura Village of Balrampur block grow traditional old varieties of cucumber as an intercrop with maize during Kharif and harvest almost ripen fruits of cucumber with mature cobs of maize. They use to dry up the cucumber after removing the upper layer in the open sun and after drying seeds of ripe cucumber are sold in the hotels @ Rs. 150/- per k.g. and dried seed free cucumbers are stored and consumed during off season. By this way they get additional income from cucumber along with maize.

Seed storage: Farmers of the district use to store maize and garlic by making garlands and keeping them near by kitchen shed so that smokes of kitchen may reach up to
the stored garlands. By this practice they save stored maize from storage insects at least for six to eight months.

**Paddy straw storage along with animal shelter**: Farmers of the district make a permanent structure with the help of woods, which are used for making roof to store paddy straw and the space below it is used as a shelter for animals.

**Fuel**: Paste made by mixing cow dung with locally available dry leaf and finely chopped paddy straw is stored and then maize stem is covered with this paste and sun dried for 4-5 days. Such sun-dried dung sticks are effectively used as fuel. The major advantage of such fuel is that, it burns for longer duration emitting less smoke and is also cost effective.

**Grain storage bin**: Storage of grains is challenges since so many insects viz. Sitophilus oryzae, Sitotroga cerealella etc. attack the stored paddy and other grains. Farmers of the village Changro, block Shankargarh make storage bin from locally available bamboo sticks and store dried paddy in them and they keep the bins on mud made platforms and after storing paddy keeps the bin air tight
from mud paste. So many other workers have reported different kinds of storage bin developed by farmers.

**Drudgery reduction**: Women are real manager of the household in rural areas and for that they have to do lot of works. Some works are drudgery kind of and for that they developed some indigenous implements which can reduce drudgery. In the tribal pockets of block Shankargarh transport of woods for fuel from nearby forest and bundles of harvested stock besides water in earthen pots/ aluminum pots etc. is the major work done by women. Milling of rice and spices like turmeric was done by moosals earlier which was painful and causing drudgery. To avoid the same tribal women have adopted dhenki for milling works and ghondri for reducing the drudgery.

**CONCLUSION**

The documentation of ITKs showed richness of the time-tested traditional knowledge applied for protection of agricultural crops and livestock. Though, all the ITKs have been found effective as per the observations made by the farmers, they need to be validated scientifically along with the identification and isolation of active ingredients present in the materials used. Such studies will provide scientific rationality for use of ITKs in future. Since the ITKs seem to be cheaper, locally and easily available and have lesser side effects, the use of these ITKs may be encouraged. While encouraging the use of ITKs, some modifications to make them scientifically rational may be made. Since the study was confined to few villages of Balrampur-Ramanujganj District, generalisation of the study cannot be made elsewhere.

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**REFERENCES**