

Short Communication

Indigenous technical knowledge regarding agriculture and livestock practiced by the farmers in Jammu region of Jammu and Kashmir

NEERJA SHARMA

Krishi Vigyan Kendra (SKUAST-Jammu), Kathua 184101 Jammu and Kashmir, India

Email for correspondence: neerja1975@gmail.com

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ABSTRACT

Indigenous knowledge is the systematic body of knowledge acquired by local people through accumulation of experiences, informal experiments and intimate understanding of environment in a given culture. Indigenous knowledge is not only economically viable but also locally feasible. Indigenous technologies in agriculture are low cost, organic and eco-friendly in nature. They do not cause any damage to the air, water and soil; are safe to human beings and free from environmental pollution. But indigenous technology is diminishing day by day due to modern technology. In the present study the ITK of the farmers of Kathua district of Jammu and Kashmir has been compiled.

Keywords: Indigenous technical knowledge; agriculture; livestock; farmers

INTRODUCTION

Traditional knowledge, traditional wisdom, traditional practical experiences and traditional act of living are endless frontiers of models of innovations. Indigenous knowledge is the systematic body of knowledge acquired by local people through the accumulation of experiences, informal experiments and intimate understanding of the environment in a given culture. Such indigenous knowledge is not only economically viable but also locally feasible. Indigenous knowledge is diminishing at an alarming rate with ageing of those in the indigenous population with strong links to the past (Maundu 1995). The enhancement in the quality of life of the Indians who in great majority live in and depend on agricultural production system would be almost impossible if this rich tradition of indigenous technical knowledge (ITK) is kept inside (Berkes and Folke 1994). Indigenous not only stands for ingrained intrinsic knowledge but it also amenable to modification based on latest technical knowhow by local inhabitants through native means to suit their daily requirements. In other words it requires integration with modern scientific knowledge to generate a wide range of new ideas and practices for the betterment of mankind (Mishra et al 2011).

Farmers of backward as well as Kandi area of Jammu province have been practicing indigenous techniques since time immemorial. Most of these farmers are small and marginal farmers.

METHODOLOGY

The study was carried out to document ITK from the different backward/hilly areas and also Kandi areas of Jammu province. Farmers of Bani, Basohli, Billawer, Poonch, Rajouri and Kandi areas of Jammu were interacted. The information was collected during interpersonal interaction and group discussion.

RESULTS and DISCUSSION

The observations of the present study regarding indigenous technical knowledge have been summarized as under:

Indication of rain

- Ants carrying their eggs from one place to another indicates the initiation of rain.
- Sparrow bathing in water during hot summer days also indicates rain.
- Streaks of lightening in the east would lead to the rain.

- Fowl stretching its feather in hot summer days indicates rain.

Postharvest technology

- Rubbing the pulses with mustard oil helps in long storage and controls the pulse beetle attack.
- Addition of sugar in mango pickle helps to keep it green and fresh for longer time.
- Storage of garlic in bundles and hanging to the walls prevent disease infection of bulbs.
- Preservation of vegetables by drying them in summer make them available in severe winter in high snow-covered areas.
- Seeds of vegetables are stored by putting them in earthen pots after mixing with ash.
- Grains of cereal crops are stored in locally prepared storage bin called Kowl which is made up of clay.
- Kaladi is prepared from milk for the storage of milk.

Soil nutrient improvement

- Incorporation of *Sesbania* (Dhaincha) into the soil before paddy plantation enhances the fertility of the soil.
- Addition of ash into the soil is believed to reclaim the soil gradually and improve fertility.
- Addition of cow dung and cow urine improves the fertility as well as controls the insect pests.
- Mulching with *Adhatoda vesica* (Branker) in vegetables/fruit plants helps to conserve soil moisture and improves soil fertility.
- Laying of stone bunds around the field across the slope prevents soil erosion and conserves moisture.

Plant protection

- Use of neem/*Melia* seeds, kernels, leaves and cake was found effective against aphids, army cut worms and root knot nematodes.
- Ash is dusted to control aphids in vegetables.
- Use of asafoetida and flooding of field with water control the termite attack.
- Spraying of the extract prepared from the paste of chilly leaves and garlic cloves was found effective against caterpillars.
- Spraying of 20 days old butter milk helps to control sap sucking insects and caterpillars.
- A manlike effigy made up of rice straw wearing dress and head covered with earthen pot is erected in the field to scare the birds.

- Marigold is planted in tomato crop as a trap crop to control insects and root knot nematodes.
- Farmers of Kandi area of Jammu region use wild grown bushy shrub *Carissa spinarum* locally known as Gharna as fodder and strong fence around the crop to prevent the cattle.

ITK regarding livestock

- To improve lactation grounded seeds of tamarind are given to animals after roasting and soaking.
- Indigestion of animals is cured by giving pepper, molasses and betel leaf powder.
- To control ecto-parasites (lice and fleas) in animals, powdered naphthalene balls are applied all over the body and then washed with clean water.
- To cure constipation in animals 200 g of molasses dissolved in water are given.

Miscellaneous

- *Zizyphus nummularia* and *Z xylocarpa* locally known as Katthi ber are used for fruit, fuel, fodder and fencing purposes and wood is used for making agricultural implements like handle of Desi plough.
- Wood of *Acacia nilotica* and *A modesta* is used for making traditional agricultural implements locally known as Suhaga, Panjali and Sangi.
- Flowers of tree species like *Moringa oleifera* (Sohanjana) and *Bauhinia variegata* (Karal) are used for vegetable and pickle making
- Rubbing of seeds of okra with mustard oil before sowing keeps the pods free from itching while picking.

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