



ISSN (E): 2277-7695
ISSN (P): 2349-8242
NAAS Rating: 5.23
TPI 2023; SP-12(12): 1519-1521
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www.thepharmajournal.com
Received: 13-09-2023
Accepted: 16-10-2023

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Documentation of the indigenous technical knowledge

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Abstract

The present study was undertaken with the main objective to study the socio-economic profile of the ITK farmers. The study was conducted in Ratnagiri district of Konkan region of Maharashtra. In all 120 respondents were selected by using simple random sampling technique. The "Exploratory" research design was used for conducting the study. The data were collected through the personal interview. The data collected were processed and statistically analyzed by using -statistical technique like frequency, percentage, mean and standard deviation. Total 44 ITks were collected from the respondents. Out of 44 ITks, 19 ITK practices were collected to safeguard crops from wild pig damage, 15 ITK practices were collected to safeguard crops from monkeys, 5 ITK practices for rat/ bandicoot rat, 2 ITK practices for wild cattle, 2 ITK practices for rabbit and 1 ITK practice for porcupine.

Keywords: Socio-economic profile, ITK

Introduction

Indigenous Technical Knowledge (ITK) related to crop damage by wild animals often includes a range of strategies and practices that indigenous communities have developed over time to protect their crops and minimize losses caused by wildlife. The techniques are typically tailored to the local environment, species of animals involved, and the specific crops being grown. To curb the menace of wild animals include techniques for gathering and storing information about to control the crop damage. Indian villagers know many indigenous techniques and formulations which can control crop damage by wild animals without causing adverse effects. Indigenous knowledge practices are prevalent in rural India, and their extinction is a significant concern. Preserving indigenous knowledge is crucial for managing technical knowledge, respecting people's knowledge, preventing wild animal damage to crops, and incorporating it into crop development. The study, titled "Indigenous technical knowledge to curb the menace of wild animals," is based on this perspective. Traditional knowledge is primarily derived from human experiences, beliefs, and practices, collected from various sources such as manuscripts, photographs, folk literature, and grey literature. Ancient people developed the Vedas, Puranas, religious books, grey literature, ethno-botanical texts, and archaeological deposits, providing detailed accounts of their lives and methods of living. These sources also provide information on biotechniques, medicinal knowledge, breeding techniques, agricultural farming systems, healthcare techniques, religious and astrological guidelines, and cultural artifacts. While some indigenous traditional knowledge is available in written form in primary, secondary, and tertiary sources, most is undocumented and is available orally or in memory of the community. So documentation of ITK from indigenous or old peoples is necessary before its extinction.

The study was conducted with the general objectives of "Indigenous Technical Knowledge to curb the menace of wild animals". The specific objective of the study are as under.

1. Documentation of Indigenous technical knowledge related to wild animals.

Methodology

The present study was conducted in Ratnagiri district of Konkan region of Maharashtra. A simple random sampling was adopted for the selection of respondents. In all 120 respondents were selected for study from Ratnagiri district of Konkan region of Maharashtra. The "Exploratory" research design was used for the proposed study. The data were collected through the personal interview. The data collected were processed and statistically analyzed by using statistical technique like frequency, percentage, mean and standard deviation. The socio-economic profile study included characteristics like age, education, land holding, family size, cropping pattern, farming experience, proximity to forest and water body.

Results and Discussion

Wild Pig

- A fence should be made around the farm embankment using sarees. So that wild animals cannot enter inside the field.
- A plastic bag should be tied to a stick and the stick should be fixed in the field towards the wind. So wild animals get scared of the voice.
- Scatter the cut hair from the barbershop on the way of wild boars, those cut hair get into their nose and they feel itchy.
- Make a smoke of cashew nuts and coconut shells, wild animals aware of the presence of someone in the field so that they are afraid to enter the field.
- A powder or a chemical solution like (phorate and phenyl) with bitter/pungent smell should be applied around the farm embankment that deter wild animals.
- A stone embankment of about 4 to 5 feet height should be built on the boundary of the field. Because of that the wild boar cannot enter the farm.
- Scarecrow should be fixed in the field, they feel human is standing in the field.
- A stone and a tin box should be hung parallel to the tree in the field. So that the tin box continues to ring, because of continuous noise they don't come close to the field.
- Burn the leather on the farm embankment. Because burnt smell of leather they don't come there.
- In the field, two glass bottles should be hung almost parallel to each other and an iron rod should be attached to them in such a way that they will make sound on glass bottles. Because of that sound they won't come.
- The field should be fenced with thorny plants or wire. Because of that animals are not able to enter in the field.
- Naphthalene balls should be tied in the rows of trees or crops near the embankment, will keep wild animals away from the farm due to the smell.
- Keep buttermilk and garlic together for 15 days and then throw it sideways on the embankment, causes all the animals to run away due to its strong smell. This effect lasts for 8 days.
- At night, firewood should be lit near the field in such a way that it burns slowly, so that the animals misunderstand about presence of humans.
- Sticks should be wrapped with audio or video tape fixed near the embankment, it makes a sound at night when the wind blows and shines during a day, thus disturbing animals eyes.
- Throwing gual (red powder) on the side of the field causes the radium-like substance in it to glow and it hurts the eyes of the animals.
- Carbide gun should be used, it makes a loud noise and animals run away.
- Take a jute bag, put oil on it, then put two parts of red chilli on it, after putting oil on it again, wrap the jute bag with a tall piece of wood and tie it tightly with string so that it does not come off. After it is prepared, it is fixed in the desired direction and lit in the evening so that its smoke spreads everywhere and animals will not come. Do this experiment once a week.
- Taking a big sheet (oil) container cut square at the bottom and smearing it with cow dung, then adding coconut shell, red chillies and tar pellets to it, it gives a very pungent smell, then a medium height pipe was inserted

into the oil container with a hole at the top. So that the smoke should spread everywhere. The cut part should be towards the air and then it should be ignited. This experiment can be done even in rainy season.

Monkey

- Burn the firecrackers near the farm occasionally. Sound of firecrackers makes them run away.
- Put a piece of wet / dry fish in a perforated bag and hang the T-bag, it emits a strong smell and monkeys never eat meat so that they leave that place.
- Use catapult/fork (bechki) or air gun to drive away the monkeys.
- Using a megaphone, sounds of various wild animals and humans should be played up near the farm. So the monkeys feel that there is always someone in the field and they don't come.
- In the field, sound should be made on the empty tin box with the help of a stick.
- Fill a water bottle with red coloured water and keep such bottles on the farm embankment. The monkeys are afraid of red colour, so they do not come near the trees.
- The field should be fenced with net.
- The monkeys should be chased away by throwing light reflection with the help of mirror. It irritates the monkeys eyes.
 - Putting red chili powder in lahya (popcorn) and hanging it on a tree in the field. Monkey's have a habit that they always touch their eyes, if they touch their eyes, their eyes burn and they never come back.
 - Wet fish water should be sprinkled in the field, they don't tolerate its smell.
 - Scarecrow should be fixed in the field, they think that a man is standing in the field and they do not come.
 - The sound of Gayatri Mantra should be kept in the field for 24 hours.
 - By filling the lower layer with papers in the oil container and filling the upper layer with popcorn, the monkey would put his hand into the container to take the popcorn and his hand would get trapped.
 - By taking rice in a pot and adding poultry droppings to it, the monkey's hand gets itchy. So they never come.
 - The monkeys should be chased away with the help of domesticated dogs.

Rat / Bandicoot rat

- A ball of cloth dipped in burning oil and naphthalene balls should be kept near the field pits, its smell make them go away from the field.
- By placing alum stones near the burrow, its breath causes fire in the nose and throat of rats.
- After cutting an elephant foot yam (wild snake) and putting it in the mouth of the hole, it looks like a snake and they get scared.
- By placing the flowers of Gliricidia on the spot, its smell forced them to go away.
- A powder or a chemical solution with pungent smell like (phorate or phenyl) should be applied around the farm embankment.

Wild cattle

- Scarecrow should be fixed in the field, they feel that someone is standing in the field.

As a big log of wood is set on fire, they get scared of the fire and leave.

Rabbit

- Placing nets close to the ground prevents them from entering the field.
- The rabbits should be chased away with the help of domestic dogs.

Porcupine

Chilli smoke to drive the salindar (Porcupine) out of the burrow.

Conclusion

- The abundance and various facets of traditional knowledge in field conditions pertaining to wild animals are extensive. The majority of these practices demonstrate ecological prudence, are tailored to specific locations, and emphasize sustainability. While holders of Indigenous Traditional Knowledge have their own reasoning and justification for adhering to these indigenous practices, it is imperative to subject these methods to scientific validation and scrutiny before advocating their application in similar farming system locations.
- Deforestation disrupts natural habitats, compelling wild animals to forage in agricultural areas, causing widespread crop damage. As their homes vanish, the intricate balance of ecosystems is disturbed, leading to increased human-wildlife conflicts. Addressing this issue necessitates conservation, reforestation, and sustainable land-use practices for harmonious coexistence.

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