

Original Research Article

Knowledge of Existing Traditional Practices of Paddy among Tribal Farmers in Mandla District, Madhya Pradesh

Varsha Upadhyay*, N. K. Khare and Sonam Upadhyay

Department of Extension Education, JNKVV, Jabalpur, M.P., India

**Corresponding author*

ABSTRACT

Farmers in India have been using traditional health care practices in dairy farming since time immemorial. Tribals in course of their close interactions with nature and natural resources have to make certain decisions to solve the problems they encounter in their day to day life while managing the land and environmental resources for survival. The present study was carried out during 2019-20 in the tribal block of Mandla district of Madhya Pradesh. Ex post-facto research design was followed in this study, since different variables chosen for the study had already occurred. Total 300 tribal farmers who cultivating paddy crop were selected from 15 villages of three blocks i.e., Mandla Bichhiya and Nainpur of Mandla district. The aim of this study is to know the knowledge existing traditional practices of paddy by tribal farmers. The data collection was done through interview schedule. Data were analyzed with help of suitable statistical tools. It was found that majority (73.34%) of tribal farmers had high knowledge of traditionally existing practices of paddy crop.

Keywords

Tribals, Paddy,
Traditional
Practices,
Knowledge,
Farmers

Introduction

Indigenous Technical Knowledge (ITK) in crop, livestock and fish farming as well as forestry has been well documented by many researchers across the country during different periods. In many cases, concerted efforts have also been made on validation of ITKs based on judgment of researchers and in a few cases useful products have been developed. In view of cultural compatibility, social acceptability and economic viability, ITKs are bound to play a predominant role in farming dominated by resource poor farm families. While much efforts have been published in peer reviewed journals and popular magazines, evidence on variability of ITK's usage across various regions to solve a

particular problem is not available. Cross regional analysis would help to understand the diversity and similarity of different ITKs documented and used by farming community. Since most of the ITK's have a significant bearing on farming.

Tribals are generally steeped with a number of superstitious and primitive beliefs related to crop production and protection practices. Some of the beliefs play a vital role in deciding the sustainability of a technology to reduce the cost of cultivation and to propagate eco-friendly agriculture (Sundaramari and Ranganathan, 2003). According to Haverkort (1995) ITK is the actual knowledge of a given population that reflects the experiences based on tradition

and includes more recent experiences with modern techniques. ITKs are broad based, ecologically sound, environmentally safe, socially acceptable and economically resilient. Identifying, documenting and incorporating the indigenous knowledge systems into agriculture extension organizations is essential to achieve sustainable agriculture development (Rajasekharan, 1993).

India, being a country with most ancient civilization in its history, occupies a unique position in the world for possessing a treasure house of Indigenous Technical Knowledge (ITK) and the tribal population. The tribal population gives us many simple techniques which lead to the local resource management and recycling the natural resources by a number of techniques. These are also relevant to the modern practices, when we analyzed these techniques for to know their scientific base. The vast tribal areas, spreading in the forest and hilly territories of the country, have virgin farming lands that are unexploited by modern agricultural technologies of chemical fertilizers and pesticides. Hence, it provides us with the most nutritious and chemical-free agricultural products to which the modern world is renaming as 'Organic products'. The knowledge thus generated over the years is time tested and has the attribute of eco-friendliness. Such knowledge is called the 'Indigenous Technical Knowledge (ITK)' or 'local knowledge' or 'traditional knowledge'. This knowledge is based on experience, often tested over centuries of use, adapted to local culture and environment and is dynamic and changing.

The knowledge related to indigenous traditional is depleting day by day because of lack of awareness about its value and impact, as well as proper documentation. There is an urgent need of effort to identify such valuable

information for the welfare and betterment of society. Therefore, there is need to study, identify, document and share, some of the specific experiences of the tribal farmers collected during the field work at grass root level of programme areas.

Materials and Methods

The study was conducted by adopting an ex-post facto research design method to study the knowledge of existing traditional practices of paddy crop by tribal farmers. The study was conducted in Mandla, Bichhiya and Nainpur block of Mandla districts of Madhya Pradesh. From each Block five villages were selected, and from each villages, 20 farmers were selected for this study by following random sampling method. Thus the study represents 3 blocks, 15 villages and 300 respondents. For testing the knowledge of the existing traditional knowledge of paddy crop, questionnaires containing different lists of traditional practices of paddy crop pertaining to Plant Protection and Post-harvest technology were prepared. The mean score was calculated by summing the overall scores and divided by the number of judges for a given item. Tribal farmers were interviewed through personal interview. Prior to interview, tribal farmers were taken in to confidence by revealing the actual purpose of the study and full care was taken in to consideration to develop good rapport with them. For the data collection well designed and pre-tested interview scheduled were used. Collected data were analyzed by the help of various statistical tools i.e. frequency, percentage, mean and rank etc.

Results and Discussions

Table 1 shows that the knowledge of existing traditional practices of paddy crop by tribal farmers, they had 100 percent knowledge of

Spraying the ash in nursery for protecting the seedling for falling before the rainfall, Soaked the seed of paddy for 24 hour in gunny bag which promote better germination, Transplanting is done along with wind direction. The total mean score of these practices was 3 with rank I (a), I (b), I(c) respectively. The 76 per cent of farmers had complete knowledge of Neem+oil+water with 1:1:1 mixture spray to control brown plant hopper followed by 24 per cent had partial knowledge with total mean score 2.76 with rank II. The 78.34 per cent of farmers had complete knowledge of Farm waste is burnt on nursery bed. The heat generated by burning added potash in soil followed by 18.00 and 03.66 per cent had partial and no knowledge respectively with total mean score 2.74 with rank III. The 70.00 per cent of farmers had complete knowledge of Common salt dissolved in water and sprayed in field for controlling weed followed by 25.00 and 15.00 per cent had partial and no knowledge respectively with total mean score 2.65 with rank IV. The 66.34 per cent of farmer had complete knowledge of, with the help of mud and bricks they made a structure called kothi and stored the rice grain for protecting rice by rodents followed by 25.66 and 08.00 per cent had partial and no knowledge with total mean score 2.58 with rank V. The 66.66 farmers had complete knowledge of Using kerosene oil with cow dung placed in paddy field to control bunki insect followed by 28.00 and 07.04 per cent had partial and no knowledge respectively and 66.00 per cent had complete knowledge of Smoke of mahua is used to control bacterial blight followed by 25.00 and 09.00 per cent had partial and no knowledge respectively, both the practices had total mean score 2.57 with rank VI (a), VI (b) respectively. The 62.66 had complete knowledge of Neem+kerosene oil mixture used for controlling the insect followed by 21.34 and 16.00 per cent had partial and no knowledge with total mean score 2.46 with

rank VII. The 63.00 per cent had complete knowledge of Bhelama (*Anacardium* spp.) stem twigs used for protecting the paddy crop by gundhi bug followed by 17.34 and 19.66 per cent partial and no knowledge respectively with total mean score 2.43 with rank VIII. The 59.00 per cent of farmers had complete knowledge of 3% neem oil extract and 3% mahua cake at the rate of 1:1 ratio is used to control the pest while 18.66 and 22.34 per cent had partial and no knowledge respectively with total mean score 2.36 with rank IX.

It was observed from Table 2 that out of total tribal farmers, 12.66 per cent had low knowledge of existing traditional knowledge of paddy crop whereas 14.00 per cent farmers had medium knowledge and 73.34 per cent of had high knowledge of existing traditional knowledge.

Thus, it can be concluded that majority (73.34%) of tribal farmers had high knowledge of traditionally existing practices of paddy crop.

In conclusion, knowledge regarding the existing traditional practices among tribal farmers revealed that, Most of the tribal farmers have 100.00 per cent complete knowledge about spraying the ash in nursery for protecting the seedling for falling before rainfall, Soaked the seed of paddy for 24 hours in gunny bag which promote better germination, and transplanting is done along with wind direction followed by 78.00 per cent of farmers had complete knowledge about farm waste is burnt on nursery bed. The heat generated by burning added potash in soil, 76.00 per cent of tribal farmers had complete knowledge about Neem+oil+water with 1:1:1 mixture spray to control brown plant hopper, 70.00 per cent had complete knowledge about common salt dissolved in water and sprayed in field for controlling

weed, 66.34 per cent had complete knowledge about structure called kothi made by mud and bricks and stored the rice grain for protecting rice by rodents, 64.66 and 66.00 per cent of farmers had complete knowledge about Using kerosene oil with cow dung placed in paddy field to control bunki insect and smoke of mahua is used to control bacterial blight respectively. The 62.66 per cent of farmers had complete

knowledge about Neem+kerosene oil mixture used for controlling the insect, 63.00 per cent of farmers had complete knowledge about Bhelama (*Anacardium* spp.) stem twigs used for protecting the paddy crop By gundhi bug and 59.00 per cent of farmers had complete knowledge of 3% neem oil extract and 3% mahua cake at the rate of 1:1 ratio is used to control the pest.

Table.1 Practice wise Knowledge regarding existing traditional practices among the tribal farmers

S.No.	Practices	Knowledge			MS	R
		C	P	N		
1	Common salt dissolved in water and sprayed in field for controlling weed	210 (70.00)	75 (25.00)	15 (15.00)	2.65	IV
2	Neem+kerosene oil mixture used for controlling the insect	188 (62.66)	64 (21.34)	48 (16.00)	2.46	IV V
3	Spraying the ash in nursery for protecting the seedling for falling before the rainfall	300 (100.00)	00	00	3.0	I(a)
4	Neem+oil+water with 1:1:1 mixture spray to control brown plant hopper	228 (76.00)	72 (24.00)	00	2.76	III
5	Soaked the seed of paddy for 24 hour in gunny bag which promote better germination	300 (100.00)	00	00	3.0	I(b)
6	Using kerosene oil with cow dung placed in paddy field to control bunki	194 (64.66)	85 (28.00)	21 (907.04)	2.57	VI(a)
7	with the help of mud and bricks they made a structure called kothi and stored the rice grain for protecting rice by rodents	199 (66.34)	77 (25.66)	24 (08.00)	2.58	V
8	Farm waste is burnt on nursery bed. The heat generated by burning added potash in soil	235 (78.34)	54 (17.34)	11 (03.66)	2.74	II
9	Transplanting is done along with wind direction	300 (100.00)	00	00	3.0	I(C)
10	Bhelama (<i>anacardium</i> spp.) stem twigs used for protecting the paddy crop by gundhi bug	189 (63.00)	52 (17.34)	59 (19.66)	2.43	VII I
11	Smoke of mahua is used to control bacterial blight	1998 (66.00)	75 (25.00)	27 (09.00)	2.57	VI(b)
12	3% neem oil extract and 3% mahua cake at the rate of 1:1 ratio is used to control the pest	177 (59.00)	56 (18.66)	67 (2.34)	2.36	IX

(Figures in parenthesis indicate percentage)

C=Complete, P=Partial, N=Nil, TS=Total score, MS=Mean score, R=Rank.

Table.2 Distribution of farmers according to knowledge of existing traditional knowledge

S. No.	CATEGORIES	FREQUENCY	PERCENTAGE
1	Low	38	12.66
2	Medium	42	14.00
3	High	220	73.34
	TOTAL	300	100.00

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