IDENTIFICATION DOCUMENTATION OF AND SCIENTIFIC TECHNOLOGICAL KNOWLEDGE (STK)

Bharat Bhushan[1], R.S. Narwal[2] & J.S. Malik[3]

We inhabit a single planet but several worlds. There is a world of abundance where plenty brings pollution. There is a world of want, where deprivation degrades life. Such a fragmented planet cannot survive in harmony with nature and environment indeed with itself. For over decades there have been tremendous advance in agriculture technology. The Indian farming, it is said, has heaved itself out of the ruts of traditional farming. Agriculture is the chief source of livelihood for millions of masses worldwide. Spectacular break through in agricultural research, technology development and dissemination under the umbrella of Green Revolution have been major factors in increasing both agriculture production and productivity. With increase in crop yield from Scientific Technological Knowledge (STK) reaching a plateau in most of the countries and the environmental problems due to excessive use of agro-chemicals i.e. fertilizer application a matter of concern, the need for Sustainable Agriculture is increasingly being felt, the world over. In the process of attaining higher level of food production for matching the demands of the growing population during the past four decades emphasis was laid on intensive agriculture practices. The STK generated over the past four decades have proved detrimental to the natural resource base and the environment in different part of the world. Further the population is increasing day by day it will difficult to feed such a burgeoning population in near future only depend on Indigenous technology.

It is believed that scientific technologies are the only alternative to feed the tremendously growing population. But simultaneously we required sustainability in production also.

METHODOLOGY

The present investigation was conducted in Jammu and Kashmir State of India comprising extreme western sector of the Himalayas and occupies a Central geographical location in the Asian Continent Out of these two divisions Jammu division was selected purposively because it has more cultivable area for agriculture. Jammu division has six districts. Out of the six districts three districts viz. Kathua, Jammu and Udhampur were selected purposively because they has higher net sown area as compared to other district. Two tehsil from each of the selected district were selected by simple random sampling technique. Thus, 6 tehsils were selected for the investigation purpose.A list of revenue villages under the selected tehsils was prepared. Out of this list two revenue villages were selected from each tehsil with the help of simple random sample technique. In this way total 12 revenue villages were selected. A list of all the farmers was prepared. From this list 20 farmers from each selected revenue village were selected with the help of random sampling technique. By this way a sample of 240 farmers was drawn for the study purpose.

1. Ph.D. Scholar, 2. Associate Director Extension, CCS HAU, Hisar, Haryana.
3. Assoc. Prof., HRD, Extension Education Institute, Nilokheri.

The package of practices recommended by the scientists were taken into account for documentation of STPs. An attempt was made to asses the Scientific Technologcal Knowledge of farmers about important crops with the help of schedule constructed specially for the present investigation. Six crops namely What, Mustard, Potato, Paddy, Maize, and Urd were identified as the important crops of the Jammu diveision on the basis of production and such questions included in the questionnaires were pertaining to recommended producation technology of these crops to access the Scientific Technological Knowledge for each crop and to work out knowledge index.

$$\text{Knowledge Index} = \frac{X1 + X2 + X3 \ldots\ldots\ldots\ldots Xn}{N}$$

Where,

(a) X1 + X2 + X3 ..... Xn are correct answers for first, second, third.....nth questions and N is the maximum possible score to secure or the number of questions. Equal weight age was given to all items assuming that all the items included were equally difficult to under stand, apply and recall. On the basis of knowledge scores, the farmers were then classified into four groups accordingly as presented below–

(i) The farmers who obtained a score below mean –1 S.D were categorized as having Low Knowledge Level.

(ii) The farmers who obtained a score between Mean- 1S. D and Mean + 1 S.D. were categorized as having Medium Knowledge Level

(iii) The farmers who secured a score above Mean + 1 S.D. were categorized as having High Knowledge Level.

The three levels of knowledge, viz.; low, medium and high were then allotted a score of 1, 2, and 3 respectively for the purpose of calculating the mean scores of each components.

RESULTS AND DISCUSSION

Data in Table-1 reflects the overall assessment of the knowledge level of the farmers in study area.

Table 1. Percentage of farmers under different knowledge levels on various aspect of Scientific Technological Practices of agriculture

S. No.	Crops	High	Medium	Low	Mean Score	Rank
1.	Wheat	(67)27.91%	(125)52.08%	(58)24.16%	70.68	I
2.	Mustard	(30)12.09%	(143)59.58%	(67)27.91%	61.11	V
3.	Potato	(33)13.75%	(126)52.5%	(81)33.75%	60.00	VI
4.	Rice	(26)10.23%	(178)74.16%	(36)15.00%	65.27	II
5.	Maize	(40)16.67%	(148)61.67%	(52)21.67%	65.00	III
6.	Urd	(43)17.91%	(127)52.91%	(70)29.16%	62.90	IV
7.	Overall Knowledge	16.52%	58.21%	25.27%		

Figure in parenthesis indicate no. Of respondents

It is apparent from the table that there were 25.27per cent, 58.21per cent, and 16.52 per cent farmers who may be categorized under low, medium and high knowledge levels, respectively. It leads to the conclusion that about 60 per cent respondents have medium knowledge level with respect to production technology of all the six important crops in the study area.

Crop-wise analysis shows that out of six crops, wheat was given top priority (70.68) on the basis of the amount of Scientific Technological Knowledge of the farmers followed by Rice (65.27), maize (65.00), Urd (62.90), mustard (61.11), and potato (60.00).

Findings revealed that about 58per cent farmers were having medium knowledge level about production technology of all six important crops of the region. Approximately 25 per cent respondents were having low knowledge level about STPs. This shows that implementation of new extension approach produced significant impact in improving the knowledge level of farmers. The probable reason of this finding may be that the farming was shifting from subsistence to commercial. Every farmer wanted to get maximum production from per unit area. It was general notion among the farmers that the production could be enhancing only by adopting Scientific Technological Knowledge. Secondly knowing about scientific technologies was also attached with the prestige of farmers in society. Hence, the above said result obtained. The education is also important for the substantial amount of knowledge among the farmers about Scientific Technological Practices of important crops. The low knowledge level of the farmers may be attributed to low literacy level, poor contact with extension agency, poor contact with farmers etc. Further, the crop-wise analysis showed that knowledge level of farmers about wheat, rice and maize was high as compared to other crops of the locality. This might be due to the fact that these crops were more popular in the area where the study was conducted. The farmers seemed to be more eager to know the latest development in these crops. The finding has also been supported by Bangarva (1985), Sharma (1994) and Sharma (2000) by concluding that there was substantial amount of knowledge among the farmers about Scientific Technological Practices of important crops.

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