

RELATIVE EFFECTIVENESS OF DIFFERENT SOURCES OF  
INFORMATION AT VARIOUS STAGES OF ADOPTION  
OF WHEAT TECHNOLOGY AMONG UNTRAINED  
AND TRAINED FARMERS OF  
F. T. C. JABALPUR

THESIS

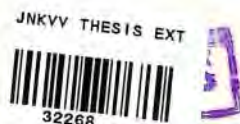
Submitted to the  
Jawaharlal Nehru Krishi Vishwa Vidyalaya, Jabalpur  
in partial fulfilment of the requirements  
for the Degree of

MASTER OF SCIENCE  
IN  
AGRICULTURE  
( EXTENSION EDUCATION )

By  
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JAWAHARLAL NEHRU KRISHI VISHWA VIDYALAYA  
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No part of the thesis has been submitted for any other degree or diploma (certificate awarded etc.) or has been published/published part has been fully acknowledged. All the assistance and help received during the course of the investigations have been duly acknowledged by him.

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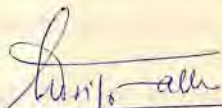
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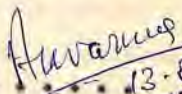
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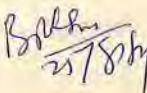
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REPRODUCTION

## CHAPTER I

### INTRODUCTION

As a matter of fact, it is a common observation that Indian farming in our country is speedily undergoing transformation in approach from a "sub-sistence farming and traditional way of life towards a more scientific and modernised. Negligence cannot be paid to farming as it is the primary occupation in our country.

With the application of science and more sophisticated technology to farming system, educated youths of today are adopting farming as an occupation in preference to other jobs.

Some kind of communication media as sources of information is needed to impart knowledge to the farmers for adoption of the latest farm technology. There is a favourable atmosphere for organizing training courses for farmers to acquaint them with the latest findings and also for teaching them the ways of performing the various farm operations successfully.

Emphasis has already been paid to agriculture by central as well as by the state governments who are trying to bring about speedy improvements in agricultural production of our country. Our Honourable Prime Minister Mrs. Indira Gandhi emphasised during 4th and 5th Five Year Plans on the improvement of agriculture by bringing about technological revolution in the field.

For making farming a sustaining and an attractive profession, proper knowledge of inputs and skills to handle them are essential. The inputs like varieties, fertilisers, pesticides, implements and irrigation are universally accepted as pre-requisites for increasing the farm production. But mere implimentation of these inputs can not result into outstanding yields. The inputs also serve as limiting factors, hence proper and more efficient use of various inputs can result in better farm output.

Knowledge can be imparted to the farmers on their own farms through a variety of educational methods like organising personal visits, illustrating the merits of various recommended practices, conducting successful crop demonstrations, making available the required literature, broad-casting the farm information through radio and by arranging visits of the farmers to Farmer's Training Centres and research farms where they may have all opportunity to discuss their problems with the concerned specialists and seek their proper solutions.

Wheat is one of the major crop in the state of Madhya Pradesh coming next to paddy, covering nearly 316,3400 hectares. Several methods are being used for dissemination of wheat technology to the farmers.

Adoption of the innovations differ from farmer to farmer depending upon the use of various communication sources.

Significance of the Study :

In the proposed research project, due emphasis has been paid to study the effectiveness of different sources of information at various stages of adoption. These sources of information are of varied importance at different stages of adoption. All the sources are not equally effective in communicating the messages to the farmers and even differs from person to person.

For increasing the output, it is necessary to impart the knowledge to the farmers and also to acquaint them with modern technologies of wheat cultivation. Only information about the improved wheat technology to the farmers is not sufficient, but it's proper implementation is very necessary.

Adoption of the wheat innovation by the farmers vary from farmer to farmer depending upon their situation and availability of various communication sources. The use of different sources influences the adoption of the technologies by the trained and untrained farmers, hence this study has been undertaken to identify the effectiveness of the various sources of information at various stages of adoption of different package of practices of wheat cultivation in case of trained and

untrained farmers. This will also provide information about the pattern of utilising the various sources of information at various adoption stages by two different groups of farmers.

Objectives of the Study :

The specific objectives of the study were as under :

1. To identify the sources of information used by the trained and untrained farmers relating to the improved farm practices of wheat cultivation.
2. To study the utilization of the various sources of information by the farmers at various stages of adoption (i.e., awareness, knowledge, attitude and adoption).
3. To measure the effectiveness of the various sources of information in relation to different farm practices of wheat cultivation at each stage of adoption.

Limitations of the Study :

1. The study was limited to few selected villages of Jabalpur and Panagar blocks of the district Jabalpur where the farmers were trained in majority during the last two years.

2. The study excludes the farmers who were very big having 30 acres size of land holdings and above.
3. The study is confined to only three major farm practices of wheat i.e., Varieties, fertilizers and plant protection measures.

REVIEW OF LITERATURE

## CHAPTER II

### REVIEW OF LITERATURE

#### A. Meaning of Training :

Planty et al. (1949) described training as "Training in commerce and industry is a specialized and very practical form of education. Basically, it prepares people to do their jobs well. To accomplish this, it develops the skills that make for rapid, effective work, the knowledge that is meant for intelligent actions and attitudes that bring willing cooperation with fellow employees and with management.

The psychological and psychoanalytical dictionary (1959) gives the meaning of training as "The totality of instructions, planned circumstances and directed activity to which an animal or person is subjected to induce learning".

Flippo (1961) has explained training as "The act of increasing the knowledge and skills of an employee for doing a particular job."

Taylor (1961) said that "The means to bring about a continuous improvement in the quality of work performed by the staff and individuals. It should equip the leaders with necessary knowledge, skills or abilities and attitudes to perform their job".

Milton Hall (1962) gave the definition of employee training as the process of aiding employees to gain effectiveness in their present or future work through the development of appropriate habits of thought and action, skills, knowledge and attitude.

United Nations department of Economics and Social affairs has opined that training must be conceived in its broad sense, as involving more than direct teaching in class room or in the field. Training is the entire relationship of staff to trainee.

Sharma and Pisharody (1962) have stated that training goes much further than teaching. It involves imparting knowledge plus development of skills and habits.

Lynton and Pareek (1967) while explaining the concept training stated that training as we see it aims at a lasting improvement on the job. The kind of education we call training more of the distinction latter is in truth, not for knowing more but to behave differently.

Operationally, training has been defined in this study as a kind of learning process where a selected groups of individuals undergo learning experiences to internalise the skills, resulting in the modification of behaviour towards specific job-performance.

Bornell and Hill (1945-46)<sup>8</sup> pointed out that the basic purpose of training is to increase the efficiency of making decisions.

Sanders (1967)<sup>25</sup> has rightly emphasized the importance of training in increasing agricultural production - "Training is necessary for a job to be done properly. It saves many heart breaking experiences. Training is necessary to bring about a desire on the part of the masses to want to increase production, to have understanding of meaning of increased agricultural production, to have the know-how for increasing production and to have the needed support from Government and public.

Singh, A.P. (1967)<sup>30</sup> defined training as "The process by which the desired knowledge skill, attitudes and ideas are included, fostered and reinforced in an organism.

In the words of late Prime Minister Pt. Jawaharlal Nehru (1967)<sup>12</sup> the essence and importance of training is "If the community development movement, which aims at changing the whole texture of society, if our thinking and our actions ever fails in achieving its objectives, it will not be for lack of money, but for lack of training personal. Training is necessary in whatever field of activity one may be engaged in".

Sanders (1967)<sup>26</sup> has stated that "It is rightly recognized that extension training in its various forms contributes highly to increased agricultural production. Although not the total resource of ability, training for the right objectives in the right perspective means the difference between success and failure. It is reasoned that at the heart of development is education and training which is knowledge. And knowledge is power and power can move and change things and conditions.

#### B. Genesis of Farmers' Training in India :

Education and training of village leaders used to be one of the most important aspects of the rural reconstruction programme in India even prior to the starting of community development programme. From its inception in 1948, the Etawah Project also included it among the project activities (Mayer 1958). These were integrated types of camps concerning all aspects of rural development and were held for six or seven days, followed by a study trip of two to three days.

With the advent of the community project in 1952, training of village leaders became a part of the community development programme as reported by the programme evaluation organization (1961). The objectives of these training camps were generally to broaden the out look of the trainees and particularly to impart training in

improved methods of husbandary in agricultural and livestock, knowledge of scientific practices like health and sanitation.

The sixth annual conference of community development (1957) gave a new direction to the training in the light of the emphasis on agricultural production programmes in C.D. Blocks. The conference recommended that for purposes of training in the villages five categories might be taken into account. Agricultural groups with agriculture, animal husbandary and minor irrigation was given first preference for training. A new nomenclature was given to the trained farmers as Gram Sahayak. According to Taylor, Eslinger and others (1965) this training of Gram Sahayak was taken up to promote adoption of improved agricultural practices by his brother farmers and to promote all agricultural activities leading to increased production. According to Director of Extension Training (1965), sixty three such training centres were in operation in various states of the country during the third five year plan period.

The advent of I.A.D.P. (1961) and I.A.A.P. (1964) changed the emphasis and pattern of farmers training. The training were of short period, focussing emphasis more towards specific for particular crops to step-up farm production. In addition to training of farmers, schemes were envisaged to train farm women and for exchange visits by farm leaders within this country. A comprehensive

scheme for the systematic training of farmers, farm women and young farmers in the cultivation of high yielding varieties was drawn up for implementation during the fourth five year plan.

Twenty five farmers training centres under this new scheme have already been sanctioned by the government of India during 1966-68<sup>7</sup>.

C. Importance of Farmers Training :

Farmers' trainings is specially considered to bear paramount importance in guiding the farmers in adoption of improved technology for achieving high agricultural production. Many authorities in India and abroad have expressed their views for the imminent need of farmers training to improved agriculture.

Cheng (1965) emphasized that the farmers' training was a big field, because it dealt with millions of farmers many of whom could not read or write. Hence, they must be trained for increasing agricultural production.

Mosher (1960) while explaining the importance of farmers education stated "since abilities of farmers and the decisions they make about their farming operations are so crucial to the rate of agricultural development, special programmes designed to facilitate farmers' education are an important phase of education for development".

Report of the first regional seminar on agricultural education (1966) sponsored by food and agricultural organisation emphasized that "It is the farmer who will produce more and better food and put in the market. Unless they are given chances for training, all other educational efforts are not likely to be very fruitful.

Barooah (1967) has stated that farmers' training would play the main role in successful implementation of the high yielding varieties programme.

According to Singh and Sohal (1971)<sup>32</sup> "There is a lot of technical know how to be properly disseminated. These are favourable conditions for extension workers to accelerate the speed of adoption of innovations by arranging training courses for the farmers. By providing the required technical "know-how" the training programme fulfills a great need of the farmers.

Patel and Patel (1968)<sup>19</sup> have stated that it has now been realised that to achieve higher yield per unit area, one of the most important thing is the training of farmers. With few exceptions almost all the trained farmers gained higher adoption scores than those of the matched untrained farmers in all the categories of characteristics age, caste, educational status and area of land cultivated. Thus training has considerable impact on the adoption of improved farm practices.

According to Sinha and Sehgal (1970)<sup>35</sup> the trained farmers bring about visible all round improvements in their farm organisations through adoption of profitable cropping pattern, high yielding varieties of crops, balanced use of fertilizers, timely and proper application of pesticides and improved work methods. Their farms act as demonstration centres for other farmers. The training programme, thus, has a great multiplier effect.

Sharma and Murthy (1971)<sup>29</sup> stated that both trained and untrained farmers as well as progressive and non-progressive recognized the need for training in plant protection and use of manures, fertilizers and improved seeds. Progressive farmers wanted only one training exposure but non-progressive as well as small farmers definitely preferred more than one exposure.

Sinha and Sehgal (1970)<sup>35</sup> describe that the programme of practical training in agriculture for young farmers owes its origin to the initiative of Dr. M.S. Randhawa, the then Director General, I.A.D.P. and Special Secretary to the Ministry of food and Agriculture, Government of India, who called upon all the states in India to draw up schemes for imparting comprehensive training to farmers in scientific techniques of farming.

According to Sharma and Murthy (1971)<sup>29</sup> "Small and medium farmers need full financial assistance for attending training while big farmers did not demand it as a precondition for attending training. More emphasis was laid on field trips, visit to method and result demonstration and group discussion. Practical rather than theoretical presentations were preferred.

Mathur states that young farmers could be attracted towards a training which gives them greater confidence in using machinery, sprayers and fertilisers.

Mathur (1967)<sup>17</sup> further stated that farmers' training is no matter of the periphery but it is central to agricultural production. It has to be part and parcel of any programme of production. The training programme should be given same priority and attention by the organizers of agricultural production, as by the trainers and educators.

#### Radio as an Effective Mass Media :

Mathur and Neurath, (1959)<sup>18</sup> studied on radio farm forms in India reported that radio forum members learned a great deal more about the topic under discussion than did adults in the villages without the forum. In the non-forum villages most of the learning gains were made in the villages with radio. Illiterate members of the forum

actually gained more than did the literate. The reaction to radio farm forum was on the whole most enthusiastic and the demand that this be made a permanent feature was practically unanimous.

Sitaram (1963)<sup>36</sup> in his experimental study on the effect of radio upon the rural people in India reported that farming knowledge was higher in villages with community radio facilities than in villages without radio or with private radio sets.

Jain (1969)<sup>13</sup> concluded that group radio listening with group discussion is distinctly more influential than group listening done in bringing about changes in knowledge, beliefs, attitudes and behavioural intention to adopt innovations.

Saini and Sehgal (1973)<sup>27</sup> reported that cultivators have a high opinion regarding agricultural radio broadcasts and that they serve useful purposes in guiding the farmers on matter of agriculture. Further the relationship between opinion of the respondent about agricultural broadcasts and the personal traits indicated that moderately educated respondents with primary and middle class education showed high level of opinion over both the poorly and highly educated respondents. Regarding social participation the study indicated that the level of opinion was the function of social participation.

Kelsey and Hearn (1963)<sup>1</sup> emphasised that radio reaches large number of people inexpensively and reaches those people who could not be contacted by other means of communication. The radio broad casts build enthusiasm, maintaing interest and stimulate people to want to know more about a particular programme. Good communication is an essence of good extension teaching, and so it is generally said that one has not taught if he has not communicated.

According to Lasswell (1960)<sup>2</sup> "A convenient way to describe an act of communication is to answer the questions like who, says what, in which channel, to whom, with what effect? The scientific study of the process of communication tends to concentrate upon one or another of these questions".

According to Schramm (1960)<sup>5</sup> when we communicate we are trying to establish a "commonness" with some one, that is we are trying to share information and ideas or attitude.

According to Goleman and Marsh (1955)<sup>11</sup> "the term communication is often used in a very broad sense and some times in a more narrow sense. In the broadest meaning all educational and action programmes in Agriculture are communication. If one is conducting a

programme designed to secure that adoption of new Agricultural innovations, the extent to which such a adoption takes place is in large degree a measure of the success that those responsible for the programme have had in communicating their ideas.

Loomis and Beegle (1963)<sup>3</sup> explain the meaning of communication as the process by which information, decisions and directives pass through a social system and the ways in which knowledge opinions and attitudes are formed or modified.

Schram (1960)<sup>5</sup> says that mass communication is essentially a working group organized around some devices for circulating the same message at about the same time to a large number of people.

Agriculture Extension Service, U.S.A.<sup>6</sup> is of the view that "More people become aware of new ideas from mass communication media than from any other source. This was supported by studies in different parts of the country. At the interest stage mass communication still plays an important role in providing information.

Emphasizing the importance of mass media and other communication methods in the process of diffusion and conviction.

Rogers (1960)<sup>4</sup> "Mass media are generally most important in creating awareness of a new idea but personal influence from neighbours and friends is most effective in convincing the farmers to actually try out the main idea".

Barsh and Coleman (1955)<sup>16</sup> found that "Radio friends, neighbours and relatives are important in adoption in all the areas and are most helpful source".

It was observed by Ranga Rao and Patel (1966)<sup>22</sup> that mass media (which includes Radio) is important source of information at interest stages of adoption.

This finds support of Lionberger<sup>15</sup>, Williams<sup>50</sup>, Kelsey and Hearne<sup>1</sup>, Hoffer<sup>41</sup>, Lindstrom<sup>14</sup> etc., who also found mass media (including radio) as most useful source of information at awareness and interest stages of adoption.

Sharma (1967)<sup>48</sup> concluded in his study that "Radio as comparatively new means of communication to rural people. It appears to be the most popular mass media among the respondents. It is both a source of entertainment and education to the audience. Every evening Gram Sabha attracts the attentions of 38% of the respondents. Radio can be used to bring awareness, arouse interest and help evaluate farm practices in the

process of adoption. Radio as a channel of farm information was mentioned by 40% of the middle aged respondents 37% of the young age respondents and 19% of the old age, respondents.

Lionberger (1956)<sup>15</sup> in his study of low income farmers in Missouri found that "the dependent farmer or news papers, farm journals and radio for farming information then upon the services directly, only one third of the farmers reviewed help directly from country agents, very low percentage of farmers in the low economic status group media use of the A.E.O. and printed matter while slightly more than one third made use of Radio.

Marsh and Coleman (1955)<sup>16</sup> reported that "the great majority of all farmers regardless of size of holding said they get farming information from neighbours, friends or relatives and listened from programmes on the radio".

Coleman (1951)<sup>10</sup> found that the farmers having larger holdings often adopted more practices than the farmers having smaller holdings.

P.E.O. (1958)<sup>20</sup> of the Government of India reported that 67 per cent of the cultivators adopted the improved seeds, Jha, P.N. and Singh, B.N. (1963) reported that the farmers with higher educational level easily adopted the new practices.

Radhyshyam (1965)<sup>45</sup> found that the high cost and lack of money were the reasons reported by majority of non-adoption of fertilizers.

Roy and Ram Mandan (1966)<sup>41</sup> in their study of characteristics of improved practices as related to adoption have reported highest adoption (97%) of improved varieties of wheat as compared to other three practices.

Prasad, S.D. (1967)<sup>44</sup> pointed out that the reasons for non-adoption of fertilizers were high cost and lack of money reported by majority of non-adopters of fertilizers.

Singh, B.S.P. (1968)<sup>33</sup> found that knowledge of improved agriculture practices were positively related with the level of adoption.

Tiwari, R.P. (1968)<sup>49</sup> found that 30 per cent farmers from small size, 44 per cent from medium size and 48 per cent from large size of holding adopted cultural practices.

Dubey, S.K. (1969) reported that improved seeds has most widely been accepted as compared to other practices.

Reddy, M.V.R. and Lakshmana, C. (1969)<sup>24</sup> found that the majority of the non-adopters were not aware of the seed treatment with Agrason, G.H.

Sanoria, Y.C. (1970)<sup>28</sup> stated that out of 39 adopters of the recommended doses of fertilizers, 35 per cent reported that it had increased the yield of the crop.

Chaudhary, B.N. and Prasad (1972)<sup>9</sup> reported that the high cost of fertilizer and lack of money was the real problem of the farmers for fertilizer use. There was further need to improve supply of fertilizers and knowledge about fertilizer use.

Ande, N. L. (1973)<sup>36</sup> found that the reason of non-adoption of plant protection measures were lack of experience, lack of knowledge about the effectiveness and use of insecticides with traditional attitude of non-violence.

Reddy, H.B.N. and Jalihal, K.A. (1974)<sup>23</sup> that lack of money, lack of knowledge, lack of experience about the practice were the main reason for non-adoption of fertilizers.

Tripathi, S.N. and Khan, A.N. (1976-77)<sup>37</sup> reported that there is a significant positive correlation between knowledge and adoption with regard to farm practices of crops like wheat, paddy and potato.

Pande, A.K. (1977)<sup>42</sup> found that the medium and big farmers have more adoption as compared to the small farmers.

Gadre, S.M. (1979)<sup>39</sup> stated that there is significant increase in level of adoption from illiterate farmers to literate farmers.

According to Ranjit Singh and S.K. Sharma (1973)<sup>34</sup> among the personal cosmopolite sources, V.L.W. was found most sought source in creating awareness about H.V.V. wheat seed in the T. V. and non-T.V. villages.

Pandit (1962)<sup>43</sup> reported that highest percentages of information for different practices were obtained from the village level workers followed by neighbours and meetings in the villages.

Rahim (1960)<sup>21</sup> concluded that impersonal sources of information were very important in the awareness stage, informed personal sources were most important in the information stage, while formal personal sources (agency personal) were most important in the trial stage.

B.N. Singh and P.N. Jha (1965)<sup>31</sup> concluded that the village level worker was considered to be the most important source of information in all stages of adoption as having ready access to farmers.

## METHODOLOGY

## CHAPTER III

### METHODOLOGY

This chapter deals with the methods and procedure used for collection and analysis of data under the following sub-heads :

1. a) Problem,  
b) Variables,
2. Selection of practices
3. Sampling procedure
4. Instrument of data collection
5. Collection of data
6. Analysis of data.

1. a) Problem :

Wheat technology is being disseminated to the wheat growers since several years through different media. These sources of information have a great importance at various stages of adoption.

At present there is a need to make the best utilization of the sources of information for raising the level of wheat production.

This study is being under taken to identify the effectiveness of different sources of information at various stages of adoption.

b) Variables :1) Independent variables :

- a) Mass media :
  - i) Meetings,
  - ii) Printing materials,
  - iii) Radio.
- b) Institutional sources :
  - i) Cooperatives,
  - ii) Panchayats,
  - iii) Salesman and other organisations.
- c) Extension contacts :
  - i) Village level workers (V.L.Ws.)
  - ii) Agriculture Extension Officers (A.E.Os.)
  - iii) Demonstrations,
  - iv) Field trips and exhibitions.
- d) Personal sources :
  - i) Neighbours,
  - ii) Friends,
  - iii) Relatives,
  - iv) Other farmers.

2) Dependent variables :

Effectiveness of the sources of information at various stages of adoption  
i.e.,

- a) Awareness,      c) Attitude,
- b) Knowledge,     d) Adoption.

2. Selection of Practices :

Out of the several improved agricultural practices of wheat cultivation, the practices of improved varieties, fertilizers and plant protection measures were selected to study the extent of utilization of various information sources at awareness, knowledge, attitude and adoption stages by the trained and untrained farmers.

3. Sampling Procedure :

Out of 14 blocks of Jabalpur district, Panagar and Jabalpur blocks were purposively selected to conduct this study. There were 16 and 11 V.L.W. Circles in Jabalpur and Panagar blocks respectively. Out of these total 27 V.L.W. Circles of both the blocks, 4 circles were purposively selected (2 from each block) on the basis of having a greater number of trained farmers during the last two years. From these four V.L.W. Circles seven villages were again purposively selected on the criteria of greater availability of trained farmers who had training during 1982 and 1983. A list of trained farmers in these 7 villages was prepared separately. 25% of the trained farmer from each village were randomly selected. Thus the total selected trained farmers were 35. A similar number of untrained farmers were

selected from each of the seven villages who were of the matching group i.e. of the same age, education and size of land holding. Trained farmers having more than 30 acres land were not included in the study as the untrained farmers of this size of land holding in these villages were not available. Thus both the types of farmers (trained and untrained) were of matching group. Among the trained and untrained farmers selected for this study were belonging to the irrigated and unirrigated category of farmers. But the majority of the farmers were growing wheat under unirrigated conditions. A similar number of farmers of each category were selected from both trained and untrained farmers. Thus the total respondents were 70 who were interviewed for securing the required information.

#### 4. Instrument of Data Collection :

The interview schedule was designed for the trained and untrained farmers on the basis of dependent and independent variables included in the study.

The data were collected with the help of structured interview schedule. The interview was conducted personally by the investigator.

### Interview Schedule :

The interview schedule for trained and untrained farmers was similar. It was classified into four separate parts on the basis of stages of adoption i.e., awareness, knowledge, attitude and adoption, the questions relating to all the three selected farm practices were included i.e. improved varieties, fertilizer and plant protection measures.

### 5. Collection of Data :

Before administering the schedule it was pre-tested and necessary corrections, were made. Then it was administered to the respondents personally by the researcher at the time of personal interview.

Before asking the questions from the respondents, the purpose of this study was explained to them. The author assured the respondents that the information given by them will be kept confidential and will be used only for the research purpose. The replies given by the respondents were immediately recorded in the interview schedule.

### 6. Analysis of Data :

The data collected were analysed on the basis of scores and rank order. In view of measuring the

effectiveness of the various sources of information under each of the major four categories, the responses of individual respondent were recorded about the effectiveness of each source separately in 4 different levels i.e., Most effective, Very effective, effective and not effective giving 4, 3, 2 and 1 weightages respectively. By multiplying the frequency with the weightage the total score for each individual source of information was recorded. Thus the total scores obtained by the various sources of information were placed under each broad category of the sources of information i.e., mass media, Institutional sources, extension contacts and personal sources were tabulated and rank order was given to each source of information separately and also to each major category source on the basis of scores obtained by them.

The score obtained were also grouped separately for each selected farm practice i.e., Variation, fertilizer and plant protection measure of each, stage of adoption i.e., awareness, knowledge, attitude and adoption to clearly record the extension of utilization of sources of information at different stages of adoption for different farm practices. Thus higher the rank order greater the effectiveness of the sources of information and vice-versa.

ANALYSIS, PRESENTATION AND  
DISCUSSION OF DATA

## CHAPTER IV

### ANALYSIS, PRESENTATION AND DISCUSSION OF DATA

In this chapter the collected facts about the use of various sources of information by the trained and untrained farmers at different stages of adoption i.e., awareness, knowledge, attitude and adoption for obtaining the information of wheat varieties, fertilizers and plant protection practices were presented under different categories. Firstly the collected information was mainly grouped into three broad categories i.e., varieties, fertilizers and plant protection practices and the over-all placement of the various information sources at different stages of adoption was done giving them rank-order according to the scores obtained by each. Then the total sources of information were grouped in four major categories i.e., Mass Media, Institutional Sources, Extension contacts and the Personal sources and the information sources under each category were placed in rank-order as per scores obtained by each. The effectiveness of each was noted at various stages of adoption separately for all the three selected farm practices of wheat.

In the end, the importance of each information source was compared for the farm practices separately in view of creating awareness, developing knowledge, forming an attitude of farmers towards adoption and in final adoption of the practices.

Table 1 : Effectiveness of the various sources of information at different stage of adoption for wheat varieties

S. No.	Sources of information	Awareness				Knowledge				Attitude				Adoption			
		T		Unt.		T		Unt.		T		Unt.		T		Unt.	
		A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B
<b>A. Mass Media :</b>																	
1.	Meetings	59	X	87	VI	58	X	84	VI	57	IX	79	VI	50	XI	72	VII
2.	Printing material	87	IV	68	IX	87	IV	66	X	81	IV	71	IX	81	V	71	VIII
3.	Radio	181	I	130	III	122	I	107	IV	104	III	111	III	90	IV	97	V
<b>B. Institutional Sources :</b>																	
4.	Cooperatives	51	XII	42	XII	51	XII	38	XII	49	XI	40	XI	51	X	39	XI
5.	Panchayats	53	XI	60	X	52	XI	69	IX	50	X	61	X	48	XII	67	X
6.	Salesman and other organisation.	39	XIV	35	XIV	36	XIV	37	XIII	36	XIII	37	XIII	38	XIV	39	XI
<b>C. Extension Contacts :</b>																	
7.	V.L.Ws.	136	II	136	II	121	IX	179	I	125	I	199	I	192	I	145	II
8.	A.E.Os.	72	IX	77	VII	72	IX	73	VIII	74	VIII	72	VIII	72	IX	70	IX
9.	Demonstrations	73	VIII	43	XI	76	VII	42	XI	74	VIII	39	XII	80	VI	39	XI
10.	Field trips and exhibition	78	VII	36	XIII	84	V	36	XIV	77	VI	36	XIV	78	VII	37	XII
<b>D. Personal Sources :</b>																	
11.	Neighbours	83	V	103	V	75	VIII	126	III	75	VII	105	IV	75	VIII	114	III
12.	Friends	81	VI	107	IV	77	VI	104	V	79	V	101	V	96	III	109	IV
13.	Relatives	42	XIII	72	VIII	42	XIII	74	VII	40	XII	73	VII	40	XIII	77	VI
14.	Other farmers	97	III	181	I	95	III	133	II	108	II	132	II	101	IX	181	I

\*T' Indicates Trained and 'Unt.' indicates untrained farmers.

A - denotes scores and B denotes rank-orders.

The data presented in Table 1 indicates that radio was utilized most by the trained farmers for creating awareness and developing knowledge about wheat varieties, but the other farmers and the village level workers were the main sources of information for untrained farmers in creating awareness and increasing knowledge of the practice respectively. As regards utilization of the different sources in farming attitude towards acceptance of the varieties, village level workers were preferred most by both the types of farmers followed by the other farmers who stand second in the rank-order. At the adoption stage village level workers were again found most important source of information by the trained farmers followed by other farmers. In case of untrained farmers, the major source was other farmers followed by village level workers. This clearly shows that at different stages same source of information was not equally important even by similar type of farmers. The institutional sources were utilized least by both the types of farmers at almost all the stages of adoption. If we have a look to the over-all picture of utilization of the sources, village level workers stand's first in the rank-order at knowledge, attitude and adoption stages in most of the cases. The utilization of radio was considered important in creating awareness of the practice.

Table 2 : Effectiveness of the various mass media sources of information for wheat varieties at different stages of adoption by the trained and untrained farmers

S. No.	Sources of information	Awareness				Knowledge				Attitude				Adoption			
		T		Unt.		T		Unt.		T		Unt.		T		Unt.	
		A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B
<b>A. Mass Media :</b>																	
1.	Meetings	59	III	67	II	58	III	84	II	57	III	79	II	50	III	72	II
2.	Printing material	87	II	68	III	87	II	66	III	81	II	71	III	81	II	71	III
3.	Radio	161	I	130	I	122	I	107	I	104	I	111	I	90	I	97	I

T - Indicates Trained and Unt.- indicates untrained farmers.

A - denotes Scores and B - denotes Rank-orders.

The data presented in Table 2 indicates that among mass media sources of information, the use of radio was most effective at all the stages of adoption. The printed material was mostly utilized by the trained farmers. The meetings were the least effective source of information among mass media for majority farmers but the untrained farmers preferred meetings over printed material. This concludes that the training could create an impact on the farmers for making use of the printed material in addition to the use of radio as sources of information at all the stages of adoption.

The data presented in Table 3 indicates that as regards the pattern of utilization of various institutional sources, panchayats played the most important role for wheat varieties at each stage of adoption followed by the cooperatives. The least important sources of information were the salesman and other organisations. The cooperatives were ranked first by the trained farmers at the adoption stage for wheat varieties.

Table 3 : Effectiveness of the Institutional sources of information for wheat varieties at different stages of adoption

S. No.	Sources of information	Awareness				Knowledge				Attitude				Adoption			
		T		Unt.		T		Unt.		T		Unt.		T		Unt.	
		A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B
<b>B. Institutional Sources :</b>																	
1.	Cooperatives	51	II	42	II	51	II	38	II	49	II	40	II	51	I	39	II
2.	Panchayats	53	I	60	I	52	I	69	I	50	I	61	I	48	II	67	I
3.	Salesman and other organization	39	III	35	III	36	III	37	III	36	III	37	III	38	III	39	II

T - Indicates Trained and Unt. - indicates untrained farmers.

A - denotes Scores and B - denotes rank-orders.

Table 4 : Effectiveness of the various extension contacts as sources of information for wheat varieties by the trained and untrained farmers at different stages of adoption

S. No.	Sources of information	Awareness				Knowledge				Attitude				Adoption			
		T		Unt.		T		Unt.		T		Unt.		T		Unt.	
		A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B
<b>C. Extension Contacts :</b>																	
1.	V.L.Ws.	138	I	136	I	121	I	179	I	125	I	199	I	192	I	145	I
2.	A.E.Os.	72	IV	77	II	72	IV	73	II	74	III	72	II	72	IV	70	II
3.	Demonstrations	73	III	43	III	76	III	42	III	74	III	39	III	80	II	39	III
4.	Field trips and Exhibition	78	II	36	III	84	II	36	IV	77	II	36	IV	78	III	37	IV

Table 5 : Effectiveness of the various personal sources of information for wheat varieties at different stages of adoption by the trained and untrained farmers

S. No.	Sources of information	Awareness				Knowledge				Attitude				Adoption			
		T		Unt.		T		Unt.		T		Unt.		T		Unt.	
		A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B
<b>D. Personal Sources :</b>																	
1.	Neighbours	83	II	103	III	75	III	125	II	75	III	105	II	75	III	114	II
2.	Friends	81	III	107	II	77	II	104	III	79	II	101	III	96	II	109	III
3.	Relatives	42	IV	72	IV	42	IV	74	IV	40	IV	73	IV	40	IV	77	IV
4.	Other farmers	97	I	181	I	95	I	133	I	108	I	132	I	101	I	181	I

The data presented in Table 4 indicates that as regards utilisation of the various information sources under extension contacts for wheat varieties, village level workers were ranked at the top by both the types of farmers. The other important sources were field trips and exhibitions in the next rank-order as reported by the trained farmers. These sources were considered least important by the untrained farmers as they could not make much use of the same due to being untrained.

The data presented in Table 5 indicates that among the various personal sources of information, the utilisation of other farmers was maximum by both the types of farmers at all the stages of adoption followed by neighbours and friends. The least important sources was relatives in regard to supply of information about wheat varieties. This means that most of the information was passed-on by the other progressive farmers using the practice.

Table 6 : Effectiveness of the various main sources of information in regard to wheat variety at various stages of adoption

S. No.	Sources of information	Awareness				Knowledge				Attitude				Adoption			
		T		Unt.		T		Unt.		T		Unt.		T		Unt.	
		A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B
A.	Mass media	327	II	265	III	267	III	257	III	242	III	261	III	221	III	240	III
B.	Institutional sources	143	IV	137	IV	139	IV	144	IV	135	IV	138	IV	137	IV	145	IV
C.	Extension contacts	361	I	292	II	353	I	330	II	350	I	346	II	422	I	291	II
D.	Personal sources	303	III	463	I	389	II	437	I	302	II	411	I	312	II	461	I

T - Indicates Trained and Unt. - indicates untrained farmers

A - denotes Scores and B - denotes rank-orders.

The data presented in Table 6 indicates that for creating awareness about the improved wheat varieties, the extension contacts as a source of information was ranked first followed by mass media in case of trained farmers. The personal sources were the prime sources of information followed by extension contacts among untrained farmers. As regards the effectiveness of the various major sources of information to develop knowledge, forming an attitude towards acceptance of the practice and in actual adoption of the same extension contacts were placed at the top followed by personal sources by the trained farmers but it was vice-versa among untrained farmers. This clearly indicates that the training had an impact on the farmers due to which the trained farmers preferred using the extension contacts and the contacts remained restricted to the use of personal sources by the untrained farmers. The institutional sources were ranked as least important in all the cases at each stage of adoption which also indicates that the farmers of the locality could not get time to contact the institutional sources much and they could obtain the required information about the varieties from the sources like extension contacts and personal sources. All the farmers were also making use of mass media which was ranked third at each stage of adoption.

Table 7 : Effectiveness of the various sources of information at different stages of adoption for fertiliser

S. No.	Sources of information	Awareness				Knowledge				Attitude				Adoption			
		T		Unt.		T		Unt.		T		Unt.		T		Unt.	
		A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B
<b>A. Mass media :</b>																	
1.	Meetings	59	VIII	84	VI	60	X	77	V	58	X	71	VI	59	X	74	VI
2.	Printing material	92	III	67	X	88	IV	64	VIII	86	IV	64	IX	85	V	62	IX
3.	Radio	165	I	170	I	108	II	101	XII	101	III	98	IV	94	III	96	IV
<b>B. Institutional Sources :</b>																	
4.	Cooperatives	56	IX	47	XII	53	XI	37	XI	57	XI	36	XIII	67	IX	47	XII
5.	Panchayats	54	X	68	IX	52	XII	63	IX	47	XII	60	X	51	XII	59	X
6.	Salesman and other organization	47	XI	49	XI	43	XIII	51	X	44	XIII	49	XI	55	XI	49	XI
<b>C. Extension Contacts :</b>																	
7.	V.L.Ws.	135	II	127	II	117	I	186	I	128	I	178	I	184	I	148	II
8.	A.E.Os.	72	VII	70	VIII	71	IX	68	VI	70	IX	68	VIII	70	VIII	65	VIII
9.	Demonstrations	74	VI	38	XIII	82	VI	37	XI	79	VI	37	XII	75	VII	36	XIII
10.	Field trips and Exhibition	74	VI	36	XIV	73	VIII	34	XII	74	VIII	33	XIV	70	VIII	33	XIV
<b>D. Personal Sources :</b>																	
11.	Neighbours	76	V	117	IV	77	VII	99	IV	77	VII	111	III	83	VI	94	V
12.	Friends	76	V	105	V	84	V	99	IV	85	V	95	V	87	IV	102	III
13.	Relatives	38	XII	74	VII	41	XIV	67	VII	41	XIV	69	VII	40	XIII	71	VII
14.	Other farmers	91	IV	125	III	94	III	125	II	106	II	129	II	95	II	162	I

The data presented in Table 7 indicates that in case of fertilizer practice at the awareness stage, radio was ranked first by the trained and untrained farmers followed by the source village level workers. As regards the development of knowledge, formation of an attitude towards acceptance of fertilizer practice and in it's actual adoption, the village level workers were ranked first by most of the trained and untrained farmers with an exception at the adoption stage. At the adoption stage for the use of fertilizer practices the untrained farmers preferred other progressive farmers over village level workers.

The second important source was other farmers followed by radio which was accepted by farmers in majority at all adoption stages. The weakest source was institutional source which was ranked at the last.

The data presented in Table 8 indicates that among the various sources of mass media, radio was most effective source followed by printing material for trained and meetings for untrained farmers at all the stages of adoption. This clearly indicates the tendency of trained farmers towards consulting the literature

Table B : Effectiveness of the various mass media sources of information for fertilizer at different stages of adoption

S. No.	Sources of information	Awareness				Knowledge				Attitude				Adoption			
		T		Unt.		T		Unt.		T		Unt.		T		Unt.	
		A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B
<b>A. Mass Media :</b>																	
1.	Meetings	59	III	84	II	60	III	77	II	58	III	71	II	59	III	74	II
2.	Printing material	92	II	67	III	88	II	64	III	86	II	64	III	85	II	62	III
3.	Radio	105	I	170	I	108	I	101	I	101	I	98	I	94	I	96	I

T - indicates Trained and Unt.- indicates untrained farmers.

A - denotes Score and B - denotes Rank-orders.

Table 9 : Effectiveness of the various institutional sources of information for fertiliser at different stages of adoption

S. No.	Sources of information	Awareness				Knowledge				Attitude				Adoption			
		T	B	Unt.		T	B	Unt.		T	B	Unt.		T	B	Unt.	
		A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B
<b>B. Institutional Sources :</b>																	
1.	Cooperatives	56	I	47	III	53	I	37	III	57	I	36	III	67	I	47	III
2.	Panchayats	54	II	68	I	52	II	63	I	47	II	60	I	51	III	59	I
3.	Salegama and other organisation	47	III	49	II	43	III	51	II	44	III	49	II	55	II	49	II

T - indicates Trained and Unt.- indicates untrained farmers.  
 A - denotes Score and B - denotes Rank-orders.



Table 10 : Effectiveness of the various extension contacts as sources of information for fertilizer at different stages of adoption

S. No.	Sources of information	Awareness				Knowledge				Attitude				Adoption			
		T	B	Unt.		T	B	Unt.		T	B	Unt.		T	B	Unt.	
<b>C. Extension Contacts :</b>																	
1.	V.L.Ws.	135	I	127	I	117	I	196	I	128	I	178	I	194	I	148	I
2.	A.E.Os.	72	III	70	II	71	IV	68	II	70	IV	68	II	70	III	65	II
3.	Demonstrations	74	II	38	III	62	II	37	III	79	II	37	III	75	II	36	III
4.	Field trips and Exhibition	74	II	36	IV	73	III	34	IV	74	III	33	IV	70	III	33	IV

more for securing knowledge, forming an attitude and also in final adoption of the practice which was poorest among untrained farmers.

The data presented in Table 9 indicates that as regards the use of institutional sources, cooperatives were mostly used by the trained farmers followed by panchayats for creating awareness, developing knowledge, forming an attitude for adoption and in adopting the fertilizer practice. The panchayats were consulted most by the untrained farmers followed by salesman at each stage of adoption.

The data presented in Table 10 indicates that out of the various sources of information under extension contacts, village level workers were found most effective at all the stages of adoption. The demonstration was considered second important source by the trained farmers at all the four stages of adoption but the untrained farmers preferred to contact the Agriculture Extension Officers for clear understanding of the practice.

The data presented in Table 11 indicates that the personal sources were also useful at all the stages of adoption. Out of them, the other farmers

Table 11 : Effectiveness of the various personal sources of information for fertilizer at different stages of adoption

S. No.	Sources of information	Awareness				Knowledge				Attitude				Adoption			
		T		Unt.		T		Unt.		T		Unt.		T		Unt.	
		A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B
<b>D. Personal Sources :</b>																	
1.	Neighbours	76	II	117	II	77	III	99	II	77	III	111	II	83	III	94	III
2.	Friends	76	II	105	III	84	II	99	II	85	II	95	III	87	II	102	II
3.	Relatives	38	III	74	IV	41	IV	67	III	41	IV	69	IV	40	IV	71	IV
4.	Other farmers	91	I	125	I	94	I	125	I	106	I	129	I	95	I	162	I

were most influential followed by friends and neighbours. The neighbours were considered next important source by both the types of farmers especially in creating awareness of the practice, but they were also found useful in developing knowledge and forming the favourable attitude towards the practice by untrained farmers. The relatives were least effective among the personal sources at all the stages of adoption.

The data presented in Table 12 indicates that in case of trained farmers, the extension contacts were ranked at the top at all the stages of adoption for creating awareness, developing knowledge, forming attitude and in actual adoption of the fertilizer practice in wheat but the personal sources were ranked first by the untrained farmers. This clearly shows that the training had an impact on the farmers and due to the results of training, the trained farmers mostly contacted the extension staff for obtaining the information about fertilizer use and others who did not have the training contacted only the other farmers, neighbours, relatives at their personal levels. Except awareness stage, the rank-order was second for personal sources by the trained farmers and extension contacts by the untrained farmers. Mass media was considered second important

Table 12 : Effectiveness of the various main sources of information in regard to fertilizer at various stages of adoption

S. No.	Sources of information	Awareness				Knowledge				Attitude				Adoption			
		T	B	Unt.		T	B	Unt.		T	B	Unt.		T	B	Unt.	
A.	Mass media	316	II	321	II	256	III	152	III	155	III	233	III	238	III	232	III
B.	Institutional sources	157	IV	164	IV	148	IV	151	IV	148	IV	145	IV	173	IV	155	IV
C.	Extension Contacts	355	I	271	III	343	I	325	II	351	I	316	II	399	I	282	II
D.	Personal sources	281	III	421	I	296	II	390	I	309	II	404	I	305	II	429	I

T - Indicates Trained and Unt. - indicates untrained farmers.

A - denotes Scores and B - denotes Rank-orders.

source by both the trained and untrained farmers in regard to create awareness about fertiliser practice. A similar tendency was observed in case of making use of Institutional sources as it was in case of wheat variety, placing this source at the end in order of preference. This may be due to difficulty in approaching the institutional sources and also easy in obtaining the desired information through extension contacts, personal sources and mass media. Mass media source was ranked as third in enhancing the knowledge, forming an attitude towards practice and making the practice actually adopted which also indicates that this source is also of importance at other stages also. The use of mass media was generally preferred in creating awareness by both the type of farmers.

The data presented in Table 13 shows a different trend in the utilisation of information sources for plant protection practice. The radio was mostly utilized in creating awareness of the practices and also in developing knowledge of the trained farmers but village level workers were considered useful by both the types of farmers at the remaining stages of adoption. This source was also considered next important to radio even at the awareness and knowledge stages. This clearly

Table 13 : Effectiveness of the various sources of information at difference stage of adoption for plant protection

S. No.	Sources of information	Awareness				Knowledge				Attitude				Adoption			
		T		Unt.		T		Unt.		T		Unt.		T		Unt.	
		A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B
<b>A. Mass media :</b>																	
1.	Meetings	59	IX	83	VI	57	X	47	V	53	IX	44	VI	46	X	24	VI
2.	Printing material	91	IV	70	VII	90	III	37	VII	73	IV	36	IX	62	VII	23	VII
3.	Radio	196	I	185	I	111	I	61	III	109	II	55	V	71	III	36	IV
<b>B. Institutional Sources :</b>																	
4.	Cooperatives	44	XI	45	XI	44	XII	26	IX	43	XI	25	XI	40	XI	16	X
5.	Panchayats	47	X	63	IX	47	XI	34	VIII	41	XII	33	X	35	XII	17	IX
6.	Salesmen and other organization.	59	IX	48	X	61	IX	23	X	52	X	23	XII	68	IV	19	VIII
<b>C. Extension Contacts :</b>																	
7.	V.L.Wg.	100	II	144	II	97	II	100	I	128	I	107	I	102	I	68	I
8.	A.E.Os.	68	VIII	68	VIII	67	VIII	38	VI	62	VII	38	VIII	57	IX	23	VII
9.	Demonstrations	59	IX	41	XII	61	IX	20	XI	61	VIII	22	XIII	63	VI	12	XI
10.	Field trips and	76	VII	36	XIII	76	VI	20	XI	62	VII	20	XIV	55	VIII	12	XI
<b>D. Personal Sources :</b>																	
11.	Neighbours	81	VI	104	V	70	VII	56	IV	70	V	56	IV	65	V	36	IV
12.	Friends	86	V	106	IV	79	V	56	IV	69	VI	60	III	68	IV	40	III
13.	Relatives	42	XII	70	VII	40	XIII	38	VI	41	XII	39	VII	29	XIII	29	V
14.	Other farmers	92	III	112	III	88	IV	84	II	92	III	73	II	77	II	49	II

Table 14 : Effectiveness of the various mass media sources of information for plant protection practices at different stages of adoption

S. No.	Sources of information	Awareness				Knowledge				Attitude				Adoption			
		T	B	Unt.		T	B	Unt.		T	B	Unt.		T	B	Unt.	
		A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B
A. Mass Media :																	
1.	Meetings	59	III	83	II	57	III	47	II	53	III	44	II	46	III	24	II
2.	Printing material	91	II	70	III	90	II	37	III	73	II	36	III	62	II	23	III
3.	Radio	196	I	185	I	111	I	61	I	109	I	55	I	71	I	36	I

T - Indicates Trained and Unt.- indicates untrained farmers.  
 A - denotes Scores and B - denotes Rank-orders.

concludes that the radio was the major source helping the farmers in creating awareness. The village level workers were most useful for increasing the knowledge, forming a favourable attitude and also in adoption of the practice. The plant protection practices being complex in nature, both the types of farmers preferred consulting the village level workers.

The data presented in Table 14 indicates that among the various sources under mass media, the radio was ranked first in order of preference at all the stages of adoption. A similar trend was also noted in making use of the printed material by the trained farmers and of meetings as the source of information by the untrained farmers. This seems that the untrained farmers could not make much use of the printed material, hence they preferred meetings as important source next to radio.

The data presented in Table 15 indicates that in case of making use of the various institutions for plant protection practices, a specific pattern was observed that the salesman and the organisations were found to be most effective at almost each stage of

Table 15 : Effectiveness of the various institutional sources of information for plant protection practices at different stage of adoption

S. No.	Sources of information	Awareness				Knowledge				Attitude				Adoption			
		T		Unt.		T		Unt.		T		Unt.		T		Unt.	
		A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B
<b>B. Institutional Sources :</b>																	
1.	Cooperatives	44	III	45	III	44	III	26	II	43	II	25	II	40	II	16	III
2.	Panchayats	47	II	63	I	47	II	34	I	41	III	33	I	35	III	17	II
3.	Salesman and other organisation	59	I	48	II	61	I	23	III	52	I	23	III	68	I	19	I

adoption, except in case of untrained farmers at the knowledge and attitude stages. This clearly indicates that the usefulness of salesmen and organisations was realised by the trained farmers right from the awareness to adoption stage. The next important sources were cooperatives at knowledge, attitude and adoption stages. The trained farmers expressed that the panchayats were next in importance at the stages of awareness and knowledge and for untrained at the adoption stage. This clearly means that due to complexity of the practice, the trained farmers consulted salesmen and organizations where as untrained could not approach these sources. The contacts of untrained were confined to only cooperatives and panchayats.

The data presented in Table 16 indicates that out of the sources under extension contacts, the village level workers were ranked at the top by both the types of farmers at all stages. Field trips and exhibitions were given second preference by the trained farmers and Agricultural Extension Officers by the untrained farmers. This clearly indicates the easy availability of the Village Level Workers as compared to Agriculture Extension Officers. The poorest effect was of

Table 16 : Effectiveness of the various extension contacts sources of information for plant protection practices at different stages of adoption

S. No.	Sources of information	Awareness				Knowledge				Attitude				Adoption			
		T		Unt.		T		Unt.		T		Unt.		T		Unt.	
		A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B
<b>C. Extension Contacts :</b>																	
1.	V.L.Ns.	100	I	144	I	97	I	100	I	128	I	107	I	102	I	68	I
2.	A.E.Os.	68	III	68	II	67	III	38	II	62	II	38	II	51	IV	23	II
3.	Demonstrations	59	IV	41	III	61	IV	20	III	61	III	22	III	63	II	12	III
4.	Field trips and Exhibition	76	II	36	IV	76	II	20	III	62	II	20	IV	55	III	12	III

Table 17 : Effectiveness of the various personal sources of information for plant protection practices at various stage of adoption

S. No.	Sources of information	Awareness				Knowledge				Attitude				Adoption			
		T		Unt.		T		Unt.		T		Unt.		T		Unt.	
		A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B
<b>D. Personal Sources :</b>																	
1.	Neighbours	81	III	104	III	70	III	56	II	70	II	56	III	65	III	36	III
2.	Friends	86	II	106	II	79	II	56	II	69	III	60	II	68	II	40	II
3.	Relatives	42	IV	70	IV	40	IV	39	III	41	IV	39	IV	29	IV	29	IV
4.	Other farmers	92	I	112	I	88	I	84	I	92	I	73	I	77	I	49	I

demonstrations at almost each stage of adoption which may be due to not properly conducting the specific demonstrations of the practice in wheat crop.

The data presented in Table 17 indicates that as regards the effectiveness of the various personal sources, the other farmers were considered most effective at all the stages of adoption both the types of farmers followed by friends. Neighbours were also found in creating influence at the stage of attitude by the trained farmers. There was a very little difference between the scores of neighbours and friends which indicates their equal importance. The least effective were relatives but the farmers also consulting them.

The data presented in Table 18 indicates that the mass media source was preferred most by the trained farmers whereas the personal sources were mostly liked by the untrained farmers for creating awareness about plant protection measures. The personal sources were ranked first by the untrained farmers at each stage of adoption in developing their knowledge, forming an attitude towards acceptance of the practice and also

Table 18 : Effectiveness of the various main sources of information regard to plant protection measures at various stages of adoption

S. No.	Sources of information	Awareness				Knowledge				Attitude				Adoption			
		T	Unt.	T	Unt.	T	Unt.	T	Unt.	T	Unt.	T	Unt.	T	Unt.		
		A	B	A	B	A	B	A	B	A	B	A	B	A	B		
A.	Mass media	346	I	338	II	258	II	145	III	235	III	135	III	179	III	83	III
B.	Institutional sources	150	IV	156	IV	152	IV	83	IV	136	IV	81	IV	143	IV	52	IV
C.	Extension contacts	303	II	289	III	231	III	178	II	313	I	187	II	271	I	115	II
D.	Personal sources	301	III	392	I	277	I	234	I	272	II	228	I	239	II	154	I

at the time of its actual adoption. This clearly shows that the personal sources like farmers, neighbours and relatives were most influential in regard to plant protection practices. Except awareness stage, extension contacts were ranked second by the untrained farmers which clearly shows that these were next easily available sources to them. First and second rank-order of mass media by trained and untrained farmers at awareness stage establishes the most usefulness of this source in creating awareness of the practice. This source also assisted in increase of knowledge, developing the attitude and in adoption of the practice. A similar tendency was also observed in regard to use of institutional sources, placing them at the last in rank-order because of the fact that the other sources of information could provide required information of the plant protection practices. The farmers in general tried to contact the institutional sources in the end. The cost in contact of these sources was higher as compared to that of other sources, and most of the information about plant protection was made available to the farmers through personal sources, extension contacts and mass media.

Table 19 : Effectiveness of the various sources of information in creating awareness regarding improved wheat practices

S. No.	Sources of information	Variety				Fertilizer				Plant Protection			
		A	T	B	Unt.	A	T	B	Unt.	A	T	B	Unt.
<b>A. Mass Media :</b>													
1.	Meetings	59	X	87	VI	59	VIII	84	VI	59	IX	83	VI
2.	Printing Material	87	IV	68	IX	92	III	67	X	91	IV	70	VII
3.	Radio	181	I	130	III	165	I	170	I	196	I	185	I
<b>B. Institutional Sources :</b>													
4.	Cooperatives	61	XII	42	XII	56	IX	47	XII	44	XI	45	XI
5.	Panchayats	53	XI	60	X	54	X	68	IX	47	X	63	IX
6.	Salesman and other organisation	39	XIV	35	XIV	47	XI	49	XI	59	IX	48	X
<b>C. Extension Contacts :</b>													
7.	V.L.Ws.	136	II	136	II	135	II	127	II	100	II	148	II
8.	A.E.Os.	72	IX	77	VII	72	VII	70	VIII	68	VIII	68	VIII
9.	Demonstrations	73	VIII	43	XI	74	VI	38	XIII	59	IX	41	XII
10.	Field trips and Exhibition	78	VII	36	XIII	74	VI	36	XIV	76	VII	36	XIII
<b>D. Personal Sources :</b>													
11.	Neighbours	83	V	103	V	76	V	117	IV	81	VI	104	V
12.	Friends	61	VI	107	IV	76	V	105	V	86	V	106	IV
13.	Relatives	42	XIII	72	VIII	38	XII	74	VII	42	XII	70	VII
14.	Other farmers	97	III	181	I	91	IV	125	III	92	III	112	III

The data presented in Table 19 indicates about the extent of use of different sources of information in creating awareness of variety, fertiliser and plant protection measures by the trained and untrained farmers. It is clear from the data that radio stands first in the rank-order to create awareness about fertiliser and plant protection practices as felt by both the types of farmers. To create awareness about the wheat variety, radio was the prime source for trained farmers and the other farmers were ranked first by the untrained farmers. Village level workers were used as second important source of information in creating awareness for all the three practices.

As regards the use of different mass media, radio was ranked at the top by all the trained and untrained farmers in creating awareness of improved wheat varieties. The next important sources were printed material for trained and meetings for the untrained farmers.

Among the institutional sources, panchayats were used by majority of the trained and untrained farmers followed by cooperatives. The least important sources were salesmen other organisations in creating awareness of the practices.

Table 20 : Effectiveness of the various sources of information in regard to developing the knowledge of improved wheat practices

S. No.	Sources of information	Variety				Fertiliser				Plant Protection			
		A	T B	Unt. A	B	A	T B	Unt. A	B	A	T B	Unt. A	B
<b>A. Mass Media :</b>													
1.	Meetings	58	X	84	VI	60	X	77	V	57	X	47	V
2.	Printing material	67	IV	66	X	88	IV	64	VIII	90	XII	37	VII
3.	Radio	122	I	107	IV	108	II	101	XII	111	I	61	XII
<b>B. Institutional Sources :</b>													
4.	Cooperatives	51	XII	38	XII	53	XI	37	XI	44	XII	26	IX
5.	Panchayats	52	XI	69	IX	52	XII	63	IX	47	XI	34	VIII
6.	Salesman and other organization	36	XIV	37	XIII	43	XIII	51	X	61	IX	23	X
<b>C. Extension Contacts :</b>													
7.	V.L.Ws.	121	II	179	I	117	I	106	I	97	II	100	I
8.	A.S.Os	72	IX	73	VIII	71	IX	68	VI	67	VIII	38	VI
9.	Demonstrations	76	VII	42	XI	82	VI	37	XI	61	IX	20	XI
10.	Field trips and Exhibitions	84	V	36	XIV	73	VIII	34	XII	76	VI	20	XI
<b>D. Personal Sources :</b>													
11.	Neighbour	75	VIII	126	XII	77	VII	99	IV	70	VII	56	IV
12.	Friends	77	VI	104	V	84	V	99	IV	79	V	56	IV
13.	Relatives	42	XIII	74	VII	41	XIV	67	VII	40	XIII	38	VI
14.	Other farmers	95	XII	133	IX	94	XII	125	IX	88	IV	84	IX

As regards the utilization of the various sources under extension contacts, village level workers were placed at the top position by both the types of farmers followed by field trips and exhibitions in case of trained and Agriculture Extension Officers in case of untrained farmers. The demonstration was considered least influential source in creating awareness by both the types of farmers.

The data presented in Table 20 indicates the utilisation pattern of various sources of information in developing the knowledge of improved farm practices. Among mass media, the radio was mostly utilized followed by the printed material in case of trained farmers and meetings in case of untrained farmers. Out of the institutional sources, panchayats were of greatest importance for variety followed by cooperatives. To develop the knowledge of fertilizer use, the trained farmers liked cooperatives over panchayats and untrained liked panchayats over salesmen. In case of plant protection, the trained farmers mostly contacted salesmen and other organizations followed by panchayats whereas the panchayats were of greater importance to untrained farmers over cooperatives. Among the extension contacts, the village level workers were ranked first for all the three farm practices. The field trips and exhibitions

were second important sources for the purposes of variety and plant protection practices in case of trained farmers but for the fertilizer practice the demonstration was second important source. The pattern of contact by untrained farmers was uniform in case of all the three farm practices because they felt Agriculture Extension Officers as second important source of information. Among the personal sources, the other farmers using the practices were mostly preferred for the practices by both the types of farmers. The friends were placed second in importance by the trained and untrained farmers with an exception for neighbours by untrained farmers in case of wheat varieties. This shows that the relatives and neighbours were of least importance for developing knowledge of farm practices.

The data presented in Table 21 indicates that the use of the various sources of information in the formation of attitude towards adoption of farm practices. As regards mass media, there was uniformity in the pattern of their utilization by the trained farmers. They preferred radio followed by the printed material for the farm practices. The meeting was considered second important source by the untrained farmers. Among institutional sources the salesmen and tother organisations were ranked first by the trained farmers in attitude

Table 21 : Effectiveness of sources in regard to formation of attitude towards improved wheat practices

S. No.	Sources of information	Variety				Fertiliser				Plant Protection				
		A	T	B	Unt.	A	T	B	Unt.	A	T	B	Unt.	
<b>A. Mass Media :</b>														
1.	Meetings	57		IX	79	VI	58	X	71	VI	53	IX	44	VI
2.	Printing material	81		IV	71	IX	86	IV	64	IX	73	IV	36	IX
3.	Radio	104		III	111	III	101	III	98	IV	109	II	55	V
<b>B. Institutional Sources :</b>														
4.	Cooperatives	49		XI	40	XI	57	XI	36	XIII	43	XI	25	X
5.	Panchayats	50		X	61	X	47	XII	60	X	41	XII	33	X
6.	Salesman and other organization	36		XIII	37	XIII	44	XIII	49	XI	52	X	23	XII
<b>C. Extension Contacts :</b>														
7.	V.L.Ws.	125		I	199	I	128	I	178	I	128	I	107	I
8.	A.E.Os.	74		VIII	72	VIII	70	IX	68	VIII	62	VII	38	VIII
9.	Demonstrations	74		VIII	39	XII	79	VI	37	XII	61	VIII	22	XIII
10.	Field trips and Exhibitions	77		VI	36	XIV	74	VIII	33	XIV	62	VII	20	XIV
<b>D. Personal Sources :</b>														
11.	Neighbours	75		VII	105	IV	77	VII	111	III	70	V	56	IV
12.	Friends	79		V	101	V	85	V	95	V	69	VI	60	XII
13.	Relatives	40		XII	73	VII	41	XIV	69	VII	41	XII	39	VII
14.	Other farmers	108		II	132	II	106	IX	129	II	92	III	73	IX

formation towards plant protection practices followed by the cooperatives. Panchayats were considered most useful in all other cases by both the types of farmers except by trained farmers for developing an attitude towards fertilizer. Among extension contacts, the universally accepted source was village level workers. The next important source were field trips and exhibitions in the attitude formation about the wheat varieties and plant protection practices as expressed by the trained farmers. The demonstration was considered next important by the trained farmers in developing an attitude towards adoption of fertilizer practices. In remaining cases, the Agriculture Extension Officers were next important to village level workers. Among personal sources, the other farmers using the practices were the most useful as source of information for all the three farm practices. The next useful source was friends for trained farmers in regard to variety and fertilizer practices. The neighbours were preferred next important source for plant protection practices and variety by the trained and untrained farmers respectively. The relatives were least concerned towards forming the attitude of farmers regarding the farm practice.

Thus it may be concluded that the radio, village level workers, other progressive farmers and panchayats

Table 22 : Effectiveness of sources in regard to creating adoption of improved wheat practices

S. No.	Sources of information	Variety				Fertiliser					Plant Protection					
		A	T	B	Unt.	A	T	B	A	B	Unt.	A	T	B	Unt.	B
<b>A. Mass Media :</b>																
1.	Meetings	50		XI	72	VII	59	X	74	VI	46	X	24	VI		
2.	Printing material	81		V	71	VIII	85	V	62	IX	62	VII	23	VII		
3.	Radio	90		IV	97	V	94	III	96	IV	71	III	36	IV		
<b>B. Institutional Sources :</b>																
4.	Cooperatives	51		X	39	XI	67	IX	47	XII	40	XI	16	X		
5.	Panchayats	48		XII	67	X	51	XII	59	X	35	XII	17	IX		
6.	Salesmen and other organisation	38		XIV	39	XI	55	XI	49	XI	68	IV	19	VIII		
<b>C. Extension Contacts :</b>																
7.	V.L.Ws.	192		I	145	II	184	I	148	II	102	I	68	I		
8.	A.E.Os.	72		IX	70	IX	70	VIII	65	VIII	51	IX	23	VIII		
9.	Demonstrations	80		VI	39	XI	75	VIII	36	XIII	63	VI	12	XI		
10.	Field Trips and Exhibition	78		VII	37	XII	70	VIII	33	XIV	55	VIII	12	XI		
<b>D. Personal Sources :</b>																
11.	Neighbours	75		VIII	114	III	83	VI	94	V	65	V	36	IV		
12.	Friends	96		III	109	IV	87	IV	102	III	68	IV	40	III		
13.	Relatives	40		XIII	77	VI	40	XIII	71	VII	29	VIII	29	V		
14.	Other farmers	101		II	181	I	95	II	162	I	77	II	49	II		

were the main sources of information in regard to frame the attitude of farmers towards wheat varieties, fertilizers and plant protection practices.

The data presented in Table 22 indicates that village level workers were ranked first by the trained farmers who assisted them most at the time of adoption for all the three farm practices. For plant protection practices even untrained farmers liked the village level workers to the greatest extent.

The demonstration was ranked as second important source in case for all the farm practices by the trained farmers but Agriculture Extension Officers were ranked second by untrained farmers. This indicates that the training assisted in increasing the capacity for making better use of the demonstrations. Among the personal sources, all the farmers preferred contacting other farmers for the practices followed by friends in case of trained farmers and followed by neighbours in case of untrained farmers.

In regard to use of various sources it was observed that the information about varieties and fertilizers by were mostly sought from other farmers by trained farmers followed by the village level workers. For the practices of plant protection, the most important source of information was village level worker as felt by both trained and untrained farmers.

SUMMARY, CONCLUSION AND  
SUGGESTIONS

## MAIN FINDINGS, SUMMARY, CONCLUSION AND SUGGESTIONS

Introduction :

The technology in the field of wheat cultivation has been developed to provide proper direction and guidance to the farmers. The progress in the real sense is possible only when the farmers adopt the recommended technology on their fields. To adopt the technology in a right manner, it requires the use of various sources of information through which communication of technology to the farmers becomes possible. All sources are also not of equal importance at different stages of adoption as the adoption of any technology takes time and goes in stages. The technologies also differ in nature due to which the sources of information must suite to their nature. Hence the selection of the proper sources of information for a proper technology is also essential for an effective communication of that technology to the farmers. The farmers who are to adopt the package of practices are also not homogenous in character and the situations also vary in which they come out their farming. Hence the pattern of making use of the sources of information differs among the farmers of different educational levels.

This study was under taken from the view point of studying the pattern of utilization of various sources of

information for different package of practices at various stages of adoption by the trained and untrained farmers. This will provide a information for making necessary suggestions for an effective use of the sources of information for different purposes i.e. for creating an awareness about the technology for increasing its knowledge, for developing an attitude among farmers towards acceptance of the technology and in actual adoption of the same. This study will also assist in establishing the fact about the usefulness of training in bringing change in utilization pattern of the various sources of information. The effectiveness in use of the various sources of information for proper and complete adoption of the technology by the farmers is very essential, keeping this in view the study will be able to provide a concrete suggestion for better and effective utilization of the various sources of information to adopt different package of practices for wheat cultivation and will also be able to establish the fact about the best usefulness of the sources at a particular stage of adoption. If proper selection of the sources of information are made, then the effective use of the same may become possible in serving the specific purpose of a particular stage in the adoption process and the technology may finally be adopted with full confidence by the farmers at the end of the

process. This is a very essential aspect for making necessary developments in wheat cultivation for increasing the production of wheat per unit area.

Objectives of the Study :

1. To identify the sources of information used by the trained and untrained farmers relating to the improved farm practices of wheat cultivation.
2. To study the utilisation of the various sources of information by the farmers at various stages of adoption (i.e. awareness, knowledge, attitude and adoption).
3. To measure the effectiveness of the various sources of information in relation to different farm practices of wheat cultivation at each stage of adoption.

Methodology :

The study was conducted in Panagar and Jabalpur blocks of Jabalpur district. The selection of these two blocks out of the total 14 blocks was purposive. Out of 27 V.L.W. circles of the two blocks, 4 circles (two from each block) were purposively selected where the trained farmers were maximum in number who had training during the last two years. A list of villages of these selected circles was prepared and seven villages were again purposively

selected where such trained farmers were maximum in number. A list of trained farmers who had training during the year 1982 and 1983 in these selected village was prepared and 35 farmers in total were selected randomly. A similar number of untrained farmers from the same villages who were of the same matching group (age, education and size of land holding). The trained farmers having more than 30 acres land holding were excluded from this study as the untrained ones of this group were not available. Farmers selected for the study were from both irrigated and unirrigated. Majority farmers were growing wheat under unirrigated conditions, but equal number of farmers from trained and untrained having irrigation or not having irrigation were selected to conduct this study. The total respondents were 70 who were interviewed personally for collection of data. The sources of information (i.e., mass media, institutional sources, extension contacts and personal) were the independent and the stages of adoption (i.e. awareness, knowledge, attitude and adoption) were dependent variables. The selected farm practices were improved wheat varieties, fertilizers and plant protection measures. Pre-testing was done prior to finally administrating the schedule. A report was developed with the respondents to establish confidence in them for obtaining their frank opinion. In order to measure the

effectiveness of the various sources at different stages of adoption for each selected farm practice, the replies were taken at different levels i.e. most effective, very effective, effective and not effective given 4, 3, 2 and 1 weightages respectively. By multiplying the frequency in each case with the weightage, the total scores of each source of information at different stages of adoption for different farm practices were calculated and according to the scores obtained by the sources, they were placed under rank-orders.

#### Main Findings and Conclusions :

##### A. Effectiveness of the sources of information for varieties :

1. For creating awareness and developing knowledge about wheat varieties, the radio was considered most effective sources by the trained farmers where as the untrained farmers considered the other farmers and the village level workers as most effective sources for the same.
2. Both the trained and untrained farmers considered village level workers most effective in developing an attitude of farmers towards acceptance of wheat varieties.
3. In final adoption of the wheat varieties, the trained farmers considered village level workers

as the most effective source where as untrained considered the other farmers.

4. The institutional sources were least effective at all the stage of adoption for both the types of farmers.
5. For all the farm practices, the radio was considered most effective for creating awareness and the village level workers were most effective in developing knowledge, forming attitude towards acceptance of the practices and at the time of actual adoption of the same.
6. Among mass media sources the radio was most effective at all stages of adoption.
7. The printed material was most effective for the trained farmers and meetings for the untrained farmers.
8. Among the institutional sources, panchayats were most effective source and the least effective source was salesman and other organisations for the practices of wheat varieties.
9. The trained farmers considered co-operatives as most effective sources at the adoption stage of wheat varieties.
10. Among extension contact sources the trained farmers considered village level workers the most effective source of information for wheat varieties followed by field trips and exhibitions whereas for untrained they were least effective.

11. From the personal sources of information, the other farmers were considered most effective sources followed by neighbours and friends by both types of farmers at all stages.
12. The relatives were the least effective source of information for communicating the information of wheat varieties.
13. The extension contacts were considered better than mass media by the trained farmers for creating awareness of the practices of wheat varieties. Whereas the untrained farmers considered personal sources better than extension contact sources for the same.
14. For developing knowledge, forming the attitude towards acceptance of the varieties and in actual acceptance of the varieties and in actual adoption of the same, the extension contacts were most effective followed by personal sources for trained farmers and the reverse is true for the untrained farmers.
15. The institutional sources were least effective source of information for wheat varieties.

Effectiveness of the sources of information for fertilizer :

1. For creating awareness of the fertilizer practice, radio was considered most effective by all where as village level workers were most effective to develop the knowledge of fertilizer use, forming the attitude of farmers towards acceptance of the practice and also in actual adoption of the same.
2. The untrained farmers preferred to make use of the other farmers over village level workers at the adoption stage.
3. The institutional sources were least effective sources in case of fertilizer practice also.
4. For the fertilizer practices also in all the cases, among mass media, radio was most effective source followed by printed material for trained and meeting for untrained farmers.
5. Cooperatives were most effective source of information among the institutional sources for the trained farmers at all stages of adoption.
6. The untrained farmers considered panchayats as most effective source of information for fertilizer practices followed by salesman at all stages of adoption.
7. Among extension contacts, village level workers were again considered most effective in use of the fertilizer practices by all the farmers.

8. The most effective source was demonstration for trained and Agriculture Extension Officers for the untrained farmers.
9. The other farmers were most effective source of information followed by friends and neighbours. The relatives were least effective in also communicating the information of fertilizer practice.
10. The trained farmers considered extension contacts as most effective source of information at all stages of adoption but the personal sources were most effective for untrained farmers.

Effectiveness of the sources for Plant Protection :

1. The Radio was most effective increasing awareness and developing knowledge of plant protection practices for trained farmers but the village level workers were most effective at all other stages of adoption for both they type of farmers.
2. The radio was main source of information in creating awareness but at other stages, village level workers were considered most effective due to complex nature of the plant protection practices.
3. For plant practices also, the trained liked printed material over the meetings and the reverse is true for untrained farmers at all stages of adoption.

4. The salesman and other organisation were most effective source of information for the practice of plant protection among institutional sources at all stages of adoption.
5. The untrained farmers considered cooperative and panchayats as effective sources of information for the plant protection practices as they failed to contact the salesman and other organisations.
6. Among extension contacts, the village level workers were again most effective source of information and the least effective were demonstrations as they were poorly conducted.
7. Among the personal sources, the other farmers were most effective source of information for plant protection practices where as friends and neighbours were of similar importance.
8. The trained farmers considered mass media most effective source of information for creating awareness of plant protection practices where as the untrained farmers considered personal sources of information.
9. The extension contacts were next effective to mass media for untrained farmers.

10. The institutional sources were considered least effective source of information being not easily approachable and most of the required information was available through other sources like personal, extension contacts and mass media.

Summary and Conclusions :

For creating awareness about wheat varieties radio was most effective source of information for trained farmers. The untrained farmers consulted the other farmers and the village level workers for the purpose. For developing an attitude towards acceptance of the practice and in actual adoption, the trained farmers mostly used the village level workers but they were liked most by the untrained farmers. The institutional sources were least concerned. The trained farmers preferred using printed material where as the meetings were the main source of information for untrained farmers. Panchayats were preferred over salesman and other organisation. But the trained farmers liked most the cooperatives. Village level workers was the most effective source at all stages followed by field trips and exhibitions among extension contracts. Other progressive farmers were contacted by majority to secure the information of wheat varieties. The institutional sources were least in effectiveness for the information of wheat varieties.

For the information of fertilizer, radio was again listed at the top in creating awareness but for securing greater knowledge, developing an attitude towards acceptance of the practice and in its actual adoption, village level workers were mostly contacted. Cooperatives were consulted more by the trained farmers and panchayats by the untrained farmers among institutions. Extension contacts were preferred by the trained farmers and the personal sources by the untrained farmers.

Radio was again considered best in creating awareness about the plant protection practices, but for the development of knowledge, attitude and in adoption, the village level workers were most influential. For institutional sources, salesman were mostly consulted for the practice and from personal sources, the other farmers were mostly liked in assisting towards the acceptance of the practice. Again the institutional sources were least in effectiveness for the practice.

In general it may be concluded that for creating awareness of the practices, radio was most effective source but at other stages of adoption the village level workers were given preference. The training could also create an impact on the attitude of farmers towards motivating them to consult printed material. For the

simpler nature of farm practice, panchayats were consulted but in case of other complicated nature of practices, like fertiliser use and plant protection the cooperatives and salesman were preferred. The tendency of consulting the extension contact sources by the trained farmers was greater. The untrained farmers restricted their contacts to the other progressive farmers of the area, friends and neighbours.

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APPENDIX

क्यावरलाल गैडर कृषि विषयविद्यालय,  
विस्तार शिक्षा विभाग, जलपुर

परामर्श दाता - श्री 212040 नॉर

शोध का विषय:- गेहूँ की उत्पादन तकनीकी के अंगीकरण की विभिन्न अवस्थाओं पर सूचना के विभिन्न स्तरों का कृषक प्रशिक्षण केन्द्र जलपुर के प्रशिक्षित एवं अप्रशिक्षित कृषकों पर प्रभाव ।

शोधकर्ता,

शिक्षु भूषण झा,  
एम०ए०ए०ए०।कृषि।  
अज्ञितम पपी।

131 सामान्य जानकारी।

1- कृषक का नाम :-

2- गाँव :-

3- ग्राम सेवा केंद्र :-

4- ब्लाक :-

5- कृषक की उम्र (वर्षों में) :-

6- पारि :-

7- शैक्षिक स्तर :- प्राथमिक/माध्यमिक/उच्चतर एवं उच्चतर से अधिक

8- व्यवसाय :-

132 प्रमुख व्यवसाय :-

133 सहायक व्यवसाय :-

9- कृषक का भूमि प्रयोग : एकड़ में।

**131। विविध जानकारी।**

1। गेहूँ की उन्नाशील बातियाँ सम्बन्धी।

- 1- क्या आपने गेहूँ की उन्नाशील बातियाँ को देखा है या उनके चित्र में कभी सुना है। हाँ / नहीं

कृपया गेहूँ की कोई तीन उन्नाशील बातियाँ के नाम बताएं।

131।

132।

133।

- 2- यदि आप गेहूँ की उन्नाशील बातियाँ से परिचित हैं, तो कृपया बतायें कि निम्नलिखित साधन जो तारणी में दर्शाये गये हैं, उनमें से किस साधन ने आपको सबसे अधिक प्रभावित किया कारण 121 में तली 1। का निम्नानुसार उत्तर दीजिए इसी के साथ ही नीचे लिखे स्तंभों में से प्रत्येक स्तंभ के प्रभाव की सीमा के विषय में 3, 4 और 5 का क्रम में से किसी एक कारण में तली 1। का निम्नानुसार अपनी राय स्पष्ट कीजिए।

प्रकार	जानकारी के स्त्रोत	सबसे अधिक प्रत्यक्ष प्रभाव- प्रभावकारी स्त्रोत	प्रभावकारी स्त्रोत	प्रभावकारी स्त्रोत	प्रभावकारी स्त्रोत
1	2	2	4	4	5

**132। कृषि साधन :-**

- अ- लता
- ब- साहित्य
- क- रेडियो

**133। संस्थागत स्त्रोत**

- अ- सहकारी संस्थान
- ब- पंचायत
- क- अन्य संस्थान एवं विद्येता



जानकारी के स्रोत

सबसे अधिक उत्पन्न  
प्रभावकारी स्रोत

उत्पन्न प्रभाव-  
कारी

विस्तृत प्रभावकारी  
स्रोत

111 जनसम्पर्क माध्यम

- अ- तारा
- ब- साहित्य
- स- रेडियो

121 संस्थानगत स्रोत

- अ- सहकारी संस्थायें
- ब- पंचायत
- स- अन्य संस्थायें एवं  
विश्रुता

131 प्रसार माध्यम

- अ- ग्राम सेवक
- ब- कृषि विस्तार अधिकारी
- स- प्रदर्शन
- द- प्रेषण प्रणाली एवं प्रदर्शनी

141 व्यक्तिगत स्रोत

- अ- पड़ोसी
- ब- मित्र
- स- सम्बन्धी
- द- अन्य कृषक

161 क्या आप गेहूँ की उन्नतशील जातियाँ को पसंद करते हैं ? हाँ/नहीं

अ- यही हाँ का :-

अ- क्या आप उन जातियाँ से सम्बन्धित विस्तृत जानकारी एकत्रित हाँ/नहीं करते हैं ?

171 यदि आप गैरुं की उम्मातडीत सातियाँ को परतद करते है और उनके विषय में विस्तृत जानकारी प्राप्त करते है, तो इस कार्य के लिए निम्नलिखित स्त्रोतों में से किता स्त्रोत ने आपको सबसे अधिक प्रभावित किया कालम 121 में तडी । । हा निम्नान लगाकर स्पष्ट कीलिर और निम्न स्त्रोतों में से प्रत्येक स्त्रोत के प्रभाव की सीमा को कालम 3, 4 या 5 में से किसी एक कालम में तडी । । हा निम्नान लगाकर स्पष्ट कीलिर तारिमी 131

जानकारी के स्त्रोत	सबसे अधिक प्रभावकारी स्त्रोत	अत्यन्त प्रभाव-शाली	प्रभावकारी	किसी प्रभावकारी नहीं
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111 जनसंघर्ष माध्यम

- अ- सभा
- ब- सभी सुई सामुहिक
- स- रैडियो

121 संस्थागत स्त्रोत

- अ- सरकारी संस्थायें
- ब- परिवार
- स- शिक्षा एवं अन्य संस्थायें

131 प्रसार माध्यम

- अ- ग्राम सेवा
- ब- स्थानिक विस्तार अधिकारी
- स- प्रदर्शन
- द- प्रथम अनुभव एवं प्रदर्शनी

141 व्यक्तिगत स्त्रोत

- अ- पड़ोसी
- ब- मित्र
- स- सम्बन्धी
- द- अन्य कुल

108A क्या आप गेहूँ की उन्नतशील जातियाँ को उगाते हैं ? हाँ/नहीं  
यदि हाँ तो -

अ- क्या आप अपने गेहूँ के सम्पूर्ण प्रदेश में उन्नतशील जातियाँ हाँ/नहीं  
को उगाते हैं ।

19। यदि आप गेहूँ को उन्नतशील जातियाँ से उगाते हैं तो निम्नलिखित  
स्त्रोतों में से आपको किस स्त्रोत में सबसे अधिक प्रभावित किया अपने  
उत्तर को कालम 12। में तही । । का निदान लगाकर स्पष्ट कीजिए  
और इन जातियों को अपनाने में विभिन्न स्त्रोतों के प्रभाव की सीमा  
को कालम 3, 4, 5 में से किसी एक में तही । । का निदान लगाकर  
अपनी राय स्पष्ट कीजिए \*

जानकारी के स्त्रोत	सबसे अधिक प्रभावशाली स्त्रोत	अत्यन्त प्रभाव-शाली	प्रभावशाली	किसी प्रभावशाली नहीं
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11। जनसम्पर्क माध्यम

- अ- तथा
- ब- छपी हुई सामग्री
- स- रेडियो

12। संस्थागत स्त्रोत

- अ- सरकारी संस्थान
- ब- पंचायत
- स- विश्रुता एवं अन्य संस्थान

13। प्रसार तन्त्र

- अ- ग्राम सेवक
- ब- कृषि विस्तार अधिकारी
- स- प्रदर्शन
- द- प्रवेश भ्रमण एवं प्रदर्शनी



प्रकार	जानकारी के स्त्रोत	सबसे अधिक प्रभावशाली स्त्रोत	अत्यन्त प्रभावशाली	प्रभावशाली	किसी प्रभावशाली नहीं
	1	2	3	4	5
111	<u>जनसम्पर्क माध्यम</u>				
अ-	सभा				
ब-	उपरी हुई सामग्री				
स-	रेडियो				
121	<u>संस्थागत स्त्रोत</u>				
अ-	सहकारी संस्थायें				
ब-	पंचायत				
स-	विद्युत् एवं अन्य संस्थायें				
131	<u>प्रसार सम्वर्ध</u>				
अ-	ग्राम सेवा				
ब-	कृषि विस्तार अधिकारी				
स-	प्रदर्शन				
द-	प्रदेश प्रान्त एवं प्रदर्शनी				
141	<u>व्यक्तिगत स्त्रोत</u>				
अ-	पड़ोसी				
ब-	मित्र				
स-	सम्बन्धी				
द-	अन्य कृषक				



1	2	3	4	5
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138 प्रसार तन्त्र

- अ- ग्राम सेवा
- ब- कृषि विस्तार अधिकारी
- स- प्रदर्शन
- द- प्रयोग भ्रमण एवं प्रदर्शनी

140 व्यक्तिगत स्त्रोत

- अ- पड़ोसी
- ब- मित्र
- स- सम्बन्धी
- द- अन्य कृषक

868 गेहूँ की उन्मत्तनीय बातियाँ के लिए निर्धारित रासायनिक खाद डॉ/एकी को आप पतन्द् करतो है । यदि हाँ तो -

877 क्या आप इन रासायनिक खादों से सम्बन्धित विस्तृत जानकारी डॉ/एकी सञ्चित करतो है ।

880 यदि आप गेहूँ की उन्मत्तनीय बातियाँ के लिए निर्धारित रासायनिक उर्वरकों को पतन्द् करतो है और उनके विषय में विस्तृत जानकारी प्राप्त करतो है तो इस कार्य के लिए निम्नलिखित स्त्रोतों में से आपकों तको अधिक प्रभावित किया गया काम 828 में तथी । डा निदान लगाकर स्वच्छ कीचिओ और प्रत्येक स्त्रोतों के प्रभाव की सीमा को काम 3, 4, 5 में से किसी एक काम में तथी । डा निदान लगाकर स्वच्छ कीचिओ ।

ग्रामांक	जमान्तारी के त्वांत	सबसे अधिक प्रभावशाली त्वांत	अल्पतम प्रभाव- शाली	प्रभावशाली प्रभावशाली	किसान प्रभावशाली वर्ग
1	2	3	4	5	

111 जन सम्यर्क माध्यम

- अ- लभ
- ब- साहित्य
- स- रेडियो

121 संस्थागत त्वांत

- अ- सहाकारी संस्थाएँ
- ब- पंचायत
- स- विज्ञान एवं अन्य संस्थाएँ

131 प्रसार सम्यर्क

- अ- ग्राम सेवा
- ब- कृषि विस्तार अधिकारी
- स- प्रदर्शन
- द- प्रक्षेप भ्रमण एवं प्रदर्शनी

141 सांजिगत त्वांत

- अ- पढ़ोती
- ब- मित्र
- स- सम्बन्धी
- द- अन्य कृतक

110। यदि आप गैरों की कक्षा के लिए निर्धारित रासायनिक वाद का प्रयोग करते हैं तो निम्नलिखित स्तरीयों में से आपको उपयुक्त करने में किस स्तरीय में सबसे अधिक प्रभावित किया अपने उत्तर को छात्र 121 में सही।  
 का निम्नान लगाकर स्पष्ट कीजिए और इन उर्वरकों के उपयोग में विभिन्न स्तरीयों के प्रभाव की सीमा को छात्र 3, 4, 5 में से किसी एक में सही।  
 का निम्नान लगाकर अपनी राय स्पष्ट कीजिए।

प्रकार जानकारी के स्तरीय	सबसे अधिक प्रभावकारी स्तरीय	उत्पन्न प्रभावकारी	किसी प्रभावकारी नहीं	
1	2	3	4	5

111 वन सम्पर्क अधिकारी  
माध्यम

- अ- लता
- ब- साहित्य
- स- रेडियो

121 संस्थान स्तरीय

- अ- सहकारी संस्थाएँ
- ब- पंचायत
- स- विद्येता एवं अन्य संस्थाएँ

131 प्रसार माध्यम

- अ- रेडियो सेवक
- ब- कृषि विस्तार अधिकारी
- स- प्रदर्शन

141 प्रयोग प्रणाली

141 व्यक्तिगत स्तरीय

- अ- पशुपाली
- ब- मित्र
- स- सम्बन्धी
- द- अन्य कृषक

118) गेहूँ में पथि संरक्षण से सम्बन्धित जानकारी

111 क्या आपने गेहूँ की उन्नतशील जातियाँ के लिए निर्धारित पथि संरक्षकों को देखा है या उनके विषय में कभी सुना है ? हाँ/नहीं

यदि हाँ तो -

3- कृपया गेहूँ की फसल के लिए निर्धारित कोई तीन पथि संरक्षकों के नाम बताइये -

131

132

133

121 यदि आप गेहूँ की उन्नतशील जातियाँ के लिए निर्धारित पथि संरक्षकों से परिचित हैं तो कृपया बताइये कि निम्नलिखित स्त्रोत जो दर्शाये गये हैं उनमें से किस स्त्रोत ने आपको सबसे अधिक प्रभावित किया, कारण 12) में तली । । का निम्नानुसूचीकृत उदाहरण दीजिये इसी के साथ नीचे लिखे स्त्रोतों में से प्रत्येक स्त्रोत के प्रभाव की सीमा के विषय में 3, 4, 5 कारण में से किसी एक कारण में तली । । का निम्नानुसूचीकृत अपनी राय स्पष्ट कीजिये ।

प्रमाण जानकारी के स्त्रोत	सबसे अधिक प्रभावशाली स्त्रोत	अल्पतम प्रभावशाली स्त्रोत	प्रभावशाली नहीं	किसी प्रभावशाली नहीं
1	2	3	4	5

111 जन सम्पर्क माध्यम

3- समा

4- साहित्य

5- रेडियो

121 संस्थागत स्त्रोत

3- सहकारी संस्थान

4- पंचायत

5- विज्ञान एवं अन्य संस्थान

## 130 प्रसार तन्त्र

- अ- ग्राम सेवक  
 ब- वृद्धि विस्तार अधिकारी  
 स- प्रदर्शन  
 द- प्रथम प्रश्न एवं अन्य संस्कार

## 141 व्यक्तिगत स्त्रोत

- अ- पशुती  
 ब- मित्र  
 स- सम्बन्धी  
 द- अन्य वृत्त

141 क्या आप गेहूँ की फसल के लिए निर्धारित पाँच संरक्षणों से लाभ हाँ/नहीं के विकल्प में जानते हैं ?

यदि हाँ तो, निम्नलिखित प्रश्नों के उत्तर दिये

## 151 रोग प्रश्न :-

- अ- गेहूँ के बीजापचार के लिए कौनसी दवा का उपयोग किया जाता है -----
- ब- लिक्विड गेहूँ के बीजापचार के लिए उक्त दवा की मात्रा जितनी चाहिए -----
- स- गेहूँ में गेरुआ तथा क्लोस्ट रोग घटने के लिए किस दवा का उपयोग करना चाहिए -----
- कीट सम्बन्धी प्रश्न :-
- अ- दीमक से बचाव के लिए गेहूँ की बोनी के पूर्व किस दवा का उत में मिलाना चाहिए -----
- ब- दीमक से बचाव के लिए गेहूँ की बोनी के पूर्व किस दवा को केत में एक हेक्टर में कितनी दवा डाली जानी चाहिए ----- किग्रा.
- 161 यदि आप गेहूँ की फसल के लिए निर्धारित पाँच संरक्षणों से लाभ के विकल्प में जानते हैं तो उक्त लाभ की प्राप्ति के लिए निम्नलिखित स्त्रोतों में से कौन सा स्त्रोत सबसे अधिक प्रभावकारी रहा ? कृपया अपने उत्तर के लिए कारण 2:1 में लीजिए । । का निदानकर्ता कृपया कीजिये और विभिन्न स्त्रोतों की प्रभाव की सीमा को भी 3, 4 या 5 कारणों में दे कर एक कारण में लीजिए । । का निदान लगाकर अपनी राय स्पष्ट कीजिये ।

प्रकार जानकारी के स्त्रोत	सबसे अधिक प्रभावशाली स्त्रोत	उत्पन्न प्रभाव-शाली	प्रभावशाली	कितना प्रभावशाली नहीं
1	2	3	4	5

**111 जन सम्पर्क माध्यम**

- अ- लभा
- ब- साहित्य
- स- रेडियो

**121 संस्थानगत स्त्रोत**

- अ- सहकारी संस्थाएँ
- ब- पंचायत
- स- शिक्षता एवं अन्य संस्थाएँ

**131 प्रसार माध्यम**

- अ- ग्राम सेवक
- ब- कृषि विस्तार अधिकारी
- स- प्रदर्शन
- द- प्रथम भ्रमण एवं प्रदर्शनी

**141 व्यक्तिगत स्त्रोत**

- अ- पड़ोसी
- ब- मित्र
- स- लोकजी
- द- अन्य कृषक

171 क्या आप गेहूँ की उन्मत्तशील जातियाँ के लिये निर्धारित पाँच संरक्षणों को पंक्त करते हैं ? हाँ/नहीं

यदि हाँ तो -

181 क्या आप इन पाँच संरक्षणों से संबंधित विस्तृत जानकारी एकत्रित करते हैं ? हाँ/नहीं

191 यदि आप गेहूँ की उन्मत्तशील जातियाँ के लिए निर्धारित पाँच संरक्षणों को पंक्त करते हैं और उनके क्रम में तयस्तुत जानकारी प्राप्त करते हैं तो इन कार्य के लिए निम्नलिखित स्त्रोतों में से जिस स्त्रोत ने आपको सबसे अधिक प्रभावित किया है उसका नाम लिखिए और उस जातियों को जिनके नाम से विभिन्न स्त्रोतों के प्रभाव की सीमा को जानना है उसका नाम लिखिए ।  
 121 में तभी 172 । का निदान लगाकर स्पष्ट कीजिए ।  
 उनका नाम से विभिन्न स्त्रोतों के प्रभाव की सीमा को जानना है उसका नाम लिखिए ।  
 121 में तभी 172 । का निदान लगाकर स्पष्ट कीजिए ।

प्रभात वागकारी के स्त्रोत	सबसे अधिक उत्पन्न प्रभावकारी	किसका प्रभावकारी नहीं
	प्रभावकारी स्त्रोत	प्रभावकारी नहीं

111 जल सस्पर्श अधिकारी

- अ- तना
- ब- साहित्य
- ग- रेडियो

121 संस्थागत स्त्रोत

- अ- सहकारी संस्थायें
- ब- पंचायत
- ग- विद्येता एवं अन्य संस्थायें
- द- प्रबन्ध प्रणाली एवं अन्य संस्थायें

131 पुस्तक संघर्ष

- 121 कृषि विस्तार अधिकारी
- 131 प्रदर्शन
- 141 प्रबन्ध प्रणाली एवं अन्य संस्थायें

141 प्यबिलन स्त्रोत

- अ- पड़ोसी
- ब- मित्र
- ग- संबंधी
- द- अन्य व्यक्ति

1101 क्या आप गैरों की फसल में निर्धारित पाँच संरक्षकों का उपयोग करने चाहें/नहीं करते हैं ?

1111 यदि आप गैरों की फसल में निर्धारित पाँच संरक्षकों का उपयोग करने चाहें तो निम्नलिखित स्त्रोतों में से आपको कितने स्त्रोत ने सबसे अधिक प्रभावकारी रूप से अपने उत्तर को कालम 21 में सही है ? का निम्नान लगाकर स्पष्ट कीजिए, और इन पाँच संरक्षकों के अपनाने में विभिन्न स्त्रोतों के प्रभाव की सीमा को कालम 3, 4, 5 में से किसी एक में सही है ? का निम्नान लगाकर अपनी राय स्पष्ट कीजिये ।

प्रभात जानकारी के स्त्रोत	सबसे अधिक प्रभावशाली स्त्रोत	उत्पन्न प्रभाष-शाली	प्रभावशाली	दिलकुल प्रभावशाली नहीं
1	2	3	4	5

116 जन सम्पर्क माध्यम

- अ- सभा
- क- साहित्य
- स- रेडियो

121 संस्थागत स्त्रोत

- अ- सरकारी संस्थायें
- क- पंचायत
- स- पत्रिता एवं अन्य संस्थायें

138 प्रसार माध्यम

- अ- ग्राम सेवाक
- क- कृषि विस्तार अधिकारी
- स- प्रदर्शन
- द- प्रथम प्रयोग एवं अन्य संस्थायें

141 व्यक्तिगत स्त्रोत

- अ- पड़ोसी
- क- मित्र
- स- सस्यन्धी
- द- अन्य कुवक