Chapter 2

REVIEW OF LITERATURE
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Many studies on agricultural communication through Farm Radio broadcasts of All India Radios have been conducted in India and abroad but to their different situational, socio-economical and socio-psychological and cultural locale, their conclusions are not of much importance in this particular setting. However, these studies provide an insight into the problem and assist in deriving valid conclusions. The present review deals with the previous studies made in India and abroad relating to the present investigation. However, literature relating to some aspects present investigation is wanting and hence nearly associated literatures have been included. The review of literature has been categorised in the following heading and subheadings.

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2.1. LISTENING BEHAVIOUR

2.1.1. Frequency of Programme Listening

Johnston and Busche (1942) in an interview with 294 farm families concluded that 22.00 per cent of the farmers and 26.00 per cent of the home-makers listened to agricultural extension programmes regularly and 53.00 per cent occasionally.
Crile et al. (1945) in an interview with 190 farmers and 173 farm home-makers found that extension radio programmes had been heard by 94.00 per cent of the farmers and 81.00 per cent of the home-makers.

Hainey (1948) reported that 29.00 per cent of the families surveyed had listened to the extension programme. About 38.00 per cent of them had never listened to any farm programme.

Jaccord and Sabrosky (1949) found that 80.00 per cent of the rural families listened to local station farm programmes. However, all the members of every family were not listeners.

Brown (1949) in an interview with 100 farm men and 110 farm women observed that as many as 77.00 per cent of the men and 81.00 per cent of the women had heard local extension radio programmes.

Further, he reported that about 36.00 per cent of women and 18.00 per cent of the men listened to it daily.

Spaven and Wallerious (1951) in 9 surveys of 742 home makers reported that 74.00 per cent of the farmers had heard the farm and home programmes either regularly or occasionally. Further, they observed that there were more occasional listeners to these programmes than the regular listeners.
Putnam (1952) in a survey of 349 rural families observed that three fourth of the rural families listened to Extension Programmes.

Matthews and Whiteman (1953) reported that 2/5 of the people listened regularly to radio farm programmes.

Calderwood (1964) found that 56.00 per cent of his respondents listened to radio frequently, 12.00 per cent occasionally and 20.00 per cent rarely.

Nigham (1968) reported that 53.00 per cent and 71.00 per cent of his respondents listened respectively to Kheti-Bari and Kheti-Kalwar programmes of All India Radio regularly or often, while 16.00 per cent and 19.00 per cent of them did not listen to these programmes.

Sandhu (1970) observed that 40.77 per cent of the radio owning farmers were listening to farm radio programmes regularly, 28.83 per cent several days a week, 4.46 per cent once a week, 16.13 per cent less than once a week, while 5.77 per cent had seldom or never listened to them.

Katiyar and Jha (1975) in their study of 120 farmers concluded that 16.67 per cent of them had never listened the farm radio broadcasts of All India Radio, Jaipur.

Tripathi (1976) reported that 39.25 per cent of the farmers listened to the farm programmes regularly, 24.00 per cent several days a week, 13.50 per cent once a week, 14.25 per cent seldom or never.
Desh Pandey and Trifle (1984) in a study of 300 respondents sampled from 12 villages of 3 Blocks in Jabalpur district reported that 29.64 per cent farmers were using radio "sometime".

Yadava, J.S. (1985) reported that only 57 per cent of his respondents listened to Radio regularly. Further he concluded that the mass media can hardly be an effective media of information for those who are living below poverty line.

Sonaria and Sathawane (1987) studied that out of the total respondents 26.98 per cent listened Radio programme regularly, 38.89 per cent sometimes.

Lock and Victor (1988) studied that frequency of radio listening varies but nearly half of the sample, 48 per cent listen daily, 17.1 per cent listen 1-3 days a week and 15.4 per cent listen only on Sundays.

Michael and John (1988) reported that the listenership of radio Australia's news and information programming is approximately 80.00 per cent of the available listening audience.

Jaiswal and Mishra (1989) categorizes the radio listeners into three listening groups as under:

(1) Most frequent listeners: Respondents who use to listen the programmes at least five times a week.
(2) Moderately frequent listeners: Respondents who use to listen the programmes three to four times a week.

(3) Least frequent listeners: Respondents who use to listen the programmes one or two times a week.

He reported that majority of radio listeners (23.23 per cent) preferred "Kheti-Bari" Karyakram ranked first, whereas "Krishi Vishwa Vidyalaya Se Kheton Tak" was placed third in the rank order preferred by 23.28 per cent respondents.

2.1.2. Time Devotion

Read (1931) in a survey of 4375 listeners in Minneapolis observed that the mean listening time was 19.6 hours a week (2.4 hours a day).

Kalpatrick (1933) in his study found that generally those who had greater educational level devoted less time to radio. He further studied that generally those who had greater educational level devoted less time to radio listening.

A study conducted by C.B.S. (1934) showed that the number of hours the radio is tuned-on varies directly with the length of time radio has been in the home.

Lumley (1934) reviewed the several studies and found less listening on week end days.
Lumley (1935) reported average time is more likely 4-5 hours a day.

Houser et.al. (1952) reported that farm people spent 9 hours to radio listening per week as compared to 13 hours for non-farm people.

Sandhu (1970) found that on an average radio was listened from a low half an hour to the maximum of 7 hours. The overall mean listening time being 2.45 hours a day.

Singh (1972) reported that majority (61.00 per cent) of the listeners spent half an hour, 35 per cent spent more than an hour and only 4.00 per cent less than half an hour, daily in listening various programmes on radio.

Katiyar (1973) observed that on an average, the members of Charcha-Mandal in Kanpur listened to radio for about 2.44 hours a day.

The similar result was observed by Tripathi (1976) in listening to radio daily.

2.1.3. Preferred Listening Time of Farm Radio Programmes

Lumley concluded various surveys on hours when people listen to radio most and observed that their peak hours were 7 to 9 p.m., 9 to 10 p.m. and 6 to 7 p.m. respectively. The next three peak hours were 10 to 11 p.m., 12 to 01 p.m.
and 5 to 6 p.m.

Johnston and Busche (1942) found that high percentage of farmers and their wives preferred programmes broadcast at 12.00 noon. The noon hour was first choice for the time of agricultural programmes for seven out of every ten respondents.

Crile, Morrill and Nest (1945) have observed that seven out of ten of both the farmers and home makers said that the time 1 O'clock when the programme was broadcast, has been convenient time for them, both during summer and winter.

Jackson and Bainster (1946) in a study of rural family observed that the noon hour was the most desirable time. For a Farm Radio programme 6.00 a.m. was most satisfactory than any other morning hours.

Homson (1946) found that the farm radio programme was found most suited and preferred at 9 to 10 p.m.

Maine (1948) in his study found that 4/5th of the rural families had their radio tuned at 6 to 7 p.m. The next best time to reach large number of farm families was 12.00 at noon and third best was from 7 to 8 a.m.

Smits (1948) reported that the best radio listening time for farmers was from 12.00 to 12.30 noon. He further suggested rural people wants evening programme.
He observed that content wise time as for market summary and weather reports and news about 7.00 in the evening and 8.00 to 8.15 p.m. respectively.

Gallup (1948) found that the most popular times for listening to the extension programmes were meal hours, noon hours and the evening hours.

Riest and Frutchy (1948) have found that there was decided preference of farmers for noon hours for extension radio broadcasts.

WABI Radio study completed by University Maine (1948) has clearly indicated that the time preferred most by the farmers was 7 to 8 p.m. and 12 O'clock in the noon.

Bertrand and Hitt (1949) in a survey concluded the radio listening habits of Louisiana farm people and reported that on week days a greater population of the audience listened to radio regularly from 12.00 noon to 12.30 and 7 to 9 p.m. than any other time.

Jaccord and Sabrosky (1949) in their personal interview with rural families found that the largest farm people listen radio from 7 to 8 a.m. and 12.00 noon to 1.00 p.m.

The highest concentration for both men and women was obtained from 1 to 2 p.m. and 8 to 9 p.m. in the evening.

Lazarsfield and Dinerman (1949) have mentioned in
their book that carefully planned scheduling of additional music would undoubtedly attract many other listeners to additional morning listening.

Brown (1949) in a study concluded about the listening time of radio programme among farm men and women and found noon hours as most preferred for agricultural extension programme.

Dayton and Massachusetts state extension evaluation (1950) have reported that early morning and noon time broadcasts are the most popular listening time for farmers.

Spaven and Wallerious (1951) observed most attracting time of broadcasts between noon and 1.00 p.m. or 7.00 and 8 a.m. for radio listeners.

Putnam (1952) in an interview with 349 rural families reported that noon hours were most preferred by both men and women for the radio programme listening. Second preferred hours were reported as 6.00 a.m. and 7.00 p.m.

Alford (1953) reported that more than 50.00 per cent of his respondents preferred the time 10 a.m. to 1.00 p.m. and rest 50.00 per cent preferred from 1 to 3 p.m.

Whan (1954) found that more than one half of the farm families listened to radio at 7 to 8 o'clock in the morning and about 2/3rd listened at noon, i.e. 12.00 to 12.15 and next to 6 to 6.15 p.m.
Calderwood (1964) reported that for most respondents listen radio from 5.30 to 8 a.m. The next concentration was found between 4 to 6.30 p.m.

Kishore (1968) concluded that all the groups of respondents agreed that 6.00 p.m. to 8.00 p.m. is the best time for rural broadcast throughout the year.

Sandhu (1970) reported evening programmes broadcast as the most preferred time for listening point of view.

Singh (1972) concluded that majority (62.00 per cent) of the respondents desired farm programme in the evening from 7.00 p.m. whereas in smaller majority (6.4 per cent) wanted it after 7 p.m.

Singh (1972) reviewed that foreign studies showed that farm broadcasts were generally desired during the noon hours. But in India, the situation is quite different. As reported by study conducted in India, farmers are in favour of status quo with regard to starting times of farm programmes which are mostly in evening.

Tripathi (1976) found that the evening was the most preferred time of farm radio broadcasts for farmers.

Singh (1979) concluded that listeners preferred the night hours as the time of the radio listening, followed by evening, morning and noon. The breakfast time was the least preferred time of radio listening.
Sinha and Chaudhari (1983) through their research note on follow-up study of Krishiwani broadcast of All India Radio, Nagpur, reported that the morning time selected for the programme had been unanimously accepted as a convenient time of Krishiwani broadcast.

2.1.4. Preferred Duration of Farm Radio Programmes

Cantril and Alport (1935) have reported that the listeners' loss of interest in long talks tends to be counter-balanced by any intrinsic effectiveness gained by an expansion in length. Although there are distinct expectations to the general rule, for ordinary educational, political, factual or news broadcasts, the most suitable length seems to be around 15 minutes.

Crile et.al. (1945) reported that about half of both men and women of their study thought 5 minutes programmes were right in length. About one-third each group (men and women) thought it should be longer than 5 minutes. Most of the respondents had no opinion towards the length of radio programmes.

Brown (1949) in his study of 100 men and 110 women found that agricultural programmes of at least 10 minutes duration is as most preferred.
Dayton (1950) observed that some people listened to a 5 minutes programme because it was short enough. The respondents under his study preferred also 10, 15 or 30 minutes programmes.

Spaven and Wallerious (1951) observed on the basis of a survey conducted of home-makers and farm men that a 30 minutes programme would attract most to its listeners.

Haksson (1953) has suggested that most people would not listen to a straight talk of a duration longer than 6 to 8 minutes. Dialogues will hold interest a little longer, say to a maximum of 10 minutes.

Sandhu (1970) found that against weekly evening programme of 30 minutes duration respondents were in favour of reducing the time span upto 20 minutes, but keeping the status quo in respect of the day of week. However, 5, 10 and 30 minutes duration of 'Kheti-Bari' (evening), Unnat-Kheti (noon) and Kheti-Kalwar (evening) programmes were respectively preferred by majority of his respondents.

Singh (1979) concluded that 30 minutes duration was the most preferred duration followed by 20, 15 and other time span of farm radio programmes.

2.1.5. **Preferred Contents of Farm Radio Broadcasts**

Johnston and Busche (1942) have found that high percentage of farmers and their wives preferred the
agricultural programmes.

The national wide USDA (1946) survey brought out that farm people in general preferred the more 'serious' programmes like news and market reports, hymns and religious programmes and farm talks.

Hamson (1946) in his research study found that timely farm advice, weather and market reports and experience of local people were the preferred subjects.

Schmits (1948) observed that all his 450 respondents were interested in listening about new ideas or developments concerning any phase of farming. However, they particularly preferred to hear market, weather reports and informations on live stock, crops, soil conservation, machinery and labour saving devices.

Ziebarth (1948) reported that news broadcasts and market reports were the most preferred programmes of the rural people.

Jaccord and Sabrosky (1949) observed in a personal interview that the most of interviewed rural families preferred rural programmes as folk songs, news and market reports.

Moe (1954) observed that farm programmes were high on the list of preferred radio programmes, news reports, farm market reports, talk and discussion in farming were the best liked programme.
Calderwood (1964) observed that his farmer respondents found most useful the programmes of gardening, home grounds and fruit informations.

Thakur, Bradford and Thirtha (1964) in their study, "Impact of the radio on our villages" have found that the village population, taken as a whole, seems to prefer film music and entertainment programmes to the news and villagers special programmes.

Sandhu (1970) observed that crop cultivation was the first preferred content. The next most interesting content to farmers was 'Daily farming hints'. Their third, fourth, and fifth preferences were weather reports, market reports and plant protection measures.

Singh (1972) reported that crop cultivation, vegetable cultivation, experiences of other farmers and plant protection measures were the most desired items of farm broadcasts for listeners of Patna district.

Singh (1979) concluded that the first and second preferences of listeners were for improved agricultural practices and daily farming hits. The other item of preferences in sequence were live-stock production, market reports, listeners reply, folk songs, applied nutrition, agriculture news, weather reports and features and plays respectively.

Bhagat and Mathur (1985) through their study on opinion of farm women about mass media have found that the
favourite programmes on radio for women in rank order were women's programmes (66.3 per cent), news (65.7 per cent), drama (61.1 per cent), and religious songs (42.6 per cent). Further they reported that no negative impact of radio was mentioned.

Aina (1985) in a survey on information needs an information seeking involvement of farmers in six rural communities in Nigeria; he concluded that most of the farmers required information on a wide range of subject, but all were concerned with ways of increasing production.

Lock Yut Kumar and Victor (1988) studied that a high majority (81.7 per cent) reported that they listen music programmes, 64.6 per cent to western pop-music programmes, 52.00 per cent disco music programmes, 40.6 per cent to rock music and 33.7 per cent to local music. A total of 28.00 per cent reported they tune into talk shows and 26 per cent to news and current affairs programmes. Less than 25 per cent listen to other programmes, such as sports, drama and religious programmes.

Sanoria, Agrawal and Sathawane (1989) studied that the regular listener respondents (100 per cent) listened on agriculture, 82.35 per cent on Hindi news and bulletins, 79.41 per cent listened folk songs and religious programmes. Out of those who listened 'sometime' 100 per cent listened agricultural programmes, 85.71 per cent Hindi news bulletin,
61.12 per cent film songs and remaining 6.12 per cent listened folk songs as well as religious programmes. Further they concluded that majority of respondent farmers listened farm informations on agriculture followed by Hindi news bulletin and film songs.

Singh and Kumar (1990) reported that concurrently, the rural third world in which 60-80 per cent of the national population reside also had the first taste of rural broadcasts.

2.1.6. Preferred Mode (Style) of Presentation of Farm Broadcast

Several scattered attempts have been made by India and outside country research workers in the field of mode of presentation of Farm Radio Broadcasts. In India up to now, investigators have not come across any sophisticated work on the above mentioned topic with special reference to the location of present study. And hence the shortcomings of whatever research literatures could be gone through are being reviewed in the following passages:

Fulton (1931) found that dialogues are less successful medium than lectures or informal talks or teaching facts.

Phillips (1931) found in comparing the results produced by presenting a speech face to face versus speech
via radio that more facts are gained by direct listening to a formal speech, while an informal one produced better results over the radio.

Lumley (1933) classifying techniques used in educational broadcasting found into six categories: (1) straight radio lesson, (2) Radio talks, (3) Reading, (4) Dialogues, Interviews, Debates and Conversations, (5) Dramatization and (6) Musical programmes with comments and explanations.

Garbett (1936) believes that mixture of music and comment can make information educationally more effective.

Johnston and Busche (1942) reported that farmers preferred a variety of voices and question answers. Talk by farm people giving their own experiences was mostly desired by the farmers.

Extempore speaking was preferred to reading from script. A survey conducted by them of 295 farm families (1942) observed that there was a great desire of talk by farm people giving their own experiences.

An extension radio survey of seven peninsulan countries (1942) had clearly brought out that listeners liked variety combined agricultural and home programmes, different speakers, more local people, the question and answer method, several subjects for each broadcast and judicious use of music.
Crile, Morrill and Nesset (1945) have observed that a large majority of farmers preferred the interview style of presentation to the straight talk. One-third of men preferred to have some music along with the programme.

Dietrich (1945) found that radio communicators conversational delivery was more effective than his dynamic delivery in influencing attitudes.

Hanson (1946) found that interview type of presentation was the first choice, the second being one person talking to the listeners. Music was desired on the programme by more than 80 per cent of those interviewed.

Gallup (1948) has reported that conversational style of presentation, wherein one or more voices are used, is the most effective.

WABI Radio study completed by University of Maine (1948) had clearly indicated that interview method of presentation was liked more than the straight subject matter talks.

Moe (1954) observed that talks and discussions in farming were the best liked programmes.

Nicol, Shea, Simmins and Sim (1954) have reported that there are four methods of broadcasting, i.e. dramatized broadcast, Panel discussion, Speech or interview, review broadcast. Out of these four methods, no single "best" form
of presenting a programme has been discovered. He further reported that the mainstay of the broadcast is the panel discussion, but this is varied from time to time by alternating discussion with plays, speeches, interviews or a combination of two or more of the fundamental programme types.

Mathur and Neurath (1959) have observed that group discussion, as a means of transmitting knowledge, was a complete success.

A survey programme conducted by the National Institute of Education (1961) had clearly shown that the farmers like dialogue method of broadcasting than straight talk, interview, drama and folk songs.

Bhatt and Krishnamoorthy (1965) observed that group method of discussion proved extremely successful.

Kishore (1968) concluded that change in knowledge and attitude was higher among the farmers who listen conversational mode of broadcast.

Sandhu (1970) report that first three preferred mode of programme presentation was discussion, lecture and feature and drama. The next three preferences went to interviews with farmers, question-answers and views and reviews.

Knight and Singh (1974) found that interview was found
to be most effective at immediate post-broadcast and thirty days after broadcast with different groups of listeners. Straight talk on many occasions was found to be equal to interview method of broadcast. Similar observations were also recorded by Pandey and Khanna (1976) in a study on effectiveness of three modes of presentation of information to rural women.

Singh (1979) concluded that discussion was the most preferred mode of presentation of Farm broadcast. The interview, views and reviews, question-answer, dialogue, feature and drama and straight talk occupied successively lower position in preferential order.

Bains (1979) reported the effectiveness in communicating nutrition knowledge to the rural women through the mode of informal dialogue, folk song and illustrated talk were found to be equally effective for gain and retention of knowledge.

Roy and Khanna (1985) in their study on effectiveness of three mode of communication for presenting information on house-hold sanitation to rural women have concluded that the three modes of communication, viz., straight talk, discussion and drama resulted in distinct gain in knowledge. The modes may, therefore, be used for communicating message to rural home makers. Further, they reported that since the mode 'drama' was found to be most effective in gaining
know-how immediately after exposure, the possibility of greater use of this mode may be explored for communicating message on other topics too. Again they reported that the straight talk was found to be least effective in comparison to other two modes. They suggested that there is a need to improve this mode of communicating different messages.

2.2.1. Attention Paid in Term of Preferred Listening Place and Work Engagement during listening

Hettinger and Read (1931) reported that only about 13.00 per cent of the housewives paid complete attention to the morning broadcast, 22.00 per cent to after-noon programmes and about 55.00 per cent to evening programmes.

Thus it might be concluded that about 13.00 per cent, 22.00 per cent and 55.00 per cent housewives do not make them engage in any other work when they tuned their radio for morning, afternoon and evening programmes through farm radio broadcast.

Johnston and Busche (1942) in a survey of 294 farm families observed that very few listeners took down note of the farm informations brought to them through farm broadcasts.

Crile et al. (1945) found that about 25.00 per cent women and 10.00 per cent men had taken notes during the broadcasts and those who did not listen were too busy and work
outside or away from the farm time.

Calderwood (1964) reported that about 98.00 per cent of the respondents who were farmers worked around the house while listening the radio. Radio was listened to more closely during performing routine type of works around the house where the work required little attention.

Calderwood (1964) reported that radio listening is more in morning when people are getting ready to go to work. Further he reported that when people returned home and took evening meal radio listening is most.

Sandhu (1970) found that only 22.77 per cent of respondents were taking down notes about the important informations given in the farm broadcasts.

Sandhu (1970) reported that 27.20 per cent farmers were not doing any other work except listening to radio programmes. However, 22.77 per cent obtained informations in the message. Eating and dressing are some of the activities which are carried out while the radio is on and 12.30 per cent of the farmers are reported to be engaged in them. The most alarming fact was that one out of every four (26.54 per cent) farmers were engaged in gossip.

Sandhu (1970) revealed that about 45.00 per cent of the farmers paid full attention, 21.00 per cent partial and 34.00 per cent little attention while listening to farm programmes.
Singh (1972) reported that 23.00 per cent of the respondents were taking notes and that too rarely.

2.2.2. Preferred Communication Channels and Source Utilization in respect to Further Information Seeking

Bureau of Agricultural Economics (1946) reported that men particularly regarded radio as an important source of farm information.

Lazarsfield and Field (1946) have reported that 30 per cent people said that they got practical information through radio, out of which 22 per cent people said that they got information about home making or shopping, while 9 per cent said that they got agricultural information. Only 25 per cent reported that they never learned anything from the radio.

Spaven and Wallericus (1951) found that about one-fourth of his respondents (Rural home makers and farmers) had seen the programme timing in the radio schedule of their newspapers. Rest said that they heard about it by accident.

Lionberger (1966) concluded that in an awareness stage, mass media, newspaper, magazine, radio and television are the most frequent sources of information about new ideas and practices.
Wright (1966) reported people do more than just listen to mass communicated news. They talk about it with friends, relatives, neighbours and co-workers.

In an Indian study, Indian Institute of mass Communication (1968) reported the following sources and channels of communication in the descending order of relative credibility rank - (1) Village level workers, (2) Demonstration, (3) Other formal personal sources, (4) Radio, (5) Neighbourers, (6) Bulletins, Leaflets, (7) Posters, (8) Newspapers and (9) Films and relatives.

Sankariah (1969) by applying paired comparison technique, studied the relative source credibility in a progressive village and a non-progressive village. In the progressive village, Pusa Scientists occupied the first rank, followed by radio, progressive farmers, block extension agency, demonstration, bulletins and folders and newspapers, while in the non-progressive village, demonstration get first rank followed by progressive farmers, Pusa Scientist, block extension agency, Radio, Bulletins and Folders and Newspapers in order of credibility rank.

Sandhu (1970) reported that mostly the farmers knew topic of farm broadcasts either tuning the radio accidently or at the same time regularly (72.67 per cent) only 11.53 per cent reported to have Know-How of specific programmes from radio schedule.
Sandhu (1970) reported that for seeking additional information among farm radio listeners the agencies most frequently preferred were the extension worker and neighbours. Only a small fraction (7.31 per cent) wrote to radio station for the purpose.

Singh (1971) reported eight sources in order of their credibility ranks. These sources were: demonstration, Pusa workers, Block Extension Agency, Progressive Farmers, Television, Radio, Folders and Newspapers. A critical analysis of the findings of the Indian studies reveals that in four out of six cases, demonstration was attributed first credibility rank. Village level workers and scientists attributed first rank only once out of the six cases. Progressive farmers and block extension agency were in the middle position of the credibility rank. Bulletins, leaflets, newspapers and posters were consistently assigned low credibility rank in almost all cases.

Singh (1972) observed that majority of listeners learnt about future farm broadcast from radio itself.

Pande and Trifle (1984) reported that out of 14 identified sources only 10 have been perceived as credible by the respondents. The VLW, village leader, FTC, Neighbours and Demonstrations were ranked as one, two, three, four and five respectively. Four sources namely - Family members, other farmers, meetings and exhibitions were not
perceived as credible sources even though they were utilized for obtaining information.

Natraj and Channegowda (1985) in their study on source of information utilisation for adoption of improved dairy management practices reported that mass media sources, such as Film Show (77.3 per cent), Cattle Rally (70.00 %) and Radio (54.00 per cent) have been utilised to a very large extent.

Rai and Chaubey (1985) have reported that radio was the important one followed by printed literature, poster, demonstration, newspapers, field visits, film shows, exhibitions and meetings in respect to credibility, usefulness and utilization of communication sources and channels as perceived by farmers. They further stated that the farmers utilized many sources and channels of communication but the important sources and channels were localised inter personal, V.L.Ws, S.M.S. and Agriculture Universities, demonstration, radio, printed literatures, field visits, farmers' training centres, posters and newspapers. Radio now-a-days is most common channel in the rural area.

Yadava (1985) observed that overwhelming majority of the respondents are not exposed at all to radio, television, cinema, newspapers and periodicals. Even if some are, it is only rarely or at least occasionally 5 per cent of the
respondents listen radio regularly.

He concluded that mass media can hardly be effective media of information for those who are living below the poverty line.

Sangha and Gupta (1985) have studied about credibility of source of information about agriculture and their T.V. viewers and they found that television was considered as the most credible obtaining credibility index 26.5. It was followed by agriculture university (7), radio (3), block extension staff (0.65) and relatives, friends and neighbours (0.01 per cent).

Kulkarni (1985) in his research note on utilisation of media and methods in tribal areas conclusively reported that farming neighbours and tribal leaders were utilised as source of information. These sources were only perceived as trustworthy for seeking information. He further reported that the credibility of sources, namely demonstration, radio, newspapers, magazines were affected with poor socio-economic condition. He also reported that mass media source of information like radio has the greater potentiality to educate the tribal farmers, if this source is coupled with farmers' discussion group.
Aina (1985) in his survey on information need and information seeking involvement of farmers in six rural communities in Nigeria, he observed that farmers made little effort themselves to obtain required information and a very few visited agricultural institutions in search of information.

Jaiswal and Mishra (1989) reported that farmers gave first, second and third priority to V.L.Ws, Supervisors and Scientists respectively. The other sources, like neighbours, progressive farmers, friends and village leaders were utilised by a little number of farmers and were placed IV, V, VI and VII of the rank order respectively. Similarly, the findings of various channels of agricultural information utilised by majority of farmers were radio, demonstration and exhibition, and were placed I, II and III in the rank order respectively. Other channels, like gossive group, poster, training, panchayat, cooperative and puppet shows were utilised by a few of the farmers and were placed IV, V, VI, VII, VIII and IX in the rank order respectively.

2.2.3. Attention Paid in Term of Evaluation of Broadcasted Farm Programmes

Lumely (1934) observed that people went to meeting, concert, museum and clinic because of some talk heard on the topics/subjects.
Wiles (1940) found that dramatization method is most effective and a talk was the least effective in influencing the attitude.

Crile et al. (1945) in summarising some of the important findings stated that both men and women considered that radio is an important source of information because it was timely, regular and easy way to get information.

Zieberth (1948) in an interview of one thousand farm and rural non-farmer men and women in 14 countries in Minne Sota and Wisconsin found that radio was providing sufficiently carried programmes to meet most of the recognised needs of his respondents.

Jaccord and Sabrosky (1949) found that farmers in Berton country said that the time of the agent's broadcast (6.45 a.m.) was too early in the winter, but satisfactory for other seasons.

Roghvender (1954) found in his research project that a speaker's ability was not a prime factor in establishing a favourable audience reaction pattern. The evidence suggested indicated that the topic and subject matter were important in gaining audience approval.

Nathur and Neurath (1959) observed that group discussion is a means of transmitting know-how for complete success.
Bhardwaj (1966) reported that one of the findings of mass communications that are favourable or congenial to their pre-dispositions and the more effective likely in such selective attention.

Reddy and Kivilin (1968) reported that farmers from west Godavary district placed first credibility on radio.

Kishore (1968) reported that respondents comprising of subject matter specialist, farmers and other speakers of All India Radio had considered that speaker should have clear and systematic thinking on topic, should be fully able to speak the language, understandable, appealing to the farmers as most important factor of effective speaker.

Shankariah (1969) found that farmers of non-progressive villages accorded high credibility to radio than farmers of progressive villages.

Sandhu (1970) in his study observed that 38.84 per cent respondents either did not discuss the matter listened on air at all or they did it very rarely. Of the remaining 36.92 per cent did it regularly and 24.24 per cent occasionally. Thus one out of every three farmer respondents were in the habit of discussing the content of farm broadcast with other family members and those with other farmers were almost equal. The most important purpose of discussing contents with others was to clear doubts. For seeking additional informations, the
agencies most frequently referred to were the extension workers and neighbours. Only a small faction, i.e. 7.31 per cent wrote to radio station for the purpose.

Tripathi (1976) reported that about 69.00 per cent and 76.00 per cent of respondents were in the habit of discussing content after listening with family members and other farmers respectively. The purpose of discussing content was mostly clear doubts (45.0 per cent) evaluating ideas (33.00 per cent) sharing informations (30.00 per cent) and arranging inputs (38.00 per cent).

Jaiswal and Mishra (1989) reported that most of the radio listeners (58.88 per cent) were of opinion that the broadcast time was suitable, whereas only 22.34 per cent reported the broadcast time should be half an hour earlier, i.e. from 7.30 p.m.

2.3. IMPACT OF FARM RADIO BROADCASTS

2.3.1. Know-How of Agricultural Improved Practices

Lumley's study (1934) showed that 16 to 20 per cent information through a radio talk was gained in teaching of geography.

Baker (1938) found no significant difference in the
amount of information acquired by radio and non-radio pupils in teaching history to the High School classes.

Cook, Dean and Nemzek (1939) found no significant differences in the amount of information acquired by radio and non-radio students.

Miles (1940) found advantage for the radio group in the teaching of elementary science. While studying the acquisition of information, "the wisconsin studies" conducted by Barr and others (1942) about the classroom radio, were inclusive. The comparison consistently favouring the radio groups only in field of music and even here several differences were not big enough to be statistically significant.

Muller (1940) found no statistically significant difference in the amount of information gained by radio as an instructional aid for teaching science between radio and non-radio pupils.

Lazarsfield and Field (1946) have reported that two-third of the people say that radio has added to their general knowledge, which the money on education might be an unexpected finding. 31.00 per cent people said that they got practical information, out of which 22 people said that they get information about home making or shopping while 9 per cent said that they got agricultural information.
Only 25 per cent reported that they never learned anything from the radio.

Putnam (1952) found that out of five listeners remembered one or more subjects that were discussed during the six months prior to the interview.

Nicol, Shea, Simins and Sim (1954) have reported that there was no way of determining how much information has been acquired by members from the broadcast and discussions, but it is possible to get some idea of the extent to which an inquiring attitude has been fostered as a result of attempts which the members had made individually and through groups, to acquire further knowledge.

Crile et al. (1955) had observed that the less educated and less intelligent listen more and remember better what they hear by radio as compared to more educated and more intelligent listeners.

Wiltich and Schuller (1957) have stated that radio programmes produced and transmitted by educational broadcasting stations are an extremely practical way of increasing the effectiveness of capable people in all fields. At the same time, the enrichment of experiences which they provide, may open the door to better achievement by the listeners.
Mathur and Neurath (1959) have reported that Radio Farm Forum as an agent for transmission of knowledge has proved to be a success beyond expectation. Increase in knowledge in forum villages between pre and post-broadcasts was spectacular, whereas in the non-forum villages, it was negligible. What little gain there was occurred mostly in the non-forum villages with radio.

The increase in knowledge was equally impressive for many sub-groups, such as leaders and other villagers, agriculturists and non-agriculturists, literate and illiterates. They also found that group discussion was a means of transmitting knowledge for complete success.

Neurath (1960) has found that 89 per cent of knowledge is increased when farmers listen to community sets in their forums while non-forums increase their knowledge by 20 per cent.

Lionberger (1960) reported that radio is a supplier of information primarily at awareness and information stages. Evidence also indicates that a given source frequently performs other functions as well. In a number of cases, radio has performed a legitimizing or "Okay"ing" function important at the evaluation, trial and final adoption stages.

Survey conducted by the National Fundamental Education Centre (1961) has pointed out that people had a good understanding of the role of Farm Radio Forums. All the farmers
reported that the objective of the scheme was to provide useful information about agriculture, animal husbandry and other aspects of rural life, so as to create a great zeal for development. The educational aspect received greater emphasis than the recreational.

Lazarsfield and Field (1964) have reported 31 per cent people said they got practical information, out of which 22 per cent people said that they got information about home making or shopping while 9 per cent said that they got agricultural information; only 25 per cent reported that they never learned anything from radio.

Bhatt and Krishnamoorthy (1965) have reported that the forum groups showed a very impressive gain in knowledge. The gain was equally impressive among the different groups in the form - illiterates and literates, agriculturists and non-agriculturists. He further added that West Bengal report stated, "It is interesting to note that hundred per cent of the members have said that the Radio Farm Forum Organisation and the broadcasts are the best means of communicating and enhancing knowledge among the villagers on agricultural matters".

Kishore (1968) concluded that community set listeners retained more knowledge than own radio set listeners. Further, he reported that change in knowledge and attitude was high among the farmers who listen conversational mode of broadcasts.
Mishra (1969) revealed that farmers have more knowledge regarding improved seeds, improved farm practices, plant protection measures and modern crop rotations.

Bhagat (1985) reported that farmers were asked their opinion on impact of radio on their lifestyle. It was seen that education for better living (68.1 per cent) ranked at the top followed by increase in knowledge (67.5 per cent) and information on home improvements (63.3 per cent). This clearly indicated that radio was an important part of their life and a source of education.

It added to their knowledge and also entertained and gained happiness as mentioned by 214 (63.3 per cent) respondents. Other important impact of radio was that it gave knowledge on social issues (56.2 per cent), education for health (56.2 per cent) and knowledge on agriculture (53.9 per cent). It was observed that most of modern women (86.8 per cent) felt that radio provided education for better living, followed by semi-modern (62.5 per cent) traditional farm women (68.1 per cent). Same trend was there for increase in knowledge information on home improvement and knowledge on social issues. Traditional group (65.7 per cent) considered radio more of an entertainment followed by women (53.2 per cent). The largest number of modern farm women (68.4 per cent) found radio listening having impact on health followed by semi-modern (54.2 per cent) and traditional farm women (37.1 per cent).
Bhagat and Nathur (1985) through their study on "Opinion of farm women about mass media" have found that hundred per cent respondents opined negative impact of radio.

Sanoria and Sathawane (1987) reported that out of the total regular listeners only 61.11 per cent had high level knowledge, whereas 38.89 per cent had moderate level of knowledge. Those who listened programmes sometimes 23.81 per cent, 57.14 per cent and 19.05 per cent listeners had high, moderate and low level of knowledge respectively. Out of the non-listeners, 14.28 per cent, 35.70 per cent and 50.02 per cent were having high, moderate and low level of knowledge respectively. Further, he concluded that the greater listening frequency possessed higher the level of knowledge.

2.3.2. Attitude Towards Improved Agricultural Practices

Lumley (1934) in his study on favourable or unfavourable attitude towards a city as affected by a radio talk showed that the talk made pupil's attitude towards the city more favourable.

Davis and Nichals (1985) have reported that broadcast designed to influence attitude of pupils towards the Japanese, increased the variability of their beliefs. This
was attributed primarily to the fact that broadcasts intensified the attitude of pupils with respect to factors measured. The broadcasts produced no statistically significant difference of average scores in the attitude tested, but made the group more variable in its belief.

Rubon (1944) found a slight shift on attitude achieved by the use of recording, but the results were in no way conclusive.

Rathney, John and Homsen (1947) made an exploratory study, using the questionnaire method of obtaining grade 5th through grade 8th student reactions to a Wisconsin school of the Air Radio programme designed to teach children ideals of American democracy and basic concept of agricultural relations. The programmes appeared to develop favourable attitudes towards members of other cultural groups and were liked by 97 per cent of the students.

Haugh (1952) found that there were no significant differences in the effectiveness of reading or listening to radio drama in acquiring information and that neither method caused any shift in attitudes.

Slocun, Broughand and Spans (1958) revealed that only a small percentage of farmers felt unfavourable attitude towards making change in farming practices.

Shastri (1962) stated that farmers in general had
positive attitude towards new practices of crops.

Chakravarti (1966) and Mishra (1969) observed in their studies that farmers showed favourable attitude towards improved seed, improved agricultural implements, new crop rotations and plant protection measures.

Bhardwaj (1966) stated that radio can feed individual and group communication, raise aspirations, create a climate for development, help indirectly to change strongly held attitudes or valued practices.

Kishore (1968) concluded that farmers of various socio-economic status groups listening to community sets change attitude by higher degrees than those listening their own radio set.

Jalihal et al. (1973) in their study in Mondya (Mysore) indicated that majority of the farmers had favourable attitude towards high yielding varieties of paddy.

Bhagat and Mathur (1985) study on "Opinion of farm women about mass media" have found that hundred per cent respondents opined negative impact of radio.

Subramanyam (1988) said that "All media forum programme seem to be rather effective in creating knowledge, forming and changing attitude and in catalysing behavioural changes".

Rajan R.V. (1990) emphasises that "The mass media is an
important instrument of information, education and entertainment. In developing countries such as India, it also helps to bring about change in attitude in people and involves them in development policies and plans.

2.3.3. Impact on the Adoption of Improved Practices

Gallup (1948) reported while giving a seminar at the institute for education by radio, at Columbus, Ohio, based on a competition of finding on radio from a number of studies (Extension) that we can get action both of a primary sort in changing practices as well as that of a secondary nature, such as the attending of meetings and asking for information. The practice of making local people tell for their successful experiences in the use of recommended practices is effective for encouraging listeners to accept these recommendations.

Reist and Frutchey (1948) have reported that farmers took action as a result of listening the radio. Those who listened regularly reacted better than those who listen occasionally. They also reported that full time farm women showed more influence as a result of broadcasts as compared to part time farm or un-farm women.

Jaccord and Sabrosky (1949) have reported that 26
per cent families were able to absorb the improved practices which had been broadcast over the radio.

Dayton and Massachusetts state extension evaluation committee (1950) have reported after summarising their studies of radio that 8 out of 10 say that they have incorporated some of the ideas in their work.

Putnam (1952) found that half of the listeners said that they had applied at least one new practice in their home or on their farm.

Crile (1955) had observed that a high proportion of people take definite action as a result of these programmes in such ways as attending meetings, ordering bulletins and changing old practices or adopting new ones.

Bhardwaj (1966) stated that radio can feed individual and group communication, raise aspirations, create a climate for development, helping indirectly to change in the decision making and teaching functions.

Lionberger (1966) expressed that adoption had range of contact with originating sources of farm informations.

Pandey (1967) has found that radio accounts for 40.24 per cent effectiveness in relation to adoption of practices.

Tripathi (1972) quoted that the adopters have more knowledge and willingness than the non adopters about the
high yielding varieties of wheat, maize and paddy, as reported by Gupta (1968), Kumar (1968) and Subedar (1968). Jha (1967) reported in his study that 48 per cent respondents in the studied sample were adopting improved seeds.

Tripathi (1968) found that the percentage of adopters of Japanese method of paddy cultivation was 29 and of U.P. method of wheat cultivation was 55.

Singh (1965) reported in his study on the adoption of improved seeds in Padrauna Block of Deoria District that 88 per cent respondents in the studied sample were using improved seeds.

Singh (1968) reported that the adoption of improved seeds of paddy was higher in the studied sample followed by wheat (87.0 per cent) and Maize (24.0 percent).

Kumar (1968), Subedar (1968), Dube (1968) and Prasad (1967) in their studies reported that a strong relationship existed between the fertilizer use and the adoption of high yielding varieties programme. They further stated that 49 per cent of the adopters of high yielding varieties programme were tempted to purchase higher amounts of fertilizers. For having proper response of fertilizer, the method of its application is also an important point to consider.

Kumar (1968) in a study of hybrid maize cultivation and Gupta (1968) in a study on adoption of package of
practices in Mexican wheat reported that about half of the adopters did not adopt the correct methods of fertilizer application.

Tripathi (1968) observed that 61 per cent of the respondents in their studied sample were adopting fertilizers. The percentage of area covered under fertilizer was highest in case of wheat group, followed by maize and paddy. He also found that the use of fertilizer mixture number 2 was highest among the farmers.

Dubey (1968) reported that mostly the farmers adopt cultural and mechanical methods of pest and disease control. He also observed that 20 per cent of the respondents in their studied sample were using chemicals in controlling the disease and pests. Mostly the farmers were found using B.H.C. The study also revealed that the farmers did not have the knowledge of the characteristics of pests of various crops.

Tewari (1967) investigated that 22 per cent respondents were adopting seed treatment. He also reported that 30 per cent respondents were adopting control measures against Gandhi bug in paddy crops. In case of aphids only 19 per cent were adopting control measures. Subedar (1968) in a study on the adoption of package of practices in wheat crop reported that 46 per cent respondents were adopting seed treatment.
He also reported that 10 per cent were using chemicals to control pests and disease.

Singh (1968) reported that 56 per cent of the respondents were adopting rat control measures. These findings were reported by Tewari (1964), Gupta (1965) and Tripathi (1968).

Chauhan (1976) challenges the definition of adoption as decision to make use of an innovation in the term that the action taken to make use of the innovation and measured the farmers level of adoption in term of the practice or practices a farmer make use of it.

Gogoi and Gogoi (1989) reported that "Seed selection" was the only practice which was fully adopted by all the respondents. "Seed treatment" was not adopted by 87.27 per cent respondents. The practice of chemical control measures in nursery and main field was found to be fully adopted by 40.00 per cent and 48.14 per cent respectively. Half of the respondents were low adopters of recommended plant protection practices followed by 36.36 per cent medium adopters and 13.64 per cent high adopters. They further said that mass media exposure could contribute 57.00 per cent of the variation. Mass media exposure, extension contact and knowledge of plant protection practice were important variables in explaining the adoption of plant protection practice to a great extent. Conclusively they said that extension agencies should concentrate their efforts in enhancing the
knowledge of farmers on improved plant protection practices, not only through personal contact but also encouraging extensive use of mass media.

2.4. **SUGGESTED MEASURES FOR EFFECTIVE BROADCAST ON FARMS**

Fulton (1931) observed that dialogue was successful medium than lectures or informal talk for teaching facts.

Cantril and Allport (1935) reported that when the material has no intrinsic interest or is of a high factual nature, short sentences increase its memory value. The greater effectiveness of short sentences disappear as the material become more interesting and more unified. The majority of broadcasts are more comprehensive is the best qualified. So far as material for the talk is concerned has a vague one delivery which completely nullify his expert knowledge.

Menser (1936) reported that too many times the speaker is selected only because he is an authority on his subject. Many a time the man who is the best qualified so far as material for the talk is concerned has a woebe gone delivery which completely nullifies his expert knowledge.

Carlile (1940) has reported that knowledge of studio acoustic also is of importance to the broadcast.
An extension radio survey of seven Pennsylvania coun-
tries (1942) had clearly brought out that listeners liked
variety combined agriculture and home programmes, different
speakers and more local people, the question and answer
method, several subjects for each broadcast and judicious
use of music, other methods, suggested for improving the
broadcasts, were more publicity concerning the time and
subject of broadcast use of more timely adoptable informa-
tion and more time and thought given to the preparation of
manuscripts.

Bureau of Agricultural Economics (1946) reported that
radio has become a highly valuable part of every day living
in most rural homes in the United States. Women tend to
value radio more than men do. But education, income and age
seem to make little difference. Men in particular, regard
radio as an important source of farm information.

Hass and Packer (1946) have found that lengthy quoting-
tions and statistics make the broadcasts less effective.
Thinking, writing and speaking in terms of word pictures
can make a broadcast more successful.

Jaccord and Sabrosky (1949) observed that good dia-
logue, time talks and one complete idea in a talk were pre-
ferred most.
Dayton et al. (1950) concluded that those who did not listen to the Farm Radio Programme were too busy working outside or away from the radio or that they just did not like the programmes.

Dayton and Massachusetts state extension Evaluation Committee (1950) have reported that farmers would listen more often if they knew prior to the broadcast what the country agent was going to discuss. The study also pointed out that early morning and noon time broadcast are the most popular listening times for farmers.

Bhola (1956) suggested that the radio programme should be selected according to the needs of the farming listeners population.

Leveson and Stasheff (1958) have reported that the language used must be of listeners. At least it should be familiar to them. The style of the speaker should be leisurely. Examples should be from actual life of the listeners and should be related to the listeners experiences.

Mathur and Neurath (1959) suggested that topic should be important and according to their need, should create interest in the listeners.

Further they suggested that group discussion, as a means of transmitting knowledge through radio was a complete success.
Mathur (1960) has reported that programmes for a rural audience would have to be addressed to a community and not to an individual, as most programmes at present. He has also pointed out that village communities need is of a composite programme of a limited duration broadcast at times convenient to them.

Siller, White and Terhed (1960) have reported that preparing radio news for broadcast is a matter of decision after decision. The simplicity and clarity should be radio script writer criteria. Besides, cardinal principles of simplicity and clarity in preparing radio news principles of brevity should also be considered. It is essential that every time in a news round up should be kept as brief as possible due to the rigid time limitations in broadcasting.

They have further added that returning once more to the principles of simplicity, clarity and brevity, it should be obvious that there is place for flowery language and big words in broadcasting. This does not mean that radio news must be dull or poorly written, but rather point out that cute and ricky phrases only confuse the listeners and add to the woe of the reader.

A survey conducted by the National Institute of Education (1961) has clearly shown that according to the report substantial position of information provided to the farmers was not directly related to the problems. Another
finding of survey was that the language of broadcast was quite intelligible. However, there appeared to be some room for improvement.

Bacon (1963) has stated that for making the radio programmes successful, we should consider the following points:

1. Select subject interesting to the people,
2. State subject clearly
3. Remember that leading sentence is very important, use ear catching and exciting programmes having punch arousing curiosity in the listeners creating desire and telling a story,
4. Use conversational language not a speech,
5. Tell a complete story
6. Use local information, local people and local place,
7. Do not use too many figures
8. Correct time and length in order not to such through suitable time of day regularity in day and week and
9. Use of a pleasing language.

Leagans (1964) throws light on the importance of communication like the potential for millions of village people to overcome ignorance, poverty, disease and to attain a status of economic and social well being. Study conducted by Rogers (1960).

Kishore (1968) said that the radio has been found to be effective medium in dissemination of information on agriculture through dynamic and conversational mode. The medium also helped in changing the knowledge and attitude of the farmers.
Further, he investigated that farmers listening to Community sets have shown a very impressive gain in knowledge and higher degree of change in attitude than the farmers listening to their own radio sets. The gain in knowledge is equally impressive among the different groups of socio-economic status. Therefore, there is a need to organise effective radio club. He suggested that conversational mode of delivery was superior than dynamic one, in terms of changing the attitude and knowledge. According to him these factors such as subject matter should be related to the "FEEL NEED", dialogues should be able to create mental picture of the subject in the mind of listeners and a clear summary should be given in the end of radio talk, have been considered as most important key ideas that should be fact fully emphasised.

Sandhu (1970) reported that first three preferred modes of presentation were discussion, lecture and features and drama. The next three preferences went to interviews with farmers, question and answers and views and reviews.

Singh (1972) summarised the finding of Crile Morrill and Nesset (1945) and Dayton et al. (1950) that three important reasons, namely heavy load of work, working away from home and did not like the programmes prevented the farmers from listening to farm broadcasts.

Singh (1972) summarises the finding of Hauser Galloway
and Hoffsommer (1952) and Sandhu (1970) that farmers devoted sometimes daily in listening to radio programmes and this habit in the farmers can be utilised for the purpose of popularising new farming technology by broadcasting farm programmes at appropriate time.

Singh and Sharma (1973) conclusively said that adoption is a continuous and time consuming process. It involves decision-making and at logical steps which in term is effective by a number of situational socio-psychological factor. They further said that the communication source plays a significant role in including socio-economic changes in the development process. Communication of farm innovation to farmers is the key to agricultural development in India.

Knight and Singh (1974) found that interview was found to be most effective at immediate post broadcast time and thirty days after broadcast with different groups of listeners. Straight talk on many occasions was found to be equal to interview.

Chauhan (1976) has found that farmers with medium socio-economic status are better adopters than those in the upper socio-economic status. He suggested use of local dialect in delivering the message involvement of local scientists and farmers in the programmes, use of local equivalent of technical terminology, advance information about the programmes to the farmers and the formation of farmers
Charcha Mandal to make effective improvements in the farm programmes of the SITE.

Deshpande and Trifle (1984) concluded that knowledge production and knowledge utilization can be narrowed by the efficient use of communication sources. It is, therefore, necessary to know the existing sources, their eligibility and relationship between socio-personal characteristics and sources of communication. After knowing and identifying these facts a communication plan for particular area can be prepared and developed so that transfer of technology is quick and efficient.

Chattopadhyay and Singh (1984) suggested that planning criteria must be given the consideration and treated as prerequisite for making all the group media more effective from the point of view of creating their impact on the audience.

Pathak and Mazumdar (1985) reported that four independent variables, i.e. understandability, accuracy, suitability were found to have significantly contributed to prediction of communication fidelity of respondents.

Bhagat (1985) suggested that it is encouraging to discover in the present investigation that radio has started reaching farm homes while it is a good reason to feel proud of the progress at the national level. The next step is to ensure that this mass medium produce desired results. The study
has brought out interesting findings that would act as feedback to the Radio communicators who could remodify or strengthen existing strategies to make them more meaningful and effective. Similarly, the finding would interest and prove useful to extension workers who do bank upon radio for awareness about women development programmes. The popularity of radio can be utilised to start programmes on the lines of "Farm School on the AIR" for farmers, for women as well as they should make them aware of community programmes, help them make better citizens and guide them to develop independent views on important social issues and give knowledge of home science. The popularity of dramas suggest that story form of messages are prepared by farm women and should therefore be given more offer. Dramas on family planning, dowry system, early marriage, help and hygiene should be specially written in rural background in mind. Such plays will change the farm women in desired direction. Radio rural programmes need to be improved and be accepted fully by farm women. Their less popularity among rural women suggest scope for improvement. Rural programmes need to be made more interesting, women oriented and entertaining.

The overall impact of Radio was considered positive. The source of radio is acceptable medium of education for all age groups of farm women. It has really entered rural
life and its listening is considered educational. This is very positive trend and should be encouraged. Though 70 per cent of our radio audience belong to rural areas, yet radio programmes are more urban oriented, e.g. Radio devotes time to news (23.20 per cent), classical music (12.10 per cent) talks and discussions (9.00 per cent), Film music (6.80 per cent) and light music (6.30 per cent). In other words our programmes are really aiming at rural audience. This need to be modified. Unless the plan radio programmes catering to needs of rural women, we cannot achieve maximum through radio.

He also reported that it is being increasingly realised that the potential of radio in promoting human growth and development in Indian rural setting may be far greater than any other tool of mass media. All India Radio through its 94 stations and 157 transmitters claims to reach 90 per cent of the population. Some 61 stations of All India Radio have farm and home units which provide educational and informational support to the intensive agricultural and rural development work. There are about 1.6 lacs community sets.

Rai and Chaubey (1985) communication of farm information is sine-quo-non for bringing about social change in the rural social systems. There is a wide gap between knowledge
production and its utilization. The scientific knowledge accumulated to its users. This gap is more pronounced in farm sectors. This gap needs to be narrowed down so that the farmers can adopt the farm technology. To bridge the gap, extension scientists have emphasized the proper use of communication sources and channels for communicating farm informations, thereby resulting adoption of farm innovation.

Thombre, Bhilegankar and Kulkarni (1986) suggested to increase the present timing of an agricultural programme on All India Radio for enhancing the use and effectiveness of radio in dissemination of farm information.

Bajaj and Nayak (1987) reported that majority of the farmers (78.00 per cent) had suggested that the information in respect to agricultural technology be given in dialogue form. 72.89 per cent farmers reported that music of their interest should be included in the programmes. Further, they quoted that Sandhu (1970), Singh (1972) and Pandey (1976) also reported that the majority of the farm listeners (62.10 per cent) desired for the inclusion of folk songs and music of their interest. The majority of the farmers (68 per cent) of high study also suggested the important points should be repeated. Further, they studied that some of the farmers also suggested that agricultural programmes
and the information should be given sufficient time and it should be broadcasted slowly.

They concluded that the radio plays an important role in communication of the agricultural knowledge to the farmers very quickly than other media of communication. In satellite era, it also has its own importance, because it transfers the agricultural technology within short time to distant farmers in interior pockets which result into increasing agricultural production. Further they concluded that the suggestions given by the farmers for improving the farm programmes should be considered while formulating the programmes and communicating to the farmers.

Lionberger (1960), Wilkening (1952), Coleman (1955) and many other scientists high-lighted the role of communication in adoption behaviour of the farmers.

Indian scholars like Jha and Singh (1965), Sharma (1966) and Singh (1968) pointed out that communication behaviour of the farmers need to be studied in the light of adopters categories and their socio-economic status and psychological dimensions.

Subramanyam (1988) concluded that media forums, if operated correctly, have a considerable impact in diffusing technological innovation to peasants.
Jaiswal and Misra (1989) suggested that in order to make suitable communication strategy for rural upliftment, the sources mainly V.E. Ws., Supervisors and Scientists and the channels such as radio, demonstrations, and exhibition should be given priority and importance for dissemination of new farm technology.