CHAPTER – 2

REVIEW OF LITERATURE
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2.1. Introduction

Communication occupies an enviable place in the process of development. Empowerment has become the watchword of 21st century. Information has become a very powerful tool and resource of empowerment. It may be simply defined as a process which enables the people to control the factors and forces which affect their lives. We are known living in the age of information revolution. The gap between the information haves and information have not should be bridged in a developing country like India. “Be informed, be empowered” is a very popular slogan of our times. Information is rightly considered as a key resource for the development of a country. The modern society mainly depends on communication flow which facilitates the development of people. Effective and efficient utilization of communication resources would contribute in a big way towards the development of the nation, policy makers, planners, administrators, academicians, activists, researchers, farmers and others have realized the need and importance of communications media in a developing country like India. But there is only scattered empirical evidence about the awareness accessibility, utility and role of communication in agriculture development. An attempt has been made to review the studies on empowerment of farmers, media usage in extension activities, communication resource in research, training and developmental institutions with special reference to FCV tobacco production technology. A brief survey of notable works done in the field of communication is presented in this chapter.
This chapter deals with the review of literature made in relation to the objectives of the study. Review of some of the related research studies which have a bearing is also done and presented under the following headings.

1. Awareness about communication sources / media.

2. Utilization of communication sources / media by the farmers for seeking information.

3. Relationship among the personal, socio-economic and psychological characteristics of the farmers with information source utilization.

4. Role of media in development of FCV tobacco farmers.

5. Media usage in extension activities.

2.2. Awareness about communication sources / media

1. D. Somasundaram and K. N. Doraiswamy (1975) found that only 18.3 % of the farmers were aware of demonstration conducted locally.

2. J. Oliver and R. Annamalai (1975), reported that the farmers were aware of eleven audio visuals in total. In that demonstration ranked first with 92.16 % followed by radio (86.84%), leaflets (79.16%), exhibition (76.80%), posters and charts (75.24%), newspaper (64%) and photographs (61.44%), study tour (48.64%), magazines (43.62%), films (28.16%) and slides were least aware among audio-visuals utilized by extension workers to disseminate agriculture information about high yielding varieties.

3. J. Oliver, N. Ravendran and Radhakrishna Menon (1975) reported that only 24.5 % of respondents were aware of National demonstration plots. More farmers (57.8 %) who were aware of demonstration plots came from villages lying within one mile radius.
4. M. Muthaiah et al., (1975) revealed that the farmers, who became aware of the high yielding varieties of rice through other extension methods, finally consulted the neighbours and friends to adopt the practice.

5. D. Sundaram and K. N. Duraiswamy (1975) observed that only 18.3% of the farmers reported awareness about the demonstration.

6. J. Oliver and Annamalai (1975) reported that the farmers were categorized as high, medium and low awareness category. 28.95% under high awareness category, 50.00% under medium awareness category and 21.05% under low awareness category of the respondents. There is a trend that as awareness of audio-visual increases, the adoption also increases. There is a positive association between awareness of audio-visual and adoption of package of practices.

7. Apparao and K. Radhakrishna Menon (1975) revealed that 80 and 70% of farmers from two village groups were aware of the national demonstration. It is seen that the majority of the farmers (40 and 30%) had no opinion about national demonstration plots. This may be due to non-awareness of national demonstration plots.

8. R. Radhakrishna Menon and K. N. Doraiswamy (1976) revealed that among various extension methods, Radio, exhibition, film shows were known more by small farmers. But the extension methods like agriculture meetings, trainings, tours and demonstrations were less known by them.

9. T. Rayappa Reddy and K. Bhaskaran (1983) observed that the methods influencing the awareness, knowledge or adoption of improved practices, the indirect influence through neighbours and friends ranked first. Literature ranked second followed by demonstrations, radio, training, group discussion and television.
10. Shekar and G. Perumal (1988) found that the majority of the respondents (75%) were found to be in the medium category in their awareness about farm broadcast programmes and almost equal proportion (13 and 12%) had low and high awareness.

11. Henry J. Frindlay (1993) observed that 49% of the farmers had a high school education or less. Although 61% were aware of personal computers can be used on the farm in making important decisions. One fifth of the respondents indicated that they never heard of personal computer usage on farms. However, 47% expressed a willingness to seek additional information. When the farmers were asked to name the source where they first heard about farm computer use, 46% said from the media (TV, radio, newspaper). 8% of the farmers had heard about farm computers from their country extension office or an extension specialist.

12. Sumana and M. Veeraraghava Reddy (1998) observed that the majority of the farm women (65%) fell under category of medium awareness followed by high (18%) and (17%) awareness regarding the technologies of watershed cultivation, where as the research have not analysed the farm women with respect to awareness about information sources / media in the study.

13. J. Meenambigai and Dr. V. Ravichandran (1998) revealed that the awareness of farm women about the farm programmes of radio and television was higher than the other programmes. Regarding the print media, especially agricultural magazines, the awareness is found low.

14. N. Anandaraja et al., (2000) found that (44.50%) of farmers were not aware of any single agricultural websites, followed by the farmers (34.40%) aware of 2 agricultural web sites about (13.10%) of farmers had with awareness of more than five agricultural web sites. It
could be concluded that more than (55.50 %) of the farmers had awareness of 3 to 5 agricultural websites. Least percentage of farmers (8.00 %) were found with awareness of more than five agricultural websites. It could be concluded that more than (55.50 %) of the farmers had awareness about agricultural websites. Among the websites studied, most of them used www.kissan.com, www.oddanchatram.com and www.velammai.com to gain agricultural information.

15. M. Ramasubrahmanian et al., (2003) observed that among institutional sources, the respondents were much aware of bank officials (1.73), Agricultural Officers (1.58), Agricultural development Officer (1.52), Field demonstration Officer (1.48) and representatives of private agencies also consulted (1.48) to a considerable extent. Among non-institutional sources, the respondents were much aware of the sources of information as friends (1.98) and neighbours (1.92). Among the media sources radio (1.87) ranked first and newspaper (1.70) and television (1.73).

16. Chandrakanta (2003) observed that while studying the communication media of the farmer’s, it was found that though these farmers are aware of the modern media of information like radio, TV, newspapers, magazines etc., they are using them only for their entertainment purpose. The researcher have not analysed the awareness of the farmers about the new media and their extent of awareness of the media/information sources in the study.

17. Meenal and R.K.Rajan (2006) observed that most of the farmers were fully aware of the type of rearing house, silkworm breeds, shoot rearing (82%), and mounting method (100%), partial knowledge noticed for incubation of eggs (60%), black
boxing (62%), bed cleaning (64%) and IPM of uzifly (78%). Farmers were aware of mechanical and control of uzifly, but awareness on biological control was very limited.

18. Baldeo Singh, R. N. Padaria, et al., (2006) revealed that awareness about new generation technology like integrated pest management (IPM), integrated plant nutrient management (IPNM), Vermicomposting, zero-tillage, organic cultivation practices, post harvest handling were communicated through farmers meet and group discussion. The researchers have not analyzed the awareness of the respondents about the information sources / media available.

2.3. Utilization of communication sources / Media

1. Veerabhadraiah and Sethu Rao (1971) reported that informal sources were almost equally consulted by the farmers. Mass media sources were consulted to a very little extent. Gramsevak among formal sources was the almost consulted source of information.

2. K. Desai (1975) found that potato farmers consulted more of formal and informal sources than other sources. The sequential order of information source consulted by potato farmers were gramsevak, neighbours and friends, gardeners, staff of co-operative society followed by Assistant Horticultural Officer and Taluk Development Board.

3. Nanjaiyan et al., (1975) reported that the practices like seed treatment, intercropping with Sunhemp, and foliar spray with urea and plant protection measures, most of the respondents utilized channels followed by informal and formal sources and personal experience. In case of selection of variety and season, the farmers utilized informal sources followed by channels and formal sources. In adopting seed rate by personal experience of farmers and informal and formal sources. With regard to fertilizer application the farmers used for gaining informative followed by personal experience, informal and formal sources.
4. N. Vishwanathan et al., (1975) revealed that small farmers mostly utilized informal sources. The formal sources ranked first. Among the informal sources, neighbours are utilized to the maximum. So also radio ranked first in mass media and village level worker in case of formal sources.

5. K. Radhakrishna Menon et al., (1975) revealed that group contact methods like Agricultural meetings and trainings were found responsible for diffusing the practices such as improved implements, improved seeds and use of fertilizers. Neighbours and relatives played a dominant role in diffusing practice of plant protection. Exhibition and film shows were also effective to some extent in diffusing practices. But the extension methods like demonstration, tours and printed materials have not helped in diffusing practices among small farmers.

6. K. Nanjaiyan et al., (1975) observed that the adoption and non-adoption had no association with utilization of sources and channels. However, non-adopters utilized more of informal sources than the adoption with respect to all practices. Adopters utilized more of formal sources and channels and less of personal experience.

7. Hiriyannaiah (1977) stated that graduate and non-graduate farmers consulted more of formal personal sources like gramsevak among mass media sources like radio and newspapers were consulted to a greater extent followed by other sources.

8. Giriandhar (1977) studied information seeking patterns of farmers regarding agricultural marketing in Karnataka. The study revealed that neighbours are the most important sources of information followed by progressive farmer, gramsevak and radio.
9. Pamadi (1980) reported that the village extension workers were the first consulted sources of information followed by neighbours, radio and extension guide for farmers regarding farming practices.

10. Gokulraj (1981) revealed that a large percentage of big and small tomato farmers consulted friends and observation of crops in the neighbour fields on the adoption of improved practices of rainfed cultivation.

11. Meenakshi (1983) reported that market media were the most important sources of market information to the farmers. Mass media such as radio and newspapers were found to be the least important sources of information.

12. Reddy (1983) noted that the most of the farmers consulted more of formal and informal sources, gramsevaks (DD’s) progressive farmers, neighbours, village leaders, friends and relatives were more popular in the order.

13. Rotty (1983) found that sugarcane growers consulted ten sources of information, out of which, agricultural assistants was the top most source consulted, followed by progressive farmer, next source consulted in sequential order were friends, relatives, neighbouring farmer, radio, Cane Inspector, Assistant Agricultural Officer, opinion leader and newspaper. None of the respondent considered demonstration as a source.

14. T.R.Rayappa Reddy and K. Bhaskaran (1983) reported that among the method influence the awareness, knowledge or adoption of improved practices, the indirect influence through neighbours and friends ranked first. Literature ranked second followed by demonstrations, radio, training, group discussion and television.
15. Rai and Choubey (1985) reported that in the adoption of farm practices in Jabalpur district of Madhya Pradesh State, the communication sources which were utilized by most of the farmers were neighbours, friends, relatives and village leaders.

16. Ajaya Kumar (1989) identified the most preferred sources of information by the grape growers for improved grape cultivation technologies in the order of rank were private consultants, Scientists from the division of Horticulture and Agricultural Universities, neighbours, friends, relatives and Scientists from grape research station. The least preferred sources were radio, horticultural officers, newspaper and farm magazines.

17. Yogananda (1992) observed that nearly almost all the big and small coconut growers used friends, relatives and neighbours as their sources of information. Sources such as Assistant Agricultural Officers, Assistant Horticultural Officers were used by less than 40 per cent of small coconut growers, but 80 per cent of big farmers used Assistant Agricultural Officers and only 15 per cent used Assistant Horticultural Officers as their sources.

18. Patel et al., (1993) studied the communication source utilization pattern of the farmers of village namely progressive and less progressive villages in Shajapur district. Their study reveals that in respect of progressive village rural agricultural extension officer (100%), radio (82%) and television (82%) were more promising source of information followed by relatives (72%), newspaper (58%), neighbour (54%), magazines (54%) and friends (20%). In respect of less progressive village rural agricultural extension officer (98%) and relatives (92%) were more promising source of information followed by neighbour (80%), radio (60%), progressive farmers (46%), television (38%), friends (32%), newspaper (22%) and magazine (10%).
19. G.S. Sangha and R.K. Kalra (1993) reported that the farmers preferred the radio the most for seeking agricultural information followed by television, newspaper, agricultural magazines, agricultural films and audio cassettes.

20. Aski et al. (1996) studied the trained and untrained sugarcane growers in Belgaum district. The study revealed that majority of the trained and untrained farmers consulted agricultural assistants as well as progressive farmer as the source of information followed by neighbours, friends and relatives.

21. Raghavendra (1997) conducted a study on knowledge and adoption behaviour of arecanut farmers of South Canara district, Karnataka State, revealed that 50 per cent of the arecanut growers consulted progressive farmers for cultivation practices of arecanut followed by mass media sources (25%) and institutional sources (20%).

22. Kumar (1998) in the study on knowledge, adoption and economic performance of banana growers reveal that a major proportion (50%) of banana growers had consulted neighbours and friends to get information regarding banana cultivation.

23. Jyothi (2000) reported that input dealers were the most consulted information sources followed by progressive farmers, TV, radio, extension personnel of private organizations, friends, radio and Assistant Agricultural Officers.

24. Sangita, B et al. (2001) revealed that the majority of the paddy growers received information about improved agricultural technology from their friends, neighbours and progressive farmers of the area with regard to personal localite sources. Most of the farmers used Agricultural Assistant and University Scientists as personal cosmopolite sources. Among the mass media, they mainly used radio and television to acquire the information about agricultural technology.
25. Manohari (2002) found that the majority of the respondents indicated that they were noted friends, neighbours and local leaders as their main source of information. Most of the tribal farmers had never noted information sources like Sub assistants and agricultural officers. Negligible amount of farmers are utilizing newspaper as their source of information.

26. Sannibabu et al.,(2003) stated that 48% of farmers gain knowledge on FCV tobacco through interaction with co-farmers and 24% through CTRI, Tobacco Board and developmental activities of ILTD, GPI etc. The communication of knowledge through fertilizer and pesticide dealers was about 18%, through newspaper 8% and through Air & Doordarshan 2% and also reported that 75% of literate farmers opined that the mass communication through newspaper and pamphlets was effective and remaining 25% felt that the field visits and group discussions would help the farmers for production of quality leaf.

27. Gupta (2003) found that the information sources like local leaders, friends, relatives and neighbour where people have easy access to such sources. KVK / University scientists were consulted by maximum farmers in all the production systems. Second preference for seeking information in all production system was extension officers. Television was the most popular medium among the farmers of all the production system and followed by radio. Print media like newspaper and magazines were least preferred medium by the respondents in all the production systems.

28. Ramasubramanian and Manoharan (2003), reported that among the Institutional sources, the most utilized were field demonstration officers (1.92), bank officials (1.68) and Assistant Agricultural Officer (1.68). Their most utilized non-institutional sources were friends (2.22), relatives (2.35), Input dealers (2.88) and neighbours (2.25), radio (1.74),
newspaper (1.58) and television (1.42) were their most used media sources of mango growers.

29. Nirmal Kumar (2003) revealed that the information regarding the extent of use of different mass media by the respondents was found that television was most often used by 26.78% of the respondents followed by radio (13.01 per cent), agriculture literature (7.01 per cent) and Kisan Mela / agriculture exhibition (5.61 per cent).

30. Subyasachi Roy (2004) observed that personal localite sources were the most important sources of communication of the rural youth. Mass media ranked second among the communication sources, whereas personal localite channels were found to be the least preferred sources of communication used by the rural youth.

31. Meena and Jithendra Chauhan (2005) revealed that majority (66.67%) of respondents used medium source of information. The most potential information sources were personal localite channels as the extent of use of these channels was 60.48%. Whereas farmers were used mass media and personal cosmopolite channels upto 44.00 and 40.80 per cent respectively for obtaining the information on recommended dairy farming practices. Overall, the study shows that among the various information sources, family members (75.33%), progressive farmers (69.33%) radio (59.33%), TV (55%), VDO (53.33%) were mostly used by the farmers to obtain information for betterment of dairy farming.

32. Om Prakash and Katiyar (2006) found that major sources of communication utilized by the farmers in watershed areas were Agricultural Scientist (76%) followed by Soil Conservation Officers (68%), Agricultural Officers – Bank (42%), Animal Husbandry Officers (39%), progressive farmers (32%) and Sarpanch (29%). Whereas in non-watershed area major sources of communication were Sarpanch (53%), progressive farmers
(46%), Soil Conservation Officer (19%), Animal Husbandry Officer (17%) and Agricultural Officer – bank (16%). Similarly major channels of communication on watershed area were training (82%), radio (68%), demonstration (62%), TV (59%), meeting (36%), panchayath (34%). Whereas, in Non-water shed area major channels of communication were Panchayath (63%), radio (49%), meeting (32%), demonstration (26%) and training (16%).

33. Naresh Prasad et al., (2006) observed that about 66.67% of dairy farmers had medium level of communication behaviour followed by high (18.33%) and less (15%).

34. Sonika Gupta et al., (2006) found that neighbours, friends and relatives were the major sources of communication under localite category. Village extension worker and auxiliary nursery midwife personal cosmopolite channel and Television, radio and banner under impersonal cosmopolite channel. The overall conclusion in respect of utilization of communication sources/channels were observed as personal localite sources, personal cosmopolite channels, personal cosmopolite sources and impersonal cosmopolite channels in order of preference.

35. Meena et al., (2006) revealed that the onion growers have used personal localities sources of information with the top priority which is indicated by their fist rank. Whereas, personal cosmopolites sources were used by slightly lesser number of respondents for seeking information pertaining to onion production technology.

36. Siddeshwara et al., (2006) revealed that the most important mass media used by sugarcane farmers were package of practice booklet (61%), newspaper (38%), agricultural magazines (37%) and Television (30%) to obtain information on improved agricultural technologies.
37. Tewari et al., (2006) revealed that most of the vegetable growers were getting information from the Village Development Officer (90.56%), Kisan Mela (87.78%) and demonstration (71.11%) from personal cosmopolite sources. The personal localite information sources frequently used by the farmer were import dealer (96.11%), Panchayath co-operative officials (93.33%) and neighbours (92.22%) respectively. From mass media sources of information viz., radio (79.44%), newspaper (76.11%) and television (73.89%).

38. Khare and Vinod prakash (2007), observed that out of 13 sources of information, Radio utilized by 91 per cent of paddy growers followed by television (86%), farmers extension literatures (75%), Inter personnel channels (70%), newspaper (68%), group discussion (67%), farm and house visit (64%), poster / chart (63%), meeting / lecture (57%), training (40%), demonstration (30%), neighbours (26%) and others (10%).

2.4. Relationship among personal, socio-economic and psychological characteristics of the farmers with utilization of information sources

Review of relevant research findings in relation to the association between independent variables and information sources utilization were collected, there are presented hereunder:

1. Singh et al., (1970) established there was non-significant relationship between landholding and information consultancy of farmers.

2. Vishwanathan et al., (1975) found that the utilization of sources of information and the age of farmers was found to be non-significant. Increase in education has increased the contact with informal sources. Though the increased income has reduced the contact with informal sources, there is no significant influence. Social participants utilized formal sources to a greater extent, compared to non-participants. There is significant relation between social participation and utilization of sources.
3. Kalamegum et al., (1977) revealed that the young farmers in progressive village depend more on personal localite sources (50%) whereas middle and old farmers depend more upon mass media sources with (55%) and 30%). On the other hand, young and middle aged farmers depend more on personal cosmopolite sources but the old farmers depend more on mass media sources. It is also found that the education level and farm size is increased, the dependence on personal cosmopolite and mass media source also increased.

4. Kantharaju (1980) revealed that there was a positive and significant relationship between farmer’s land holding and their information source consultancy regarding improved methods of cultivation. Patel et al., (1994) were also found similar results.

5. Geetha Kutty (1982) indicated that information source consultancy in case of potential clientele was found to be significant relationship with innovativeness of farmers.

6. Hegde (1986) indicated that there was significant association between education and extent of source of consultancy in adoption of recommended practices of cardamom cultivation.

7. Basavaraj (1987) indicated that there was a non-significant relationship between information source consultancy and market orientation of farmers.

8. Ramesh Babu (1987) reported that information source consultancy of grape growers with respect to adoption of recommended practices of grape cultivation was found to be significantly associated with their level of extension participation.

9. Mande et al., (1993) observed that age was not related with information source consultancy of mango growers. They also indicated that social participation and farming experiences have positive and significant relationship with information source consultancy of mango growers.
10. Patel et al., (1994) reported that annual income of the respondents had non-significant relation with information source consultancy of sugarcane growers.

11. Javale and Nachane (1994) revealed that education was found to have significant and positive correlation with information source consultancy of mango and citrus growers.

12. Rusdi (1995) found that annual income, adoption behaviour and source credibility have positive and significant relation with information source consultancy, whereas other characteristics like age and social participation were found to have non-significant relation with information source consultancy of ornamental fish farmers.

13. Reddy (1995) reported that there was non-significant relationship between social participation and information source consultancy of mango growers. Further he reported that the information source consultancy of mango growers had significant association with their level of extension participation.

14. Ravishankar (1995) found that the social participation, land holding and innovativeness were found to have non-significant relation with information source consultancy of potato farmers.

15. Balasubramani (1997) observed that market orientation of farmers had significant relationship with information source consultancy pattern of farmers.

16. Kumar (1997) indicated in his study that age, education and adoption behaviour were significantly associated with information source consultancy, whereas other characteristics like farming experience and innovativeness were found to have non-significant relation with information sources consultancy of rose growers in Bangalore urban district.

17. Vijayaraghavan and Subramanian (1981) have found that for the garden land farmers, the most credible information sources was Deputy Agricultural Officer followed by
gramsevak, radio, friends, neighbours and literature. For the dry land farmers, the most credible source of information was gramsevak followed by friends, neighbours, radio and literature.

18. Sanghe and Kaira (1993) found that the radio was accorded the first rank on the basis of responses of the farmers about credibility. Radio was followed by television, newspaper, audio cassettes and agriculture films in order of their descending credibility as perceived by the farmers for receiving agricultural information.

19. Out of several sources of information used by the ornamental fish farmers, fisher extension worker found to be most credible, followed by friends and neighbours, fisheries publication, Agricultural Assistant, progressive farmers and television as reported by Rushdi (1995) and Kumar (1998).

20. Raghavendra (1997) revealed that the age was found to have significant association with information sources consultancy of arecanut growers in south canara district. Further he reported that there was a significant association between extension participation and information source consultancy of arecanut growers.

21. Wagdhare et al., (1998) reported that village extension workers of training and visit system were the top most credible source as the information perceived by the small farmers of Maharashtra, followed by neighbours, friends, progressive farmers and TV.

22. Kumar (1998) reveals that there was non-significant relation between extension participation and adoption level of farmers with information source consultancy of Banana growers.

23. Wagdhare (1998) revealed that credibility of information source has significant relation with information source consultancy.
24. Chandrashekar (1999) reported that family income had significant relation with information source consultancy.

25. Chandrashekar (1999) revealed that the family income had significant relation with information source consultancy of farmers.

26. Jyothi (2000) reported that education status, source credibility and innovativeness were found to have significant relation with information source consultancy of tomato farmers.

27. Babanna, (2002) revealed that personal, social-economic and psychological characteristics such as education, family income, social participation, extent of area under arecanut, experience in arecanut cultivation, adoption of recommended practices, risk orientation, innovativeness perceived source of credibility of the growers found to be highly significant relation with information source consultancy of arecanut growers. Characteristics such as age, extension participation and knowledge level on arecanut cultivation practices are found to have positive but significant relationship at 0.05% level with the information source consultancy of arecanut growers.

28. Naresh Prasad et al.,(2006) in the study, the correlation analysis revealed that communication behaviour of dairy farmers had positive and significant correlation with occupation, education of respondent, extension contact, mass media exposure, risk orientation, socio-economic status and cosmopolitaness – localiteness. Age had negative correlation while social participation, family education status and annual income were found to have positive but non-significant correlation with communication behaviour of dairy farmers.
29. Sidewara et al., (2006) revealed that the more trusted source of information was Agricultural University specialists, subject matter specialists, Assistant Agricultural Officers, Radio and extension literature in the order perceived by the paddy growers.

2.5. Role of media in empowerment of FCV tobacco farmers

1. Ryan and Gross (1943) had conducted a study on the diffusion of hybrid seed corn in two Iowa communities. They found 10.7% of farmers citing farm journal as the original source of knowledge and 2.3% indicating as most influential in leading to adoption.

2. Rao (1961) found that the booklets and information folders were more effective in changing the knowledge of farmers, followed by field trips in addition to lectures by demonstrators, flash cards and flip book, photographs and flannel graph etc,

3. M. Muthaiah et al., (1975) found that the effectiveness of individual contact and indirect influence method were on-par but, significantly superior to other methods such as use of radio, illustrated talk, literature and visual material in causing adoption of high yielding varieties of paddy farmers.

4. Muttaiah et al., (1975) found that the farmers who became aware of the high yielding varieties of rice through other extension methods finally consulted the neighbours and friends to adopt the same.

5. Oliver et al., (1975) revealed that there is influence of agriculture articles mostly at awareness and interest stages for new rice varieties. Whereas in old rice varieties, the influence was in adoption stage. Thus there is an influence on adoption by reading agricultural articles.

6. Subramanian et al., (1978) reported that among major categories of sources of information through which respondents became aware of the poultry farming and adopted the same.
Government agencies stand first followed by neighbourhood agencies, mass media and commercial agencies. But among individual information sources, neighbour and friends found to influence more number of respondents followed by poultry breeders, co-operative society, extension officer, veterinary surgeons / relatives, radio and other individual sources had very little influence on the respondents.

6. Ramesh Kumar Reddy & J. Reddy babu (1982) observed that the participant farmers were only benefited in improving their knowledge by demonstrations compared to non-participants. From the result, it can be said that the National demonstrations have proved to be an effective tool for educating farmers to bring about desirable changes in knowledge about package of practices of several crop.

7. Rayareddy and Bhaskaran (1983) reported that among the extension methods influencing the awareness, knowledge or adoption of improved practices, the indirect influence through neighbours and friends ranked first. Literature ranked second followed by demonstration, radio, training, group discussion and television.

8. Kashem (1992) reported that, television is an important means of communication media in the transfer of technology. Television was found as most effective medium which can motivate, stimulate, induce and change the attitudes of peoples in relation to dairy development. It was found that television had the power to stimulate dairy development.

9. Krishna Murthy and Nataraj, M. S. (1999) examined farm telecast with respect to dairying, sericulture and horticulture activities. The listeners recommended increase in broadcast duration (68.33%), timely information (40%) and more information on dairy, sericulture and horticulture (42.49%). The investigation was confined to farm broadcasting with
special reference to dairying, sericulture and horticulture. Other channels of mass communication like print, television and film are not included in their investigation.

10. Singh (2001) examined the socio-economic characteristics, dairy farming practices, and communication behaviour of Buxa tribal dairy farmers in Udham Singh Nagar district, Uttarakhand, India. A communication strategy, which combined indigenous and modern media of communication, is suggested to promote the development of the tribal community vis-à-vis dairy development.

11. Sannibabu et al., (2003) revealed that 48% of farmers gain knowledge through interaction with co-farmers and 24% through CTRI, Tobacco Board and development activities of ILTD, GPI etc. The communication of knowledge through fertilizer and pesticide dealers was about 21.8% through newspaper 8% through AIR and Doordarshan 2%.

12. Sabya Sachi Roy (2004) observed that the rural youth is one of the most important resources for the future development of all developing nations like India. Based on the study undertaken to find out their key communication sources and their utilization pattern, the personal localite source of communication were the most effective channels for communicating any information to the rural youth. Friends followed by neighbours, progressive farmers and relatives have maximum influence on the youth of the rural areas regarding receiving and discussing message and topics on farm and rural development aspects. Mass media like television and radio are also quite popular among the rural youth. This signifies the spread and influence of these popular media even deep inside rural India. These two media along with newspapers can be effectively used for informing the rural youth regarding agricultural as well as rural development aspects.
13. Narayanappa (2004) reported that extension media accessible to the dairy farmers in the developed (92%) and accessible to a considerable extent to the dairy farmers in the under developers. Mass media also accessible to some extent both in developed (50%) and under developed (29.33%) areas and also extension media provide frequent information on dairy development compared to other communication media both in developed (83.33%) and under developed areas and mass media stands next only to the extension media in this regard in developed area (37.33%) and under developed area (23.33%) and extension media top list in enhancing the knowledge of dairy farmers specially in developed area (89.33%) and under developed area (48%). Mass media stands next to extension media in this regard in developed area (49.33%) and under developed area (26%).

14. Mallikarjuna, Srilatha et al., (2006) found that all the three extension communication system i.e., Farmers Advisory Centre (Scientists-farmers interaction), prime media (Reshme Vahini – bimonthly magazines, books and pamphlets and Electronic media (Radio less broadcasted through All India Radio, Mysore, Audio visual aids, KIOSK disc and compact disc) are very useful in transferring the technologies to the Sericulturists in appropriate time though each one got its own relative advantages and limitations. Communication system is very effective and successful when three to four approaches are integrated.

15. Geetha, and Manjunatha et al., (2006) revealed that the information and communication are the important instruments for facilitating and augmenting the process of development and improving the quality of life. The results indicated that the mean nutritional knowledge, attitude and practice on nutrition and health among Bangalore women was 75.6%, 82%, 70.2% respectively. Whereas, that of rural women was 69.7%, 70.9%, 62.3% which is
lower than the urban population. This is because of the lack of suitable information and communication to the rural population compared to urban. In both the population, television followed by community workers was the main source of communication.

16. Padaria, et al., (2006) revealed that Radio has proved to be an effective medium not only for dissemination of information about socio-political, economic-cultural, agricultural and environment of national and international prospective but also in empowering the rural community at large.

17. Shamana and Narayanagowda (2006) indicated that with an impending needs to increase our food grain production to meet the needs of ever growing population, the agricultural scenario calls for adopting innovative strategies. According to available sources, there is enough technology to double the production. Therefore, the need of the hour is to transfer available technology to end users, providing information pertaining to credit, insurance, marketability and infrastructure and paying attention to uphold natural resources and disaster management. Knowledge plays an important role in agricultural development. Without imparting proper knowledge to farmers, the dream of achieving second green revolution will be futile. The future role of extension area should be knowledge management in order to make the farmers more competent for enhance production and increased income.

18. Preeti Sharma and Shashikanta Varma (2006) reported that with the approach of 21st century, the use of information communication technology for rural development has accelerated more and more information communication technology are being invented to reach the rural and remotely situated people. Radio and television are being used from their commencement for the rural development. Now with the advent of new information
technologies these disseminating devices have advanced their technologies and become more interactive. With the aid of geographic information system, computer modeling, internet, audio and visual conferencing, it is possible to have ideal records of land use, soil type, socio-economic status of region and making this information available to rural masses at a press of button near their door steps. Information empowerment of people including rural women is possible through Information and Communication Technology (ICT). These technologies are helping people to develop and empower themselves as well as helping Scientists and extension workers in disseminating information more effectively and timely to rural masses.

19. Baldeo Singh and Lenin (2006) revealed that the poverty is the major problem of the people throughout the world. Most of the poor are found in rural areas, and among these, the majority is located in more difficult areas characterized by combinations of low and erratic rainfall, hilly topography, poor soils and weak infrastructure. These people are hampered by poor information and weak infrastructure in any effort to take up employment opportunities. Lack of information and poor information is a series cause of poverty. Here comes the role of information communication technology providing meaningful, useful, latest, instant information on local language at affordable cost. ICT connects the sources of information with the poor living in every nook and corners of the world.

20. Arneja and Dhaliwal (2006) revealed that in the world of globalization, information plays an important role for sweeping changes in socio-economic development. The technologies developed within four walls of laboratory and research field must reach the farmers at the earliest. Communication technology in the last decade will prove to be an ideal tool for
achieving the goal of dissemination of knowledge and skill development among rural communities.

2.6. Media usage in extension activities for dissemination of farm information

1. Edward (1957) recommended that the research workers should associate the extension specialists to keep in touch with the local farmers.

2. Rogers (1960) gave that there are several communication channels by which information is diffused from scientists to farm people. The four main channels of communication were (i) informal friends and neighbours (ii) commercial salesman and dealers (iii) Government agencies, extension services and (iv) mass media like television, radio and magazines.

3. Hiranand and Jain (1967) in a study found that personal contact, meetings and group discussions were the main extension methods used by village level workers. Next to them was the demonstration, which was used by 80% of the village level workers. Film shows, local songs, posters and paintings, tours and sightseeing and literature were the other methods used by 30 to 40% of the village level workers.

4. Khara (1967) stated that extension workers expressed their preference for farm and home visits, group meetings and demonstrations as important channels to communicate to farmers.

5. Patel (1967) found that farm and home visit was the most used channel by majority of the village level workers. And he also reported that individual and group contact were basis channels while mass media and other supporting channels were used throughout, both initial and at later stages of programmes promoting behavioural changes among farmers by village level workers.
6. Bhaskaran (1970) observed that the most commonly used communication channels by the village level workers were farm and home visits, demonstrations, group contacts and local leaders. Reddy and Patel (1973) also reported similar findings in respect of agricultural extension officers in Gujrath State.

7. Rao (1972) has reported that the outward transfer messages of agricultural technology outweighed the inward messages. Messages from the research system are transferred through special programmes, demonstrations, in-service training, meetings and journals. The scientists sent notes on the potential uses of the results to development administration.

8. Akhouri (1973) observed that the extension personnel used office calls, farm and home visits, telephone calls, general meetings, training programmes, advisory letters and demonstrations in that order of the most used communication channels.

9. Somasundaram and Doraiswamy (1975) in a study conducted in two blocks of Coimbatore district have reported that most of the gramsevaks (94.7%) invited farmers only by personal contact method. Radio was utilized by 10.5% of gramsevaks in teaching the techniques of demonstration.

10. Oliver and Radhakrishna (1975) has reported that the farmers were knowing about agricultural innovations through individual or personal contacts of extension workers more than any other method of extension followed by demonstrations, newspapers, radio, group meetings, exhibition and film shows.

11. Veerabhadraiah et al., (1975) reported that gramsevaks used to a greater extent farm and home visits and office calls among individual contact methods, whereas method demonstrations, result demonstrations and discussion meetings among group contact methods to perform their role.
12. Kar et al., (1976) in a study conducted in Bhubaneswar of Orissa state have found out the personal contacts were used extensively by all extension workers. Village level workers and field agents made maximum contacts through different extension methods were observed to be more effective than the methods when used alone.

13. Byra Reddy and Singh (1977) in a study showed that only four communication channels were used by more than 50 per cent of the village level workers, namely farm and home visits, group meetings, method demonstrations and farmers training camps. The remaining channels like exhibitions, tour, campaigns, film shows, crop competitions, field days, field visits and posters were used by less than 50% of the village level workers.

14. Sridhar (1977) in his study on communication pattern of extension personnel observed that farm and home visits, leaflets, office calls and group meetings were the important methods used by extension personnel to communicate the technology. The extension personnel must be encouraged to use other methods by providing the required facilities. He also observed that more occasions are to be created to bring the research personnel in contact with the extension personnel since their contact were generally limited.

15. Byra Redddy and Singh (1977) revealed that the village level workers of Kolar and Bangalore districts of Karnataka state transformed research information through farm and visits (99 %), followed by group meetings (95%), result demonstration (63%) and farmers training camps (60 %). The remaining channels used were exhibition, tours, campaigns, film shows, field days were used by less number of village level workers.

16. Sonaria (1977) in a study conducted in the Agricultural Department of Madhya Pradesh found out that farm and home visits, office calls, field days, educational tours, film shows were the common extension teaching methods used by the village level workers.
17. Sridhar (1977) reported that extension personnel, namely Assistant Agricultural Officers and Agricultural assistants were most commonly using farm and home visits, office calls, group meetings, result demonstrations, method demonstrations and leaflets to communicate farm information to their clients of Bangalore district.

18. Sonaria (1977) revealed that farm and home visits, office calls, farmers training, field days, educational tours, farmers meetings, extension training, extension publications, radio talks, film shows and newspaper releases formed extension teaching methods used by all categories of extension personnel. Demonstrations used only by block and village level extension personnel. Farm and home visits made by village level workers followed by Agricultural extension officers and Joint Director of Agriculture. Joint Director of Agriculture and Deputy Director of Agriculture used radio talks and newspaper articles more than the Agricultural extension officers and village level workers. All the levels of extension personnel used extension publications.

19. Ambastha and Singh (1977) revealed that office calls followed by advisory letters to farmers, telephone calls by extension personnel and farm and home visit were the most important methods for farm scientists.

20. Byra Reddy and Singh (1977) reported that the village level workers attended field days at the University of Agricultural Sciences and were having contacts with scientists of the UAS., Bangalore.

21. Patil (1978) observed that the Israeli extension personnel were using field days, lecture, journals and publications from the Agricultural Research Organization to transfer the research results to the farmers.
22. Sanoria (1978) reported that researchers used personnel visits, demonstrations, field days, training of farmers, meetings, seminars, training of extension workers, extension publications, radio talks, farmers fairs and newspapers in that order.

23. Ambasha and Singh (1979) reported that village level extension workers were using farm visits, home visits, demonstrations and general meetings to a large extent in communication of farm technology to farmers.

24. In the Warud Panchayat Samiti in Amravati district of Maharashtra State, Ganorkar (1979) found out that for transferring information to the farmers, the methods used by village level workers were demonstrations (81%), exhibitions (78%), Krishimela (76%) and literature (71%). Nearly two thirds of the village level workers had utilized to meetings, lectures and training for the information transfer to the farmers.

25. Chamala (1979) in his paper on Agricultural Extension and China’s rural development, reported that the agricultural scientists visits and stay in rural areas and this kind of inter-personal contact being a tremendous method of reducing many steps in the diffusion of information from scientists to the ultimate users. He has further reported that the researchers disseminated the information through demonstrations, personal contact with farmers and extension workers and radio broadcasts.

26. Ganorkar (1979) informed that meetings and lectures, literature, radio, group discussion and training were the important methods for disseminating the information to extension workers and demonstrations, exhibitions, Krishimela and literature followed by lectures, training, were the methods used to transfer the ideas to farmers by the staff of the University of Maharashtra.
27. Sanoria and Singh (1979) found that scientists differ significantly in their information output amount. The amount of information output was higher in scientists of the research institutes rather than research stations. Also reported that, the information output index of agricultural scientists was positively and significantly correlated with education, training, total experience, present post-experience, experience of extension work, organizational position, family background and job preference. The job satisfaction, age, job commitment and dedication could not indicate any significant association with information output amount of agricultural scientists.

28. In the Shrirampur and Rahuri Community Development Blocks of Ahmednagar district of Maharashtra State, Sawak and Thorat (1979) have reported that 37.6 per cent of gramsevaks conduct meetings of farmers for giving technical know-how on agriculture. Then, demonstrations for the extent of 36.0 %, farm and home visits 19.6 % followed by group discussion 14.5 %, literature 10.2 %, field trips 8.0 %, farmers rallies 3.0 %, radio clubs 2.0 % and film shows 1.0 %.

29. Ambastha (1980) revealed that information output indices of farm scientists had a significant and positive correlation with cadre, education, service experience and job commitment but not with training, job preference and job satisfaction of the researchers.

30. Sanoria and Singh (1980) have reported that the scientists-extension personnel communication had the largest direct effect on information output of the scientists followed by processing. They have further pointed out that the largest total indirect effect on information output has been exerted by scientists-extension personnel contact, scientists-farmers contact, input, processing, facility, scientists-other department communication and peer communication.
31. Sanoria and Singh (1980) pointed out that researchers communicate the information to extension personnel is professional meetings, seminars, workshops, package of practices, meeting and training of extension workers and also found out that extension personnel-researcher communication pattern had more impact on output pattern.

32. Narayana (1980) in his study reported that the important extension teaching methods used by Agricultural Assistants were night meetings, field days, visit to farmers’ fields, result demonstration and radio.

33. Akinbode (1981) had reported that there was no proper linkage between researcher and the end users – the farmers. He has further revealed that the research workers disseminated the research findings through publications of results in reports and information papers. The researchers also organized field days and open days to farmers.

34. Dorga (1981) revealed that the contacts of the research scientists with end users of the results have been loose and if there was a contact it was with rich farmers.

35. Thitai ((1981) has conducted a study on the production and dissemination of research results in Kenya and reported that the researchers disseminated the findings mainly through publications in local and international journals and annual reports.

36. Chenne Gowda (1982) has conducted a study on interaction between researchers of the University of Agricultural Sciences, Bangalore and the farmers in Bangalore district of Karnataka State. He has reported that the researchers contacted farmers in villages. Further, they contacted farmers of all categories. Farm and home visits group meetings, method and result demonstrations and field visits were the methods employed.

37. Rockett and Smith (1982) in England and Wales revealed that the research workers disseminated the research results through publications, group meetings, radio television and
lectures. The researchers also conducted subject days twice a year, workshops, symposium and merchant days. The researchers received lectures four times a year during associates days and other visiting groups.

38. Farm and home visits, field days and film shows were the popular extension teaching methods (taught by the extension personnel of Bangalore district of Karnataka State) among small farmers, marginal farmers and agricultural labourers pursuing dairy farming (Nataraju, 1982).

39. The more frequent use of communication channels like farm and home visits, leaflets, group meetings, method demonstration was found to be used by the extension personnel of Bangalore district of Karnataka State to communicate the farm information to the farmers (Venkateshappa, 1983).

40. Patil and Kibey (1987) in a study conducted in Dhule sub division of Maharashtra State have reported that the communication methods / media used by contact farmers and village extension workers in transfer of improved agricultural technology were discussion, seed samples and live specimens of crops for communicating the messages. The use of demonstrations, printed materials and specimen of pests and disease was on limited scale.

41. Chidanandappa and Veerabhadraiah (1988) in a study conducted in Bangalore district of Karnataka State revealed that farm and home visits, group meetings, result demonstration, method demonstration, field days and farmers’ training meetings were the methods used by majority of extension personnel. Other methods used to a limited extent were office call, personal letters, writing in farm magazines, circular letters and participation in radio broadcast.
42. A. K. Gupta (1999) found that the majority of the respondents used to meet individual farmers at farm or home followed by group discussion, distribution of handouts in addition to discussion and conducting meeting of contact farmers at panchayat respectively. The most of the respondents used sample/models supporting material for discussion. The slide viewer and pamphlet were used almost by about one fourth of the village extension workers.

43. Preeti Sharma and N. Mahajan (2004) observed all the KVKs had VCR and TV, had sets of slides, slide projector, tape recorder, overhead projector and public address system was available with 7 KVKs, 6 KVKs had audio and Video cassettes available to them, 3 KVKs had film projector. Only two KVKs had set of flash cards, charts, photographs, video camera, films and film strips etc.,

44. Punam Tiwari et al.,(2006) observed that traditional communication media like leaflet, pamphlets and charts, posters were regularly utilized for training programme followed by occasional use of films, television, bulletin boards, exhibits and flop books by majority of extension personnel. Advanced communication media like telephone and computers were utilized to a greater extent for the purpose of training programme and most importance was given to telephone, field demonstration and field visit regularly.

45. B. Dananjaya et al., (2006) found that the participant farmers were first trained using lecture method and at the end of each topic, knowledge gain was tested. The same farmers were tested for knowledge gain. The study revealed that there was 40 % increase in knowledge among the farmers trained using multimedia as against lecture method.
2.7. Summary

Karnataka State occupies an important place in Flue-Cured Virginia tobacco production next to Andhra Pradesh. Karnataka tobacco commercially identified as ‘Mysore style tobacco’ is value for money in the international market. The present thrust in KLS is to improve productivity and quality through ‘vertical growth’. Farmers in tobacco growing region do not access to the real time information nor do they have adequate skills in tobacco growing and global trends. Some of these challenges are to be met through effective transfer of technologies. The media exposure among FCV tobacco farmers, acquisition of information, utility of information and participation of farmers in production management activities are significant in present context. Few researchers in Karnataka have assessed about media awareness, media utility, and media role in empowerment of farmers and media used in extension activities in the process of agricultural development. The major deficiency observed in their investigations was lack of emphasis on the role of communication in FCV tobacco production with special reference to Karnataka. However, quite a few studies which are distantly related with the main theme of the present study are briefly presented in the study.