CHAPTER – 6

CONCLUSION
6. CONCLUSION

6.1. Introduction

The importance of agriculture development forming the core of national development is being increasingly recognized. FCV tobacco crop assumes new significance since it generates gainful employment opportunities and enhances the social and economic status of the farmers. Many area-specific and target group specific programmes are launched throughout Karnataka to achieve integrated rural development. FCV tobacco cultivation forms an important component of agriculture development. Planning for better dissemination of production technologies, communication at grass root levels becomes inevitable.

The chapter contains the summary of the study, findings of the study, implication on Government bodies, suggestions and recommendations for technology transfer and implication on future research.

6.2. Summary

Agriculture development is a priority in Indian economy. It contributes 34 % to national income with nearly 70 % of its total population engaged in agriculture (Anonymous – 1999). On the other hand in commercial and scientific agriculture, man applies his ingenuity to increase his control over all the factors that affect plant and animal growth. He introduces irrigation, applies plant nutrients to the soil. He uses high yielding varieties of crop that can utilize large amount of fertilizers, that are resistant to drought, that can mature more quickly and yield better. He develops scientifically prepared feeds for his livestock and scientific methods to protect them from disease.

All these new ways of doing farming are discovered through research. This increasing knowledge provides the technical basics for the changes that add up to agriculture development
to bright about agriculture development, the research system alone is not adequate. In the process of agriculture development, transfer of technology and its application in the field by millions of farmers plays a crucial role. Although agriculture development requisitions the fulfillment of many other factors such as water, inputs, credit, market, research etc., the transfer of technology to the farmers all along has been a challenge in the countries with a farm based economy. The role of extension worker is to bridge the gap between research laboratory and farmer’s field, through transfer of technology using effective communication media.

The information sources and channels of communication are pre-requisite for the awareness and adoption of innovations. There are many sources information engaged in communicating scientific innovation to farmers. Farmers on their part seek information from different sources. The creation of knowledge through research and its communication is the foundation of scientific, technological, social and economic progress of the nation. The transfer of technology and dissemination of the value added information for the agrarian prosperity is the need of the hour.

Communication is now one of the current issues in developing societies. The discussion at various fora in the third world and elsewhere confirm that the communication should be treated all an integral component of the total development process. Knowledge expansion, information technology and information dissemination are the three important dimensions of any developing system, be it agriculture, industry or whatever. It is also true in the developed nations, science and technology utilize the information services but in the last two decades, the developing nations have also moved in their direction. We have benefited but the studies indicated that the most of the advantages of information support have gone to the progressive privileged affluent groups. As far as India is concerned, the present situation suffers from many
shortcomings and injustices. Revolutionary changes in communication policies, techniques and strategies are needed in order to make it a fundamental right practiced by the poor rather than making communication a privilege enjoyed by the rich and powerful (Chandrashekar et al., 1996).

Man’s need communication is as basic as his need to eat, sleep and love. Communication is a tool, a means, a process and crucial to the adoption of innovation by community. Communication in general and agriculture in particular has emerged as a profession. Here, one wants to transfer knowledge and skill about improved agricultural technology with a view to inducing changes in the existing farm practices of farmers, for increasing production. In this process both communication and information technologies play a crucial role. Agricultural Scientists/ Extension workers have fairly succeeded in developing more effective scientific method of cultivation but significantly failed to take the new technology to the rural people. Efforts have to be made to reach rural people through (mass media, inter personal and group) communication channels / transferring of farm technologies from research system to the farmers system with a view to make desirable changes in respect of higher productivity, profitability and prosperity and also get feed back from the clients.

Mass media communication is another important type of communication to send message to large audience. Modern nation probably could not exist without mass communication. The mass media viewed as facilitator of development education and played a significant role in modernization of society. Mass media like print, film, radio, on-line information, television have the unique ability of disseminating information to a larger number of people in the shorter possible time. There is a growing recognition that a mass media, if appropriately used can bridge the gap between have and not have. Communication and development are major domains of
human endeavor. While the administration carried out the government policies and programmes, mass media provides the understanding and motivation lying behind such decisions and help in generating people’s participation in decision making and project implementation process. Thus, the various communication media are required to popularize the beneficial affects of various development projects / programmes and to enlist the active participation of the clientele.

The significance of the information and communication in today’s society is apparent. Communication of new information ideas and technology is an integral part of rural transformation. Many research studies, conferences and seminars have probed this area with a view to discuss some theoretical and practical issues for better utilization of communication and information sources by all the segments of the society for the benefit of the society at large. Proper flow of information not only minimized the communication gap but also opens avenues for people to get well informed. In India only 70% of population resides in rural areas and derives livelihood from agriculture and allied activities to round the year employment. Agriculture development in India largely depends on the action of its farming community scattered all over the country. The progress can only take place, when the people know the new technology, understand and act upon it (Rajput, 1993). This requires access to accurate and reliable information through appropriate and dependable sources. Thus, the developmental activities cannot be taken perused effectively in the absence of good communication infrastructure. Perhaps the oldest and more common approach of rural development communication in the less developed countries is the extension service for the dissemination of useful and practical information on agriculture, nutrition, health and family planning (Khan, 1979). A whole range of sources of information including media sometime available in the rural area but their research and acceptance as dependable source of farm information cannot
be taken granted. The farmer may come across a number of information sources and media but they pursue only few of them.

The government has made several efforts so far through various extension activities particularly in transfer of technology for rural development, but it has been observed that there is a wide gap between expected and actual results regarding development in general and agriculture in particular.

Emergence of private extension service provides in extension scenario is most welcome at this point of time. The role played by agribusiness companies, input dealers, progressive farmers, farmers organizations, industries, non-government organization, private TV and radio channels, newspaper, agricultural magazines, fast expanding internet services are increasing and absorb significant time, space and professionals in agricultural media (Chandrashekar, 2003).

It is recognized that unless the diffusion strategy keeps pace with the progress of FCV tobacco research, there is an every chance of new findings not being availed by the farmers. Thus the communication becomes important for the adoption of innovation. The role of communication is an important in FCV tobacco production management as it is in the process of natural development. Hence the communication is a major development resource. The present study evaluates the communication strategies for development at gross root level in Karnataka State.

FCV tobacco production support communication facilities have been extended over the year in Karnataka and elsewhere. Although the media role for tobacco production is important, the attempt to develop suitable communication strategies to evaluate role of media in FCV tobacco production has been inadequate. The crucial importance of communication media for the progress of FCV tobacco production management cannot be ignored in the present times.
FCV tobacco production and tobacco industry is indeed plays an important role in terms of income augmentation, employment generation and revenue collection for the development of the country.

Objectives of the study

1. To find out the awareness about existing communication gadgets available to FCV tobacco farmers.
2. To study the extent of utilization of various sources of communication by FCV tobacco farmers in adoption of improved practices.
3. To study the personal, socio-economic and psychological characters associated with utilization of communication sources.
4. To analyze the role of media in empowerment of FCV tobacco Farmers
5. To asses the impact of globalization on media usage in Extension activities
6. To evaluate infrastructure and resource established by participating agencies.

The present study was undertaken in the year 2007-08 in H.D.Kote, Hunsur, Periyapatna and K.R.Nagar taluks of Mysore district, Ramanathapura of Arakalgud taluk of Hassan district and Shimoga covering different agro-climatic zones under 10 Auction floors of Tobacco Board. 10 clusters at the rate of one cluster from each auction floor were selected considering yield potential and area of cultivation under FCV tobacco crop. Thus, there were 10 clusters selected from each of the selected cluster one village was selected considering the same criteria and a total of 10 villages were selected for the study. A list of FCV tobacco farmers was prepared for each selected village with the help of Field Assistants (AF’s) / Field Officers (FO’s) of tobacco board and 15 farmers from each village were selected. Thus 150 farmers from 10 villages of the three districts were selected randomly for the
Study. The present study approaches the problem through a research design which is exploratory by nature.

In the present investigation, *ex post-facto* research design was used. The design is considered as appropriate because the phenomenon had already occurred. The design is also appropriate because the variables considered for the study have had their affect in the field.

In view of the objectives of the study independent variables were considered for the study. The variables considered for the purpose of analysis of data with respect to the responses given by the respondents were age, educational level, land holding, annual income, farm experience in tobacco cultivation, family size, family type, social participation, market orientation and perceived source of credibility.

The interviews were conducted in free time of the respondents as the interview schedule was elaborate and needed comprehensive details. The data collection was done by personal interview in an informal atmosphere after developing rapport, either on farm or at residence of the respondents.

Mean and standard deviation used beside the frequencies and percentage analysis. Chi-square test was applied to find the significance of difference between the independent and dependent variables. The study being descriptive in nature, no parametric statistical test involved to draw inferences based on the sample results.

6.3. Findings

6.3.1. Awareness of FCV tobacco farmers about communication sources / media

1. The overall awareness of FCV tobacco farmers regarding the information sources / media was measured. It is evident that the majority of the farmers (36.00%) under the medium awareness category followed by high (32.67%) and low (31.33%) awareness category.
2. Among the personal localite sources, (97.33 %) of respondents having awareness about neighbours and friends followed by progressive farmers (94.00 %), Relatives (92.00 %), local leaders (85.33 %) and fertilizer and pesticide dealers (82.00 %).

3. Among the personal cosmopolite sources of communication, that the majority of the respondents were much aware of the extension personnel of Tobacco Board and Tobacco industry (100.00 %), Scientists of CTRI (62.00 %), extension personnel of Department of Agriculture (54.00 %) and the Scientists of Agricultural University (30.00 %) to a considerable extent.

4. Among the mass media sources of communication, Radio and Television (94.00 %) stands first followed by Newspaper (81.33 %), Farmer’s training (72.67 %), Demonstrations (68.00 %), pamphlets/leaflets/folders (67.33%) Field day/field trips (36.67 %), exhibition (28.00 %), Film show (20.00 %).

5. With respect to new media sources of communication the majority of the respondents aware of video-on-wheel programme to the extent of (64.00 %) followed by Tobacco farmers’ portal (Thambaku vedike) (23.33 %) and respondents were less aware of Kissan call centre (6.00 %) as new media.

6.3.2. Information sources / media utilized by the FCV tobacco farmers for recommended cultivation practices

1. The communication sources utilized by the FCV tobacco farmers for information regarding FCV tobacco production technologies are measured. It can be seen that 47.33 % of respondents were found under medium category with respect to receiving information from different sources like personal localite, personal cosmopolite, mass media and new media sources. This was followed by 30.00 and 22.67 % were found to be under low and high category respectively.
2. Among the personal localite sources, neighbours and friends are main sources for receiving information by majority of respondents to the extent of 48.00 % whereas 14.00 % consulted progressive farmers regularly and followed by 8.00 % of relatives for obtaining information on FCV tobacco production technologies, occasionally progressive farmers, relatives and neighbours and friends have been consulted by 32.0 %, 26.00 % 22.00 % respectively.

3. Among the personal localite sources of communication, neighbours and friends with mean score of (2.18%) received first rank followed by progressive farmers (1.60) relatives (1.42) fertilizer and pesticide dealer (1.19) and local leaders with the mean score of (1.06) in obtaining information on FCV tobacco production technologies.

4. Among the personal cosmopolite sources of communication like extension personnel of Tobacco Industry, Tobacco Board and Scientists of CTRI have been regularly differing the information to the extent of 53.33 %, 36.00 % and 10.00 % respectively. Whereas respondents occasionally receiving information from extension personnel of Tobacco Board to the extent of 60.00 %, followed by the extension personnel of Tobacco Industry (40.67 %), Scientists of CTRI (34.00 %), extension personnel of Agricultural department (24.00 %) and 11.33 % from the Scientists of Agricultural University.

5. The farmers were used the extension personnel of Tobacco industry with the mean score of (2.47) received first rank followed by the extension personnel of Tobacco board (second rank) with mean score of (2.32), CTRI Scientists received third rank with mean score of (1.54), extension personnel of Department of Agriculture ranked fourth with the mean score of (1.24) and Scientists of Agricultural University with the mean score of (1.16)
respectively in acquiring the technical know-how with respect to FCV tobacco production technologies.

6. The mass media sources of communication like pamphlets / leaflets / folders (41.33 %), Newspaper (34.67 %), Television (24.00 %), Farmer’s training (23.33 %), demonstration (14.67 %) and Radio (14.00 %) are the chief sources of communication used regularly for obtaining information on FCV tobacco production technologies. However, among those, most of them to the extent of Television (54.67 %), demonstrations (51.33 %), Farmer’s training (42.67 %), Radio (39.33 %), Field day / Field trips (26.00 %), Pamphlets / leaflets / folders (26.00 %) used occasionally by FCV tobacco farmers.

7. Among mass media sources of communication pamphlets / leaflets / folders received first rank with mean source of (2.08) followed by Television ranked second with mean score of (2.03), Farmer’s training ranked third with mean score of (1.90) and followed by Newspaper 91.83), demonstration with mean score of (1.74), Radio (1.69), Field day / Field trips (1.42), exhibition (1.20) and film show (1.07) for receiving information regarding the FCV tobacco production technologies.

8. The New media sources of communication like video-on-wheel programme and tobacco farmer’s portal were utilized regularly to the limited extent of 5.33 % and 4.00 % respectively whereas, 48.00 % and 6.00 % of the respondents were used video-on-wheel programme and tobacco farmer’s portal occasionally to obtain information on FCV tobacco production aspects and it is interesting to see that none of the respondents consulted Kissan call centre to receive information either regularly or occasionally regarding FCV tobacco production technologies.
6.3.3. Source credibility as perceived by FCV tobacco farmers

1. It could be seen that among personal cosmopolite sources extension personnel of Tobacco Industry (84.67%), Tobacco Board area more credible sources of information (82.00%) ranked first and second respectively followed by Scientists of CTRI (56.00%) and Scientists of Agricultural University (18.00 %) and the extension personnel of Agricultural Department (13.33 %) ranked least.

2. Among localite sources of communication, neighbours and friends (75.33%) was more credible source of communication ranked third followed by progressive farmers (37.33%), relatives (12.67%) were their credible sources. And none were expressed the fertilizer and pesticide dealers as credible source of information.

3. The credibility of mass media sources, farmer’s training (60.00 %) was more credible followed by pamphlets / leaflets / folders (58.67%), Television (51.33%), Demonstration (50.00%), Radio (26.67%) and Newspaper (16.00%) as higher credible sources of information. Field day / field trips (8.00%), exhibition (6.00%) and film show were found to be least credible sources of information.

4. Among the New media sources of communication video-on-wheel programme (44.00%) was found most credible followed by Farmer’s portal “Tambaku Vedike” (6.00%) as least credible source of information and none of the farmers were expressed the Kissan call centre as a credible source of information.

5. Overall the extension personnel of tobacco board and tobacco industry were the most credible information sources followed by neighbours and friends, farmers training, agricultural literatures and scientists of CTRI
6.3.4. Personal, socio-economic and psychological characters of FCV tobacco farmers and association with their communication sources/media utilization pattern

1. Out of ten independent variables, education, Landholding, Annual income, Social participation and perceived source credibility of FCV tobacco farmers are having highly significant relation with their communication sources/media utilization pattern.

2. Whereas other characteristics namely age, experience in FCV-tobacco cultivation, family size, family type and market orientation are not significantly related their communication sources/media utilization pattern.

6.3.5. Role of Media in empowerment of FCV tobacco farmers

1. Personal cosmopolite sources of communication tops the list with 94.67% accessibility to the respondents from the development of FCV tobacco farmers’ point of view. Mass media comes next (53.33%) followed by personal localite sources of communication (22.00%) and news media (4.00%).

2. The data reveals that the personal cosmopolite sources of communication / media (62.67%) are frequent and regular in flow of information on FCV tobacco production technologies followed by mass media (24.00%), new media and personal sources of communication to the extent of 6.00 and 4.00% respectively.

3. The personal cosmopolite sources / media of communication provide the farmers with most relevant information (92.67%) on various FCV tobacco production technologies. Mass media comes next (42.67%) followed by personal localite sources (18%) and new media (4.67%).

4. The personal cosmopolite sources / media of communication forms as major sources in creating awareness among the FCV tobacco farmers (86.67%) followed by mass media (46.67%), new media (13.33%) and personal localite sources of communication (11.33%).
5. Personal cosmopolite sources of communication (90.00%) provides necessary knowledge to the farmers on FCV tobacco production technologies considerably when compared to the mass media (59.33%) followed by personal localite sources of communication (13.33 %) and new media with 4.67%.

6. The personal cosmopolite source provides credible information to the farmers (78.67 %) followed by mass media (42.00 %), personal localite sources of communication (24.00 %) and new media (16.00 %).

7. The data indicates that the personal cosmopolite sources of communication play a major role in persuading the farmers to participate actively in FCV tobacco development programmes (84.00 %) followed by personal localite sources of communication (10.00 %) and mass media to the extent of (8.00 %) only and the new media has not persuade the farmers in this regard.

8. Personal cosmopolite sources of communication provide the farmers with most of the information on increasing production and productivity (90.67%), personal localite sources (18.67%) and the new media only to the extent of 2.0 % and the role of new media was meager in this regard.

9. Personal cosmopolite sources of communication provide the farmers with most of the information with regard to marketing (93.33 %) followed by the personal localite sources (28.00 %), mass media (5.33 %) and new media (1.33 %). It is noted that the mass media and new media play a very meager role with regard to providing market information among FCV tobacco farmers.

10. Personal cosmopolite, sources of communication succeed the most in promoting leadership qualities among FCV tobacco farmers (54.00%) followed by personal localite sources
(5.33 %) and mass media (3.33%). The mass media and personal localite sources of communication do not play the notable role in this regard and the role of new media not at all felt with regard to promoting leadership qualities among FCV tobacco farmers.

11. The personal cosmopolite sources of communication persuading the FCV tobacco farmers regarding the inputs supply to the extent (98.00 %) followed by personal localite sources (36.00 %) and mass media (3.33 %). The mass media do not play the significant role in providing information on supply of inputs on competitive with credit facility. The role of new media not felt with regard to providing information on supply of inputs.

12. The personal cosmopolite sources of information play a major role in providing information on other technological input supply and persuading farmers to adopt the technologies (82.00 %) followed by personal localite sources of communication (13.33 %). The role of mass media and new media not at all felt with regard to providing information on supply of other technological inputs.

13. The personal cosmopolite sources of communication provides the information on credit facilities available (85.33 %) to the FCV tobacco farmers followed by personal localite sources of communication (14.67 %) and mass media (3.33 %) and it is noted that mass media play a very meager role in this regard and the role of new media not at all felt with regard to providing information on credit facilities to the FCV tobacco farmers.

14. The personal cosmopolite sources provides the information on farmers’ Welfare insurance scheme (96.67 %) followed by personal localite sources (10.00 %) and mass media (3.33%). The mass media do not play the notable role in this regard and the role of new media not at all felt in this regard to provide information on farmer’s welfare insurance scheme to empower the FCV tobacco farmers.
15. The personal cosmopolite sources found to be playing major role (58.00 %) followed by mass media (8.00 %) and personal localite sources (5.33 %) in providing information on Best farmer’s award. The mass media and personal localite sources played a very meager role and new media role was not at all felt in this regard to motivate the farmers providing information on facilitation of Best farmer’s award.

6.3.6. Media used in dissemination of FCV tobacco production technologies by extension personnel

1. Among the interpersonal communication media, it has been observed that the majority of the extension personnel were mostly using farm and home visit to the extent of 88.00% followed by attending to office calls and giving information over phone and the extent of use of these media upto 52.00 and 20.00% respectively.

2. The extension personnel moderately using the giving information over telephone and office calls to the extent 64.00 and 36.00 %, respectively and they were using the farm and home visit to the limited extent upto 12.00 % only. Whereas giving information over phone and office calls were least utilized by 16.00 and 12.00% of the extension personnel to disseminate FCV tobacco production technologies.

3. Farm and home visit received first rank with a mean score of 3.88 followed by office calls (second rank with mean score of 3.40) and informing the farmers over phone received (third rank with mean score of 3.04).

4. Among the extension media, the extension personnel were mostly using farmer’s training (76.00%), followed by conducting demonstrations (60.00 %), field day / field trips (60.00 %) and educational tour (36.00 %).

5. Some of the extension personnel have mostly used conducting exhibition, models and specimens to the limited extent of 4.00 and 12.00 % only. Whereas, extension personnel
informed that models / specimens and education tour (48.00 %), conducting demonstration, field day and field trips (40.00 %), conducting exhibition (32.00 %) and farmer’s training (24.00 %) were moderately used in dissemination of FCV tobacco technologies.

6. Farmers’ training received first rank with mean score of 3.76 followed by demonstrations and field day / field trips ranked second with mean score of 3.60, education tour received third rank with mean score of 3.20. Models / specimens and exhibition received fourth and fifth rank with mean score of 2.64 and 2.12 , respectively.

7. The extension personnel mostly using pamphlets/leaflets/folders to the extent of 80.00 % to disseminate FCV tobacco production technologies. Majority of 88.00 and 76.00 % of them never utilized writing articles to newspaper and agricultural magazines respectively.

8. Writing to agricultural magazines was moderately used by the 12.00 % of extension personnel. Whereas, writing to newspaper and agricultural magazines were least utilized by them to the extent of 12.00 and 8.00 %, respectively.

9. Pamphlets/leaflets/folders received first rank with mean score of 3.80 followed by agricultural magazines and newspaper received second and third rank with mean score 1.44 and 1.20, respectively.

10. The Tobacco Farmers’ portal – Tambaku vedike was mostly utilized by 24.00 % of extension personnel. Video-on-wheel, local TV network and giving television programmes were mostly used to the limited extent of 12.00, 4.00 and 4.00 %, respectively.

11. Whereas the extension personnel moderately utilized Video-on-wheel (28.00 %), Tobacco Farmers’ portal and film show (16.00 %), local TV network and giving television programme (4.00 %) in dissemination of FCV tobacco technologies.
12. Whereas, majority of extension personnel 88.00, 80.00, 60.00 and 56.00 % of them never utilized to electronic media viz., radio, giving television programme, film show and local TV network, respectively as their source to disseminate FCV tobacco technologies.

13. Video-on-wheel programme received first rank with mean score of 2.32 followed by local TV network and film show received second rank with mean score 1.56, Tobacco Farmers’ portal received third rank with mean score of 1.48. Whereas, giving television programme and radio talk received fourth and fifth rank with mean score 1.32 and 1.12, respectively in utilizing for the diffusion of FCV tobacco technologies to the farming community.

14. The overall ranking indicates that the farm and home visit received first rank with mean score of 3.88 followed by distribution of pamphlets/leaflets/folders (second rank with mean score 3.80), conducting Farmers’ training (ranked third with mean score 3.76). Conducting demonstration in Farmers’ field and organizing field day / field trips (ranked fourth with mean score 3.60) and attending to office calls ranked fifth with mean score 3.40 in dissemination FCV tobacco production technologies to farmers.

15. With regards to overall ranking, the data revealed that in general out of four categories of media, interpersonal media received first rank with the average mean score of 3.44. The second important media used was extension media ranked second with mean score of 3.15 print media and electronic media utilized by the extension personnel stands third and fourth rank with mean score of 2.14 and 1.37, respectively for dissemination of information with regard to FCV tobacco production technologies to the farming community.
6.3.7. Media used in dissemination of FCV tobacco production technologies by the Scientists

1. Among interpersonal media, the Scientists were mostly using office calls to the extent of 50.00 % as a chief media in dissemination of FCV tobacco technologies. The Scientists moderately using farm and house visit and giving information over phone to the extent of 41.67 %.

2. Whereas, majority of the Scientists, least utilized phone, farm and home visit and office calls to the extent upto 50.00, 33.33 and 16.67 %, respectively and 25.00 % of them had never used farm and home visit as a media.

3. The Scientists used office call as chief media, received first rank with mean score of 3.33 followed by giving information over telephone and farm and home visit received second and third rank with mean score of 2.58 and 2.16 respectively.

4. Among the extension media, majority of the Scientists mostly using Farmers’ training, organizing field day / field trips and demonstration of the extent of 75.00, 58.33 and 25.00 % respectively.

5. While 16.67 % and 8.33 % of them utilized the models / specimens, conducting education tour and exhibition to the limited extent. Scientists moderately used models / specimen (75.00 %), demonstration (66.67 %), field day / field trips and exhibition (33.33 %) and education tour (25.00 %).

6. Where in 16.66 % of Scientists moderately used Farmers’ training to the limited extent. While, majority of 41.67 % of the Scientists least used the exhibition as media to disseminate information.

7. Demonstration, field day / field trips and models / specimen were least utilized by the Scientists up to the limited extent of 8.33 % only.
8. Some of the Scientists 33.34, 16.67 and 8.33% of them not at all used education tour, 
   exhibition and Farmers’ training as a means to deliver information.

9. Scientists employed Farmers’ training to disseminate information received first rank with 
   the mean score 3.58 followed by field days/field trips, ranked second with mean score of 
   3.50. Demonstration received third rank with mean score 3.16, models/specimen, 
   exhibition and educational tour, stands fourth, fifth and sixth rank with the mean score of 
   3.08, 2.33 and 2.08 respectively.

10. Among the print media used by the Scientists writing and distribution of pamphlets/ 
    leaflets/folders received first rank followed by agricultural magazines and newspaper 
    ranked second and third with mean score of 2.83 and 2.42, respectively.

11. Among the electronic media used by the Scientists, Tobacco Farmers’ portal and giving 
    television programme received first rank with mean score of 2.75 followed by radio talk 
    (2.66), giving programme in local TV network (2.50), Video-on-wheel (2.00) and film 
    show (1.66).

12. The overall ranking revealed that the distribution of pamphlets/leaflets/folders received 
    first rank with mean score of 3.67 followed by Farmers’ training (3.58), field day/field 
    trips (3.50), attending to office calls (3.33) and demonstrations (3.16).

13. The data reveals that, out of four categories of media, print media received first rank with 
    the average mean score of 2.97. The second important media used by the Scientists was 
    extension media with the mean score of 2.95. Inter personal media received third rank with 
    mean score of 2.69 and the electronic media ranked fourth with the mean score of 2.38 for 
    dissemination of FCV tobacco production technology to the farmers.
6.3.8. Infrastructure facilities for communication established by participating agencies

1. Most of the infrastructure facilities for conducting trainings were lacking with Tobacco board and tobacco industry.

2. Inadequate man power and infrastructure are observed during the study period.

6.4. Implications and recommendations

In the light of the study and informal discussion held with the cross section of the people representing FCV tobacco growers, extension workers, administrators and scientists during the study period, the following recommendations are made to sustain the crop in the international market through improved productivity and quality of FCV tobacco for the economic advantage of tobacco growers in KLS.

6.4.1. Implication on government of India

The investigation reveals that it is imperative to formulate a national policy on agriculture at this juncture of globalization, liberalization, privatization, pluralistic farm culture and commercialized agricultural scenario in India. This has been a long pending demand and government of India may consider constituting an expert committee of policy makers, farm scientists, social activists and farm experts. This policy may consider devoting a separate section on FCV tobacco at national, regional and gross roots level. The committee may also consider the need for planning media intervention package and programmes at national regional and gross roots level as effective instrument for development FCV tobacco. The government of India has to expand media units namely, Prasarbharathi corporation, Directorate of field publicity, Directorate of Advertising and Visual publicity and Song and Drama Division at the district level.
to make apparent contribution for farm development including FCV tobacco development at gross roots.

6.4.2. Implications on Karnataka state Government

The government of Karnataka may consider formulating state level agricultural policy with more emphasis on tobacco to boost farm sector. The Directorate of Information does not have a block level network, plans and programmes. The government of Karnataka should establish a block level information network and provide decentralized information services for farm development. The study reveals that the personal cosmopolite sources/media continue to be the major source of information on FCV tobacco production management at gross roots level. Hence, existing communication network has to be enriched at the gross roots level especially in development departments including department of Agriculture, tobacco research station, Tobacco Board, Tobacco Industry and University of Agricultural sciences in Karnataka state.

6.4.3. Implications on Zilla, Taluk & Grama panchayat

The Zilla panchayat samithi must consider development of FCV tobacco crop as a priority-based activity and pool communication resources for rural development, agriculture development and so on. Special media campaigns and publications are required to boost productivity and improve quality of FCV tobacco at district level. Similar exercises are required at block and community levels. Grassroots level workshops, publicity campaigns, farmers’ trainings, demonstrations, participatory communication and electronic & new media exercises are required to diffuse FCV tobacco production technologies and to improve production and quality of FCV tobacco.
6.4.4. Implication on research and development organizations

The present study reveals that the research and development organizations have a fairly developed communication infrastructural facilities. These organizations have primarily utilized interpersonal media, extension media, mass media and new media of communication in order to reach tobacco farmers. These organizations also enabled farmers to understand various technologies and facilities extended to them through vertical channels of communication in the present times. These organizations are required to create awareness about different information sources/media, technologies and services & facilities available to farmers. These organizations may join development departments, banks, cooperatives, media institutions, NGOs and other welfare organizations and strength their efforts towards persuading the people to take active part and to adopt good agricultural practices.

6.5. Suggestions and recommendations

The study suggests the following media intervention for efficient transfer of FCV tobacco production technologies to sustain the demand in inter-national market by increasing productivity, improving quality for the economic betterment of the tobacco growers.

It appears that the FCV tobacco farmers were less aware of the information sources like field day/field trips, exhibition, film show, Tobacco farmers’ portal and Kisan call centre sources. Hence there is a need for extension system to direct its efforts towards creating awareness and bringing about change in knowledge and attitude components of FCV tobacco farmers through improving the information availability and accessibility.

Majority of the FCV tobacco farmers found in the low and medium information utilization groups. These categories of farmers need to be educated about the benefits of having right information at the right time by consulting the right source. This is the responsibility of
extension workers, who can effectively make use of the FCV tobacco farmers in the high information source consultancy group as “role models” or ‘opinion leaders’.

The study revealed that the extension personnel of Tobacco Board and Tobacco industry, Neighbours and friends, pamphlets /leaflets/folders, television and farmers training were most frequently utilized information sources, further they were perceived as most credible information sources by FCV tobacco farmers. Hence the extension system has to effectively make use of these sources in “information dissemination” by providing them the required training from time to time. In this era of privatization there is a need for public and private extension system to function in a co-ordinated and integrated manner in managing overall development of FCV tobacco farmers.

Efforts of extension system need to be directed towards the organization of FCV tobacco farmers under a co-operative society or self help groups at the grassroots level to under take multiple activities. All the information related to agriculture and allied activities including FCV tobacco cultivation could be channelled through this institution. This in turn enhances their social participation which was found to be low, improving their information availability, accessibility and their utilization.

Several workers made observations on empowerment. It was found that the personal cosmopolite and mass media sources playing major role in empowering of FCV tobacco farmers. Hence, the extension system has to make use of these sources effectively at grassroots level for overall development of FCV tobacco farmers.

The communication methods like Farm and home visit, distribution of pamphlets/leaflets/folders, conducting farmers training, conducting demonstration in the farmers field, organizing field day/field trips were most commonly used by extension personnel for
effective communication to their clients. Hence, frequent use of these methods in an effective manner should be encouraged.

The study reveals that, the extension personnel lack proper education about mass media and new media items and their utilization. Hence the extension system should keep in view, while formulating training programmes. Audio-visual education must be imparted in such a way that they will be oriented towards the use of mass media and new media items in their extension work for effective dissemination of FCV tobacco production technologies.

The communication methods like writing and distribution of pamphlets/leaflets/folders, farmers training, field day/field trips, attending to office call and demonstration were most commonly used by Scientists to transfer FCV tobacco production technologies. Hence regular use of these methods in an effective manner should be encouraged for the dissemination of FCV tobacco production technologies.

It is evident from the study that the extension system need to direct efforts towards the establishment of information centers in all the mandals. There is every need to encourage mass media like giving radio talk, organizing film shows, “Tambaku vedike” and organizing of Video-on-wheel programme at grass roots level.

Computers are the greatest discovery in the recent times. Internet has made the world into a global village and provides the channel for exchange of information quickly. Few attempts are also made in the field of agriculture including FCV tobacco. Private sector has taken keen interest and Tobacco farmers portal www.indiantobaccafamer.com / www.thambakuvedike.com -Tambacco vedike was developed in a vernacular language of tobacco growing areas by ITC limited-ILTD division in collaboration with Tobacco Board and CTRI for effective dissemination of FCV tobacco production technologies. Hence the extension system need to
direct efforts towards the establishment of *Tambaku vedike* in all the community centres. Extension personnel and farmers have to be educated about the usage of the same for effective utility of this media.

Most of the infrastructural facilities of communication are lacking with Tobacco Board and tobacco industry, which affects the transfer of technology in an effective manner. Hence, there is a need to equip sufficient number of these audio-visual aids and equipment to organize extension activities both on the campus and off the campus.

### 6.6. Implications on future research

The study is made an attempt to understand the Role of communication in FCV tobacco production. During the source of investigation, it is understood that there are many areas, which suggests systematic research interest in this area as for as Karnataka state is concerned. The following suggestions are made for the use of future researchers who undertakes studies in this area of study.

1. Since, the research study was confined only to single crop, it is advisable to take up similar studies in other area in other crops in order to arrive at wider generalization.

2. An experimental study has to be taken up for the development and implementation of “information system” on the lines of single window information bank.

3. An experimental study may be taken up to study the media impact on knowledge and adoption level of FCV tobacco farmers in Karnataka light soil region.

   Beside this, a combination of quantitative analysis, qualitative analysis, content analysis and experimental research is advocated for understanding communication system in FCV tobacco production in future.
6.7. Epilogue

The importance of agriculture development forming the core of national development is being increasingly recognized. FCV tobacco cultivation assumes new significance. Since, tobacco crop offers significant employment opportunities both at on-farm and off-farm situation and significantly influence the economy and prosperity of farming community. Development communication is the premise of progress in our modern society. FCV tobacco cultivation demands planned, deliberate, systematic and sustainable communication strategies and packages. Optimum use of all communication channels in proper combinations can certainly help transfer of FCV tobacco production technologies in an effective manner. The future agenda for communicating good agricultural practices of FCV tobacco at grass roots level must deal with media selection, media co-ordination, media integration, participatory communication, scientific evaluation and other related aspects. The government organizations, Tobacco research, Tobacco Board, Tobacco industry, agriculture universities, media organizations and NGO’s, have to work in close collaboration towards designing communication system and operations in the rural areas of Karnataka light soil region.