



Utilization of mass media for transfer of technology in palms and cocoa - an analysis

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Abstract

A study on assessing the extent of utilization of mass media for transfer of technology in palms and cocoa by our Institute revealed that there is a substantial increase in the publication of popular articles from 1998-99 onwards. Though cocoa is getting more importance as a remunerative cash crop, only 1.39 per cent of the popular articles covered the topics related to cocoa. Maximum number of popular articles was published on topics related to disease management. Only 15 popular articles (4.17 per cent) were published on topics related to post-harvest technology. A lion's share of popular articles was published in English (34.44 per cent) and Malayalam (33.33 per cent). About two-third (61.4 per cent) of the radio programmes were on topics related to coconut. Only 4.12 per cent of the radio programmes covered topics related to cocoa. Hence, efforts to present more programmes on cocoa cultivation are to be strengthened. It was observed that disease management, crop improvement and integrated nutrient management were the three subject matter areas which received maximum coverage (15.9 per cent, 15.7 per cent and 14.5 per cent respectively) in the radio programmes presented. The results also point to the fact that palm based farming systems and post-harvest processing technologies need to be given more coverage considering the importance of these subject matter areas in increasing the income of farmers especially in the current scenario of globalization.

Key words: Mass media, transfer of technology, popular articles, radio programmes

Introduction

Organizing various transfer of technology programmes to disseminate the technologies on palms and cocoa evolved at the Institute among the farming community is an important mandate of Central Plantation Crops Research Institute. It is realized, of late, that development of technologies by the Research Institute alone is not enough, but creating awareness and knowledge about the same among the end users is much more important and relevant. Hence, various media and method are being effectively utilized to reach the farm families.

Print media having coverage in every nook and corner of rural areas are utilized by the Institute for technology dissemination, mainly in the activities and achievements of the Institute. Popular articles on various aspects of production technology of palms and cocoa are being regularly published by the scientists of the Institute, in farm journals and newspapers. Similarly, the coverage on Institute activities and achievements by the

newspapers also plays a vital role in enhancing the awareness and knowledge of the farmers. Likewise, radio is an important mass medium suitable for creating general awareness amongst the people, helping change their attitude and reinforcing the learning process.

Hence, presentation of radio programmes by the scientists on various aspects of production, protection and post-harvest technologies of coconut, arecanut and cocoa has been an important technology transfer activity of the Institute. People with no formal education or very little education and those who are not in a position to attend extension programmes personally, can take advantage of this medium and build up adequate knowledge and skill. It reaches a large number of people at a very low cost. It is an accepted fact that the vast changes that have taken place in the countryside, particularly the 'green revolution' could not have come about so quickly without the use of radio. It gives emphasis on informing the farming community about the latest scientific techniques to increase production in all farm enterprises.

In this paper, an analysis of the coverage of Institute activities through newspapers, popular articles published in farm journals and other publications, and radio programmes presented by the scientists of CPCRI, is made with the objective of assessing the extent of utilization of mass media for transfer of technology in palms and cocoa by the Institute.

Methodology

The extent of utilization of mass media, in this study, is operationalized as the number of news items appeared in various newspapers about the activities and achievements of the Institute, number of popular articles published in different farm journals and agriculture columns and the number of radio programmes in different formats presented by the scientists on various technologies and activities of the Institute. Analysis of the extent of utilization of mass media for transfer of technology in palms and cocoa by the Institute was done using the newspaper clippings collected in the library during the period covered from 1999 to 2003 (up to June), popular articles published and radio programmes presented by the scientists of the Institute during the period from 1993-94 to 2002-03. Year-wise, newspaper-wise, Division-wise and item-wise analyses were made for the newspaper coverage. Similarly, the popular articles were analyzed taking into account the year-wise, Division wise, crop-wise, subject matter area-wise, language-wise and publication-wise distribution. Radio programmes were analyzed considering the year-wise, quarter-wise, Division-wise, and crop-wise distribution of items besides the subject matter areas covered and mode of presentation adopted.

Results

A. Newspaper coverage

i. Year-wise coverage

During 1999, only 28 items (16.3 per cent) represented the Institute activities, which increased to 77 (44.7 per cent) by 2002 (Table 1).

Table 1. Year-wise coverage of Institute activities

Year	No. of news items	Per cent
1999	28	16.3
2000	44	25.6
2001	23	13.4
2002	77	44.7
Total	172	100.0

ii. Newspaper-wise coverage

From Table 2, it is clear that there was equally good coverage ranging from 21 per cent to 29 per cent in the local language newspapers, as compared to English

newspapers. Thus, the need to communicate in the farmers' own language has been met with.

Table 2. Newspaper wise coverage of Institute activities

News paper	Percentage
Mathrubhumi	29
Malayala Manorama	28
Madhyamam	21
The Hindu	6
The New Indian Express	16

iii. Division-wise coverage

Among the divisions, the coverage was 36 per cent from crop improvement followed by the Social Sciences with 27 per cent (Table 3). The former reveals a wealth of information on germplasm collection, since CPCRI holds the largest germplasm assembly in coconut, arecanut and cocoa, whereas the Social Sciences Division is engaged in various training programmes and other farmer centered activities. The information on diseases and pests is also fairly well covered.

Table 3. Division-wise coverage of Institute activities

Division	Percentage
Crop Improvement	36
Crop Production	8
Crop Protection	19
Physiology, Biochemistry and	
Post-Harvest Technology	10
Social Sciences	27

iv. Item-wise coverage

As many as 60 articles appeared on research/extension and farmers interface, followed by over 50 articles on human resource development programmes (Table 4). These two put together highlight the point that farmers were made aware of the training programmes being conducted by the Institute on various topics at different levels. The message on new technologies developed by the Institute also reached the common public and farmers as indicated by 29 articles published by the newspapers. The Institute strived hard to keep the public abreast of other activities also from time to time.

Table 4. Item-wise coverage of Institute activities

News item	Number	Per cent
New agricultural technologies	29	14.57
HRD/Training programmes	47	23.62
Strengthening Institute facilities	29	14.57
Women empowerment	5	2.51
Research-Extension-Farmers interface	50	25.13
Celebration of days of National importance	17	8.54
Others	22	11.06
Total	199	100.00

B. Popular articles

i. Popular articles published over the years

Table 5 furnishes the details of popular articles published during the period from 1993-94 to 2002-03.

Table 5. Popular articles published over the years

Year	No. of popular articles	Per cent
1993-1994	8	2.2
1994-1995	15	4.2
1995-1996	20	5.6
1996-1997	15	4.2
1997-1998	19	5.3
1998-1999	43	11.9
1999-2000	62	17.2
2000-2001	57	15.8
2001-2002	62	17.2
2002-2003	59	16.4
Total	360	100.0

It can be seen from the above table that during the last ten years a total of 360 popular articles were published by the scientists of the Institute in various farm publications. Maximum number (62 each) of popular articles was published during 2001-02 and 1999-2000. The distribution of popular articles over the last decade clearly indicates that there is a substantial increase in the publication of popular articles from 1998-99 onwards. The number of popular articles published increased from 2.2 per cent in 1993-94 to 17.2 per cent in 2001-02.

ii Popular articles published from different divisions

From the results presented in Table 6, it can be seen that scientists from crop protection division published the maximum number (123) of popular articles accounting for 34.17 per cent of the total number of popular articles published. Pest and disease incidence is one of the important problems faced by farmers. Hence, it is heartening to observe that scientists from Crop Protection division have been able to communicate to the farmers on the technologies for the effective management of pest and disease problems through the medium of farm publications. A comparable number (115) of articles were published by the scientists of Crop Production also. Scientists from the remaining three divisions of the Institute, viz., Crop Improvement, Physiology, Biochemistry and Post-Harvest Technology and Social Sciences published 11.94, 10.56 and 11.39 per cent of the articles published respectively.

Table 6. Popular articles published from different divisions

Divisions	No. of popular articles	Per cent
Crop Improvement	43	11.94
Crop Production	115	31.94
Crop Protection	123	34.17
Physiology, Biochemistry and Post-Harvest Technology	38	10.56
Social Sciences	41	11.39
Total	360	100.00

iii. Popular articles published on different crops

Crop-wise details of popular articles (Table 7) present a highly uneven distribution. About two-thirds (61.94 per cent) of the popular articles were on topics related to coconut. 35 popular articles (9.72 per cent) dealt with arecanut. Only 1.39 per cent of the popular articles covered the topics related to cocoa.

Table 7. Popular articles published on different crops

Divisions	No. of popular articles	Per cent
Coconut	223	61.94
Arecanut	35	9.72
Cocoa	5	1.39
Other Crops	28	7.78
General	69	19.17
Total	360	100.00

Crop-wise distribution of popular articles is merely a reflection of the relative importance of the crops in terms of number of farm families depending on the crop and area under cultivation. However, it is worthwhile to note that the number of popular articles was very less in cocoa, though of late the crop is getting more importance. Hence, efforts are required to publish more popular articles on production technologies of cocoa.

iv. Subject matter areas covered in popular articles

Table 8 provides the details on subject matter areas covered in popular articles. It was observed that maximum number of popular articles (63 nos.) was published on topics related to disease management. It was closely followed by topics on improved varieties (62 nos). Topics related to pest management ranked third with 48 nos. of popular articles. Substantial number of articles were also published on topics related to crop production practices such as cropping/farming systems, irrigation and water management and organic farming practices including vermicomposting, bio fertilizer etc. (57, 23 and 22 nos. respectively). Better coverage of these subject matter areas indicate that the topics covering the important technologies for improving the production and productivity of crops were given due attention. Currently, value addition through product diversification is gaining

much attention among farming communities, but only 15 popular articles (4.17 per cent) were published on topics related to post-harvest technology. Hence, post-harvest processing technologies need to be given more coverage in popular articles published from the Institute.

Table 8. Subject matter areas covered in popular articles

Subject matter area	No. of popular articles	Per cent
Crop improvement-improved varieties and biotechnology	62	17.22
Integrated nutrient management	13	3.61
Irrigation and water management	23	6.39
Cropping / farming system	57	15.83
Organic farming Practices - vermicomposting, bio-fertilizer etc.	22	6.11
Pest management	48	13.33
Disease management	63	17.50
Nematode management	6	1.67
Post-Harvest Technology	15	4.17
Transfer of Technology	6	1.67
Home Science	14	3.89
Other topics	31	8.61
Total	360	100.00

v. Language-wise distribution of popular articles

The distribution pattern of popular articles published in different languages (Table 9) showed that a lion's share of articles was published in English (34.44 per cent) and Malayalam (33.33 per cent). Sixty five popular articles (18.06 per cent) were published in Kannada, while 37 (10.28 per cent) were published in Hindi. Only few articles were published in Tamil (9 nos.) and Telugu (5 nos.) It is worthwhile to note that Tamil Nadu and Andhra Pradesh are the states having considerable area under cultivation of coconut, the important mandate crop of the Institute, with a substantial number of farm families depending on this crop for their livelihood. Popular articles can be effectively used as a means to disseminate the technologies to these farm families in their own languages. Hence there is a need to publish more popular articles from the Institute in Tamil and Telugu languages to strengthen the TOT efforts of the Institute.

Table 9. Language wise distribution of popular articles

Divisions	No. of popular articles	Per cent
Malayalam	120	33.33
English	124	34.44
Kannada	65	18.06
Tamil	9	2.50
Telugu	5	1.39
Hindi	37	10.28
Total	360	100.00

vi. Publication-wise distribution of popular articles

The distribution of popular articles (Table 10) showed that the articles were spread over 62 publications ranging from 0.28 to 15.56 per cent of the popular articles published by the Institute. Wider distribution of popular articles is, in a way, an encouraging trend as it ensure a wider readership. Maximum number (56 nos.) of popular articles were published in Indian Coconut Journal, followed by Indian Naleekara Journal (41 nos.) and Kerala Karshakan (30 nos.)

Table 10. Publication-wise distribution of popular articles

Journal	No. of popular articles	Per cent
Indian Coconut Journal	56	15.56
Indian Naleekara Journal	41	11.39
Kerala Karshakan	30	8.33
Bharathiya Nariyal Pathrika	28	7.78
Karshakan	13	3.61
Karshakasree	10	2.78
Krishiloka	11	3.06
Sujatha Sanchike	11	3.06
Udayavani	11	3.06
Other Journals (59 nos.)	141	39.17
Total	360	100.00

C. Radio programmes

i. Radio programmes presented over the years

Table 11 and 12 furnish the details of radio programmes presented during the period from 1994 to 2003.

Table 11. Radio programmes presented over the years

Year	No. of radio programmes	Per cent
1994	29	20.0
1995	13	9.0
1996	24	16.6
1997	7	4.8
1998	9	6.2
1999	13	9.0
2000	15	10.3
2001	18	12.4
2002	12	8.3
2003	5	3.4
Total	145	100.0

It can be seen that during the last years a total of 145 radio programmes were presented by the scientists of the Institute. Maximum number (20 per cent) of radio programmes were presented during 1994. The programmes were comparatively less during 1997 and 1998.

ii Radio programmes presented during different quarters

The quarter-wise analysis of radio programmes presented is furnished in Table 12. It was observed that the radio programmes are evenly distributed among all the four quarters.

Table 12. Radio programmes presented during different quarters

Quarter	No. of radio programmes	Per cent
Jan-Mar	42	29
Apr-June	35	24
July-Sept	33	23
Oct-Dec	35	24
Total	145	100

iii. Radio programmes presented from different divisions

Division-wise distribution of radio programmes (Table 13) revealed that Crop Improvement, Crop Production, Crop protection and Social Sciences divisions had presented more than 20 per cent each of the total number of radio programmes. But the Division of Physiology, Biochemistry and Post-Harvest Technology has only 10.3 per cent programmes to its credit. This may be due to the fact that apart from the Post-Harvest Technologies, the division is carrying out research work mainly on basic science aspects. Crop Protection division presented the maximum number (24.8 per cent) of radio programmes. Pest and disease incidence is one of the most important problems faced by farmers. Obviously scientists from Crop Protection division were frequently requested to present radio programmes on various aspects of pest and disease management in palms and cocoa.

Table 13. Radio programmes presented from different divisions

Quarter	No. of radio programmes	Per cent
Crop Improvement	30	20.7
Crop Production	32	22.1
Crop Protection	36	24.8
Physiology, Biochemistry and Post-Harvest Technology	15	10.3
Social Sciences	32	22.1
Total	145	100.0

iv. Radio programmes presented on different crops

Crop-wise details of radio programmes (Table 14) present a highly uneven distribution. About two-thirds (61.4 per cent) of the radio programmes were on topics related to coconut, 25.5 per cent programmes dealt with arecanut. Only 4.12 per cent of the radio programmes covered the topics related to cocoa.

Table 14. Radio programmes presented on different crops

Quarter	No. of radio programmes	Per cent
Coconut	89	61.4
Arecanut	37	25.5
Cocoa	6	4.1
Other crops	13	9.0
Total	145	100

Crop-wise distribution of radio programmes is

merely a reflection of the relative importance of the crop in terms of number of farm families depending on the crop and area under cultivation. However, it is worthwhile to note that the number of radio programmes was very less in cocoa, though of late the crop is getting more importance. Hence, efforts to present more programmes on cocoa cultivation are to be strengthened.

v. Subject matter areas covered in radio programmes

It was observed that disease management, crop improvement and integrated nutrient management were the three subject matter areas which received maximum coverage (15.9 per cent, 15.7 per cent and 14.5 per cent respectively) in the radio programmes presented (Table 15). Topics related to transfer of technology services of the Institute and pest management also received fairly good coverage (13.8 and 11.7 per cent respectively). Better coverage received on these subject matter areas indicate that the topics covering the important technologies for improving the production and productivity of crops such as improved varieties, pest and disease management, fertilizer management have been given due attention. The results also point to the fact that palm-based farming systems and post-harvest processing technologies need to be given more coverage considering the importance of these subject matter areas in increasing the income of farmers especially in the current scenario of globalization.

Table 15. Subject matter areas covered in radio programmes

Subject matter area	No. of radio programmes	Per cent
Crop improvement	23	15.7
Integrated nutrient management	21	14.5
Irrigation and water management	9	6.2
Cropping systems	3	2.1
Pest management	17	11.7
Disease management	23	15.9
Transfer of technology	20	13.8
Home science	4	2.8
Post-harvest technology	12	8.3
Other topics	13	9.0
Total	145	100

vi. Mode of presentations of radio programmes

The results summarized in Table 16 showed that a majority (74.5 per cent) of the radio programmes were presented as radio talks. Interview method was adopted in 15.9 per cent of the radio programmes. Question answer, discussion, phone-in-programme and documentaries were employed in very few programmes (4.1, 2.7 and 0.7 per cent respectively). It can be seen that field based, outdoor programmes were negligible. It is an accepted fact that to sustain the interest of rural listeners more emphasis is to be given for such mode of

presentations which give farmers an opportunity to interact with experts and also share their experiences. Success stories of farmers also need to be given importance as it is an effective tool to motivate farmers to adopt improved farm technologies. Mere talk by experts most of the times become monotonous and can not sustain the interest of the listeners. The analysis of the mode of presentation of radio programmes clearly indicate the need for preparing and presenting more field-based programmes with scope for direct interaction with farmers.

Table 16. Mode of presentation of radio programmes

Mode of presentation	No. of radio programmes	Per cent
Radio talk	108	74.5
Interview	23	15.9
Documentary	1	0.7
Discussion	4	2.7
Question & Answer	6	4.1
Phone-in-programme	3	2.1
Total	145	100

Conclusion

An analysis of the extent of coverage of technologies as well as Institute achievements in newspapers indicated that the print media and radio have been effectively utilized for updating farmers' awareness

about the activities and new technologies evolved at CPCRI. Although the information on varieties/hybrids and extension programmes received wide coverage, other subject matter areas need attention for improvement. Though cocoa is getting prominence as a remunerative crop, the number of popular articles appearing was very less in coca. Hence, special efforts are required to publish more popular articles on production technologies of cocoa. Similarly, very few articles are being published on post-harvest processing, though value addition through product diversification is gaining much attention among farming communities. Hence, post-harvest processing technologies need to be given more coverage in popular articles published from the Institute. The results of the analysis of popular articles also indicated the need to publish more popular articles from the Institute in Tamil and Telugu languages to strengthen the TOT efforts of the Institute.

The results indicate the need to have more radio programmes on cocoa. The subject matter areas like cropping/farming system and post-harvest technology are to be given more coverage. Further, the results also clearly indicate the need for preparing and presenting more field-based programmes with scope for direct interaction with farmers.