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ABSTRACT

Communication of technologies has to reach quickly and timely. For profitable Agri Business the communication of messages to farmers need to be checked for correctness of its contents, easiness to understand since it has to be practiced to get the desired yield. This study will suggest a new communication strategy for technology transfer of messages to farmers for profitable agricultural business by communicating information on crops through various agencies co-coordinating the functions of Research, Extension, Media and Local Farmers in indigenous way without altering the messages for an everlasting impact. Hence the effectiveness of different multi- media combinations towards knowledge gain and retention was studied presenting a folk song on 'Rat Control' through different multi-media combinations of Radio, Television and Print. A Multi-media combination of Radio – Print and Radio-Television was found to be effective towards knowledge gain in Poonamallee and in Kundrathur experimental block blocks respectively. The results of the study will be useful to make the agri business more profitable.

Introduction

Communication is very essential and Radio, Television and Print media play a vital role in communicating messages to farmers for getting max returns. According to Woods (1976), the development workers have not utilized the communication resource properly. It was reported by Sankaran (1973), Aggrwal (1978), Sachidananda and Jha (1980) reported that only

limited messages reach the rural poor who need them most. Since folk format is rural communication can be made effectively to rural people who are tied with traditions (Krishnan, 1965; Desai, 1969; Parmar 1973; Zaidi, 1975 and Sanzgri, 1977). There is a growing concern among the academics and extension workers that the potentially of traditional media like folk songs has not been exploited, (Wang 1982). Nicholls (1993)

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stated that folk media will motivate the farmers to adopt new technologies. Considering the importance, a folk song was prepared for dissemination of messages on 'Rat Control' through several media combinations to study the effectiveness of different multi-media combinations towards knowledge gain, knowledge retention after fifteen days and knowledge retention after thirty-days.

Research Methodology

Chengai-MGR district was selected purposively for this study and Sriperumbudur taluk was randomly selected. Experiments were conducted in Poonamallee and Kundrathur blocks and Sriperumbudur block was treated as control by using simple random procedure. From each of the blocks using simple random procedure and four villages were randomly selected from each block.

Research Design: The research design followed in this study is 'Before and After, Two Experimental Groups and One Control Group (Pretest – Post Test) Design with Time Dimension'. Four treatments were carried out in four villages of each block. The treatments are Radio-Television, Radio-Print, Television-Print and Radio-Television-print

Knowledge Test: A teacher made knowledge test consisting of 25 questions on the topic of 'Rat control' was prepared and administered. One score was given to every correct answer and zero for each incorrect answer. A symbolic arrangement of two-in-one Radio cum Cassette Player for Radio, a television with VCR for Television and printed matter as such were used in the selected villages.

Table 1 Effectiveness of multi-Media Combinations Studied

S.No	Name of the multi-media combination	Poonamalle block (Experiment - I)			Kundrathur block (Experiment - II)			Sriperumbudur block (Control)					
		PEK	KIAE	KRA15	KRA30	PEK	KIAE	KRA15	KRA30	PEK	KIAE	KRA15	KRA30
1	Radio - Television	0.00	9.67	83.89	6.33	3.28	16.72	10.61	8.83	0.64	0.64	0.64	0.64
2	Radio – Print	0.00	17.56	16.33	15.17	0.00	2.78	2.44	2.22	0.00	0.00	0.00	0.00
3	Television – Print	0.00	11.11	10.89	9.50	0.00	8.67	7.39	3.72	0.00	0.00	0.00	0.00
4	Radio - Television – Print	0.00	12.39	8.61	7.39	0.44	9.88	8.50	2.72	0.34	0.34	0.34	0.34

PEK - Pre Exposure Knowledge

KIAE - Knowledge Immediately After Exposu

KRA15 - Knowledge Retention after Fifteen Days

KRA30 - Knowledge Retention after Thirty Days

In comparison, the results of experimental groups reveal that the treatments were obviously responsible for knowledge gain and knowledge retention.

Knowledge Gain in Poonamallee Block

It is clear from the Table 2 that no pre-exposure knowledge was found among the respondents of any one of the multi-media combinations studied. This might be due to non-participation of the respondents of these multi-media groups in any of the training programmes conducted on scientific storage by extension officials of Save Grain campaign and by the staff of Department of Agriculture.

Table 2. Effectiveness of Multi-Media Combinations towards Knowledge Gain in Poonamalle Block

Multi-Media Combination	PEK	KIAE	KG	't'
Radio-	0.00	9.67	9.67	5.87 0.0001**
Radio-Print	0.00	17.56	17.56	28.71 0.0001**
Television-Print	0.00	11.11	11.11	8.43 0.0001**
Radio- Television-Print	0.00	12.39	12.39	7.87 0.0001**

^{**}Significant at one per cent level.

It could be seen from the Table 2 that higher knowledge gain was found among the respondents of Radio-Print multi-media combination as evident from the score of 17.56.

Knowledge Gain in Kundrathur Block

It is clear from the Table 3 that there was no preexposure knowledge on 'Rat Control' among the respondents of Radio-Print and Television-Print multi-media combinations. In contrast, some preexposure knowledge was observed among the respondents of Radio-Television and Radio-Television-Print multi-media combinations.

Table 3. Effectiveness of Multi-Media Combinations Towards Knowledge Gain in Kundrathur Block

Multi-Media Combination	PEK	KIAE	KG	't'
Radio- Television	3.28	16.72	13.44	10.85 0.0001**
Radio-Print	0.00	2.78	2.78	10.58 0.0001**
Television-Print	0.00	8.67	8.67	5.06 0.0001**
Radio- Television-Print	0.44	9.88	9.44	4.19 0.0001**

^{**} Significant at one per cent level.

The respondents of Radio-Print and Television-Print multi-media combinations were unable to answer even a single question of the knowledge test on 'Rat Control' though they reported that they Practiced rat baiting. No one was able to mention the name of the chemical to be used and the recommended procedure which could be considered as vital information. This might be due to their lack of exposure to scientific storage methods and might also be due to their non-

participation in ay of the training programmes on the topic. But the respondents of Radio-Television and Radio-Television-Print multi-media combinations had some pre-exposure knowledge. This might be probably due to their participation in the training programmes on scientific storage methods conducted by the extension officers of 'Save Grain Campaign' and those of Department of Agriculture. It could be seen from the Table that higher knowledge-gain was found among the respondents of Radio-Television multi-media combination as evident from the scores of 13.44. This was followed by the knowledge gain reported by the respondents of Radio-Television-Print, Television-Print and Radio-Print combinations as evident from the scores of 9.44, 8.67 and 2.78, respectively. The results of knowledge gain due to all the multi-media combinations were found to be significant at one per cent level.

Effectiveness of Multi-Media Combinations in Terms of Knowledge Retention After Fifteen Days

The effectiveness of knowledge retention after fifteen days of exposure for the respondents of each multi-media combination was assessed by using the same knowledge test. From the number of correct answers the knowledge retention score of the respondents of each multi-media combination in the experimental villages was obtained.

Knowledge Retention After Fifteen Days in Poonamallee Block

Results of knowledge retention after fifteen days are presented in Table 4

Table 4. Effectiveness of Multi-Media Combinations Towards Knowledge Retention After Fifteen Days in Poonamallee Block

Multi-Media Combination	KG	KRAI5	ť′
Radio- Television	9.67	8.89	2.72 0.015*
Radio-Print	17.56	16.33	3.18 0.005**
Television – Print	11.11	10.89	2.20 0.042*
Radio- Television-Print	12.39	8.61	3.18 0.005**

** Significant at one per cent level. * Significant at five per cent level

A higher score of knowledge retention after fifteen day s was found among the respondents of Radio-Print multi-media combination (16.33). This was followed by the respondents of Television-Print, Radio-Television and Radio-Television-Print multi-media combinations as evident from the scores of 10.89, 8.89 and 8.61 respectively.

Results of 't' test indicate that Radio-Television and Radio-Television-Print multi-media combinations were found to be significant at one

per cent level and Radio-Television and Television-Print multi-media combinations were found to be significant at five per cent level towards knowledge retention after fifteen days.

Knowledge Retention after Fifteen Days in Kundrathur Block

Effectiveness of Multi-Media Combinations Towards Knowledge Retention After Fifteen Days in Kundrathur Block

Table 5. Effectiveness of Multi-Media Combinations Towards Knowledge Retention After Fifteen Days in Kundrathur Block

Multi-Media Combination	KG	KRAI5	t'	
Radio-Television	13.44	10.61	2.58	0.019*
Radio-Print	2.78	2.44	2.06	0.055
Television –Pint	8.67	7.39	2.06	0.055
Radio- Television-Print	9.44	8.50	2.88	0.010*

^{*} Significant at five per cent level

It may be observed from the Table 5 that a higher score of knowledge retention after fifteen days was found among the respondents of Radio-Television multi-media combination as evident from the score of 10.61. This was followed by the respondent of Radio-Television-Print, Television-Print and Radio-Print multi-media combinations as evident form the scores of 8.50, 7.39 and 2.44, respectively. Results of 't' test indicate that Radio-Television and Radio-Television-Print multi-media combinations studied were found to be significant at five per cent level towards knowledge retention after fifteen days.

Effectiveness of Multi-Media Combinations in Terms of Knowledge Retention after Thirty Days

Knowledge Retention After Thirty Days in Poonamallee Block

Table 6. Effectiveness of Multi-Media Combinations Towards Knowledge Retention After Thirty Days in Poonamalle Block

Multi-Media Combination	KG	KRAI5	t'	
Radio-Television	9.67	6.33	2.31	0.034**
Radio-Print	17.56	15.17	3.72	0.002**
Television -Print	11.11	9.5	5.97	0.0001**
Radio- Television-Print	12.39	7.39	4.11	0.001**

^{**} Significant at one per cent level

It is clear from the Table 6 that a higher score of knowledge retention after thirty days was found with the respondents of Radio-Print multi-media combinations (15.17). This was followed by the respondents of Television-Print, Radio-Television-Print and Radio-Television multi-media combination as evident from the scores of 9.50, 7.39 and 6.33, respectively. Results of 't' test indicate that all the multi-media combinations were found to be significant at one per cent level towards knowledge retentions after thirty days.

Knowledge Retention After Thirty Days in Kundrathur Block

Table 7. Effectiveness of Multi-Media Combinations Towards Knowledge Retention after Thirty Days in Kundrathur Block

Multi-Media Combination	KG	KRAI5	t′	
Radio-Television	13.44	8.83	5.12	0.0001**
Radio-Print	2.78	2.22	2.05	0.056
Television -Print	8.67	3.72	2.66	0.017*
Radio- Television-Print	9.44	2.72	3.21	0.005**

^{**} Significant at one per cent level

It may be seen from the Table 7 that higher score of knowledge retention after thirty days was found with Radio-Television multi-media combination as evident from the score of 8.83. This was followed by the respondents of Television-Print, Radio-

Television-Print and Radio-Print multi-media combinations as evident from the scores of 3.72, 2.72 and 2.22, respectively. Results of the 't' test indicate that Radio-Television multimedia combinations were found to be significant at one per cent level and results of Television-Print were found to be significant at one per cent level and results of Television-Print were found to be significant at five per cent level towards knowledge retention after thirty days.

Discussion

In brief, the results indicate that Radio-Print multimedia combination was found to be more effective in Poonamallee block and Radio-Television multimedia combination was found to be more effective in Kundrathur block towards knowledge gain, towards knowledge retention after fifteen days and after thirty days.

The respondents of Radio-Print group of Poonamallee block had more chances to meet the extension staff since the village was selected for imparting training on Integrated Pest Management through 'Farmers Field School'. Because of timely and scheduled visits of the extension workers and due to practical exposure, these villagers were eager to receive any information on agriculture. These villagers were sensitized to respond effectively towards any programme. Further, the data on the profile

^{*} Significant at five per cent level

characteristics of the respondents of Radio-Print Multi-media combinations of Pooamallee block revealed that more than eighty per cent of them were found to be literates. Even the illiterate respondents listen to the literates, when they read print information. These could be considered probable reasons for success of Radio-Print multi-media combination. Possession of radio sets may be a major factor facilitation the listening behaviors of the respondents. As all the respondents of Radio-Print multi-media combination possessed radio sets, the results on Radio-Print are self explanatory.

Effective Multi-Media Combination in Kundrathur Block

In Kundrathur block, Radio-Television multi-media combination was found to be more effective towards knowledge gain, knowledge retention after fifteen days and knowledge retention after thirty days. The respondents' profile characteristics reveal the distribution of the respondent on the educational status. It was found that majority of the respondents (66.67 per cent) were found to be illiterate. In spite of illiteracy, the respondents gained more knowledge and retained more knowledge even after fifteen and thirty days. The Radio-Television multi-media combination would have crossed the illiteracy barrier of the respondents since illiteracy was not a constraint to gain knowledge from Radio-

Television. The results further indicate that Radio-Print was effective for literates and Radio-Television was effective for illiterate population. In both the situations, the effectiveness of Radio was common. Hence it may be inferred that for an effective communication radio should be used along with television for illiterates and by presenting the same matter in printed material for literates. This may be due to an important characteristics of the print materials that they can serve as reference material, in contrast to radio and Television programmes which cannot be used as reference materials due to lack of cassette recorder and VCRs.

Implications

1. The results indicated that Radio-Print and Radio-Television multi-media combinations were found to be effective towards knowledge gain, knowledge retention after fifteen days and for knowledge retention after thirty days. It is implied that agricultural messages may be broadcast through radio followed by supply of printed materials or by transmitting audio visual messages through television. In this approach the audio visual messages through television. In this approach the farmers motivated through a radio broadcast will listen to the agricultural programmes in television. Moreover the printed material may act as reminder and reference material.

- 2. Vast difference was observed in the multi-media combination of experiment groups and control group towards knowledge retention after fifteen and thirty days and it implies that treatment of folk song was found to be effective.
- 3. The result indicates that folk song format got wide potentiality through these multi-media combinations and it may be effectively utilized for effective communication through Radio-Print and Radio-Television.

Conclusion

The study clearly indicates that communication through various media combinations without altering the messages to the farmers in their well known format found to be very effective for easy grasping of the messages and to recall the messages for adoption. Media integration of Radio, Television & Print may be thought so that farmers can understand in a better way the technical knowhow and they will try to adopt the technologies quickly since they become confident since they will often exposed to same message without any alteration. This will still improve upon the business in agriculture which will sustain and also create employment in rural areas moreover restricting migration of farmers and farm labourers since they will be busily engaged in crop production. This approach will not only improve the agricultural business but also improve the potentiality in the rural markets since farmers will reap better harvest, better returns and more profit.

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