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Selection of Vegetables Cultivation Messages for Development of Media Package for Rural Women of Haryana

Santosh Rani[1*], S. K. Varma[1] and Makhan Lal[2]

[1]Department of Extension Education and Communication Management, College of Home Science, India.
[2]Department of Vegetable Science, CCS Haryana Agricultural University, Hisar, Haryana, India.

Authors' contributions

This work was carried out in collaboration between all authors. All authors read and approved the final manuscript.

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ABSTRACT

The study was conducted in many phases during the year 2014-15 in Haryana state. Fifty rural women each from Bhimnagar, Pali, Milkpur and Bawanikhera villages of Hisar and Bhiwani districts, respectively were selected purposively thus comprising of total sample of 200 respondents. In phase-I assessing the need of the rural women, an inventory pertaining to critical messages and sub-messages was prepared. Messages having top three ranks and ten sub-messages from each selected messages got upper rank were finally selected for media preparation after consultation with experts. In phase- II, media in the form of CD for rural women and printed booklet for field functionaries was prepared on selected messages. Standard procedures for preparation of media package were adopted. In phase-III prepared media was administered to 30 judges of various departments for effectiveness and feedback.

Selection of messages related to vegetables cultivation practices revealed that out of nine messages selected only top three messages with high weighted mean scores and rank i.e. tomato,

**Corresponding author: E-mail: santoshpanwar78@gmail.com;*

okra and cucurbits cultivation practices. The sub-messages were selected under the main messages. Ten sub-messages identified for the present study were land preparation, seed treatment/seed soaking, nursery raising, sowing/transplanting, irrigation, balanced fertilizer application, weeding, intercultural operations, plant protection measures, and harvesting and marketing of three crops viz. tomato, okra and cucurbits respectively were retained for media preparation.

Keywords: Message; sub-message; rural women; media package; vegetables cultivation practices.

1. INTRODUCTION

In the recent scenario vegetable has emerged as one of the most expectant and favoured aspirant to promoting diversification in agriculture in India. Vegetable alone contribute 10.61% of the total value of output from agriculture increasing trends over the years [1]. India is the second largest producer of vegetables next to China with 2.8% of total cropped area and 15% of the world's production under vegetables [2]. According to National Horticulture Board [3] India produced 162.89 metric tons of vegetable with 9.39 million hectare area. However, the productivity is very low (17.3 metric tons/ha) in the country as compare to many other countries.

After the green revolution, India achieved sufficient quantity in food supply for internal as well as for export but lagging behind in quality. Moreover, growing demand of vegetable crops for internal consumption as well as for export has highlighted the need for escalating the production and enhancing the efficiency of these crops. But area, rate of production, productivity and yield obtained of most of the vegetables is low in most of vegetable growing states including Haryana due to lesser knowledge of vegetable production technology. Even at current level of production, farm produced value at Rs.7000 million is being waste every year due to little knowledge of production, harvesting, transportation and adequate storage facilities and other associated supported facilities. Though improved diet should have about 300g of vegetable per day per person but in India average per capita consumption of vegetable per day is reported to be less than one third particularly among the rural people which is due to little knowledge of production technology of vegetable, lack of availability of good improved and innovative planting material and less using of improved and hybrid seed, poor farm management and less knowledge of harvesting practices. There is huge gap between the scientific recommendation technology and adoption level of rural farm women. Moreover about 70% vegetables are grown in rural areas and illiteracy rate is more in these areas and also farmers and extension worker ratio are very high. Here exists a strong need for extension education and training for the growers also apply to the vegetable production technology including organic farming, integrated nutrient management, off season vegetable production, integrated pest management. Thus, it is clear that there is need to increase the production of vegetable in India to meet out the entire requirements of our progressively increasing population.

Today, it is very difficult to open a magazine, read a newspaper, and listen to the radio to get information regarding vegetable cultivation practices. To solve this problem the age of technologies has brought tremendous change and at the same time, tremendous potential for the extension education, for the first time, educators have made available for everyday use a collection of media to use in creating learning opportunities even for learners placed at a great distance. Chaudhary [4] concluded that the developed interactive CD was good and could be used by field functionaries, extension workers and all those agencies/ organizations working in rural area for transfer of scientific information to rural women and also reported that respondents have perceived and comprehended the messages of video/CD programme very well. The reason behind was that the messages were clearly understood by them.

The media is playing an important role in passing on meaningful information at faster rate to the large number of farm women in country. It has emerged as one of the powerful sources of seeking relevant scientific information by our farm women, therefore, tapping and utilization of media for transferring the newly generated technologies in vegetable cultivation among the Indian farm women is crucial and significant. This is mainly due to the fact that the vast majority of our farm women belong to remote rural areas where facilities could not be arranged for sustainable individual or group approaches of

technology transfer as it could be highly expensive and difficult in managing information infrastructure, therefore, responsibility and intervention of media in rural transformation is becoming more imperative and challenging. Moreover, women play an important role in vegetable production. Most of the operations in vegetable production like seed treatment, sowing of seed, nursery raising, transplanting, thinning, irrigation, weeding, gap filling, fertilizers application, harvesting, picking, packaging, loading, unloading even sometime marketing are also done by women. However, regardless of these variations, hardly any activities occurred in vegetable production except ploughing in which women are not actively involved. Fartyal and Rathore [5] also concluded that the majority of labour intensive activities related to vegetable cultivation were performed by women except ploughing, plant protection measures and marketing which were performed by men. Land preparation, hoeing, weeding, harvesting and post harvesting were done by women and hired labour.

Involvement of rural women clientele in message designing and media production is of paramount importance in media production so that the message actually communicates. Media effectiveness can be enhanced only when the messages are in tune with the need and interest of target audience. Therefore, in the present study attempts were made to select the messages and sub-messages according to the need of rural women in consultation with experts of Vegetable Sciences, and Extension Education and Communication Management department for develop the relevant media on vegetables cultivation practices messages so that rural women can be sensitized for self-reliance with the following specific objectives.

1. To assess the existing practices of vegetables cultivation.
2. Selection of need based messages to develop and standardize media package on vegetables cultivation.

2. MATERIALS AND METHODS

2.1 Locale of the Study

The study was conducted in many phases during the year 2014-15 in Haryana state, each phase having distinct methodology. Two districts, Hisar and Bhiwani were selected purposively from South-Western zone of Haryana. One block from each district *viz.,* Hansi block from Hisar district and Bawanikhera block from Bhiwani district were selected randomly. From the selected blocks two villages from each block, *i.e.,* Pali and Bhimnagar villages from Hansi block, Milkpur and Bawanikhera villages from Bawanikhera block were selected randomly. Fifty rural women each from Bhimnagar, Pali, Milkpur and Bawanikhera villages of Hisar and Bhiwani districts, respectively were selected purposively thus comprising of total sample of 200 respondents.

2.1.1 Phase I: Need assessment of rural women regarding vegetable cultivation

For first phase need was operationalized as the need of the each respondent related to selected vegetable cultivation practices. Assessing the need of the rural women an inventory pertaining to the critical messages and sub-messages was prepared in consultation with experts, relevant literature, library and package of practices.

2.1.2 Phase II: Finalization of messages and sub-messages with vegetable cultivation practices experts according to need of the rural women

In phase II, in this way total three messages were listed. Each message was ascertained under three categories, *i.e.,* most needed, needed and least needed with scores 3, 2 and 1 respectively. Weighted mean scores were worked out for each of the three messages and sub-messages separately. The ranks were assigned according to weighted mean score and fifty per cent of messages having top three ranks and 10 sub-messages from each selected messages got upper rank were finally selected for media preparation after consultation with the Vegetable Science experts.

2.1.3 Phase III: Preparation of media package regarding vegetable cultivation

In phase III, media in the form of CD for rural women and printed booklet for field functionaries was prepared on selected messages. Standard procedures for preparation of media were adopted. Media package involve designing, testing and refining the message professionally before their widespread use. If we want our clients or target audience to pay attention, understand, accept and act upon the communication

messages, it is imperative that we understand the target audience and make relevant messages, professionally test and modifying them. To keep in mind this perspective media package on vegetable cultivation practices was developed in the form of a Compact Disc (CD) and a booklet was also developed on selected messages of vegetable cultivation practices. To increase its understandability related photographs and effective illustrations were also included. Following steps were used for preparation of Compact Disc (CD):

- Planning
- Scripting
- Recording
- Editing and mixing
- Time estimation
- Review and fine tuning

The steps used for preparation of booklet were as follows:

- Planning
- Research
- Treatment
- Outline
- Sequencing
- Review
- Publishing

Involvement of both the parties, *i.e*., Vegetable Science experts and rural women was ensured for all the stages of media production so as to meet the requirement of target group. A detail of each step is explained in results and discussion.

2.1.4 Phase IV: Standardization and effectiveness of media package

In phase IV prepared media was administered to 30 judges including Vegetable Science, Horticulture, Extension Education and Communication Management Agronomy, Plant Pathology and Agriculture Extension Education Department, field functionaries and Home Scientists for effectiveness and feedback. Standardization was done in terms of reliability, validity and field applicability.

2.2 Tools and Techniques of Data Collection

An inventory was prepared to assess the need of the rural women regarding vegetable cultivation practices.

2.3 Data Analysis

To assess the need of rural women and for finalization of messages and sub-messages for media preparation weighted mean scores and ranking were applied as a statistical tool.

3. RESULTS AND DISCUSSION

3.1 Need Assessment of Rural Women Regarding Vegetable Cultivation

Media effectiveness can be enhanced only when messages selected are in tune with the need and interest of the rural women. In present study, attempts were made to select messages and sub-messages on the basis of need of rural women of Haryana after consulting experts from Vegetables Science department.

3.2 Selection of Messages Related to Vegetables Cultivation Practices

Nine messages identified for the present study were solanaceous crops *viz.* potato, tomato brinjal, chilies, root crops *viz.* carrot, radish, turnip, beet root, cole crops *viz.* cauliflower, cabbage, broccoli, bulb crops *viz.* onion, garlic, legume crop *viz.* cowpea, cluster bean, Indian bean, pea, cucurbits *viz.* cucumber, bitter guard, bottle guard, ridge gourd, smooth gourd, long melon, musk melon, water melon, pumpkin, summer squash, leafy vegetables *viz.* spinach, fenugreek, coriander, amaranth, okra and sweet potato (Table 1). It is revealed that out of these messages only three messages *i.e.* tomato, okra and cucurbits had above 2.50 weighted mean scores and got ranked-I. Weighted mean score of tomato crops was observed 2.72 and got ranked first in their solanaceous crops group. Bottle guard secured weighted mean scores 2.60 and got ranked first followed by ridge gourd and smooth gourd with weighted mean score of 2.50 got ranked second in their cucurbits crops group. It was also observed that okra crop had weighted mean score 2.60 which had above 2.50 weighted mean scores. Thus these three messages were selected for media preparation, identified as most needed messages by rural women. Similar results confirmed by Batra [6] emphasized that need assessment of farm women for training in respect of fruits and vegetables preservation is most crucial. They also found 84.3 that per cent respondents of farm women interested to have training in different types of pickles.

The sub-messages selected under the main messages are described in following Table 2.

Ten sub-messages identified for the present study were land preparation, seed treatment/seed soaking, nursery raising, sowing/transplanting, irrigation, balanced fertilizer application, weeding, intercultural operations, plant protection measures, and harvesting and marketing of three crop *viz.* tomato, okra and cucurbits.

Data presented in Table 2 also reveals that the out of these sub-messages nursery raising got ranked I with weighted mean score 3.00 and harvesting & marketing facilities ranked second with weighted mean score 2.87. Land preparation with weighted mean score 2.76 ranked third followed by irrigation weighted mean score 2.68 ranked fourth. Sowing/transplanting, plant protection measures, balanced fertilizer application, weeding, seed treatment/seed soaking, intercultural operations got ranked in ascending order from V to X with weighted mean score of 2.46, 2.42, 2.29, 2.26, 2.10, and 1.82, respectively.

Table 1. Selection of the messages according to the need of the rural women regarding vegetable cultivation N=200

S. no.	Aspects / Name of vegetable	Most needed	Needed	Least needed	Weighted mean	Rank
1.	**Solanaceous crops**					
	Potato	70	120	10	2.30	II
	Tomato	150	45	5	2.72	I
	Brinjal	25	75	100	1.62	IV
	Chillies	65	75	60	2.02	III
2.	**Root crops**					
	Carrot	60	122	28	1.96	I
	Radish	45	75	80	1.82	II
	Turnip	30	40	130	1.50	III
	Beet root	5	15	180	1.12	IV
3.	**Cole crops**					
	Cauliflower	55	90	55	2.00	I
	Cabbage	45	100	55	1.95	II
	Broccoli	20	40	140	1.40	III
4.	**Bulb crops**					
	Onion	85	70	45	2.20	I
	Garlic	60	60	80	1.90	II
5.	**Legume crop**					
	Cowpea	35	85	80	1.77	II
	Cluster bean	25	60	115	1.55	IV
	Indian bean	30	75	95	1.67	III
	Pea	95	60	45	2.25	I
6.	**Cucurbits**					
	Cucumber	90	85	25	2.32	III
	Bitter guard	60	84	56	2.02	IV
	Bottle guard	140	40	20	2.60	I
	Ridge gourd	115	70	15	2.50	II
	Smooth gourd	115	70	15	2.50	II
	Long melon	42	82	76	1.83	VI
	Musk melon	56	80	64	1.96	V
	Water melon	40	40	120	1.60	VIII
	Pumpkin	25	45	130	1.47	IX
	Summer squash	45	60	95	1.75	VII
7.	**Leafy vegetables**					
	Spinach	60	60	80	1.90	II
	Fenugreek	60	60	80	1.90	II
	Coriander	80	80	40	2.20	I
	Amaranth	25	45	130	1.47	IV
8.	**Okra**	100	60	40	2.60	I
9.	**Sweet potato**	25	25	150	1.37	I

Table 2. Selection of sub-message related to vegetable cultivation N=200

S. no.	Sub -messages	Most needed	Needed	Least needed	Weighted mean	Rank
1.	Land preparation	164	25	11	2.76	III
2.	Seed treatment/ seed soaking	70	80	50	2.10	IX
3.	Nursery raising	200	0	0	3.00	I
4.	Sowing / transplanting	115	62	23	2.46	V
5.	Irrigation	146	45	9	2.68	IV
6.	Balanced fertilizer application	84	60	86	2.29	VII
7.	Weeding	92	68	40	2.26	VIII
8.	Intercultural operations	50	64	86	1.82	X
9.	Plant protection measures	105	75	20	2.42	VI
10.	Harvesting and marketing	175	25	0	2.87	II

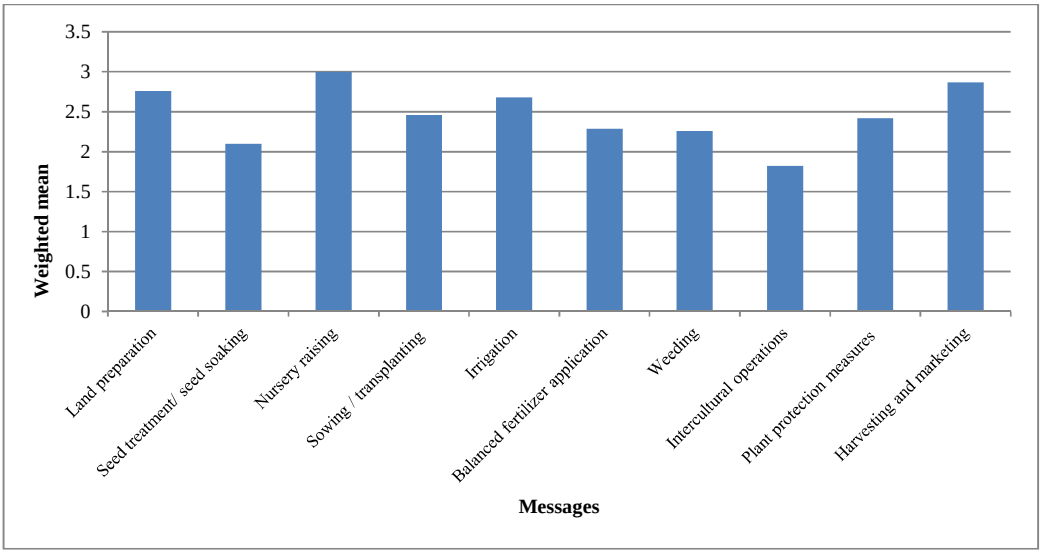

Fig. 1. Selection of sub-message related to vegetable cultivation

Results were confirmed by Gupta [7] concluded that farm women training need on pickles were green chilli pickle (26.92%) followed by sweet lemon (25.38%), garlic (23.08%), ginger (21.54%), red chilli (20.77%), salt lemon (19.23%), amla pickle (14.62%), and mix vegetables pickles (12.30%). These sub-messages were crucial as per opinion of experts and thus retained for further investigation.

4. CONCLUSION

On the basis of this study it may be concluded that out of nine messages only top three messages *i.e.* tomato, okra and cucurbits cultivation practices selected for media preparation for the rural women of Haryana. The ten sub-messages were selected under the main messages.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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