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Effectiveness of participatory newsletter on honey production: A study in Nainital district of Uttarakhand

MALIK, AAFREEN, ANSARI, M.A*. and AMARDEEP

Department of Agricultural Communication, College of Agriculture, G.B. Pant University of Agriculture and Technology, Pantnagar-263145 (U. S. Nagar, Uttarakhand)

**Corresponding author's email Id: doctoransari@rediffmail.com*

ABSTRACT: Newsletters have become an important tool for information dissemination, especially for targeted audience as it communicates the relevant, reliable and appropriate information on a specific topic to the captive audience. The present study was undertaken to assess the effectiveness of participatory Newsletter on Honey production in a purposively selected block in Nainital district of Uttarakhand. The study locale has been the current hotspot for promotion of honey production in Uttarakhand. Following experimental research design, a Newsletter was developed using participatory methodology; and it was shared with the selected respondents (honey producers). The study sample included 75 Beekeepers selected purposively (as they were participating in the government supported programme promotions on honeybee promotions) from one village in Bhimtal block of Nainital district). Following experimental design, the effectiveness of participatory newsletter was measured in terms of knowledge gain by using pre- and post-test methods. The data was collected by using structured interview schedule. The study findings revealed that there was significant difference in the knowledge gained by the respondents as a result of exposure to the Newsletter. Further, a large majority of the respondents were 'most satisfied' with various features of the Newsletter such as size, design, content, accuracy, readability utility and accuracy of the information contained in the Newsletter. These findings would be useful for researchers and policy makers for strengthening extension and advisory services for the promotion of honey production in the state by using Newsletters as an instrument of information dissemination and communication.

Key words: Beekeepers, development communication, print media, participatory newsletter

Communication is at the heart of development, and is said to be a steering wheel which drives all the developmental and education interventions in society. The need for informative, educative, and innovative participatory development communications is immense, since a large population lives in rural areas and depends on agriculture and allied sectors. However, 'participants in educational and training paradigms require rich learning environment supported by well designed resources (Khan, 1997; Tamta and Ansari, 2015). A Newsletter is a specialized tool of Communication media used by an institution/ agency to share relevant, reliable and valuable information with their network of subscribers, or stakeholders allowing them to engage, sensitize and promote specific messages for awareness generation about latest technology and practices and subsequently induce its adoption. According to Broussard and Floress (2007), Newsletters have become common communication tools for many government agencies and citizen organizations. Newsletters can serve a number of

purposes. They can create or increase awareness, provide basic information, or create a sense of stability and commitment for a project.

Newsletters are very much effective in generating the desired social support and drive public participation in development programmes and initiatives. Participatory agricultural communications aimed at encouraging knowledge transfer and promoting technology adoption at the farm level are a novel approach of agriculture extension services as they create a favourable information ecosystem enhancing learning outcomes (Raghuvanshi and Ansari, 2018).

Information asymmetry at farm level has been identified as one of the main reasons for low agriculture productivity and production efficiency. Therefore, access to accurate, timely and reliable information plays a crucial role in the adoption of appropriate/ latest agriculture technology thereby enhancing agriculture productivity and production

efficiency (Ansari and Sunetha, 2014). So, for a Newsletter to be effective and serve as an information communication tool, it must be based on the needs of target people. It is therefore imperative that before designing a newsletter, we must undertake information needs assessment. Participatory communication approaches in general and participatory newsletter in particular appears as an alternative for development communications.

Mishra and Rana (2023) observed that Beekeeping forms an integral part of the small holder farming system and plays a significant role as a source of additional cash income in subsistence farming. Beekeeping has a special significance for farmers in the Kumaon hills. It offers a way for those with few resources – especially poor and landless farmers and women – to gain additional income as it requires only a small start-up investment, and can be carried out in a small space close to the house, and generally yields profits within the first year of operation. Besides, beekeeping also has significant role in ensuring the food security as honey bees pollinate cultivated crops and vegetable and enhance their productivity (Nikki, 2009). In Uttarakhand, beekeeping has emerged as an integral part of smallholder farming system and plays a significant role as a source of additional cash income in subsistence farming. It has huge potential for honey production but still underutilized and practically untapped in the state due to several constraints. Due to sustained government efforts, the honey production in this area has picked and now it has the highest honey producing block in the district. The present study was undertaken with the objective of assessing the effectiveness of participatory Newsletter as a development communication intervention for promoting the honey production.

MATERIALS AND METHODS

The present study was conducted in purposively selected Bhimtal block of Nainital district in Uttarakhand. Out of six districts (Nainital, Almora, Bageshwar, Pithoragarh, Champawat and Udham Singh Nagar), one district (Nainital) was selected purposively as it is having maximum numbers of beekeepers and maximum honey production near

about 485 metric tonnes. (Rajkiya Maun Palan Kendra, Jeolikote 2017). There are 108 villages in Bhimtal Block. One village –Jeoli, was selected purposively because this village is the hub of honey production as it has maximum honey production than other villages in the whole Block (KVK, Jeolikote). Majority of residents of Jeoli village were involved in commercial honey production (about 4 tons per annum.) and the village has quite high literacy rate (80 percent). Therefore, it became a good choice as the research involved print media (Newsletter). Total population of village was 290. All the 75 respondents who were involved in beekeeping and were above 21 years of age, were selected purposively for the present study. The study followed experimental research design.

The newsletter was developed and designed with the participation of beekeepers according to their information needs which were identified through a Need Assessment exercise done with the bee keepers. In order to determine the impact of Newsletter, a Knowledge test was developed with the consultation of experts. The Knowledge test comprised of 39 questions related to beekeeping. Out of these, 14 questions were of fill-in the blanks type, 13 were of True and False type and 12 were Multiple Choice Questions (MCQs). The Newsletter on Honey production was distributed to the selected respondents. A Pre-test was conducted before distribution of Newsletter and after 20 days, another test (post-test) was completed to find out the gain in knowledge as a result of exposure to the Newsletter.

RESULTS AND DISCUSSION

Effectiveness of participatory newsletter was operationalised in terms of gain in knowledge of the respondents. Primarily, a knowledge test was administered to respondents before exposure to the Newsletter and later it was followed by a post-test. Further, a Paired 't' test was done to find out whether the difference in pre- and post-test scores is significant or not. The results obtained are given in Table 1.

It is evident from the results presented that there

Table 1: Effectiveness of participatory newsletter in terms of gain in knowledge (n=75)

S. No.	Statements	Pre-test score	Post-test score	Difference
1	Optimum season for start of bee-keeping is autumn season	75	75	0
2	Distance between boxes should be 3.5 feet	74	75	1
3	Distance of boxes from line to line (3.5 feet)	34	74	40
4	Rainy season is the not good season for honey bees.	19	43	24
5	At the time of shortage of feed in the boxes, feed should be given weekly	32	40	8
6	Presence of potential market for the sale of honey products.	0	44	44
7	Bee- keeping enterprise should be started with at least fifty number of boxes.	48	75	27
8	In rainy season due to shortage of feed in the boxes, problems of mites start.	45	75	30
9	Feed should be given to the boxes at evening time.	55	75	20
10	Boxes should be kept under sun during winter.	55	75	20
11	In winter, boxes should be opened weekly for checking.	35	75	40
12	Wax moth destroys the honey bees comb.	48	75	27
13	When honey bees will be attacked by the virus the colour of honey bee larvae will be change to blue	23	49	26
14	Rainy season is the season when the attack of 'momipatinga' (wax feeder) is more	39	75	36
15	There is no need of water for honey bees	74	75	1
16	To get nectar and pollen throughout the year, bees should be taken from one place to other	50	75	25
17	In the month of march – April honey bees collect nectar from fruit crops, mustard and <i>barseem</i> crops	36	75	39
18	In the month of April swarming of bees occur due to over population	38	75	37
19	In the month of January, honey bees collect enough nectar from <i>toria</i> crop	32	75	43
20	Boxes should be kept in sunshade during summer.	54	75	21
21	If the content of water is more in the honey it is likely to get rotten or become sour	53	75	22
22	There is more problem of robbing during spring season	36	75	39
23	To control robbing, entrance gate of the boxes should be reduced	39	75	36
24	There is need for giving packaging during winter season	39	75	36
25	Attack of wax moth is less in the months from July-Oct	47	75	28
26	Freezing of honey is the sign of adulteration	60	75	15
27	Mature honey does not rot easily	73	75	2
28	What happens if feeding not done at appropriate time	59	75	16
29	Maize plant is the best source of	75	75	0
30	Which is the best season for purchasing honey bee	47	59	12
31	What is the age of queen bee	50	75	25
32	At what time attack of wax moth starts	75	75	0
33	What happen with the attack of <i>thai</i> sack	54	75	21
34	What happen with the attack of <i>verroa</i> mite	49	67	18
35	What do you do to protect the bees from ants	31	75	44
36	What are the control measures for varroa mite	66	75	9
37	For what purpose winter packaging is given	75	75	0
38	Honey from which crop more	75	75	0
39	Where honey kept after harvesting from the bee hives	75	75	0

was some gain in knowledge in most of the aspects (Statement) of the honey production by the respondents. Further, in order to find out whether this gain in knowledge was significant, paired t-test was done. The results obtained are given in Table 2.

As is borne out from the above table, the beekeepers initially had low knowledge regarding scientific

concepts and practices of scientific beekeeping as indicated by scores in pre-test ($\bar{X}_1 = 25.92$). Further, there was a significant increase in their knowledge level after the intervention (exposure) of participatory Newsletter as their post-test score increased - from Mean Score of 25.92 to 36.97. The average gain in knowledge was 11.053. Further, the results of paired t-test indicate that table that value

Table 2: Paired 't' test for relative effectiveness of participatory Newsletter (n=75)

Mean of pre-test score \bar{X}_1	Mean of post-test score \bar{X}_2	Mean of difference \bar{d}	Standard deviation of difference SD	't' cal	't' tab
25.92	36.97	11.053	4.51	21.214**	-2.378

***Indicate the value is significant at 1% level of significance*

of 't' cal is higher than value of 't' tab at 1% level of significance. It means that the post-test scores of the respondents were significantly higher than their pre-test. Thus, it can be inferred that the knowledge gain due to exposure to the participatory Newsletter among the respondents was found to be significant. Hence, it can be concluded that the intervention of Participatory Newsletter made a significant difference to the knowledge of respondents. The findings are similar to Ekoja (2003) study on farmer's access to agricultural information in Nigeria and Chung (2008) who conducted a study on interactive feature of online newspaper.

Opinions of respondents regarding Newsletter:

The design, content presentation and attractiveness of a Newsletter is important in effectively conveying the desired information to its readers. The results obtained regarding various features of the Newsletter are given in Table 3.

It is evident from the results presented that there was some gain in knowledge in most of the aspects (Statement) of the honey production by the respondents. Further, in order to find out whether this gain in knowledge was significant, paired t-test was done. The results obtained are given in Table 2.

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Opinions of respondents regarding Newsletter:

The design, content presentation and attractiveness of a Newsletter is important in effectively conveying the desired information to its readers. The results obtained regarding various features of the Newsletter are given in Table 3.

From the above data it can be concluded that majority

Table 3: Opinion of respondents about Newsletter (n=75)

Sl. No.	Particular	Most satisfactory (%)	Satisfactory (%)	Least Satisfactory (%)
1.	Name of the Newsletter	96	4	0
2.	Size of Newsletter	73.33	23.67	3
3.	Design of Newsletter	83.49	15.51	1
4.	Need based information	85.33	8	6.67
5.	Utility of the content	68.59	31.41	0
6.	Accuracy of message	65	35	0
7.	Clarity of message	71.53	28.47	0
8.	Readability of the message	68	32	0
9.	Overall look of the Newsletter	95	5	0

of respondents (96%) expressed their satisfaction regarding the name of the Newsletter while 73.33 percent found the size of the newsletter to be most satisfactory. Regarding design of newsletter, majority of respondents (83.49%) found to be most satisfactory and majority of respondents (85.33 %) said that information contained in the newsletter were 'most satisfactory'. As regards utility of the Newsletter, only 68.59 percent were most satisfied with it and 65 percent were 'most satisfied' with the accuracy of the content. Further, 71.53 percent said that they were 'most satisfied' with clarity of message in the Newsletter. Readability of the Newsletter was found to be 'most suitable' by 68 percent of the respondents. Finally, a large majority of the respondents (95%) were 'most satisfied' with the overall look of the Newsletter. Thus, we can conclude that majority of the respondents were quite satisfied with various features of the Newsletter developed by the researcher.

CONCLUSION

It can be concluded that mean knowledge score was significantly higher in post-test than pre-test. Hence, it can be concluded that the intervention of participatory newsletter led to significant gains in the knowledge of respondents. Participatory Newsletter as a tool for communication was found to be effective as displayed by the significant gains in knowledge of respondents. Hence, the intervention of participatory newsletter can be used as an effective medium to enhance the level of knowledge of beekeepers. It can also be concluded that when Newsletter is designed based on identified information needs of the respondents, positive results can be obtained in not only bridging the information and knowledge gap but in other possible aspects also. The study findings will be useful to the researchers as well as policy makers for endorsing the participatory mode of developing Newsletter, and that it can be effectively used as an effective tool for information dissemination and communication to the targeted clients.

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