RESEARCH ARTICLE

AN ANALYSIS OF EFFICIENCY OF WHATSAPP PLATFORM IN DISSEMINATION OF PULSES CULTIVATION TECHNOLOGIES

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Abstract: A study on analysis of Effectiveness of Whatsapp platform in dissemination of pulse production technologies was taken up at KVK, Thiruvarur as part of an FLD among 45 pulse farmers as Experimental group and 45 pulse farmers as control group. A pulses whatsapp group was created and the whatsapp were given to Experimental group continuously throughout the crop period. The results indicated that the Experimental group has been found to score high in all parameters than the control group which could be inferred as the whatsapp group was very effective. The mean knowledge gain is 35.80, mean adoption is 8.10, Mean Communication Efficiency Index is 7.48 among the farmers of the Experimental group which is far ahead of the control group. Further, the members of whatsapp group could save Rs. 2560 with mean yield of 8.7 quintals /ha and achieved an income of Rs. 43100/ha.

Keywords: Cultivation, Farmers, Mobile, Whatsapp platform

INTRODUCTION

Mobile phones have become another part of human body and without which a day cannot pass by nowadays. The mobile phones become omnipresent and for the possession of mobile phone one need not be economically sound. People in all walks of life starting from scavenger to Government employee to a corporate man invariably possess cell phones. The advantages are many as well as the ills of using cellphones is also on the rise. The Information and Communication Technology in general has created ripples in the technology transfer arena and the introduction of many gadgets like mobile phones has mage humongous changes in the transfer of Agricultural Technology.

It has started from Multimedia compact disc, Expert systems, SMS and now the buzz word is artificial intelligence in Agriculture. While contemplating a time bound, quick, less costly, less labour involving Extension tools, in recent past these ICT tools have made sea changes in delivering technologies (World Bank, 2016, Cole and Fernando, 2012, Aker, 2011) According to Andres and Woodard (2013), though, the short messaging services (SMS) could reach a greater number of farmers very fastly, we cannot know whether the information is intended for the recipient or not. This unidirectional, non-interactive technology delivery through SMS often does not serve the purpose. (Bell, 2015).

Farmers are in need of more customised individualistic mobile advisories for which many social networking tools have come in handy. Especially, the Whatsapp platform can serve the purpose of one to one, one to many and many to many nodes of technological diffusion with more interactivity. Many reserachers have pointed out that Whatsapp platform can very well be used for Agricultural Extension and development of Allied agricultural enterprises which has been substantiated by studies that farmers have been increasingly learning getting information through mobile internet (Kailash *et al*.,2017). Thakur and Chander (2018) in their study among 96 whatsapp users found that perceived ease of use, usefulness, previous internet/social media use in agriculture, number of posts shared were factors significantly related to favourable attitude towards use of whatsapp application. Their Regression analysis further showed that gender, number of posts shared and perceived usefulness of whatsapp were main contributing factors in attitude towards its use in agriculture.

KVK, Thiruvarur has come up with an official whatsapp in the name Thiruvarur KVK Group besides linking with thousands of farmers who are members in various whatsapp groups. Having experienced with the scope of whatsapp in quick problem solving, the Team of Scientists in KVK, Thiruvarur has ventured into an empirical study based on a Frontline Demonstration in order to create Empirical evidence to support the effectiveness of whatsapp. Hence, a study has been contemplated with the following objective.

1. To study the effectiveness of Whatsapp in mean knowledge gain and adoption of technologies in pulse cultivation.
2. To analyse the effectiveness in terms of cost saved, yield and income of pulse farmers.

RESEARCH METHODOLOGY

The study was taken up in wetland-based paddy-paddy-pulses system during Kharif 2020. Three

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villages namely Pullavarayankudikadu, Vaduvur Melpathi and Vaduvur Pudhukottai were selected due to the highest area under pulses in these villages in Needamangalam block of Thiruvarur District where the KVK is located.

Three participatory workshops were conducted in three villages wherein 15 pulse growing young farmers were sensitised about the experiment. Totally 45 farmers were selected. A whatsapp group namely 'KVK Pulses group' was initiated and 15 farmers have been enrolled in the group. Messages with video, pictures and text messages related to Pulse cultivation was given through the whatsapp and data was collected after the season was over. A control group with 45 farmers were also selected in order to compare the results of the experiment. The following variables were operationalised and the scoring procedure is given below.

Mean Knowledge gain- Twenty questions related to blackgram cultivation was asked to both respondents of test and control group. Correct answers were given with two scores. Cumulative score was obtained and mean was worked out.

Mean adoption -Responses about the adoption of ten important technologies on Blackgram cultivation by both test and control group were collected which were given 2 score for adoption and 1 score for non-adoption. The scores were cumulated and mean was worked out.

Mean Communication Efficiency Index- This refers to the degree to which whatsapp has effectively communicated information to the participants. This has been measured by three domains namely content adequacy, understandability and Interactivity. These three domains were measured using the scoring of 3, 2 and 1 for high, medium and low for respective domains. Hence, a score of 9 will be the maximum to be obtained by a participant.

Mean Cost Saved: This is the figure arrived at by asking the respondents about how much was the cost saved due to Pulse production technologies that they have adopted which were given through Whatsapp

Mean yield: This refers to the increase in yield experienced by the respondents due to the adoption of improved pulse production technologies delivered through Whatsapp.

Mean Net income: This refers to the increase in income realised by the respondents after having adopted the improved pulse production technologies delivered through Whatsapp.

RESULTS AND DISCUSSION

After the experiment was over, a well-structured interview schedule was designed and the data about the above parameters were collected. The data collected on knowledge on twenty pulse production technologies, the adoption of these technologies, Communication efficiency of the whatsapp platform as operationalised in the methology, cost saved, yield and income were collected from individual respondents and also respondents from control group and presented in the following table.

Parameters	Test Group (n=45)	Control Group* (n=45)
Mean Knowledge gain	35.80	27.30
Mean adoption of technologies	8.10	5.20
Mean Communication Efficiency Index	7.48	NA
Mean cost saved	Rs. 2560	NA
Mean Yield	8.7 q/ha	5.4 q/ha
Mean Net Income	Rs.43100	Rs. 29000

The mean knowledge gain of Test group who were given with whatsapp information has been found to be high compared to control group. The respondents did possess knowledge about recent varieties of black gram namely VBN 8 and VBN 11 which are resistant to Yellow Mosaic virus which were given through Whatsapp and reminded in the participatory workshop. Similarly, the seed treatment of blackgram with biocontrol agents like pseudomonas, and Trichoderma viridi were known to the respondents.

Mean Adoption of Technologies in test group was on the higher side than in the control group which substantiated that the whatsapp can trigger farmers to go for adopting technologies. Especially during the interview, the researchers were told that the farmers in Test group were very much convinced with Pulse wonder which gave them profuse flowering and yield. The variety and seed treatment messages given through whatsapp also were adopted by majority of the farmers in test group.

Mean communication index which was the core of the research was found to be 7.48. The maximum score was 9 encompassing the scores of content adequacy, understandability and interactivity. Since the mean score is very near to maximum score, it could be inferred that the respondents of the study in test group were very much convinced about the whatsapp in all the three domains which were studied. The respondents told the twenty items given through whatsapp in different dates throughout the season is adequate to take up scientific pulse production. Similarly as the messages were given in simple vernacular language, it was understood by all the respondents. As for as interactivity is concerned, all the respondents were interacting freely to the research team by way of giving feedback, photos of the field to the research team.

Since, the resistant varieties of VBN 8 were cultivated by the respondents after having joined this whatsapp group, the respondents could save approximately Rs. 2500 through avoiding unnecessary expenditure on plant protection chemicals. The cost incurred on fertilisers and growth hormones was reduced by application of pulse wonder.

The mean yield and mean net income were also found to be on the higher side when compared to control group. The whatsapp group members were in constant touch with the research team thereby applying the important technologies of appropriate varieties, seed treatment and pulse wonder spray in their field. The respondents were telling that the application of pulse wonder has increased their yield by 30% and income by 40%.

CONCLUSION AND RECOMMENDATIONS

This study on utility of whatsapp for technology transfer has yielded very useful results. Pulses whatsapp group created by scientists of KVK, Thiruvarur resulted in mean knowledge gain of 35.80, mean adoption of 8.10, Mean Communication Efficiency Index of 7.48 among the farmers of test group of the Experiment which is far ahead of the control group which mean the whatsapp group has functioned effectively. Further, the members of whatsapp group could save Rs. 2560 with mean yield of 8.7 quintals /ha and achieved an income of Rs. 43100/ha.

There are two recommendations which can be emanated from the findings of the study

1. The scientists of KVK should try to make use of social networking especially whatsapp group to reach a greater number of farmers with lesser cost
2. A network research study on Effectiveness of whatsapp in technology delivery should be taken up by all KVKs in Tamil Nadu to find out more deep information and factors influencing the effectiveness so that this platform could be used effectively.

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