

## **Evaluation of the feasibility of use of online extension service for the farmers in Sabaragamuwa Province in Sri Lanka**

N.N.D Dulmini<sup>1</sup>, \*K.A.D.S Thilakarathna<sup>2</sup>, S. H. Pushpa Malkanthi<sup>3</sup>, K.A.S Nalaka<sup>4</sup>,  
A.A.C.I Piyarathna<sup>5</sup>, M.T Kelum Rupasinghe<sup>6</sup> K.A.D.S Thilakarathna<sup>2</sup>

Department of Agribusiness management

Faculty of Agriculture Sciences

Sabaragamuwa University of Sri Lanka kadsthilakarathna@gmail.com

### **ABSTRACT**

At present, online extension service is one of modern extension methods following in many agricultural countries with significant levels computer literacy rates, for the development of Agriculture sector. However, since the computer literacy rate of Sri Lanka is relatively low it is important to evaluate the feasibility of application of online extension service thoroughly before implementing such a service. Therefore, this research is carried out with the objective of identifying the availability of facilities and ability farmers to use internet, and to find out Preference of farmers regarding online Agriculture extension service. Sabaragamuwa province was selected as the research area. Out of total farmer population, a sample of 140 farmers was randomly selected for the study based on available time and the budget. According to the results, most of the respondents (farmers) are male farmers belongs to the middle age category and having significant level of education. Most (55.7%) of them are fulltime farmer, growing several types of crops and getting average level of monthly income (LKR 10 000 – 20 000). Furthermore, there are no significant association with age, gender, educational level and income of the farmers with availability of internet facilities. However, there are associations between age and educational level of them with the ability to use internet facility. Therefore, even though majority of farmers' possess internet facilities, only a very small proportion of them have even general knowledge to use internet facility. It is matching with the present statistics related to IT in the country. While all island IT literacy rate in Sri Lanka is 26.8%, it is lower in rural areas (Department of Census and Statistics, 2015). Out of internet using famers, only a tiny portion(4%) use internet for agriculture purposes and rest use it for entertainment and or as social networks.

**Key words:** *Online extension, Knowledge, Internet*

### **Introduction and research problem**

Agriculture play a vital role in country economy. According to annual report, Agriculture sector contribute 12.8 percent to the national GDP (Central bank, 2015) and also more than 30 percent of total population still depend on Agriculture as their main income. Agricultural extension is an inseparable part in agriculture and it is highly useful to utilize maximum benefit from agriculture through farmer education and training.

Agriculture extension can be defined as, 'Agricultural Extension is an ongoing, nonformal educational process which occurs over a period of time and it leads to improve the living conditions of farmers and their family members by increasing the profitability of their farming activities.' (Mahaliyanaaarachchi,2003).Currently, online extension service is one of modern extension methods following in many agricultural countries with significant levels computer literacy rates, for the development of Agriculture sector. However, since the computer literacy rate of Sri Lanka is 26.8% in first half of 2015 (Computer Literacy Statistics – 2015 Department of Census and

Statistics), it is important to evaluate the feasibility of application of online extension service thoroughly before implementing such a service. Therefore, the objectives of this study are;

- 1). To study the demographic factors of farmers
- 2). To find out availability of facilities with farmers to use internet
- 3). To identify the ability of farmers to use internet
- 4). To find out Preference of farmers regarding online Agriculture extension service

## **Research Methodology**

Sabaragamuwa province was selected as the research area of this study. Total farming population of the province is 224705 (Census of Population and Housing 2001). Out of them, a sample of 140 farmers was randomly selected for the study based on available time and the budget.

The research approach was deductive approach and research strategy was field survey. Primary data was collected using a pre tested, interviewer administered questionnaire during March – June 2016.

Other than doing some descriptive statistical analysis, Chi square test was used to identify the relationship between farmers' demographic factors, the availability of internet facility for their houses and also the relationship between demographic factors and use of internet facility by the farmers. Thus, the three hypothesis used in the study were;

H1: There is an association between main demographic factors (age, gender, education level and monthly income level) and availability internet facility

H1: There is an association between main demographic factors and ability use internet facility

H1: There is an association between main demographic and the preference to use of internet facility

Also five point Likert scale was used to identify the attitude towards the information gathered through internet.

## **Results and discussion**

When consider about the demographic profile of the respondents (farmers), majority of them (82.9%) were male farmers. Most of the respondents were from the age group of 51-60 years and 71.5% of them were above 40 years. In focusing education level, 62.9% of the respondents had above ordinary level education while 23.6% of them had above advance level education. However, in these families although 80.7% of the husbands had education level above Ordinary level, only 67.1% of the wives has the education above Ordinary level and also 55.7% of the children had education level above Ordinary level.

Furthermore, main crops growing in the area were tea (46.4%) followed by paddy (45%). Other crops grown commercially in this area were rubber, coconut, vegetable, flowers, pepper, yams, and banana. Land size of most (32.9%) of the respondents was 0.5-1 acre and 19.3% respondents has land area more than 2 acres. Out of the whole sample, while 55.7% were full time farmers, 44.3% were part time farmers. Moreover, most of them are doing off farm occupations such as carpenters, masons, etc. Most of the respondents are getting monthly income between LKR 10 000 – 20 000.

When considering the availability of the facilities to surf internet 62.1% of the farmers has the devices to use internet. However only 28% of the farmers has the knowledge how to use or even enter to internet.

Table1: Results of the Chi square tests for hypothesis 2 and 3

Demographic factor	Hypothesis 1		Hypothesis 2		Hypothesis 3	
	P value at Alpha=0.05	Decision	P value at Alpha=0.05	Decision	P value at Alpha=0.05	Decision
Age	0.699	Ho Not rejected	0.001	Ho rejected	0.270	Ho not rejected
Gender	0.968	Ho Not rejected	0.911	Ho Not rejected	0.672	Ho not rejected
Education level	0.077	Ho Not rejected	0.001	Ho rejected	0.001	Ho rejected
Income	0.084	Ho Not rejected	0.334	Ho Not rejected	0.364	Ho not rejected

According to the Chi square test, there was no association between age, gender, education level or monthly income and availability of internet facility.

However, with regard to hypothesis 2, there was an association between some demographic factors and use of internet facility by the farmers. While age and education level showed clear associations, there was no association between gender and income levels of the respondents and the use of internet service

Furthermore, out of all considered demographic factors, only educational level of farmers has significant association with farmers' preference for online Agriculture extension service. (*table1*)

When consider the alternative sources of information, Agriculture instructors (61.4%) ,the private input suppliers like Agro chemical vendors (33%), television (35.7%) and the newspapers/the books (46.4%) were the mostly utilized ones. Moreover, no farmer stated that, they have ever used the official web site of the Department of Agriculture.

In identifying the attitude towards the information gathered through internet, as per the five point Likert scale, 40.7% of the farmers agreed with the statement "information that they can get through internet is latest" while 12.9% strongly agreed with it. When come to the facts that the "internet information is clearer and they contain figures that clearly describe important points" majority of the farmers (68.6%) were neural which means that they do not have an idea about the clarity of the information. Only 30% of the farmers had expressed that "they believe internet information can be considered achievable".

46.4% of the farmers stated that the "internet information is difficult to gather". Majority (72%) of the respondents stated that "they need extra training for the use of internet for getting solutions to the problems that they face in the field". 82.2% of the respondents stated that "the getting internet information is an expensive process".

## Conclusion

According to the results even though majority of farmers' possess internet facilities, only a very small proportion of them have even general knowledge to use internet facility. It is matching with the present statistics related to IT in the country.

Therefore, it is timely important to give training and education programs to farmers to use internet service in order to popularize the online internet service for agricultural information. These training and education programs can be started with the farmers who have internet facilities as the first stage. If it is successful, it can be continued furthermore.

## References

- Samansiri B.A.D. and Wanigasundera W.A.D.P. (2014), Use of Information and Communication Technology (ICT) by Extension Officers of the Tea Small Holdings Development Authority of Sri Lanka, *Tropical Agricultural Research* Vol. 25 (4): 460 –475
- Jayathilake H.A.C.K, Jayasinghe-Mudalige U.K, Gow, N Waidyanatha G.A and Perera L.D.R.D (2015), Use of low cost information communication technologies for knowledge mobilization in agricultural communities in Sri Lanka, *Proceedings of 8th International Research Conference, KDU, Published November 2015*
- Dissanayake U.I., Wickramasuriya H.V.A. and Wijekoon R. (2009), Evaluation of Computer-Based Learning Materials in Agricultural Information Dissemination in Sri Lanka, *Tropical Agricultural Research* Vol. 21(1): 73 - 79 (2009)
- Rohan Wijekoon, Shantha Emitiyagoda, Rizwan M.F.M., Sakunthala Rathnayaka R.M.M, Anura Rajapaksha H.G., *Cyber Extension: An Information and Communication Technology Initiative for Agriculture and Rural Development in Sri Lanka,*
- Henegedara G.M. (2015), *Information And Communication Technology (Ict) And Rural And Agricultural Development In Sri Lanka, First International Conference on Theory and Practice (ICTP-2015)*