

# Utilization of ICT by Rural Farmers in Lampung, Indonesia

*By indah listiana*

# Utilization of ICT by Rural Farmers in Lampung, Indonesia

Sumaryo Gitosaputro, Kordiyana K. Rangga, Indah Listiana

**Abstract:** Lampung as the gateway of the island of Sumatra, the progress of development and society quite rapidly. The development of information communication technology has also been felt by farmers. This study aims to determine: the accessibility of farmers to conventional agricultural information sources and farmers accessibility to ICT in finding agricultural information. The sample of farmers is taken by rural area of urban border (Kecamatan Jati Agung, Lampung Selatan Regency adjacent to Bandar Lampung City) where 3G and or 4G cell phone signal coverage is sufficient. The results showed that the accessibility of farmers to ICT is good enough, but the utilization of conventional media is still relatively high. Most farmers know the benefits of hp to find agricultural information, but most farmers use face-to-face with agricultural extension workers to obtain agricultural information. Currently, radio and television have been abandoned by farmers to find agricultural information, and the majority of farmers use it as a medium of entertainment.

**Keywords :** Farmer, ICT, Lampung, rural urban

## I. INTRODUCTION

Lampung Province is located on the southern tip of Sumatra island and is known as the gateway to Sumatra from Java. The potential of natural resources has the potential as a producer of various agricultural products, so that Lampung is also known as the land of agribusiness. Because of its close proximity to DKI Jakarta, Lampung is a Jabodetabek buffer in supplying agricultural and livestock products.

National economic development coupled with the development of technological innovations in agriculture requires farmers to keep abreast of agricultural information. This is in line with the development of farming issues, especially food crops and horticulture, so farmers need information on agricultural innovations that are up to date to address the problems of their farming. The rapid development of information innovation can be obtained by using the information and communication technology (ICT) that continues to develop as well. However, the use of ICT is highly depended on the availability of supporting infrastructure, such as internet networks and the availability of 3G or 4G signals [1]. The availability and strength of 3G and 4G signals are more focused in urban areas, so that only urban communities who are easier to access information. Using information network by online system, create agriculture ore efficient to touch the farmer [2]. On the other hand the existence of agricultural extension agents and other

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conventional media such as radio broadcasts, television, community leaders, opinion leaders in the dissemination of agricultural information cannot be ruled out. The results suggested that the knowledge of the extension agents in utilizing IT classified as the high category, however, the behavior of the extension agents in utilizing IT still needs to be improved to be good behavior [3].

South Lampung Regency as the buffer zone of Bandar Lampung City, especially in supplying the needs of agricultural products for food crops and horticulture. The development of Bandar Lampung City with all the supporting infrastructure facilities is faster and better than in other regions. Because of the adjacent location, rural peasant communities around the city of Bandar Lampung can be beneficiary from the availability of information and communication technology infrastructure. Extension agents using conventional conventional mass media such as TV, Radio, Magazines, and Newspapers more better then using internet to get news in general, however, internet utilization to get agricultural information still in the low category [3]. The research problems examined in this study are; (a) How do farmers use conventional media? (b) What is the use of ICT by farmers in the Lampung region? To answer this problem, this study aims to know (a) the use of conventional media by farmers; (b) knowing the extent of the use of ICT by rural farmers

## II. LITERATURE REVIEW

The development of information and communication technology (ICT) has reached all levels of society, including rural farmers. The development of ICTs directly and indirectly brings changes in rural communities. Various studies show that utilization of ICT has been used as a powerful instrument to accelerate economic and social development, including quality of life's improvement in rural communities. The behavior of farmers in using cyber instrument affected the perception and effectiveness of farmers in using cyber extensions [4]. Information technology has been used by the public as an internet and multimedia-based learning media so that it can improve the capacity of agricultural extension workers and farmers through independent learning. The availability and utilization of ICT access takes an important role in the effort to open the isolation of rural areas to markets, production technologies, prices, capital, and other supporting facilities and infrastructure [5].

Several studies in the country related to the use of ICT was carried out by Harahap [6]. The result of the research indicated fulfilling information from ICT still less because minimum access toward television, radio and internet. Broadcast quality from television and radio can not be accepted clearly.





Ownership of communication tools by farmers is in varying conditions. The quality of the communication equipment that is owned is generally influenced by price, farmers' assessment of the quality of IT facilities: poor (5.77 percent), good (90.38 percent), very good (1.92 percent), and 1.92 percent saying no know. Farmers who do not know about the quality of the communication equipment they have because they generally only use it, for example the cellphone owned is the gift of another party.

The availability and accessibility of ICT infrastructure in this region has been very good. The infrastructure is in the form of electricity networks, landline networks (cable phones), cellular telephone networks, internet networks. Almost all regions and all farmers can access it, except for the landline network, there are 3.85 percent (92 sample farmers) who are not covered by home telephone services from PT. Telkom. At present the PLN electricity network, the cellular telephone network, has reached the entire Jati Agung District.

Farmers' assessment of ICTs is quite interesting. Farmers' assessment of the accuracy of ICTs (mobile phones, home phones, computers, computers and the internet, VCD / DVD) in delivering agricultural information messages. Only around 23 percent of farmers stated that ICT had accuracy in conveying agricultural information, 54.24 percent of farmers said they did not know. This result can be caused by farmers not understanding or not knowing how to assess the accuracy of ICTs. [3]

The results of the study show that the assessment of the accuracy of ICT in conveying agricultural information according to the assessment of Lampung farmers is also interesting to be studied further. As many as 78.85 percent of farmers do not know (cannot judge) the accuracy of ICTs in conveying agricultural information. However, more than 19 percent of farmers stated that information obtained through ICTs was not or was not appropriate. This shows information or agricultural innovations that are disseminated through several media are not appropriate (not appropriate) to the needs of farmers. Internet can provide various information about almost all economic development topic [11].

The rapid development of ICT does not reduce the role of conventional media.

- All farmers still conduct face-to-face communication (meetings) with PPL.
- Radio broadcasts have been abandoned by farmers, only 1.92 percent of farmers have radio, and even then rarely used to obtain agricultural information.
- Print media (magazines, tabloids, and newspapers) are no longer used by farmers.
- Television broadcasts are still used by 88.46 percent of farmers, and 67.31 percent of farmers have rarely used them to obtain agricultural information
- Fellow farmers, only 7.69 percent were used as agricultural information sources.
- Community leaders still have a large role, 73.08 percent of farmers have figures, although they are rarely used as agricultural information sources.
- Opinion leader also still has a large role, 76, 92 percent of farmers still have, although 42.31 percent of farmers are rarely used as a source of information.

The use of conventional media by farmers to obtain agricultural information, in general when they need it, and

most (37.91 percent) have never been used as agricultural information sources. (Table 2).

Farmers' assessment of the quality of agricultural information from various information technology facilities in detail as follows: (Table 3).

- 92.31 percent of farmers assess face-to-face communication (meetings with extension workers).
- 1.92 percent of farmers consider radio broadcasts to be of poor quality, the rest do not know because they do not have a radio
- 100 percent of farmers cannot assess the quality of print media (magazines, tabloids, newspapers) because none of the farmers have used print media to find out agricultural information.
- In general (67.31 percent) farmers consider that television broadcasts are currently lacking in quality, this is because very few television broadcasts disseminate agricultural information. Television broadcasts are dominated by news broadcasts, entertainment, sports broadcasts, and advertisements,
- Farmers as sources of information among peasants (78.85 percent) are considered quality.
- Community leaders and opinion leaders as sources of information for farmers are also considered to be of the same quality (42.31 percent).

In general conventional media is assessed by quality farmers, this shows that farmers in Lampung still believe in conventional media (Table 3). Factors that directly influence extension agents' capacity level are IT utilization, availability of non-cyber IT (3). The existence of ICT infrastructure that has been used by farmers to find agricultural information, has its own advantages and disadvantages. The shortcomings felt by farmers are the background for them to hope for a better ICT infrastructure in the future. The most expectation of farmers are Addition of agricultural information material. The completely farmers expectation, can be seen at Table 3.

## V. CONCLUSION

From the discussion above it can be concluded that:

- (1) In the era of digital communication information technology, it turns out that the role of field agricultural extension agents as conventional media by farmers is still dominant; radio and television broadcasts have been abandoned by farmers because of inadequate broadcast quality; and television tends to be a medium of entertainment;
- (2) Lampung farmers already have cellphones that are generally 2G or 3G, and they use to find agricultural information in times of need.

**Table 2. Farmers' assessment of the quality of conventional information source facilities**

Type of ICT	Quality of conventional information source facilities					Total
	Not qualified	Lack of quality	Qualified	Very good quality	Do not know	
Face to face communication / farmers group meeting, AEW (%)	0	5,77	92,31	1,92	0	100
Radio broadcast (%)	0	1,92	0	0	98,08	100

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Printed media (magazine, tabloid, newspaper, etc) (%)	0	0	0	0	100	100
Television broadcast (%)	1,92	67,31	17,31	0	13,46	100
Farmer (%)	0	13,46	78,85	0	7,69	100
Public figure (%)	0	32,69	42,31	0	25	100
Opinion leader (%)	0	36,54	42,31	0	21,15	100
Average	0,27	22,53	39,01	0,27	37,92	100,00

**Table 3. Farmers' expectations for the existence of ICT infrastructure**

Expectations for the existence of ICT infrastructure	Total	Percent age
Addition of agricultural information material	18	34,61
Addition of agricultural information material and equipment assistance	16	30,77
Equipment assistance	10	19,23
Increased signal strength	4	7,69
Increased signal strength and equipment assistance	2	3,85
Increased signal strength and Increased signal strength	1	1,92
Increased signal strength, addition of agricultural information materials and equipment assistance	1	1,92
Total	52	100,00

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