

New Approach to Information Dissemination Methods to Female Crop Farmers in Lagos State

Dr. Yacob Haliso
Babcock University
Ilishan Remo, Nigeria

Taiwo Bosede Ajayi
Library Department Lagos State Polytechnic
Nigeria
justdebbies@yahoo.com

Abstract

Information is required in every production activity which includes farming. However, in all the means of information gathering and usage, female farmers are generally at disadvantaged due to their status at home and on the farm. The study therefore aimed at discovering through literature and primary data analysis, new approach to information dissemination to female farmers. Cluster random sampling was used and the data were descriptively analyzed. All the respondents are of legal capacity to use technology based information means as the women that falls within the range of 40 years -50 years represent 59%. 23% represents women within the age range of 20 to 39 years while the older women had the least percentage which is 18% representing 9 respondents. The study shows that the female farmers need information on how to do better and gain more in terms of output and profit respectively, but they are not aware of where to get these information. It was discovered that new methods of disseminating information involving internet and telephone technologies commonly found in other parts of the world are not known and used in Lagos. There is need to promote the establishment and running of information centers through existing libraries with special focus on female farmers to boost their production and marketing activities.

Keywords: New approach, information, dissemination methods, female farmers

Introduction

Lagos is one of the states in Nigeria with total number of seventeen million people LASG (2007) through Ladele (2010). Because of its peculiarity; there is rural-urban migration. Literate, illiterate, young and old, male and female, and especially youth make the population in Lagos. People with different social economic characteristics: in occupation and profession, status, education, standard of living and some other features that differentiate one person from another.

The most important and common economic activity in developing countries is agriculture. It produces food, employment and even raw materials for industries. In Nigeria according to Oduwole and okorie (2008), food security is a major concern. Realizing this therefore, the government implemented various strategies to provide food, including support for the funding of agriculture research. Agriculture is fundamental to the sources of income of most poor people in urban area.

Information is an important element in aiding agricultural production; it is an indispensable tool for empowering farmers especially the female farmers. Chisita through Muriithi (2009)

states that access; inefficiency and affordability of agricultural information are the major barriers in the battle to uplift agricultural productivity among small scale farmers. It is a basic element for any development activity and it must be made available to all farmers. Disseminating relevant information to the farmers is an indispensable tool for promoting their agricultural production. It is therefore essential to make relevant and timely information available to farmers in order to improve their production.

Nowadays, information seeking and dissemination have become digitalized with the use of Information Communication Technology across all social strata. It is not unusual to see both male and female farmers with mobile phones for personal and farming purposes. Through the Global System of Mobile Telecommunication (GSM), farming information are sought and sent through e-mail, text message and internet network, covering production and marketing activities. However, millions of female farmers are probably still not aware of this new approach and where there is awareness, the capacity to acquire the internet facilities and mobile phones and/or their uses are not there which have both direct and indirect influence on their productivity. The farmers' demographic features are among the factors influencing their use of this new approach of technology driven information to improve agricultural production.

The report on Agricultural Technology for Development (2011) affirms that vast store of information on agriculture has been built up in the world over many years, with the ultimate aim of increasing agricultural production. The information that is made available to farmers is the prerequisite for effective agricultural development. It is to carry out their activities on their farm and after harvesting effectively. Farmers need information as confirmed by Sadaf et al (2006) that information coming from outside the area can bring fresh ideas and awareness of new opportunities.

Ogunlela and Mukhter (2009) through United Nations Development Programme (UNDP) revealed that farming in Nigeria is done by women, that women make up some 60- 80 percent of agricultural labor force in Nigeria and Lagos state is no exception. Women involvement in farming is based on food crops and despite their involvement so many factors are militating against them, part of which is information. This is necessary to equip female farmers.

Quisumbing and Pandolfelli (2008) submits that inequality in the distribution of resources between men and women is linked with production inefficiency, yet intervention targeting small holder farmers often fails to address women lack of access to and control of important agricultural resources. Sadaf, et al (2006) notes that, it is necessary to equip rural female farmers with relevant and timely information, this is to improve their production techniques and thereby increase their income. From the two submissions above, gender issues are not given appropriate attention and one of the most persistent forms of inequality is gender inequality in terms of information gathering and dissemination for agricultural production activities. This has made the policy makers, extension workers, and information brokers to be far from meeting the female farmers' needs.

The major objectives of this work is to know the new approach to information dissemination among female crop farmers in Lagos state and also to ascertain the information need of the female farmers, evaluate if female farmers are aware that there are information available to help them on the farm, identify the means and methods used in disseminating information to female farmers and to ascertain the challenges inhibiting female farmers in using the new approach to information dissemination.

Farmers' information need

Information is a vast store of information that has been built up in the world over many years with the ultimate aim of increasing agricultural production. The information that is made available to farmers is to carry out their activities on their farm and after the daily farm work effectively. Farmers need information as Sadaf, et al (2006) confirms that information coming from outside the farming area can bring fresh ideas and awareness of new opportunities.

Since information is a contributing factor to farming success therefore, farmers requires and need diverse information in order to support their work. Agricultural knowledge and information needs to be managed like other key business input. Information to farmers can either be in print or electronic means.

Information that farmers need is in order to apply them to all their agricultural production. These include optimal planting and harvesting time, appropriate method to control pest and diseases, processing and storage methods and market information. These information need is not limited to crop alone but also to livestock production. Kaaya (1999).

Adekunle, et al (2002) also point out the area that farmers need information. The research result made available that these includes information about credit facilities, market situation, information about new farm tools that can aid farmers work on the farm.

Glendenning, et al (2010) affirms that farmers in India have some challenges facing their production activities and they need information to solve these problems. Some of the problems identified are limited land and water availability, degrading of natural resources like climate change and changes in consumption pattern. The recent global rise in food price and inflation is an opportunity for farmers to earn more, but the information to make this a reality for farmers is lacking.

Technology options, management of technology, changing farm system options (mixed farming system), sourcing reputable input suppliers, collective action with other farmers, consumer and market demand of product, quality specification of products, time to buy input and sell products, off-farm income generation options, implications of changing policies, access to credit and loan, sustainable natural resources management and coping with climate change are major area that Glendenning, et al (2010) through Van Den Ben (1998) indicates as farmers information need.

Information need of farmers start from inception of the idea in the mind to the last consumer of such product. Each trend and stage needs information in making the idea a reality. The information need of the farmers varies between category of farmers and the information will be made available based on individual or group information need. Judging from the above, it would be noted that farmers need different types of information. Information sought is based on their information need. Tadesse (2008) adds that information use is a behavior that leads an individual to the use of information in order to meet his or her information need. Information use is an indication of information need but they are not identical.

New methods of information dissemination

Information is vital in achieving corporate goals, so is information dissemination critical for promoting national and international development. Making information available to female

farmers is information and communication dependent. Information dissemination therefore constitutes important and critical factors for the success of female farmers and their products.

Information dissemination is to reduce the risk of both pre and post harvest losses. Disseminating information is to sensitize female farmers on important and relevance of information, giving practical information for problem solving and assisting them about market for their products. Karamagi and Nakirya (2009)

People that need information have different characteristics, so are the female farmers. Information brokers needs to know what characterized those farmers: are they educated, married, young or old women. These and many others must be determined and ascertain in determining the best method to use in disseminating their information need. Saimaisadaf (2006) also adds that, the information need of the group must be taken into consideration too.

There are different methods of disseminating information to farmer; Adekunle et al (2002) identifies some of these methods in disseminating information. Personal contact, this includes the use of farm extension agents, radio and television broadcasting, publications, field days, agricultural shows and demonstration. These methods are used for different groups based on their information need and best ways to disseminate the information need to them.

Awonbiogbon (1991) who cited Knong (1990) identifies various communication channels and these includes talks, meetings, visit, demonstrations, field days and publications that are utilized for the transfer of research results into practice. The places of extension workers are also considered. They are to demonstrate on farmers' lands, have meetings with them regularly and also transmit information to them through mass media. The foregoing reports recognize the importance of extension workers and the library in disseminating information to farmers.

Ogutu, et al (nd) concludes with the research carried out that radio can be a superb intermediary, which can only reach rural communities especially women and youth. The study recalls that majority of all the women and youth can be reached through the radio. The study revealed that majority of the women owns a radio player through which they can easily listen to at any time.

International mines action standard (2005) identifies four major means of information dissemination and these include; face to face contact, traditional means which also includes drama, puppet show, traditional forms or theater, street theater, storytelling, songs and dance. These types of information are traditional and are normally passed down from one generation to the other. The third one is small media which includes posters, cassettes, badges, flipcharts, flash cards, and slides set. The fourth is through mass media which includes television, magazines, newspapers or other situations where large number of people can be reached with information without personal contact.

Karamagi and Nakirya (2009) identify that visual communication, that is, drawings pictures and photograph is more effective than any numbers of words. Aina (2006) mentioned that farmers get information from agricultural extension workers, and they disseminate this information through various methods. These includes; talk, audio and video recording and also through leaflets and pamphlets.

Radloff (2010) mentioned that new information communication technology affects both men and women living in remote areas. This is in agreement with the position of Qaisar, et al (2011) that a new concept about agricultural informatics has arisen based on the rapid

development in information and communication technology (ICT) and of the internet. This new approach concept is to enhance technology dissemination and information delivery through the advances in ICT and the internet. The contribution above is to reveal that new approach to information dissemination is technology based and this must be used so that agricultural products will improve. He argues that disseminating information to farmers has been integrated into information communication technologies ICTs. He mentions that telecenters in rural areas provide information on education, agriculture; health issues and also equips rural citizens on how to use computers and provide basic literacy.

All the other methods mention earlier do not make wide application and appeal like ICTs. It was discovered through him that number of information extension medium has been going down while those of the farmers are increasing. In order to bridge this gap, there is need for innovative information system to address this gap.

The use of mobile phone especially using it to send text messages (SMS) for instance has partly enabled women farmers in Nigeria and Cameroon to take advantage of middlemen; they were able to get a fair price and deal with the end user of their product without going through middlemen. Appropriate farming tools were ordered for by mere calling the seller through the mobile phone.

Using ICT especially the internet in rural area in Nigeria may be hindered by some factors which includes, power supply, and the initial capital to put up internet. In view of this, Aina (2006) suggests that information materials by extension workers and agricultural department can be made available to libraries and through the community information resource centers created by public libraries. These information can be made available to farmers through query and answer services.

ICTs offer many confirmed solutions to many challenges faced by farmers. It provides opportunities for their economic empowerment. Farmers must be empowered to have mobiles which will enhance dissemination of information to farmers to boost their productivity. Windrock International (2003) identifies the capacity that ICT bring to users: storage of text messages in its original format, information is rapid using ICT and greater interactivity in communicating, evaluating and producing useful information.

In achieving the adoption of ICTs, Gelb, et al (2008) highlights the recommendations that include focus and consolidates all national policies, budget and investment for agriculture and rural sectors, focus ICT training for teachers/researchers/ extension workers and farmers on political implementation.

The report on agricultural technology for development (2011) too identifies some challenges faced by rural women in taken advantage of all the opportunity for their economic empowerment which includes lower education level, lesser access to credit/loan, lack of land tenure and other disseminatory practices. Gender preferences are not considered when introducing new technology. The type that will be made available for them should be the type that will not affect their gender norms. Jennifer (2010) identifies this in her work and she affirms that, women living in rural areas especially do not have problem with their location but also with their gender.

METHODOLOGY

The study adopted survey research design targeting only the female crop farmers in Lagos state. From the study population, the sample was drawn from two Local Governments

(Ikorodu and Ojo). Cluster sampling was used for the work. The population for the study consists of fifty (50) female farmers out of which forty nine responded. A structured questioner was design consisting of six items for the respondents. Fifty questionnaires (50) were distributed and forty nine (49) responded successfully. This was administered personally to these respondents. The analysis was done based on the research question designed for the study. Descriptive statistics: table, frequency and percentage were used in analyzing the data.

This section shows the response of the respondents on demographic information.

The result shows that 19 with 38% had school certificate, 18 had primary school education which is 36%, 12 that represent 25 % are illiterate. The women that falls within the range of 40 years -50 years were 29 which represent 59%, 11 which is 23% represent woman within the range of 20 to 39 years while the older women had the least percentage which is 18% representing 9 respondents. 30 are Christians, and 19 of the respondents are Muslim i.e. 60% and 38%

SECTION A: socio-economic characteristics of the respondents

Characteristic	Description (Frequency)						Total
	B.sc (0)	NCE (0)	TTC (0)	School cert. (19)	Primary edu. (18)	Illiterate (12)	
Education qualification							49
Age	60-70years (9)	40-59years (29)	20-39 years (11)	-	-	-	49
Religion	Christian (30)	Muslim (19)	Others (0)	-	-	-	49
Marital status	Married (33)	Divorcee (11)	Widow (5)	-	-	-	49

respectively. 33 are married, 11 divorcees and only five are widow these are represented thus 66%, 22% and 10% respectively. These imply that all the respondents are matured with legal capacity to own modern information means and are expected to be aware of such like GSM.

Section B

The most information need of the respondents is how to market their farm products, the best fertilizer to use, where to obtain credit and loan, how to control pests and diseases and transporting their products to the farm. All these variables have the highest response which is ninety eight percentages (98%). The last three variables are closely related and it implies that, the most information need of these farmers centers on getting loan to be able to get all necessary activities ready, control the pest to be able to have good products and be able to market their products without any lost. Most of the farmers' products are perishable crops. Sixty two percents (62%) of the respondent's needs information on how to improve them academically and also be a land owner. The variable with the least percentage is the information about the climate change. It implies that the respondents are not aware of or do not know what climate change is all about and how it affects their work as it relates to both planting and harvesting season. To the respondents, the response shows that information on storage is of great importance to them as ninety two (92%) responded positively to the

question asked on storage. The result shows that if they are given information on how to store the farm products, especially the perishable farm products they will be more satisfied.

S/N	Information need	Frequency (Yes)	%	Frequency (No)	%	Total
1	New farm tools that can improve your work	43	86	6	12	49
2	Marketing your farm product	49	98	0	00	49
3	The best fertilizer to apply to the soil	49	98	0	00	49
4	The type of drug to use when you are sick?	42	84	7	14	49
5	Which school offer evening classes?	31	62	18	36	49
6	Obtaining credit/loan	49	98	0	00	49
7	The best planting season	40	80	9	18	49
8	The storage methods	43	86	6	12	49
9	Be land owner	31	62	18	36	49
10	Controlling of pests and diseases	49	98	0	00	49
11	Transporting the goods to the market	49	98	0	00	49
12	Natural resources and climate change.	30	60	19	38	49

SECTION C

This section focused on questions about agricultural information awareness of and availability to the respondents. The result shows that, seventy eight percentages (78%) were aware of where they can get information from the extension worker. Ninety eight respondents (98%) are not aware that they can get information from the library. From the above result, the farmers are aware of the information given by the extension workers. This confirms that the results of agricultural research in the library are not tapped into. As a female farmer, (40) respondents (80%) of the respondents were not aware of where to get loan or credit facility. Similarly (34) respondents (68%) know that pests and diseases can be controlled. only 12 respondents (24%)

S/N	Information awareness	Frequency (Yes)	%	Frequency (No)	%	Total
1	Are you aware of the extension workers?	39	78	10	20	49
2	Do you know where you can get credit/loan?	09	18	40	80	49
3	Do you sell your farm product on the farm?	30	60	19	38	49
4	Do you normally get information about the price of the product in the market?	21	42	28	56	49
5	Do you know of any new farm tools that can improve your work on the farm?	26	52	23	46	49
6	Have you ever been to the library before for any information?	04	08	45	90	49
7	Do you have information on how to control pests and diseases?	34	68	15	30	49
8	Are you storing your farm products based on	12	24	37	74	49

information from any source?					
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can store their farm products based on the information available to them. The implication of this is that the (74%) respondents that cannot or do not get information on how to preserve their perishable farm product will end up selling it at give away prices.

SECTION D

This section shows the rating scale of means of getting information by the farmers. 4 is used to rate variables that are mostly used, 3 is for used, 2 is for variables that are rarely used and 1 for variables that are not used at all. The variable that was rated high was other farmers with 44 respondents i.e. 88%, followed by extension worker with 39 respondents which is 78%. Farmer's cooperative society and radio has 4 respondents rating it high which represent 8%. The variables with the least rating are handbill and fliers, mobile phone and the internet. These are variable not used at all by the farmers. The frequency of use of the above variables shows that the respondents are yet to access the new methods of disseminating agricultural information. The respondents though claimed to have mobile phone but not for getting information on their work. The implication of this is that, they are limited to their old ways of getting information, which is information from other farmers, thus information from other modern and new approach sources are not used.

S/N	Means of getting information	frequency (Mostly used)	%	Frequency (Used)	%	frequency (Rarely Used)	%	frequency (Not Used)	%	Total
1	Extension workers	39	78	10	20	0	00	0	00	49
2	Farmers cooperative society	04	08	05	10	02	04	38	76	49
3	Other farmers	44	88	03	06	01	02	01	02	49
4	News paper	00	78	02	04	08	16	39	00	49
5	Hand bills & fliers	00	00	00	00	00	00	49	98	49
6	Library	00	00	00	00	02	04	47	94	49
7	Workshop	00	00	00	00	00	00	49	98	49
8	Training	00	00	00	00	05	10	44	88	49
9	Television	00	00	06	12	04	08	39	78	49
10	Radio	04	08	02	04	05	10	38	76	49
11	Mobile phone	00	00	00	00	00	00	49	98	49
12	Internet	00	00	00	00	00	00	49	98	49

SECTION E

The table below shows that forty nine (49) respondents (98%) get their agricultural information from other farmers. Twenty five (25) respondents which represent (50%) get their information through the extension workers. The number of the respondents that get information through special television program is ten (10) representing (20%) while five (5) gets information on dedicated pages of the newspaper. None of the respondents uses email, text messages on mobile phone or direct calls on the phone, announcement on the radio and experiment on the farm by extension workers; thus no percentage for these questions.

S/N	Do you get information through:	Frequency (Yes)	%	Frequency (No)	%
1	Special program on television to farmers	10	20	39	78
2	Regular meeting with the extension worker	25	50	24	48
3	E-mail	0	00	49	98
4	Text message on mobile phone	0	00	49	98
5	Receiving direct calling on mobile phone	0	00	49	98
6	The dedicated pages for farmers in the newspapers	05	10	44	88
7	Announcement and information on radio	0	00	49	98
8	Experimental on the farm by extension workers	0	00	49	98
9	Other farmers	49	00	0	98

The major problem, as shown in the table below, hindering the farmers is lack of credit and loan with forty six (46) representing (92%) responded to it positively. The result shows that forty four (44) respondents which is 88% also see lack of water as one of the factors hindering the work. This implies that these female farmers can only plant during raining season since there is no alternative of irrigation. Lack of information on market price is thirty nine (39) representing 78% respondent. Other activities aside farming work is thirty three (33) respondents that is 66%, means of transporting materials to the market twenty eight (28) respondents representing 56% and the least is not involving them in decision making which is with no positive response.

SECTION F

S/N	Problems inhibiting female crop farmers	Frequency (Yes)	%	Frequency (No)	%	Total
1	lower education level	12	24	37	74	49
2	Untimely information	01	2	48	96	49
3	inadequate information	42	84	07	14	49
4	Lack of access to credit facility	46	92	03	06	49
5	Cultural attitude	40	80	09	18	49
6	Not involving them in decision making	00	00	49	98	49
7	Lack of information on their health	41	82	08	16	49
8	Other activities apart from farming work	33	66	16	32	49
9	Inability to handle new farming tools	10	20	39	78	49
10	Means of transporting the products to the market	28	56	21	42	49
11	Lack of water	44	88	05	10	49
12	Lack of information on market price	39	78	10	20	49

DISCUSSION OF RESULT

On demographic information, the result shows that the level of the education of the respondents is low. The highest qualification as shown in the data is school certificate. With low level of education they are not opportune to have or know how to source for information. Education in any profession is important and once this is lacking. The age indicated that

young women are not many in the work, probably because its time consuming or the reward of the work. The number of the older women compare to the women between the ages of 40 to 59 years is high, this may be that they are involve because they make use of their grown up children on the farm and even at home.

All farmers need information and all the information need mentioned in the questionnaire were ticked but the three variables that has the least response are information need on becoming a land owner, school where they can get more education (like adult education or evening classes) and information on climate change. Traditionally, the respondents believed that the climate change is natural and they will adapt as the changes come. This belief does not make them prepare adequately for the season as it comes. The response of these respondents indicated that farmer like any other profession needs information in order to do well on their job and have a good reward for their work. This is to confirm the position of Kaaya (1999), Sadaf, et al (2006) and Ogunlela and Mukhter (2009) that farmers need information in order to apply them to all their agricultural production. This implies that the female farmers do not fully understand the implications of climate change otherwise they would not have taken it to be natural.

The level of awareness of the respondent about some available information is low. Majority of them are not aware of where to get credit facility. They are not in any government recognized group like cooperative where information relating to their work will be discussed like how to get fertilizer, and how they can jointly acquire plots of land and most especially get to know the market price which probably they may control. Majority of the women get to the market to know the price of the product. The price of the product in the market as at the time they are taking the farm product to the market, determine the price of their good. They cannot sell the products based on the cost of production but the market price. If these farmers have a way of preserving their products, it will enable them to sell when consumers will appreciate it and not when all the farmers bring these perishable crops to the farm. During the administration of questionnaire, it was discovered that farmers do not get more gain if the farm product is sold during its season.

The respondents do not make use of the library and other media to meet their information needs. The farmers are used to their old and former ways of getting information which is through other farmers. They are not opportune to have access to the result of the research in the library, on the television and also radio. These are good channels of disseminating information to the farmers, but the program on the television mostly are not for people in this profession. The new technology which is the new approach is still difficult to access. The internet was not used by any respondent and no information from this source. The mobile phone which has continued to have increase in coverage area is giving opportunity to people to get information from both far and near. But it was indicated that the farmers do not use the mobile phone to get information relating to their work. Many of the respondents on the farm only use their phone to receive calls from family members only and some even confirm to the researcher that they only know the button to press when they want to receive calls and that they cannot use it to send text messages or can read the message without somebody helping them. This shows the level of technology literacy of these female farmers. If majority of them do know how to use other features on these phones, accessing the information on it will not be possible and the new approach may continue to elude them.

The respondents do not see any effect on their job if they are not involved in the decision making of their community. They acknowledge the fact that they have no access to adequate information and aside that too, farming is not the only work they do as they are expected to

play their motherly role at home. With the involvement of some capital institutions to make credit facility available to farmers, the respondents are not aware of where they can get the credit from and all that they would need to get it.

CONCLUSION AND RECOMMENDATIONS

Information dissemination should be the priority of any information professional. Information centers through the public library should be established to make information available to the female farmers. Lagos state being a mixture of rural and urban settlements, the public library should be pro-active by going extra miles in making information available to the female farmers. There should be awareness on the type of information they can give to the people and that the library is meant even for the illiterate too. An information provider should be able to take information to these female farmers which will probably take little time before the farmers will be looking for them.

If the women have and know how to use mobile phone, the applications on the phone should be design to accommodate local content and languages that it will be easy for many of them to use. The government can partner with the phone making industry to design the phone basically for farmers which will enable them have access to information on it. The extension workers too should try to train these female farmers on how to receive or subscribe to agricultural information on their phone. Pictures can be sent to the farmers on their phone. This is likely to be the technology that has the highest use in Lagos; therefore, the government through the extension workers should make use of this opportunity.

Video recording machine can be used to record events on the farm. Female farmers too can be trained on how to use this machine. if the operation of the machine are not left in the hands of men alone, it will go a long way to help the female farmers. Information on video compact disk (VCD) can be used for these women, The women will be able at their convenient time be able to watch it, since they are also involve in taking care and doing other house cores.

The use of the internet that has become widely discussed topic cannot be overlooked. The information professional can source for grants or partner with organizations to establish telecentres or ICT centers, knowing that the price of subscribing to information may prevent some people from having it. This will ensure constant power supply and proper monitoring with maintenance of the centre. The government should establish these centers close to the women, where they can have access to it without travelling for miles to promote the works of these farmers. Women should be taken into consideration when establishing these centers.

There should be programme on the television and radio with local content tailored towards improving agricultural productivity ICT. The tele-radio show could focus on teaching farmers on how to use mobile phones to get farm production and marketing information. The period for such programme should be taken into consideration as this will also go a long way in making these women get maximum benefit.

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