

Role of Radio in Agriculture Development

Abstract: *Radio is the most effective communication tool. It gives information in a regional language which is easily understandable by the illiterate peoples. Radio play a vital role in giving information about agriculture development. A research conducted on the role of radio in agriculture development. The purposive sampling technique used to select the respondents to fill the survey questionnaire. The sample size contains 52 respondents. The result of this research explains that radio play a vital role in giving information about agriculture, give information about new technologies, how to adopt these agricultural technologies to prevent seasonal losses. Radio also give information about the duration of watering the crops, what pesticides use, how to cultivate a crop to increase production, it gives information about the weather and which weather is suitable for new crops.*

Contents

- [Introduction](#)
- [Objectives](#)
- [Significance of the Study](#)
- [Statement of the Problem](#)
- [Literature Review](#)
- [Hypothesis](#)
- [Research Questions](#)
- [Methodology](#)
- [Findings and Discussion](#)
- [Conclusion](#)
- [Future Research Direction](#)
- [References](#)

Key Words: Radio, Agriculture Programs, Rural Areas, Formers

Introduction

Radio is a reliable and efficient mode of communication. This strategy is not only effective but also cost-effective. It has shown to be an effective way of communication in rural areas due to its low cost, ease of use (even for those with no education), and reliance on the native language(s). Seventy percent% of homes in rural areas have a radio that is regularly tuned in. Due to the fact that it is easily available, uncomplicated, and uncomplicated to use, radio is the only source of information for a significant

number of the world's poorest people (Buckley et al [2008](#)).

Agriculture is Pakistan's primary economic driver, supporting the bulk of the country's people. Agriculture contributes a significant amount to the gross domestic product of Pakistan. The deterioration of agriculture that occurs each year is quite unfortunate. The average yield of significant crops such as rice, wheat, cotton, maize, and sugarcane is extremely low when compared to that of other industrialized countries (Ahmed, [2015](#)). Increases in crop yield have been found to

* Assistant Professor, Department of Communication Studies, Bahauddin Zakariya University, Multan, Punjab, Pakistan. Email: Ahsanbhatti@bzu.edu.pk (*Corresponding Author*)

† MPhil Research Scholar, Department of Communication Studies, Bahauddin Zakariya University, Multan, Punjab, Pakistan.

‡ PhD Research Scholar, Department of Communication Studies, Bahauddin Zakariya University, Multan, Punjab, Pakistan.

have a strong correlation with the familiarity of ancestors with newly developed agricultural discoveries and technologies. Radio is a useful medium for the dissemination of information that can contribute to the improvement of rural areas and agricultural practices. Radio is an incredible, low-cost medium that can help raise people's awareness. (Farm Radio International, [2007](#)).

As a result of the emergence of a program that are specifically centered on agriculture, radio and television in Pakistan have played a vital part in drawing attention to and providing updates regarding the agricultural plenty. The radio has the potential to be one of the most essential tools for communicating with a large number of people for a variety of reasons. Radio transmissions are instantaneous and may readily be modified to accommodate any changes in the environment. It affects an extremely high percentage of the population. Through the incorporation of the comforting sound of a human voice, it is able to circumvent the challenges that are inherent to reading printed text. When it comes to the procedure for adopting a child, radio is particularly effective at generating both awareness and interest (Behrens and Evans, [1984](#)). The most common ways that people get their news and entertainment in Pakistan are through the use of the radio and television. It is highly improbable that printed materials will be able to properly reach residents of rural areas due to the general lack of literacy. Radios make it possible for people who do not have access to televisions or electricity to still keep up with the latest news in real-time (Ayaz, [1993](#)). Radio is incomparable to any other medium when it comes to the exploratory stage of the learning process. Radio is frequently the quickest, most efficient, and only choice available when it comes to communicating with individuals who live in rural places.

Agriculture development largely depends on sharing the data and knowledge concerning new techniques and technologies that are cheap and easy to excess. Nowadays farmers have much need to get information about new technologies and upcoming pesticides, the use of pesticides, and diseases by media (Prathap, 2010). Media inform the formers about the weather, use of

pesticides, flood situations, and environmental changes (Mohammad, [2005](#)). According to Sharma ([2008](#)), radio is a reliable medium and covers a wider area and can reach a large number of the population. The power of radio as a means of communication its cheap in terms of sending and displaying and portability.

Radio plays a vital role in agriculture development, agriculture programs are daily broadcast in which agriculture experts, development officers, and stake holders are teach formers to adopt new methods of agriculture. Agriculture programs are daily broadcast from 8 radio stations daily which includes the season about sowing seeds, and harvesting crops. Tool free Punjab Agriculture helplines (0800-15000 and 0800-29000) are working for the facilitation of formers. Different shows about agriculture development are broadcast to different cities of Pakistan like Zarkhaiz Pakistan from Islamabad, tery hull halwagey from Lahore, UtumKhaiti from Multan, Thallsinghar from Mainwali, Wasderehn Gran from Rawalpindi, Wasde rehn Kisan from Sargodha , Dharti Bakht Bahar from Bhawalpur and Sandhal Dharti from Faisalabad. These radio programs inform them which weather best is for cultivating of the crop. The agriculture experts inform them the time watering the crop. It informs about the use of pesticides and fertilizers and also informs the effect of these pesticides. As due to the change of weather the production level is reduce as many crops need sunlight and water. But due to weather change the formers need the information to cultivate new crops, radio play a vital role to give this information to the formers through which the production level increase.

Rationale of the Study

Radio plays a vital role in agriculture development. Radio is a very cheap medium for getting information, it is also accessible in rural areas.

The main reason to choose this topic is that many researches done research on the role of radio in agriculture development but no research done in the rural areas of Multan.

Radio gives information about new agriculture technologies, the researcher

conducting research to know the effectiveness of this information and how much people use these technologies.

Objectives

- 1: To find out the role of agriculture experts' opinions in a radio program in the adoption of advanced harvesting technologies.
- 2: To find out the role of agriculture alerts on Radio to prevent the seasonal losses in crops harvesting or reaping.
- 3: To investigate the usefulness of agri programs to farmers.

Significance of the Study

Agriculture is the backbone of the economy of our country. It provides food and raw material. Agriculture provides employment opportunities to a very large percentage of the population. To increase in agriculture production there is a need to give information about new technologies about harvesting, sowing seed, the right use of pesticides, and change in weather to the formers. Radio play a vital role in agriculture development: Radio is easy access to the formers. As in rural areas there is electricity issues, people can't get information from other sources, as solar energy systems are used in radio. It provides information about every aspect of agriculture. The main significance of the study is to know how much radio play a significant role in informing farmers about new terms and technologies of agriculture. By this research researcher know what type of rules and regulations follows to make the radio more effective in giving awareness about agriculture to the farmers.

Statement of the Problem

The farmers need a considerable quantity of information and services on the supply of inputs, new technologies on farming; early warning related to natural disasters, market supply and demand, its price and the information on competitors and mobile is an important tool of information dissemination. But a few farmers refuse to use these new technologies due to their ignorance and low level of literacy. Ignorance and low level of literacy for which they have to

be guided and motivated adequately for the effective use of these techno devices, which ultimately leads to the benefit of farmers.

Literature Review

Pakistan is an agro based economic country.

Pakistan has a geographical area of 79.61 million out of this 22.17 % is cultivated which is 39 % of the total area. Almost 65 % of the population lives in rural areas. In Pakistan, agriculture production become low from few years. Farmers need access to the most up-to-date market data in order to boost their overall output. By giving farmers additional information that is pertinent to their work, it is feasible to increase agricultural productivity. Farmers in today's world are expected to stay informed on the latest advancements in agricultural technology as well as any forthcoming warnings regarding the health risks posed by certain diseases or pesticides. This is what the findings of a study have shown (Prathap, 2010).

Radio has the capacity to quickly distribute information about agriculturally relevant technology transfer within the farming community because it is one of the types of mass media that is used the most. It is impossible to contest the conclusions of Okwu et al. (2007), which state that radio programmes that are focused on agriculture are of great benefit to listeners. Farmers continue to rely heavily on radio communication, particularly those who live in remote areas. Traditional media such as radio and newspapers are still widely used by farmers because of their ability to assist convey information to farmers in distant regions, develop farmers' knowledge and capabilities for the future of agriculture, and eventually raise agricultural productivity (Ani and Cake, 2009). In the same way as radio is one of the simplest ways of disseminating agricultural, technical, and scientific information to farmers, one could argue that the mass media are currently the most important communication instruments that are available (Murty & anomaly, 2012). In developing nations, radio has become an indispensable tool for human interaction. (FOA, 2001)

Proper market info is that the basic want of farmers as result of it permits farmers to form relevant and correct selections (Ozowa, 1995;

Leroux et al., [2001](#)). Market information enables the farmers to make decision regarding what to produce, how to produce and whether to store the products or not (FAO, [2005](#)). Radio is a strong tool in disseminating the agricultural information. In developing countries market information initiative is the part of agriculture and agro business strategies that government paid attention (Haerah et al., [1979](#); Lutz, 2006).

Hussain ([1997](#)) states that radio and TV are the most effective tool of communication. The effectiveness of Radio about agriculture programs cannot be forget, most of formers like to listen agriculture programs (Okwu et al., [2007](#)). The study of (Wedell, 1986) reveals that radio is a dominating tool for change in culture, development, health issues, and for better agricultural development. A study conducted by Atkin ([1987](#)) in Canada explore that more than 100 million villagers listen farm based local network radio. Rein (1988) states that regional radio programs are favorite among people because they are in their languages. The study result of (Kelsey and Hearne, [1955](#)) states that the villagers who don't participate in social meetings and rarely use technology meet their informative needs through radio. The study results of (Arokoyo, [2003](#)) conducted in Nigeria proved that video, TV and radio are the major sources of farmers to get information.

Information sources for farmer's square measure TV, radio, publications, sensible education, newspapers, agriculture exhibitions and extension employees (Ekoja, [2003](#)). Radio may be a best supply to disseminate data regarding wheat, seed and soil (Fassard, [2005](#)), Saadi et al., [2008](#)). Education and the introduction to fresh concepts are also essential to the development of rural communities. Farmers are particularly well-suited to profit from this information due to their extensive prior experience in the region. The widespread sharing of knowledge, in conjunction with innovative approaches to farming, will make available to farmers a wealth of fascinating new opportunities (Mohammad Retz Nazn and Hasan Harbullah, [2010](#), pp. 13-20). The timely and pertinent messages that are broadcast on agricultural radio shows make it simple to communicate with a large number of individuals, whatever their location, socioeconomic standing, or any of the

other elements that may be at play (Omenesa, [1994](#)). Radio programs have been utilized in nations both wealthy and less developed to transmit agricultural knowledge with the goal of boosting farmers' productivity. The goal of these programs is to improve farmers' productivity (Enitan, 1988). Farmers still widespread rely on traditional media like radio and television. (Ani& cake [2009](#)). Radio is effective for giving agriculture, technical,scientific info to the formers. (Murty & Allbino, [2012](#)).

Hypothesis

- 1: It is more likely that agriculture experts' opinions in agriculture programs of radio play vital role for the adaptation of new agriculture technologies.
- 2: It is more likely that role of agriculture alerts on radio are useful to prevent the seasonal losses in crops harvesting.
- 3: It is more likely that agriculture programs are much useful for the farmers.

Research Questions

- 1: What is the role of agriculture experts in the adaptation of new technologies?
- 2: What is the role of radio in giving awareness about right use of pesticides?
- 3: What is the usefulness of agriculture programs to the farmers?

Theoretical Framework

Radio plays a vital role in giving awareness about agriculture development in rural areas. It gives information about new technologies and techniques about agriculture. In this study the researcher uses the adaptation or diffusion of innovation.

The Diffusion of Innovation (DOI) Theory was conceived of by E.M. Rogers in 1962 and is considered to be among the pioneering works in the field of social theory. Attempts were made in the past to better describe how an idea or a product gradually gains momentum and spreads throughout a certain community or social organization, which is where the term's origins can be traced back to. The most notable results of this dispersion are, among other things, the general acceptance of a new tactic, practice, or product among members of a social group. A

person who adopts anything has a fresh perspective towards the thing that they had in the past (i.e., purchase or use a brand new product, acquire and perform a brand new behavior, etc.). The individual must first acknowledge that the concept, behaviour, or thing that is being introduced is new in order for the adoption process to be successful. Because of this, the diffusion process can proceed.

In a social system, the adoption of a novel idea, practice, or commodity (hence referred to as "innovation") does not occur simultaneously among all members; rather, it is a process during which some individuals are later adopters of the innovation than others are. In other words, innovation is not something that happens all at once. Researchers have identified a number of noteworthy distinctions between people who try new things right away and those who put off their experimentation for a while. When one is working to improve the pace of adoption of an innovation that requires an associate degree within a specific group of people, it is essential to have a solid awareness of the characteristics that exist inside that group that will either function to quicken or slow down the rate of adoption.

The researcher use this theory as agriculture experts on radio give information about new technologies and how to use these technologies and the benefits of these technologies. Radio also provides information about the feedback of early adopters. Radio gives information about new agriculture strategies about agriculture to increase the production.

Methodology

A survey is a research method used for collecting data from respondents to gain information. The process involves asking questions, which can be offline or online. By Check & Shutt (2012) as technique to gather data from a specific sample of people through their responses to queries.

This study analyzes the role of radio in agriculture development. This study also analyzes the role of agriculture experts in agriculture programs, there role in adoption of new agriculture technologies and techniques.

Survey methodology helps the researcher to research the matter in realistic settings, helps researcher to gather the information from the particular age groups of peoples.

Population

The population of this research consists of formers of rural area of Pakistan.

Sample Size Calculation

The sample size of the research calculated by the presence of the radio in the household of peoples and they should be formers. The research sample size contains 52 peoples.

Sample Technique

Purposive sampling technique is used. Which incorporates respondents, subjects or components selected for specific characteristics and eliminates those that fail to fulfill these criteria. During this analysis the researcher choose the respondents who are farmers.

Data Collection Tool

Zikmond (2003) make a case for that the foremost effective tool for information collection is questionnaire. It permits respondents to convey in-depth info and express their opinions.

A questionnaire is a analysis instrument consisting of a series of inquiries to gather information from respondents

Questionnaire provides an effective and cheap way to collect information from the respondents. The survey tools are used to analyze the role of radio in agriculture development.

Structure of the Questionnaire

In this research the survey questionnaire consists of demographic questions to know the information related about the use of radio for agriculture development and also use close ended questions.

Data Analysis and Interpretation

The researcher has collected the data with the help of self-administered survey.

Table 1. Time spent on radio

	Frequency	Percent%	Valid Percent%	Cumulative Percent%
Valid less than one hour	28	53.8	53.8	53.8
two hours	11	21.2	21.2	75.0
three hours	9	17.3	17.3	92.3
more than three hours	4	7.7	7.7	100.0
Total	52	100.0	100.0	

The given table 1 explain that 53% respondents are listen radio less than one hour ,21% listen radio for two hours, 17% respondents listen radio

for three hours and only 7% respondents listen radio more than three hours.

Table 2. Listening agri based radio programs

	Frequency	Percent%	Valid Percent%	Cumulative Percent%
Valid Yes	43	82.7	82.7	82.7
No	8	15.4	15.4	98.1
3.00	1	1.9	1.9	100.0
Total	52	100.0	100.0	

The given table 2 explain that 82% respondents listen agriculture based radio programs and 15%

respondents not listen agri based radio programs .

Table 3. Role of radio in giving awareness about new agriculture technologies

	Frequency	Percent%	Valid Percent%	Cumulative Percent%
Valid Yes	39	75.0	75.0	75.0
No	4	7.7	7.7	82.7
no opinion	9	17.3	17.3	100.0
Total	52	100.0	100.0	

The given table 3 explain that 75% respondents responses are positive that radio play a crucial role in giving awareness about new agriculture

technologies , 7% respondents show negative response and 17% respondents show no opinion.

Table 4. Depend on other media for getting information

	Frequency	Percent%	Valid Percent%	Cumulative Percent%
Valid Yes	38	73.1	73.1	73.1
No	2	3.8	3.8	76.9
some time	12	23.1	23.1	100.0
Total	52	100.0	100.0	

The given table 4 explain that 73% respondents explain that they depend on other media for getting information about agriculture ,3% respondents show that they not depend on other

media for getting information about agriculture and 23% explain that they sometime depend on other media for getting information.

Table 5. Agriculture experts on radio give information about new disease of crops and how to get rid of these diseases

		Frequency	Percent%	Valid Percent%	Cumulative Percent%
Valid	Yes	38	73.1	73.1	73.1
	No	4	7.7	7.7	80.8
	no opinion	10	19.2	19.2	100.0
	Total	52	100.0	100.0	

The given table 5 explain that 73% respondents show positive , 7% respondents show negative and 19% show no opinion about that agriculture

experts on radio give information about new disease of crops and how to get rid of these disease.

Table 6. Agriculture experts on radio give information about weather change and for which crop weather is suitable

		Frequency	Percent%	Valid Percent%	Cumulative Percent%
Valid	Yes	44	84.6	84.6	84.6
	No	1	1.9	1.9	86.5
	no opinion	7	13.5	13.5	100.0
	Total	52	100.0	100.0	

The given table 6 explain that 84% give positive response ,1% respondents show negative response and 13% show no opinion about that

agriculture experts on radio give information about weather change and also explain which weather is suitable for the crops.

Table 7. Getting information about the new steps taken by the government for the welfare of formers

		Frequency	Percent%	Valid Percent%	Cumulative Percent%
Valid	Yes	26	50.0	50.0	50.0
	No	13	25.0	25.0	75.0
	no opinion	13	25.0	25.0	100.0
	Total	52	100.0	100.0	

The given table 7 explain that 50% respondents show positive response ,13% show negative response and 25 % show no opinion about the

new steps taken by the government for the welfare of the formers by radio.

Table 8. Radio give information about the duration of watering crops

		Frequency	Percent%	Valid Percent%	Cumulative Percent%
Valid	Yes	43	82.7	82.7	82.7
	No	5	9.6	9.6	92.3
	no opinion	4	7.7	7.7	100.0
	Total	52	100.0	100.0	

The given table 8 explain that 43% respondents show positive response, 9% respondents show negative response and 7% show no opinion about

that radio give information about the duration of watering the crops.

Table 9. Agriculture experts give information about the invention of new technologies

		Frequency	Percent%	Valid Percent%	Cumulative Percent%
Valid	Yes	32	61.5	61.5	61.5
	No	7	13.5	13.5	75.0
	no opinion	13	25.0	25.0	100.0
	Total	52	100.0	100.0	

The given table 9 explain that 61% respondents show positive response ,13% respondents show negative response and 25 % show no opinion

about that radio give information about the invention of new technologies .

Table 10. Agriculture experts give information about how to use new agriculture gadgets

		Frequency	Percent%	Valid Percent%	Cumulative Percent%
Valid	Yes	32	61.5	61.5	61.5
	No	9	17.3	17.3	78.8
	no opinion	10	19.2	19.2	98.1
	Total	52	100.0	100.0	100.0

The given table 10 explain that 61% respondents show positive response ,17% respondents show negative response and 19% show no opinion

about that radio give information about how to use new agriculture gadgets.

Table 11. Getting information about how to cultivate a crop to increase the production

		Frequency	Percent%	Valid Percent%	Cumulative Percent%
Valid	Yes	42	80.8	80.8	80.8
	No	7	13.5	13.5	94.2
	no opinion	3	5.8	5.8	100.0
	Total	52	100.0	100.0	

The given table 11 explain that 80% respondents show positive response ,13% respondents show negative response and 5% show no opinion about

that radio give information about how to cultivate a crop to increase the production .

Table 12. Agriculture experts give information about the use of new technologies and how to overcome agriculture expenses

		Frequency	Percent%	Valid Percent%	Cumulative Percent%
Valid	Yes	31	59.6	59.6	59.6
	No	4	7.7	7.7	67.3
	no opinion	17	32.7	32.7	100.0
	Total	52	100.0	100.0	

The given table 12 explain that 59% respondents show positive response ,7% respondents show negative response and 32% show no opinion

about that radio give information about the use of new technologies and how to overcome agriculture expenses .

Table 13. Agriculture alerts on radio help how to prevent seasonal losses

		Frequency	Percent%	Valid Percent%	Cumulative Percent%
Valid	Yes	29	55.8	55.8	55.8

	Frequency	Percent%	Valid Percent%	Cumulative Percent%
No	7	13.5	13.5	69.2
no opinion	16	30.8	30.8	100.0
Total	52	100.0	100.0	

The given table 13 explain that 55% respondents show positive response,13% respondents show negative response and 30% show no opinion

about that agriculture alerts on radio help hoe to prevent seasonal losses.

Table 14. Agriculture experts share the feedback of early adopters about new agriculture gadgets in their agri based radio programs

	Frequency	Percent %	Valid Percent%	Cumulative Percent%
Valid Yes	22	42.3	42.3	42.3
No	11	21.2	21.2	63.5
no opinion	18	34.6	34.6	98.1
Total	52	100.0	100.0	

The given table 14 explain that 42% respondents show positive response ,21% respondents show negative response and 34% show no opinion

about that radio give information about the early adopters of new technologies and gadgets.

Table 15. Agriculture experts on radio help to overcome agriculture losses

	Frequency	Percent%	Valid Percent%	Cumulative Percent%
Valid Yes	34	65.4	65.4	65.4
No	4	7.7	7.7	73.1
no opinion	14	26.9	26.9	100.0
Total	52	100.0	100.0	

The given table 15 explain that 65% respondents show positive response ,7% respondents show negative response and 26% show no opinion

about that radio give information about how to overcome seasonal losses.

Table 16. Satisfaction about the role of radio in agriculture development

	Frequency	Percent%	Valid Percent%	Cumulative Percent%
Valid Yes	31	59.6	60.8	60.8
No	6	11.5	11.8	72.5
to some extent	14	26.9	27.5	100.0
Total	51	98.1	100.0	
Total	52	100.0		

The given table 16 explain that 60% respondents show positive response ,11% respondents show negative response and 26% show to some extent satisfaction about the role of radio in agriculture development.

Hypothesis Testing

H1: It is more likely that agriculture experts' opinions in agriculture programs of radio play vital role for the adaptation of new agriculture technologies.

Do agriculture experts give information about how to use new agriculture gadgets ?

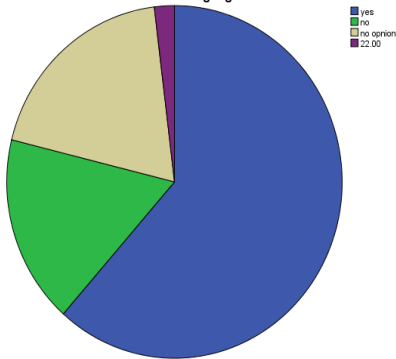


Figure 1

Do agriculture experts give information about the invention of new technologies ?

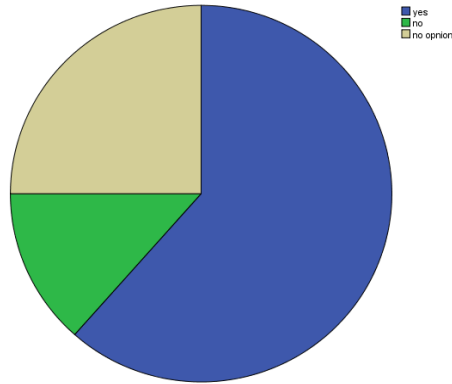


Figure 2

Do agriculture experts share the feedback of early adoptors about new agriculture gadgets in their agri based radio programs ?

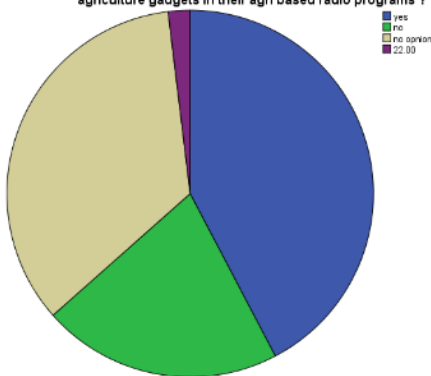


Figure 3

Does radio play a crucial role in giving awareness about new agriculture technologies ?

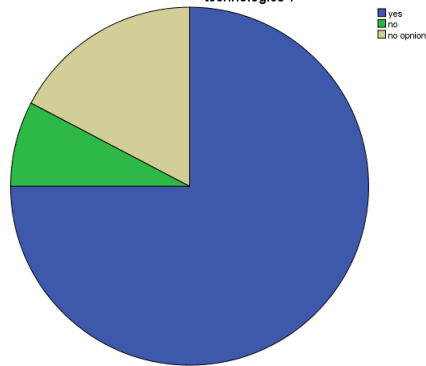


Figure 4

The survey was made to test the above mentioned hypothesis. The results reveal that agriculture experts' opinions on radio help to adopt new technologies. As in the survey questionnaire, the researcher collected data from the respondents. In which the result explains that radio gives information about the adoption of new technologies, radio also gives information about the new steps taken by the government for the welfare of the farmers. Radio gives information

about the feedback of early adopters about the new inventions.

The results are showing that the results are supporting the hypothesis. So hypothesis proved

H2: It is more likely that the role of agriculture alerts on radio are useful to prevent the seasonal losses in crops harvesting.

Do you get information about how to cultivate a crop to increase the production ?

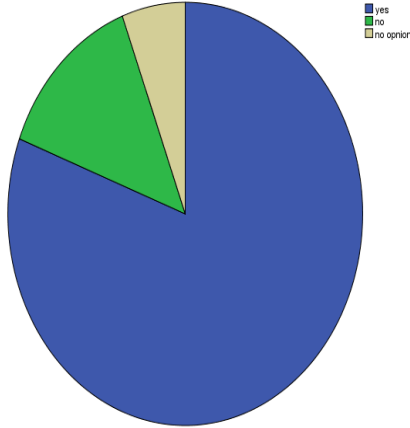


Figure 5

Do agriculture experts on radio help to overcome agriculture losses ?

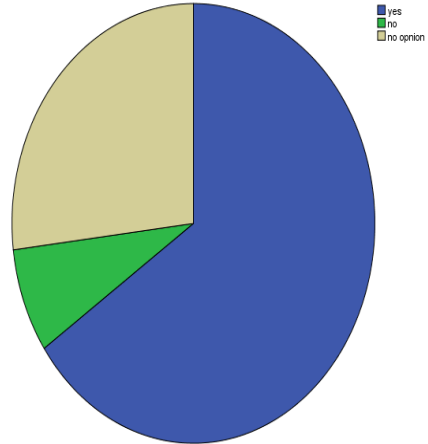


Figure 6

Do agriculture alerts on radio help how to prevent seasonal losses ?

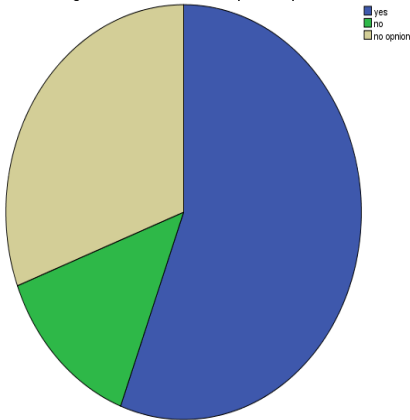


Figure 7

Do radio give information about the duration of watering crops?

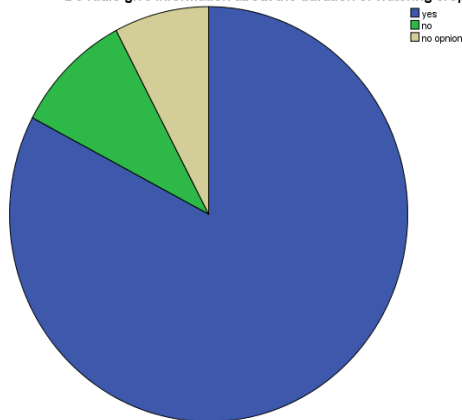


Figure 8

The survey was made to test the above mention hypothesis the result reveals that agriculture alerts on radio are helpful to prevent the seasonal losses . As in the survey questionair the researcher collect the data from the respondents . The result explain that radio give alerts on radio to prevent seasonal losses radio and give information about how the seed is put indepth to increase the cultivation. Radio also give

information about the duration of watering the crops.

The results are showing that the results are supporting the hypothesis. So hypothesis proved

H3: It is more likely that agriculture programs are much useful for the formers.

Do you get information about the new steps taken by the government for the welfare of formers?

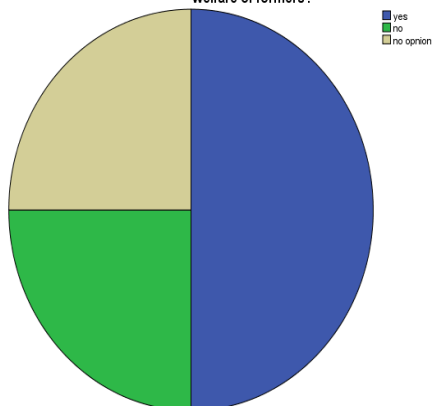


Figure 9

Does agriculture experts on radio give information about weather chane anf for which crop weather is suitable ?

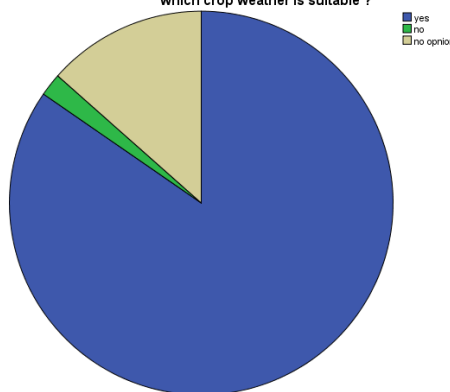


Figure 10

Does agriculture experts on radio give information about new disease of crops and how to get rid of these diseases?

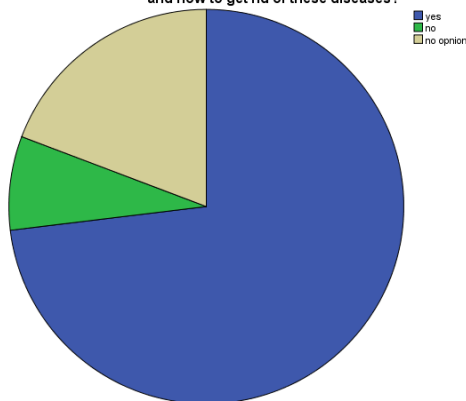


Figure 11

Are you satisfied about the role of radio in agriculure development?

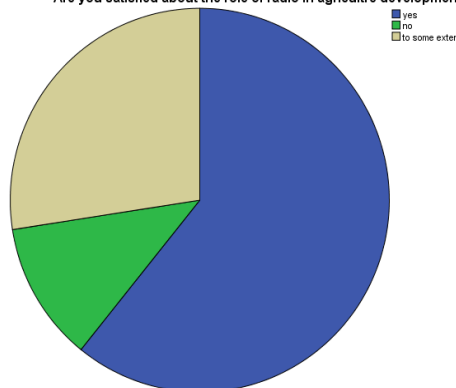


Figure 12

The survey was made to test the above mention hypothesis . The result reveals that radio is very useful tool for the formers. It provides information about the new steps taken by the government for the welfare of the formers as compare to It also provide information about weather change and which weather is suitable for the new crops. Radio provide information about new disease of crops and what type of pesticides use to get rid of these diseases also give information about the use of best fertilizer to boost the production.

The results are showing that the results are supporting the hypothesis. So hypothesis proved

Findings and Discussion

Formers mostly use radio due to low literacy rate. It mostly gives information in regional language. Radio is affordable. 70% formers have radio in their households.

Radio play a vital in giving awareness about agriculture as it is popular in rural areas. Formers mostly use radio for getting information about weather change. Radio provide information about best time to sow seed , duration of watering the crop .Radio give information about which weather is suitable for the new crops. Agri based radio programs help the farmers to improve the farming method. Radio provides information about new market rates of crops. It also provide information about steps taken by the government for the welfare of the formers. As government give subsidy on the fertilizer and also subsidy on the cotton seed.

Conclusion

The researcher conclude that radio play a vital role in agriculture development. The agriculture experts on radio help the formers how to get rid of seasonal losses. Radio experts also inform about best use of fertilizer to boost the production. It gives information about weather change. It informs formers about the attacks of disease on crops and how to get rid of these diseases. Radio provides information about steps taken by the government for the welfare of the formers. Formers mostly use radio for agriculture information but they also other media for getting information.

Suggestions

Radio is a most common, effective and easy access able media. It gives information about agriculture in regional language.

- Formers must focus on agriculture expert's information. They also focus on the weather change for the cultivation of new crops. Formers can't use fertilizer in very excess.

- Formers must discuss everything to the agricultural experts. They also share their problem with radio persons in which they raise their problem and give solution.
- As the weather is change then the news crops cultivate for the best production.
- There is a need to focus on the suggestions of agriculture experts.

Limitations

- As the respondents of the researcher was former. Mostly respondents are illiterate there is much difficulty faced by the researcher to fill the survey forms from the illiterate farmers. .
- Another problem of the researcher was that the researcher encountered to collect reliable data from respondents like respondents are formers and have radio in their households.
- Face difficulty in statistical measurement.
- Due to physical survey the researcher can't collect the all survey questionnaires after filled by the respondents.

Future Research Direction

- Researcher must use Qualitative research method. Physical interview will conduct by the researcher to know the effectiveness of radio and also know what type of improvements need to make the agriculture programs more effective.
- The researcher must try to know what type of instructions followed by the agriculture experts to increase the agriculture production and more educate the farmers about agriculture.

References

- Ahmed. (2015). *To study effectiveness of channels of communication of the transfer of agriculture technology of wheat, sugar cane and cotton to the farmer in tehsil KotAdu of district Muzzafargarh. M.Sc. (Hons.) Thesis.* Deptt.OfAgric. Ext. Univ. of Agric. Faisalabad.
- Ani, A. O. (2006). Potential of oasis for sustainable agricultural production in Yobe State, Nigeria. *International Journal of Agriculture and Biological Science*, 4(1), 1-5.
- Ani, A., & Baba, S. (2010). Utilization of Selected Electronic Mass Media as Sources of Agricultural Information by Farmers in Northern Taraba State, Nigeria. *Tropical Agricultural Research and Extension*, 12(1), 17. <https://doi.org/10.4038/tare.v12i1.1979>
- Arokoyo, T. (2003). *ICT for agriculture extension transformation. Proceeding of ICT's -transforming agriculture extension? CTA's observatory on ICTs.* Sixth Consultative Expert Meeting. Wageningen, 23 - 25.
- Atkin, G. (1987). Developing countries Farm Radio Network towards solving the world food problem. *World Farming Time, USA*. 2(11):20-23
- Ayaz, M. (1993). *Extension and Communication. In: E. Bashir, (Ed.) Extension Methods.* National Book Foundation, Islamabad. 121-152
- Behrens, J.H., & Evans, J.F.(1984). *Using mass media for extension teaching. In: B. E. Swanson (Ed.) Agricultural Extension: a reference manual.* 2nded. FAO, United Nations, Rome. 144-155.
- Buckley, S. et al. (2008). *Broadcasting Voice and Accountability: A public interest approach to policy, law and Regulation.* University of Michigan Press. USA
- CEDA. (2001). *Impact Evaluation of AICC's Publication, Radio and Television Program, Final report. Economic Survey.* 2011, Government of Nepal.
- Ekoja, I. (2003). Farmer's access to agricultural information in Nigeria. *Bulletin of the American society for information science and technology*, 29(6): 21- 23.
- Enitan, O. (1988). *Comparative Analysis of Radio and Television Drama.* Unpublished Bsc Thesis. University of Ibadan. Ibadan, Nigeria.
- FAO. (2005). *Knowledge and information for food security in Africa from traditional media to the Internet.* Communication for Development Group, Sustainable Development Department. Rome: FAO.
- Farm Radio International. (2007). *Proposal submitted to the Bill and Melinda Gates Foundation on the African Farm Radio Research Initiative.* Ottawa.
- Fassard, E. D. (2005). *Writing and Producing Radio Dramas.* Sage Publications. New Delhi.
- Haerah, A., Gani, R., Schubert, B., & Zehrfield, E. H. (1979). *Manual of Operations for an Agricultural Market Information Service, Indonesian German Technical Cooperation Project.* ATA 85/86 Publication No. 7
- Hussain, M. (1997). *Mass media. In: Memon, R.A. and E. Basir (eds.), Extension Methods.* 208-61. National Book Foundation, Islamabad-Pakistan.
- Kelsey, D. L. & Hearne, C. C. (1955). *Cooperative Extension Work.* Ithaca, New York: Comstock Pub. Associates.
- Leroux, N., Wortman, M. S., & Mathias, E. (2001). Dominant factors impacting the development of business-to-business (B2B) e-commerce in agriculture. *The International Food and Agribusiness Management Review*, 4(2), 205-218. [https://doi.org/10.1016/s1096-7508\(01\)00075-1](https://doi.org/10.1016/s1096-7508(01)00075-1)
- Mazhar, A. (1998). *Media role in process of efficient technology transfer.* Ayub Agric. Res. Instt.
- Mohammad, R. N., Salleh, M. D., & Hasbullah, A. H. (2010). "Radio as an Educational Media: impact on Agricultural Development". *The Journal of South East Asia Research Centre for communication and Humanities*, (2), 13-20. <https://fslmjournals.taylors.edu.my/wp-content/uploads/SEARCH/SEARCH-2010-2-1/SEARCH-2010-P2-2-1.pdf>
- Murty & Albino. (2012). Electronic media in rural agricultural business- A promotional injection. *National monthly refereed*

- journal of research in science & technology*, 1 (11), 63-68.
- Okwu, O. J., A. A., Kuku, & Aba, J. I. (2007). An assessment of use of radio in agricultural information dissemination: a case study of radio Benue in Nigeria. *African Journal of Agricultural Research*, 2(1): 014-018
- Omenesa, Z. (1994). *The Role of Media in Agricultural Extension Communication. A Paper Delivered at the Training of Media Officers in Research Institutes*. ABU Zaria March, 1994. p. 5.
- Saadi, H., Mahdei, K. N., & Movahedi, R. (2008). Surveying on Wheat Farmersâ€™ Access and Confidence to Information and Communication Channels (ICCs) about Controlling *Eurygaster integriceps* in Hamedan Province of Iran. *American Journal of Agricultural and Biological Sciences*, 3(2), 497-501. <https://doi.org/10.3844/ajabssp.2008.497.501>
- Sharma, N. K. (2008). *Impact Study of Farm radio Program produced by Agriculture information and Communication Centre: A case Study from the farmers of Phalebas Kannigian V.D.C. of Parvat District*, Unpublished Master's Thesis, T.U.