THE CONTRIBUTION OF RADIO IN PROMOTING AGRICULTURAL ACTIVITIES IN RURAL TANZANIA: A CASE OF RADIO NYEMO FM IN DODOMA RURAL DISTRICT

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CERTIFICATION

The undersigned certifies that she has read and hereby recommends for acceptance by the Open University of Tanzania a dissertation entitled, "The Contribution of Radio in Promoting Agricultural Activities in Rural Tanzania: A Case Radio Nyemo FM in Dodoma Rural District" in partial fulfillment of the requirements for the award of Degree of Masters of Arts in Journalism.

Signature …….

Dr. Kaanaeli Kaale

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Date……

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DECLARATION

I, Neema Hussein Msangi declare that the work presented in this dissertation is original. It has never been presented to any other University or Institution. Where other people's works have been used, references have been provided; it is in this regard that I declare this work as originally mine. It is hereby presented in partial fulfillment of the requirement for the Degree of Master of Arts in Journalism.

Signature……

Neema Hussein Msangi

(Student)

Date……

DEDICATION

Hereby, I dedicate this work to my family for being patient and tireless during the whole period of my studies.

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ABSTRACT

This study assessed the Contribution of Radio in Promoting Agricultural Activities in Rural Tanzania particularly Radio Nyemo FM in Dodoma Rural District. This study was guided by three specific objectives; to determine whether Radio Nyemo FM addresses the needs of the farming community in Dodoma Rural District, to examine the competence of the resource persons used in Radio Nyemo FM programming and to examine the appropriateness of the time and frequency of the Radio Nyemo FM programme. The study employed a descriptive research design to study the contribution of Radio Nyemo FM in Promoting Agricultural Activities in Rural Tanzania particularly Dodoma Rural District. The researcher used questionnaire to obtain information from 91 small-scale farmers and in depth interview to obtain information from key informants. The findings revealed that 67% small scale farmers listen to Radio Nyemo FM using own language, about 70% are aware on farming practices, and 56% access more farming opportunities. It was reported that 63% agreed the programme to be informative and 55% agreed that the programme provide knowledge on the type of farm inputs to apply and 57% agreed that the programme provide skills to maintain products in the farm. Furthermore, Time and Frequency of the Radio Nyemo FM Programme 58% agreed that the time the programme aired is appropriate; 41% agreed that sufficient time was allocated for the programme; 57% language used was helpful in communicating agricultural information; 55% said the richness of the language attracted them more to listen to the programme. Thus, Radio Nyemo FM through Agricultural programme fulfills the requirements of the farmers by broadcasting precise and relevant agricultural information.

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LIST OF ABBREVIATION

AC	-	Adult Contemporary
ACP	-	Africa, Caribbean and Pacific
AFRRI	-	African Farm Radio Research Initiative
ASDP	-	Agricultural Sector Development Program
CBO	-	Community Base Organization
ECA	-	Economic Commission for Africa
ECONEWS	-	Electronic Component News
FAO	-	Food and Agriculture Organization
FM	-	Frequency Modulation
GDP	-	Growth Domestic Product
HIV/AIDS	-	Human Immunodeficiency Virus Infection and Acquired Immune Deficiency Syndrome
ICAR	-	Indian Council of Agricultural Research
ICT	-	Information and Communication Technology
ISFM	-	Integrated Soil Fertility Management
MHz	–	MegaHertZ
NAIP	-	National Agriculture Innovation Project
NBS	-	National Bureau Statistics
NFM	-	Radio Nyemo FM
NGO	-	Non-governmental Organization
NSCA	-	National Sample Census of Agriculture
NSGRP	-	National Strategy for Growth and Reduction of Poverty
PC	-	Participatory Communication
PLA	-	Participatory Learning Action

PRA	-	Participatory Rural Appraisal
PRCA	-	Participatory Rural Communication Appraisal
PRC	-	Participatory Rural Communication
SAGCOT	-	Southern Agricultural Growth Corridor of Tanzania
SPSS	-	Statistical Package for Social Science
TCRA	-	Tanzania Communications Regulatory Authority
UNESCO	-	United Nations Educational, Scientific and Cultural Organization
UNDP	-	United Nations Development Program
URT	-	United Republic of Tanzania
USAID	-	Unite States Agency for International Development

CHAPTER ONE

INTRODUCTION

1.1 Introduction

This chapter introduces the study on the Contribution of Radio FM in Promoting Agricultural Activities in Rural Tanzania: A Case of Radio Nyemo FM in Dodoma Rural District. It entails background of the study, statement of the problem, objective of the study, research questions, significance of the study, scope and limitations of the study, as well as definition of key terms.

1.2 Background of the Study

Agricultural growth in Tanzania is vital for poverty eradication in view of the fact that the majority of people depend on agricultural activities for their lives. Hence, (World Bank, 2019) found that, agriculture helps in poverty reduction, raise incomes and improve food security for 80% of the world's poor, who live in rural areas and work mainly in farming (Lugandu, 2017).

One of the main problems rising in Dodoma region is that crop production is limited over the decades and its harvest are insufficient compared to the growth of population in spite the effort for poverty reduction. In identifying the problems of low productivity, it is clear that adopting new technologies for better crop production in Tanzania, Dodoma region encounter challenges to raise productivity directly since farmers in this region have lack of knowledge on how to apply improved methods and limited government resources to facilitate agricultural extension services (Lugandu, 2017). In other views, the low adoption rates of new technologies and improved farming techniques caused by lack of awareness and other complexities, result in poor outcomes. World Bank studies described that a

knowledge and skill delivery could be an integral part in farmers' capacity to generate higher growth in agricultural yield (Adebiyi & Okunlola, 2010).

1.2.1 Agricultural Extension

Agricultural extension service is one of the most common means of transferring knowledge and skills to farmers in helping them in their agricultural activities. The primary objective of the agricultural extension service is to provide education on how to apply new principles and technologies of improving farming practices. The extension activities encourage farmers to formulate group for increasing productivity and facilitate market for their agricultural products through institution (Mtega, 2012). Mass media have proved to help in classifying concepts, stimulating group and individual activities, developing a collective critical awareness, changing attitudes, imposing a new structure or organization on certain subjects and encouraging originality and creativeness (Jothi, 2019).

The media take a variety form – cognitive, attitude, behavioral and psychological. It is a source of information to the audience and raising debate that change behavior of people through radio programmes. Radio is recognized as an engine for facilitating transfer of information to people in the large platform. The radio wave information is recognized to support wide spread of news, information and educational awareness.

1.2.2 The Uses of Community Radio for Development

Historically the term rural radio and community radio are always used interchangeably to articulate FM stations established to broadcast in the local area. Over the past decades, community radio is witnessed to improve directly with improvement of information technologies. This is a source of development paradigm shift over the rural community through a more participatory means of information transfer to the audience (Ngugi 2015).

The use of community radio is one of the fruitful services for social and economic development in Tanzania. There is increasingly concern on the community radio ability to access small-scale farmers, with various programs, which are needed in agricultural development. This is evidently contributed to increase agriculture in household.

The number of agricultural households in Dodoma region was 323,719 out of which 233,709 (72.2%) were involved in growing crops only, 608 (0.2%) were involved in livestock keeping only and 89,402 (27.6%) were involved in crop production as well as livestock keeping. Most of the agricultural households rank annual crop farming as an activity that provides most of their cash income followed by off farm income, tree/forest resources, livestock keeping/herding, remittances, permanent crop farming and fishing/hunting. These agriculture household need more information and knowledge to improve farming activities, yet farming are still organized in low technology base and capacity. Community radio like Nyemo FM designed special programs for farming household, but still farming is organized at low level and stage. This increased the need to search out on the contribution of Radio Community in promoting agricultural activities in rural Tanzania, particularly Dodoma District.

1.2.3 Radio Nyemo FM Profile

Radio Nyemo FM is a private owned community media, licensed by the Tanzania Communications Regulatory Authority (TCRA) in 2010 to operate as Content Service Provider. Its studios are located at Kikuyu Area, Hazina Street in Dodoma region. Nyemo FM's carrier frequency is 97.7 MHz.Nyemo Radio FM covers central zone area including Dodoma, Kondoa, Mpwapwa, Kongwa, Chemba, Bahi, Chamwino, Iringa, Manyoni and Singida. Nyemo FM engages with its audience and all other stakeholders by hearing and sharing their voices. Its content is educative, informative and entertaining, with regular

reference to real life issues of human interest. Nyemo Radio FM adopts a non-partisan approach to broadcasting as evident by its clean track record for the entire period it has been in operation. The station has physical presence across the region with its representatives in all districts of Dodoma Region.

1.3 Statement of the Research Problem

As in many other countries, Tanzania suffers from a limited numbers of extension agents (1:4,000 farmers) (Mtega, 2012). Therefore, it is difficult for them to reach all farmers in time. That is why a radio have been used to broadcast agricultural programmes with relevant information at the lowest costs and to large areas even those which are not reachable by extension agents as expected.

While other scholars confirmed that these radio programmes have a large number of listeners, there has been less attention to the farmer's perception about the specific benefits these programmes offer. This research therefore contributed to this body of work, by assessing the contribution of Radio Nyemo FM *Agricultural Programme* in promoting farming productivity in Dodoma Rural District.

1.4 Objectives of the Study

1.4.1 General Objective

The core purpose of the study was to assess the contribution of radio in promoting agriculture in rural Tanzania.

1.4.2 Specific Objectives

i. To determine whether Radio Nyemo FM addresses the needs of the farming community in Dodoma Rural District.

ii. To examine the competence of the resource persons used in Radio Nyemo FM programme

iii. To examine the appropriateness of the time and frequency of the Radio Nyemo FM program.

1.5 Research Questions

i. In what ways did RadioNyemo FM address the needs of the farming community in Dodoma Rural District?

ii. What was the proficiency of the resource persons used in Radio Nyemo FM programme?

iii. What was the appropriateness of the time and frequency of the Radio Nyemo FM programme?

1.6 Significance of the Study

The study will help to get better value of the programme's content, designing good diversity and format on agricultural programme that meets requirements of the listeners. Furthermore, it will help farmers to acquire new knowledge and improve their career on new farming techniques, market opportunities and the contribution of Nyemo Radio FM in the community that can convey social change and mobilization. Hence, the communities can gain profit from their farming.

1.7 Scope and Limitation of the Study

This study focused on farmers in Dodoma Rural. It was carried out between June and July after harvesting. Moreover, it based on a radio programme which in Swahili it is called "KilimoChetu" and the programme is on air during Saturdays from 7.00 to 9.00 am.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter presents analysis of specific and wide literature connected to the key topic in the study, objectives and research questions. The key topic comprises broadcasting, farm production and rural development**.** Both published and unpublished works such as newspaper articles, articles, books, theses, journals, convention speeches, policy reports, and presentations of other works on the role of broadcasting in farm production, model, theoretical and conceptual frameworks have been analyzed.

2.2 Definition of Key Terms

Agriculture

Agriculture is defined as an art or practice that facilitate cultivating the soil producing crops and raising livestock and in varying degrees the preparation and marketing of the resulting products (Janick, 2013). In view of that Reid (2011) defined agriculture is recognized as a process of producing food, feed, fiber, fuel and other goods because of raising plants and animals. *According to Ikerd, (2010)* agriculture is the science and art of cultivating plants and livestock, it is a development that rises from human history development and civilization pace, in which farming of domesticated species created food surpluses that enabled people to sustain living. According to NBS (2013) Agriculture in Tanzania is a source which motivate agricultural production, in which farming is recognized to support survival, in which commercial agriculture is difficult to achieve because it needs heavy investment, in terms of irrigation, agricultural skills, fertilizer, pesticides, transport, technology and research. Agriculture need to be well developed as a

means for providing food through cultivating plants. The agricultural activities are used by farmers and non-farmers to support living.

Community Radio

Community radio is a radio service offering a third model of radio broadcasting which may be commercial and public broadcasting. These community radio tend to serve a geographic communities and communities of interest. The community radio is recognized to facilitate in terms of popular and relevant to a local, specific audience is generally overlooked in terms of mass media (Kembero, 2014). Community radio stations are operated, owned and influenced by certain communities, which tend to serve. The community radio is basically operated in terms of non-profit, and it provide mechanism for welcoming the individuals, groups and communities to tell own stories, share experience and welcome contributors (Bryson, 2011).

Community Radio is characterized by its ownership and programming and the community it is authorized to serve. The radio works for ordinary people. To qualify as a community radio, the ownership and control of the station must rest squarely, and unquestionably, with the community it claims to serve (UNESCO, 2001). In view of that community radio is defined by Fairbairn &Rukaria (2010) is a short range, not for profit radio station or channel focus on the information needs of the people living in a particular locality. It relies on the language and formats which are found in the local context. The community radio station is the source of mobilizing campaign, which take opportunity to announce campaigners or facilitating the campaign. Thomas (2011) defined community radio as fundamentally not a technical enterprise, but a venture that aim to build humanity. A radio in the community remains a traditional person-to-person connection, in the realm of new technologies in the digital age.

Agricultural Information

In the situation of rural development, information associates to products, skills and techniques, which is facilitated by the communication process to go further the dissemination of information skills and thoughts from the source purposely to change intension of behavior recipients. The information is delivered to the farmers to facilitate farming activities in the innovative way (Jimi &Noeem, 2013). Information policy is the engine, which supports rural development for the performers in terms of an effect of rural development, from decision-makers to peasant farmers. The ability to reach farmers is enhanced by the information; in order for information to reach the farmers must be transferred by appropriate channels (Lavison, 2013).

It is believed that agricultural information for small-scale farmers need to improve farming activities through creative and innovation process. The message is transferred through action which affects the feeling of individuals in the respective message provision. The underlying trend is the way to promote the basis of knowledge, information and communication approaches (Lugandu, 2017).

FAO (2012) indicated that a critical factor in meeting the challenge of ensuring food security in Africa is human resource development through knowledge building and information sharing. According to the report communication technologies are powerful tool for informing people and providing them with the knowledge and skills they need to put agricultural science and production inputs to best use (Mignouna, *et al.*, 2011). The agricultural sector generally and farmers particularly, are highly exposed to threats because of bigger disparities in market uncertainties and climatic situation. Farmer's experience to jeopardize and uncertainty is frequently worsened by lack of information about climate, inputs, farm management practices or market prices (Nigel, 2017). Farmers

need access to agricultural information that enabling them increasing in productivity. Nigel, (2017) argue that the application of agronomic techniques can reduce the impact of pest attacks, drought or other source of yield variability. Thus, radio expected to play a role in bridging the information gap, and in eliminate the information asymmetric that exists between farmers and regions (Okello, *et al.*, 2011). There is a need for essential information about predictable weather conditions, and about knowledge of know-how: which crops to plant, which seed varieties to use, what the best cultivation practices and farm management practices are for that area, and the best suitable technology available locally. Improved returns from agricultural production through enhanced access to markets can be a crucial step in alleviating poverty and overall livelihood improvement (Okello, *et al.*, 2011).

Promotion means activities that communicate the merits of the product and persuade target customers to buy it (Kotler Armstrong, 2013: 76).

Smallholder farmers are small-scale farmers, pastoralists, forest keepers, fishers who manage areas varying from less than one hectare to 10 hectares. They characterized by family-focused motives such as favouring the stability of the farm household system, using mainly family labour for production and using part of the produce for family consumption (FAO, 2012).

2.3 Theoretical Framework

The researcher used the Uses and Gratifications, Participatory Communication Model and Diffusion of innovation theories.

2.3.1 Uses and Gratifications Theory

The theory states that, media users play an active role in choosing and using media. Supporters of this theory, Blumer and Katz (1974) believe that people use the mass media

to their benefit or to satisfy their own needs (Baran & Davis, 2015). The uses and gratifications approach springs from a functionalist paradigm which presents the use of media. The gratifications of social or psychological needs of the individual is to be influenced. The uses and gratifications theorists argue that people's needs influence the use of a medium. Additionally, different desires are associated with individual personalities, level of maturation, backgrounds and social roles (Myers, 2011). The typology of the common reasons for media, use such as the need for information and personal identity. This approach was essential to assess how the targeted farmers use agricultural information broadcast on radio to suit their farming needs. It provides the way farmers may respond to information and use in the respective farming.

2.3.2 Diffusion of Innovation

This is a pattern designed by Everett Mills Rogers in 1962 explaining it as a mental process through which an individual passes from first knowledge of an innovation to a decision to adopt or reject and to confirm the decision (Nyeresa, 2012). Scholars of the diffusion of innovation have argued persuasively that the adoption of new behaviors should be viewed as a multistage process. They recognized that this process occurs over a period of time and consists of a series of action such as:

Knowledge

This is where an individual is acquainted with the innovation's existence and increases some understanding of how it works. Then, individual chooses which innovation messages to attend to and which ones to ignore. The knowledge is functional; it is structured not to satisfy an elegant logic, but to facilitate daily use (Okunlola, *et al.,* 2011). Thus, that knowledge-seeking must be initiated because it is not a passive activity. In this case, therefore, individual farmers rarely expose themselves to farm radio programmes unless they think there is a need for the information (Supratit, 2015).

Even if such farmers are aware to such radio programmes, there will be slight effect of such exposure unless the farmer recognizes the farm radio programme is relevant to the current needs and reliable based on the existing thoughts and believes. The knowledge of innovation can generate inspiration for its adoption and farmers may adopt such technology (Keelan, *et al.,* 2014). There is a need to search for information and relevant knowledge through community radio, to avoid unfamiliarity of such programmes. The radio programmes which provide knowledge on the adoption of farming method are relevant to farmers.

Persuasion

The major result of this method is either a positive or an adverse outlook towards the innovation, which is the belief in the utilization of the new idea for the individual. It is understood in terms of persuasion that leads to a successive change in overt behavior (Feder, *et al.,* 2017). It is clear that adoption or rejection is directly related to the attitude held. The farmer strongly look for farm information out of the messages provided in the radio that added value to the best of farmers current needs, and disregards others that are not. A common view of the innovation such as relative advantage, compatibility and complexity are therefore, developed at this stage.

A prior positive practice with the adoption of innovations generates a bank of favorable thoughts to change, that facilitates the development of a productive evaluation of the next innovation considered by an individual. On the contrary, a miserable experience from a new farm input that seeming as a malfunction can lead to fight for future new thoughts (Happer& Philo, 2013). Therefore, Radios such as Nyemo FM for that matter, regularly arrange for radio forums, road shows and talk shows in which they present pro-change programmes that expose listeners and even give them chance to ask questions about

programmes and influence them to use such information. This way, the radio station makes smooth adoption of farm radio programmes by its audience.

Decision

This is a decision between two options i.e. either to adopt or to abandon a new thought. It also involves direct consideration of whether or not to attempt the innovation, if it is attemptable. Innovative thought may be adopted at this stage in the process and be used continuously or discarded later due to transformations in how the individual perceives the innovation. Hence, most farmers do not adopt a new farm practice without testing on experimental basis to conclude its efficacy (Kassam, *et al.,* 2017).

Confirmation

The individuals seek support for the decision that made, but it is relied on the overturn in the prior decision with contradiction messages about the innovation. A farmer adopted and started to utilize a new fertilizer, it is generally for the farmer to stop using of better fertilizer once failed to be satisfied by the result of the input (Kumar, 2010).

2.3.3 Participatory Communication Model

The theory of participatory communication (PC) refers to the process by which people within a given community create and share information in order to reach a mutual understanding (Milan, 2009). In the case of radio, it means arguments and other active forms of participation in the decision-making, production and sharing of various ideas. This study used this approach to identify the level to which phone, discussions and interviews spread information for the benefit of the farmers.

1. **Relative Advantage** - intensity of the reward or punishment resulting from adopting an innovation.

2. **Compatibility** - the degree to which an innovation is perceived as consistent with the existing values, past experiences, and needs of the receivers.
3. **Complexity** - this is perceived by potential adopters as negatively related to its adoption level.
4. **Trialibility** - the degree to which an innovation may be experimented with a limited basis.
5. **Observability** - the degree to which the results of an innovation are visible and can be easily communicated to others.

The individual poses those variables that are present in the situation prior to the introduction of an innovation. These factors have effect to the level of innovation adoption and its use by an individual (Bill & Melinda, 2011). It contain social influence, articulated the pressure applied on the individual by the societal norms and values, and views of others; channel of communication, either mass media or interpersonal; seemed usefulness or to the point to which a user develop trust on the benefits from using the farm radio programme; and accept easily on new innovation (Ericka, 2013). Moreover, besides the determining factors, the model includes a set of mediating factors towards behavioral objective. A farmer for example finds it profitable to utilize farm radio programme (perceived usefulness i.e. determining factor) but shortage of finances (mediating factor) can considerably weaken the new farm idea adoption (Bisangwa, 2013). The mediating factors are recognized by the model to be personal factors, like attitude towards change, strength of perceived need for the innovation, socio-economic factors like education (level of literacy) and accessibility of finances. These factors are related to the incentives or controls on the individual's decisions. The model assumes that actual adoption and use is the source of related outcome, by the uses of mediating and determining factors (Kassam*et al.*, 2017).

Under that ground, communication channels can be mixed in media forums to provide maximum results. The knowledge stage, as individuals become aware of an innovation tend to rely on mass media; as individuals move toward persuasion and the decision well implemented based on personal sources. These make individuals to rely on the mass media, in the use of community radio as source of information.

2.4 Empirical Literature

UNESCO report (2018), observed that local radio acts as an actor for development because its involving populations in decision-making and participation processes, stimulate public debate, promote civic rights and help held authorities accountable towards the citizens. The report said here is some proof that radio alone can bring about results. Retz & Hasbullah (2010) conducted a study on the role of community radio in livelihood improvement. This was a case study design in which the sample size was 12 communities members, data were collected through focus group discussion and in depth interview. Findings revealed that community members provide feedback in the form of stories describing the change in their lives through radio. The radio when used in combination with some form of interpersonal support such as discussion printed materials or contacts with extension workers and found them to be very efficient and effective. For instance, the people listen in groups and take notice of issues raised and sometimes call in to make their opinions known. Kumar (2010) conducted a study on the agriculture development and economic transformation.

The sample size was 67 respondents, data were collected from related documents and interviewing community members, later on was analyzed by using content analysis and excel computer software. The study findings revealed that knowledge and information are essential factors for accelerating agricultural development through increased production. Radio could make the greatest contribution by telescoping distances and lowering the cost

of communication between stakeholders, since it has the potential assistance to farmers in the entire sequence of production. The production ultimately tends to lead in sales. The National Agriculture Innovation Project initiative (NAIP) of the Indian Council of Agricultural Research (ICAR), Government of India, has also pointed out the requirement for the use of community radio stations to reach rural farmers in the country in order to understand their weaknesses, successes and gaps to ensure that they meet farmer's expectations and needs so that they can foresee and manage their risk at the best level.

Okunlola, *et al.*, (2011) conducted a study in Nigeria on the adoption of new technologies by fish farmers. The sample size was 395 respondents. The data were collected by using questionnaire to collect information from small-scale farmers and interview professional staffs, the collected data were analyzed by the use of SPSS, where the descriptive analysis was used. The study findings showed a high level of listenership to the programmes. The study found that 66% of the respondents listened to the agricultural programmes aired on Radio Benue and 42% of the listeners reported to find programmes which are relevant to their agricultural informational needs. This depict that some people listen to radio due to the programmes offered.

Noorivandi & Ommani (2009) conducted a study on the sustainable development and its challenges in developing countries. The study was a survey design, where by sample size was 169 respondents, data collected by using survey method, in which questionnaires were used as instruments. The documentary review was used to collect some secondary data. The results found that in most of developing countries, starting from Asia, Latin America and Africa, there are concerned efforts by Governments to guide its media towards development goals. Many countries over the years made many attempts to use the media to push development in Agricultural programmes. There was comparative success

in a number of those development programmes. There is existence of foundations which connected by hundred radio stations in the Latin America.

Fairbairn and Rukaria (2010) conducted a study in Kenya on the Community Media Network. The study was a cross sectional design, in which information collected at a single point in time from 97 respondents. The data were collected by using questionnaire and some documentary review method, in which the collected data was analysed by using excel computer software. The findings showed that 98% of farmers have access to a radio message from various audio technologies. Two key factors were shown to contribute to radio listenership. These were language of communication and content. Farmers generally prefer listening to relevant, exciting and different programmes in their local language. Programmes that carry highest listeners include the news, sports, and politics. Farmers as well listen to agricultural programmes, but they feel that these programmes are often centered more on farm inputs than their needs and preferences.

Isis, *et al* (2013) conducted a study on the poverty and small scale range of farmer in Uganda, Kenya and Tanzania. The sample size was 1500 small holders farmer's, data collected by using questionnaire from three countries, it was analysed by using SPSS, and Microsoft excel. The findings showed that agricultural programming was broadcast seven hours per week in nineteen languages. The radio was used in food growing campaigns to motivate its audiences. There is a clear problem on the feasible way of reaching their rural people with national policies on farm production. The radio sets and radio stations have increased in Tanzania. The success of this medium can further improve radio stations to satisfy the specific wellbeing and needs of their audience. The rural educational radio station goes beyond modernization, it increases ability to mobilize populations to contribute in several activities. It involves controlling and increasing of the population's capability to live better in their conditions.

2.5 Conceptual Framework

This is a descriptive diagram showing the connection between the independent and the dependent variables (Githaiga, 2008). In this study, the independent variables are categorized as firstly, Radio Nyemo FM Programme such as Listening to Agricultural Programme, Lessons Learnt from Agricultural Programme, Share farming information. Secondly, Competence of the Resource Persons such as understand the lesson about modern techniques of farming, understand the expert in farming programme, the programme is informative. Thirdly, appropriateness of time and frequency the programmeis aired whether is appropriate and sufficient. Personal characteristics and Social factors are the Intervening variables promoting agricultural activities.

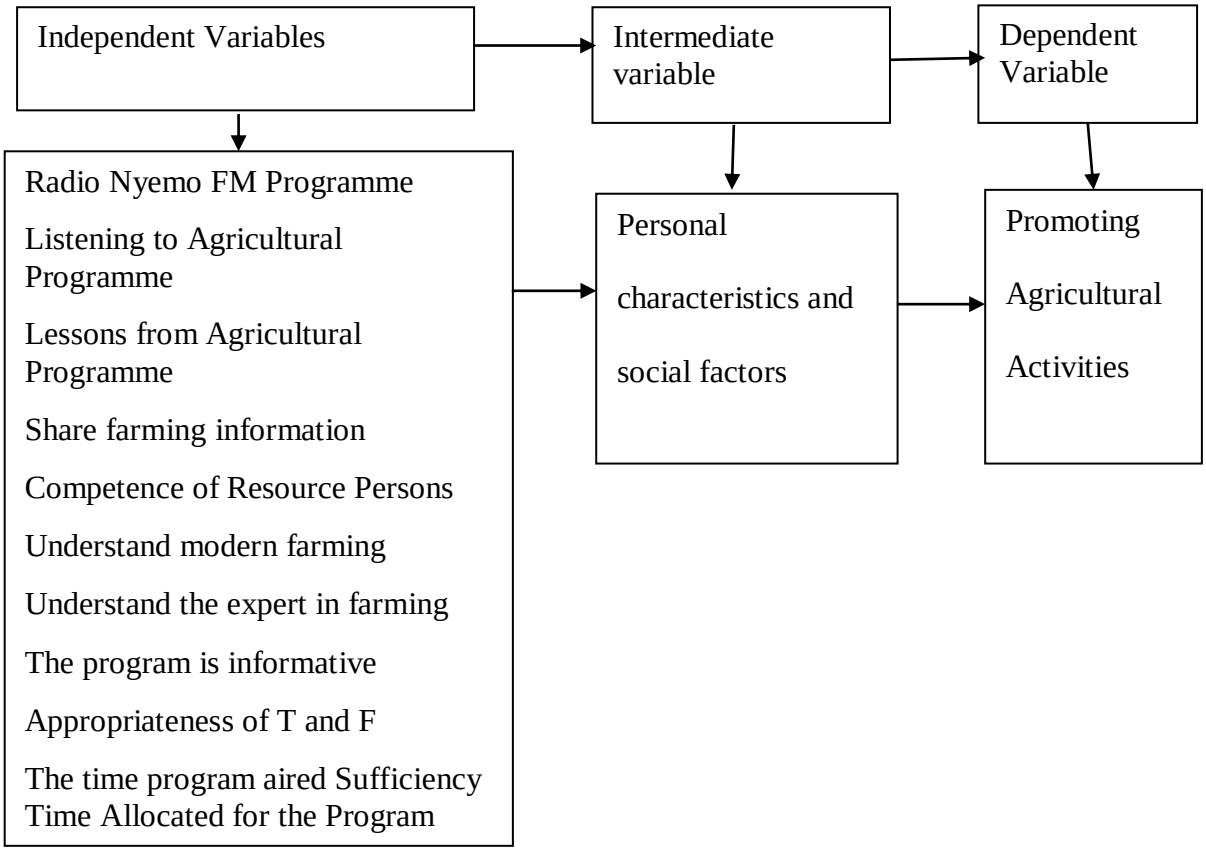


Figure 2.1 **Conceptual framework**

2.6 Research Gap

In the review of theoretical analysis and empirical literature, it has been found that there are limited numbers of extension agents. This has created a barrier to accessibility of extension services to farmers especially of small-scale size. This call for improved system for reaching knowledge and extension services to farmers of small-scale size. The only alternative to enhance outreach is through radio programmes, which are supported by a number of listeners. This is the reason the current study focused on the contribution of Radio Nyemo FM Agricultural Programme in promoting farming productivity in Dodoma Rural District.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the research design, description of the study area, sample size, sampling procedures, data collection techniques, data analysis and presentation, validity and reliability of research instruments and ethical consideration.

3.2 Research Design

This study used a descriptive research, which focuses on the fact-finding investigation, which intended in providing information about the role played by community radio broadcasting in promoting farm productivity among populated rural farmers. This research design enabled the researcher to ensure that study objectives captured in data collection (Rajagopal, 2019). Both quantitative and qualitative approaches used to collect data. This study used qualitative data to present more description of respondents concerning the major study themes (Demetrius & Bryan 2012). On the other hand, quantitative data was used to present more detailed information on the basis of numerical information (Creswell, 2015). While a quantitative approach provides a high level of measurement precision and statistical power, a qualitative approach provides greater depth of information about how people perceive events in the context of the actual situations in which they occurred (Creswell, 2015).The combination of quantitative and qualitative approaches provided clear understanding of the phenomenon of this study.

3.3 Area of the Research

The study was carried out at Radio Nyemo FM in Dodoma region, which is the Capital city of Tanzania where the problem was cited. The region is located in central part of Tanzania whereby their habitants are engaging in cultivating maize, grapes, groundnuts

and sorghum therefore the farmers need information about agriculture. This study was carried out at three wards in Dodoma rural, which are Mbabala, Mpunguzi and Hombolo. The researcher interviewed at least 20 farmers in each wards. This area of research was selected purposely to get relevant respondents, the accessibility of information and data required by this study was another justification and the researcher's familiarity with the area and field, for that reasons provided more room to access required data and information.

3.4 Population

In research, population is defined as an entire group of objects that a researcher wants to study and about which he plans to generalize findings (Ame, 2011). In this study, targeted population was 1,000 Dodoma rural farmers aged 18 to 45 years. The population of this study incorporated both male and female general population of Dodoma rural, who are farmers and have access to Radio Nyemo FM.

3.5 Sample Size

Sample size is a count of individual samples or observations in any statistical setting, examples are scientific experiments or a public opinion (Emme, 2013). The sample size computed by using Yamane, 1967 formulae as follows; thus, from the target population the sample size is determined using the formulae below:

$$n = \frac{N}{1 + N(e^2)}$$

Where n = sample size, N = the target population 1000 small scale farmers in Dodoma rural areas

e = margin of error (10%)

$n = 1000/ 1+ 1000 (0.1)^{2 =} 91$

The sample size was 91 small scale farmers

Table 3.1: Distribution of Respondents

Name of Village	No. of small scale farmers	No. of respondents
Matumbulu	359	33
Nghurabi	266	24
Zepisa	131	12
Mahomanyika	107	10
Msisi	78	7
Mphusu	59	5
Total	1000	91

3.6 Sampling Procedures

Sampling is a process of selecting units (people, organizations) from a population of interest so that by studying the sample it may fairly generalize the results back to the population which they were chosen (Emmel, 2013). This study used purposive and cluster sampling procedure.

3.6.1 Purposive Sampling Procedure

The researcher used purposive sampling to select the sample from Key informant population. The method is based on characteristics of a population and the objective of the study. According to Kumar (2011) purposive sampling allows the researcher to apply the best sample according to the purpose of the study. In this study, purposive sampling enabled the researcher to select Radio Nyemo FMprogramme manager who provided information about agriculture programme. Purposive enable the researcher to save time and money as it allows the researcher to go straight to the reliable source.

3.6.2 Clusters Sampling Procedure

Clusters are natural grouping of people, for example, electoral wards, general practices and schools (Alvi, 2016). Cluster Sampling involves obtaining a random sample of

clusters from the population with all members of each selected cluster invited to participate (Labaree, 2009). Cluster sampling technique was used to select respondents (farmers) from three wards in Dodoma Rural Districts who were listening to the Agricultural Promotion Programme through the Nyemo Radio FM. Journalist and key informants who were familiar with farmers and Agricultural Promotion Programmes.

3.7 Data Collection Technique

This study used interview and questionnaire to acquire information about the role of radio broadcasting in promoting agricultural activities in rural Tanzania focusing on Radio Nyemo FM in Dodoma Rural District. This study used interview and questionnaire to collect data

3.7.1 Interviews

The researcher used face to face interview to collect qualitative data from key informant's interviews. Open ended questions were used to guide journalists to provide information about the role played by Nyemo Radio FM in promoting farm production. Interview is appropriate for this study because it explore the views, experiences, beliefs or motivations of individuals on specific central theme (Denzin& Lincoln, 2005).

One of the benefits of this method is that, face to face interview enabled a researcher to gather information rapidly (Creswell, 2009). The interview enabled the researcher to collect information about research questions. However, in type of primary data collection, researcher has direct control over the flow of process and clarifies certain issues during the data collection process (Wimmer, & Dominick, 2014). The in-depth interviewing is repeated face-to-face encounter between the researcher and the informants directed towards understanding informants' perspective on their lives, experiences or situations as expressed in their own words (Mertens, 2009). Therefore, because of the time spent with

the key informant, it is assumed that relationship between researcher and informant was enhanced and the corresponding understanding and confidence between the two had direct to in-detail and precise information.

3.7.2 Questionnaires

According to Wimmer, & Dominick (2014) a questionnaire is a data collection tool with a list of questions prepared by the researcher to be answered by the respondent. A questionnaire has the capacity to collect a large quantity of information in a reasonably quick space of time (Emmel, 2013). This study used close and open-ended questions and cluster sampling to collect data from small scale farmers on the contribution of Nyemo Radio FM in promoting farm production in Dodoma Rural district.

3.8 Data Analysis

Data analysis as the process of assembling, cleaning and examining data. This study used both quantitative and qualitative research methods to analyze the data.

3.8.1 Quantitative Data Analysis

Quantitative data analysis comprises the calculation of frequencies of variables and differences between variables (Thompson, 2012). The study used the Statistical Package for Social Science (SPSS) version 20, in which the coding and summarizing were in statistical format. Descriptive statistics were used to decrease the data for easier interpretation of frequency distributions. These measurements provided frequency distribution summaries by using tables, pie charts, curve and percentages.

3.8.2 Qualitative Data Analysis

Qualitative data refers to non-numeric information such as interview transcripts, notes, video and audio recordings, images and text documents (Mertens, 2009).This study used

interview and open ended question in the questionnaire. The researcher used discourse analysis, a method of analysis of naturally occurring talk and all types of written text to order, to get clear meaning of the information from the key informants and farmers. Data analysis contains three steps as following:-

Firstly, the researcher used Atlas ti 6.0 software for qualitative data analysis in organizing, coding and organizing raw data in order to try to make sense of it; secondly, the researcher classified themes and patterns and then interpreted it to get a clear meaning of the textual data; and lastly, the researcher summarized the data and connected it with research questions in order to identify the role played by Radio Nyemo FM in promoting farm production in Dodoma Rural District.

3.9 Validity of Research

The validity explains how well the collected data covers the actual area of investigation. The content of validity was determined by homogeneity of the focus groups, for example, in age, gender, level of education and income and so on, as a too diverse group may not provide representative response (Thompson, 2012). By asking questions related to the research objectives and knowing who to ask, the study used open-ended questions which allowed respondents to provide a full answer, to capture information which is related to the research.

3.10 Reliability of the Research

The reliability is the consistency with which a repeated study measures the same results across time and observers. The same data collection methods are used with similar sample, the same results was achieved. To test reliability of the focus group discussion, the study was used triangulation, whereby data were verified from one method to another (Emmel,

2013). For example, one participant's responses are linked with observational objects and other respondents' views. For instance, views from one person were match up to another.

3.12 Ethical Considerations

The researcher obtained consent letter to carry out the research from the Head of Journalism and Mass Communication Department at Open University of Tanzania, which was presented to the selected participants in the study. Informants and participants were informed about the reason, method and benefits of the study. Participation was on voluntary basis and no data was collected without authorization. The respondents were treasured and any requests were accepted where possible. They had a right to reject to respond any questions or even withdraw from the study at any time, right to ask for any clarification needed.

CHAPTER FOUR

FINDINGS

4.1 Introduction

This chapter presents the finding and discussions about the contribution of Radio Nyemo FM in promoting agricultural activities in rural districts of Dodoma Region. The findings are presented based on the research questions the respondents were asked. The findings and discussions rely on the objectives of the study, which were: To examine the appropriateness of the time and frequency of the Radio Nyemo FM programme. To examine the competence of the resource persons used in Radio Nyemo FM programme. To determine whether Radio Nyemo FM addresses the needs of the farming community in Dodoma Rural District. The data collected from the respondents were analyzed and calculated into percentages, frequency tables, curves and pie charts. Each graphical presentation is preceded by a description and an explanation of the analyzed data.

4.2 Response Rate

The study focused on a sample population of 91 farmers from whom their responses were anticipated to inform the study about the efficiency of radio in agricultural development. Out of the sample size, 86 responses were found, which gives a 89.8% response rate. This makes the study valid and reliable. Some of the respondents stayed too long with the questionnaires thus at the time of retrieval, quite a number of respondents could not be traced. In spite of these drawbacks, the total collected was quite enough to guarantee the progress of the study.

Table 4.1: Questionnaire Response Rate

Respondents	Administered	Returned	% Return Rate
Matumbulu	33	33	100
Nghurabi	24	24	100
Zepisa	12	10	83
Mahomanyika	10	9	90
Msisi	7	6	86
Mphusu	5	4	80
TOTAL	91	**86**	**89.8**

As table 4.1 above, this research planned to carry out eight (8) interviews with key informants as well.

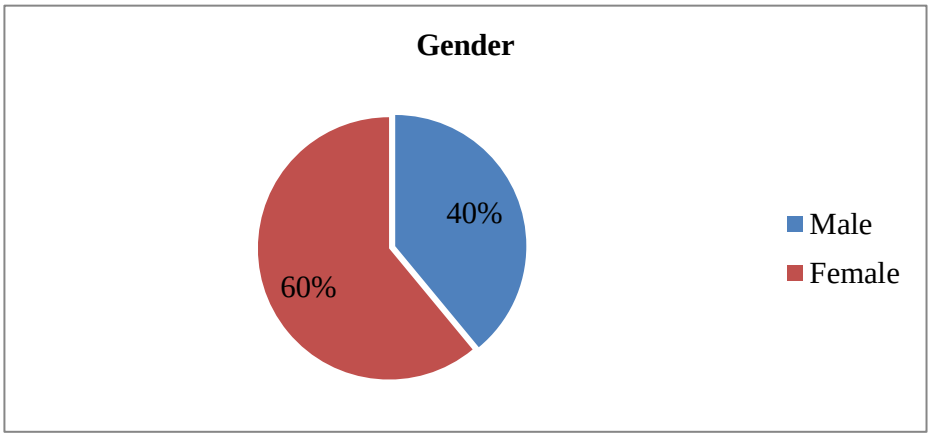
4.3 Demographic Information

The farmers were requested to indicate their demographic information, which included their age, gender and level of education.

4.3.1 Gender of the Farmers

As pointed out in figure 4.1, out of 86 farmers female were 52 which is equal to 60% while 34 were male which is 40%

Figure.4.1: Gender of the Farmers



4.3.2 Age of the Farmers

The results indicated that out of 86 of the respondents 17% were aged between 18 - 25 years, 23% were aged between 26 - 33 years, 28% were aged between 34 - 41 years, 22% were aged were aged between 42 - 49 years, 10% were aged between 50 - 66 years. This illustrates that 90% of labour force has age between 18-49 years old as Table 4.2 showed.

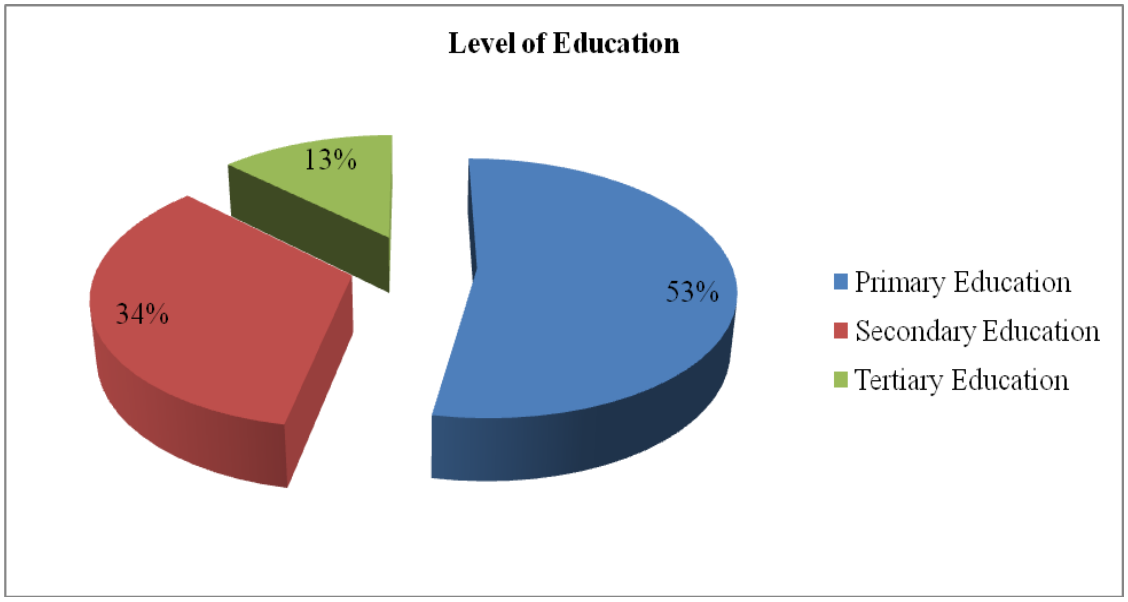
Table 4.2: Age of the Farmers

Age in years	Frequency	Percent
18 – 25	15	17
26 – 33	20	23
34 – 41	24	28
42 – 49	19	22
50 – 66	9	10
Total	**86**	**100**

4.3.3 Level of Education of the Farmers

The findings illustrates that out of 86 respondents 46 which accounted for 53% have primary education, 29 which accounted for 34% secondary education and 11 which accounted for 13% have tertiary education. This depicts that most of the respondents have primary education and beyond. These findings interpret that most of the farmers had the ability to read and write. Therefore, most of the farmers can participate in Nyemo FM Programmes.

Figure 4.2: Level of Respondents



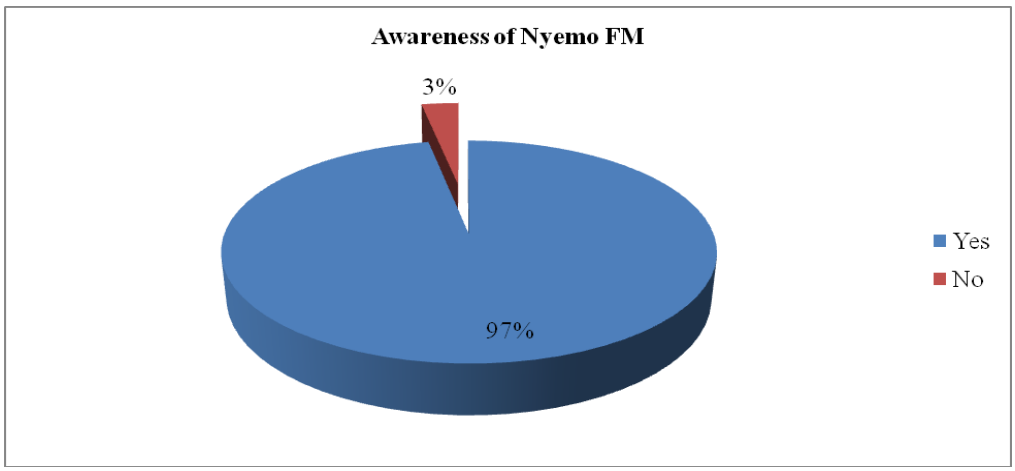
4.4 Awareness and Participation in Radio Nyemo FM Station

In determining the effort of Radio Nyemo FM in creating agriculture and promote agriculture through its radio programme, the farmers were asked to specify whether they were aware of Nyemo FM, whether they were listening to Radio Nyemo FM, which programme they know and their favorite programmes and whether they were participating in the programme.

4.4.1 Awareness and Listening to Nyemo FM

The farmers were asked to specify whether they listened to Nyemo FM; the findings showed that 83 respondents (97%) out of 86 listen to Nyemo FM while three respondents (3%) they don't. This illustrates that most of the farmers in this study are listening to Nyemo FM as shown in figure 4 and thus they had the information necessary in farming.

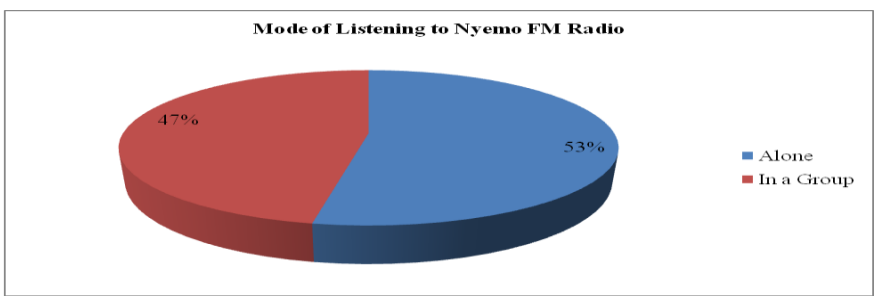
Figure 2.3: Awareness and Listening to Nyemo FM



4.4.2 Listening Alone or in Group

As it is shown in 4.4.1, the total number of respondents who listen to Nyemo Radio is 83 which is 97% out of 86 respondents. Therefore, the research carried out 83 respondents to analyze data collected. In this respect then, as it is shown in figure 5, the respondents were asked to indicate whether they were listening to the Nyemo Radio alone or in a group. The results showed that 64 respondents (53%) out of 83 respondents listen to Nyemo FM alone, while 19 respondents (47%) indicated that, they listen to Nyemo FM in a group.

Figure 4.4: Listening Alone or in Group

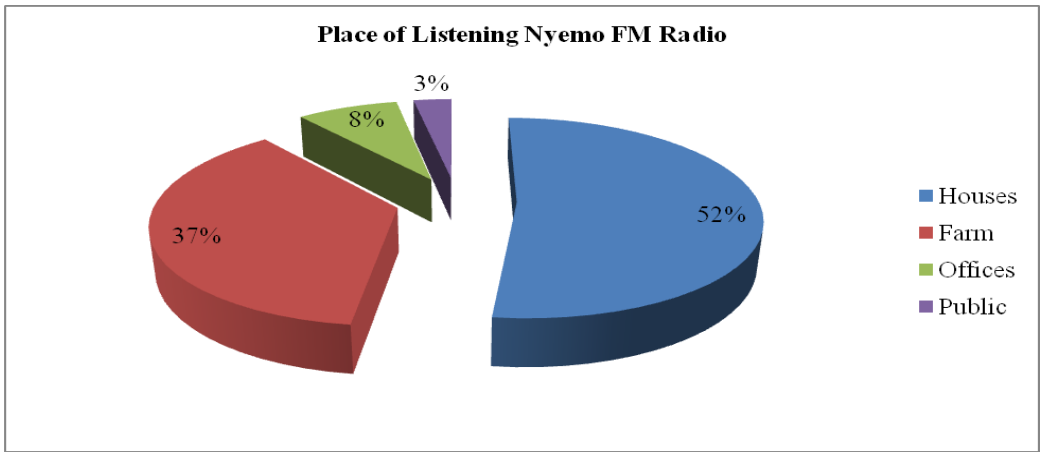


4.4.3 Place of Listening to the Radio

The farmers were asked to indicate the places where they usually use to listen to Radio Nyemo FM. The study found that, 43 respondents (52%) listen to radio from their houses,

31 respondents (37%) indicated that they listen while in the farm, 7 respondents (8%) listen from their offices and 2 respondents (3%) from public places/market. This shows that most of the farmers were listening their radio from their homes and while in their farm as indicated in figure 6.

Figure 4.5: Place of Listening to the Radio



4.4.4 Favorite Programme

The respondents were requested to indicate their favorite programmes. The findings showed that 15 respondents (18%) out of 83 indicated that their favorite programme is news bullet, 40 respondents (48%) indicated that their favorite programme is entertainment news, 10 respondents (12%) prefer development issues like agriculture, health and environmental issues while 18 respondents (22%) indicated that they listened to radio just to pass time, as indicated in Table 4.3.

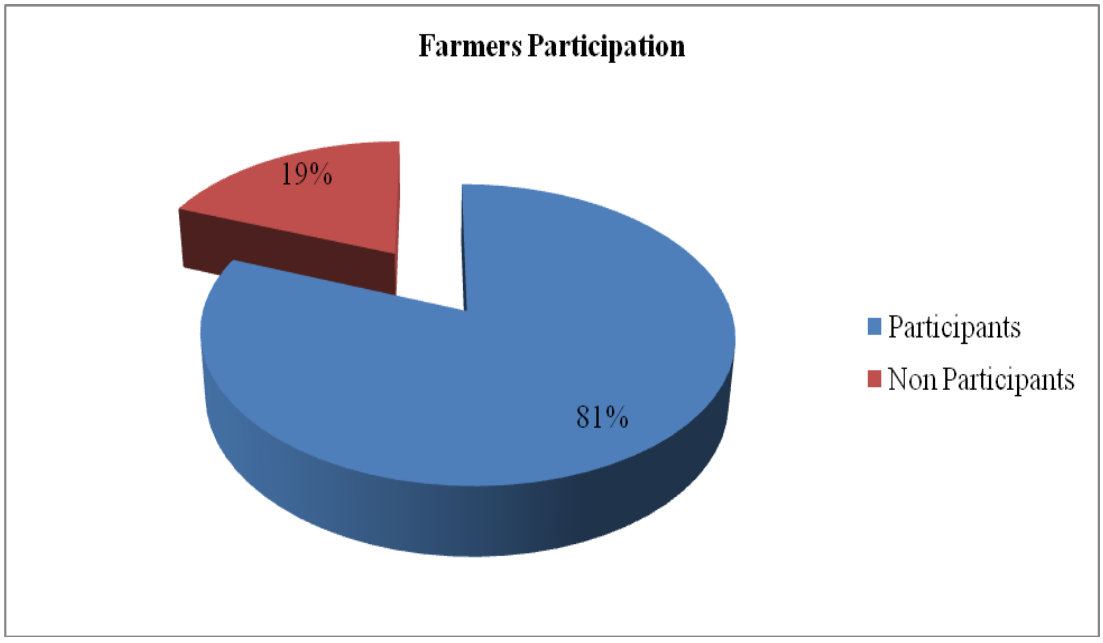
Table 1.3: Favorite Programme for Dodoma Districts Farmers

Favourite Programme	Respondents	Percent
News	15	18
Entertainment	40	48
Development issues	10	12
Pass Time	18	22

4.4.5 Participation in the Programme

As figure 6 indicated, 67 respondents (81%) of the farmers participate in radio programme while 16 farmers (19%) they were not participating in the programme. This shows that most of the farmers listen to Agricultural programme and participate in the programme.

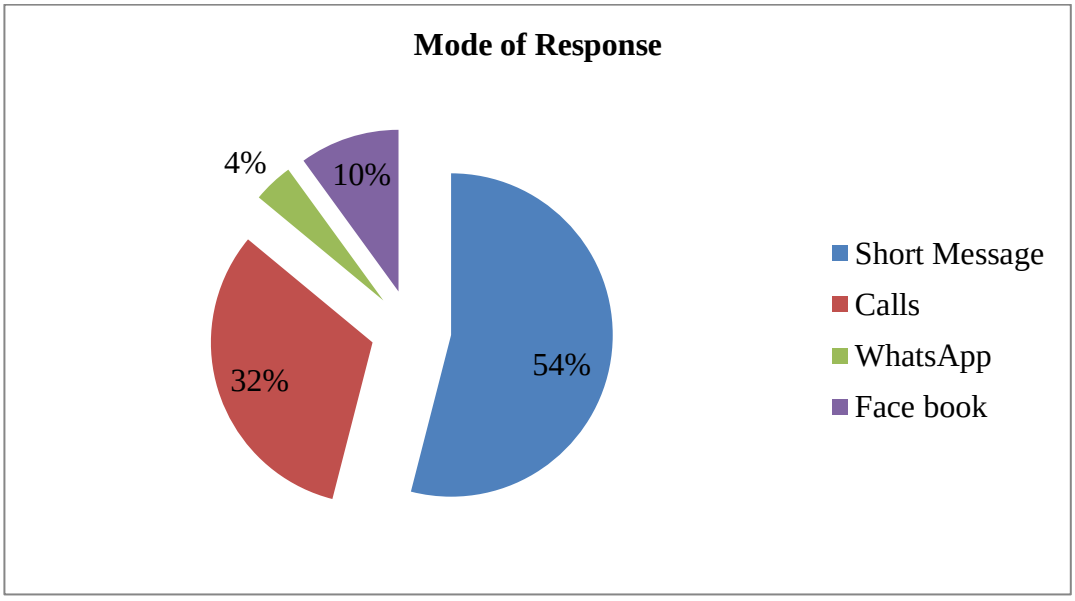
Figure 4.6: Participation in the Programme



4.4.6 Mode of Response

When they were asked, which mode of response they used to participate in the Radio Programme, 45 respondents (54%) of 83 said they sent short message in the radio programme, 27 respondents (32%) are made phone calls, 8 respondents (10%) indicated that they use Facebook and WhatsApp application to participate in the Agricultural programme and only 3 respondents (4%) said they were not participating in the programme.

Figure 4.7: Mode of Response



4.5 Radio in Addressing the Needs of the Farming Community

The study sought to determine whether the radio programme addresses the needs of the farming community in Dodoma Rural District.

4.5.1 The ability of the radio to address the needs of small scale farmers

The findings in Table 4.4 presented the responses on the ability of Radio to address the needs of small scale farmers. Presentation used Likert scale of five points, in which 1 represent strongly disagree, 2 disagree, 3 neutral, 4 agree and 5 strongly agree.

Table 4.4: The ability of Radio to Address the Needs of Small Scale Farmers

Category	Level of agreement in %				
	1		3		5
Listening to Agricultural Programme	12	9	4	55	20
Lessons Learnt from Agricultural Programme	6	12	4	42	36
Improve their farming and products	12	12	4	44	28
Share farming information in own languages	5	4	1	67	23
Motivates debate on farming technologies	5	7	5	63	20
Small farmers aware on farming practice	5	4	2	70	19
Farmers access more farming opportunities	7	4	2	56	31
Reduce marginalization of the farming groups	8	4	4	51	33
Opportunity to become producers	11	7	5	55	22
Farmers manage to classify concepts	8	5	4	60	23

4.5.1.1 Listening to Agricultural Programme

The findings in Table 4.4, presented a statement that listening to Agricultural Programme is a need of small-scale farmers. A large proportion 55% agree and 20% strongly agree, compared to 12% strongly disagree and 9% disagree, while a small proportion 4% reported to be neutral with that statement. These findings imply that community radio address the needs of small-scale farmers in rural areas.

4.5.1.2 Lessons Learnt from Agricultural Programme

Findings in Table 4.4 presented the statement that lessons learnt from agriculture programme address the needs of small-scale farmers. A large proportion 42% agree and 36% strongly agree, compared to 12% disagree and 6% strongly disagree, while a small proportion 4% reported to be neutral. These findings imply that community radio are programmed with various lesson to small-scale farmers.

4.5.1.3 Community Radio Improve Farming and Products

Findings in Table 4.4 presented the statement that community radio improves farming and products. A large proportion 44% agree and 30% strongly agree with that statement, compared to 12% strongly disagree and 12% agree, while a small proportion 4% reported to be neutral with that statement. These findings imply that community radio provides small-scale farmers with knowledge and information that improve farming and products.

4.5.1.4 Share Farming Information in Own Languages

Findings in Table 4.4 presented the statement that community radio Share farming information in own languages. A large proportion 67% agree and 23% strongly agree, compared to 5% strongly disagree and 4% disagree, while a small proportion 1% reported to be neutral. The local community access farming information in the language that could be well understood.

4.5.1.5 Motivates Debate on Farming Technologies

Findings in Table 4.4 presented the statement that community radio motivate debate on farming technologies. A large proportion 63% agree and 20% strongly agree, compared to 7% disagree and 5% strongly disagree, while a small proportion 5% reported to be neutral with that statement. These findings imply that community radio, Nyemo FM have various debate that motivate farmers to use farming technologies. These findings imply that Community Radio such as Nyemo FM is a source of farming technologies in rural areas of Dodoma.

4.5.1.6 Small Farmers Aware on Farming Practice

Findings in Table 4.4 presented the statement that small-scale farmer aware on farming practice. A large proportion 70% agree and 19% strongly agree, compared to 5% strongly disagree, 4% disagree and 2% reported to be neutral with that statement. These findings

imply that community radio is the source of farming practices information in the rural areas context.

4.5.1.7 Farmers Access More Farming Opportunities

Findings in Table 4.4 presented the statement that farmers access more farming opportunities, about 56% agree and 31% strongly agree, compared to 7% strongly disagree, 4% reported to be neutral with that statement. These findings imply that more opportunities are provided to small-scale farmers through community radio.

4.5.1.8 Reduce Marginalization of the Farming Groups

Findings in Table 4.4 presented the statement that community radio reduces the marginalization of the farming groups. A large proportion 51% agree and 33% strongly agree compared to 8% strongly disagree, 4% disagree and 4% reported to be neutral with that statement. These findings imply that farming groups access information concerning farming that improve their knowledge base.

4.5.1.9 Opportunity to Become Producers

Findings in Table 4.4 presented the statement that community Radio Nyemo FM provide opportunity to become producers, about 55% agree and 22% strongly agree compared to 11% strongly disagree, 7% disagree and 5% reported to be neutral with that statement. These findings imply that information provided by Radio Nyemo FM to farmers increases the opportunity to become a producer.

4.5.1.10 Farmers Manage to Classify Concepts

Findings in Table 4.4 presented the statement that farmers manage to classify concepts by listening to Radio Nyemo FM. A large proportion 60% agree and 23% strongly agree compared to 8% strongly disagree, 5% disagree and small proportion 4% reported to be

neutral with that statement. These findings imply that through community radio farmers may access farming programme that enabled them classify various concept required in farming practice.

4.6 The Competence of the Resource Persons Used in Agricultural Programme

The study examined the competence of the resource persons used in radio programming, and findings showed that Radio Nyemo is using skilled and knowledgeable people to provide training to the famers. The farmers were asked if they understand the lesson about modern techniques of farming provided by the experts in the Agricultural Radio programme.

Table 4.5: The Resource Persons Used in Radio Nyemo FM Agricultural Programme

Category	Level of agreement in %				
Understand the lesson about modern farming techniques	6	6	2	55	31
Understand the expert in farming programme	5	6	4	64	21
The programme is informative	4	2	1	63	30
Radio programmes advised on the required time for farming	6	6	4	57	27
Ability to provide knowledge on the type of farm inputs to apply	6	6	4	55	29
Skills to maintain products in the farm.	8	14	1	57	20

4.6.1 Understand the Lesson about Modern Farming Techniques

Findings in 4.5 presented the statement that resource person used in Radio Nyemo FM provide understanding of the lesson about modern farming techniques. About 55% agree and 31% strongly agree, compared to 6% strongly disagree and 6% disagree, while a small proportion 2% reported to be neutral with that statement. These findings imply that resource person provide clear knowledge on the modern farming techniques.

4.6.2 Understand the Expert in Farming Programme

Findings in Table 4.5 presented the statement that resource person used in Radio Nyemo FM are well understood in terms of expert in farming programme. A large proportion 64% agree and 21% strongly agree, compared to 6% disagree and 5% strongly disagree, a small proportion 4% reported to be neutral with that statement. These findings imply that expert programme in Radio Nyemo FM are well understood by the small-scale farmers.

4.6.3 The Programme is Informative

Findings in Table 4.5 presented the statement that resource person provide programme which informative. About 63% agree and 30% strongly agree compared to 4% strongly disagree and 2% disagree, while a small proportion 1% reported to be neutral with that statement. These findings imply that resource person provide farming programme which are educational to small-scale farmers. This section discusses the findings about assess the Role of Community Radio Broadcasting in promoting farming in rural area.

4.6.4 Radio Programmes Advised on the Required Time for Farming

Findings in Table 4.5 presented the statement that Radio programmes advised on the required time for farming programme. A large proportion 57% agree and 27% strongly agree, compared to 6% strongly disagree and 6% disagree, while a small proportion 4% reported to be neutral with that statement. These findings imply that resource person is competent to advise the appropriate farming time.

4.6.5 Ability to Provide Knowledge on the Type of Farm

Findings in Table 4.5 presented the statement that resource person used in Radio Nyemo FM are able to provide knowledge on the type of farm inputs to apply. A large proportion 55% agree and 29% strongly agree, compared to 6% disagree and 6% strongly disagree, while a small proportion 4% reported to be neutral with that statement. These findings

imply that resource person used in Radio Nyemo FM are competent to provide adequate knowledge on farming input to be used by small scale farmers.

4.6.6 Skills to Maintain Products in the Farm

The findings in Table 4.5 presented the skills to maintain products in the farm, about 57% agree and 20% strongly agree compared to 8% strongly disagree and 14% disagree while a small proportion 1% reported to be neutral with that statement. These findings imply that resource person in Radio Nyemo FM are competent enough to equip small scale farmers with skills for maintaining products in the farm.

The Radio Nyemo FM management was requested to explain about competence of the resource persons used in radio programming and informing farmers on appropriate farming techniques and problems they are facing to run the programme. The response acquired from the key informant interview. The Manager of Agricultural Programme said, the preparation of agricultural programmes is associated with their *mission of* strengthening small-scale farming in rural communities. The study discovered that, the selection of the content that was aired in Agricultural Radio Programme depend on instructions of the radio programmer.

Thus, Agricultural Programme conduct various activities to improve aptitude of extension workers to deliver information on Integrated Soil Fertility Management (ISFM) practices to small-scale farmers through innovative radio programmes and cut down the gap of communication from agricultural extension officials. Agricultural programme focus in education, including news on local affairs, broadcasts from service providers and entertainments such as music, radio programmes and audience views.

Furthermore, the findings discovered that the Agriculturalprogramme inviting extension officers and agriculture experts to contribute in the programme on a specific date which is

requested by listeners. The findings illustrate that the targeted group of Agricultural programme is farmers in Dodoma Region. Normally, the Radio Nyemo FM targeted the rural population comprising over 80% of the population in Tanzania, including Dodoma rural district. The results showed that, the time for airing the programme is appropriate because it is the time when farmers are available during the evening. The findings showed that the programme listenership is 97% because most of the farmers provide feedback by calling and sending messages to the programme officers.

In addition, the findings showed that, Agricultural programme is participatory because it provide opportunity for farmers to share ideas and contribute in decision on the content of the programme. The findings showed that there is a time for live broadcasting where farmers have an opportunity to make calls in the studio and share their experience or pose questions. During Agricultural Programme, there are times farmers send messages and ask specific questions about farming which is aired directly and experts respond to them accordingly.

Furthermore, the findings showed that the journalists visit and interview farmers about their farms and then air the programme. The results showed that the farmers have learn modern farming methods from the programme such as the proper use of fertilizer, importance of measuring the soil and proper crops to plant on it. The findings showed that, from what they have learned, the farmers have improved their agricultural productivity.

Lastly, the programme manager requested to point out some of the barriers they faced in the production process of the programme. The findings showed that, the barriers on the whole production of the programme are lack of funds to reach remote areas and limited airtime. Moreover, some technologies that was introduced to the farmers while there was no market, the farmer condemn the journalists for failing to advise them properly.

However, there was also misinterpretation between the journalists and the farmer about what makes up marketing and information. Some farmers always think that, the purpose of inviting the journalists was to promote their farming activities. This conflicted with the journalists intended objective of searching information.

4.7 The Appropriateness of the Air Time of the Radio Nyemo FM Programme

The findings presented in objective three sought to examine the appropriateness of the time and frequency of the Radio Nyemo FM programme. It addressed whether the time the programme was aired was appropriate or time allocated for the programme was sufficient, the language used was helpful in communicating agricultural information and the richness of the language attract them more to listen to the programme.

Table 4.6: The Appropriateness of the Time and Frequency of the Radio Nyemo FM Programme

Category	Level of agreement in %				Average	
The time the programme aired was appropriate	6	5	2	58	29	20
Sufficiency of Time Allocated for the Programme	7	26	4	41	22	20
The language used was helpful in communicating agricultural information	6	7	5	57	25	20
The richness of the language attract them more to the programme	6	5	4	55	30	20

4.7.1 The Time the Programme Aired was Appropriate

Findings in Table 4.6 presented the statement that the time the programme aired is appropriate. A large proportion 58% agree and 29% strongly agree compared to 6% strongly disagree and 5% disagree and a small proportion 2% reported to be neutral with

that statement. These findings imply that the Nyemo FM agriculture programme aired at appropriate time.

4.7.2 Sufficiency of Time Allocated for the Programme

Findings in Table 4.6 presented the statement that the time allocated for the programme is sufficiency. About 41% agree and 22% strongly agree with that statement, compared to 26% disagree and 7% strongly disagree while a small proportion 4% reported to be neutral with that statement. These findings imply that time allocated to the programme at Nyemo FM is sufficiency to small-scale farmers.

4.7.3 The Language was Helpful in Communicating Agricultural Information

Findings in Table 4.6 presented the statement that language used was helpful in communicating agricultural information to small-scale farmers. A bout 57% agree and 25% strongly agree, compared to 6% strongly disagree and 7% agree while a small proportion 5% reported to be neutral with that statement. These findings imply that language Nyemo FM used to communicate agriculture information to small-scale farmers was accessible and well understood in the rural context.

4.7.4 The Richness of the Language Attract Them More to the Programme

Findings in Table 4.6 presented the statement that richness of the language attract small scale farmers to the programme. About 55% agree and 30% strongly agree compared to 6% strongly disagree and 5% disagree while a small proportion 4% reported to be neutral with that statement. These findings imply that small scale farmers are interested by the farming programme through the language applied.

4.8 Nyemo Radio FM Agriculture Special Programme

The researcher used interview to obtain information from Radio Nyemo FM about contribution of agriculture documentary in promoting agriculture in Dodoma. During the interview, management was asked to explain about competence of the resource persons used in radio programming and sensitizing farmers on appropriate methods of farming and challenges, they are facing to run the programme. The information was obtained through interview for the key informant. In responding the questions, the manager said the preparation of agricultural programmes aligned with the *mission,* which to strengthen small- scale farming and rural communities.

The finding revealed that the selection of the content that aired in agriculture Radio Programme depends guideline of the donors and sponsors. Radio Nyemo FM have renewable five-year contract with with Farm Radio International Tanzania (FRI), which is under a Canadian NGO. In addition, it is collaborating with the Ministry of Agriculture, Food Security and Cooperatives (MAFC) to implement a 3-year project that focuses on capacity building for agricultural extension trainees in order to upscale the use of legumes for soil recapitalization in Tanzania.

Therefore agriculture special radio programme implementing various activities to improve capacity of extension workers to deliver knowledge on Integrated Soil Fertility Management (ISFM) practices to smallholder farmers through innovative radio programmes and shorten the gap of communication from agricultural extension officials *agriculture special radio programme* programme have an educational focus, including news on local affairs, announcements from service providers, and entertainment such as music, radio plays, and audience contributions.

In addition, the findings revealed that the *agriculture special radio programme* programme inviting extension officers and agriculture experts to participate in the programme in a specific day which requested by listeners. The findings show that the target group of *agriculture special radio programme* is a farmer in Dodoma Region. Generally the Nyemo Radio FM targeted the rural population who comprise over 80% of the population of in Tanzania, including Dodoma rural distinct. The findings show that the time for airing the programme is appropriate because it is the time when the farmers are free during the evening.

The finding show that the programme listenership is 97% since most of the farmers give the feedback by calling in and texts message to the programme officers. Also the finding show that *agriculture special Radio programme* is a participatory programme because it allow the farmers do contribute in deciding the content of the programme. The findings show that there is a time for live broadcasting where the farmers given chance to make a call in the studio and shared their experience or asked questions, which direct aired. There are times the farmers send the messages and ask of specific issues about farming and experts answered it by using *agriculture special radio programme*.

The findings showed that the journalists reach farmers by visiting and interviewing them their farms and then aired the programme. The findings showed that the farmers have learnt modern farming techniques from the programme like the proper use of fertilizer, the importance of measuring the soil and appropriate crops to plant on it. The findings show that through what they learnt the farmers have increased their agricultural productivity.

Finally, the manager was requested to indicate some of the barriers they faced in the production process of the programme. The findings show that the barriers on the whole production of the programme are lack of fund to reach remote places and limited airtime. Secondly, some technologies talked about caused high yields for the farmer and when the

market lacked, the farmer blamed the journalists for failure to advise appropriately. Third, there was also misunderstanding between the journalists and the farmer about what constitutes marketing and information. Some farmers always thought the intention of inviting the journalists was to promote their farming activities. This conflicted with the journalists intended objective of seeking information.

CHAPTER FIVE

DISCUSSION OF THE FINDINGS

5.1 Radio in Addressing the Needs of the Farming Community

These findings imply that community radio addressed the need of small-scale farmers in rural areas. In respect to this research, agricultural information that a small-scale farmer needs to improve in farm productivity, its innovation. In correlation to this, therefore, the role of communication in rural development as clarified by Bill & Melinda (2011) is to create a common pool of ideas, strengthens the feeling of togetherness through the exchange of messages and translates through action.

The local community access farming information in the language that could be well understood. The findings also are strengthened by Okelo (2011), who states that community radio is a preferred source of agricultural information for the large majority of smallholder farmers. Media play a central role in communicating to the public what happens in the world. In those cases in which audiences do not possess direct knowledge or experience of what is happening, they become particularly reliant upon the media to inform them.

Also According to the results, every respondent indicated that the producer packaged the programme content skillfully in the language and everyone understood. This finding is strengthened by prior studies that the development of education and awareness leads to the adoption of agricultural information about types of crops to be planted and use of modern inputs like fertilizers and certified seed (Retz &Hasbullah, 2010).

These findings imply that information provided by Nyemo FM to farmers increases the opportunity to become a producer. Similarly Janick, (2013) argued that farmers with well-equipped information and knowledge are likely to increase production and even attain growth of agriculture production. The programmes are well equipped with technological information; farmers demand such information in production. Concurrently Kembero, (2014) found that media are the source of information in various dimension, once are well structured tend to affect farm productivity. The programme of Radio as a media, need to address the needs of farmers by supplying them with farming inputs and technology which are necessary for productivity.

The finding is related with Kembero (2014) study which explained that the role of communication in rural development is to ensure that an innovation is made known and accepted before it can come into use, and this is possible through various communication channels. Radio has also been used to promote community development, innovation, and other programmes in which self-help and community participation are essential.

5.2 The Competence of the Resource Persons Used in Agricultural Programme

These findings imply that resource person provide clear knowledge on the modern farming techniques. The findings are strengthened by the study of Retz &Hasbullah (2010) who highlighted that, community members provide feedback in the form of stories describing the change in their lives because of the activities of the radio. Another views from UNESCO report (2018), highlighted that, local radio acts as an actor for development. The radio has also been used to promote community development, innovation, and other programmes in which self-help and community participation are essential. The study found that, people listen in groups and take notice of issues raised and sometimes call in to make their opinions known (Thomas, 2011).

Various scholars insisted that community radio is useful for providing education for farmers. While Communication is the interactive process that goes beyond the transmission of information skills and ideas from a source with a view of modifying the behavior of receivers. Information is therefore of only limited value if it is not communicated (Kembero, 2014). These findings imply that resource person provide farming programme which are educational to small-scale farmers. This section discusses the findings about the Role of Community Radio Broadcasting in promoting farming in rural area. This study is strengthened by various scholars of community development such as Ericka (2013) who emphasized that radio and other mass media have been used to support agriculture in many places. The findings are supported by other studies that, community radio promoting development in rural areas by providing information connected to the products, methods and skills, while Communication is the interactive process that is beyond the diffusion of information skills and ideas from a source with notion of transforming the behavior of recipients. Therefore, information is only limited value if it is not communicated (Lavison, 2013).

These findings indicate that resource persons are competent to advise the appropriate farming time. This finding is related to the FAO report, which emphasized that, the planned use of communication can also help people exchange experiences, find common ground for decisions and actively participate in and guide development activities (FAO, 2012). Farmers, then, need knowledge about new inputs, new methods of production and how to economize in production and marketing. According to Jimi and Noeem (2013) radio is provision of entertainment, education, the need to facilitate change, progress and improved living conditions that make Community Radio a special medium for social transformation. Community radio empowers ordinary people to become active producers, and not merely passive recipients of information and opinion.

These results were consistent with previous Nyeresa (2012) that dissemination of timely and accurate agricultural information to the farming communities is critical in the farm productivity since information avails opportunities to local farmers and hence lessening their vulnerability. The development of education and awareness leads to the adoption of agricultural information about types of crops to be planted and use of modern inputs like fertilizers and certified seeds.

5.3 Radio Nyemo FM Programme Appropriateness of the Time and Frequency

These findings suggest that the Nyemo FM agriculture programmeis aired at appropriate time. These findings are related to the findings provided by Fairbairn &Rukaria (2010) Radio programmes especially those affecting farming activities need to be provided at appropriate time. The farmers for instance need to obtain such information early to effectively use in the agricultural activities. The time for instance farming community would access such information are very important.

These findings meant that time allocated to the programme at Nyemo FM is sufficient to small scale farmers. This is supported by Jimi and Noeem (2013) that people use the mass media to their benefit or to satisfy their own needs. The uses and gratifications approach springs from a functionalist paradigm, which presents the use of media in terms of the gratifications of social or psychological needs of the individual. The uses and gratifications theorists argue that people's needs influence how they use and respond to a medium (Baran& Davis, 2015).

These findings show that the language Radio Nyemo FM used to communicate agriculture information to small scale farmers was accessible and well understood in the rural context. The study by Kumar (2010) argued on the ability to communicate agriculture information is facilitated by the radio to reach the farming community on the agriculture knowledge.

This is really built on the fact that farming community are in needs of agriculture knowledge; this is required to increase farm productivity. It is really built in the fact that radio is used as medium to transfer to the place where small scale farmers are present.

These findings imply that small scale farmers are interested by the farming programme through the language applied. This shows that most of the farmers are listening to Agricultural; programme and participating in the programme. The concept of participatory communication (PC) refers to the process by which people within a given community create and share information in order to reach a mutual understanding (White, 2008). In the case of radio, it means debates and other active forms of participation in the decision-making, production and sharing of diverse ideas. This study used this approach to know the extent to which phone-ins, discussions and interviews diffuse knowledge for the benefit of the farmers.

CHAPTER SIX

CONCLUSION AND RECOMMENDATIONS

6.1 Introduction

This chapter presents summary, conclusions and recommendations about the assessment of the role played by radio broadcasting in enhancing farm production in rural Tanzania particularly, Nyemo Radio FM in Dodoma Rural District.

6.2 Summary

The study was led by three specific objectives as following:

i. To determine whether Radio Nyemo FM addresses the needs of the farming community in Dodoma Rural District,

ii. To examine the competence of the resource persons used in Radio Nyemo FM programming,

iii. To examine the appropriateness of the time and frequency of the Radio Nyemo FMprogramme.

The following is the summary of the findings of the study:-

The study revealed that Radio Nyemo FM Agricultural Programme is aired for half an hour, twice a week with aim of improving small-scale farmers in rural area. The programme has five segments in which agricultural programme are discussed and these included: introduction, Farmers' Voice; Weather Reports; Expert Session; question and answers through telephone. These topics were found to be relevant to the requirements of the listeners as the sign that Radio Nyemo FM has been playing its role in improving farmer's production by broadcasting precise and relevant agricultural information.

The general results showed that Radio Nyemo FM through Agricultural programme played a major role in promoting farm production in Rural Tanzania. The programme was found to be applicable to the requirements of the farmers, an indication that the Nyemo Radio FM had been playing its role in improving farmer's production by broadcasting precise and relevant agricultural information. This was confirmed with a 97% positive response from the farmers that they had learnt about the use of agricultural farm inputs like fertilizers and certified seeds, issues on animals' fertility, animal disease control and weather reports. This findings is supported by Chapman (2003) who affirmed that media plays an important role in communication development through circulation of knowledge, providing forum for discussion of issues, teach ideas, skills for a better life and create a base of consensus for stability of the state.

The findings illustrated that although majority of farmers were satisfied with the time used to air the programme, some of them would prefer Radio Nyemo FM to start another programme to market agriculture products. Kizilan (2006) pose that, dissemination of timely and accurate agricultural information to the farming communities is critical in the farm productivity since information avails opportunities to local farmers and hence lessening their vulnerability. Therefore, Radio Nyemo FMoffers the best platform and providing opportunities to farmers of Dodoma Rural District to contribute in their economies and development by acquiring agricultural information that enable them pick up their farm productivity.

6.3 Conclusion

The study tried to establish whether Nyemo Radio FM Agricultural Programme succeeded in increasing the farming productivity and convey the farmers with news knowledge. An important result was that, great majority of over 97% of the respondents reported that the

radio broadcasting has extremely improved their production, and hence, farmers had affirmative opinions towards the agricultural programmes aired on Radio Nyemo FM.

The study concludes that the farmers attained new knowledge in agriculture, new methods of fighting diseases, new ways to control pests and learned new ways of farming. Moreover, they learnt how to perform effective farming, how to improve their farming skills, poultry farming, how to improve their farm outputs, how to maximize profits from agriculture and how to use modern technology in agricultural production.

Regarding the competence of the resource persons used in the radio programming, the study concludes that the programme's expert had helpful information on new methods of farming. With regard to the effectiveness of the programme to farmers, the study concludes that the programme helped the farmers to improve their production. It informed them about the suitable farming inputs that could lead to increase production. Furthermore, the programme educated farmers on how to arrange for their planting seasons. Moreover, it offered solutions to problems that were pest related and ended them.

6.4 Recommendations

6.4.1 For Action

From the study findings, it is recommended that:

i. Radio stations have to introduce the extension service by arranging agricultural field days together with the experts in different fields of profession to demonstrate practically on what they broadcast in radio could be more difficult to farmers.

ii. The Government, NGOs and other private sector have to invest in projects that aspire at connecting rural farmers to market, manufacturers of farm inputs and other agricultural information.

iii. Support should also be directed towards farmer's organization groups for instance farm groups, which would take part in farming information adoption. The group should participate and come up with prosperous stories about the importance of adopting modern farming methods.

iv. The participation methods should be enhanced, new techniques like questions and answers and competition that award those who wins this would motivate the listeners and increase news ones.

v. In the future, the management of Radio Nyemo FM should plan to initiate another programme to market agricultural products to complete the needs of farmers.

vi. The Radio broadcaster should develop Agricultural Programme by going to the field and pose questions to farmers or clarify their activities for the purpose of expanding chances to share the experience from the field.

vii. Radio stations should plan for their agricultural programmes that match the agricultural microclimates and an extension programme of feedback to be included in the production process.

viii. The management of the Nyemo Radio FM should discover more opportunities of income which can strengthen community radio stations to be more self-sufficient in order to meet operational costs.

6.4.2 For Further Studies

This study focused on the assessment of the role played by radio broadcast in promoting farm production in rural Tanzania; therefore, the study recommends further studies on the factors affecting the participation of farmers in agricultural development programme in radio stations. Moreover, researchers may develop further studies on other means of

media in promotion agricultural activities in Tanzania as well as to have opportunity to this body of work to view various development activities through community radio.

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APPENDICES

Appendix One

Questionnaire for Farmers

Dear respondent,

I am a student at Open University of Tanzania (OUT), pursuing Master Degree in Journalism, conducting a research on a topic, The Contribution of Nyemo FM in Promoting Agricultural Activities in Rural Tanzania: A Case of Dodoma Rural District. You are asked to read the questions carefully and then answer them accordingly. It is part of the academic work, thus, I promise you that whatever information given here, will be held confidential and no information will be released to anyone. Your participation is highly respected.

1. What is your name?.....{Optional}
2. Gender: Male [ ] Female [ ]
3. How old are you?.....{18+}
4. What is the level of your education? Primary [ ] Secondary [ ] College [ ]
   University [ ]. Specify…….
5. Do you listen to Agricultural Program on Radio Nyemo FM? Yes [ ] No [ ] If No, which other radio stations do you listen to? .....
6. In most instances, do you listen in a group or alone? (Tick as appropriate)
   Group [ ] Alone [ ]
7. Where do you listen your radio from?
   a) In the house [ ]
   b) In the farm [ ]
   c) At the office [ ]

d) Public paces/ market [ ]

e) Others

Specify……

8. Where do you listen your radio from?

9. Which is your favorite program?

.....……

……

10. Do you participate in the program? Yes [ ] No [ ] If yes, which modes do you use?

a) Call-ins/phones [ ]

b) Short messages (SMS) [ ]

c) Emails [ ]

d) Face book [ ]

11. If No, explain why……..……..

…….……

……..

12. Does the program address the needs of farmers? Yes [ ] No [ ] If Yes or No please explain

……..……...…

…….……

……

13. What lessons do you learn from this program? ……

……

……

14. Do you think the program helps farmers improve their production? Yes [ ] No [ ] If yes, please mention some of the benefits of the program. If No, please explain why?

    ……..……

    ……..……

15. Have you heard about Agricultural Program on Radio Nyemo FM?

    Yes [ ] No [ ]

16. Do you think experts used in the program to explain issues understand modern methods of farming? Yes [ ] No [ ]

    If yes, please mention some of the methods of farming that the program talks about; If No, please briefly explain

    ……

    ……

17. 11. Do you think the amount of time the program airs is sufficient?

    Yes [ ] No [ ] If No, briefly explain

    ……

    ……

18. 12. Do you think the time the program airs is appropriate? Yes [ ] No [ ] If No, please briefly explain

    ..……..

    ……

19. What other programs do you listen to on radio? (Tick as appropriate)

    a) News [ ]

    b) Entertainment [ ]

    c) Development issues [ ]

    d) Pass time [ ]

The following statement you are required to tick where appropriate which means that 1 strongly disagree 2, disagree 3, neutral 4, agree and 5 strongly agree, your are requested to indicate the answer basing on your understanding

Statement					
A: Radio Nyemo FM addresses the needs of the farming community					
Listening to Agricultural Program					
Lessons Learnt from Agricultural Program					
Improve their farming and products					
Share farming information in own languages					
Motivates debate on farming technologies					
Small farmers aware on farming practice					
Farmers access more farming opportunities					
Reduce marginalization of the farming groups					
Opportunity to become producers					
Framers manage to classify concepts					
B: Competence of the Resource Persons					
Understand the lesson about modern farming					
Understand the expert in farming program					
The program is informative					
Radio programs advised on the time for farming					
Type of farm inputs to apply					
Skills to maintain products in the farm.					
C: Appropriateness of the Time and Frequency of the Nyemo FM					
The time program aired was appropriate					
Sufficiency of Time Allocated for the Program					
The language used for agricultural information					
The richness of the language attract them more to the program					

20. What are your general remarks about the contribution of Radio Nyemo FM-Agricultural Program improving agricultural development in Dodoma Rural District

……

……..

……..

Thank you for your cooperation

Appendix Two

Interview Guide for Journalists – Radio Nyemo FM

Dear respondent,

I am a student at Open University of Tanzania (OUT), pursuing Master Degree in Mass communication, conducting a research on a topic, The Contribution of Radio Nyemo FM in Promoting Agricultural Activities in Rural Tanzania: A Case of Dodoma Rural District. I am requesting for your time to answer my research interview questions regarding Agricultural Program. The research is part of the academic work. Therefore, I guarantee that whatever information given here, will be held confidential and no information will be exposed to anyone except for academic purpose. Your contribution is highly respected.

Which principles do you follow when creating agricultural programs?

How do you come to a decision on the content that you air?

Whom do you target in your interview program?

Do you think the time of the program aired is appropriate for farmers?

What do you consider when choosing an interviewee for your program?

What is the percentage of listenership on your program?

Do the farmers participate in deciding the content for your program?

Which channels do they use in reaching farmers?

What are the achievements the program has made to farmers?

What are the barriers/challenges you face in the whole production process of the program?

Thank you for your time