ASSESSING THE IMPACT OF FARM RADIO INTERNATIONAL IN THE CASE OF ATOTA RADIO PROGRAM

BY - GEMECHIS DIDI

A THESIS SUBMITTED TO
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APPROVED BY BOARD OF EXAMINERS

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Declaration

This thesis is my orioginal work. It has not been presented for a degree in any other University and that all sources of material used for the thesis have been duly acknowledged.

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ABSTRACT

Ethiopian economy is dependent on agriculture. The sector provides a livelihood for about 85% of Ethiopian population. Communicating information on agriculture innovations to farmers has relied on extension services which limits the number of farmers reached. This study sought to assess Atota agricultural radio program sponsored by Farm Radio International radio broadcasted on Oromia regional state radio. Radio remains the most cost effective means of building awareness, and supporting the adoption of new farming practices by small scale farmers.

Although radio is the most popular mass medium, broadcast media houses hardly undertake surveys for agricultural programs to find out the impact of the programs aired. This study therefore provides an insight into best approaches to agricultural programming for radio stations and stakeholders in the agriculture sector.

This research project applies one model and two media theories namely: Paul Freire Partcpatory model, Diffusion of innovation and agenda setting theory to show how the selection of topics and packaging of agricultural content impacts on farmers‘ uptake of agriculture innovations. The researcher used, both qualitative and quantitative to examine the validity of agricultural communication in the context of Oromia small sacle farmers.

The research findings indicate that agricultural information is essential for increased productivity and that radio is the preferred medium for sharing information on agriculture innovations. The study finds there is a need to make radio program farmers centered so that rural farming communities be served effectively. This would attract listenership and increased level of awareness for boosting agricultural productivity. This in turn increased revenue for the stations from the partnerships.

ABREVIATIONS

ALCs	Active listening communities (ALCs)
AGRA	African Green Revolution
AGREN	Agriculture Research and Extension Network
AFRRI	African Farm Radio Research Initiative
AIRC	Agriculture Information Centre
AMDI	Africa Media Development Initiative
ATA	Agricultural Transformation Agency of Ethiopia
ATOTA	Better Harvest for people
BMGF	Bill and Melinda Gates Foundation
DTR	Development through Radio
EAGC	East African Grain Council
EPRDF	Ethiopian People Republic Revolution and Democratic Front
FRT	Farm Radio Trust
FVR	Farmer Voice Radio
FAMWZ	Federation of African Media Women Zimbabwe
IFPRI	International Food Policy Research Institute (IFPRI
ISAAA	International Service for the Acquisition of Agricultural Biotechnology Applications
FRI	Farm Radio International
PLCs	Passive listening communities
PRC	Participatory Radio Campaign
UNMDGs	United Nations Millennium Development Goal
ICTs	Information and Communication Technologies

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CHAPTER ONE - INTRODUCTION

1.1. Background and context

1.1.1. Social and Economic Context

Ethiopia has undertaken a far reaching program of economic reforms over the last 19 years. When the Government came to power in 1991, it inherited a weak command economy characterised by fiscal and current account deficits amounting to 8.7 per cent and 6.9 per cent of Gross Domestic Product (GDP) respectively, in addition to an external debt burden equivalent to 33 per cent of GDP. It therefore embarked on far-reaching reforms to achieve broad-based economic growth in a stable market economy. Price controls and subsidies were removed and the exchange rate was devalued by 250 per cent. The financial services sector was also opened up to competition from the private sector. Judicial and civil service reforms were made to remove impediments to pro-poor strategies, policies and investment programmes. Equally, regulations were put into place to encourage both domestic and foreign investment, particularly in agriculture and agro-processing. These reforms were underpinned by increased pro-poor public spending in agriculture, education, health, water, roads, rural electrification, and telecommunications.

The per capita income of Ethiopia is USD 170. Ethiopia was ranked 171 st out of 182 countries on the UNDP Human Development Index in 2009. Life expectancy at birth is only 54.7 years. Infant and maternal mortality and child malnutrition rates are among the highest in the world. While access to education has increased in recent years, the overall adult literacy rate, at 36 per cent is low even by sub-Saharan African standards. Only about 58 per cent of the population have access to clean drinking water and about 80 per cent have no access to improved sanitation. About 38 per cent of children under the age of five are underweight and over 12 million people currently suffer from chronically or transitory or acute food insecurity.

Poverty and food insecurity is concentrated in rural areas. Roughly 30 per cent of the population live below the national poverty line (1075 Birr/adult in 1995/96 prices). There are marked differences, however, between rural and urban areas. Most rural households live on a per capita income of less than USD 0.50 per day. Generally, rural households have less access to most

essential services. According to the latest Poverty Assessment (2005), overall progress in reducing poverty, despite strong agricultural sector growth falls short of what is required to meet MDG1 by 2015 as a result of high variability in agricultural GDP and rapid population growth. Many rural households are finding it difficult to survive without resource to seasonal or permanent urban migration in search of wage employment, and support from social safety net programmes.

The poorest sub-sector of rural households are unable to meet their basic needs and are chronically food insecure. About a third of rural households farm less than 0.5 hectares which, under rainfed agriculture at current yield levels, cannot produce enough food to meet their requirements. Most agricultural production is used to meet household consumption needs and, for a very large number of households, there is a prolonged hunger season during the pre-harvest period.(Oxfam America, 2009)

According to oxfam America 2009 report commissioned by the International Labour Organization and United Nations Capital Development when there are surpluses, smallholder farmers are often constrained by lack of access to markets. In all farming systems, livestock are the single most important household asset and there is a strong correlation between lack of livestock ownership and poverty, particularly among woman-headed households.

1.2. The Agricultural Sector

The agricultural sector greatly influences economic performance in Ethiopia. About 11.7 million smallholder households account for approximately 95 per cent of agricultural GDP and 85 per cent of employment. About 25 per cent of rural households earn some income from non-farm enterprises, but less than three per cent rely exclusively on income from such enterprises. With a total area of about 1.13 million km 2 and about 51.3 million hectares of arable land, Ethiopia has tremendous potential for agricultural development. Nearly 55 per cent of all smallholder farmers operate on one hectare or less. The agricultural sector accounts for roughly 43 per cent of GDP, and 90 per cent of exports. Cereals dominate Ethiopian agriculture, accounting for about 70 per cent of agricultural GDP. Livestock production accounts for about 32 per cent of agricultural GDP and draught animal power is critical for all farming systems. Over the past decade, cereal production has more than doubled to nearly 15 million tonnes, as a result of

horizontal expansion and increased yields. Nevertheless, food security remains a critical issue for many households, and for the country as a whole. Moreover, expansion of the cropped area to more marginal lands has led to severe land degradation in some areas.

The use of chemical fertiliser and improved seeds is quite limited despite Government efforts to encourage the adoption of modern, intensive agricultural practices this can be attributed to limited access by smallholder farmers to agricultural inputs, financial services, improved production technologies, irrigation and agricultural markets; and, more importantly, to poor land management practices that have led to severe land degradation.

Ethiopia has one of the highest rates of soil nutrient depletion in sub-Saharan Africa. Estimates suggest that the annual phosphorus and nitrogen loss nationwide from the use of dung for fuel is equivalent to the total amount of commercial fertiliser applied. Land degradation is further exacerbated by overgrazing, deforestation, population pressure and inadequate of land use planning.

The agricultural sector has performed strongly over most of the last decade, but there is substantial potential to improve productivity and production. Since 1996/97 the average growth rate of the agricultural GDP has been about 10 per cent per annum, and since 2004-05 the sector has been reported to have expanded at around 13 per cent per annum, which easily surpasses the CAADP target of 6 per cent. Over this period the food poverty head count decreased from 44 percent in 1999/00 to 38 per cent in 2005/06, and is expected to be under 30 per cent by 2009/10. Percapita grain production increased from below 150kg in 2003/04 to 213kg in 2007/08, which is close to meeting the minimum 2,100 kcal/day nutritional standard. The share of agriculture in GDP declined from 53 per cent to 43 per cent between 1995/96 and 2008/09, reflecting strong growth in other sectors of the economy. Despite these achievements, however, the Government has made poverty and hunger reduction its top priorities. It recognises much remains to be done in the agriculture sector to realise the vision to become a middle income country (defined as GDP/capita of USD 1,000) by 2020.

To enhance the delivery of improved production technologies and support services, the Government has, with strong support from development partners, embarked on (i) expanding coverage of the national agricultural research system into arid and semi-arid areas; (ii) training

and deploying at least three development (extension) agents to each *kebele*; (iii) establishing farmer training centres in all 18,000 *kebeles*; and (iv) strengthening research-extension-farmer linkages to improve technology generation, transfer, utilisation and feedback.

Droughts periodically reverse agricultural sector performance gains with devastating effects on household food security and poverty levels. Vulnerability to droughts is greatest in the pastoral areas of the lowlands and the densely populated, food-insecure districts of the highlands.

Drought-induced famines are further exacerbated by limited coping mechanisms and inadequate contingency planning for drought mitigation and the threat of climate change. Ethiopia has an irrigable potential of about 4.3 million hectares, but only about six per cent of this potential is currently being utilised.

Gender disparities significantly impede women's empowerment. While the constitution guarantees gender equality and supports affirmative action, on average, women have fewer years of schooling and heavier workloads than men. They perform a significant portion of farm work but tend to be excluded from control of farm income and inheritance of property. Women also suffer disproportionately from environmental degradation as they have to walk longer distances to collect water and firewood. The lack of draught animal power tends to intensify their vulnerability. They also shoulder a greater burden of rural poverty because of their vulnerable socio-economic position.The incidence of poverty in woman-headed households is also higher.

1.3. Policy Framework – General

Since 1991, the Government has been implementing its strategy of Agricultural Development-Led Industrialisation (ADLI**)** that sees agriculture as the engine of growth. Its main thrust has been to: (i) improve agricultural extension services; (ii) promote better use of land and water resources; (iii) enhance access to financial services; (iv) improve access to domestic and export markets; and (v) provide rural infrastructure. The country's first poverty reduction strategy known as the Sustainable Development and Poverty Reduction Programme was successfully implemented over three years with strong support from development partners. The program consolidated the gains realised under the ADLI strategy and promoted civil service and judicial reforms, capacity-building, good governance, and decentralisation and empowerment.

The Plan for Accelerated and Sustained Development to End Poverty (PASDEP) was implemented from 2005-06 to 2009-10. The highly successful PASDEP, which achieved an average 11% GDP growth, and saw the relative share of agriculture within the economy decrease from 47 percent to 41 percent, aimed to: (i) improve implementation capacity; (ii) promote accelerated and sustained economic growth; (iii) manage population growth; (iv) empower women; (v) strengthen infrastructure; (vi) develop human resources; (vii) manage risk and volatility; and (viii) create employment opportunities. In the agricultural sector, the PASDEP called for: (i) market-based agricultural development; (ii) increased private sector investment; (iii) specialised support services for differentiated agro-ecological zones; (iv) improved rural-urban linkages; and (v) special efforts to support pastoral development. These objectives were underpinned by investments to improve rural infrastructure, enhance access to financial services, promote irrigation development, ensure land tenure security, and improve the performance of agricultural markets. PASDEP also recognised the urgent need to better manage the natural resource base and protect the environment.

A Professor of Agricultural Economics and World Bank Consultant, Foluso Okunmadewa u the described Nigeria like wise a nation blessed with abundant agricultural resources, but has found it increasingly difficult to feed her people (Obi, 2008; Alozie 2011). Okunmadewa offered this view while delivering a paper titled "Food prices crisis and the 150 challenge of sustainable development in Nigeria" at the 40th Interdisciplinary Research Discourse by the post graduate school of the University of Ibadan, Nigeria (Alozie, 2011).

Taking into consideration the situation of these to big nations in Africa ,Ethiopia and Nigeria, so many critics contend that despite the two nation's massive wealth, millions of people go to bed very hungry every night. Hunger and malnutrition increase on daily basis throughout the countries . Both cattle rearing and other sustainable food system have worsened, crisis exists in peasant and indigenous agriculture and people are losing sovereign control over their resource.

This is why the first United Nations Millennium Development Goal (UNMDGs) is targeted towards eradicating extreme poverty and hunger. The targets include, having between 1990 and 2015, the preparation of people whose income is less than one dollar a day and having, during the same period, the proportion of people who suffer from hunger (SCM News cited in Mboho, 2009). While several factors may be responsible for the food shortage in Ethiopia, the concern

of this paper is to examine the impact of radio in promoting sustainable food production through dissemination of agricultural innovations and stimulation of interactions among peasant farmers towards the attainment of surplus food production and general agricultural development in Ethiopia in special reference to farm international radio targeted areas.

1.4. Statement of the Problem

Ethiopian agriculture is dominated by a subsistence, low input-low output, rainfed farming system. The use of chemical fertiliser and improved seeds is quite limited despite Government efforts to encourage the adoption of modern, intensive agricultural practices. Low agricultural productivity can be attributed to limited access by smallholder farmers to agricultural inputs, financial services, improved production technologies, irrigation and agricultural markets; and, more importantly, to poor land management practices that have led to severe land degradation.

Ethiopia has one of the highest rates of soil nutrient depletion in sub-Saharan Africa. Estimates suggest that the annual phosphorus and nitrogen loss nationwide from the use of dung for fuel is equivalent to the total amount of commercial fertiliser applied. Land degradation is further exacerbated by overgrazing, deforestation, population pressure and inadequate of land use planning.

There exists a gap between the scientific/agricultural researchers and the farm users. A lot of findings from the research institutions and laboratories are not used by farmers. Research information on improved seed varieties, better farming techniques, post-harvest handling and marketing are not used by farmers either because the information did not reach them, either because the implementation of the received information is not clear. The gap between the researcher and the farmer is even wider in the rural areas; large distances separate researcher from rural farmer. Other barriers like language and diversity of cultures also come into play making it even more difficult for the research information to reach the intended audiences.

It is evident that development implies change, and the first change that takes place is the attitude of the people who will be directly affected by the development in this case, the farmers and rural communities. In order to achieve this goal, there must be a fundamental change in the way farmers approach agriculture and the rate at which they adapt new technologies, husbandry and farming practices.

In order to achieve this change farmers and rural communities need to be informed on the importance of adapting these new practices.

Attempts by extension workers through demonstration farms and working with communities have not been sufficient to bring about change in attitudes. Radio has often been used to complement the efforts of the extension workers. However the use of radio as a mass media has its limitations such as poor signals, limited reach in certain areas, top-down approach, and limited airtime and in appropriate programming. This calls for a shift in the use of radio from mass media to community centered as already illustrated in the paper.

McQual and Windahl in Mboho (2009) noted that this media role emanates from a collective, organized source with a purpose and a clearly specified objective. It is targeted to a specific section of the population and conforms to established norms. Yahaya (2003) underlined that it can also act as an institutional catalyst where departments, groups, organizations, institutions and government can use to mobilize people for agricultural development (Mboho, 2009) Having these roles of mass media in promoting agricultural development, and taking in to consideration media scholarls comments there is one organization in Ethiopia who claims that it had different radio program format called Participatory Radio Compaign (PRC) aming at created a series of farm radio programs designed to educate farmers, and to enable them to improve their agricultural practices. Farmer listeners were central to the development and implementation of the radio campaigns. The researcher noted that Farm Radio Internation works with four regional states of Ethiopia. But this study dedected to acesss the impact of this farm radio international sponsored by the campaigning name called (Atota) in its enabling small scale farmers to spread and stimulate agricultural ideas and interactions in such away that agricultural innovations encouraging them to take up new agricultural practices that would improve their food security among certain peasant farmers in rural Oromia.

1.5. Research Problem

The main questions this research answered is Radio effective in enabling smallholder farmers in Ethiopia to fill existing gaps between the scientific/agricultural researchers and the farm users, with a particular focus on increasing/diversifying food production, Improving land use management, and reducing post-harvest losses ? Has radio considerable potential to be used as a

tool for community development because of its wide reach, companionship, portability and affordability in less developed communities? In the same manner, must issues of communication are preconditions for community development and has radio the power to give a voice to farmres ?

1.6. The Objectives of the Study

1.6.1. General Objective

To assess the impact effectiveness, relevance and sustainability of using radio in community development in special reference to Farm Radio International Ethipia (FRI) sponsored program (Attota) Radio Affan Oromia program

1.6.2. Specific Objectives

- Assess the impact ,effectiveness,sustainability and relevance of 'Atota ' agricultural radio program to small scale farmers.
- Assess the level farmers satisfaction of *'Atota'* radio program
- Assess the farmers future use of learnt knowledge from *'Atota'* radio program
- Assess 'Atota' radio program formats preferred by small scale farmers in acquiring knowledge

1.7. Research Questions

The questions below serve to further break down the aim and objectives of this research in order to simplify them and guide the focus of the thesis. This research based itself on the Farm international radio(FRI)'Atota' sposerd radio program in this case radio for its development and research dissemination in Ethiopia inspecial reference to Oromia small sacle farmers . The results may be of general relevance, but may also not be directly applicable to situations of radio use in community development elsewhere.

i. Is Farm radio international effective and relevant for community development in the present era?
ii. To what extent do communities participate in programming?
iii. What is the depth of farmers exposure to radio programs on this agricultural program?

iv. How well are farmers aware of agricultural innovations through radio programs?

v. How useful is this radio program on agriculture to individual farmer in stimulating agricultural issues interactions?

1.8. Significance of the Study

The findings of this study shall inform the radio producers of farming programs on the impact of their programs on farmers and better approaches to disseminating agriculture information. It is expected that this will assist them in packaging of agriculture content for radio. This would also provide the basis upon which to review program production policies in terms of allocation of resources towards effective programs that involve the other stake holders. The findings shall be a reference point for stakeholders and content providers of agriculture information to strengthen their partnerships with radio stations

1.9. Scope of the Study

This research focused on the use of "Attota" radio program for purposes of advocating for and communicating issues affecting vulnerable people that today account for a significant proportion of the population in the farm communities of Oromiya region .

1.10. Limitation of the study

Farm Radio international operates in different diversified development programs regions and zones in its project interventions .Here therefore due to time and financial constraints this research focused only to assess the impact of Farm Radio International in the case of Atota radio program in Oromia among those indicated here under:-

Radio station	**Region / city Name**	**Name of campaign**	**Remarks**
Campaign	**Campaign**	**Campaign**	
Dimtsi Woyane Tigray	Tigray / Mek'ele	Improved planting for Better yields	
Amahra mass media agency /Amahra Radio	Bairdar	No name	
Debeu mass media FM /	Hwassa	Improved planting for Better yields	
Oromia Radio and Telvesion Agency 92.3	Oromia /Adama	Atota	The compaign under study

CHAPTER TWO - REVIEW RELATED LITERATURE

2.1. Theoretical and Conceptual Framework

This section discussed in brief the various theoretical underpinnings and conceptual frameworks related to communication for development as applicable to this research.

2.2. The Participatory Model

Paulo Freire (1921 – 1997), the Brazilian educationalist, has left a significant mark on thinking about progressive practice. His *Pedagogy of the Oppressed* is currently one of the most quoted educational texts (especially in Latin America, Africa and Asia). Freire was able to draw upon, and weave together, a number of strands of thinking about educational practice and liberation of any thing. Sometimes some rather excessive claims are made for his work e.g. 'the most significant educational thinker of the twentieth century'. Though others may not agree with this notion, John Dewey would probably take that honour but Freire certainly made a number of important theoretical innovations that have had a considerable impact on the development of educational practice and on informal education and popular education in particular. In this research the resecher asses five aspects of Paulo Freire's work have a particular significance for purposes here. First, his emphasis on dialogue has struck a very strong chord with those concerned with popular and informal education. Given that informal education is a dialogical (or conversational) rather than a curricula form this is hardly surprising. However, Paulo Freire was able to take the discussion on several steps with his insistence that dialogue involves respect. It should not involve one person acting on another, but rather people working with each other. Too much education, Paulo Freire argues, involves 'banking' – the educator making 'deposits' in the educatee.

Second, Paulo Freire was concerned with praxis action that is informed (and linked to certain values). Dialogue wasn't just about deepening understanding but was part of making a difference in the world. Dialogue in itself is a co-operative activity involving respect. The process is important and can be seen as enhancing community and building social capital and to leading us to act in ways that make for justice and human flourishing. Informal and popular educators have had a long-standing orientation to action so the emphasis on change in the world

was welcome. But there was a sting in the tail. Paulo Freire argued for informed action and as such provided a useful counter-balance to those who want to diminish theory.

Third, Freire's attention to naming the world has been of great significance to those educators who have traditionally worked with those who do not have a voice, and who are oppressed. The idea of building a 'pedagogy of the oppressed' or a 'pedagogy of hope' and how this may be carried forward has formed a significant impetus to work. An important element of this was his concern with conscientization – developing consciousness, but consciousness that is understood to have the power to transform reality' as other would say he borrowed from (Taylor 1993).

Fourth, Paulo Freire's insistence on situating educational activity in the lived experience of participants has opened up a series of possibilities for the way informal educators can approach practice. His concern to look for words that have the possibility of generating new ways of naming and acting in the world when working with people around literacies is a good example of this.

Fifth, a number of informal educators have connected with Paulo Freire's use of metaphors drawn from Christian sources. An example of this is the way in which the divide between teachers and learners can be transcended. In part this is to occur as learners develop their

The participatory model is inspired by Paulo Freire`s (1970) pedagogy of the Oppressed, which argues for community involvement and dialogue for individual and community empowerment. According to Morris (2001) the participatory model of development communication makes use of interpersonal channels like group meetings, workshops, etc almost exclusively and sometimes localized 'small media' like community theatre. It defines communication as horizontal information exchange or dialogue with development communication being a process of grassroots participation through group interaction. It influences communication strategies for social mobilization/activism through interventions like empowerment education, participatory action research, rapid participatory appraisal and community involvement in health.

The participatory model incorporates the concepts in the emerging framework of multiplicity/ another development. It stresses the importance of cultural identity of local communities and of democratization and participation at all levels- international, national, local and individual (Servaes and Malikhao 2002:121).

The above characterization of paradigm shifts in communication for development as determined by paradigm shifts in development theory helps to shape the frames of reference for the paradigmatic frameworks that contain this research. It is difficult to confine the research to one paradigm as it borrows from most or all of them. FRI radio program, being predominantly a discussion program produced in and for rural farm communities, to poor, vulnerable and less literate or illiterate people altogether cannot avoid to borrow from both the diffusion, top-down models and participatory models. Radio is still the least interactive medium, making participation difficult. Howevr becuse of this participatory approach explains FRI program receives immediate feedback. The participatory empowering models are employed to some extent at program production as an imperative practice in this era of democracy.

Application of Paulo Freire in line with Atota Participatory Radio Campaigns

A Participatory Radio Campaign (PRC) is a planned radio series, broadcast to a specific farming population, over a specific period of time. It is designed to help farmers mobilize to adopt a specific farming practice or improvement. PRCs are farmer-driven and feature the voices of farmers at every step. Farmers are involved in:

- Determining the improvement to be featured;
- Discussing the pros and cons of adopting it;
- Making an informed decision to take up the improvement (or not); and
- Providing practical advice while the improvement is being adopted.

New Information and Communication Technologies (ICTs) such as cell phones, MP3 players, interactive voice response systems, bulk SMS messaging systems, and beep-to-vote systems are linked with radio to boost the interactivity, reach and accessibility of PRCs.

Phase 1:- Introduction to the improvement;

Phase 2:- Discussion of the improvement;

Phase 3:- Encouraging listeners to make a decision either to introduce or not to introduce the improvement and register this decision with the radio station, and;

Phase 4:- Information on implementation.

A PRC also includes the following elements, some of which may be undertaken simultaneously:

- Conducting background research to choose the focus of the PRC;
- Engaging knowledge partners and radio station partners;
- Establishing community listening groups (clgs);
- Training radio stations (capacity building);
- Designing, producing and broadcasting the PRC;
- Listener interaction (through clgs and icts); Participatory Radio Campaigns

According to (ARRI 2008) A Participatory Radio Campaign (PRC) is a planned radio series, broadcast to a specific farming population, over a specific period of time. It is designed to help farmers mobilize to adopt a specific farming practice or improvement. PRCs are farmer-driven and feature the voices of farmers at every step. Farmers are involved in:

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- Providing practical advice while the improvement is being adopted.

New Information and Communication Technologies (ICTs) such as cell phones, MP3 players, interactive voice response systems, bulk SMS messaging systems, and beep-to-vote systems are linked with radio to boost the interactivity, reach and accessibility of PRCs.

The PRC methodology allows a project to measure the radio campaign's contribution to farmers' increased knowledge and uptake of practices in a way that is not generally possible with other radio methodologies.

For a deeper theoretical context, the views and arguments of the forerunners of communication for development will be discussed in relation to the related literature. The concepts of radio as a communication tool for supporting development, communication for development and advocacy will be explained. This research is fore-grounded on the broader theoretical heritage of communication for development. The theoretical heritage is adapted to communication and advocacy for community development in questioning the Farm radio international program (FRI). Ultimately, the literature, theories and concepts are helpful in shaping the scope, focus and conclusions of this research.

No research study stands alone nor does it rise or fall by itself. Wimmer and Dominick (2000:13) argue that astute researchers always use previous studies as building blocks for their own work. One of the first steps in conducting research is to review the available scientific literature on the topic so that the current study will draw on the heritage of past research.

2.3. Agenda Setting Theory

Agenda setting is a media effects theory is of the theory that informs this research. Agenda setting has to do with media content but more than that McCombs and Shaw (Griffin, 2009:359) positions mass media as the ability to transfer the salience of items on their news agendas to the public agenda.

Another viewpoint from Miller (2005:271) is of the stand that agenda setting encompasses the Consideration of three related agendas; the media agenda, the public agenda, and the policy Agenda. The author added information by quoting scholars of agenda setting (Zhu & Blood 1997) who stated that agenda setting is a process whereby the news media lead the public in assigning relative significance to numerous public issues. Miller further states that the media influences the public agenda by saying *"the issue is important"* in an overt way but by giving more space and time to that issue and by giving it more prominence and time

Griffin (2009:364) emphasizes media's influence making reference to framing as discussed by scholars and quotes from James Tankard who defines a media frame as the central Organizing idea for news content that supplies a context and suggests that the issue is through the use of selection, emphasis, exclusion, and elaboration.

Baran and Davis (2009:279) refer to the work of the forerunners of agenda setting McCombs and Shaw. In choosing and displaying news, editors, newsroom staff, and broadcasters play an important part in shaping political reality. Readers learn not only about a given situation, but how much importance to relate to that issue from the amount of information in a news story and its position. The mass media may well determine the important issues-that is, the media may set the agenda' of the campaign.

Some media have emphasized the high risks and potential harm to humans and the environment while others have been the opposite. The more they do this the more the stakeholders espouse

varied perceptions and opinions about agriculture biotechnology. The media shall set the agenda for whatever majority of stakeholders perceive of agricultural biotechnology in countries where the media frame it thus .Indeed radio may set the agenda for agricultural biotechnology by giving it more time and space enabling certain stakeholders to enjoy greater access to such information than others.

Radio formats are designed to reinforce massages in order to bring change among farmers to adopt new farming techniques for improved productivity. Radio producers do this through program planning which informs the selection of topics, presentation of the topics on radio with interviews from selected experts and farmers. Farmer Voice Radio project (2012) impact programming formats are grounded in the agenda setting theory aimed at influencing farmers to adopt effective farming techniques. This position is confirmed by Farm Radio International they are working with key research and development partners, enabling them to effectively use radio in their knowledge-sharing efforts – and thus contribute to improved livelihoods on a large scale (http://www.farmradio.org/about-us/impact-programming/).

The agenda setting theory has been challenged by scholars who are of the view that it does not always work, Griffin (2009) posits that the media agenda affects the salience of some issues for some people some of the time, this is perhaps what informed McCombs in 1994 when he suggested that *agenda setting is a theory of limited media effects*..

2.4. Communicating agriculture innovations information through radio

2.4.1. Adoption and Diffusion of Agricultural innovations – theories and concepts

Difution of innovation is the third media theories that informs this research

> *Rogers`s Diffusion of innovations model is based on the premise that diffusion of innovations takes place in a channel involving five stages namely: awareness-interest-evaluation-adoption-implementation. The process also involves the emergence of opinion leaders that in turn facilitate the flow of information through interpersonal communication. According to Melkote (1991) early diffusion studies pointed out that at the awareness stage the mass media were influential while at the evolution and adoption stages, interpersonal communication and conservative sources of information seemed to be the dominant modes of influence*

Diffusion of innovations has been studied by communication studies from an initial domination of sociology, economics has gradually taken over, possibly because of a stronger emphasis on the theoretical basis for adoption, and its policy relevance. a hardware aspect (the tool, product) and a software aspect (how to use the hardware). For good reasons studies of diffusion of innovations have often addressed individual innovations, in practice innovations often come in packages – clusters – and are interrelated and interdependent.

The characteristics of innovations explain their rate of adoption. Five such characteristics of importance are discerned: 1) The relative advantage reflects how the innovation is subjectively perceived superior to the previous idea; 2) Compatibility reflects how the innovation is perceived "consistent with the existing values, past experiences, and needs of potential adopters"; 3) Complexity reflects the perceived difficulty to understand and use the innovation; 4) Trialability is "the degree to which an innovation may be experimented with on a limited basis"; and 5) Observability reflects how the results of an innovation are visible to others. An innovation can further be changed or modified (re-invented) by a user through channels, provides information to a social system with the purpose to influence the knowledge and assessment of the innovation. Mass media is often more effective in creating awareness of an innovation, whereas personal contacts are more effective in forming an opinion about a new idea. Such interpersonal communication is facilitated if conveyors of information are optimally similar to the receiver in certain attributes.

Dikshit et al (1979). In their compilation of a publication for UNESCO about rural radio, they provide a glimpse into the history of agriculture programming on radio in the world. The potential of radio in development was apparent from its inception in the 1920s in Africa when mass media were viewed as tools of power with which authoritarian governments would use to mobilize communities to rally communities around the development agenda. For farming communities living on the periphery of information technologies and societies, radio is the only window to global reality. (AFRI 2008:66). Mapusteni (2006) in his study on the Use of Radio in Zimbabwe is of the view that what motivated the use of radio as a pedagogic and Educational tool were its perceived strengths. The strengths of radio as realized by the users have been enumerated by other scholars; It is based in oral tradition, it appeals to and relies on the imagination of the listener, it can cross time and space without limit, it can go places and evoke

images that are impossible in real life, and it is a personal medium (in being a companion that) can reach millions of listeners at once with the power to speak to each one of the individually, (It can easily intrude into a person‘s schedule and private life with little or no interruption). Fossard (1996:17)

The statements advanced by scholars in favour of radio build a case for the relevance of radio use in development. Weaknesses are however observed, according to Girard (2001:116) efficiency of rural radio is often limited by its structure and lack of peasant involvement in determining its programming. Program are often broadcast on a single radio network that sometimes does not reach the entire country. The medium‘s strengths however far outweigh the limitations placing it way above any other mass media in developing countries, in the developing countries, radio is the powerful and effective medium to project the information and knowledge related to agriculture (Nakabugu, 2001). In yet another publication Nakabugu (2010) observes: Information on better farming methods, improved seeds, timely planting, agroforestry,

Better harvesting methods, soil conservation, marketing, post-harvest handling and diversification. Rural radio gives farmers an opportunity to interact with each other And other relevant authorities e.g. extension workers, crop and animal experts through format Like live talk shows, phone in programs, and on location broadcasts. Since Rural radio is Community based, It can be used to mobilize people towards community development Work as construction of valley dams, protected wells and immunization of animals".

The significance of media in development is undeniably critical, according to Ansah (1992), the role of the media has been enhanced by the current realization that the old paradigms of development that tended to equate development with modernization are wanting. This approachwas characterized by the "diffusion of innovations" and the "extension" of knowledge and service from the change agents to the people. In this context the role of communication was to transfer knowledge or technological innovations from change agents to recipients and thus create a climate for an appetite for change among the people striving towards development Ochilo (1993:26). The writer however criticizes this approach as being found to be elitist, top-down and paternalistic to the extent that it excluded people from participating in the planning and the implementation of desired development program Such criticisms have led to the realization incorporating communication in national programs. This has led to efforts by

governments and institutions to design communication models aimed at bridging this gap in some developing countries.

Moemeka (1980) gives examples of countries that used radio for raising the intellectual and living standard of rural communities, Tanzania and Colombia. Tanzania‘s educational project was periodic centred on national radio station and broadcast messages to numerous listening groups centred around the country. Columbia on the other hand removed physical distance by decentralization, setting up stations in rural areas. The use of ICTs in agriculture extension stems from the realization that although effective, extension is expensive and cannot reach the desired number of within the required period. According to Bell, Payne and Bohn (2011), the functions of extension are to link farmers to markets; raise general awareness of opportunities; provide technical information, demonstrate or train; diagnose problems and recommend solutions; respond to follow-up questions raised by clients; provide mass advisories; facilitate access to credit and inputs; assist with business planning; and conduct surveys, monitoring and evaluation, and enumerations. Those functions require different ICT strategies and options. Vignare (2013) makes a case for the integration of extension services with ICTs, he states that; Broadcast technologies are very useful for extension strategies. Broadcast tools generally have limited audience participation, but many radio programs targeted to farmers often include questions and answers through call-in. Still, there is less audience participation than would occur with one-to-one mobile or even well-designed.

Internet training or DVD/CD training. Coupling broadcast tools with interaction can enhance the impact. Broadcast is aimed at serving large groups of people through radio, television or production of video. Digital video could be used today on site for small trainings through television, through video players and online, often through satellite feeds (on a monitor or projected on a screen).

In line with AFRRI (2008) there are three types of rural radio; public, private/commercial and all of them are faced with different challenges for both radio frequency allocations and funding, with a majority of resources in the hands of public radio stations. Resource challenges of rural radio led to partnerships with international organizations that support programming. Since 1979,

Farm Radio International (formerly known as Developing Countries Farm Radio Network) has been supporting radio broadcasters in Africa by providing free information on agriculture and food security specifically for small-holder farmers. The organization has recently expanded to include additional supports such as a weekly news service for African broadcasters and an annual script-writing competition with broadcasting equipment as prizes.

2.5. Review of Existing Literature and Presentation of Research Approach

2.5.1. The Media and Development

The notion of the power of the media to influence development has for years been challenged scholarly, but the field remains worth of further research. It is within this context that this research focuses on the effectiveness of using radio for poverty alleviation in small scale farmers in Oromiya.

Research and literature on radio for development revolves around the broad assumptions arising from the views and arguments of some of the earliest remembered communication for development theorists like Daniel Lerner (1958). Kiapper (1960). Wilbur Schramm (194) and Everert Rogeners (1983).

In Mass Media and National Development, Schramm (1964) argues that. :

> *The task of the mass media of information and the 'new media' of education is to speed and ease the long, slow social transformation required for economic development, and, in particular, to speed and smooth the task of mobilizing human resources behind the national effort (p27).*

Moemeka (1994) classifies Schrmm`s Mass Media and National Development as the best known exposition of the relationship between the mass media and national development in the 1960s. until this day, Schramm`s book remains a good starting point for research in communication for development.

(Schramm1964) lists in his book twelve areas of influence for the mass media in the task of national development namely:

- Widening horizons.
- Focusing attention on relevant issues,
- Rasising aspiration,
- Creating a climate for development,
- Helping change strongly held attitudes or values not conducive to development,
- Feeding interpersonal channels of communication, Conferring status,
- Broadening the policy dialogue, Enforcing social norms,
- Helping form tastes, Affecting attitudes lightly held and canalizing stronger attitude, and
- Helping substantially in all types of education and training.(page 9)

According to Jayaweera (1991:10), the 1950s and 1960s were the heydays of the hypnotic faith in the mass media as an agent for social change and as such developing world governments invested heavily in the mass media especially radio in the hope that it would enhance the diffusion of innovations as enunciated by Everett Rogers. Melkote (1991:87) sums up the perceptions of the power of the mass media in the world of development during the 1950s and 1960s as follows:

> *The mass media were thought to have powerful, uniform and direct influence on individuals… (The mass media) were considered as magic multipliers of the development benefits in the Third World nations. The strength of the mass media lay in their one-way top-down and simultaneous and wide dissemination. And since the elites in every nation were required to modernize others in the population, the control of the prestigious mass media by them served their economic and political interests… Administrators, researchers and field workers sincerely believed in the great power of the mass media as harbingers of modernizing influences… (p87)*

The earliest remembered proponents of the theory and practice of communication for development largely fell prey to the theoretical and paradigmatic heritage of their time. Development was confused to mean the same as modernization as the modernization theory suggested. The conception of the media and communication with which the proponents worked was not a significant divergence from the outdated ‘bullet theory’. The emphasis was on what

communication could do and or the effect the media could have on literacy, aspiration, empathy, attitudes, agricultural production, health, and so on. Very little or no attention was given to the cultural and socio-economic realities of the communities studied. It is with this observation in mind that this research will put the power of radio against that power of the socio-cultural and socio-economic contexts of the small scale farming population to arrive at a more plausible conclusion on the effectiveness and relevance of radio.

2.6. Radio: Accessibility and Relevance

Girard (2001) observes that radio undoubtedly remains the most important medium in Africa since low levels of literacy, distribution problems of newspapers and the cost of television leave it the most accessible medium. The author argues that radio radically transformed the nature and practice of social communication. Explaining the concept of community radio, Girard says that, "Community radio listeners are the producers, mangers, directors, evaluators and even the owners of the stations… Women, indigenous peoples, ethnic and linguistic minorities, youth, the political left, peasants, national liberation movements and others are discovering the potential of radio as a means of political and cultural intervention and development. They are transforming radio into a medium that serves their needs- a medium that allows them to speak as well as hear," (p2).

The limitations of using radio in particular and the media in general for the promotion of development may be best expressed in the argument that, "Mass media have proved in many, many countries to be a necessary but not a sufficient condition for development," (Schramm, 1964:4)

Ethiopian People Republic Revelution and Democratic Front (EPRDF) for about a decade prior to Ethiopian Federal republic `s political reform in 1991, radio was being used by national liberation movements operating from outside the country like elsewhere in Africa as a tool for political communication. According to Mosia, Riddle and Zaffiro (1994:3) radio then was used to denounce exploitation, discrimination and minority rule that came with communism. The denunciation was achieved through political education that mobilized people to unite and rise up against dictotrial rule. Although largely undocumented, the lessons learnt on the use of radio then informed the enthusiasm with which the government of Federal Ethiopia used radio to reorient its citizenry from the agony of poverty to the nation building project that demanded reconstruction and development.

A few attempts have been made by researchers to study the use of radio for community mobilization and development in Ethiopia. There is very little published literature specifically on the use of radio for development in Ethiopia , but there are some from other African countries for example,in Zimbabwe; most if not all of which dwells on the Development Through Radio (DTR) project, Matewa (2002) discusses in her PhD thesis about the DTR project run by the Federation of African Media Women Zimbabwe (FAMWZ) in which she looks at how the democratization of radio could be achieved through giving a voice to the voiceless and the importance of a two-way communication in broadcasting development. She further looks at how participatory radio production contributes to the empowerment and advancement of women and the marginalized communities. The thesis also assesses how community interests, needs and concerns are served by radio. Matewa`s research noted that educational and development oriented programs seemed not to belong to the category of programs that rural communities enjoyed listening to. This point to the need to always look at ways of making educational programs appealing to their target audiences (Matewa, 2002).

The DTR project in Zimbabwe operated through radio listening clubs involving rural women who would gather to listen to programs by and about themselves. It was hoped that opinion leaders would emerge from the radio listening clubs who would then relay the developmental information to others. According to Msipa (2005) radio listening clubs were solely responsible for conducting their own program recordings, providing feedback and ensuring exchange of information that affected their communities.

Nancy George (1993) contacted an experimental research to determine whether radio could be used in Kenya in the same way it has been used in Zimbabwe in the DTR project. The author argues that radio is the most pervasive media in Africa, the most easily accessible (especially for communities without electrification) and the most affordable compared to video, television and the print media. This scenario is true of Zimbabwe such that the radio medium, with its popularity, can be adapted into an appropriate tool for community-initiated development. Nancy George`s findings on the DTR project show that for many of the radio listening clubs the result of participation in the project allowed people to go beyond passive acceptance of mediated messages.

Realizing the most research and literature on the of radio for community development in Zibabwe mainly focus on the DTR project, radio for literacy and protest radio, it is the intention of this research to focus on how radio can serve the small scale farming communities. The reason for this is to contribute to and complement the existing literature and broaden the scope of understanding radio use in Ethiopia.

The use of radio to develop farm communities is not unique to Zimbabwe. According to Lewis and Booth (1989:167) the first experiment was in Canada during the Second World War called the 'farm forum'. The Farm Forum involved organized groups of farmers who met in their homes to listen to broadcasts, discuss their problems and take cooperative action to address them. The Farm Forum idea was taken up by India in 1949. Ghana in 1961 and by 1973 similar schemes was operational in Zambia, Malawi and Nigeria. Radio listening clubs and radio campaigns were the major activities. Lewis and Booth make an observation about African audiences, which remains applicable to the poor farm communities and most of rural Zimbabwe to date. The authors argue that "the lack of (universal ownership) of receivers means that group listening is the norm, and an oral culture which favors debate makes the forum/discussion approach especially suited in the region." (1989:170). this research will draw some comparisons between the implementation of different kinds of agricultural radio programs experiences from other countries.

The Developing Countries Farm Radio Network believes that radio can reach communities at the very end of the development road – people who live in areas with no phone or electricity. Other media technologies are far less affordable and accessible than radio. The print materials, even when they are produced in local languages they cannot help the illiterate people yet radio can do.

2.7. Defining Theory and Concepts

2.7.1. Radio: Pedagogy on Air

For almost a century radio has been used as an educational tool in both development and literacy programs for the reason that it is a "universal and versatile medium of communication that can be used for the benefit of society. …radio has been used to encourage positive individual behavior change and constructive social change through formal lessons or didactic lectures

delivered by renowned scholars and authorities," (Fossard, 1996:2). What motivated the use of radio as a pedagogic and educational tool were its perceived strengths as outlined by Fossard:

- It is based in oral tradition,
- It appeals to and relies on the imagination of the listener,
- It can cross time and space without limit,
- It can go places and evoke images that are impossible in real life, and
- It is a personal medium (in being a companion that) can reach millions of listeners at once with the power to speak to each one of the individually,
- it can easily intrude into a person`s schedule and private life with little or no interruption. (1996:7)

These strengths tend to outweigh the weaknesses of radio, especially the assumption ascribable to the Uses and Gratifications Theory that listeners are accustomed to using radio as a background to their lives, without paying full attention to what is being broadcast.

Fossard (1996) believers that listening skills are better developed in the developing world than in the technologically advanced countries because with the spread of print materials, television and computers in the latter, learning has become less oral and more visual. The question of access to these other media in the developing world comes into question. In Ethiopia, the changing socio-economic and political situation compels people to be alert on new information that affects them. This opens up a good opportunity for using radio, which thrives on the listening skills of people. This observation is supported by Gordon Adam (2005)`s assertion that war in Afghanistan made the Afghans 'voracious radio listeners' (p350). Awareness raising and advocacy work through the Farm radio international programs borrowed from the pedagogic potential of radio.

Gordon Adam derived lessons from the Afghanistan experience of broadcasting 'socially useful' programs as follows:

> *If they are well produced and transmitted in good quality at prime time, radio programs can change perceptions and behavior on their own without (external) 'resources and positive incentives' to support them which Bandura discusses.*

Drama-and especially soap opera- is an effective means through which to provide socially useful information.Use of everyday language is all-important- people identify with not only what is said but how it is said.Broadcasters have to ensure, as far as possible, that the target audiences have access to the programmers. This implies determining in advance when the best time for radio listening is, and whether the target groups have ready access to radios. (2005:264-5)

These lessons learnt serve to build a good argument for the relevance of radio use for development purposes. Depending on the circumstances of the benefiting population, people may begin to take positive steps on their own after they receive socially useful information applicable to their individual lives.

The arguments above explain the notion of radio as a pedagogical instrument used to teach people academically and socially useful information. The limitations of the radio instrument should be discussed in cognizance of its pedagogic potential.

2.7.2. Advocacy: Setting the Agenda for Development Action

The Farm radio International program is a combination of communication, advocacy and community development. As such, it is imperative to define the advocacy concept before explaining how it applies to the case of FRI. Advocacy is perhaps what all individual and institutions do every day consciously or unconsciously to push specific agendas and make progress. It is "an ongoing process aiming at change of attitudes, actions, policies and laws by influential people and organizations with power, systems and structures at different levels for the betterment of people affected by the issue," (International HIV/AIDS Alliance, 2004:12). According to the Tear fund, advocacy is "Seeking with, and on behalf of, the poor to address the underlying causes of poverty by influencing the decisions of government, companies, groups and individuals whose policies and actions affect the poor." Action Aid says advocacy is "the process of influencing key decision makers and opinion formers (individuals and organizations) for changes to policies and practices that will work in the poor`s favors."

Reflecting on the above definitions and the theory behind advocacy, this research sees as it is simply as 'agenda-setting'. This is so because advocacy is about influencing issues to affect actions, which is what FRI seeks to do through the radio program. According to Dearing and

Rogers (1996:2) agenda-setting is an ongoing competition among issue proponents to gain the attention of media professionals, the public and policy elites. Agenda-setting offers an explanation to the question of why information about certain issues and no other issues; is available to the public in a democracy: how public opinion is shaped; and why certain issues are addressed through policy actions while other issues are not. Agenda-setting mutates and revolves around the media agenda, the public agenda and the policy agenda and the obvious interrelationships among these three elements.

Processes of advocacy can be started at any of the levels; media, public and policy, It is important to note that the media and communication are the prime movers of all advocacy activities. Advocacy is about communication of issues through various media and at various levels, therefore advocacy communication processes are at the center of the viscous circle of public, media and policy platforms.

In the case of the FRI radio program, issues emanate from the social environment (the farm communities) where they affect the small scale farming population. The need for communication and action on the issues arises naturally creating space for advocacy work. The advocacy process can be kick-started at and by any of the three entities; public, media and policy. The advocacy activities may be undertaken by and/ or through the public interpersonally, the media or policy makers. Action to address issues being advocated for may be spontaneous or organized. The action is usually more likely to produce long lasting solutions if issues are embodied in the policy agenda, which is usually legislated. When this happens, further advocacy for action will be reinforced and much more justified. The FRI radio program (media) seeks to take up issues of the small scale farmers with policy makers (government and other institutions) and communicate policy decisions or actions back to the small scale farmers . The ultimate goal is to promote issues affecting those farmers up the policy and public agendas for positive change and action that will mainstream the population into national development.

2.8. Communication for Development

2.8.1. Defining the Concept

Communication for development is a composite concept made up of the two different terms-communication and development. It cannot be defined or understood in isolation from communication and development. The theory behind communication for development:

> *…in essence (…) is the sharing of knowledge aimed at reaching a consensus for action that takes into account the interests, needs and capacities of all concerned. It is thus a social process. Communication media are important tools in achieving this process but their use is not an aim in itself-interpersonal communication too must play a fundamental role (Servaes 2002 :3).*

Morris (2001:1) quotes Wilkins (2000:197) defining development communication as "the strategic application of communication technologies and processes to promote social change." The author observes that development communication is dominated by two conceptual models namely; *diffusion/mechanistic model and participatory/organic model* (Morris 2001:1; servaes and Malikhao 2002:115).

The diffusion/mechanistic model dominated the early 'decades of development' 1950_s-60_s before gradually giving in to the divergent participatory/organic model. It does not always follow that each communication for development project falls directly and exactly within a single paradigm. The room for overlaps is always there. The overlap between the paradigms produces a hybrid of theory and practice that connect diffusion, magic bullet models with empowering and participatory models. These conceptual models distinguish paradigm shifts in development communication that correspond to paradigm shifts in development theory. The FRI radio program in its spirit and motive is driven more by an empowering, participatory model. However, in practice it also borrows significantly from the diffusion. Top-down models as FRI plays the role of the advocate between the small scale farming population from the farms and decision/policy-makers.

2.8.2. The shifting Paradigms

According to Servaes and Malikhao (2002:128), original models of the 50_s and 60_s say the communication process narrowly as a message going from sender to receiver (that is, Laswell`s classic S-M-R model).

> *"The emphasis was mainly sender and media-centric; the stress laid on the freedom of the press, the absence of censorship, and so on. Since the 70s however, communication has become more receiver-and message-centric. The emphasis is more on the process of communication (that is, the exchange of meaning) and on the significance of this process (that is, the social relationships created by communication and the social institutions and context which result from such relationships"*

As Servaes (2002:10) argues, the more general typology of development paradigms corresponds to communication and culture. As Alfonso Gumucio Dagron (2002:106) puts it,

> *"The changing discourse of international development agencies should evolve parallel to changing development practices in relation to communication. If communication is not understood as the oil that will allow the new discourse to effectively move the machinery of development and social change little will actually change in the development practices. "*

The diffusion model is influenced by Everett M. Rogers`s (1962) diffusion of innovations theory, which focuses on knowledge transfer leading to behavior change and also centers on the power of mass media. It defines communication as vertical transfer of information, while defining development communication as information dissemination via the mass media (Morris, 2001:3). It predominantly influenced communication strategies of the modernization paradigm and even present day social marketing.

> *"Communication theories such as the 'diffusion of innovations', the 'two step-flow', or the 'extension' approaches are quite congruent with the modernization theory. The elitist, vertical or top-down orientation of the diffusion model is obvious." (Servaes, 2002:12,114).*

Servaes (2002:4) puts the diffusion model of development communication into context. The scholar argues that in the one-and a-half decades that followed Daniel Lerner`s influential 1958 book entitled The passing of Traditional

Society, the media have been seen to have more or less direct and powerful effects on Third World audiences, accelerating development as magic multipliers.

Perhaps a more explicit shift of paradigms can be seen from Fair and Shah`s (1987) observation that,

> *"In the 1987-1996 period, Lerner`s modernization model completely disappears. Instead, the most frequently used theoretical framework is participatory development, an optimist postmodern orientation, which is almost the polar opposite of Lerner who viewed mass communication as playing a top-down role in social change. Also vanishing from research in this latter period is the two-step flow model, which was drawn upon by modernization scholars," (quoted in servaes, 2002:4)*

Servaes and Malikhao (2002:120) observe that in many ways dependency is the antithesis of modernization, but at the level of communication it is a continuation of it.

2.9. Communication

Communication can be defined from two schools of thought namely; the semiotics school and the process school. The semiotic school defines communication as the production and exchange of meanings emphasizing the importance of the socio-cultural context in facilitation interaction between messages or texts and their receivers in order to produce meanings. It is concerned with the role of texts and their meanings in the development of a people`s culture. The process school starts from a channel perspective defining communication as the mechanical transmission of messages from senders to receivers. This perspective focuses on how transmitters of messages use channels and media of communication. McQuali (1987) defines communication as the sending of a message about something to someone who is a receiver. Fiske (1990) says that communication is social interaction through messages, a human activity that is easily recognizable. Fiske`s definition strikes a linkage with Servaes`s above description of communication for development as a social process. For purposes of this research

communication is viewed in a broader perspective as a human process that cannot be separated from the socio-cultural context. Therefore, this research leans more to the semiotic school than the process school.'

2.10. Development

Neville Jayawera (1991:1) defines development as an inclusive process involving qualitative and structural change resulting in the improvement of the quality of life of the community as a whole. No matter how radical scholars want to differ on defining development, that is should lead to t he improvement of the quality of life remains compelling.

Pieterse (2001:7) outlines a tabulated historical continuum of development theory and discourse spanning across nine perspectives. These are outlined as follows; latecomers (to development) (1870) and after) defined development as industrialization and catching up with the North; colonial economics (1850) and after) defining development as resource management and trusteeship of colonized countries; development economics (1940 and after) where economic growth in the form of industrialization meant development; modernization theory (1950 and after) which defined development as growth in economic, political and social modernization terms; dependency theory (1960 and after) that saw development as an autocentric process of accumulation of wealth nationally, alternative of people`s choices; neoliberalism (1980) defines development as economic growth as in structural reform, deregulation, liberalization and privatization, and last on the continuum if post-development (1990 and after) where development is authoritarian engineering and a disaster.

Although Pieterse`s periodization can be questionable, his continuum of perspectives of development goes a long way to explain the historical roots and continuation of development discourse. By not closing the periods, Pieterse manages to recognize the fact that the discourses of development overlap through time as one paradigm dominates at a time with its predecessors either continuing in small doses and/or eventually become irrelevant altogether. Each perspective unfolds within a distinct historical era, which determines the discursive value it carries.

Three paradigms of development theory namely, modernization theory, dependency theory and another development will, however, largely inform and guide the line of discussion in this research.

2.11. Community, Community Media and Mass Media

The term ‘community development’ predominantly referred to in this research begs for more clarity. As development has been defined. It remains prudent to unpack what community means. Perceptions on what a community is may differ with the geographic regions of the world. A community is a geographically based group of different individuals. It is a social interest group. This research is inclined to adapt the definition by Neville Jayaweera who says a community “is a local group that occupies a local space within a defined physical area,” (1991:16)

Jayaweera (1991) defines community media as people`s communication that depends on people`s energies than technology for its efficacy and efficiency. It relies heavily on communication models that are rooted in the local culture, such as song, drama, poetry and dance. The emphasis is on ‘people’ rather than on ‘communication.’ That is to say that people must always stay in command of communication, not ‘professionals’ or ‘technicians’ or ‘experts’. While it does not altogether leave out technology-based communication, its reliance on technology is marginally confined to what the people themselves can own and use. People`s communication must result in the strengthening of ‘community’ and communality, and in the erosion of individualism. Other scholars refer to it is local or grassroots media.

The mass media are the highly mechanized technology of communication that sends media messages to large audiences and geographical areas all at once. They are controlled by trained experts and not the people.

The literature reviewed in this research may not be exhaustive. A deliberate attempt was made to focus on that literature that is closely related to the subject of discussion. The concepts and theories have also been selectively picked and defined in as much as they apply to this research. Therefore, the literature, concepts and theories define the academic roots of the thesis.

2.12. Farm Radio International (FRI)

2.12.1. Farm Radio International

FRI is a Canadian-based, not-for-profit organization working in direct partnership with approximately 400 radio broadcasters in 38 African countries to fight poverty and food insecurity. Its mission is to support broadcasters in developing countries to strengthen small

lscale farming and rural ommunities. FRI was established over 35 years ago in response to the fact that farm radio broadcasts in the global South did not, for the most part, serve small-scale farmers. Rather, they were geared toward large-scale commercial farmers – an audience with very different needs from the largely subsistence farmers that make up the large majority of the population of these regions. By producing and sharing radio scripts, a weekly news and information service, and other valuable resources with radio broadcasters, FRI increases the relevance, quality and quantity of farm-radio programming of partner stations that, collectively, serve some 220 million small-scale farmers in Africa (FRI, 2007).

FRI later started the Africa Farm Radio Research Initiative (AFRRI) aimed at investigating the effectiveness of radio in addressing the food security and agricultural goals of resource-poor farmers in five African countries: Ghana, Malawi, Mali, Tanzania and Uganda (Commonwealth 2012). AFRRI developed the use of Participatory Radio Campaigns (PRC) to gather, implement, evaluate and share best practices for using radio-based communication strategies to enhance food security in rural Africa. It was pioneered in Malawi, starting in 2007 with the inception of AFRRI-I project, funded by the Bill and Melinda Gates Foundation (BMGF) and implemented by Farm Radio International (FRI) (MEAS case study #8 2014). Participatory Radio Campaigns (PRCs) developed by Farm Radio International as a way to help farmers learn about, evaluate, and introduce new agricultural practices that they are interested in trying. With training and facilitation support from Farm Radio International, selected radio stations work closely with farmers and farmer organizations, agricultural extension and advisory services, researchers and others to carefully plan and deliver a four-six month radio campaign (www.farmradio.org).

Agriculture programming has evolved bringing different models into play; oganisations at the centre of communicating agriculture innovations endeavour to develop new models which emphasize interaction;

The Farm Radio Trust (FRT) evolved out of the African Farm Radio Research Initiative (AFRR-I); it grew and developed through the Farmer Voice Radio (FVR) and African Farm Radio Results Initiative-II (AFRRI-II) projects. The purpose of the FVR project was to develop an alternative approach to agricultural extension and advisory services using radio. The FVR model used radio to extend the reach of traditional extension services by harnessing the voices and experience of farmers, as well as local experts. These were developed into radio programming to

provide effective technology-assisted learning for smallholder farmers (AIR, 2009) (MEAS case study # 8 2014).

2.12.2. Farmer Voice Radio

The FVR project was implemented in Ethiopia, 2007, in Kenya and Malawi in 2009 for three years and later expanded to Uganda and Tanzania. FVR was funded by Bill and Melinda Gates Foundation and led by the American Institutes for Research (AIR). The project was initiated to address the challenge of communicating agriculture information to small scale farmers due to inadequate agricultural extension services that ―are capacity-constrained and insufficient. The implementers acknowledged the strengths of ―radio and related technologies offer a powerful, cost-effective alternative for delivering agricultural information‖ but also aware of the limitations particularly of radio agriculture programs. Agriculture programming continued to air old formats of long discussions with experts with little involvement of key stakeholders; farmers especially women farmers, community stakeholders, and excluded the youth. The programs were haphazardly planned solely by producers and therefore lacked a systematic agenda.

FVR sought to mitigate these challenges, by providing sustainable agricultural extension services through radio and complementary technologies. This was also through building partnerships and networks between agriculture institutions and experts and radio production teams, for sustainable content provision and assist in program planning. FVR project further augmented the stations capacity to involve farmers at all stages of program planning, develop innovative agricultural radio formats that appeal to farmers, integrate gender in agriculture programming. This included another important aspect; a research desk – a feedback system to monitor farmer responses in all participating radio stations. At the end of the project in 2012 among noted achievements was that cooperating radio stations had committed more than 6,900 hours per year of free airtime, while 21 agencies in all four countries (governmental or farmer associations) have assigned 87 extension officers to work with FVR at no cost. (http://www.farmervoice.org/content/solution) This chapter has attempted to discuss concepts related to the study; communication, mass Communication and the processes involved. It has discussed agenda setting theory as applied in agriculture radio formats pursued by program makers in the fast changing media trends. The developments in media and mass communication and established the use of radio in communicating agriculture information to rural farming communities.

CHAPTER THREE - METHODOLOGY

3.1. INTRODUCTION

This research is both qualitative and quantitative. It is a result of triangulation of both qualitative and quantitative research methods that make possible the gathering of different kinds of data. The qualitative methods, allow a deeper understanding of the research subject to dig out the tones of measuring the use and effectiveness of radio in poverty alleviation in small scale farming communities. Quantitative methods will help to bring out empirical data that both complement and authenticate the qualitative analysis and conclusions. The basic assumption of all triangulation is that the weaknesses of each single method are compensated by the counter-balancing strengths of another. This being a case study research means that the research will be much more focused and limited in scope to be managed within the time allowed and resources available. The methods used intend to provide an objective, unbiased evolution of data.

Undertaken as a scientific and academic research, this research strives to be systematic, controlled, empirical and a critical investigation. It borrows from the basic tenets that distinguish scientific research from all other types of research as outlined by Wimmer and Dominick (2000:11) that it must;

i. Include information on sampling methods, measurements and data gathering procedures for other researchers to verify or refute a given report.
ii. Allow for correction and verification of previous research findings.
iii. Be objective- The researcher should deal with facts and not interpretations of facts.
iv. Be empirical. Researchers are concerned with a world that is knowable and potentially measurable.
v. Be systematic and cumulative.
vi. Jensen and jankowsk (1991) contend “data collection in qualitative research involves a variety of techniques: in-depth interviewing, documents analysis and unstructured observation. It is these techniques that make up the qualitative component of this research. The following research procedures and methods will be explained in this chapter; samping, case study, participant observation, qualitative interviewing, content analysis, audience research and questionnaire survey.

3.2. Researcher`s Role and Relation to Farm Radio International

The researcher undertook this research as an independent,academic driven researcher interested in radio use in development work. After identifying a possible radio case study concept note the researcher submitted to Farm radio international Ethiopia office proposing to use their program as a case study. The resecher included in the note that the results from a critical research on the radio program, especially the audience research, would immensely help them and others as an opportunity to see if their program was achieving the desired results and to see ways of reviewing it.

Farm radio International accepted concept note provided that Addis Ababa university Department of Journalism and communication would give the researcher supporting letter . Farm Radio international allowed the researcher to do Academic research and opened its door and connected him to get access to its partners . Oromia Radio is one of the station partnering with Farm Radio International in addressing the issues of poverty alleviation in the small scale farming community under the compaing name called ‘Atota’ . (Atota means large yield for the people).

3.3. The study area

The study was carried out in oromia regional states eastern,wetern and centeral and south oromia., farming is the major ocucptions of the inhabitants . The economy of the oromia in general and that of this study area in particular is based on agraiculture . The chif agriculatuarl product is Teffee, maize, corn and cerial crops and ofcures in some areas oil seeds are also practiced .

3.4. Topography and Climate

Oromia is a region of great physiographic diversity. Its landscape includes high and rugged mountain ranges, undulating plateaus, panoramic gorges and deep incised river valleys, and rolling plains. Rising from less than 500 meters above sea level to high ranges that culminate into Mt. Batu (4607 m)- the highest peak of the region. Oromia is endowed with varied relief features which in turn accentuate varied and amiable climatic condition and other rich natural resource bases.

Oromia is a remnant part of the high and extensive Afro-Arabian plateau formed from continued uplift, rifting and subsequent volcanic piles. High relief of over 1500m is dominant. The climatic types prevailing in the region may be grouped into 3 major categories: the dry climate, tropical rainy climate and temperate rainy climate. The dry climate is characterized by poor sparse vegetation with annual mean temperature of 27°Cto 39°C, and mean annual rainfall of less than 450 mm. The hot semi-arid climate mean annual temperature varies between 18°Cand 27°C. It has a mean annual rainfall of 410-820 mm with noticeable variability from year to year. Highlands of Oromiya experience temperate climate of moderate temperature, (mean temperature of the coolest month is less than 180c) and ample precipitation (1200-2000mm).

3.5. Sampling and Justification

3.5.1. The sample Size

The research worked with a convenient sample of 93 respondents (Small scale Farmers Listeners ,Community Leader. Farm Radio international program Director, program and training leader, Agricultural Bureau representative and Radio Producer/Presenter' for questionnaire survey). The reason for this was to achieve the best results within the limited time, resources and scope of research in a manner that would accomplish the research objectives. Out of 107 respondents 93 answered the questionnaire.

Access to the field was determined by the different political circumstance prevailing in different wards s as well as the field presence of Farm Radio international, which in turn followed the political patterns as well. Bako was the friendiest zone; hence the largest number of respondents. The next more accessible Jima was Central, followed by Adma East and last Sibu Sire West in that order.

3.6. Sampling Methods

Two sampling methods were relied on during the research in the field. The sampling methods depended on the research method that was being applied at a particular time. The two methods were the most appropriate to quickly gather data from the field .The methods used were; snowball sampling and convenience sampling.

3.6.1. Snowball Sampling

To be able to undertake qualitative interviews snowball sampling was used I relied on Farm Radio international Communications to refer me to those people they worked with in their Radio program productions and development communication work who could give me informative interviews about the radio program. Through this sampling method I managed to draw a short list of my interviewees.

Deacon, et al (1999:53) metaphorically defines snowball sampling as, "Like a snowball rolling down a hill, a snowball sample grows through momentum: initial contacts suggest further people for the researcher to approach, who in turn may provide further contacts." The small scale farm populations pass for what Deacon et al refer to as very closed or informal social groupings, where the social knowledge and recommendations of the initial contacts are crucial for opening up and mapping tight social networks. It is in such settings where snowball sampling is mostly used.

The possible limitation of this method is the likelihood of having many versions of the same issue biased by the personal linkages of initial contacts and those they refer. This justifies why triangulation of methods is important. I managed to go round these possible limitations through participant observation.

3.6.2. Convenience Sampling

Field circumstances already explained above, time, transport and financial resources demanded that only those most accessible people be interviewed.

Expedience, chance and opportunity rather than deliberate intent determined the sample of respondents. Convenience sampling relies on what is available to the researcher. This sampling method was helpful in the questionnaire survey.

3.7. Research Methods

3.7.1. Case Study Method

In terms of research methodology, this thesis is a mix of audience servey program content analysis and a case study component. In general term the methology largely tends to qulatative. Yin (1984:13) says that case studies are the preferred method when the researcher

has little control over events and when the focus is on answering the 'why' and 'how' question about a contemporary phenomenon within some real-life context.

> *A case study is an empirical inquiry that investigates a contemporary phenomenon within its real-life context; when the boundaries between phenomenon and context are not clearly evident; and in which multiple evidence are used. (Yin. 1984:23)*

The radio program "Atota" is run by the Farm radio international with the partnership of Radio Oromia. Farm radio international also has a standing memorandum of understanding with the Radio Oromia to work in the farm communities to assist the small scale farming population. Without using the Farm Radio International (FRI) radio program as a case study, researching the same and accessing the field was going to be a nightmare. Taking the case study route also helped me to do the audience survey.

Indeed, the overall research question being answered in this thesis is-radio 'why' and 'how'. To answer this question a real-life case study presents a good opportunity to study radio from a specific case and context.

3.7.2. Participant Observation

The researcher participated in the progm production to be able to peer into the inner sanctum of radio programming and working with the small scale farming population. For two days he spent the whole days as part of a production crew for the radio programs to be aired in the month March of 2017. The crew included communications people from Farm radio international, a Radio Oromia Journalist (producer/presenter) and the researcher . The researcher was privileged to be introduced to the small scale farming as part of the Farm Radio international volunteer producer. This allowed him an opportunity to see and dig out the most deep seated evidence and information needed to answer those research questions. It was much easy to ask anything the researcher wanted to know from the production crew and the members and representatives of the small scale population. Any informative documents about the radio program and Farm radio International `s work were provided at ease. The researcher was able to immediately verify what he was hearing from interviews during and before the fieldwork with what I the researcher was seeing on the ground.

Participant observation was therefore used to improve upon other research methods applying what Hansen et al (1998:44) say about participant observation as a method that deploys a number of methods including observation. Talk and interviews and scrutiny of documentary sources. Indeed as the scholars argue, "participant observation is the only method by which the normally invisible realm of media production can be recorded and made available for wider consideration." It is predominantly a qualitative method.

The researcher was able to assess community participation and the hidden truths of power dynamics, control and agenda-setting process involved in the radio program. The method of participant observation, although not without weaknesses, has the following strengths:

i. Records and makes the invisible visible
ii. Counters the 'problem of inference'
iii. Improves upon other methods through triangulation
iv. Qualifies or corrects speculative theoretical claims
v. Reminds us of the contingent nature of cultural production
vi. Provides evidence for the dynamics as well as embedded nature of cultural production (Hansen, et al, 1998:43).

Participant observation was further justified by the fact that "there is always a discrepancy between reports of attitudes gained through interviews and observation related to those attitudes." (Jensen and Jankowsk. 1991:61).

As a participant observer the researcher kept a detailed record of both objective observations and subjective feelings mostly on the spot and later whenever remembered something from the field.

3.8. Qualitative Interviews

Five in-depth interviews were carried out with the following categories of people. The number of interviews was limited so that they could be manageable.

i. Community Leader
ii. F arm radio international training and program directors
iii. Agricultural Bureau representative.
iv. Radio Producer/Presenter

The interviews were structured. Informed consent of the interviewees was obtained in advance and during the interview processes. Informed consent encompasses notifying the research subjects about the overall purpose of the research and the main features of its design, as possible risks and benefits from participation in the research project. Without this initial step, it would not have been easy, if at all possible, to get interviews from people familiar with the sensitive political situation in Ethiopia. Kvale (1996:2) says that "an interview is literally an interview, an inter change of views between two persons conversing about a theme of mutual interest." The author metaphorically refers to the interviewer as a miner who unearths a valuable but buried metal, which is knowledge.

"The research interview is an interpersonal situation, a conversation between two partners about a theme of mutual interest. It is a specific form of human interaction in which knowledge evolves through dialogue." (Kvale. 1996:125).

An interview guide was developed containing rough and general topic to be covered by interview questions in answering the research questions. The interview questions were designed in a manner that they promoted positive interaction. Kept the flow of the conversation going and motivated the subjects to talk about their feelings and experiences. The guide was common to all interviews (structured and unstructured) only to be segregated accordingly to be directed to appropriate interviewees during the course of the qualitative interviews.

The structured interviews were formal such that the researcher had to introduce himself and the intentions to the interviewees. The unstructured interviews were those that the researcher carried out during participant observation in which the resecher did not tell the interviewees that a research was carrying out but simply and promptly started to talk to them in natural conversation.

3.9. Content Analysis

Quantitative content analysis was employed to thoroughly look into the radio program and be able to do cross analysis against the findings from interviews and participant observation.

A total of ***18*** radio programs were listened to, reviewed and their main topics were transcribed to allow for counting of salient features of program content (issues). The analysis covered mostly

the salient features of the program like issues covered, caliber of talking voices quoted and geographical distribution of the coverage, the new ideas, and innovations. Through this method it was possible to count and analyze issues.

Stacks and Hocking (1992) define content analysis as "a research method or measurement technique that involves the systematic study of the content of communication messages" (Asamen, 1992:272). Berelson argues that content analysis is "a research technique for the objective, systematic and quantitative description of the manifest content of communication" (Deacon et al, 1999:115). The purpose of content analysis in this research was to quantify salient and manifest features of a large number of texts (issues) and to use the statistics to make broader analyses. In this thesis, content analysis was used mainly in relation to an audience survey.

Hansen et al (1998:95) define content analysis as follows:

> *Content analysis is by definition a quantitative method. The purpose of the method is to identify and count the occurrence of specific characteristics or dimensions of texts, and through this, to be able to say something about messages, images, representations of such texts and their wider social significance. Content analysis can help provide some indication of relative prominences and absences of key characteristics in media texts, but the inferences that can be drawn from such indications depend entirely on the context and framework of interpretation by which the texts analyzed circumscribed.*

3.10. Audience Research and Questionnaire Survey

An audience survey was undertaken. Out of the 107 sample. a total of 93 respondents answered questions. This means that 6 other targeted respondents did not complete the questionnaire for various reasons. This gives the questionnaire a success rating of 92%. The breakdown of the respondents to the questionnaire is as follows :

- 42 farmers , largely small scale farmers
- 12 non-farm workers.
- 25 farm workers
- 21 extension workers

- 3 producers
- 4 Farm international officers

The audience research was meant to find out the media tastes and preferences of farm communities. The audience research is central to this research as its results will be helpful in judging whether what Farm radio international is communicating is what interests and helps the small scale farming communities.

According to Hansen et al (1998) "Surveys are useful in collecting data about current attitudes and opinions of audiences. Hansen et al say that the basic tool for such kind of research is the questionnaire, which standardizes and organizes the collection and processing of information. The most common type of a questionnaire according to the authors is administered in a fact-to face situation with an interviewer asking questions and completing the form. During this survey, interviewers went out to meet people, ask questions and complete the questions. This was done to increase the chances of having questionnaires completed as this method of administering questionnaires is the least involving on the part of the respondent.

3.11. Research Instruments

A questionnaire was designed to interview the farm communities (farm workers, non-farm workers and farmers). Structured interview questions were drafted for the following people; community Leader, Farm Radio International Training and program national Directors, Agricultural Bureau representative and a Radio Producer/Presenter.

The strength of this research lies in the fact that different research methods, both qualitative and quantitative were applied to gather data. This has allowed complementarily of the methods such that weaknesses of one method are compensated by another method. The quantitative methods were the only means to undertake audience research and to pick out the issues of priority to the small scale farming population for deeper content analyses. Qualitative methods presented an open ended opportunity to gather deep seated information, which allows for more informative analysis and conclusions.

CHAPTER FOUR - DATA PRESENTATION AND ANALYSIS

4.1. Introduction

This chapter presents the results of the study after exploring respondents' reactions to questions regarding the impact of radio agricultural programming in the case of small scale farming for poverty alleviation. It provides data analysis and interpretation of results on respondents' reaction to the relevance of agricultural content broadcast on radio, and its influence in changing farming practice. The researcher used triangulation a method that combines both quantitative and qualitative data to achieve the objectives of the study. The data collection methods were varied; the researcher used structured questionnaires, in=depth interviews with key informants and focus group discussions. Selected quotes from the respondents involved in the study are also presented. Data from farmers was gathered using structured questionnaire, while agriculture experts and radio producers were interviewed using a questionnaire guide

Studies indicate the potential for significant yield increases in key staple crops. To make these potentials a reality, farmers need access to information on farming practices and sustainable technologies. The Government of Ethiopia is trying to support small-scale farmers through an agricultural extension system that places an extension officer in every kebele in the country.

Small-scale producers in Ethiopia have been growing staple foods such as teff, sorghum, beans, maize and wheat for their families and their wider communities for centuries – even millennia. These farmers are widely recognized for their deep historic knowledge of indigenous seed varieties ("land races") and farming practices.

Teff is indigenous to Ethiopia and Eritrea, and is one of Ethiopia's most important cereal crops, not only in terms of food security but also culture and tradition. But, according to the Agricultural Transformation Agency, the crop's average yield has remained low (1.3 t/ha) and supply has not kept pace with demand. As a result, market prices have risen beyond the reach of many Ethiopian households.

The Government of Ethiopia has indicated its commitment to helping small-scale farmers overcome such challenges and improve their productivity. A key element of government strategy is helping small-scale farmers gain knowledge of farming practices and sustainable technologies

that can boost yields, reduce post-harvest losses, and strengthen access to markets. To help makes these knowledge gains a reality, a mass media-based communication strategy is needed, one that regularly shares knowledge with and among farmers and helps farmers voice their needs and interests.

While radio ownership is not universal in rural Ethiopia, radio remains the only medium that reaches the majority of farmers in their own language free of charge and unconstrained by illiteracy. The farm radio projects responded to the need for more effective radio strategies, and provide a model of a communication strategy that can be scaled to large populations and evaluated for effectiveness.

The Staples project was designed to work with partners to develop and broadcast participatory radio programs to help Oromia smallholder farmers learn about, introduce and benefit from improved methods of farming and marketing staple crops such as teff. By doing so, the project tried to extend the reach, scale, impact and sustainability of agricultural development initiatives already introduced by other organizations in Ethiopia – many of them with funding from the Bill & Melinda Gates Foundation. The project also builds the capacity of local radio stations to research produce and sustain, programs that provide small-scale farmers with the information they need to evaluate, select and implement practices that boost their yields of staple crops improve post – harvest mangenet and achieve greater success in the market

The study focused on three categories of respondents; farmers, the program 'Atota', and agriculture experts (extension officers) and program producers and directors. The research sample was composed of 93 farmers and farming related respondents, the initial respondents were drawn from Bako Eastern wollega through convinent sampling; ensuring they are farmers and were indeed listeners of Oromia Radio Atota and listeners of the agricultural program "Atota ". 107 questionnaires were distributed to respondents in Bako, Jima Horda, however only 93 were listeners of the station and indeed the radio program under study "Atota ". A decision was taken to go forward becuse the data gathered was found excellent in its reperesntion . for the part of conent analysis another 18 list of respondents drawn from interactive show in the "Atota" program is taken from a data base of a period spread over four months from January to April , these respondents are from various parts of the country; Western, Central, Eatern, south .

Three respondents were selected randomly from each of the four months bringing the total to 18 bringing the total of respondent to 93.

Out of the 93 respondents, 61 were male (65%) while 31 (33%) were female while 2(2%) of the respodents are un kown .

Table 1 - Distribution of the farmers based on socio economic characteristics

Gender	**Frequncey**	**Percentage**
Male	61	65
Female	31	33
Undermined	1	1
Marital		
Married	79	84
Divorced	03	3
Widowed	02	2
Unkown	9	9
Age group		
18-30 years	21	22
31-42	31	33
43-54	24	25
55 years and above	14	15
Un kown	3	3
Educational attainment		
Adult education	07	7
Primary education	45	48
Secondary education	10	10
Informaleducation and illtrate	31	33
Total	**93**	

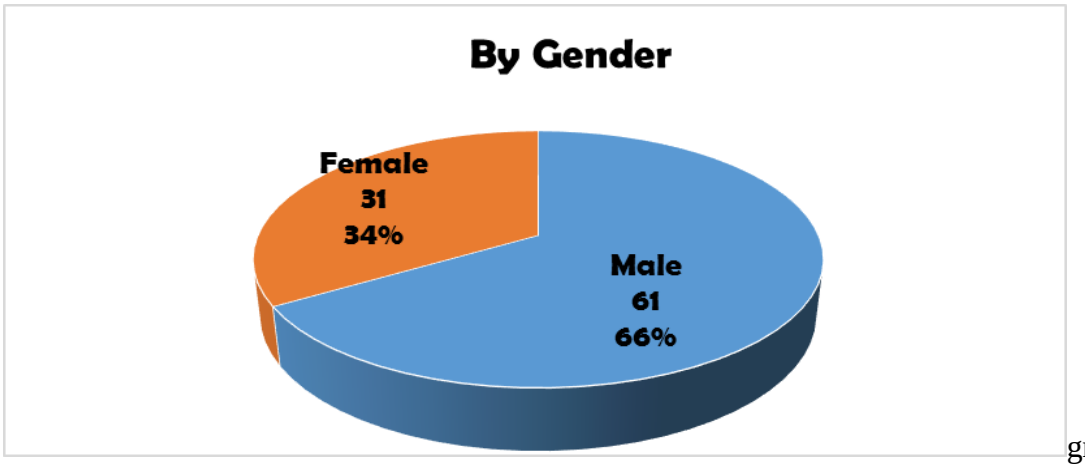
Souces field survey ,2017

4.2. Distribution of the Atota small scale farmer listners according to gender respondents

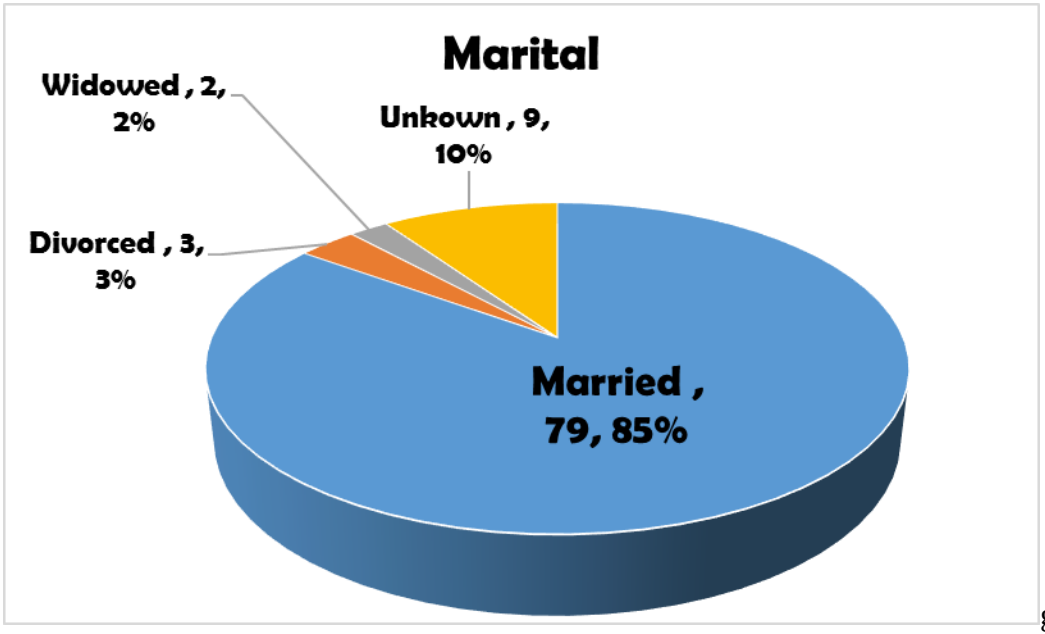
4.2.1. Women participation in the Atota agriculture radio program

According to Table 1 the findings reveals that the participation of women in Atota is great this finding is a reflection of the important place the women have in agriculture sector and their use of mass media. Out of the total 92 respondents 31(33%) were women, this finding confirm the surveys of other scholars who have concluded that the use of radio, like all ICTs, is gender neutral. And this is the evidence that women can have access to radio than men which is exactly in contrary to Myers (2008). Myers earlier survey in Eritrea (2004) revealed several factors that affect rural women listeners, namely: men's ownership and control of radio sets, women's lower levels of education (and lack of knowledge of languages other than their mother tongue), and women's higher and more constant domestic workload which left them little time to devote to radio listening is reversed in the case of farm radio interanation "Atota" radio program this finding is also in line with farm radio Network (2004) which pronounces that when women have access to appropriate information, they can make better choices that benefit their families and their communities. And radio is the best way to reach rural women particularly since they account for two thirds of the world's billion illiterate. According Table 1 Atota agricultural radio program disproved exeperinces and lesssons from farm radio program in Malawi that says that women tended to shy away during participatory research activities, program recordings and feedback sessions here thfore it is not the shyness or boldness of the women which would make the women participative but the way the program is desgined that is why AFRI prescribe a participatory approach as opposed to a passive one which according to Perkins (Perkins 2012:17) is one that valued farmers as decision-makers rather than as passive recipients of diffused information. It is for this reason the model is called a participatory radio campaign.

In addition, information access and listening habits for men and women were different. The timing and mix of programs became important for radio stations.AFRRI would argue that to ensure that both men and women were able to listen, broadcasts (and repeats) were aired at different times. The best time for women to listen to the radio is the evening , as most of the household and fieldwork is done in the morning .

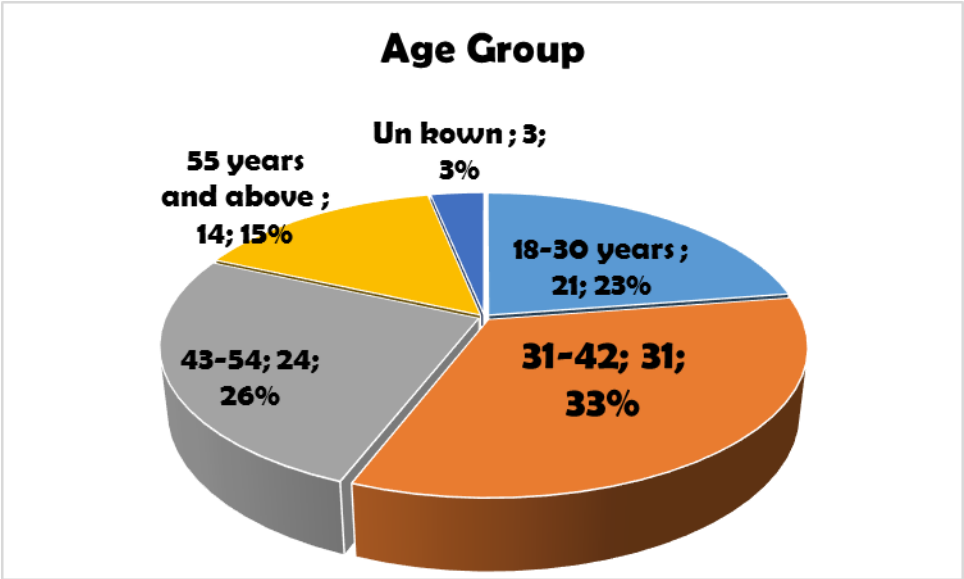


graph 1



graph 2

4.3. Distribution of the Atota small scale farmers listeners according to age group



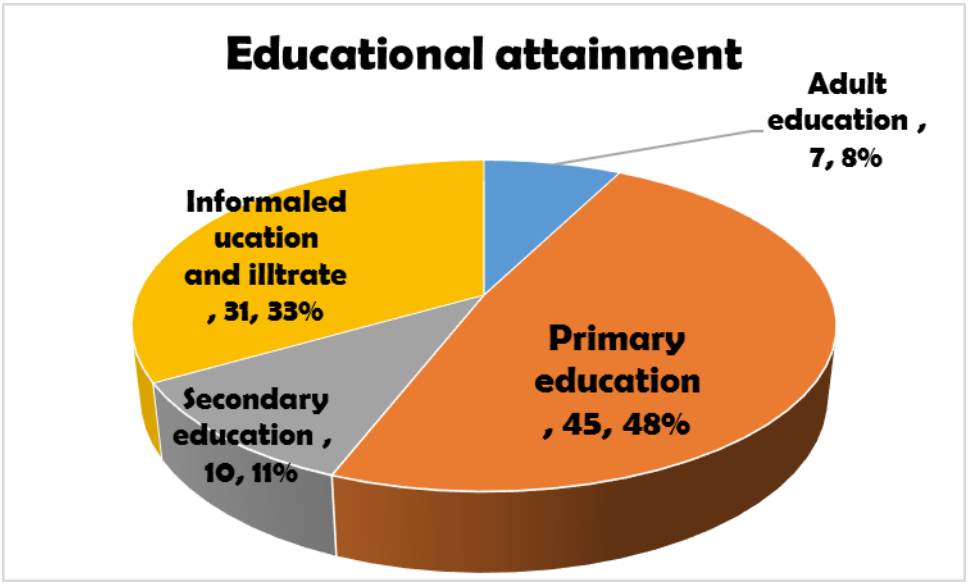
graph 3

4.4. Atota agriclural radio program younger age listeners are relatively low

Table 1 finding revealed that only (22%) of young people listen to Atota agricultural radio program. This Study has shown that Atota oromia radio audience increasing above 42 years of age while fewer young people attend to mainstream media and have a preference for FM stations whose format emphasizes entertainment. This finding is in agrrement with different former lieratures like a report on the Forum on Communication for Development & Community Media for Family Farming Rome-Italy, 2014 as it observed that Agriculture is not an attractive opportunity for youth that are not willing to take up farming as a profession. From the inerdepth interview with the resecher understood that there are other reasons for lack of interest in agriculture among young people. It is attributed to customary social systems that are so oppressive or restrictive, youth are also aware of urban-rural inequalities and aspire to standards of living not typically associated with agricultural livelihoods in Ethiopia and some African countries like Tanzania, for example, young people reportedly regard farming as a dirty activity‘ without proper facilities, while in South Africa teenage girls point to the low status ascribed to farm children compared to children living in towns and villages .

4.5. Educational Attainment

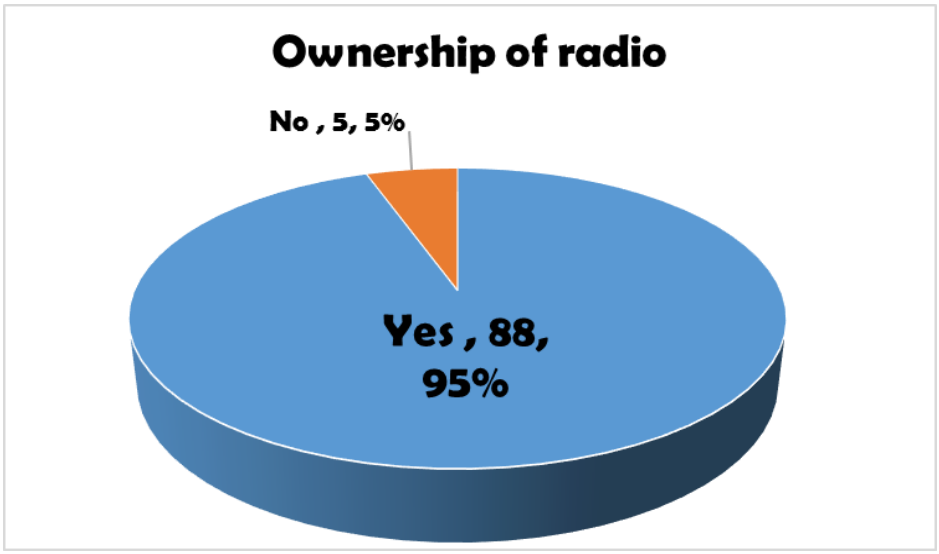
Attainemnt of education was found to have a positive realashionship with the individual1`s attidudes towards change agents and as scuh favorable attitude to innovativeness . the finfings in the Table 1 showed that most (48%) of the farmers had primary education ,while (31%) of the farmers have some education in informal ways,or tradional education .the finding implied that alsmost all farmers had attained one tupe of education or the ther other.from tis table we can deduce that level of education ws found to affect his or her acess ,comprension and adoption ofmodernagriculturalpractices.



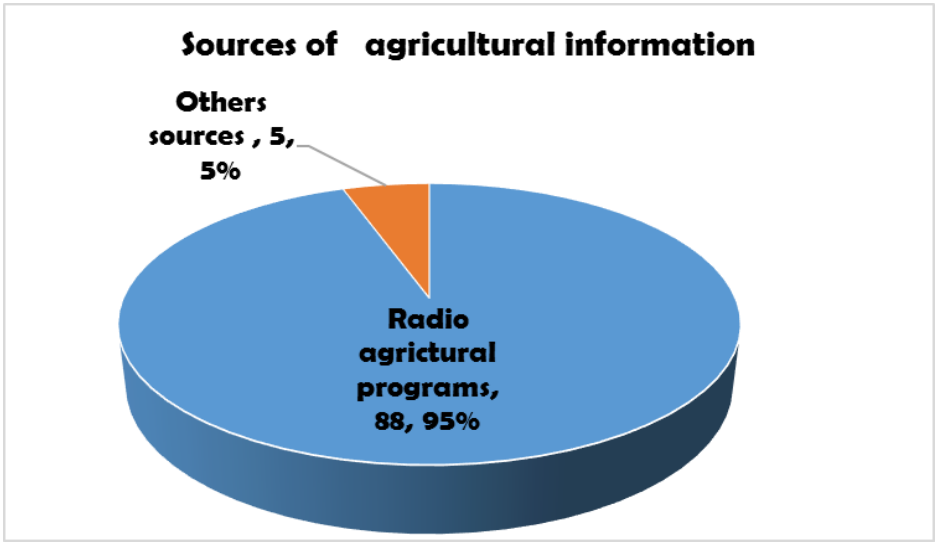
graph 4.

Table 2 Distribution of the farmers according to source of agricultural information and radio owenership (N=93)

Source of agricultural information	Frequency	Perenatage
Sources of agrictural information		
Radio agrictural programs	88	94
Others sources	5	6
Ownership of radio		
Yes	88	94
No	5	6



graph 5



graph 6

4.6. Relevence of Radio as Souces of Agricultural Information

4.7. Source of agricultural information

As shown in the findings of Table 2 , majorities of (94%) of the farmers had acess to the sources of information through radio agricultural programs while (6%) of the farmers had access to agricultural information through other mean diffent from radio.This indicates that

majorties of thesmall scale farmers of the study area relied on Radio as their souces of agricultural information compared to extension contacts ,farmer to farmer contact. This finding is in agreement with Farm Radio Internation report focuses on the outcomes of the teff component of the Ethiopian Smallholder Staples Development Project, which was conducted in collaboration with the Agricultural Transformation Agency of Ethiopia (ATA), and with the financial support of the Bill & Melinda Gates Foundation. Because FRI also worked in 2012 on a short-term project with the Agricultural Transformation Agency called *Scaling up Successful Technologies for Teff using Radio and ICT,* which involved radio campaigns on teff, which reveled that as far as agricultural extension work is concern , radio was the most important and effective means of disseminating agricultural information and innovation to the farmers in rural oromia targeted areas.

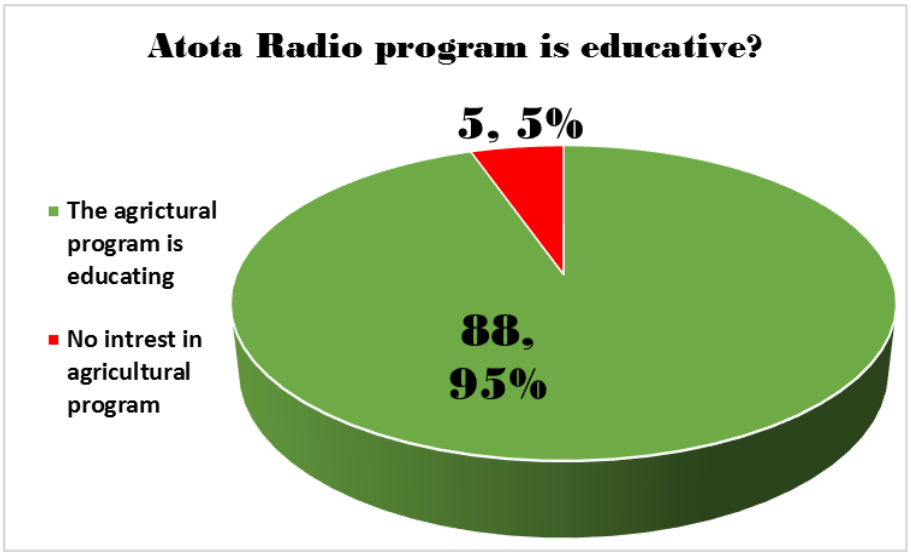
4.8. Radio Ownership

Radio as an impartnat type of mass media played a vital role of enlighting farmers about government agricultural polices aand dissminations of agricultuarla information to hunderds of thousnads of farmers. Based on this importance , many rural farmers are fond of having transitor radio through which they are able to listen to both agricultural and non agricultural information .Table 2 of the finding showed that majority (94%) of farmers had radio sets while (6%) of the farmers did not owned a radio sets. This implied that most of the farmers had access to radio , which is tremed s stepforwared towards having access to information .this also in accoradamce with farm radion internation studies that the owenership of radio set by farmers is an important factor that indicates the physical avialbility of the medium and exposure of the audience /farmers to radio agricultural program.

Table 3 farmers distribution based on agrictural radio program (Atota)

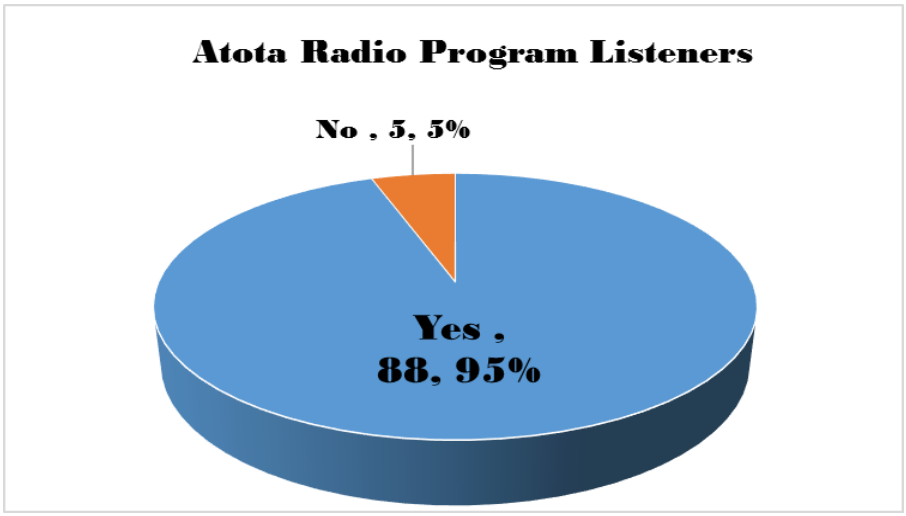
Listening radio program	Frequency	Perentage
Yes	88	94
No	5	6
Why not		
No promotion about the progarm		
Battries problem		
The agrictural program is not educating		
No intrest in agricultural program	5	6

Souces field survey ,2017



graph 7

4.10. Atota agrictural radio program is listened



graph 8

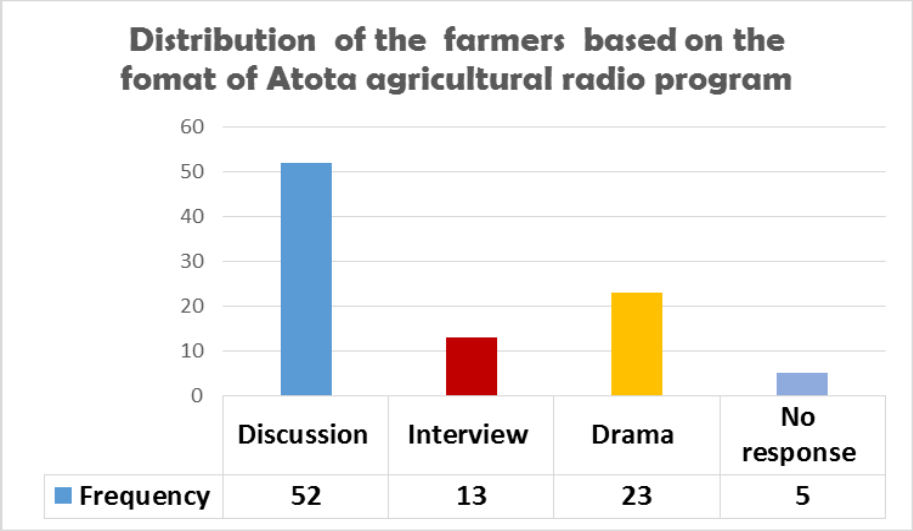
As shown in Table 3 of the findings majority (94%) of the farmers eas found to have listened to(attota) agricultural radio program while (6%) did not listen to agricultural radio program. This is an indication that a greater percentage of farmers in this study areas had access to agricultural information which according to them helps in providing furnishing information on agricultural activities ,market issues, weather,etc. The finding is in line with the general fact that information clears market price and farmers baragin for more high selling price.

The finding in Table 3 also reveled that out (6%) of the farmers did not listen to the agricultural radio program in our context "Atoata'. The finding s of the study imply that clear promotion of the program and making the program very attractive would make the farmesr to see with their naked eyes how a particular agricultural program is being demonstrated step by step.

Table 4 - Distribution of the farmers based on the fomat of Atota agricultural radio program (N=93)

Format	Frequency	Perenatage
Discussion	52	55
Interview	13	13
Drama	23	24
No response	05	5

Souces field survey ,2017



graph 9

4.10. Formats of presenting agricultural radio program

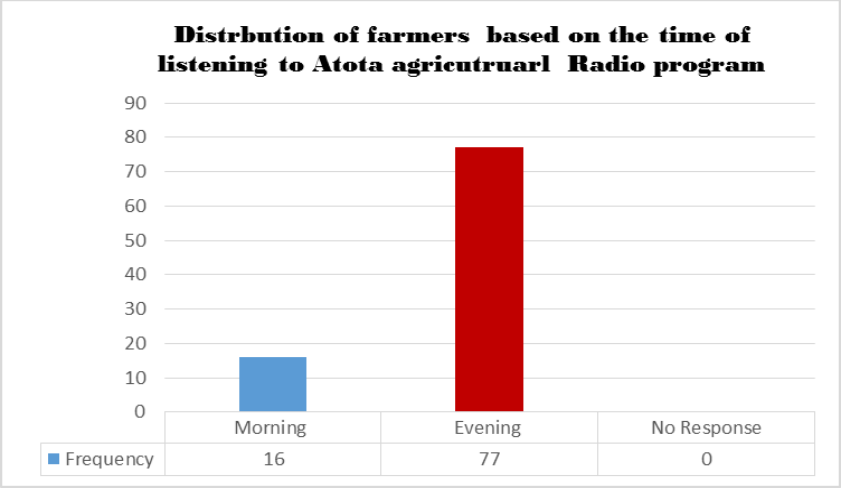
In order to arouse the intrest and create awrness among the farming listners , radio stations normally prsents their program in diversified formats.As indicated in Table 4 of the result,majorities (55%) of the farmers were of the view that the format of the agricultural radio program s listened to was presenting through presention or discussion by an expert and or an extension worker while (23%) of the farmerns expressed that the agrictural radio program listened to was presented through the dramatic presntion . Interviwe consisted (13%) of the farmers listened to. This implies that majority of the farmers listened to Atota agraicutural radio

program that were presented through discussion or in dramatic format which is more attracting the framers to listen .This finding is in line with the Atota radio program content analysis which is dominated by the the format the farmers liked most per the table 4 finding.According to Farm radio Internation core values the program is in acoradnce with audinces choice at the same time the pogram is predermined as the agency agend seting in such away that agricultural radio program in question is set as enetrainemnt communication becuse performances such as storytelling interview and drama could facilitate development of agricultural extension program through the rapid diffusion of new thecnologies .

Table 5 distrbution of farmers based on the time of listening to Atota agricutruarl Radio program (N= 93)

Time of listening to Atota radio program	**Frequency**	**Percentage**
Morning	16	17
Evening	77	82
No Response	0	0

Souces field survey ,2017



graph 10

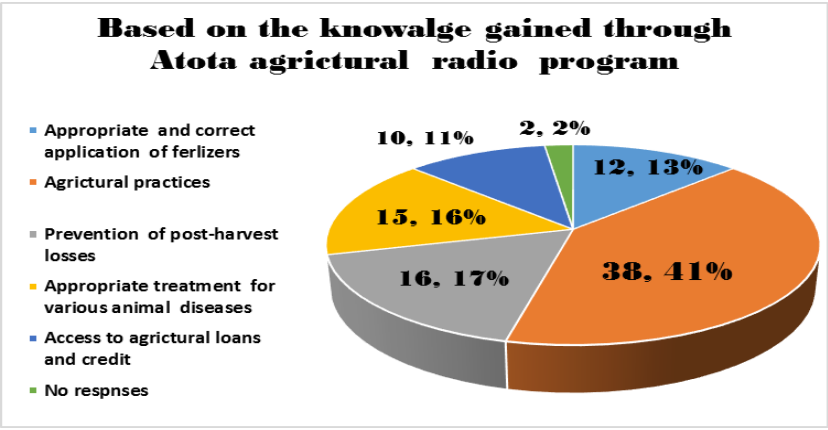
4.11 Convenience time of for listening to Atota Agricultural Radio program

Rural farmers were mostly found to have been engaged with either farm or domestic activites all the day long . Primal time to listen to any agricultural program is very essential but time sacrificing .therfore , any agricultural radio program that needs the attention of farmers has to be aired at farmers primal time.As indicted in Table 5 , majority (82%) of the farmers listened to Atota agrictural radio program is during the evening hours , while 17% of the farmers wanted to listen the agricultural radio program in the morning .This finding is in line with farm radio international that the program that aired in the morning would be repeated in the evening , thus the Atota radio program doenot miss its audience in any case . This primal time issues in agreement with the farm ardio inetrnation core values in such away that the listening group dterminnes their primal time at the same time the sation they want the progam be aired on.

Table 6 Distribution of the Respondents based on the knowalge gained through Atota agrictural radio program (N=93)

Knwalge gained	Frequency	Percentage
Appropriate and correct application of ferlizers	12	13
Agrictural practices	38	40
Prevention of post-harvest losses	16	17
Appropriate treatment for various animal diseases	15	16
Access to agrictural loans and credit	10	10
No respnses	02	2

Souces field survey ,2017



graph 11

4.12. Knowledge Gained from Atota agricultural radio program aired

The main essence of using radio to diiemnate information to farmers is to create warness and convincingly demonstrate to farmers on how such an improved tchknolgy could be practiced . The demonstration could be made in diversified format with he aim of attracting the attention of the farming community and ultimately make acondcuive environment for them. So that they can change their attidtide and adopt the technology , knowlage, practices disseminated. The findings in the Table 6 indicated that (40%) of the small scale farmers in the target group gained knowlage of agrictural practices through Atota agricultural radio program aired and (13%) of the small scale farming communities gained knowlage on appropriate and correct application of fertilizer ,again (16%) of the listening community acquired knowlge of treating for various animal and plant diseases. The finding also showed that (10%) of the target audinces got information about agricultural and credit facility issues and still (17%) of the listeners got issues in realtion to post harvest losses while (2%) of the listrners did not get any type of knowledge different from their former practices ,Despite this all the respondent said that they have big problem in their market linkage which I would say tme missed market in this agrictrural radio program.

The findings of the research indicated that the farmers in the study area gained some knowledge out of the farmers agrictural practices . The finding is in line with the Farm radio Internation research conducted from May 27 to July 31,2014[1], the aim of both projects was to use FRI's unique, Participatory Radio Campaign (PRC) methodology infour regions of Ethiopia to boost knowledge and foster the adoption of teff planting practices to improve teff yields on small-scale farms.

The evidence from the end of project survey that almost 80% of farmers in communities exposed to the PRC adopted planting in rows compared to 30% of farmers in communities not exposed to the PRC suggests that this 50% gap[2] in adoption is due to the radio programs. At the same time, the 30% adoption rate in communities not exposed to the PRC points to the effectiveness of work by the government extension system. The gap in adoption rates between non-listeners in

[1] FRI,2014 survey. PDF

[2] Everett M. Rogers, Diffusion of Innovations, Fifth Edition 2003, Free Press, New York. As of February 2, 2015, a pdf version of the book was available online at http://teddykw2.files.wordpress.com/2012/07/everett-m-rogersdiffusion-of-innovations.pdf

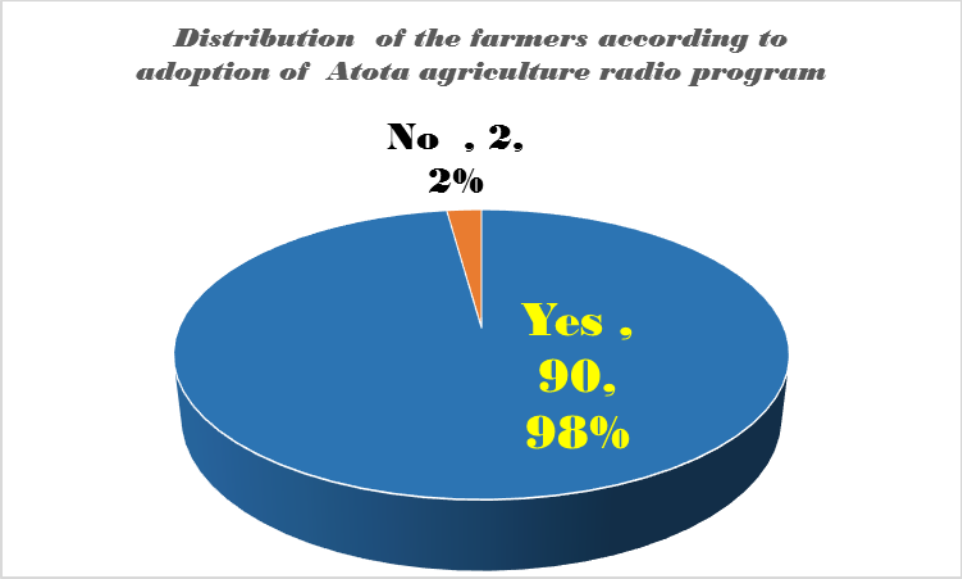
communities exposed to the PRC (55% of whom adopted row-planting) and non-listeners in communities not exposed to the PRC (30% of whom adopted row-planting) is also strongly related to broadcast of the PRC, via diffusion[2] from family and neighbours who listened to the broadcasts.

From the response of the correspndents and the orgaiztional survey done by the Fram Radio International itself ,we can dedeuce that the more frequently respondents listened, the more likely they were to adopt inovvations .

Table 7 Distribution of the farmers according to adoption of Atota agriculture radio program (N=90)

Adoption	**Frequency**	**Percentage**
Yes	90	97
No	2	3

Souces field survey ,2017



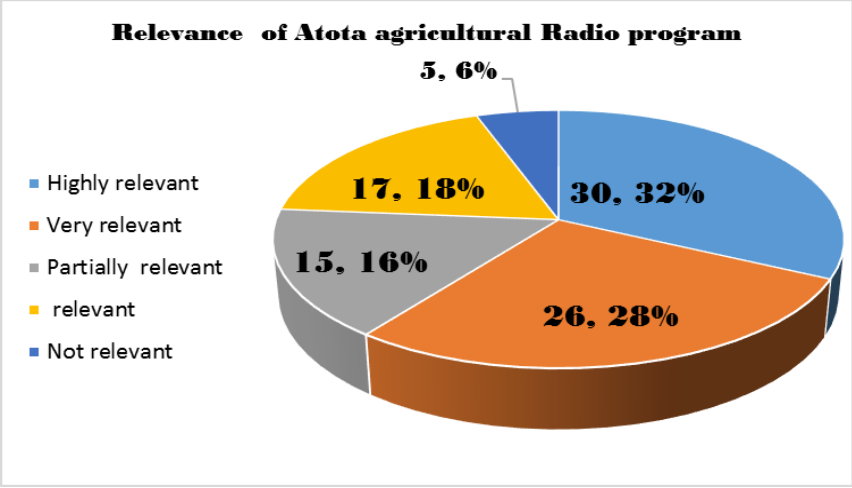
graph 12

4.13. Adoption of information aired through Atota radio Program

The main essence of creating awareness through radio program is to make the small farming community awre and convencing through appropriate attracting format which would persude the farmer to adopt the innovation as indicated in Table 7 of the findings ,the majority (97%) of the small scale farming adopted the new practice disseminating through gained knoweleg from the Atota agricultural radio program. Farmers in the study area adopted the new technology disseminated through radio due to the availability of the media sources as well as its portability and the format in which the program was aired. Drama as a tradional means of information dissemination permits diversified possible endings by enabling audience participation which is aimed at changing the attitude of partcipants of such menas of communication .

Table 8 Relevance of Atota agricultural Radio program (N=93)

Relevance of the radio program	Frequency	Percentage
Highly relevant	30	32
Very relevant	26	27
Partially relevant	15	16
relevant	17	18
Not relevant	5	5



Souces field survey ,2017

graph 13

Table 8 of the result indicated that (32%) of of the small farming in the study area ranked Atota agricultural radio program as highly relevant in realtion to their agrictural activities ,27 % of the respondents expressed their view that Atota agricultural radio program is very relevant while 16% of the small scale farming confirmed as the Atota agricultural radio program is partially relevant to their issues of agricultural activities .further more 17% of the farming communites have the opnion of Atota radio program relevant in their agrictural information life, while only 3% of the respndents said that Atota agricltural radio program were not relevant in their agrictural activeties.

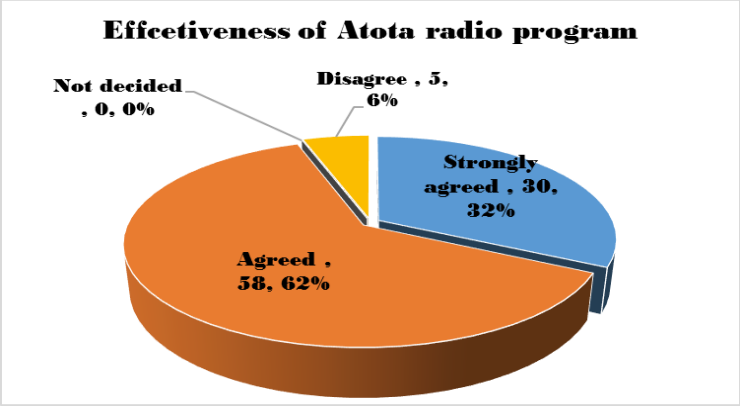
The finding of the study impied that Atota radio programs are relevant as a result of the knwelege gained that helps inimproving the small scale farming activites . This study is ine with Farm radio international core of value[3] that encourage innovations by exchanging knowledge at appropirtae season with due date and fresh information .

Table 9 The distribution of small farmers based on the efectviness and importance of Atota radio agrictural program in awarness creation (N=93)

Effcetiveness of Atota radio program	**Frequency**	**Perenage**
Strongly agreed	30	32.25
Agreed	58	62.36
Not decided	0	0
Disagree	5	5.37
Importance of Atota radio program		0
Yes	88	94.62
No	5	5.37

Souces field survey ,2017

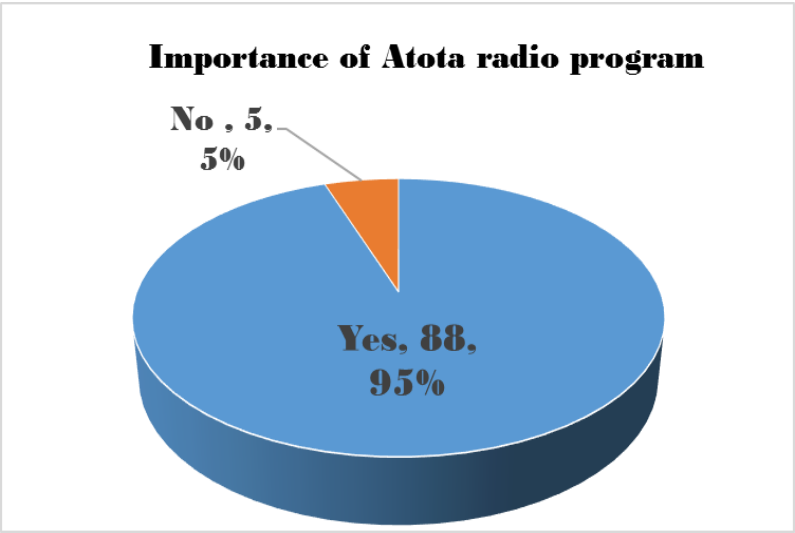
[3] shared knowelage , innovations core value no 3



graph 14

4.14. The Importance of Radio Agricultural Radio Program

The core value of airing agricultural radio program by agiven mass media is to sensitize and eduate farmers about improved agricultural practices needed to tobe adopted .as shown in Table 9 of the result ,the majorities (94.6%%) of the small scale farmers were of the opnion that the Atota garicltural radio programs were very important to them in their agricultural practices while only (5.4%) of the resondents have the view of the program as it wasn't important to their agrictural business life. This indicates that the larger number of the study area communities valued the Atota radio program as very important and relevant in their agricultural life. From the indepth interview and observation they improved their level of income and got access to good niutration values,at the same time this finding is in agreement with farm radio internation servey of 2014 that most of those who access the Atota radio program adopted new ideas and shared knowelges which made increased their level of income.



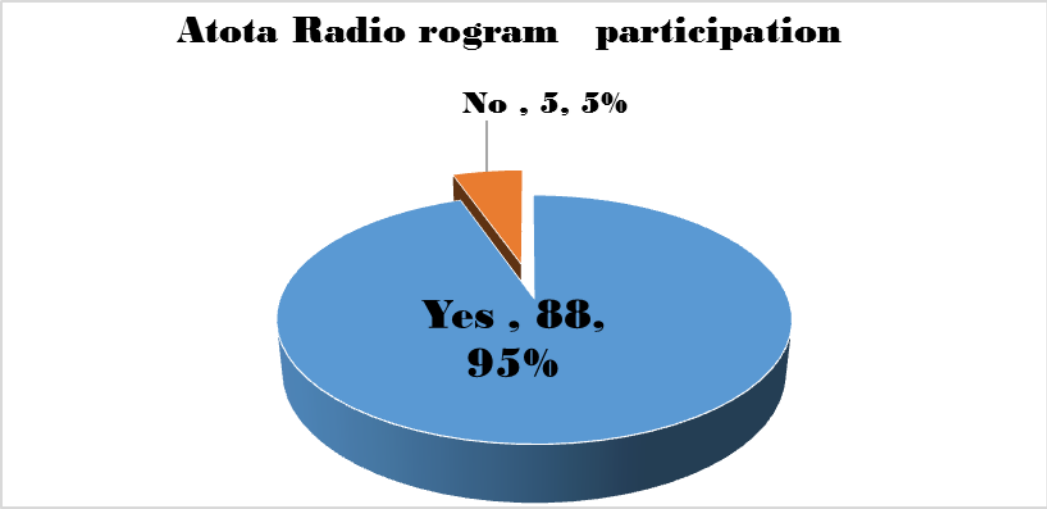
graph 15

Table 10 - Atota radio program participation

Participant in the Atota radio program	Frequency	Percentage
Yes	88	95
No	5	5

Souces field survey ,2017

Table 10 Ethiopia has widespread extension support for small-scale farmers, so this finding is not surprising. But friends and neighbours and radio were also very common sources of information. This is important because radio and word of mouth (via friends and neighbours) have been demonstrated in several life studies 95% of the Atota listenrs participate in the program . This finding is in line with the model itself indicating that the program is audience participatory. This suggests that a well-produced radio program combined with extension support and word of mouth can reach a good proportion of farmers with accurate and timely agricultural information. It also suggests that radio can act as a catalyst and that, as mentioned above, the total impact of radio programming is greater than its impact on direct listeners.



graph 16

CHAPTER FIVE - DISCUSSIONS, CONCLUSION, AND RECOMMENDATION

5. Discussions

5.1 Agriculture Knowledge to Farmers is Significant

The findings of this study confirm that farmer's need for agriculture information is very important.

Information is a core determinant of success inhuman endeavor such as storage of farm produce towards food security, Sokoy etal(2014). Rural communities which depend mainly on agriculture rely on indigenous knowledge for innovation and adoption . indigenous knowledge, however, is insufficient if the small scale farmes are expected to increase food production for food security. This means that formal and informal knowledge and innovation must therefore be linked to accelerate susistanable agricultural development.

According to International Food Policy Research Institute (IFPRI 2009), knowledge is not the preserve of science and new knowledge but aninteractive, bottom-up, social process (EIP 2013). The IFPRI policy briefs define knowledge as organized or processed information or data, is fundamental in the pursuit of innovation, and innovation as the means putting ideas, Knowledge and technology to work in a manner that brings about a significant improvement in their Product quality. Farmers on their own part need to know how to increase their yield, how to use new techniques and the findings of contemporary agricultural research and how to operate in changing market and credit situation (Lucky and Achebe 2013:12). Perkins (2012:15) observes that many agricultural innovations have been developed by researchers and by small-scale farmers themselves that, if adopted on a wide scale, would make a significant contribution to increasing food security and reducing poverty.

It is a fact that information has the power to turn around the fortunes of farmers around the Africa In general and that of Ethiopia in particular . This is because agriculture is the backbone of African economies being the largest employer and contributor to wealth creation and poverty alleviation.

5.2 Radio is the most Accessible Medium to Farmers

The second major finding of this study is that radio is the most accessible medium to farmers aged over forty years, majority of respondents listen to radio compared to television and Newspapers. Even in the fast changing world of communication and emerging of new ICTs radio has proved difficult to replace because it is ―in constant expansion (UNESCO 2001). Radio is as a mass media channel is repeatedly finding itself the preferred medium for communicating information about agriculture innovations as its reach far exceeds any other mass media channel, and as such a powerful tool for information dissemination and access especially for hard to reach rural audiences (Myers 2008:5).

Radio is used extensively as a communication medium in developing countries to support educational program in teaching, health, literacy training, nutrition education, and the Promotion of changes in farming practices to improve agricultural production (Nwaerondu & Thompson, 1987).

The rationale for using radio in extension and advisory services came from an understanding that radio is an excellent, cost-effective means of sharing knowledge, building awareness, facilitating informed decision-making and supporting the adoption of new practices by small-scale farmers (FRI, 2007). According to Sharma (2008), radio is the reliable medium that can cover wider area and can reach to the large number of people. The strength of radio as the medium of communication is that it is cost effective in terms of transmission, presentationand portability (Khanal 2011).

An effective method of dissemination of agriculture innovations to farmers remains a challenge to Africa‘s agricultural sector such that some scholars have recommended new concepts for Communication with farmers and researchers where radio plays a central role. (Spurk et al. 2013) is yet another reason for turning to radio. Radio is considered important because regular transmission of radio programs related to agriculture gives valuable information about new farming methods (Khanal 2011:201). Such successes have been recorded by the Agricultural Information Resource Centre a division in the ministry of agriculture in Kenya and other African countries which are charged with the responsibility of promoting information on agriculture innovations to farmers, agriculture extension experts trained in radio package agriculture

program which are aired on the public as well as private stations (Kiplag'at, 2003:6). Radio has continued to influence food production and food security of farmers through transmission of relevant content however the challenge is for agricultural communicators today is to develop and package messages and content that appeal to their target audiences the farming constituencies (AFRI 2012).

5.3 Farmers Voices in Agriculture Programs are More Desired

The research findings revealed that farmers prefer to listen to fellow farmers they could identify with, this is because the farmers speak in a language they can understand. While interviews with specialists were welcome they found them too technical and hence the need to integrate withfarmer interviews for better understanding.

The participation of rural farmers makes the programs more interesting and effective as the message and information easily gets through creating a sense of ownership (Khanal 2011:202). According to McRoberts & Frankie, few farmers decide to adopt a novel farming technique solely based upon information received from mass media or extension officers. External factors may create interest in and awareness of innovations, but the actual decision to adopt a new technique is usually not taken by the majority of farmers until information and practical experience from peer-farmers is received. This statement is supported by David and Asamoah (2011:26) who observe that the use of local facilitators creates a sense of ownership and adds to the credibility of technical messages participation then becomes an effective communication tool

as farmers can identify with them and consider change of behavior. Radio producers of *"Attota "* said when they interviewed farmers they were more likely generate interest and feedback from the listeners with requests for more information, the farmers also receive calls for further information from fellow farmers known to them after such interviews are aired.

While inclusion of farmers in agriculture programs is desirable by both the audience and the radio producers at the stations there are challenges that hamper inclusion of farmers 'voices in the programs. Andrew Moemeka (1980:44) observes that there is lack of interaction between Producers and consumers of programs before the programs are planned, produced and broadcasted so most of the programs though seemingly relevant are not always based on

firsthand identification of urgent needs as indicated by the audience concerned. Moemeka (1980:4).

Resource challenges of radio have made radio rather than engaging its audience it has become predominantly concerned with the search for larger audiences Girard (1992:2). This situation leads to a passive audience depicted by Kevin Williams (2003:172) as passive recipients of media messages with little or no say in how they interpret them a situation he perceives as providing the audience with the power to resist. William (2003:64).

With effective capacity support radio stations and their personnel, broadcasters can produce high-impact radio programs and phone-in shows, facilitate and record community discussions and debates, document the experiences of individual farmers and other value-chain actors, put farmers‘ questions to subject specialists, and link sellers with buyers on air (Farm Radio International, 2011). The need to harmonize availability of services by stakeholders with agriculture information is important as was depicted in the case in which farmers asked why legumes were promoted without ensuring that a seed system was in place MEAS (case study # 8 February 2014). The involvement of small scale farmers in programming is effective as revealed by FRI in their comprehensive Participatory Radio Campaign (PRC) approach that includes Understanding farmer information needs and in the entire program design such that the uptake of detailed knowledge of specific farming practices among small scale farmers, adoption of new farming practices, such that on average one in five households living in the passive listening communities actually introduced a new farming practice after being engaged in a PRC (MEAS 2014)

5.4 Conclusions

The power and potential of radio use for advocacy and communication has been demonstrated and is recognized in this research. The quantitative audience survey has revealed that radio is more popular with the small scale farming population .The major determinant for this position is that the program was produced and aired in the language and culture they understand . This radio has showed its greatest ability to cut across literacy levels, reaching the literate, less-literate and illiterate people, be they rich or poor. However, looking at it from the point of view of the small scale farming case study, this power of the radio is limited at farm production but lacked

market linkage . The lack of organized value chain of others stakeholders or structured listening limits the impact of the programs, although this research has tried to do so with limited success. More people also expressed during the audience survey that they prefer the radio programs to continue broadcasting in the local language, which makes it possible for them to feel more like the program is theirs.

Based on the findings of the study , it could be concluded that Atoa agricultural rdio program is an effective menas of communicating agricultural to the small scale farmers and as such an effecetive tool in creating awareness about improved agricultural information most especially among small scale farmers in rural areas .The findings revealed that the majority of the small scale farmers that listened to agricultural program were more males within the active productive ages of 31-42 relatively with a good number of women participation and ofcurse with less number of youg population . All the small scale farmers were found having one type of education or the other more espcaially informal type of eduction and with good number of primary education.

It was also observed that almost all the small scale farmers recived information on agriculture from Atota farm radio program and most of the information disseminated through the Atota farm radio was aired through discussions (talking) by an extension worker or an expert on the field.based on the findings of the study ,knowlage of certain agricultural parcices such appropriate and correct application of fertilizer ,agricltural pracices,prevention of post harvest losses,appropriate for different animals`diseases and access to agricultural information of loans were obtained. The study reveals that knwowlage obatained through Atoat agrictural radio program were very important ,highly relevant and effective in solving small scale farmers agricultural problems.

Accoding to table 7 only developing the best program content doesn't make the listening good but also program format. The finding clearly indicate that to creat awareness through radio program for the small scale farming community the staions need to develp a convencing and appropriate attracting format which would persuade the farmer to adopt the innovation per this study, the majority (97%) of the small scale farming adopted the new practice disseminating through gained knoweleg from the Atota agricultural radio program, due to the availability of the media sources as well as its portability and the format in which the

program was aired. Drama as a tradional means of information dissemination permits diversified possible endings by enabling audience participation which is aimed at changing the attitude of partcipants of such means of communication .

As indicated in Table 8 (32%) of of the small farming in the study area ranked Atota agricultural radio program as highly relevant in realtion to their agrictural activities ,27 % of the respondents expressed their view that Atota agricultural radio program is very relevant while 16% of the small scale farming confirms as the Atota agricultural radio program is partially relevant to their issues of agricultural activities .further more 17% of the farming communites have the opnion of Atota radio program relevant in their agrictural information life, while only 3% of the respndents said that Atota agricltural radio program were not relevant in their agrictural activeties. From this diversified opnion of relevance issues it can be forgranted that the need of agricultural radio program is demand driven innovation both for the individuals and community at alrage.

95% of the Atota listenrs participate in the program . This finding is in line with the model itself indicating that the program is audience participatory. This suggests that a well-produced radio program combined with extension support and word of mouth can reach a good proportion of farmers with accurate and timely agricultural information. It also suggests that radio can act as a catalyst and that, as mentioned above, the total impact of radio programming is greater than its impact on direct listeners.

The audience survey brought out audience preferences that show the potential and suitability of radio as a medium of communication to the small scale farming community population. However, this should not be taken to mean that the radio strategy is the most sustainable. The sustainability of the radio program is determined by the Farm Radio International and oromia regional radio marriage of convenience and financial and technical resources to bring radio more to the people. Broadcasting in the local dialect language and the accessibility of radio sets and waves compared to television and newspapers, makes radio popular and more suitable. What remains to be done is e informed actions. Then to adapt the radio medium to more participatory approaches that will take radio down into the people's hands as a technology for community media. Despite the limitations, this research arrives at a conclusion that radio remains a suitable mass medium for community development. Although it is not an answer to poverty and

deprivation by itself, it is a potentially helpful starting point for cutting back the border lines of human suffering.

5.5 General Rcommnedations

Based on the findings of the study would be nessary to suggest the the following recommenadtoins:

1. Agricltural farm radio stations should be established within the reach of the farmers.
2. There is need for effort in providing more agricultural information program to farmers through radio especially in the primal time of the lesire times of the farmers ingeneral and that of women and youth in particular .
3. The public and Non-Goverenement ,civil socities in general and and organization who have development programs should sponsor agricultural programs particularly those have strong capacity to innovate farmers agrictural practices.
4. Agrictural radio program practioners should develop relevant and attractive program format insuch away that they can attrct the youth
5. The researcher recommends that station managers invest in agriculture programming and should consider building partnerships with organizations in the agricultural sector for both technical and financial support for sustainability

5.6 Policy Recommendations

- The findings of this study emphasize the centrality of knowledge in agriculture innovations and that farmers rely most on radio to get information about agriculture innovations while extension remains the most trusted source despite its challenges. There is need to integrate extension services with radio agriculture programming in order to effectively serve rural farming communities. It is imperative that agriculture institutions and radio stations form partnerships to overcome challenges that both sides experience.

- Radio is repeatedly the most preferred mass media channel easily available to rural farming communities. It is cost effective in terms of transmission, presentation, and portability (Khanal 2011); qualities that enable farmers to receive information and to bring change in farming methods and applying new techniques .

- Radio producers and stations need to find sustainable ways of packaging innovative programs; .partnerships with agricultural institutions in producing programs would be more sustainable compared to donor funded Programs. Extension agents ought to be aware of the weakness and opportunities that radio offers and ensure they employ a multi-sectored approach in communicating agriculture innovations to farmers.

- The voice of the farmer in farm radio programs enhances the credibility of the programs and encourages the adoption of agriculture innovations for farming audiences thereby increasing productivity.

- Radio stations need to invest more in the participation of farmers in the programs if they are to be effective and sustain listenership as intended.

- As critical players in the agriculture sector the youth have a right to information about agriculture innovations for their complete and meaningful engagement in agriculture. From the findings it is obvious that few young people listen and interact with agriclural radio program. A new approach to attract young listeners to agriculture programs is recommended, the producers ought to consider ‚Youth Radio‘which broadcasts programming that is produced by or for young people Shipler (2006). Young people are known to be versatile in their use of ICTs, such Programs should have a multi approach in the use of ICTs; which combines radio, social media, and the mobile telephony.

- Ethiopian Government ought to see its agricultural extension policy becuse model has been criticized for being a model characterized by =top-down‘, =linear‘, =rigid‘ approaches were criticized for their reductionist perspectives and the passive role of farmers (Taye 2013) and neglect of societal actors as contributors to innovation, and for considering only one source of legitimate knowledge (Leeuwis 2004; Knickel et al., 2009). This method was abandoned in the 1990s (Zhou) and now a more inclusive

approach to sharing knowledge has been adopted, working Collaboratively, national agricultural research institutes, international research centers, farmers, and extension services have already produced numerous research results that have led to increased knowledge and innovation in agriculture (IFPRI 2009).

- Other develpement sctor in Ethiopia should come to the rationale for using radio in extension and advisory services understanding that radio is an excellent, cost-effective means of sharing knowledge, building awareness, facilitating informed decision-making and supporting the adoption of new practices by small-scale farmers (Farm Radio International, 2007).

- Ethiopia need to see the strength of rural radio as an extension tool is widely regarded to lie in its ability to reach illiterate farmers and provide them with information relating to all aspects of agricultural production in a language they understand; Radio is affordable, accessible to the illiterate, can use local languages, and can give voice to end-users critical for effective agricultural extension and advisory services FRI (2007).

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ANNEX 1: QUESTIONNAIRE FOR FARMERS and related

STUDY ON THE IMPACT OF RADIO AGRICULTURAL PROGRAMMES ON SMALL SCALE FARMERS

QUESTIONNAIRE FOR FARMERS

Date of interview: _____ Name:_____ (Optional)

County:_____ Sub- county:_____

SECTION 1: DEMOGRAPHICS

1. Gender : Male Female

This questionnaire is for a study on the impact of radio *"Atota Radio "* agricultural program on small holder farmers in the fulfillment of my MA degree in Journalsim and Communication. Your consent willbe highly appreciated. Your answers will be held in confidence and used only for the purpose ofthis study.

2. Age: (a) 18-30 (b) 31- 42 (c) 43-54 (d) 55- and above

3. Marital status mark (x)

Married
Divorced
Widowed
Unkown

4. Level of education:

(a) None (b) Primary (c) Secondary (d) Graduate (e) informal education

5. How often do you access;

a)Radio

i) Weekly ii) Bi-week iii) No access

6. What is the reason for your weekly access (of your preferred medium)?

……

……

……

LISTENERSHIP TOATOTA PROGRAM

7. Do you listen to agriculture program on Oromiaradio ?

Yes ☐ No ☐

Can you rate its relevance

A. relevant B. highly relevant C. low relevant D. not relevant

8. Is Atota radio program educative ?

If not why:……

9. At what time do you listen to the program?

Morning evening Not at all

10. When type of format do you like listen to the program? Mark (x)

Discussion
Interview
Drama
No response

11. What is Sources of agricultural information? mark (x)

A. Radio programs

B. Others sources

12. **Do you have radio? Yes No**

13. Are the topics addressed in the program relevant to your agriculture activities?

14. What knowledge did you get from the program content? mark (x)

A appropriate and correct use of fertilizer

B agricultural practices

C prevention of post –harvest losses

D appropriate treatment for various animal dieses

E access to agricultural loan

15. Have you been able to practice what you heard in the program?

Yes ☐ No ☐

16. How helpful (if at all) did you find what you heard in the program to your farming activities?

……

……

……

……

17. What aspects of the program would you like to be improved?

……

……

……

……

ANNEX 2: GUIDE FOR AGRICULTURE EXPERTS

STUDY ON THE IMPACT OF RADIO AGRICULTURAL PROGRAMMES ON SMALL SCALE FARMERS

QUESTIONNAIRE FOR AGRICULTURE EXTENSION OFFICERS

Date of interview: _____ Name:_____

Organization: _____ County:_____

1. What is the number of farmers you serve?_____

This questionnaire is for a study on the impact of Atota radio agricultural program on small holder farmers. Your consent will be highly appreciated. Your answers will be held in confidence and used only for the purpose of this study.

2. a) How do you mostly communicate agriculture extension information to farmers?

3. Have you ever used radio to communicate agriculture information?

   Yes ☐ No ☐

4. What are the advantages of radio?

……

……

……

5. What is your experience of using radio programs to communicate agriculture? information? (please discuss the radio programs format you have been involve in)

……

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……

……..……

6. Are the topics addressed in the program relevant to the information needs of small scale farmers ?

   Yes ☐ No ☐

7. How do you know you are reaching the farmers with agriculture information when using radio?

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……
……
……

8. What is the impact (if at all) of radio programs on agriculture in improving farming practices of small scale farmers?

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9. What are the limitations of using radio in communicating agriculture information?

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……

10. How can radio programs be improved to effectively communicate agriculture information?

……
……
……

ANNEX 3: GUIDE FOR RADIO PRODUCERS

1. Name of Radio Station
2. Title of Radio Program
3. Duration of program
4. Target audience
5. The period the program has been on air
1. 8.Program format (i.e state if it is a magazine, use of interviews, call-in or pre-recorded
2. etc)
3. What issues are covered in the program.
4. .How the topics the feature in the program selected?
5. .Who/what (institutions and experts) are your sources of information?
6. .What is the feedback system used in the program? ie SMS, letters etc
7. .How you respond to issues raised by the audience?
8. .How do you determine the impact of the program to the audience?
9. .How do you ensure fairness, balance, and use of accuracy in your programming?
10. . How do are you equipped to handle agriculture issues which are mostly scientific?
11. Comment on the challenges you face in covering agricultural issues and how you Overcome them.