

COMMUNICATING NEW AGRICULTURAL TECHNOLOGIES
IN IRRIGATION FARMING IN MALAWI: TREADLE PUMPS
IN SALIMA AND CHIKWAWA DISTRICTS

MASTER OF ARTS (THEATRE AND MEDIA FOR COMMUNICATION) THESIS

CHRISTINA SHORAI NYAMBALO

UNIVERSITY OF MALAWI
CHANCELLOR COLLEGE

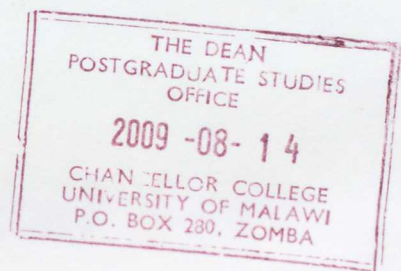
JULY, 2008

COMMUNICATING NEW AGRICULTURAL TECHNOLOGIES IN IRRIGATION FARMING IN MALAWI: TREADLE PUMPS IN SALIMA AND CHIKWAWA DISTRICTS

MA THESIS

MALAWI COLLECTION

BY



CHRISTINA SHORAI NYAMBALO



Submitted as partial fulfilment for the degree of Master of Arts in Theatre and Media for Communication in Development to the Department of Fine and Performing Arts, University of Malawi, Chancellor College.

JULY 2008

DECLARATION

I, Christina Shorai Nyambalo, hereby certify that this is my own original work and has not been submitted in part or in full for any examination and is being submitted for examination with my full knowledge and authorization.

Signature  Date..... July 2008



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CERTIFICATION

We certify that this thesis has been submitted with our approval.

Main Supervisor: DR. MUFUNANJI MAGALASI [Signature] 9/4/09
Name Signature Date

Head of Department: Dr. R. Chanunkhe [Signature] 9/4/9
Name Signature Date

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DEDICATION

I dedicate this work to my dearest mother Mary Georgina Chimangeni whose love, support and inspiration made it possible for me to achieve what I have today. You will always be my best friend Mary.

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bless!!

ABSTRACT

This research examines the communication strategies that the ministry of agriculture uses in communicating new technologies. It specifically looked at how the introduction of treadle pumps was communicated to the farmers. The study explores different communication strategies that the ministry used; these include interpersonal communication, print and radio. There were several organizations that took part in the sensitization of this innovation in corroboration with the ministry. Some of them were; the Agricultural communication Branch (ACB) and The Story Workshop (SWET). ACB as a communication hand of the ministry of agriculture used both interpersonal and radio communication in order to sell out the idea of treadle pump use to the farmers. On the other hand SWET which is a Media Organisation used both radio programs and radio drama in trying to expose the innovation.

Much as it is a fact that different media were used to communicate the message about treadle pumps, it was the intention of this paper to examine to what effect were these used and perhaps see what went wrong for the technology not to be received by a lot of farmers in Malawi, despite being communicated to the farmers on the importance of using it. In trying to achieve this objective, an investigation was made in several areas. At institution level, the research looked at the ministry's policy on communication and at communication level, the paper looked at communication strategies employed.

What the investigation reveals is that the communication tools that are used do not really

look into what farmers need as a result they do not deliver fully. Most of the farmers in Malawi are illiterate, making them unprivileged of the messages being created; as a result they end up not adopting new technologies coming. However, if interpersonal communication is to be used in its full understanding, a lot of farmers would be benefiting. To this effect, the study proposes various suggestions.

The research employed qualitative methods to extract data. Focus group discussion, structured interviews, case studies, and study of district level documents..

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LIST OF ABBREVIATIONS

CB	Agricultural Communication Branch
DD	Agricultural Development Division
DMARC	Agricultural Development and Marketing Cooperation
EDO	Agricultural Extension Development Officer
GLIT	Adolescent Girls Literacy
ERT	Centre for Education and Research Training
DADO	District Agricultural Development Officer
DIO	District Irrigation Officer
DOI	Department of Irrigation
DFID	Department for International Development
EPA	Extension Planning Area
EU	European Union
FA	Field Assistant
FGD	Focus Group Discussion
GCSE	General Cambridge SE
HIV	Human Immune Virus
JC	Junior Certificate
MBC	Malawi Broadcasting Cooperation
MP	Member of Parliament
MSCE	Malawi School Certificate of Education
MTC	Mobile Training Course
MW/ 346	Mwana Alilenji Program Number 346

JGO	Non Governmental Organisation
'LA	Participatory Learning Appraisal
'RA	Participatory Rural Appraisal
'RCA	Participatory Rural Communication Appraisal
'SLC	Primary School Leaving Certificate
RAO	Regional Agricultural Office
RTC	Residential Training Course
STD	Standard
SWET	Story Workshop and Educational Trust
T/A	Traditional Authority
GVH	Group Village Head

CHAPTER TWO

INTERPERSONAL COMMUNICATION ON TREADLE PUMPS

2.0 INTRODUCTION

Malawi is divided into eight Agricultural Development Divisions, subdivided into Extension Planning Areas (EPAs), for this purpose. Each EPA has a local office, from which the field activities are administered. The Ministry creates a flow of information to be delivered, by this network, to the farmer families in the field through its Agricultural Communication Branch (ACB). It provides information input for the extension process as interpersonal communication, newsletters, booklets, radio broadcasts, cine film projections and puppet shows.³²

This chapter will start by examining the standing Operating Procedures that are carried out when communicating new technologies, then will proceed to see how interpersonal communication was done on treadle pumps. It will go further to specifically look at the types of training courses that were undertaken by different farmers in the two districts under study and further more look at interpersonal communication in detail and a critical analysis of this will be given at the end of the chapter.

The ministry does not have a written policy on how communication of new technologies is to be done. However, there is Standing Operating Procedure that is followed in order to achieve the objectives of the ministry. The ACB is the central area for all communication taking place in the Agriculture sector. When a technology is to be introduced, people at

³² Sturges P etal 1996

CHAPTER ONE

1.0 INTRODUCTION

1.1 BACKGROUND

Since the introduction of multiparty democracy in 1994, Malawi has and continues to go through some major changes in its approach to service delivery. Democracy brought participatory and pluralistic approaches to service delivery. A good example is in Agriculture which is the backbone of Malawi's economy. According to a policy document of the Ministry of Agriculture and Irrigation, top-down approaches were previously used for extension services, with major decisions made at a central level¹. In other words, technologies and ideas were just being forced upon the local people. With multiparty politics, most approaches have been decentralized and follow participatory models. Participatory approaches entail involvement of beneficiaries in all processes of implementing interventions. However, what is not known is, how participatory are these approaches?

Agriculture being the backbone of the economy of Malawi, the country depends on tea and tobacco farming to export for its foreign exchange, apart from growing maize for its own consumption and also partly for export. The government introduced the Agricultural Development and Marketing Cooperation (ADMARC) to look into administration of farming activities. When farmers have surplus commodities, it is the responsibility of the government through ADMARC to buy and store the crop produce for future use. Beside that, ADMARC also sells commodities, for example maize to people when necessary.

¹ DAES EXTENSION CONCEPT – POLICY DOCUMENT 2000, p.2

However, according to DFID reports², Malawi continues to face food shortage due to drought and other natural disasters. As part of its efforts to address the crisis, the government has been introducing and implementing different technologies to improve food security in the country. Some of these included the introduction of use of compost manure, Sasakawa 2000, treadle pumps and hybrid maize seeds³. The whole idea of coming up with these approaches was to make sure that food was always available in the country.

The government began handing out low-tech treadle pumps which rely on human energy to members of parliament for distribution in their constituencies, pledging to buy 300,000 treadle pumps by October 2002. According to data collected at the Ministry of Agriculture – Zomba, when a new technology comes to Malawi it is experimented first by the Ministry of Agriculture or the Department of Irrigation and after investigating its advantages this is then imparted to the farmers.⁴ This shows that the farmers do not participate in the initial decision making other than just being impressed upon to adopt the new technologies. They are only invited to view the technologies during a Field Modelling Day, organized by the Agricultural Field Assistants.

Due to problems of land pressure in the smallholder sector of the country, irrigation is looked at as an important production technology in Malawi.⁵ Treadle pumps have been introduced for small-scale irrigation and have proved to be popular, but as they are used

Carlos Barahora and Sarah Levy 2003

Kadyampakeni, D. 2004 p. 16

A personal interview with Mr Chirimbiro, Assistant Irrigation Officer in the Ministry of Agriculture – Zomba 7th April 2007

Kadyampakeni, D. 2004 p.32

by farmers, it is found that they cover only a small portion of the field.⁶ This disjuncture between what they were impressed upon and the reality of its operation could be the reason why many smallholder farmers sell the treadle pumps once received. The other issue is its usability by women. In Malawian villages, women wear “chitenje” lappa wrap - tied around their waists, and let to flow to the middle of their legs. When pumping water, one uses the legs just as they do when cycling on a bicycle; this has proved to be difficult for women to pump due to the lappa wapa they wear. As such, treadle pumps have not been well adapted. Other women have expressed reluctance due to the amount of work treadle pumps demand and the height of some of the pumps. Could this be the reason why there has been low adoption of treadle pumps by women farmers in Malawi?⁷

James Nagoli in Kadyampakeni⁸ commended that with regards to the dress code, it is vitally important that manufacturers of treadle pumps come up with new designs that are gender friendly. However, some irrigation technologies like motorized pumps are so highly priced that they have not been largely adopted by small-scale farmers due to high capital requirements, operation and maintenance costs.⁹ All this comes down to the method of communication. At what level were the farmers involved in communicating these agriculture technologies?

According to the Assistant Irrigation Officer of Zomba Agricultural Branch, farmers are not involved in introducing any agriculture technology. Rather it is the Ministry's

⁶ A comment in the Daily Times Paper of 20th April 2005

⁷ Kadyampakeni D, 2004

⁸ Kadyampakeni D, 2004

⁹ Ibid 98

sponsibility. He said that the ministry has demonstration gardens on which a new technology is tried first. When it works out well, it is then given out to the farmers. The same method was used for treadle pumps. When they had tried them in their demonstration fields, after seeing how they worked, they decided to give them to the farmers. It was up to the farmers to accept or refuse the technology that had been presented to them.¹⁰ The government uses "diffusion of innovation". But in a country coming out of a dictatorship, the idea of refusing what the government says through its agencies is still not commonplace.

As a result of using the diffusion of innovation theory, which to an extent involves only influential people as the main players in the process of diffusing the innovation, farmers are bombarded with pre-packaged messages of persuasion and adoption processes¹¹. This could be the reason why adoption rate is very low in most of the cases with agricultural technologies. Melkote says, there is a Change- Agency communication and mass media model of development. Under this, the mass media would be responsible for creating widespread awareness of and interest in the innovations with the help of change agencies.¹²

From the reconnaissance conducted in Lilongwe and Kasungu, it was revealed that a lot of people are finding it hard to use treadle pumps because of the high energy requirement of the pumps. "*thedo pampu imafuna nyonga zambiri, imafuna thupi la thanzi kuti upope madziwo*" meaning, "treadle pumps require so much energy, it needs an energetic body

¹⁰ Assistant Irrigation Officer, Ministry of Agriculture -Zomba

¹¹ Melkot S 1991, p.25

¹² Ibid, p.25

or one to be able to pump the water".¹³ Is it the question of how the technology was communicated to local farmers, agreeing without question, only to find treadle pumps difficult to use?

Gender issues as well have an impact on irrigation crop production. Irrigation activities are dominated by men. Female farmers who had bought or were given treadle pumps are not using them but prefer to use water can instead. A Mrs Nyoni in one agricultural radio programs said that these treadle pumps are not easy to use because they require energy. She went on to say that they work well when there are more people to help.¹⁴

What can be drawn from these indicators regarding communication about treadle pumps seems to be that farmers did not fully understand the full implications of the adoption of treadle pumps or that the government never told the full story about treadle pump use in irrigation farming. Hypothetically, it can therefore be concluded that a top-down communication process was used for treadle pumps in Malawi.

1.2 LITERATURE REVIEW

In Malawi, very few studies have looked at adoption of new technologies specifically on treadle pumps. A.H Lwesya et al highlighted the effects of treddle pumps adoption on livelihoods and social institutions. In it they evaluated the links between adoption and livelihoods and different social institutions that exist in different communities. However,

¹³ An interview with farmers that are using treadle pumps for the Ulimi wa lero radio program, produced by the Agriculture Communication Branch (ACB), 2006.

¹⁴ An interview with farmers that are using treadle pumps for the Ulimi wa lero radio program, produced by the Agriculture Communication Branch (ACB), 2006.

analysis of the prominent models of adoptions like diffusion of innovation, one appreciates the need for an evaluation of the type of information that is passed on to farmers and the knowledge that they have before adoption and after. Rogers¹⁵, a prominent theorist of diffusion of innovation defines diffusion as a process whereby a technology is transferred from researcher to farmers through competent extension services. In line with this, Kishindo¹⁶ looked at the role of agricultural extension service and the way they communicated different technologies to farmers in Malawi during and after colonial era. He argued that agricultural extension services used to persuade farmers using a variety of methods to adopt modern methods of farming, which he called “the take –it or leave –it approach. The reason for this attitude appears to be that farmers learn by experience that bad practice brings its own punishment. In other words, people will be willing to adopt new technologies after seeing how other farmers have benefited from them or else after a bad experience with the methods that are being used at that particular time.

Kishindo says that in the past, agricultural advice used to reach farmers via a “chain of command” reaching down from the Regional Agricultural Officer (RAO), Divisional Agricultural Officer (DAO), and the Area Supervisors. The Demonstrators and Field Assistants received their instructions from the Area Supervisors and communicated these to the local farmers¹⁷. Depending on how the communication had been done, some adopted the methods while others did not. However, the advantage was that the message could change from one level to the next depending on how people at each level

¹⁵ Rogers E.M 1983,

¹⁶ Kishindo p 1980

¹⁷ Kishindo P 1980, p.25

eted it. By the time it reached the final stage or the farmers, it became totally
nt from the original. The observation made by Kishindo is very enlightening, but
unaterly he does not develop it farther. This is understandable as his concern in this
lar work was the conflicts that exist in the extension services. In line with
unication to famers, Williams and Williams¹⁸ also notes that improved technology
armer is like what food is to the human body-a life's sustaenance-and argue that
unication of improved technology is an important factor in the adoption of
ved agricultural practices. This paper is therefore concerned with information that
vided to farmers and the approaches used as information is a vital constituent
ut which the goal of improved agricultural production will painfully continue to be
e. Wali¹⁹ underscores the importance of information when he observes that
nation, whether stored on paper or magnetic tape, or in human mind, is a
mental requisite for ensuring rationality and cohension in decision making. Lack of
timent in information, Wali argues, results in the creation of an "information poor"
"information rich" society which tends to perpetrate and perpetuate the unequal
bution of gains in the development process.

a²⁰ profiled the Nigerian non-literate farmer, critically re-examined the concept of
acy and considered the factors of the orally literature in agricultural communication.
e various factors responsible for poor agricultural production, he concentrated on the
l for effective dissemination of scientific agricultural information. He worked at the
munication needs of a non-literate farmer and appraises communication and

Williams and Williams 1975

ali 1981

ola E, 1988

information flow within this environment. Soola identified the various channels by which a rural farmer could be reached and influenced. He submitted on a final note that literacy in the Western sense does not preclude access to scientifically based agricultural information and adoption of improved agricultural practices. On a similar note, Boateng²¹ proposed a circular knowledge management model for agricultural extension practice. His main argument was that if the knowledge of the non-literate farmers were taken into consideration would also be helpful in implementing some of the scientific technologies. His model recognizes tacit and explicit knowledge forms as complementary in forming decisions regarding agricultural extension services. He talked of an empirical assessment of agricultural extension services in Ghana, which provided the foundation for the development of such a knowledge management model for agricultural extension practice.

The circular knowledge management model for agricultural extension practice is an approach to bringing farmers together in search of knowledge, and intensifies the collaboration between farmers and extension experts as change agents. This will significantly bridge the cultural and knowledge divide between the communities of farmers and extension experts, illustrating how tacit and scientific knowledge can be better harnessed towards improved agricultural extension practice.

Further to this, Mosher²² also examined the positive influence of information on improved agricultural development. He is of the view that scientific or technological

Boateng 2006
Mosher A 1961

information must be regarded as an essential ingredient for agricultural development. However, all these scholars are looking at the same issue of communication, and it is only when the indigenous knowledge has been recognized by the extension experts of any development communicator, that the people will feel being part of the process and will willingly accept the other scientific knowledge being given to them.

1.3.0 MAIN OBJECTIVE

The main objective of the study is to investigate the communication methods used by the Ministry of Agriculture to campaign for the adoption of irrigation methods by farmers, with specific reference to treadle pumps.

1.3.1 SPECIFIC OBJECTIVES

To achieve the above stated goal the following specific objectives looking at the institution and communication will have to be achieved:

1.3.1.1 Institution:

1. To find out about the ministry's policy guidelines on farmer's adoption of irrigation farming in Malawi.
2. To asses guidelines for communication strategies and checking the ministry's Standing Operating Procedures

1.3.1.2 Communication:

1. To find out about communication media used for irrigation farming.

2. To investigate communication media used for irrigation farming that uses treadle pumps.
3. To investigate the expertise of the communicators on agricultural communication and knowledge about treadle pumps.
4. To explore what communication objectives were contained in the communication media for treadle pumps.
5. To assess the appropriateness of the communication activities.

1.4 THEORETICAL FRAMEWORK

According to E. Rogers, development communication focuses on a number of principles such as Participation, Agricultural model, Marketing model and diffusion of innovation. The treadle pump technology was adopted from India to Malawi. Even though the technology has been adopted, there is still a need to find out at what level the farmers participated when the innovation was being introduced. This practice was perceived as new in terms of agriculture technologies. The theory behind it was diffusion of innovation. Everett Rogers in his book, 'Diffusion of Innovation' defined diffusion as "the process by which an innovation is communicated through certain channels over time among the members of a social system"²³. He also defined an innovation as "an idea, practice, or object that is perceived as new by an individual or other unit of adoption"²⁴. Looking at these two definitions it can be concluded that diffusion of innovation is the process by which an idea, practice or object that is perceived as new by an individual or

²³ Rogers E. 1983, p.5

²⁴ Rogers E. 1983, p.10

it has been adopted or rejected. The last element is the social system. This looks at interrelated units that are engaged in joint problem solving to accomplish a common goal. In this project we could be looking at the ministry of agriculture, department of irrigation, and farmers and all the stakeholders that take part to achieve the goal of using treadle pumps. This paper will look at how this theory of diffusion of innovation was used and what made it fail.

1.5 RESEARCH SETTING, DESIGN AND METHODOLOGY

1.5.1 Research Setting

This research was conducted in Chikwawa and Salima districts, Traditional Authorities Katunga and Kambwiri respectively. The villages that were visited were; Chinkole, and Dembo in Chikwawa, Mwamadi and Kambwiri in Salima. These villages were picked randomly from a list of villages in the two TAs, further more, the districts were chosen because they have a lot of farmers that are practicing treadle pump irrigation, being districts that lie along the Shire River and Lake Malawi respectively. For the individual interviews, 40 farming families were visited in the two districts and two Focus Group Discussions of 9 people each were conducted. The government of Malawi through the Ministry of Irrigation and Water Development allocated 400 treadle pumps to each constituency in all the districts.

1.5.2 Study Design

The study was iterative, with each stage building on a previous one. It also had a qualitative design to enhance triangulation of the data. The following methods were used

to obtain the data: secondary data review, individual in-depth interviews with farmers that adopted treadle pumps from the beginning, those that adopted the treadle pumps but stopped, those that do not use treadle pumps and finally those that adopted treadle pumps along the way. Informal interviews with extension workers, and key informant interviews with the Director of Irrigation and the senior communications officer from ACB were also used.

1.5.3 Study Population

The study population consisted of key informants, extension workers, farmers that adopted the use of treadle pumps at the beginning and are still using them, those that adopted but dropped the technology, those that adopted after seeing how others are benefiting from treadle pumps and finally those that never use treadle pumps. They were adult men and women (with age range of 16 to 65) whose education background varied. The study decided to include farmers young farmers of 16 years old because most of these are either married or independent farmers who make decisions on their own about their farming activities unlike young children who still follow what their parents tell them to do in terms of what, when and how to plant and manage their gardens. The wide range of educational background and socio-economic statuses of this group produced a rich and diverse range of perception in relation to how communication about treadle pumps was interpreted by different people. The study included the same number of male and female respondents to see how the two groups perceived the treadle pumps and how they understood the communication tools presented to them. One extension worker and the DADO were interviewed in each district.

1.6.1 Ministry's policy guidelines on adoption of irrigation farming in Malawi and policy guidelines for communication strategies on adoption of technologies for irrigation farming (institution study)

The respondent was the Director of Irrigation in the Ministry of Irrigation and Water Development. The rationale behind this was that the researcher wanted to find out more about the irrigation policy and probably access a copy of the policy for other references. Another interview was conducted with the senior communication officer at the Agricultural communication branch to know more about what the policy says on communication strategies on adoption of technologies for irrigation farming especially treadle pumps.

1.6.2 Communication media used for irrigation farming and treadle pumps in particular (communication study)

The respondents for this section were identified from the two ADDs namely Salima and Chikwawa. These were the extension workers that deal directly with the farmers in their villages. Apart from interviewing extension workers the researcher also interviewed the AEDC from the ADDs. The farmers were also selected to be interviewed; these were the farmers that had been using the treadle pumps from the very beginning of the innovation,

those that had dropped the innovation along the way and the farmers that started using the treadle pumps after copying from friends.

1.6.3 To investigate the expertise of the communicators on agricultural communication and knowledge about treadle pumps

The AEDC was interviewed because these are the ones who train the extension workers once a new technology has been introduced. After being trained the extension workers go ahead to train the farmers. The researcher thought it was necessary to know the expertise of these communicators in terms of agricultural communication. After talking to the AEDC the researcher also interviewed the extension workers to find out their expertise in agricultural communication. This included finding out about their skills on these agricultural technologies and the qualifications they have as communicators.

1.6.4 Finding out the communication objectives contained in the communication media for treadle pumps

The researcher interviewed the extension workers on this, as they are the people that deal directly with the farmers, they are able to note if the intended message has been delivered. Furthermore, the recipients of the messages were also interviewed these were purposively selected so that only those that are still using the technology were taken to be part of the interviewees. For the extension workers, the researcher used convenient sampling. Those who were interviewed were the ones who were available in their offices, as most of them had gone to the fields for duties.

1.6.5 Assessing the effectiveness of the communication activities

This was to be collected from the farmers. The researcher had to do field tests with the farmers using the posters and print messages which the Department of Agricultural Communication Branch produced to help give information to the farmers on treadle pumps. This was done to identify ideas how the farmers understood the messages and ideas that were given to them on treadle pumps.

1.7 NON ADOPTERS

These were the people that had not adopted the use of treadle pumps, either that they had not been told about them or that they just did not want to adopt due to their own reasons. These participated in individual interviews, ten people from each district (5 men and 5 women).

1.8 DATA COLLECTION TOOLS / METHODS

1.8.1 Individual interviews

The researcher used this data collection tool because it allows a researcher to get detailed explanation of people's knowledge under study. Since these farmers are doing irrigation farming individually, the researcher thought that it would be better if these farmers would be approached individually for each to be able to explain what they know and what their experience has been like on the use of treadle pumps. In-depth interviews are also very useful for dealing with individuals that could not come to a common place for a group session²⁸. Individual in-depth interviews also provide detailed information on individuals that could not be obtained in a focus group discussion. The individual in-depth interviews

²⁸ Patton M 1990

could be seen in the form of in-depth interviews, key informant interviews and case studies.

Key informant interviews are individual interviews that are conducted with people who have specialized knowledge about the topic of interest²⁹. These interviews allow the researcher to obtain an insight of how systems operate unlike conducting a focus group discussion. The only disadvantage with this method is that the perspectives of the respondents can be distorted and biased, thus giving an inaccurate picture of what is happening³⁰. In this study, the researcher found it very necessary to include those people involved in the making of irrigation policy and those that are in the forefront in message development at the ACB offices. The Key Informant Interviews were conducted after the other interviews had been done.

1.8.2. Focus Group Discussions

Focus Group Discussions (FGDs) are group interviews where the respondents are a homogenous group in terms of sex and age group. This was done to get high-quality data in social context where people can consider their own views in the context of others. The participants reflect on the questions asked by the facilitator. Participants get to hear each other's responses and make additional responses as they hear what other people have to say. In a FGD there is no wrong or right answer as it gives room for people's views on a particular subject and all responses have to be taken in by the researcher. This is a good tool for accumulating the knowledge of the members. They also give rise synergistically

²⁹ Kabwazi C 2002

³⁰ Patton M 1990

to insights and solutions that would not come about without them³¹. The major drawback of FGD is that one only gets general ideas about a question or topic. Moreover because of the amount of response time to any given question and issue raised is increased considerably by having a number of people, the number of questions that can be asked are limited. The researcher used this tool with people from all categories, those that had adopted TPs, those stopped, the ones that did not even adopt. This was the case to hear different views and obtain information on their knowledge about the tool and why they never adopted it, or why they stopped and also what is motivating others to continue using them. In order not to miss out on any of the information given, the researcher decided to ask the respondents for permission to record the discussion, and it was granted. Four focus group discussions were conducted in the two districts. These were selected randomly, since a lot of people came to listen to what was happening as the discussion was taking place at the chief's place. Different people had come with different expectations so to avoid confusion, the researcher decided to select 9 men and 9 women of ages ranging from 28 to 65 for two FGDs in each district.

1.8.3. Case Studies

Another variation of in-depth interviews was the use of case studies, which is another way to explore realities on the ground. The rationale behind the use of this method is that it provides a rich and detailed insight into complex issues that are often hard to explore using other research methods. These are simple events in individuals' lives, which have a strong impact on them, either positive or negative. It is a data collection tool that allows the researcher to obtain detailed information from the respondents' point of view. In this

³¹ Ibid

study it allowed the researcher to obtain detailed information on their farming experience, perceptions and knowledge of the treadle pump as a new technology. For the sake of comparison and a better understanding of the impact the introduction of treadle pump has had on those people that are using it while looking at the messages they received on the pumps and how they are using them, case studies were highlighted from each of the four groups.

1.9 DATA COLLECTION PROCEDURES

The researcher recruited the farmers through the village heads of their respective villages. Ten people (five men and five women) were recruited for the following categories; those that were using treadle pumps, those that had stopped those that adopted after seeing how their friends were benefiting from the use of treadle pumps and those that never used treadle pumps. All these were interviewed individually. Two focus group discussions were conducted with people of all categories in each district, bringing the total to four FGDs of 9 people each. After research was done at village level the researcher went ahead to conduct interviews at district level with the District Agricultural Development Officers (DADO), Agricultural Extension Development Officer (AEDO) then finished at national level with the Director of Irrigation.

1.10 DATA ANALYSIS

The data was analysed using a framework of analysis, which was developed using objectives and issues identified in the initial problem analysis. The framework of analysis was revised when additional themes and sub-issues emerged from the data. Data were

coded and sorted into different themes and sub-issues and then summarized, drawing out general common quotes and rare/common themes. Similarities and differences between male and female respondents were analysed.

1.11 SUMMARY OF THE SAMPLES OF THE STUDY POPULATION

Respondent group	Total number of respondents per district	Men	Women	Method of data collection
Farmers using TP	10	5	5	In-depth interviews
Those stopped	10	5	5	In-depth interviews
Adopted along the way	10	5	4	In-depth interviews
Non adopters	10	5	4	In-depth interviews
Mixed group (TP users, those stopped, non adopters)	18	9	9	FGD

Key informants in total	Total for 2 Districts and at National level	Men	Women	Method of data collection
(2 DADOs from the 2 districts, 2 AEDOAs from both districts, 1 Director of Irrigation and 1 Senior Communications Officer from LL)	6	5	1	in-depth interviews
Total number of respondents in both districts	(58x2+6) 122	(29x2+5) 63	(29x2+1) 59	

Table 1: Total number of people interviewed.

1.12 CHAPTER BREAKDOWN

This work has been broken down into six chapters. Chapter one carries the introduction of the paper, objectives of the paper and how these objectives will be achieved and also literature review. Chapter two, "Interpersonal Communication on Treadle Pumps" focuses on the interpersonal communication that was done on treadle pumps and the types of training courses that, farmers in the two districts under study undertook. Chapter three, "Print Media" is about how print media was used in the communication of treadle pumps. It focuses on what tools in media communication were used and how farmers responded to the materials used and its impact in terms of communicating treadle pump messages. Chapter four, "Radio in Agricultural Communication" explains how radio communication was done in Agriculture. It has a brief background of radio in agricultural communication in Malawi in the different historical phases, an analysis of a radio program and a jingle that were developed on treadle pump issues. Chapter five, "Radio Drama in Agricultural Communication in Malawi" is slightly different from the previous chapter in such a way that it specifically looks at radio drama. A radio soap produced by Story Workshop called *Zimachitika* (It happens) has been critically analysed to see how it handled treadle pump messages for its intended audience. And finally is chapter six which is a concluding chapter. This is kind of a summary of the work that has been done in this paper.

CHAPTER TWO

2. INTERPERSONAL COMMUNICATION ON TREADLE PUMPS

2.0 Introduction

Malawi is divided into eight Agricultural Development Divisions, subdivided into Extension Planning Areas (EPAs), for this purpose. Each EPA has a local office, from which the field activities are administered. The Ministry creates a flow of information to be delivered, by this network, to the farmer families in the field through its Agricultural Communication Branch (ACB). It provides information input for the extension process as interpersonal communication, newsletters, booklets, radio broadcasts, cine film projections and puppet shows.³²

This chapter will start by examining the standing Operating Procedures that are carried out when communicating new technologies, then will proceed to see how interpersonal communication was done on treadle pumps. It will go further to specifically look at the types of training courses that were undertaken by different farmers in the two districts under study and further more look at interpersonal communication in detail and a critical analysis of this will be given at the end of the chapter.

The ministry does not have a written policy on how communication of new technologies is to be done. However, there is Standing Operating Procedure that is followed in order to achieve the objectives of the ministry. The ACB is the central area for all communication taking place in the Agriculture sector. When a technology is to be introduced, people at

³² Sturges P et al 1996

ACB develop a list of themes or issues that are to be communicated. An understanding of the context within which, the communication takes place. After the context has been clearly understood, they identify possible partners or allies for building the communication process. When the materials have been developed, ACB takes them to the communities through their extension workers, if it needs training, the FAs are trained so that they can go and teach the farmers about the technology.

2.1 TRAINING

Before distribution of treadle pumps, Agricultural Extension Development Officers (AEDO) also known as Field Assistants together with representatives of various clubs to which these treadle pumps would be given, were trained on how to use the technology and also on how to assemble and maintain it. Conducted by the District Agricultural Development Officers (DADO), training was to enable the representatives to go back home and explain to their fellow members. During the training, training manuals which were developed by Total Land Care Malawi were used. These manuals gave a step by step breakdown on how to assemble a treadle pump, parts of the treadle pump and its operation.

Having been introduced to the treadle pump, the participants were then taken to a demonstration garden where they had to put whatever they had learnt into practice. During these trainings, the FAs received leaflets which they would refer to when teaching the farmers in their villages.

2.2 TYPES OF TRAINING

The Field Assistants and farmers underwent one of the three trainings depending on the body that funded a particular training. In the sessions, they tackled issues on how farmers could identify problems, prioritise the problems, and implement solutions by using Participatory Rural Appraisal (PRA) and formulation of action plan. Having discovered the farmer's problems they would then develop messages to address the problems. The message thereof would then be incorporated in Newsletters, such as *Zaachikumbe*, or taken direct to the farmers by the FAs after the training. Every EPA ran fortnightly training sessions where new messages were given before training station workers took the messages to the farmers. Monitoring that the intended message was being delivered to the farmers by these Field Assistants, the FAs were expected to give reports to their line managers and agriculture work station development coordinators called, DADOs before sending them off to Headquarters. In this way feedback was received from the farmers.

2.2.1. Day Training Course

This is normally training that takes 5 days. This training involves a majority of farmers from different farmer groups. This is done at an Extension Planning Area (EPA), with farmers operating from their homes. This training is undertaken in circumstances where there is slightly more content desired. They used a training manual that was developed by Land O' Lakes. This was the type of training that farmers from Chikwawa underwent on treadle pumps. The content of the training included how to assemble the treadle pump, how to operate it and maintenance when it is broken. Agnes Gobede said this on what they had learnt "*Anatiphunzitsa momwe tingamangire theredo pampu yathu, zidutswa*

zones zinali poeropo nkuyamba kumalumikiza chimodzi chimodzi mogwirizana ndi alangizi athuwo.” Meaning “They taught us how we could assemble our treadle pump, all the parts were there and we were putting them together one by one with the help of our Field Assistants.” The farmers were participating in several ways; they were asking and answering questions. This training was participated by 50 farmers, 25 men and 25 women from Chikwawa district.

2.2.2. Residential Training Course

Residential Training Center (RTC) course was offered at the centers with farmers accommodated for a period lasting from one to two weeks. These courses were designed with more facilities for practical training. Salima opted for this type of training, the content was more or less similar to what the Day Training Course offered, and the only difference was the practical side of it. The participants went to the Linthipe River to practically use the treadle pump. One of the participants Alice Inusu, 30 years old said, *“Titapita ku mtsinje wa Linthipewo alangizi adatipatsa mwai woti tiyesere kuthilira dimba la chionetsero lomwe lili pafupi ndi mtsinjewo, moti anthu ambiri adaigundako ndithu theredo pampuyo ncholinga chokuti tiimve bwino lomwe umo igwilira ntchito”* which means “When we went to Linthipe River, we were given a chance of trying out the treadle pump with the aim of wanting us to have a feel of how a treadle pump operates”. The parts of the treadle pump were disassembled so that the farmers could try assembling them once again and be able to know the parts and how they are fixed together. There were 30 participants in attendance, 18 men and 12 women. After the training, the farmers

few villages that make one block. The procedure of the training was the same, differing only in that a block meeting had fewer participants.

Another tool used under interpersonal communication was **Demonstration Method**. This was a planned activity in which Field Assistants respond to problems, which the farmers are facing through a demonstration. In the case of treadle pumps, the FAs identified a garden, which was near to a river or any water source. The FAs would then explain while the farmers are tried it on a treadle pump. Rogers³⁴ emphasized the fact that interpersonal communication is the most effective because it helps in persuading individuals to adopt a new idea. Individuals who are near peers would eventually influence each other to adopt a new idea. Excello Zidana, a radio officer with the Agriculture Communication Branch said “what we do in interpersonal communication is to encourage farmer to farmer information sharing. This process is important in agriculture because people learn from others through inter-personal communication”.³⁵

2.4 CRITICAL ANALYSIS

In the analysis, diffusion of innovation is used especially looking at the five stages of adoption. Rogers breaks the adoption process into five stages namely; awareness, interest, evaluation, trial and adoption. This was what interpersonal communication followed during the training courses conducted. Residential training course seemed to be advantageous over Day training course because of the duration, which was mostly two weeks. It gave the participants enough time to go through the whole process and enough

³⁴ Rogers 1983

³⁵ Interview with Excel Zidana of ACB

time to cover a lot of issues pertaining to the technology or topic being tackled. After the demonstrations it was then time to adopt the innovation. However, the number of participants was smaller comparing to the other types of trainings, this could be due to the fact that people were accommodated at the centre which was relatively expensive than having people operating from their homes. Rogers³⁶ continues to say that the most important characteristic of the first segment of a population to adopt an innovation, the innovators, is that they require a shorter adoption period than any other. The assumption was that the farmers that had attended the training would adopt the innovation and go influence the rest of the farmers to adopt too.

Only 30 farmers participated during the residential training course, and these people were to teach their fellow farmers after the training. This might have had a low impact than in a Day training course where a good number of farmers attended. This is evident by what people said as a result of the training. Mr. Chisamba, a vice chairman from Dembo club in Chikwawa had this to say, "*Aliyense anali ndi udindo wofikira athu nkuwaphunzitsa za kagwiritsidwe ntchito ka thredo pampu mmadera omwe tidachokerawo*" which means "Every one had the responsibility of reaching out to the people in our respective villages and teach them how a treadle pump operates". However, out of 108 people respondents of the study, only 34 agreed that they were either approached and taught how to use a treadle pump or had heard that people were being taught on how to use the treadle pump by the people that had attended the training. On the other hand, a good impact would be realized through a mobile training course where the number of participants is unlimited. This type of training is said to take place in villages, and every villager is given an equal

³⁶ Rogers 1983

opportunity of being exposed to the technology being introduced, this is what Rogers called the trial stage. It is up to them to accept or not, as was the case with the non-adopters from Salima. They agreed that they heard there was that type of a technology, which was being taken from village to village, but others just did not want to be part of it and so they did not go to attend. As one participant of non adopters FGD had this to say;

“Kwathu kwa Mwamadi zinafika zimenezo koma odzifunawo anapita, ife amene tinalibe chidwife tidangomva nkukhalabe mmakwathumo koma kwa omwe adakondana nazo adapita kukadzionera okha kuti alangizi abwera ndi nkhani yanji” this means

“At Mwamadi village where I come from, we heard there were those demonstrations on how to use the treadle pump, for us that had no interest we just stayed in our homes but for those that wanted to benefit from that technology went ahead to see what the Field Assistants had brought”.

In terms of interpersonal communication, it is seen that this was widely and extensively used and proved to have yielded good results. This was evident in the responses people gave on how they participated in the introduction of the treadle pump technology. However, in terms of farmer-to-farmer interpersonal communication, which ACB encourages, not all the time would this have a big impact. This would be the case because most of the farmers here in Malawi are illiterate, they are slow in understanding issues, making it very difficult to conclude that after their peers have explained to them or they have seen the importance of treadle pumps, these people would eventually adopt. It is not even guaranteed that the farmers will explain to the others exactly what they had been taught on the use of the technology or if they are going tell the others at all. On the same note Ryan and Gross agreed with Rogers that the first adopters of an innovation are usually those with a higher socioeconomic status in their society, even though 30 farmers

were exposed to the new technology, it is not automatic that all adopted it; hence all influenced the late adopters. The other setback with interpersonal communication is the scarcity of FAs, which were not enough to handle all the farmers. There are times when a farmer wants to present her/his problem but the FA is not available because he is attending to some other farmers within his catchment area. However, the exact figure of farmers versus an FA has not been calculated but as of 1987 one FA was responsible for about 40 farmers.³⁷ This shows how crucial extension agents are when it comes to interpersonal communication between them and farmers. Iniodus³⁸ defined the role of the extension agent as one of extending knowledge from formal agricultural education institutions to farming communities; of carrying new technologies developed by agricultural scientists to farmers in the field and of relating back to the scientists those filed problems that require further investigations and addition information.

This chapter has focused on the interpersonal communication that was employed in the introduction of treadle pumps technology among farmers of Salima and Chikwawa. It has looked at the three types of training that were used namely; Day training course, Residential training course and Mobile training course. These courses differ in so many ways, but the most common differences are that the Day training is conducted for a week and these farmers operate from their homes, while the Residential training is conducted for about two weeks and they reside at the centre of training. Finally the Mobile Training is done in the prospective villages along with the villagers. A detailed description of interpersonal communication was highlited; this is where the FAs personally meet the

³⁷ Ngwira N. 1987

³⁸ Iniodus P 1985

farmers through the meetings that are organized by the FAs and chiefs together with their villagers. Another tool worth noting under interpersonal communication is demonstration method; this is whereby FAs get on a field with farmers and explain to them while they are demonstrating how the technology works. A critical analysis has been given according to what farmers and Field Assistants said on this interpersonal communication.

CHAPTER THREE

PRINT MEDIA IN AGRICULTURAL COMMUNICATION

3.0 INTRODUCTION

This chapter is about how print media was used in the communication of treadle pumps. It will focus on what tools in media communication were used and how farmers responded to the materials used and its impact in terms of communicating treadle pump messages. Each tool used will be tackled separately and analysed to see if it succeeded in communicating the technology.

Print media is more or less like a back up to communication it has a higher retention level than radio.³⁹ The advantage with printed materials is that they stay for long and one is able to look back and refer to the material every time s/he wants to find out about certain information. There are other messages on the treadle pump that require calculations, for example, how big the land for irrigation should be; or how maize should be planted and how to assemble the tool. All this is put on paper for easy understanding. These messages are mostly written in Chichewa, notwithstanding that lately there are messages that are being produced in Tumbuka and Yao even and those intended for staff in English. Print materials produced for treadle pumps were posters, stickers, leaflets, fliers and booklets. Being of low literacy levels, it is very doubtful if most farmers understood the message that was being communicated. During the interviews with farmers, the interviewer took samples of the materials that were produced by the Ministry of Agriculture on treadle pumps. These were leaflets that explained how a treadle pump should be assembled, used

³⁹ Bessette 2003 p.29

and maintained. Most of the people that I presented materials to said they had never seen them. In other words, they never received them. However, there was a certain woman who reported to have seen one because her son in-law was working at the ADD, ‘*Timabuku timeneto ndatidziwa. Kunyumbaku tilipo tidabwera ndi apongozi anga kuchokera nato kunchito kwawo koma sindingakhonze kunena kuti akukamba zotani poti maso athuwa ngowonera therere basi*’⁴⁰ The lady here says that she has the leaflets in her house, were brought by her son in-law, who works in Agriculture. However she couldn’t know what was written there because she doesn’t know how to read, claiming her eyes are only able to read things being cooked like ‘okra’. On one of the leaflets was a drawing of a treadle pump. Other farmers would not even identify the drawing as a treadle pump, Grace Banda, 45 years old, a farmer with no formal education said that the drawing looked like some parts of a bicycle to her. This was a drawing of a treadle pump which had all its parts labeled. It is also very difficult to get feedback on printed material. The same message would be received differently by different recipients. Here the bullet theory applies. Adding on to this, Bessette says that most people tend to start a communication process by producing a video, a radio program, and print materials not knowing what that is going to contribute. There is no room to hear the other end’s ideas or fears and as a result it is a one way type of communication and does not work effectively.⁴¹ Some of the farmers received the leaflets but they were written in English, Wiseman Chikwenthe a farmer from Mwamadi Village, T/A Kambwiri, Salima district, confessed that after getting that English leaflet he approached his FA who explained to

⁴⁰ Violet Misomali, 50years old

⁴¹ Bessette G. 2003

him in Chichewa. However being old, he had now forgotten it, and while he still had the leaflet he did not know what it said, if it were written in Chichewa he could have been referring to it every time he needed to know about treadle pumps.

3.1.0 CASE STUDIES OF A LEAFLET AND A POSTER



3.1.1. Leaflet

Fig 1:

This was how the leaflet's front and first page appeared when folded.



Fig 2:
Front page with picture; back page with text only

Lawu nyamha

Chimanga chimabwala kumodzi pa chaka chifukwa kuno ku Mulawi m'vula imagwa kumodzi. Ighale zinthu zidi choncho, ena akulima himanga m'madimba ndi m'zigwa m'mana nuli chinyonthe. Izi ziduchidika m'ma ADD nso m'dziko lino. Kumene amalima himanga chimbiri cha m'madimba ndi ku higwa cha m'sinje wa Shire m'chigawo cha mawera, ku Salima mphete mwa nyanja m'chigawo cha pakati ndi ku Karonga mphete mwa nyanja m'chigawo cha ku ipote Dziko lino lili ndi malo okwana ma ekitala 259,000 omwe ulimi wa m'madimba khozha kuchitika.

Kukonzekera ulimi wa m'madimba

Chimanga chobwala m'dimba chimadala hinyonthe kapena madzi othiriza kuti chikuba dikubereka bwino. Njira zochitika zidipo ambiri monga kugwiritsa ntchito vava kapena uti keni, kupatula madzi kuchoka mu m'sinje ndi njira zina. Koma njira imodzi imodzi mbiri kugwiritsa ntchito masiku ano ndi heredo Pampe munga mukonere pa hithunzi chili koyambirira.

Njira wa m'madimba umafunika kukonzekera zotere:-

Pezani malo athyathya (osatsatse-reka) pafupi ndi madzi kapena pamene pali chinyonthe chimbiri.

Malo a dimba akhale pamunda wosachepa mamita 5 kuchokera m'bwawa ukakhala m'sinje wochepa, kapena mamita apakati pa 15 ndi 30 ukakhala m'sinje wankulu.

Dimba lisakhale pamene pamadutsa madzi kuopisa kukokoka kwa ndaka.

Pezani mbewu yopitira kumatenda a Chikasu ndi Chiwawa komanso yocha masanga monga DK8071, DK8031, DK8041, SC621, SC407, SC403, Katswiri ndi Masika.

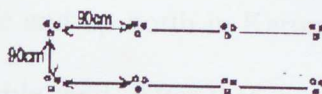
Pezaniso manyowa ndi fetereza.

- Manyowa ngosavuta kupanga kusiyana ndi kugula fetereza.
- Manyowa imayezera chonde m'ndaka ndipo nthakayo imakhala yotazuka.
- Manyowa amafunika kusungu chinyonthe m'ndaka. Chimanga chimapitira ku dzira.

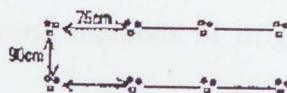
Kubzalidwe kake

Pakali pano pali njira zitatu

Pangani mapando pa mpata wa masenti-mita 90 ndipo mikwasa italikiranenso masenti-mita 90.

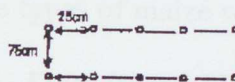


Pangani mapando pa mpata wa masenti-mita 75 ndipo mikwasa kapena n'izere italikiranenso masenti-mita 90.



Thirani pephando manyowa owolera na lwino odratza manja awiri ndikutsakana ndi dothi.

Bzalani chimanga chitatu pephando.



(b) Mukhozanso kubwala chimanga chimodzi pa mapando otalikirana masenti-mita 25 ndi mikwasa yotalikirana masenti-mita 75.

Nthawi yobzalira

Nthawi yobzalira chimanga m'madimba imasiyanasiyana malingana ndi madera ndiponso kuchuluka kwa chinyonthe. Yambani kubwala chimanga cha m'madimba pamene

Fig 3:

The other side of the leaflet

This was a leaflet that was developed to explain on how irrigation is to be done, especially using treadle pumps. Three focus areas of the leaflet will be discussed, including the content, the text and image in order to assess why or how farmers perceive the leaflet.

3.1.2 A brief content of the leaflet

The leaflet has a message on irrigation farming, with its title reading; *Bzalani Chimanga M'madimba* which translates, **grow maize in low wetland gardens**. The message starts

with an introduction of why irrigation is practiced and in which districts is it mostly done. The districts include Salima, some parts of the lower Shire and up north in Karonga. It mentions that Malawi has about 259,000 hectares of irrigable land. After that there is a sub heading which reads; *Kukonzekera ulimi wa m'madimba* meaning **Preparation for irrigation farming**. This sub heading has a message on several methods of irrigation such as a watering can, making canals, and the most treadle pump as shown on the front page. It goes on to talk about where exactly the gardens are supposed to be made for irrigation farming, the required distance from the river bed and the types of maize which is suitable for irrigation farming which includes DK8071, DK8031, *Katswiri* and *Masika* just to mention a few. Then there is another sub heading; *Kadzalidwe kake* meaning **How it is to be planted**. Here they talk of how the maize seeds should be planted, the number of centimeters from one planting station to the other. The difference being, planting three seeds per planting station while the other has one seed per station. From there, it goes to another sub heading which reads; *Nthawi yodzalira*, meaning **time or when to plant**. This is talking about the time when maize should be planted in irrigation farming. Here, they are reminding farmers not to plant their seeds during winter season because they do not grow well. Next is another sub heading *Kathiridwe ka Fetereza*, meaning **fertilizer application**. This explains on manure and fertilizer application. Several methods are explained depending on the style of planting one follows. Figures used in measurement for planting and ridging are in centimeters. Lastly, there is a heading telling farmers where to go for more information on irrigation farming and it reads; *Ngati mukufuna kudziwa zambiri funsani alangizi a ulimi a m'dera lanu*, meaning, **If you want to know more ask Field assistants in your area**.

3.1.2.1 Critical Analysis of the Content

Even though this content tried to explain well on the issue but it was not easy for every farmer to get what it tried to mean. Some of the farmers that were approached said they could not understand what the writing meant in terms of fertilizer application. In brief, the leaflet is communicating on how maize is to be planted and fertilizer application if irrigation method is to be successful. Lydia Frazer, a woman from Salima, 35 years and who had gone up to year of primary education 3 had this to say during an FGD: "*Inetu nkhani yeni yeni ikunenedwa apayi nde sindikuimvetsa, ngatinso ndingathe nkulongosola komwe apa?*" which means, "Generally I can not understand what is exactly being said here". To her this did not mean anything. However, to those that were literate they found this useful as it could be seen from one farmer's comment about the content of the leaflet "*Ayi, kapepala kameneka kanali kotithandiza zedi ife, enafe timangomva za sasakawa umo tiyenera kudzalira chimanga chathu koma pano tachita kumvetsetsa bwino lomwe ndi mitundu itatu yonse yakadzalidwe ka mbewu. Feteleza anthu enafe timangothira mchimbuli mbuli mapeto ake kuotcha nazo mbewu pano tazindikiritsidwa umo tingapangire moyenerela*"⁴². Meaning "Well, the leaflet has been of great help to us, we used to hear about the Sasakawa planting and how we should be planting our maize if we are following this type of planting, now we have understood clearly on all the three types of planting styles. Even fertilizer application, we were just applying any how ending up burning our plants but now we have learnt how to apply it." This was a 28 year old farmer from Salima district who had eight years of primary school education.

⁴² Edna mwamadi, 28 years with year 7 of primary education

3.1.3 Images

On the front page is an image of land that is farmed using irrigation. There are two women pumping water using a treadle pump. One is standing on one side of the pump, while the other is standing opposite her. There is a delivery pipe that goes all the way from the river to the garden. Maize that has been grown is also seen.

When the farmers were asked to say what they were seeing on the image others were able to mention that it was an image of a treadle pump while others could not relate it to a treadle pump. A 29 year old man from Salima, a semi literate, one who had gone up to year 4 of primary education had this to say on the image: "*Pali a zimayi awiri akuponda thedo pampu kupatutsira madzi ku madimba awo*", which meant that "There are two women pumping water using a treadle pump into their gardens". Another literate farmer, Felesta Henry, from Chikwawa aged 38 who went to primary school up to year 5 of primary school had this to say after seeing the image: "*Pamenepa pakuchitika ulimi wa mnthilira, azimayi otsogola, amakono kuiponda thedo pamp,*" which literally mean, "Here we are seeing irrigation farming taking place, modern women are using a treadle pump". A 40 year old, Miles Seda, from Chikwawa, who is a farmer, and with no formal education, said that the picture showed two women pumping water at a borehole well "*Azimayi awiriwa akuwoneka kuti akujiga madzi pa mjigo*". However, Mary Haward, a woman aged 57, was even not comfortable to give it a try, to say what she was seeing on the image and complained in this way,

"Iih! Palibe chomwe ndinganenepo ine apa, maso athu adachita mdima ndikupenya pa moto ku khitchini, mudadzadza utsi umu, moti singapenye kalikonsey. Nkati nkuuzeni nde ndinkunamizani kuti ndadziwa idzo dzajambulidwa apazi", which literally

DRAWING 1

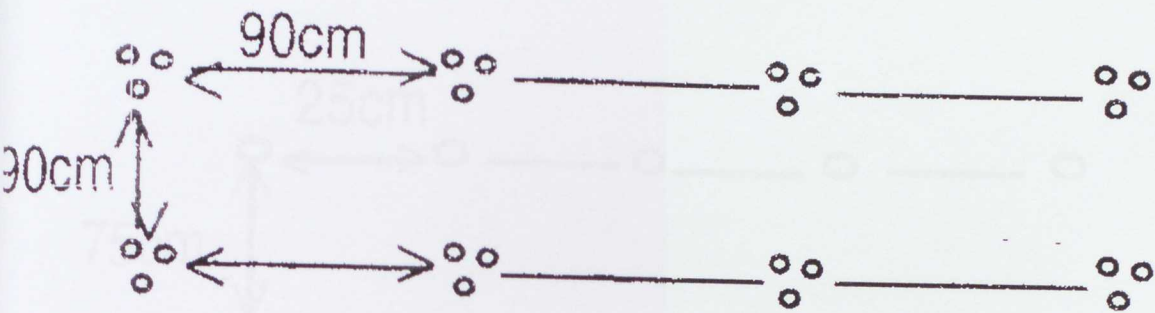


Fig 4: three seeds per station

The second drawing showed three seeds being planted per planting station with spacing of 75cm apart. The ridges maintaining the same spacing of 90cm like above, as shown in the drawing below.

DRAWING 2

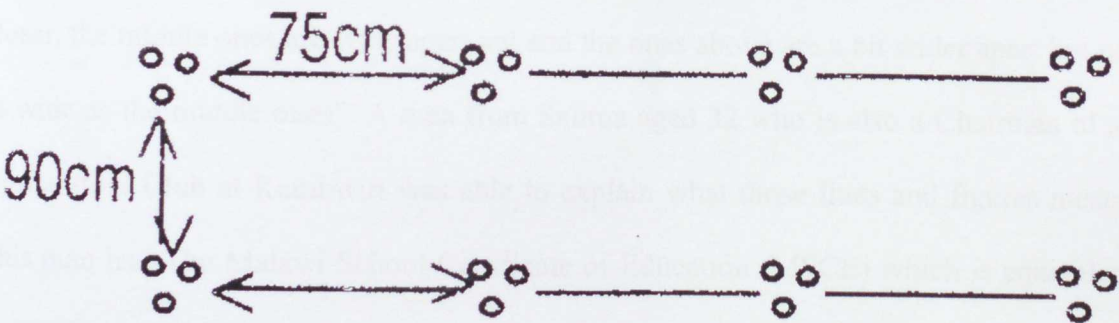


Figure 5: Three seeds per planting station of 75 cm apart

The third drawing showed Sasakawa planting method whereby one seed is sown on a planting station. On this one the planting stations are 25cm apart and the planting ridges are 75cm apart as shown in the above drawing.

DRAWING 3

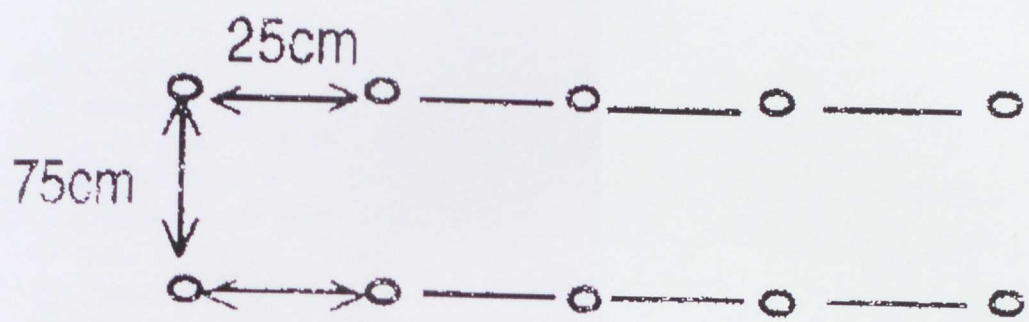


Figure 6: Sasakawa Planting Method

It was not easy for most of the people to know what those lines and numbers meant in terms of farming. Flora Cholomani, 34 years old from Chikwawa who is semi-illiterate had this to say “*Ndikuonapo mizere magulu atatu, yammusiyo yoyandikana, yapakatiyo yotalika kwambiri yomalizirayo yotalikana pang’ono osati ngati kotalika kwa ya pakatiyo.*” Which literally means “I see three groups of lines, the one below are a bit closer, the middle ones are wide apart and the ones above are a bit wider apart but not as wide as the middle ones”. A man from Salima aged 32 who is also a Chairman of an Agricultural Club at Kambwiri was able to explain what those lines and figures meant. This man had The Malawi School Certificate of Education (MSCE) which is equivalent to GCSE – “O” Level and explained it in this way.

Mizele imeneyi ikutiphunzitsa za momwe tingapangire minda athu. Pamwambapo akusonyeza kuti podzala chimanga tidzidzala pa mpata wa masentimita 90 kuchokera pa phando limodzi kufika pa limzake, ndiponso mukwasa idzitalikana ma sentimitala 90. chimangacho chidzidzalidwa chitatu chitatu. Pa chithunzi chachiwiricho akusonyeza kudzala chimanga chitatu chitatunso, pa mapando otalika ma sentimitala 75 koma mikwasa ikhale ma sentimitala 90 omwe aja. Ndipo pa chithunzi chomalizapo

akuwonetsa kadzalidwe ka chimanga chimodzi chimodzi chomwe ena amati sasakawa. Apa chimanga chimenechi chikudzalidwa pa mapando otalikana ndi ma sentimitala 25 ndipo mikwasa yake ndi yotalika ndi masentimitala 75.

These lines are teaching us on how we can make our gardens. The image at the top is showing that when we want to plant maize we should be planting it at a space of 90cm from one planting station to the other and the lines should also be 90cm apart. The seeds should be planted three per station. On the next image they are planting three seeds per station too, that are 75cm spaced and the lines to remain at 90cm apart. And on the last image they are showing the type of planting where one seed is planted per station, this is commonly known as Sasakawa planting method. Here maize is being planted on a space of 25cm from one station to the other and the lines are 75cm apart.

Even though the interviewer did not give this man a chance of reading the text that went a long with the images, it still was easy and straight forward for the Chairman to interpret what the images were communicating to the farmers. This was because he knew already that this leaflet was explaining about how maize was to be planted if one is practicing irrigation farming.

3.1.3.1 Critical Analysis

In designing print material for rural masses, Kamlongera states that there is need to bear in mind of the following elements; Culture, Educational Level, Content, Language, Application/Technical use. All these should be looked into, to be in line with the people that material is being developed for. He argues that materials using text are very useful when one wants to inform people about events as well as provide them with technical knowledge on specific issues. Print visual materials are on the other hand, particularly

Literacy Learning. In this study they were trying to find out if people who had never gone to school would like to have an informal type of education and find out what time of the day they would be willing to attend the class and perhaps what to be taught in these classes. The researchers used Participatory Rural Appraisal (PRA) methods of collecting data. These are methods where by the targeted communities take charge of the discussions and activities being done in order to collect the intended data. One method which they used was Social Mapping, in which the participants are asked to draw a map of their village and locate all the houses and any social amenities found in their area. The illiterate people from Chikwawa and Mchinji where the survey took place were more comfortable to draw on the ground using a stick, while those that had attended school preferred drawing on a paper with a pencil. This example was given just to illustrate the fact that people that do not have any education at all feel uncomfortable to be associated with literacy materials.

On a similar note, commentators such as Chike Anyaegbunam talk about the Participatory Rural Communication Appraisal tools and techniques Participatory Rural Communication Appraisal (PRCA), which mainly borrowed from other participatory appraisal approaches such as Participatory Rural Appraisal (PRA), Participatory Learning Appraisal (PLA), etc. Since most of these tools and techniques are visual in nature, they remove the need for high levels of literacy and numeracy on the part of community members.

Anyaegbunam continues by saying that the primary purpose of PRCA tools and techniques are to enable groups in the community to express and analyse their

knowledge. They help the people to map and diagram their situation and environment in the most comfortable and non-threatening manner using materials and symbols that they are used to.⁴⁵ Take note of the word **non-threatening manner**, as explained already, people with low or no literacy at all are easily threatened with issues that are to do with literacy. They are even afraid of trying out because they feel that it is not meant for them. When these people are given the same issues in a different form that is locally available they tend to accept and easily associate with it. For instance drawing those same lines on the ground or illustrating them using locally available resources like sticks, to represent lines; and stones or maize seeds to represent seeds would be welcomed by them. On these same “non threatening communication” techniques, theatre is also widely used as a communication tool. It has the additional advantages of being an immediate form of communication, which addresses problems in an integrated manner. The audience is engaged emotionally and mentally, and the use of humour and other dramatic devices encourage participants to speak without the inhibitions which formal meetings or other communication systems perpetuate.⁴⁶ The paper will not dwell much on theatre because it is not what is being studied here.

3.1.4 Text

Kamlongera states that, before the use of text, it is important to know whether the interaction group for which the materials are meant, are literate.⁴⁷ The font of this leaflet is 14 and it is single spaced. Malawian grade 1 and 2 books use font 21 which is quite big

⁴⁵ Anyaegbunam C etl 2004 p.17

⁴⁶ Sensitisation and Education through Kunda Arts is an organization that uses theatre for development to reach out to its targeted communities. www.seka-education.com

⁴⁷ Kamlongera C, 2004, p.62

and is double spaced to make it easy for primary school pupils to read and not lose interest in whatever is written, knowing that their literate levels are very low. Below, at the very end of this section is an extract of a page from a STD 1 English book, showing the recommended font for beginners.

The content on page 3 of the leaflet is a mixture of figures and words which say, *pezani mbewu yopilira kumatenda a Chikasu ndi Chiwawu komanso yocha nsanga monga DK8071, DK8031, DK8041, SC621, SC403, Katswiri ndi Masika*. For a semi-illiterate person it proved to be hard to connect numbers and words as a result he/she simply skipped that part and ended up not getting what the leaflet tried to communicate as was experienced by one girl, Chiwalira Juma, 17 years old from Chikwawa who said at that moment was a pupil at AGLIT School.⁴⁸

Dzolembewwa dzinadzi dzidakudodometsatu maningi, akuyika dza masamu muchichewa, tidadziphatikiza bwanji? Pamene akukamba za Chichewa chikhale Chichewa chokha basi, pamene akukamba za masamu akhalenso masamu okhaokha, kuphatikiza ziwiri, waaa! tidaphata kulondora tayi

Some of these writings would really trick you. They are mixing mathematics and Chichewa, and how will we be able to add the two? Where they intend to talk about Chichewa, it would be better if they only talked in Chichewa. Where its mathematics, let there be mathematics only. Mixing the two? Hey! We cannot get that right.

The sentences were very long such that it was very easy for a farmer to lose track in reading them. One example of a long sentence in this leaflet is; *kumene amalima*

⁴⁸ AGLIT stands for Adolescent Girls Literacy, this is a United Kingdom based Non Governmental Organisation that is working in Chikwawa and Mchinji, its aim is to give a second chance to drop outs especially girls that left school before they had known how to read and write. Chiwalira is 17 years old and has one child, she dropped out of school when she was in std 2 because of poverty. Her parents died when she was 11 years old, she was living with her grandmother who was very old and could not support her together with her 3 siblings. She left school and looked for employment in town. Now she is back in her village doing a small scale business and farming, whilst attending school

chimanga cha m'madimba ndi ku chigwa cha mtsinje wa Shire m'chigawo cha kumwera, ku Salima mphepete mwa nyanja m'chigawo cha pakati ndi ku Karonga mphepete mwa nyanga m'chigawo cha ku mpoto. The sentence could have been better if it were broken into short and simple sentences. As it is a fact that most of the farmers here in Malawi are either illiterate or semi-literate it was very difficult for them to read something that has a lot of words on it. One farmer in Chikwawa who was 40 years old and had gone up to year 3 of primary education, took about one and a half minutes to read that sentence, almost the same time taken by a year 3 primary education pupil who was asked to read the same sentence as a control. With the long sentences, by the time the person finished reading them, they had forgotten what was read at the beginning of the sentence. The reading was almost a count of one word after another, with pauses to first decipher the words before pronouncing them. A scanned page of a STD 2 English book below is an example of dealing with literacy at low levels.

What Temwa does every day



1 Temwa wakes up at 6 o'clock every day.



2 Temwa brushes her teeth every day.



3 Temwa washes her face every day.



4 Temwa eats breakfast every day.

Figure 7: Illustration from a Standard Two Book

Observing the font and style of writing, one can notice that the font is easy to read and not so many words have been clustered, apart from creation of a sequence using numbers. Besides, certain words are repeated in the sentences that follow each other. The way a letter is written is simple enough for a beginner or someone who did not go far with school to be able to know it is an **a**. Every picture is clearly composed and has its own text to help the reader make sense of the drawings.

Carey explains in a book called "Communication in Extension", a teaching and learning guide about the use of short and easy words. In the book, he recommends that when

writing it is better to explain any difficult words that have been used. For example in this leaflet there is a sentence with the following words; *pangani mapando pa mpata wa masentimita 90 ndipo mikwasa italikenso masentimita 90*. Even though this leaflet is in Chichewa some people from both Chikwawa and Salima could not know what *mikwasa* meant. It was going to be better if it was explained further what is meant by that. *Mikwasa* is deep and old Chichewa which means lines that are made for planting maize, which in modern Chichewa is *mizele ya chimanga*. When asked what that sentence meant, one woman in an FGD from Chikwawa had this to say,

Nkhabe! Sindikudziwa tayi kuti akufuna kukamba chain pamenepo, mikwasa ndi chain? Mapando ndi chain? Ma sentimita ndidawadziwakuyeza kwake ine? (Evelyn Benjamin, 26 years old). (No! I do not know what they are trying to say there, what is mikwasa? What is mapando? Do I even know how long a centimetre is?)⁴⁹

From Salima, a real Chewa speaking district, Mayamiko Nkhoma 37 years old said:

Kodi dzinadzi akulemba muchiyanja ati? Tsonotu chinyanja nchovutirapo kuchimvetsa angakhale tili ochewa, mikwasayo mwina kuno ali ndi dzina lina, chifukwa ine limenero nde sindinalimve, mapandowo kapena ena amati mapata, miphata kapena.

Are some of these written in Chinyanja, not so? Chinyanja is a very difficult language to understand even though we are Chewas, the word “mikwasa” probably could have a different word here because I have never heard of such a word or perhaps that is similar to mapata or miphata.

3.1.5 Distribution of the Leaflets to the Farmers

These leaflets were being distributed by the Field Assistants to the farmers during field meetings. According to the farmers from Salima, the FAs never read them out to the farmers at the time they distributed them.

⁴⁹ A lady aged 32 from Chinkole village T/A Katunga

Ankangotilandiritsa nkutiuza kuti timabuku timeneti ntofunika ndipo tikakatha kuwerenga tikathenso kuwabwererka amzathu omwe akafunenso kuwerenga nawo kuti nawonso akathe kupindura pa ulimi wawo wa mmadimba. Ndiganiza ena omwe samatha kuwerenga ankangolandira ndi cholinga choti akawelengetse mmakwawo, kaya kwa ana awo omwe ali pa sukulu kapena kwa amuna awo.

They were just giving them to us and told us that these little books are very important and after we had finished reading them we needed to let others read too so that they also could benefit with their irrigation agriculture. I should think those who were not able to read them, were just getting them with an intention of getting help from either their children who were in school and were able to read for them or probably their husbands.

In contradiction to this, the FA from Salima said that after giving them the leaflet, he took time to read it for them so that they could have an idea of what the leaflet was trying to communicate before they went back to their houses. However he also added that for those that do not know how to read, he encourages them all the times to let others read for them because it worked well when these people are working as a group/club.

The distribution method was not a good one, knowing that a lot of the farmers are either semi-literate or illiterate. The FAs needed to take time to read the leaflets together with the farmers. This would have developed interest in all the farmers after knowing the content of the leaflet. It could be true that some FAs read out and discussed with the farmers what the content was, on the other hand, as is seen from the responses from farmers other FAs did not bother to read the leaflets out to the farmers. The main emphasis in development is participation, only when people have been given a chance to participate at every step of the process, are good results realised.

The farmers said that after being given the leaflets, they were told to let other people who were not at the meeting read them too. This was a good development, however, not most of the people that did not attend the meeting would be willing to spend their time reading that leaflet, as we are saying that most of them are semi-literate, they would find it so tiring and boring to go through the leaflet. The better way of doing it would have been for the FAs to later organise a meeting and invite the farmers, those that did not attend the first meeting after hearing what the others had benefited would eventually want to be present. It was during such meetings that the FAs would find a chance of explaining the content of the leaflet to the others.

The idea of letting them work in groups is a good one because that way the illiterate ones would benefit from the others. During their normal meetings, the leaders of the groups would be taking that as a privilege and explain to the rest what the leaflet is saying. This is a good forum as farmers will be able to ask questions where they are not clear rather than depending on their children and relatives at home to read for them.

Looking at all this, it would be concluded that the communication did not fully succeed in its objective. Some people managed to grasp what the objective was while on the other hand a good number of farmers that are illiterate did not manage to get the whole idea of having that leaflet and knowing the message that was delivered through the leaflet. For example on the text, those that had gone to school managed to get what the leaflet meant while those that had no education looked at it as a confusing paper. The mixing of figures

and words proved to be a big challenge to the semi-illiterate farmers. This made them lose track of what they were reading from the leaflet. Perhaps the other reason could be that the numbers were very big. Semi-illiterate people are much conversant with small figure like 1 to 50 or 99 but three digit figurers are viewed as a challenge to them.

However, to those farmers that are literate it would be seen that the leaflet delivered the intended message on irrigation farming, despite containing a lot of writing. This can be seen from their responses on the objective of the leaflet, that it had helped them to know more of different planting methods and fertilizer application. They were able to mention the Sasakawa planting system even though it was not mentioned in the leaflet just by looking at the images (a method where by they plant one seed per station). This was well demonstrated in the leaflet. On the same issue Mundy and Phuyal in their report of a survey on Developing Agricultural Communication in Nepal warned the Agricultural Communication Division in Nepal against the publication of text-heavy materials meant for both farmers and extension staff. They said that even though some of the publications contained a few pictures (often small, poorly reproduced black and white); many contain no illustrations at all. Because of the lack of pictures, the layout was generally unattractive. Text-only publications automatically excluded illiterate and semi-literate people: the only way that they could learn from such a publication was to have someone read it to them. Even for literate people, pictures made reading attractive and helped carry the message.⁵⁰

⁵⁰ Mundy Phuyal Report, Sept 99 pp 22

3.1.6 Posters and how they are Distributed

Once produced, the materials including posters are taken to the ADDs, who take them to the EPAs, who use a filter system to distribute them to the intended villagers. The hierarchy there includes sections that are working directly with the farmers. A number of sections make up an EPA, a number of EPAs make a district. According to the FA, the posters once developed are not given to the farmers directly.

These posters were not given out to every farmer, leaflets are the ones we hand out to them, but with posters we simply give one per village, this could either be stuck on a club's wall if the club has a building, otherwise we see these posters being displayed at the chief's office. Sometimes we stick some on our offices, in school notice boards and at any convenient place where we are sure that the message will be delivered to the intended recipients.⁵¹

The farmers also had this to say on how the posters are distributed,

*Samatipatsayi timangozionera moyenda momwemu. Ngati ineyo nde sindimadziwansotu kuti kuli dzinthu ngati dzimenezi, moti panopa nkoyamba kuchiona chimenechi. Kutu kodi kani ma treadle pump anawajambulanso momveka bwino chonchi? Chikhala akumatipatsa kuti tikapachike mmanyumba wmathu kuti nthawi zinse tidzitha kukumbukira za ulimi umenewu wa mthirira.*⁵²

They do not give us we just see them around, when we are visiting places. Like in my case, I did not even know that there are things like these ones, am just seeing them now (posters). And am like, so treadle pumps are even shown in this way, they look this good? If they could be giving us these posters so that we could be hanging them in our houses and be able to remember about this irrigation farming all the times.

From both what the FA and farmers had said about distribution of the posters, it is seen that farmers do not really get in close contact with the posters. However, while this poster was well presented it would be better if they were also being distributed to the farmers

⁵¹ FA from Salima, Tembwe EPA June 2007

⁵² FGD with men from Salima districts June 07

too. A similar type of poster would be made on either an A3 or A4 paper with low quality in order to be able to produce a lot of them for distribution. To a farmer this would act as a motivation, if they reached a point of saying that they would be hanging them in their houses that means they would be appreciating this. People tend to remember better something they see rather than just being told, so if farmers are able to see a picture of a treadle pump in their homes, they would be having a picture of it and how it works at all times.

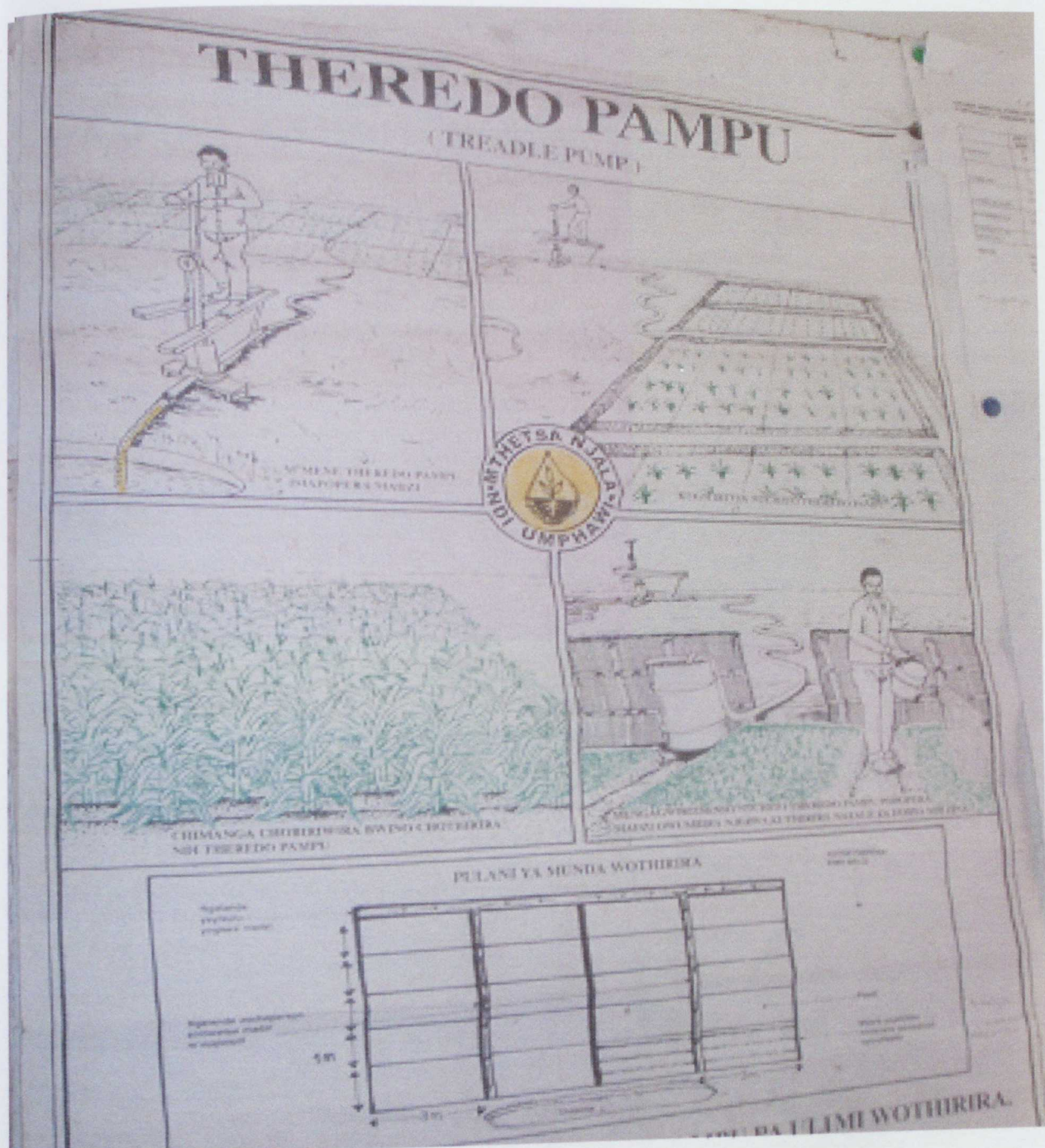


Fig 8: Poster

This was a poster that was developed to let farmers know how a treadle pump operates. It has several sections. On the left top is a farmer pumping water into the field. The targeted

issue was how that farmer was pumping the water using the treadle pump. Behind him is the piece of land on which he had planted the maize and to which the water was going.

On the top right section is the field, where the maize has been planted using the Sasakawa 2000 planting method (that is evident by the planting of a single maize seed per station). Then is a picture of green maize, showing the advantages of using a treadle pump. On the last section is a farmer watering his nursery using a watering can. He has used the treadle pump to get water into that big drum from which he is drawing water to water his nursery. The sub title there is explaining other uses of a treadle pump. You can use the treadle pump to get water for moulding bricks and for watering nurseries among other things.

When the farmers were asked what they saw in the image, most of them managed to explain what the image represented. A 30 year old man from Salima, Mwamadi village, with Primary School Leaving Certificate (PSLC), explained in this way;

Poyambilirapo pali munthu wa bambo atakwera thedo pampu akupopa madzi kumathirira chimanga chake. Penapo tikuwona chimanga chija chathiliridwa ndi thedo pampu, kenako chimanga chija chakula bwino chifukwa cho gwiritsa ntchito thedo pampuyo. Pomalizapo pali abambo akuthirira mogwiritsa ntchito wota keni. Pakatikati pa dzithunzipo alemba mau akuti Mthetsa njala ndi umphawi, kumeneko kusonyeza kuti munthu akagwiritsa ntchito thedo pampu sipakhala njala kapena umphawi pakhomo pakepo⁵³.

On the first image, there is a man using a treadle pump, he is pumping water into the maize plants. On the next section is maize that has been watered using a treadle pump, after that one, there is green maize that is growing so well because of using a treadle pump and lastly is a man

⁵³ Finias Timгона, Mwamadi Village

These people managed to explain what the different images stood for. It was easy to do so because there were sub headings illustrating the images. However, a few people, especially those that were illiterate found the images a bit confusing and here is what some of them reported to have seen in the images.

Mary Sawelengera from Chikwawa, 47 years old, who has never gone to school explained in this way;

Pali bambo akuthilira ndi treadle pump, palinso bambo wina akuthirira ndi theredo pampu, penapo pali chimanga, penapo kudutsa chithunzi cha chimangacho pali bambo wina yemwe sagwiritsa ntchito theredo pampu.

There is a man using a treadle pump, next there is another man using a treadle pump too. After that one there is maize, next after the image of maize there is a man who does not use a treadle pump.

A man from Salima, Kambwiri Village aged 28 with no formal educational background saw the images in this way;

Bambo akuthilira munda wake ndi theredo pump, penapo akupitilizabe chifukwa munda wakewo ndiwaukulu, kenako akutionetsa chimanga chake umo chikusangalatsira chifukwa cha theredo pampu. Eeeh! Koma munthu mmunthu dala, uyo! Wachitsika wayambani kugwiritsa ntchito wota keni, muja ndidakambira poyamba kuti ndi ntchito yolemetsa imeneyi, ndiwochepa amene amatha kugwiritsa ntchito theredo pampu nthawi yonse. Moti siine nekha ndidaona zimenezi, apa si aku boma amene abweretsa chojambula chimenechi? Nawo akuthilira umboni pamenepa kuti ulimi wa theredo pampu angakhale ngwabwino komanso ngovutabe.

A man is watering his garden using a treadle pump; on the next image he is continuing using the pump to water his garden. After that image we are seeing his green and good looking maize that has been watered using the treadle pump. Hey! But still, a person is a person man! Look at him there! He has stepped off the treadle pump and is now using a watering can, like I told you earlier on using a treadle pump is very tiresome. It's only a few who use the treadle pump all the times. Now I've seen that it is not only me who has these views, here are government officials sharing my view too, are they not the

ones who came up with this drawing? Here they are also commenting on the use of a treadle pump, that even though it's a good practice but it's not easy.

Here these people had their own interpretation of the image. The first one thought all those four images were different in such a way that they represented different people in their gardens. This was the case because he could not read the sub headings. The other one looked at it as a continuation of activities because he couldn't read the titles too. However, this young man was one of the people that were using treadle pumps but decided to stop because they found it so tiring. He said that he decided to stop using a treadle pump when he had planned to get married in 2006 and **was afraid if he continued using the treadle pump he would not be able to satisfy his wife in bed because he would be very tired**. For this reason, he stopped using the pump but is continuing with irrigation farming only that he now uses a watering can. "*ndidaona kuti izi ndi nkhani ya banja sidzugwirizana nkose ayi, mapeto ake akazi anga ayamba kuyenda yenda chifukwa ndidzikanika kuwakwaniritsa ndidzikhala nditatopa ndi thedo pampuyo*". Explained Anthony Chiutsa, 28 years old from Kambwiri village. According to him, he had been using the watering can for a year and still found it better than using a treadle pump, as this left him with energy to perform his marital duties at the same time able to harvest enough crops.

This is what E.Rogers called **Discontinuance** in his book titled Diffusion of Innovations. He defines discontinuance as a decision to reject an innovation after having previously

adopted it.⁵⁴ In this case a lot of people had adopted treadle pump farming but later on a lot more had stopped using them. According to Rogers, a rather surprisingly high rate of discontinuance has been found for several innovations. In fact, Leutholh⁵⁵ concluded from his study of state wide sample of Wisconsin farmers that the rate of discontinuance was just as important as the rate of adoption in determining the level of adoption of an innovation at any particular time. Looking at this study, it was also easy to note that there were a lot of farmers that had discontinued the use of treadle pumps and it was not difficult to get them as respondents because at area that was visited the number of those that stopped surprised the required number needed to be interviewed.

The images were understood quite well by all groups of people. The main objective of the poster was to pass on a message to farmers on how a treadle pump is used, and that apart from just pumping water for irrigating their crops; they could also use it for other things like moulding bricks. This could be a success because of the pre-testing which they say they do before a final poster is made. The input of the farmers during the pre-testing period fine-tunes the end product.

Even though other people could not follow well the images on the poster, for example that farmer from Salima with no formal education, who said that he could see a man pumping water into his garden. On the second image he said the man was continuing pumping the water because his field was quite big... A lady from Chikwawa with no formal education as well said she was seeing two men on the images pumping water

⁵⁴ E. Rogers 1983

⁵⁵ Lenthoh 1967 p.106

using their treadle pump....However, others managed to connect the images, that it was the same man, same image just being shown from different angles, as this could be seen from what a 29 year old farmer with a (JC) Junior Certificate of secondary education from Chikwawa.

Generally, the whole point in terms of communication was to show how a treadle pump is used. To be fair, this was a good representation of how a poster for communication development should be. This poster does not have a lot of writings/ illustrations but rather has good pictures that speak for themselves. The writings are in Chichewa with a font of 16, which is very clear and readable. However, this poster does not really bring that much interaction with the targeted audience. The poster does not explain more on how farmers should get more information wherever they do not understand and how a treadle pump is to be used. Print and radio media should come second after an interpersonal communication has been done first. With interpersonal it's easy to follow and has instant feedback where possible.

However, the communication policy is silent on these issues. It does not explain anything on print media. All it looks at is that messages should be communicated to the farmers using the right and appropriate channels.

3.2 CONCLUSION

This chapter has looked at how print media is done at Agricultural Communication Branch (ACB). Looking at a leaflet and a poster produced at ACB and distributed to the

farmers. This leaflet was written on an A4 paper and was printed on both sides. It contained drawings of a treadle pump, a maize field and of fertilizer application and also had text. On the text part of it, farmers that had formal education were able to read and understand what the leaflet was communicating. However, after further examination of the format and font of the leaflet, it was realized that the font was too small and could hardly attract people who are semi-literate to read what is written there. Most of materials written for people of low literate levels are best written with a bigger font. A page in a book for year 3 of primary education was used to compare how big the font for the leaflet would have been made. The mixing of figures and words proved difficult for semi-literate farmers to understand what it meant, as one farmer clearly said that he could never get it right where words and arithmetic were mixed. From that the researcher went ahead to look at a treadle pump. Even people with no formal education were able to get what the poster meant. This poster had colour and contained a few words, which worked to the people's advantage. However, the only problem was on distribution. These leaflets were not distributed to farmers and were only stuck at public places and sometimes at traditional authority's courts. Farmers expressed interest that they would want to be getting them as the message targets them.

In conclusion, it would be argued that ACB is doing its best it can, to provide the farmers with these written materials for them to have more knowledge on irrigation farming and how a treadle pump operates. The only set back however, is the fact that not all farmers are getting the message. Those farmers with a good education are benefiting but to the illiterate farmers, this is not being of any help to them. According to the above analysis, it

shows that ACB when communicating through media it just goes straight to what they want to deliver without really looking at its target audience's level of education. This type of communication lacks genuine participation. On the other hand, genuine participatory approaches have problems in terms of cost effectiveness. When genuine participation is taking place, there is a need to consult and identify real stakeholders. This is both money and time consuming in such a way that there is need to be constant meetings between the farmers and the stakeholders. When this is taking place it means the materials that have been produced are revisited and reproduced to accommodate the views of the people, which cost a lot of money and time. For the bottom-up approach to be successful, the recipient of the message need to be contributing at every stage of the process of message development that is why pre-testing is very crucial before any material has been finally developed. This brings the sense of ownership to the target communities/farmers, and they become familiar with the innovation being introduced. While with top-bottom approaches, the recipients do not contribute and are only given the final product with no room for feedback at all. This is very convenient and does not cost a lot of money and time, this is what is being implemented across the country and that is why the expected outcome is not being impressive. However, their messages are quite clear and well understood but only benefit those with a certain level of education. Of the 27 female participants from Chikwawa who participated in the study, 8 were literate while 19 were illiterate and of the 27 male participants from the same district, 14 were literate while 13 were illiterate, while in Salima the figures were as follows; from the 27 female participants, 13 female participants were literate and 14 illiterate and out of the 27 male participants, 20 were literate while 7 illiterate. In both districts, the number of

CHAPTER FOUR

RADIO IN AGRICULTURAL COMMUNICATION

This chapter explains how radio communication on treadle pumps was conducted in Agriculture. It has an analysis of a radio program and a jingle that were developed on treadle pump issues. And finally, it looks at how the communication policy is reflected in the program and policy.

The role of radio is to inform, educate and entertain. In development, however, the radio can be multi-faceted as, among other things, it can serve to pass messages, improve the capability of calling upon and organising groups and organisations, enlarge the forum for social dialogue, provide effective capacity building of the community, raise awareness and knowledge of community issues, bring the people's voice to the higher level of their political structure and mobilise the community to tackle issues of collective interest.⁵⁶

The major elements to be observed when producing a radio programme are accuracy, repetitions and summaries, simplicity of presentation and interactive capability.⁵⁷ This helps as most of the development programs are produced for the rural masses, especially agricultural programmes. The department of Agricultural Communication Branch ACB is where most of the radio programs are produced here in Malawi. The branch sold the idea of treadle pumps through its radio programs. However no programs were produced specifically on treadle pumps: "We managed to sell the idea of treadle pumps to the rural

⁵⁶ Kamlongera C et al, 2004, p.50

⁵⁷ Ibid p.55

masses and that is why we see a lot of people in dambo areas practicing the use of treadle pumps. We aired messages in our programs on where to get the pumps and how to assemble it. All these were being incorporated in our *Ulimi wa Lero* (Today's Farming) and *Ulimi Mnsabatiyi* (Farming Issues This Week) programs even though we never had programs special for treadle pumps." ⁵⁸ Below is just one of the messages that were aired in their programs specifically on treadle pumps.

".....pajatu ndinanena kale kumayambiliro kwa program yathuyi lero kuti tidziwitsananso za momwe tingapezere pa theredo pampu. Ndikhulupira kuti pano alimi amzanga takonzekera kuyamba ulimi wa nthilira ogwiritsa ntchito ma theredo pampu. Matheredo pampu ndi njira imodzi yachidule yothilira munda mosachedwa. Siilira kunyamula madzi pamutu ayi, koma kungojiga madziwo kuchokera mu tsinje omwe muli nawo pafupi. Nchifukwa chake tikumanena kuti tonse amene tili mphepete mwa madzi, kaya titi mitsinje tikuyenera kupanga nawo ulimi umenewu kuti tipewe njala, pajatu mvula ya masiku ano ndi yanjomba. Matheredo pampu akupezeka ku ma office onse a boma a zaulimi. Funsani alangizi aza ulimi mdera lanu kuti mumve zambiri ndikupeza nawo mwawi otenga theredo pampu pa ngongole yozizira kwambiri. Zonsezitu tikupanga kuti Malawi atukuke akhale Malawi opanda njala....."

"...Like I said at the beginning of this programme, today we are going to learn more on how we can get treadle pumps. I believe that we are all prepared to start irrigation farming through this treadle pumps. Treadle pumps are one of the simplest and efficient ways of watering crops. This method does not require one to actually carry the water, you simply pump the water from a nearest water source i.e. a river or a dam. This is why we are being encouraged that if we are living near a river we must start irrigation farming. This will help us to be food secured and as a result we can not die of hunger, we all know that these days you cannot depend on the rains as it is becoming very unpredictable as to when or how long it will rain. You can get a treadle pump at any government office, which deals with farming. You can get more information from agricultural field

⁵⁸ An in-depth interview with Exce I Zidana, Senior Radio Producer at ACB

extension workers in your area. You can also get a chance of purchasing a treadle pump using a credit facility, which is so cheap. All this is happening to make Malawi food secure.....”

In the above statement the presenter used a lot of assumptions in the presentation of the treadle pump issue. He firstly started by bringing in a supplement to what the Agricultural Field Assistants FAs could have told the farmers when he said that he believed people **were all prepared to** start irrigation farming... He went further to talk of treadle pumps as being **a simplest and efficient way** of watering crops. In his presentation he said this is a simple way of watering crops. According to research however, people do not find it any simple at all. A lot of people have been complaining that a treadle pump is an energy-consuming tool and that it requires people with a lot of energy to operate it. Others complained that these treadle pumps were making man impotent, forcing marriage break-ups in some cases as was an article carried out in a “Daily Times” paper of 24/01/08. A related development is what a man from Salima said that he stopped using the treadle pump when he was getting ready to marry. Yet the presenter is saying that it is a simple way of watering crops. He went further to say that you simply pump water from the nearest source for example, river or a dam. This is an assumption that every farmer is near a water source. The message has been generalised as if water sources are everywhere. To complement the message, he advises the farmers to contact field extension workers in their areas. Finally, he reminded them that these treadle pumps are **purchased on credit, which he said was cheap**. Here the assumption was that most of the farmers could afford to get a loan of K9, 000 which in reality is not practical. Most of the Malawians live below poverty line and are in the rural areas where agricultural products do not yield much money.

radio, as the most important means of communication in Malawi, SWET also uses comic books, booklets, the print media, and low-literacy prints to put their messages directly in the hands of Malawians. These materials have now reached tens of thousands of Malawians⁵⁹.

With funding from the European Union through the Ministry of Agriculture, Story Workshop produced a radio program called “*mwana alirenji*” which literally means ‘**why should a child cry?**’ This is a Chichewa expression, which compliments a home that is self-reliant. In Malawi, this refers to homes of successful farmers.

4.1 *MWANA ALILENJI* FARMER TO FARMER PROGRAM (MEANING “SELF-RELIANCE”)

This was a weekly farmer to farmer magazine program highlighting good farming practices, problems and their solutions. The magazine used an innovative radio format to address issues of food security in rural Malawi. The field reporters visited farmers, radio gardens, research stations, and farmers’ associations. In order to spread the word on what other farmers say about innovations and success works, *Mwana Alilenji* emphasized the fact that smallholder farming in Malawi could be successful and that low-or no-cost solutions are there for the most common problems. It also was featuring a whole range of problems related to food shortage. This program, a component of the Rural Development Communications Campaign was funded by the European Union (EU). The program was aired on MBC Radio One on Sundays at 18:30 pm. Unlike *Ulimi Wa Lero* program which was 20 minutes, *Mwana Alilenji* was a 30 minute program and was aired once a week.

⁵⁹ Swet document on their website; www.storyworkshop.org

4.2 MWANA ALILENJI ON TREADLE PUMPS

Program number MW/346 aired on 22nd August 2006 was produced at The Story Workshop to focus on whether people benefited from the treadle pumps, and whether the people took care of the rivers which they used for the pumping irrigation. The program was in a form of interviews, which the *Mwana Alilenji* reporter and producer had with several people on the treadle pump issue. The fact that interview involves more than one person already makes it more interesting to follow. According to Kamlongera, this approach can be used to generate a two-way flow of information as in participatory radio.⁶⁰ The first interview was with Mr Dyson Meki a farmer from Kampira village T/A Mbenje in Nsanje district. Mr Meki received a treadle pump as an individual even though the intention of the suppliers was to use the treadle pumps in a group. The reason why he did not belong to a particular club was that no one else from his area was interested in this type of farming. In the interview, Mr Meki explained how he benefited from the treadle pump. He said he was able to sell some of his produce and use the money for other purposes. This is what was exchanged in the program:

Kondwani Mkandawire: *Kodi inu thredo pampu imeneyi munaipeza bwanji?*

(How did you get this treadle pump?)

Dyson Meki: *Ine thredo pampu imeneyi ndinaipeza pamene ndinamva kuti boma*

likupereka ma thredo pampu awulele, nde nditamva izi ndinawauza alangizi athu kuti nane ndili ndi chidwi chofuna kupanga ulimi wa mnthirila nde anandikomera mtima nkundipatsa, moti chaka chino nchachi 3 ndikupanga ulimi umenewu. (I got this treadle pump the time government was providing free treadle pumps. When I heard about these free

⁶⁰ Kamlongera C et al , 2004, p.52

treadle pumps I approached the agricultural advisor and I told him my interest in irrigation farming. He understood and he was so kind to me so he gave me one. This is the third year since I started this type of farming)

Kondwani Mkandawire: *Koma nanga zimatheka bwanji kuti thredo pampuyi mumagwiritsa ntchito nokha, kodi mmesa zimayenera k uti mudzigwiritsa ntchito anthu angapo thredo pampu imodzi?* (But how is it that you are the sole owner of the treadle pump, I thought you were supposed to be using it as a group?)

Dyson Meki: *Ine ndinauzidwa ndi a langazi kuti ngati pali munthu yemwe akufuna kugwiritsa ntchito thredo pampuyi ali ndi ufulu odzabwereka koma anthuwo samabwera okha, mwina kapena alibe chidwi.* (I told the Field Assistant that if there are people who would like to use the treadle pump they are free to come and get it, but no one has ever approached me. I guess they are just not interested)

There was Interpersonal Communication between the farmers and the FAs, as it can be seen from the interview, which the presenter Kondwani Mkandawire had with Mr Dyson Meki. Mr Meki approached the FA of his area to tell him that if there were any people interested to join him and use the treadle pump they were free to do so, as the treadle pump which he was using was not his personal property. Mr Meki might have been a model farmer in his area and the other people got attracted to use the treadle pump after seeing that their fellow farmer was benefiting from it. Rogers (1983) said, adoption of a new idea is the result of human interaction through interpersonal networks. As these people were in contact with Meki all the times, they decided to adopt the technology save that they lacked guidance and support as they thought the treadle pump belonged to Mr Meki. He continued by arguing that earlier knowers of an innovation, when compared to later knowers, are characterised by more education, higher social status, greater exposure to mass media channels of communication, greater exposure to interpersonal channels of

communication.....⁶¹ This was the case with Mr Meki. According to the interview, he said that when he had heard on the radio that government was distributing treadle pumps to farmers for free, he approached the FA of his area. It was due to this interpersonal communication that had always been there between Mr Meki and the Field Assistants that made it possible for him to get to know about the technology early. When I did a follow up, through the FAs office in Salima to talk to Mr Meki, he explained that he had gone up to Form 3, he owned a grocery store and a radio, which he said he is free to listen to any time he wanted. It was through this radio where he heard of the free treadle pumps.

In another case, the producer went ahead to ask the Field Assistant Mrs Effie Gama of Magoti EPA why Mr Meki got the treadle pump as an individual after knowing well that it is a very difficult tool to maintain once damaged. The idea of giving the treadle pumps to clubs was for easy maintenance and repairing as it would be a group's responsibility. Mrs Gama gave the same reason why Mr Meki owns a treadle pump as an individual. However, at the EPA level they had tried so hard to encourage people to do irrigation farming but it was just that people were not interested. And this is how the interview went.

Kondwani Mkandawire: *Kodi inuyo ngati alangizi, munapangapo zotani kuti anthu adziwe kuti thredo pampu munapaleka kwa bambo Meki siyawo yokha koma kuti aliyense ofuna kugwiritsa ntchito ali ndi ufulu kutero? (As a Field Assistant, what did you do to make people realize that the treadle pump that you gave to Mr Meki isn't his own property?)*

Effie Gama: *Ifeyo tinabwera ndi nkhani imeneyo yonena kuti alimi alandire ma thredo pampu a ulele omwe boma limapeleka koma kunapezeka kuti anthu sanabwere kudzanena kuti akufuna kulandira nawo ma thredo pampu amenewo koma ndi bambo Meki okha omwe anabwera poyera kuti akufuna kupanga ulimi umenewu. (When we told*

⁶¹ Rogers E 1983, p. 206

people about the Government's idea of giving people treadle pumps, no one came forward to ask for one, it was only Mr Meki who came and showed interest in this type of farming)

Kondwani Mkandawire: *Nangatu poti kuno nkumudzi, simukuona kuti mwina zitha kutheka anthuwo sanamvetsa bwino za umwini wa theredo pampuyo kuti mwina amayesa ngati a Meki theredo pampu inapatsidwayo ndi yawo okha?* (This being a village, you know how people understand issues. Would it be not possible that people did not fully understand when you gave Mr Meki the treadle pump? Probably they thought it was his alone?)

Effie Gama: *Ayi, ifeyo tinapanga zothekha kudziwitsa anthu kuti theredo pampu imeneyi siya bamboo Meki okha koma aliyense ofuna kupanga ulimi umenewu, moti pano tapeza anthu angapo omwe awonetsa chidwinso pa nkhani imeneyi ndipo akhala akuwajoyina bamboo Meki nkupanga gulu. Chifukwatu theredo pampu imafuna maintenance kapena pa Chichewa timati kukonzetsa ikakhala yawonongeka, izi zimafunika kuti anthuwa adzikhala odzidalira pa okha ndi sistimu yomwe ilipo m'boma masiku anoyomwe tikuitcha mphamvu ku wanthu nde tikumafuna kuti anthu amenewa adzitha kudzi konzera zili zonse pa okha.* (No, we did everything possible for people to know that the treadle pump was not meant for only Mr Meki but everyone was free to use it. At the moment we have identified some other farmers who will be joining Mr Meki to form a group. The thing is, there is a need to be operating in a group because it require maintenance once it's faulty, with the coming of decentralization we are encouraging people to be helping themselves, not waiting for the government to do things for them)

Through this interview, the government's policy on the distribution of treadle pumps was mentioned; hence remind the farmers that the treadle pumps were not meant to be their own personal properties. This is highlighted where the FA, Mrs Gama said to the presenter that the treadle pump that was given to Mr Meki was not to be made his own and that they had identified other people to join him. After they had seen how successful Mr Meki was, a lot of people decided to adopt the technology too.

After these two interviews then came a jingle on treadle pump. This was a 40 second jingle.

4.3 JINGLE

Alimi amzanga tamverani, chaka chino kukolora kwavuta tigwire mtengo wANJI? TiYambe ulimi wa mdimba aaa, ulimi wa mdimba mthetsa njala, komanso tidzapha makwacha, tikagulitsa mbeu zakudimba, tilime mbatata, maungu, chimanga ndi ndiwo za masamba. Ulimi wa mdima yankho la zones, ulimi wa mdimba nthetsa njala aaaah, komanso tidzapha makwacha, tikagulitsa mbeu zaku dimba

My fellow farmers listen, this year we haven't harvested enough crops, what should we do? Let's start irrigation farming aaah, irrigation farming combats hunger, and we are going to make lots of cash from it. If we sell our produces, let's grow potatoes, pumpkins, maize and vegetables. Irrigation farming is the answer to all problems, irrigation farming combats hunger aaah, and we are going to make a lot of cash, if we sell our crops.

The message in the jingle was basically to remind farmers the importance of irrigation farming when there are no good rains. It recommends that the only way to survive and not to be defeated by hunger was to practice irrigation farming along the rivers and in dambos. The jingle tackled three important points in communicating a message. Firstly, it's the problem identification, where it says **this year we haven't harvested enough crops**, this was the problem that had been identified and needed to be solved. Second was the method of dealing with the problem, seen in the following statement, **lets start irrigation farming aaah, irrigation farming combats hunger**. This was the method that was identified to combat the problem that had been identified earlier on. After the method had been pointed out, then thirdly the result of using the identified method. In the jingle they say; **we are going to make lots of cash from it**. Fourthly is the main focus of the jingle, which was **Irrigation farming**. The main emphasis of the jingle was on the importance of irrigation farming. Lastly, there is a need to note that this was a general irrigation message. It was not made specifically for treadle pumps.

This jingle was short, running for 40 seconds, in order to be repeated several times to get into people's heads. The jingle was then connected with another interview from Salima district. The main idea of the interview was to find out how people were benefiting from the use of treadle pumps. The producer from SWET spoke to Jekapu Khamba of Mwala village T/A Maganga. Mr Khamba was complaining that the treadle pumps were brought to their area but a lot of people did not benefit as the following extract indicates:

"...Koma sinanga amaona kuti theredo pampuyo itha kuwapatsa ntchito ndiye amangosunga mmalo moti atipatse anafe kuti tigwiritse bwino ntchito. Ndiye iwo adangowona kuti chokhale chida choti chidzikhala mmanyumba mwaomo basi adziwona ngati ali ndi katundu."

The thing is, they feel that the treadle pumps would be giving them unnecessary busy, instead of giving them to us, for us to put them to proper use. They look at them as part of their property".

With this criticism from the farmer, the exchange continued in this way:

Kondwani Mkandawire: *Ndiri mboma la Salima ndiye bambo tidziwane kuti ndinu ndani ndipo mmudzi wanu ndi wansi (I am in Salima district, Sir may I know your name and the village you come from)*

Jekapu Khamba: *Ine ndi Jekapu Khamba ndipo ndimachokera mudzi mwa Mwala mfumu yayikulu Maganga. (I am Jekapu Khamba and I come from Mwala village, Traditional Authority Maganga)*

Kondwani Mkandawire: *Tsopano bambo, pali nkhani ya ma theredo awulele, kodi kunoko inafika? (There is this story about free treadle pumps? Did you hear about it?)*

Jekapu Khamba: *Matheredo pampu amenewo anafika ndipo iwo anthu oyenereka kulandirawo analandira, koma kuti ma theredo ali mmidzimu mmakomo a anthu amene ankayenera kugawa ma theredo pamuwo. Mmalo moti anthu akhama ngati ifeyo satipatsira kuti tidzigwiritsa ntchito. (These treadle pumps have reached here, and the "rightful" people received them but the thing is that they are not being used, they just dumped them in*

done, people never got to get the truth about them. The bad communication was on several cases or stages in the implementation. Mr Khamba continued to say that it would not have been possible for the people that received the treadle pumps to lend them to their friends since they were the owners of these treadle pumps and they would feel jealousy seeing other people prospering using their treadle pumps. When the government of Malawi introduced the treadle pumps, it was a development that needed to benefit every individual who was interested in irrigation farming; however, it seems there was a communication breakdown between the farmers and the officials, especially the Field Assistants. This is also seen in T/A Maganga's statement on the ownership issue of the treadle pumps when she said that she gave them to people to be theirs and she never thought of getting the ones that were not being used and hand them over to people who needed them.

Looking at the content of the interview, government had explained well its policy and how the program was to be implemented in the country. As Mr Khamba said that the government had explained well and the people thought they were going to follow the right procedures as the government had earlier explained in order to combat hunger in the villages. However, labour intensity could be the reason why those people that had been given treadle pumps stopped using them, as Khamba said that those people that received the treadle pumps just tried using them and dumped them in their homes. Another possible reason for stopping using the treadle pumps could be due to the fact that the water sources were far. As he said that there are still a few people that are using the treadle pumps especially those that are close to the water sources.

The people who received these treadle pumps do not use them but just hang them in their houses. Jekapu is one of those people who wanted to start practicing irrigation farming but did not get a chance of getting one. Here we are seeing the concept of diffusion of innovation being recognized by the communities. Jekapu Khamba expressed this when he said how people's ignorance in terms of treadle pumps is affecting them.

"...ena adangokhazika mmanyumbamu, basi kuno nkumavutika ndi njala. Mmalo moti bwenzi akugwiritsa nethito kuti mwina opanda mwawiffee timakagula chimanga kwa iwowo mu okotobalamu. Bwenzinso ife tikumasilira ngati chitsanzo tikamaona akupanga bwino ndi theredo pampuyo, kuti nafe tikumasilira kuti amzathu akupindura nafe tichitepo kanthu tipeze theredo pampu koma ayi kulibe zoterezi ndipo adangolandira monga katundu wa mnyumba".

"Some people just dumped the treadle pumps in their houses and let people die of hunger. Instead of using them so that us, the unprivileged ones could be buying maize from them during the month of October. We could have been admiring them, setting a good example to us if we could have been seeing them doing well, in that way, we could have been seeking other alternatives to also be able to get a treadle pump. But that is not the case because they just left them in their houses"

In this way diffusion of innovation seems to work automatically in people's heads, if the technology to be adopted is highly accepted and effectively used. Rogers explained in his book "Diffusion of Innovation" that adoption of a new idea is the result of human interaction through interpersonal networks.⁶² Surely, there is a lot of interpersonal communication between people in the villages and the issue of treadle pumps would not have been spared in their discussions. Rogers adds that, the first adopter of the innovation

⁶² E.Rogers 1983 p.212

discusses it with the other two members of a social system, and each of these two adopters passes the new idea along to two peers if the people from Maganga area were serious with irrigation farming, a lot of people would have benefited from that. As it could be seen from this man's interview.

After that interview, the presenter went ahead to talk to the Traditional Authority Maganga to find out if it was really true that people who got the treadle pumps were not using them. She admitted that a lot of people received them but just a few were being used. It was very unfortunate that when those people who had received the treadle pumps were not told that they needed to be borrowing others too.

Kondwani Mkandawire: *Ndakupezani pa nkhhani ya ma theredo pampu awulele omwe boma linapeleka mudzikoo muno. Kodi a T/A, mudagwiritsa ndondomeko yanji popeza anthu oti akuyenera kulandira ma theredo pampuwo, ndipo ndondomeko yokuti anthuwo apindule inali yotani?* (Am here on the issue of the free treadle pumps that the government distributed in this area. What criteria did you use to identify the beneficiaries of those treadle pumps, so that they should really benefit from them?)

T/A Maganga: *Matheredo pampu tidalandiradi, koma posanena monama kuno ma theredo pampu sitidagwiritse ntchito iliyonse, koma kumadera kwina mumdera mwamga momuno alikugwiritsa nethito maka omwe adatalikira ndi nyanja monga kwa Ngolowindo amagwiritsa nethito koma apano ayi adadalira nyanja ili mfupiyi.* (Its true we received the treadle pumps but to say the truth we do not use them here in my area. There are a few people who live far away from the lake. Those people are using them but all the people surrounding here are not using them. They would rather use the lake.)

Kondwani Mkandawire: *Pali anthu ena omwe akudandaula kuti adakapatsidwa bwenzi akugwiritsa nethito nde amakhala akudandaula kuti zinthu zikungokhala pamene ena akufuna. Kodi ndondomeko inali yoti amene wa landira theredo pampu ndi yake basi?*

(There are some people who really wished they had had a chance of getting these treadle pumps, they say if they had been given a chance they would have been using them as recommended. What was the

arrangement like? Everyone who got a treadle pump, it was meant to be theirs?)

T/A Maganga: *Maganizo oti ena adzitha kubwereka kwa amzawo sadatifike* (we never had that idea of letting people borrow from their friends)

Kondwani Mkandawire: *Ndiyekuti munthu mumampatsa kuti theredo pampu iyi basi ndi yake?* (Does this mean that you were just giving them to individuals as their own properties?)

T/A Maganga: *Munthu tinkapatsa kuti ikhale yake kumene, koma kuti tiganize kuti zomwe zikungokhalazi tipeleke kwa ena mzeru zimenezo tidalibe.* (We were giving them to be theirs of course, but for those that are not being used, we never thought of getting them and hand them over to other people who might want to use them. We never had that idea)

It was going to be better if the Ministry of Agriculture worked in collaboration with the Members of Parliament who were distributing these treadle pumps to their constituencies. In doing so there was going to be good communication to make sure that the rightful people were getting them. According to T/A Maganga, even the chiefs did not know what criteria were to be used to identify the beneficiaries of the treadle pumps. She clearly said that she didn't have an idea as what to do with those treadle pumps that were not being used as a result they were just dumped in their houses. "*Matheredo pampu tidalandiradi, koma posanena monama kuno ma theredo pampu sitidagwiritse ntchito iliyonse, koma kumadera kwina mumdera mwamga momuno alikugwiritsa nchito maka omwe adatalikira ndi nyanja monga kwa Ngolowindo amagwiritsa nchito koma apano ayi adadalira nyanja ili mfupiyi... Maganizo oti ena adzitha kubwereka kwa amzawo sadatifike.*" If they had worked closely with the EPAs that would not have been a problem because the FAs would have identified the people through the clubs, as was the case at T/A Mbenje in Nsanje.

To finalise the interview, the presenter of the program from MBC reminded the audience that these treadle pumps were supposed to be used for irrigation and not just to keep in their houses.

At the end of the interview, the presenter asked a question to the listeners especially farmers, for them to respond and have a chance of winning a t-shirt from Story Workshop. The questions are asked on weekly basis. The question for that week was; *kodi mulimi angasamale bwanji za chilengedwe monga mitsinje, nyanja ndi madambo pamene akuchita ulimi wothirira?* Which means, what can a farmer do to protect the natural resources for example, rivers, lakes and dambos as s/he is practicing irrigation farming? This was to attempt interaction with audience, in that way the organization gets feedback and knows if the message being aired is reaching the intended audience. The success of the communication in transmitting the communication objectives was seen when the responses were reviewed to select the winners of *Mwana alilenji* t-shirts the following week. Out of 75 people that sent their answers 63 got the question right and 45 got the t-shirts.

4.4 CRITICAL RESPONSE

A 30 minute long program comprised of four interviews and a jingle. All the interviews focused on treadle pump. The program targeted different types of people for example chiefs, farmers (both that are using treadle pumps and those not), Field Assistants and the youthful farmers.

Some farmers explained that they had heard about treadle pumps on the radio; however others would not mention exactly the program and the message that was on that radio pertaining to the introduction of treadle pumps. Even though this was the case, two participants who had been members of a *mwana alilenji* listening club in T/A Kambwiri in Salima district, remembered the program when the researcher replayed the CD for them.

According to Excello Zidana, ACB and other organisations that are working on either food security or other development programs believe that radio is the fastest means of sending messages to a larger group of people than any other means. Apart from incorporating a treadle pump message as either an interview or a narrative, the treadle pump messages were also given through jingles.

According to the Participatory Communication Strategy Design, jingles are usually part of a bigger programme. However, they can be used as an approach in itself. A jingle is flashed to remind people of a certain product⁶³. These jingles were either done by the ACB or the DOI. Zidana said that the *Ulimi wa Lero* program is 20 minutes long, and believed that giving these farmers more than 20 minutes would make them lose concentration on whatever issues the program is bringing. Zidana continued to say that in the past, *Ulimi Wa Makono* and *Bwalo La Alimi*, were 50 minutes long. After conducting a research it was found that the programs were too long as a result 20 minute *Ulimi Wa Lero* program and a 15 minute *Ulimi Mnsabatayi* were developed.

⁶³ Mefalopulos P. etal 2004

As regards language, all the agricultural programs from ACB were done in Chichewa as it is understood by most people in Malawi. However, interviewees were allowed to express themselves in a language they felt comfortable with as long as it was a local Malawian language. Even with the change on radio programs on Radio One, for example the introduction of other languages after the 1994 change of government in Malawi, the ACB says that it still did not have plans to produce agricultural programs in other local languages.

4.5 CONCLUSION

This chapter looked at how radio was used for communication development, especially looking at how it was used to communicate messages on treadle pump. It emphasized on two radio programs, one done by ACB and the one produced by the Story Workshop Educational Trust. ACB produces a program called *Ulimi Wa Lero*, in this program they were incorporating treadle pump messages, however, one senior producer of the program emphasized that there was never a program that was developed specifically on treadle pumps but rather made sure that the message was inserted in the programs. The message that was critically looked at in this chapter was the one that was contained in one of the *Ulimi Wa Lero* program, in this program the presenter was trying to enlighten the farmers where they could find treadle pumps and how simple it is to water their gardens with treadle pumps than it is to carry water on their heads. However, this message had a lot of assumptions on several factors. The presenter said that the treadle pump was very easy and cheap to purchase, very simple to use which is not the case on the ground. Still more,

managed to address the issue of the treadle pump as it was the time when people had so many questions on this new technology.

From that, the other program that was looked at was the *Mwana Alilenji*, this was one of the programs that SWET produced on treadle pumps. The program tried to clear the misconceptions that people had on treadle pumps distribution. Kondwani Mkandawire from the Story Workshop interviewed people in Salima district to find out how people received the news and how they were coping in using the technology. It was during the same interview when it was revealed that people in other parts of the country if not all did not understand well on the ownership of the treadle pumps, a lot of people were denied the use of the treadle pumps as only those people that had received the pumps made them their own property. This however, did not work to the advantage of the development as the people that received the treadle pumps were not using them, neither were they letting the others use. This was due to the communication break down that must have been between the government - (FAs) and the Traditional Authorities who were entrusted to distribute the treadle pumps to their people. In the same program, one FA from Salima tried to highlight and clearly explained that the treadle pumps were not supposed to be given to individuals but rather work in groups, however, in other circumstances people were using them individually because she said not a lot of people were interested to use the technology. This was contrary to what T/A Maganga said and what Mr Khamba of Salima said, this showed that there was a communication break down right from the top, the chiefs did not know how what criteria they were to use to identify the beneficiaries of the treadle pumps, neither did the villagers know what qualified others to get the treadle

pumps and others not to. A jingle was one other tool that they used to communicate the message of treadle pump to the audience. This jingle looked at the issue in three parts, firstly brought out the problem at hand which was hunger and then went on to identify ways of getting rid of this hunger that was when the introduction of treadle pumps came in and finally posed a question on the outcome, after irrigation had been done. People would then have enough food. It was a very short jingle and was only played once. After these programs had been presented a critical response was made on them. The entire programs were in the local language, Chichewa and were well presented. The only problem that was seen was that there was communication breakdown between the government and the people (beneficiaries) of the technology; this could be the reason why a lot of people did not adopt the technology and why it did not have a good impact on the lives of poor Malawians as the Ministry had assumed it would. This was because there was no genuine participation taking place. On the other hand this is almost impossible because it is too involving. Genuine bottom-up approach would mean the farmers reporting back to the stakeholders on how the whole process is being implemented in their districts and giving in their input on how things are to be administered, it was not going to be easy for the implementers to incorporate the ideas being presented by people and also to make sure that all the farmers are clear on treadle pump issues.

Just the idea of involving the beneficiaries from the beginning of the innovation meant it was going to take a lot of time to be implemented that the government might have

planned; this would not have been in line with the planning and calander of the ministry of agriculture's activities.

CHAPTER FIVE

5 RADIO DRAMA IN AGRICULTURAL COMMUNICATION IN MALAWI

5.0 Introduction
Pamela Brooke, in her book 'communication through characters' says

Radio drama is frequently referred to as "theatre of the imagination". This is because, an entire universe is created out of nothing more than human voices and sound, a universe that blends the scriptwriter's art with the listener's own world of experience and dreams. The visual realm that evolves from a radio can reach from the depths of individual subconscious to fantastic flights of the supernatural – a world freed from physical reality, but nonetheless a real world"⁶⁴.

Here, Brooke is trying to explain how a radio drama works within a listener's head. As the scriptwriter is writing a script s/he imagines the play as happening in the real world. The same applies to the listeners. They create a scenario in their minds as they listen to follow and see the play in their imagination. However, what is imagined is different between people, considering background and knowledge of the issue being tackled.

Brooke continues to say that, through suggestions and illusion, characters in a radio drama can rove endlessly from continent to continent, in the company of thugs or scholars, sporting rags or riches, sucking sugarcane juice in a rural field etc. Radio characters can go anyplace, do anything, and become whatever the writer wants, whenever he wants. Radio has no physical limitations and no time constraints. Even though a radio drama is usually recorded in a studio in front of a microphone, however, the play is capable of using several imaginary settings and plots. This is not as involving as live drama as it does not use costumes and props. As Brooke emphasized, the

⁶⁴ Brooke, P

locations, scenery, props, costumes, special effects, actions and physical bodies of the characters on a radio drama are limitless.⁶⁵

According to Kamlongera, educational radio provides knowledge and instructions on a specific issue. The three important elements to be considered in producing a radio drama are, simplicity of presentation- avoiding jargon and complicated treatment of concepts and messages, maintain accuracy of the content being presented. It is always advisable to keep in mind the KISS formular – Keep It Simple and Straight forward. Furthermore, to ensure that the material being presented is relevant to the needs of the target audience there is need to provide an interaction between the producers and the audience. This is even better when there is the possibility for immediate feedback.⁶⁶ Agricultural programmes have a lot of scientific words and treatment, it is advisable to simplify them for the audience's easy comprehension.

Here in Malawi, radio drama started a long way back. It had been used to convey messages about different issues, including, health, food security, and human rights just to mention a few. In terms of food security or agriculture, there have been a lot of radio plays that have been done by different groups and organizations. There have been radio plays for example *Pa Majiga* (On the Crossroads), *Nzeru Nkupangwa* (Wisdom is in Consultation) and *Sewero La Sabata Ino* (This Week's Play). These plays have been on Radio One since the 1970s.⁶⁷ Much as they are for entertainment, they also carried development messages. These plays did not have a specific sponsor, so messages

⁶⁵ Brooke P. p 32

⁶⁶ Kamlongera C et al, 2004, p.54

⁶⁷ Kerr, Dance Media and Entertainment, pp 51

depended on who sponsored them at a particular time. If *sewelo la sabata ino*, was being sponsored by European Union, it was likely to talk about agricultural issues. If it was the Anti-Corruption Bureau (ACB), it would tackle issues of corruption in Malawi. This chapter looks at how radio drama has been used and continues to be utilized for development. The investigation uses the story Workshop's Zimachitika radio soap opera. While there are many programs of the sort aired on many radio stations in Malawi, *Zimachitika* will be a good representative of the practice.

5.1. ZIMACHITIKA RADIO PROGRAM

Episode 470 of *Zimachitika*, amongst other issues discussed use of treadle pumps. The main intention of the investigation into radio drama is to find out approaches used in communicating treadle pumps to ordinary people. *Zimachitika* means, these things happen. This radio play tackles so many issues, with food security being one of them. Under food security, the play has looked at issues of bee keeping, advantages of early planting, practice of rotational cropping system, sasakawa global 2000, irrigation farming, and animal farming, amongst others. Below is a discussion of an episode that was produced in April 2005.

5.2 ZIMACHITIKA PLAY, EPISODE 470 (30 MINUTES)

The setting of the play is at Mbonekera village. Mbonekera is a place in the rural areas that is about 25KM from the nearest town or trading centre called Lingale.

Scene One

The story of the play was about girls of Mbonekera village who are setting a good example by growing tomato instead of spending their time on boys and other useless activities. In this scene Tamanda, a girl from the village explains to her fellow girls how beneficial tomato farming has been for her. When they get back from school the girls go to their gardens to water the tomatoes and spray insecticides.

Scene Two

This scene is happening at Nankasa's place. Zione an HIV/AIDS infected woman comes to Nankasa's place to ask for green vegetables because she had exhausted the ones that were in her garden. Zione tries to portray a positive way of living for those that have the virus.

Scene Three

This is happening on a path. Mr Spindulo meets his wife Nasiyatu. These two are on separation. Nasiyatu is trying to convince Spindulo to come back home because she still loves him and is missing him. Spindulo is still refusing to come back home. Then comes Mr Tetete, Spindulo's cousin, who hands the keys to his house to Spindulo because he is going to town and knows that Spindulo will need to get into the house when he gets to Mbonekera village.

Scene Four

This is happening at Gogo Nasibeko's house. Spindulo goes to Gogo Nasibeko's place to visit his daughter Taliona who stays with gogo Nasibeko because she does not want to

stay with her mother Nasiyatu who is forcing Taliona to get married to the famous secondary school teacher, Mr Thawani. Gogo Nasibeko and Spindulo start discussing about the weather and the shortage of rain in Mbonekera area. They discuss water conservation and irrigation farming which is being practiced in the area and the introduction of treadle pumps. They say that these treadle pumps are being given on loan by the government. Anyone who wants to know more about them should be consulting the Field Assistants of their areas. They give examples of crops that are being grown using treadle pump irrigation, for example maize and sweet potatoes. Then the story changes when Ndaona, Gogo's grand daughter comes on the scene. They ask her where Taliona is so that she could meet her father. Ndaona goes to call Taliona.

Scene Five

Taking place in Mavuto's office; Ndaona comes to see her boyfriend Mavuto who works for a certain company in town. Suzgo who is the daughter of the owner of the company where Mavuto works comes with an intention of seducing him. She finds Ndaona in the office and pretends to leave, but finally Mavuto tells her not to go for Ndaona is already on her way out of the office. Ndaona tells Mavuto to her meet at the garden where Ndaona and her friends will be watering their crops. When Ndaona leaves the office Suzgo starts her seduction moves which Mavuto does not buy and ends up telling her the truth that he is in love with Ndaona.

Scene Six

Suzgo leaves Mavuto's office. On the way, she meets Yusufu, Mavuto's workmate and asks him to help her hook up with Mavuto. They see Tamanda approaching them. Yusufu agrees to help Suzgo get hold of Mavuto on condition that Suzgo also helps Yusufu to get Tamanda as a girlfriend. Tamanda refuses to talk to Yusufu and brushes both of them off.

The lines from the script of the targeted scene are at the appendix

5.3 COMMUNICATION OBJECTIVES

The play had six scenes, and only one scene talked about treadle pumps. The message targeted both old and young people. As it can be seen from what Mr Spindulo and Gogo Nasibeko were discussing concerning treadle pumps. Apart from just owning a treadle pump, Gogo is also bringing out the issue of taking care of natural resources for example hills, mountains and rivers in order to be able to have good rains because a treadle pump operates where the water table is high, this is seen in Gogos statements when she says,

Gogo *Kusamala zinthu ngati mitsinje, mapiri ndi zina zoterozo. Tikazisamala tipindule ife tomwe. (We need to be taking care of the rivers, mountains and so on. If we are taking care of them, we are the ones who will benefit from them)*

Spindulo. *Anthu akuno kwa mbonekera munasamala phiri ndi mtsinje, mapeto ake mtsinje umayenda nthawi zonse. (People from here in Mbonekera village, you take good care of the mountain and the river, that's why your river is always flowing)*

Gogo. *Ndiye pajatu tinaupatutsa mtsinnje uja. Nde kuthilira si ntchito. (Remember we even*

constructed canals, so watering is not a problem)

Spindulo. *Nde si anthu ali ndi treadle pampu?* (And the people have treadle pumps, isn't it?)

Gogo. *Atosowa ngati, kufunsa mlangizi wina aliyense waboma akuthandizani.* (They are not even scarce; just ask any Field Assistant, they will help you)

They started with the issue of environmental degradation before they introduced the issue of treadle pumps. This was a good style to be used because much as people were to be told of the loaned treadle pumps they also needed to know other factors that were expected for a treadle pump to operate. Gogo said that the type of environment determines whether it is suitable for this type of farming or not. In line 17 she says those that are privileged to have dambos and other irrigable land need to use them for irrigation. And on the same issue of environment, Spindulo starting from line 29 recommends people of Mbonekera for taking good care of their river so that it does not go dry. This is also to enlighten people that the best environment for irrigation farming is where there is a river that does not run dry.

They also tackle the issue of Interpersonal Communication and Extension services. In Line 47 Gogo says treadle pumps are available; people need to ask Field Assistants in their areas and find out more on how they can get the treadle pumps.

It is noticeably clear that the play was created to speak on behalf of the people; it tried to address the questions which people might have had on treadle pumps. These questions

Parliament, things got mixed up in such a way that those people who got the treadle pumps on loan completely wrote loans off themselves.

Another objective in this play was to educate the people on the importance of irrigation farming and also the crops that are best suited for this type of farming. The scene mentions crops like potatoes, maize, which could be easily grown using irrigation farming, locally translated as "*ulimi wa mnthilira* or *ulimi wa mmadimba*". The emphasis was on the problem, which in this case was on food shortage due to insufficient rains. Crop diversification was the only answer to this as was explained starting from line 66. Below is how the conversation flowed:

Spindulo.

Mbewu zakudimba zikufunika chifukwa anthu nde sitinakolore bwino ndi mvula ija. (Irrigation farming is the one that we need because we did not get good harvest with the shortage of rain)

Gogo.

Ukangokhala manja pindilire pakhomo. Njala ibwera ndikukuphera pakhomo pompo. (If you just keep your hands folded in your pockets, hunger is going to find you and kill you right there)

Spindulo.

Simukunama agogo. Sipofunika manja lende. (You are not lying Gogo. We need to work hard)

Gogo;

Kaya ndi mbatata, kaya ndi chimanga ukalima utolapo kena kake kakudya. (Whether its potatoes, maize, but if you can grow any of those you will be able to get a little something)

Spindulo.

Nthawi yake ndi imeneyi yozizirirayi, chinyezi chimasungikako. (This cold season is good time for irrigation farming)

Gogo.

Kumene. Nthawi yozala ndi yomweyi. (Exactly.
This is indeed the good time for planting)

Ndaona and her group were also practicing irrigation farming and from the previous episode, it was established that they grew tomatoes, onions and sweet potatoes in their garden. This group of young girls from Mbonekera area decided to start irrigation as an extra curricular activity, instead of wasting time on useless matters. They started by using watering cans and later on managed to secure a treadle pump on loan from the Ministry of Agriculture.

As the play is called *Zimachitika*, which means it happens; whatever issues were portrayed in the play came from daily lives of ordinary people. Because of that fact, the “Zimachitika” play does not specialize on one or two issues. It makes sure that it tackles different issues in one episode. As it can be seen in this episode 470, it looks at life in general in a Malawian village. Where people interact on family, agricultural and HIV/AIDS issues. In the same scene four, just after the issue of treadle pumps had been discussed, Gogo and Spindulo start talking about the whereabouts of Taliona, Spindulo’s daughter who for some reasons was living with Gogo.

Gogo.

Kumene. Nthawi yozala ndi yomweyi.
(Exactly. Indeed, this cold season is good time
for planting)

Spindulo

Kaya taliona alipo. (Is Taliona around)

Gogo.

Anapita kumunda ndi a mnzake. (She went to
the garden with her friends)

Ndimafuna ndidzangomuona (I just wanted to
See her)

Gogo.

*Munachita bwino. Amasangalalatu
mukabwera.* (That’s good, she enjoys it when
you come to see her)

Spindulo. *Ndimadziwa. Kungoti nthawi nde imandisowa nde sindibwerabwera. (I know, it's just unfortunate that I don't come as frequent as I could have been coming)*

Gogo. *Nde nda anasiyatu zili pati (So where are things with Nasiyatu).*

Spindulo. *Akuti abwera ndi achimwene awo kuti tidzaka mbirane. (She says she is going to come with her brother so we can talk things over)*

Spindulo and his wife Nasiyatu were on separation. Spindulo says that Nasiyatu will come with her brother to discuss their differences. This is the case in Malawian culture, where a brother or uncle called the "*ankhoswe*", acts as a mediator in a marriage or as a marriage's counselor. Whenever people have problems in their marriages, the *Nkhoswe* comes to help sort things out. Every side has its own *Ankhoswe*. The wife has one and the husband too. So when you have problems you go report to your *nkhoswe* who either comes to sort things out or sometimes s/he might call up the other *nkhoswe* from the other side to help each other in solving those family matters. Note how the issues were presented in the scenes above. "Zimachitika" being an edutainment program decided not only to talk about farming, but other social issues concerning ordinary people. However, critically looking at the themes that were presented in the play, they were too much for a listener to grasp them all. The issue of treadle pump was not presented clearly and in full. As Kamlongera states, it is a good practice to repeat more than once the crucial points the programme wants to get across.⁶⁸ Treadle pump being one of the crucial issues during the time the play was produced, there was need to give more details before going ahead presenting other issues, it should not have been presented in just one scene.

⁶⁸ Kamlongera C et al, 2004, p.54

5.4 ATTEMPTS AT INTERACTION WITH TARGET GROUP

In terms of treadle pumps, the play was communicating the message on the loaned treadle pumps which the government had introduced in Malawi. According to the Agricultural Field assistant, FA for Salima, when the treadle pumps had just been introduced, people were supposed to get them on loan. The loan was on cost recovery terms, where the farmers were to pay back the loan without any interest. Even though this was the case, a lot of organizations and government bodies tried to send across messages to educate people on the terms of the loan.⁶⁹ However, many people still did not pay back the loan. The message in the play was going to all Malawians who needed to get these treadle pumps but could not afford to buy them on cash.

The play attempted at interaction with target group through a question, which was asked at the end of the play. The question was;

1. If you were Yusufu, would you have accepted to help Suzgo get Mavuto? What do you think will happen to the friendship between the two boys? Explain your answer.

The question being asked was relevant to the theme and objectives of the play for that particular week. The Story Workshop reports that 35 people out of about 200 from all the districts of the country were selected upon answering the question correctly. After each episode the organisation gave t-shirts to the 35 people. To select the winners, SWET makes sure that all the districts are well represented, and there have been cases when people from some districts have not responded correctly, but if they really tried in their answers, they are also considered. This is done realizing that if people from other districts

⁶⁹ Interview with Mr Lungu, 13th October 2007

are not included, they would end up thinking that “Zimachitika” is not their show making them to lose interest. The audience had always been encouraged to respond to the questions posed at the end of every episode. In the next Episode, names of successful people who had answered questions correctly were being aired and were given Mwana Alilenji t/shirts. So it can be seen that at the level of interaction with target audience, there are efforts to include people from all parts of Malawi. As Kamlongera puts it, interaction is best when there is the possibility for feedback.⁷⁰

5.5 CONCLUSION

This chapter has looked at radio drama as a communication tool in development. It has looked at how Story Workshop used one of their radio plays *Zimachitika* in trying to communicate treadle pumps issues. The treadle pump issue did not come out as a topic on its own, it was incorporated in a play that had a lot of issues to be addressed. Only one scene, scene four carried a message about treadle pump. Gogo and Spindulo were discussing about environmental degradation and how a treadle pump would help them to be food secure. They highlighted on the favourable conditions for this type of irrigation to take place and also how people were to access the loans that the government had brought to them.

The question that was asked at the end of the play helped in attempting at interaction with the target audience as the audience was able to answer the question according to how they understood the play. The correct answers were awarded with Zimachitika t/shirts. What this says about radio drama in Malawian development is that development agents

⁷⁰ Kamlongera C et al 2004, p.54

are trying so hard to get messages across to beneficiaries in a way that is accessible to the whole nation.

Much as this is the case, for both radio drama and any radio program that is being produced for development, there is need to consider several factors to make them a success. Soola⁷¹ argued that, the transistorized radio, particularly because of its relative cheapness, has been seen as the best means of reaching a far-flung illiterate population since radio transcends the barrier of illiteracy. However, research findings on diffusion of innovation Berelson and other scholars⁷² have shown that while the mass media are good in creating initial awareness, they are poor in influencing people for attitude change. Thus, Mc Croskey et al⁷³ have argued that if we wish to influence large numbers of people, we must be able to influence the interpersonal communication in which they are involved. In corroboration with this, Soola⁷⁴ explained that radio as a popular medium among rural people should therefore be used in creating initial awareness as well as in feeding information into discussion forums. He suggested that well organized, well coordinated "radio rural forums" or "radio farm forums" which have been tried with varying degrees of success in countries like Canada, Colombia, India and Ghana should be adopted. In other words, radio should be used as a first step of initiating interpersonal communication.

⁷¹ Soola E, 1984

⁷² Berelson et al 1954, Rogers et al 1971

⁷³ Croskey et al 1971

⁷⁴ Soola 1988

This system provides a two-way communication, an exchange process, which is imperative for adoption of innovations. In so doing all the necessary issues that farmers are meant to know about a specific technology would be highlighted fully.

CHAPTER SIX

CONCLUSION

6.0 INTRODUCTION

This paper attempted to assess ways that ACB communicate its new agricultural technologies to farmers. To bring down this issue, the research looked at how communication of treadle pumps was done by the Ministry of Agriculture through its main communication body called Agricultural Communication Branch, ACB.

Chapter one looked at the literature that looked at development communication, how communication in extension is done, the methodology that was used to get data for the research, the area where the study was conducted and the methods used. At best, the chapter contextualized the problem that was being investigated, which centred on approaches to communication for treadle pumps in Malawi. The research was conducted in two districts, which are Salima and Chikwawa.

Chapter two looked at how interpersonal communication on treadle pumps was done. The FAs and other farmers attended a training sessions, after which they went back to teach their fellow farmers. There were three types of trainings conducted by the Ministry of Agriculture in treadle pump awareness. These were Day Training Course, Residential Training Course and Mobile Training Course. Day training course was attended by farmers operating from home. The only advantage of this type of training over

Residential training course was that this accommodated more people than the other one because these people were not putting up at the centre. Residential Training course was done away from the villages and this attracted a few people compared to Day Training course since the people were accommodated at the centre which included provision of food and a place to sleep. The type of a course was designed with more facilities for practical training. The Mobile Training course saw FAs go and train people in their fields. This surpassed the other two trainings because it took place right in the village on a demonstration farm. Interpersonal Communications techniques were highlighted, as one way of wanting to see how involved the farmers were during the introduction of the technology. According to the trainings, interpersonal communication seems to have been the most effective way of giving out information despite being so involving and time consuming.

Chapter three focusing on print media, looked at the treadle pump leaflet and a poster, developed to explain how they worked. There were several printed materials that were produced on treadle pumps, some of which were, fliers, stickers, booklets, posters and leaflets. In this chapter, two of the materials were reviewed and analysed to see how far they went in communication about treadle pumps to the farmers. The content of the leaflet was basically about how a treadle pump is used and the type of crops that could be grown under this type of irrigation. The leaflet went further to explain how fertilizer is applied and the different types of planting system. To find out if farmers understood what the leaflet was trying to communicate, selected respondents from the two districts were chosen and given the leaflet to explain what they were seeing on that leaflet. These were

both with formal education and those that did not have formal education, bearing in mind that not all farmers are literate. It was found that people with education did, but those that were illiterate did not manage to get the messages from the leaflet. However, the poster still managed to communicate because a good number of people, including those who were illiterate still managed to interpret the images. This was the case because the poster was well presented, it had good drawings that made sense on their own and the writings on the poster acted as a back up to the poster.

Chapter four was on radio program in agricultural communication. This was in form of a radio program called "mwana alirenji" which focused on treadle pumps. Done by the Story Workshop, the program content included an interview program conducted in Salima which is one of the study sites too. In this program the producer talked to T/A Maganga of one area where it was believed that people just got the treadle pumps but were not using them at all. It looks there was a breakdown in communication between the government officials and the communities. The T/As just gave the treadle pumps to a few individuals as their own properties making it impossible for other people who had the interest in irrigation farming to benefit from that good gesture. People complained that the treadle pumps were not fairly distributed and this was what led to people that did not value them getting while those that were dying to get them not getting them at all. However, other people that were benefiting from the treadle pumps were also interviewed in the program. A forty second jingle on treadle pumps was also analysed in the same chapter. This jingle was basically on irrigation farming and did not talk a lot about treadle pumps. The jingle carried all the important aspects of communication. It identified the

problem and offered solution and ways of getting rid of the identified problem which was shortage of food. However, the jingle was very short and it needed to be repeated for several times so that it could get into people's minds and be able to digest it over and over. One major set back of the jingle was that it was not specifically done on treadle pump but irrigation message in general.

Chapter five looked at a radio play called Zimachitika. The main objective was to examine how radio drama was used to communicate treadle pump messages to the farmers. It focused on one scene, which tackled treadle pumps issues. However, the issue being presented was about people discussing the introduction of treadle pumps, which government had given out to farmers on loan and the other scene tackled a stolen treadle pump, which is more likely the case on the ground where by people in the villages steal other people's property, which might include treadle pumps too. In this chapter, several issues were addressed pertaining to how and why treadle pumps are to be used. Firstly, it looked at the root of the problem which was food security. Gogo and Spindulo discussed why people in the area did not get enough food and the only solution to combat hunger was to start irrigation farming. There was also the issue of environment. The play talked on the type of environment that treadle pumps operated well in land close to rivers and dambo areas. The play also reminded people about other stakeholders in treadle pump distribution and how people needed to get in contact with their FAs for assistance. As a way of trying to keep the audience up with the programs, at the end of the play questions were asked and people who got the answer right were given Mwana alilenji t/shirts. The t/shirts were distributed to all parts of the country to make sure that the program

associated with all kinds of people. Generally, the play fairly managed to address issues of treadle pump.

In conclusion, it looks like there had not been wide publicity of the treadle pump technology. It would be very helpful next time the Ministry of Agriculture wanted to introduce another intervention to make sure that it has been widely publicized. In this case people would adopt the technology they are aware, especially on its advantages and disadvantages. On the same note, it would be much helpful if the messages that are given on the technology to be made clear and appropriate. In the radio drama that was analysed it was found that not many issues on treadle pumps were tackled. Looking at the interview that the researcher had with the Radio Officer from the communication branch, it is pointed out that when making their radio programs they included two or three topics to be discussed, but had never made a program specifically on treadle pumps. In this way the program tended not to address all the issues on treadle pumps.

Print is one good way of communicating messages because they tend to live long and if well cared for would be an easier way of farmers to be able to refer and remember what has been written on a particular farming technology. However, a point worth considering would be for FAs to relate print media and interpersonal communication. When these farmers are being given these printed materials, the FAs should also take time to read out what the leaflet or poster is trying to communicate. In Chichewa we have a saying that goes "*Chimene maso awona mtima suiwala*" which literally means "What the eye has seen, the mind does not forget". If these people are given printed materials which they have well understood it would be easy for them to get back to such materials at their own

time and remember what they were trying to mean. Most of the printed materials should have a lot of illustrations and less text in order to benefit the semi-literate and the illiterate ones instead of compressing a lot of text on a single page and a big font should be used always. If all this is followed a lot of people will be getting the intended messages correct and if they are adopting them, they will do so after an informed choice unlike what the case was with the introduction of treadle pumps. To sum it all, this investigation has revealed that the policy for treadle pumps, though well intentioned, had mixed results as regards communication of treadle pumps to farmers. In some aspects, it worked but in areas which concerned the literate and semi-literate, it yielded less positive results as regards effectiveness.

RECOMMENDATIONS

After critically looking at channels of communication which were used for the implementation of treadle pump irrigation by the Ministry of Agriculture in Malawi and their effectiveness, the following recommendations have been put forward.

- It should be recommended that the ministry of agriculture employ more extension workers so that farmers should have easy access to the information they may want to get on new technology. Further to this, the existing extension workers should be frequenting the farming families so that they are always in touch with the farmers, this would make them have enough time for interaction and the farmers.
- Mobile training course should be recommended as it gives the farmers hands on experience on a technology being introduced. The only setback would be the availability of extension workers to carry on with the training, if the government could employ extra personnel, this would have a greater impact than the rest of the training methods.

- It would be recommended that the publications be written for the intended readers' level of understanding. Use of simple words and short sentences, and translation of technical terms into simpler, more understandable words, would be helpful.
- Any material that is being developed for farmers or rural audience should be pre-tested before final version has been printed. This helps in terms of correcting areas that are not clear to the recipients and clarify any ambiguity that could be brought about by the material.
- There is need for stakeholders to work closely with the local communities if development is to be realized. Much as it is clear that genuine participatory approaches is almost not possible, but if the implementers are working hand in hand with the local authorities who act as channels for transmitting messages from the district levels to community levels.
- There is need for conducting a research around an issue before a program is presented on radio, further to this, pre-testing of the materials is essential for clarity.
- Radio programmes, for example radio drama need to be evaluated preferably yearly to measure impact.

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APPENDIX 1.

Zimachitika radio play, scene 4.

Scene four.

At gogo's place

- Spindulo.* *zikomo a gogo.* (Hello Gogo) 1
- Gogo.* *Eeh. Fikano konkuno.* (Yes, get here)
- Spindulo.* *Zikomo.* (Thanks)
- Gogo.* *Dikirani ndisegule mnyumba ndikutengereni mpando.*
(Wait I should open the house and get you a chair)
- Spindulo.* *Musavutike a gogo ndikhala pankhondepa basi.* (Don't
bother Gogo, am going to sit on the velandor)
- Gogo.* *Kaya muli bwanji.* (How are you?)
- Spindulo.* *Ndili bwino kaya inu.* (I am fine and how are you?)
- Gogo.* *Kuteroku nane ndikungofika kumene ndinapita* 10
kudamboku ndimakamusonyeza wina wake malo woti
andilimire. (I am just getting home now; I went to the
garden to show someone where to cultivate for me)
- Spindulo.* *anzathu mukulimabe.* (You still do cultivation?)
- Gogo.* *Omwe tili ndi mwayi okhala ndi madambo ndi malo ena*
oti tiha kuchita ulimi wanthilira sitingangokhala ayi.
(Those of us who are lucky to have dambos and other
irrigable land cant just stay without using them)
- Spindulo.* *Ndi dzuwa ladutsa pakatili mmadambo akuyenera*
agwiritsidwe ntchito mokwanira. (With the weather that 20
we had for sometime there is need to make use of the
dambos)

Gogo.

Koma timayenera kuchita choncho olo titapeza chakudya chokwanira ndi mvula. Tikuyenera kukhala ndi mtima wongolima chakudya nthawi zonse. (But we are supposed to be doing like that even though we might have gotten enough food due to good raining. We are supposed to have a spirit of food growing all the times)

Spindulo.

Amnzathu kuno munaganiza bwino pogwirizana kusamala mtsinje kuti usamaume. (You people here 30 (4) thought it wise to take care of your river so that it should never run dry)

Gogo.

Kusamala zinthu ngati mitsinje, mapiri ndi zina zoterozo. Tikazisamala tipindule ife tomwe. (We need to be taking care of the rivers, mountains and so on. If we are taking care of them, we are the ones who will benefit from them)

Spindulo.

Anthu akuno kwa mbonekera munasamala phiri ndi mtsinje, mapeto ake mtsinje umayenda nthawi zonse. (People from here in Mbonekera village, you take good care of the mountain and the river, that's why your 40 river is always flowing)

Gogo.

Ndiye pajatu tinaupatutsa mtsinje uja. Ndiye kuthilira si ntchito. (Remember we even constructed canals, so watering is not a problem)

Spindulo.

Ndiye si anthu ali ndi thredo pampu. ? (And the people have treadle pumps, isn't it?)

Gogo.

Atosowa ngati, kufunsa mlangizi wina aliyense waboma akuthandizani. (They are not even scarce. Just ask any Field Assistant, they will help you.)

Spindulo.

Koma kuti ugule kashi tikwanitsa. (But can us 50 manage to buy them by cash)

Gogo.

Ndingongole yosavuta kubweza (It's a very easy debt).

Spindulo.

Tifunsa alangizi a zaulimi kuti atithandize. (We are going to ask FAs to help us)

Gogo.

Ndamvanso kuti pali mabungwe ena omwe si aboma akuperekanso ma treadle pump kwa alimi...ndamva kuti kusidya kuli bungwe licita zimenezo. (I have also heard that there are other NGOs who are distributing treadle

pumps to farmers.....I've heard there is such an organization in the area across the river 60

Spindulo.

Safika kuno amene aja. (Are they not going to come here too?)

Gogo.

Ati agwira ntchito mdera la T/A wakumene kuja basi. (They say they are going to work in the area of that Traditional Authority only.)

Spindulo.

Mbewu zakudimba zikufunika chifukwa anthu ndiye sitinakolore bwino ndi mvula ija. (Irrigation farming is the one that we need because we did not get good harvest with the shortage of rain.)

Gogo.

Ukangokhala manja pindilire pakhomo. Njala ibwera 70 ndikukuphera pakhomo pompo. . (If you just keep your hands folded in your pockets, hunger is going to find you and kill you right there.)

Spindulo.

simukunama agogo. Sipofunika manja lende. (You are not laying Gogo. We need to work hard.)

Gogo;

Kaya ndi mbatata, kaya ndi chimanga ukalima utolapo kena kake kakudya. (Whether its potatoes, maize, but if you can grow any of those you will be able to get a little something)

Spindulo.

Nthawi yake ndi imeneyi yozizirirayi, chinyezi 80 chimasungikako . . (This cold season is good time for irrigation farming.)

Gogo.

Kumene. Nthawi yozala ndi yomweyi. (Exactly. This is indeed the good time for planting)

Spindulo.

Kaya taliona alipo? (Is Taliona around?)

Gogo.

Anapita kumunda ndi a mnzake. (She went to the garden with her friends.)

Spindulo.

Ndimafuna ndidzangomuona (I just wanted to see her).

Gogo.

Munachita bwino. Amasangalalatu mukabwera. (That's good. She enjoys it when you come to see her) 90

- Spindulo.** *Ndimadziwa. Kungoti nthawi ndiye imandisowa ndiye sindibwerabwera.* (I know. Its just unfortunate that I don't come as frequent as I could have been.)
- Gogo.** *Ndiye nda Anasiyatu zili pati?* (So where are things with Nasiyatu?).
- Spindulo.** *Akuti abwera ndi achimwene awo kuti tidzaka mbirane.* (She says she will come with her brother to talk things over.)
- Gogo.** *Koma iwe ndiye maganizo ako ali pati?* (What's your decision?) 100
- Spindulo.** *Ine banja langa ndimalikonda. Koma nditaona kuti chikondi cha mayi aja kubanja lawo chinachepa ndinachoka.* (I love my family, but when I realised that the love that she had was not there anymore I had to leave.)
- Gogo.** *Koma bwanji pano hanasinthe.* (Why hasn't she changed?)
- Spindulo.** *Kaya tiwona akabwera ndi achimwene awo.* (I don't know, lets wait and see when she comes with her brother.)
- Ndaona.** *Zikomo!* (Excuse me.)
- Gogo.** *Taliona ali kuti?* (Where is Taliona?) 110
- Ndaona.** *Akusamba kwa amama.* (She is taking a bath at mother's place)
- Gogo.** *Ukamuuze kwabwera atatu ache kuno.* (Go tell her that her father is here.)
- Ndaona.** *Ndikamuuza.* (I will tell her)
- Gogo.** *Chabwino.* (Alright)
- Ndaona.** *Ndiye agogo, ndikuchokapo kayetu.* (Gogo, am coming.)
- Gogo.** *Ukupita kuti.* (Where are you going?)
- Ndaona.** *Ndikupita kunsika.* (I am going to the market.)
- Gogo.** *Chabwino.* (Alright.) 120

APPENDIX 2.

A woman pumping water from a treadle pump looking like borehole.

