

**ASSESSMENT OF BALING CENTRES' UTILISATION ALONG
TOBACCO VALUE CHAIN IN TANZANIA: A CASE OF URAMBO
TOBACCO REGION**

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TOBACCO VALUE CHAIN IN TANZANIA: A CASE STUDY OF
URAMBO TOBACCO REGION**

**By
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**A Dissertation Submitted to School of Business in Partial Fulfilment of the
Requirements for the Degree of Master of Business Administration (Corporate
Management) of Mzumbe University**

2013

CERTIFICATION

We, the undersigned certify that we have read and hereby recommend for acceptance by Mzumbe University, a dissertation entitled Assessment of Baling Centres' Utilization along Tobacco Value Chain in Tanzania: A Case Study of Urambo Tobacco Region, in partial fulfilment of the requirements for award of the degree of Master of Public Administration of Mzumbe University.

Major Supervisor

Internal Examiner

Accepted for the Board of the School of Business

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I, Hilary Mathew Lwoga, declare that this thesis is my own original work and that it has not been presented and will not be presented to any other university for a similar or any other degree award.

Signature

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- All those who in one way or another offered support but could be mentioned as a matter of spacing and time constraints.
- Interested and all scholars who will spend their limited time to read this research report.

I also value the time granted by all who participated in responding to the questions. I am highly indebted to all these fellows.

Lastly but not least, I would like to thank all authors whose works have informed my understanding and enabled me to write the thesis.

DEDICATION

I dedicate this research work to my parents, the late Mathew L. Chabruma and late Neema Nyanjali. Their inspiration for achievement, determination and enthusiasm is the spirit that has guided me up to this point. Almighty God, rest their soul in peace.

LIST OF ABBREVIATIONS

FAO	Food and Agriculture Organisation
TTB	Tanzania Tobacco Board
NTRM	Non-Tobacco Related Materials
TIMB	Tobacco Industry and marketing Board
TTCA	Tanzania Tobacco Co-operative Apex
ATTT	Association of Tanzania Tobacco Traders
GAP	Good Agronomic Practises
KACU Ltd	Kahama Co-operatives Unions
WETCU Ltd	Western-zone Tobacco Co-operative Unions,
CHUTCU Ltd	Chunya Tobacco Co-operative Unions
SONAMCU Ltd	Songea Namtumbo Co-operative unions
LATCU (Ltd)	Lake-Tanganyika Tobacco Co-operative Union
AFTG	Association of Food and Tobacco Growers
MTGA	Mishamo Tobacco Growers' Association
TORITA	Tobacco Research Institute of Tanzania
TCC	Tanzania Cigarette Company Ltd

ABSTRACT

Following alarming problem of poorly baled tobacco, it was considered important to examine the utilisation of the registered baling centres, with a view of identifying hindrances to proper utilisation of baling centres. The broad research question was; what are the problems that hinder the effective utilisation of baling centres in Tanzania?

Non-probability method (accidental/convenience sampling) was used to get primary societies for the study while simple random sampling (probability method) was used to get one baling centre from each primary society, for study. The respondents were picked through non-probability methods (purposive sampling). The method for primary data collection involved use of questionnaire to respondents. Secondary data from different tobacco journals and data bases were collected and analysed. Interviews were done with the elements of the study as respondents to identify hindrances for effective baling centres utilization. Data were entered into excel sheet and analysed using pivot tables.

The finding showed that baling centres were not enough for the volume of the crop handled. Construction plan was not adhered to, and most of the baling centres have low storage capacity. It was also found that most of the tobacco graders have only on job training, mostly provided by fellow graders. Tobacco transportation to and from baling centres is mainly on head and on bicycles. Another option in use is oxen carts. Tobacco wrapping materials mainly used is jute and hessian clothes; however some farmers use vinyl bags which add NTRM in the baled tobacco and later in the processed tobacco.

The study found that most farmers prefer to bale their tobacco at home. The reasons being poor transport facilities and infrastructure, local believes, and poor tobacco security in baling centres. The research recommends that registration of the baling centre should be done after inspection off those baling centres. All stakeholders should fully participate in training the graders and baling centres supervisors. Farmers and primary societies should be advised to buy and use simple transportation technologies like power tillers, motor tricycle, and oxen carts.

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CHAPTER ONE

INTRODUCTION

This Chapter presents introduction which is grouped into background information, research problem and research questions, research objectives, and significance of the study.

1.1 Background information

Tobacco baling is a process of packing tobacco into bales after grading. Grading refers to sorting of tobacco according to “plant position” (was the leaf from the top, the middle or the bottom of the plant), colour (mahogany, orange or lemon in colour), quality (the amount of damage and waste on a tobacco leaf) and tobacco factors (unnatural colour on the leaf). Baling centres refers to places where tobaccos are graded and baled ready for markets. The centres are partly responsible for pre-harvest quality assuring.

Figure 1.1: Graded and baled tobacco in the market



Source: Field data

It is vital for any value chain to have efficient and effective infrastructures. One of the important infrastructures in the tobacco value chain is baling centres. The tobacco quality ensuring activities at the baling centre level includes proper grading (so that to avoid mixing of different tobacco grades), proper baling (baling of the tobacco of the same grade in a bale thus avoiding nesting), and ensuring Non-Tobacco Related Materials are not baled with tobacco. Tobacco baling centres are important infrastructures to ensure quality of tobacco as it passes along its value chain.

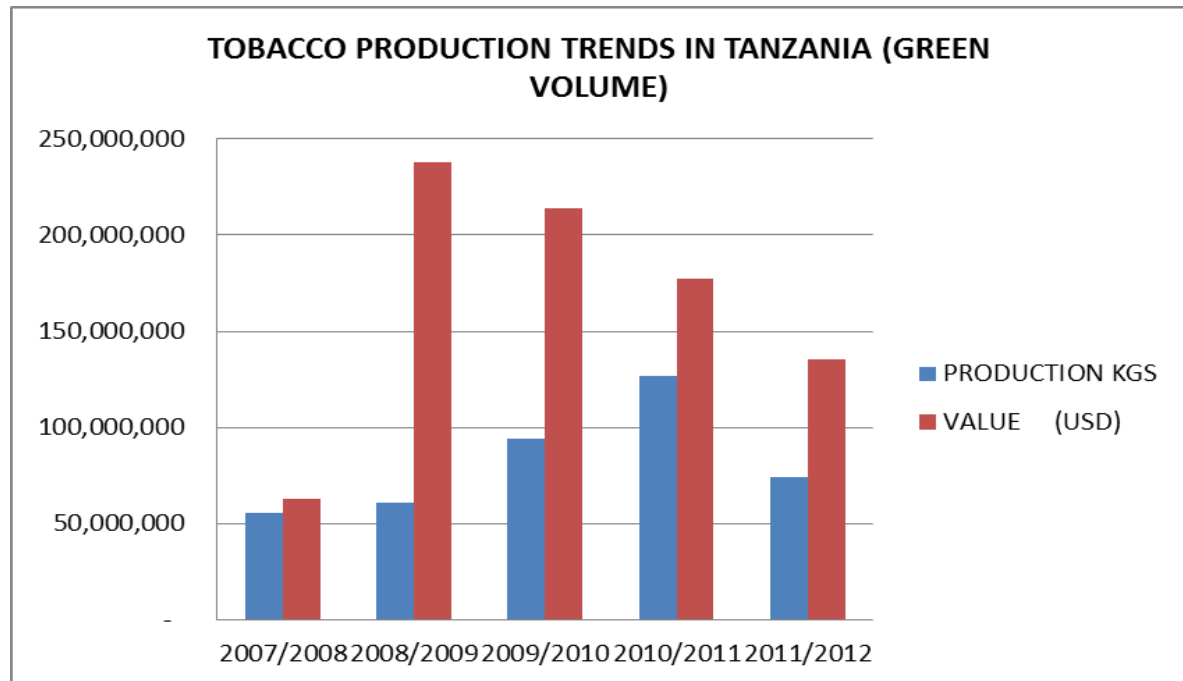
The tobacco grading/baling centres should be registered as per Tobacco Industry Regulation, 2005. Primary societies' leaf-men should supervise the grading/baling process. The regulations required all the tobacco bales presented for a market to pass through baling centres. However, the regulation does not say anything about the training of the baling centre personnel.

Due to the level of contribution of tobacco on the economic development of Tanzania, government of Tanzania through its Tobacco Sub-sector Development Program instructed to achieve a target of 100 million kilograms of green tobacco production in 2010. This is according to Tobacco Council of Tanzania (2006).

According to Agricultural Marketing policy, 2008 to the large extent, agricultural products in Tanzania are characterized by inadequate adherence to set product quality standards, grades and inadequate post-harvest management. Tobacco marketing infrastructures, grading/baling centres being one of it, should be improved, developed, and utilized effectively.

According to Crop Survey Report from Tanzania Tobacco Board (2010) the tobacco production will reach 120 million kilograms in the crop year 2011. This triggers the need for improvement of the supportive infrastructure because, as per Agricultural Marketing policy, 2008, agricultural marketing is adversely affected by lack of marketing structures.

Figure 1.2: Tobacco Production Trends in Tanzania



Source: TTB (2012)

Improvement of grading/baling centres will facilitate all the produced tobacco to be processed as per internal and external markets' quality requirements. This will facilitate more sales in the international markets and more income to farmers and the nation.

1.2 The research problem

1.2.1 The Research Problem Statement

Although Tanzania Tobacco Board statistics shows there is enough number of registered baling centres in each crop season, the problems of tobacco being poorly graded and baled is alarming (Tanzania Tobacco Board, 2010). Following this situation it was considered important to examine the utilisation of the registered baling centres, with a view of identifying hindrances to proper utilisation of grading/baling centres.

1.3 Research objectives

1.3.1 Broad objectives

The overall objective of this study was to identify factors hindering effective use the baling centres in Tanzania.

1.3.2 The Specific Objectives

The specific objectives of the study were:

- To compare the reported baling centres' list with the existing situation,
- To assess the training background of the baling centres' supervisors,
- To find out tobacco handling and transport means to the registered baling centres,
- To investigate farmers opinions on the use of baling centres.

1.4 Research questions

The broad research question was: What are the problems that hinder the effective utilisation of the registered tobacco baling centres in Tanzania.

The specific questions of this research were:

- To what extent is the reported registered centres compares with actual situation?
- What is the training background of the baling centres' supervisors?
- To what extent the means of tobacco transport from farmers to grading/baling centres efficient?
- What should be done to improve the efficiency of the grading/baling centres?

1.6 Significance of the study

The cases of problems of mixed, nested bales and tobacco bales with non-Tobacco Related Materials (NTRM) still exists even after introduction of baling centres (Tanzania Tobacco Board, 2010). The study findings will contribute to remove the information gap on understanding how the tobacco grading and baling is carried out, and how it should be carried out.

Table 1.1: Trends on bales defects as per percentage of all defected bales

DEFECTS IN BALES	CROP YEAR		
	2010	2011	2012
Mixing	48%	50%	54%
Nesting	11%	6%	11%
NTRM	40%	4%	20%
Water Stained	1%	20%	15%
Total	100%	100%	100%

Source: ATTT (2012)

The wide spread instances of mixing/nesting of bales and together with the general poor bale presentation is a factor that could cause customers to seriously downgrade their perception of Tanzania tobacco (Tanzania Tobacco Council 2006). Peter Benson (2012) showed that most of the tobacco buyers are insisting on the tobacco grading and cleanliness for them to continue buying from a given country/market.

According to Agricultural Marketing Policy of the United Republic of Tanzania (2008), one of the challenges facing agricultural marketing is underdeveloped and improperly managed agricultural marketing infrastructure. Tobacco baling centres being one of the tobacco infrastructures in the value chain. This study has highlight issues to be considered in order to eradicate the mixing, nesting and NTRM problems through better utilization of baling centres.

Technically and financially, the recommendations from the study will enable smooth processing of tobacco and relative cut some handling costs at processing facilities.

Economically, poor graded tobacco gives farmers less income when compared to the well graded tobacco. Another economic importance of the study is that proper grading at field level will provide employments to graders and supervisors at villages' level and thus increase income to rural population.

The external and internal customers are interested with tobacco which has passed through a proper supply chain to ensure quality and traceability.

The benefits of the proposed study is that, reasons for failure of the baling centres, in some areas, to provide well graded tobacco with no NTRM have been identified. Suggestions from stake-holders have been identified. This will provide the way forward to the problem solving.

The intellectual and practical importance of study was that there are few researches done in Tanzania concerning tobacco infrastructure development especially baling centres. Tobacco industry being an agricultural subsector has its challenges on infrastructures development which needs to be addressed. This study has expanded the frontiers of knowledge through identification of hindrances to proper utilization of tobacco baling centres.

The rationale for research exercise was that the finding will help those concerned with tobacco infrastructures and logistics along the tobacco value chain to take some measures so that to improve tobacco quality through better utilization of tobacco baling centres, thus alleviate the of poor grading and baling of tobacco.

CHAPTER TWO

LITERATURE REVIEW

This part reveals various theories and empirical studies done on tobacco value chain with respect to baling and grading.

2.1 Review of relevant theories

Literature review have been conducted using the Mzumbe University's library and National Agricultural Library at Sokoine University of Agriculture, and Google Scholar, as well as the websites of the, tobacco research institutes, Government of Tanzania, FAO, and World Bank. The key concept which will be covered is Utilization of tobacco baling centres, and tobacco value chain improvement. Search terms included the word Tanzania in combination with tobacco infrastructures, tobacco baling systems, smallholder, government policies, and agriculture.

2.1.1 Baling and grading

Baling is a process of wrapping cured tobacco into hessian clothes after the tobacco has been graded. According to Universal Leaf Corporation (2010), grading means classification of tobacco according to specific physical characteristics, such as body, colour, and stalk position; Stalk position or plant position (was the leaf from the top, the middle or the bottom of the plant), colour (is the tobacco mahogany, orange or lemon in colour), quality (the amount of damage and waste on a tobacco leaf), and tobacco factors (unnatural colour on the cured tobacco leaf).

In Tanzania, tobacco grading is governed by the grading and classification system as per Tobacco Industry Act (2004) of the United Republic of Tanzania. According to this act, tobacco should be send to Baling centres for grading and baling before presentation for sale in the markets.

In Zimbabwe, the grading and baling is a provision in the Tobacco Industry and Marking Rules (2000). This provision requires all graders to be trained and certified.

The rule insists on the registration of baling centres. An application for the issue of the grader's licence shall satisfy the Tobacco Industry and Marketing Board (TIMB) that his financial position is sound and management of the proposed grading organization is capable of functioning satisfactorily (Tobacco Industry and Marking Rules, 2000).

According to Agricultural Marketing Policy of the United Republic of Tanzania (2008), one of the challenges facing agricultural marketing is underdeveloped and improperly managed agricultural marketing infrastructure. Tobacco baling centres being one of the tobacco infrastructures in the value chain.

2.1.2 Farmers training and literacy level in Urambo Tobacco Region

Literacy rate is the foundation of what type of methodologies should be used to train a given group of people. According to the United Republic of Tanzania (2002), the percentage of literacy rate in Tabora was 53.5 and that of Kigoma was 65.2. The statistics for rural areas was poor comparing to the urban areas. In tobacco farming and operations, the age which is involved is that of 20-64 years. According to the United Republic of Tanzania (2002), this age had a literacy rate of 55.36% for the whole country. This is also expected to be below that, in rural areas of Tanzania.

According to Tanzania Tobacco Council (2006), a farmer training is a shared function between tobacco stake holders; this is part of the Tanzania sub-sector Development Program 2006 to 2015/16. The tobacco stakeholders are government, farmers, and tobacco dealer (merchants). According to Tobacco Council of Tanzania (2006), most of the tobacco farmers are organised in primary societies, unions and on top is Tanzania Tobacco Co-operative societies Apex (TTCA). There are also farmers' associations dealing with tobacco production. It is also known that two of the tobacco merchants are organised under their association called Association of Tanzania Tobacco Traders (ATTT). All these organisations are responsible for farmers training. However, according to Tobacco industry Act Regulations (2005) the actual job of tobacco baling in a required standard remains to the primary societies through its councils.

According to the Ministry of Agriculture Food Security and Cooperatives (2010), the Ministry will collaborate with all stakeholders to ensure that the Agricultural Sector Development Programme achieve its goals. Specifically, the Ministry will enhance demand driven research and development and revamp extension and training services (Ministry of Agriculture Food Security and Cooperatives, 2010).

To revamp extension services on tobacco the Ministry will require activating all the tobacco institutes which are not functioning to the level required. Under the Ministry of Agriculture and Food security and Cooperative there are the following research centres which were required to deal with tobacco research and dissemination of technology to farmers; Tumbi research centre was utilised by BAT as a research station and purchasing centre for tobacco until 1968 (Janik, 1979). It is now the headquarters for the Western Zone Research Institute and Tobacco research Institute of Tanzania (TORITA). According to TORITA website, its mandates entail development and dissemination of appropriate technologies to the Tobacco growing community for improved productivity to support the Tobacco sector goals in social-economic development of the country.

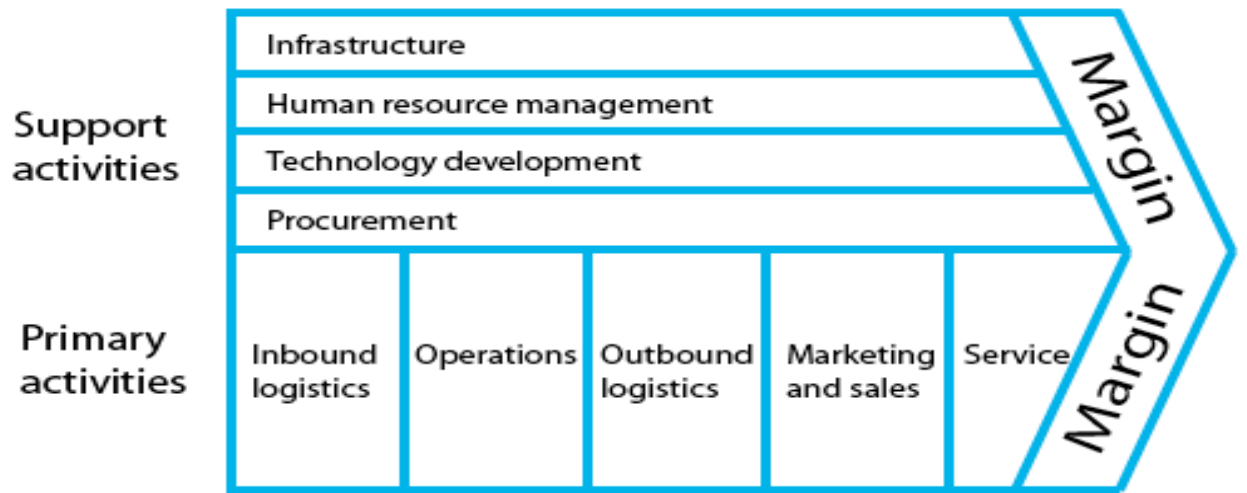
According to Janik, 1979, the station at Iringa was originally a commercial tobacco and dairy farm called "Seatondale". In 1971, the station took the name Iringa Experimental Station. This station is now not working.

2.1.3 Value Chain

According to Michael Porter (1985), Value Chain describes the full range of activities which are required to bring a product or service from conception, through the different phases of production (involving a combination of physical transformation and the input of various producer services), delivery to final consumers, and final disposal after use. Value chains do not only create and add value – it is also possible to lose value in a suboptimal process.

Illustrations of these activities by Michael Porter is shown in the figure 2.1 below

Figure 2.1: Porter's value chain analysis



Source: Michael Porter (1985)

According to Michael Porter's concept, all activities involved in the process of the value chain are analysed and structured in a generic model with the margin of the product as output.

According to Agricultural Marketing policy, 2008 to the large extent, agricultural products in Tanzania are characterized by inadequate adherence to set product quality standards, grades and inadequate post-harvest management. For tobacco value chain post-harvest management includes baling as per Tanzania Tobacco Board and customers' requirements.

According to FAO (2007), in the competitive advantage approach, the deciding factor in international trade relations is technology. At the micro level, firms can create a competitive edge over others through innovation leading to better ways of doing things at any level of the product cycle and of the value chain – marketing, product transformation, finance and management. This study report has identified better ways of doing things in the baling centres as one level of tobacco production cycle.

Liu Xiaozhuo and Chen Hongming, (2010) argued that in construction and utilization of logistics infrastructure of tobacco industry, it is necessary to consider the immediate

needs, while keeping in mind the long-term development. Taking into consideration of the increased tobacco production volume this report can be utilized when planning for the immediate and long term needs of the balling centres utilization.

2.1.4 Tobacco Value Chain

The tobacco value chain starts with Seed being produced in seed farms and green houses. The seeds should be of high quality and free from diseases and pests.

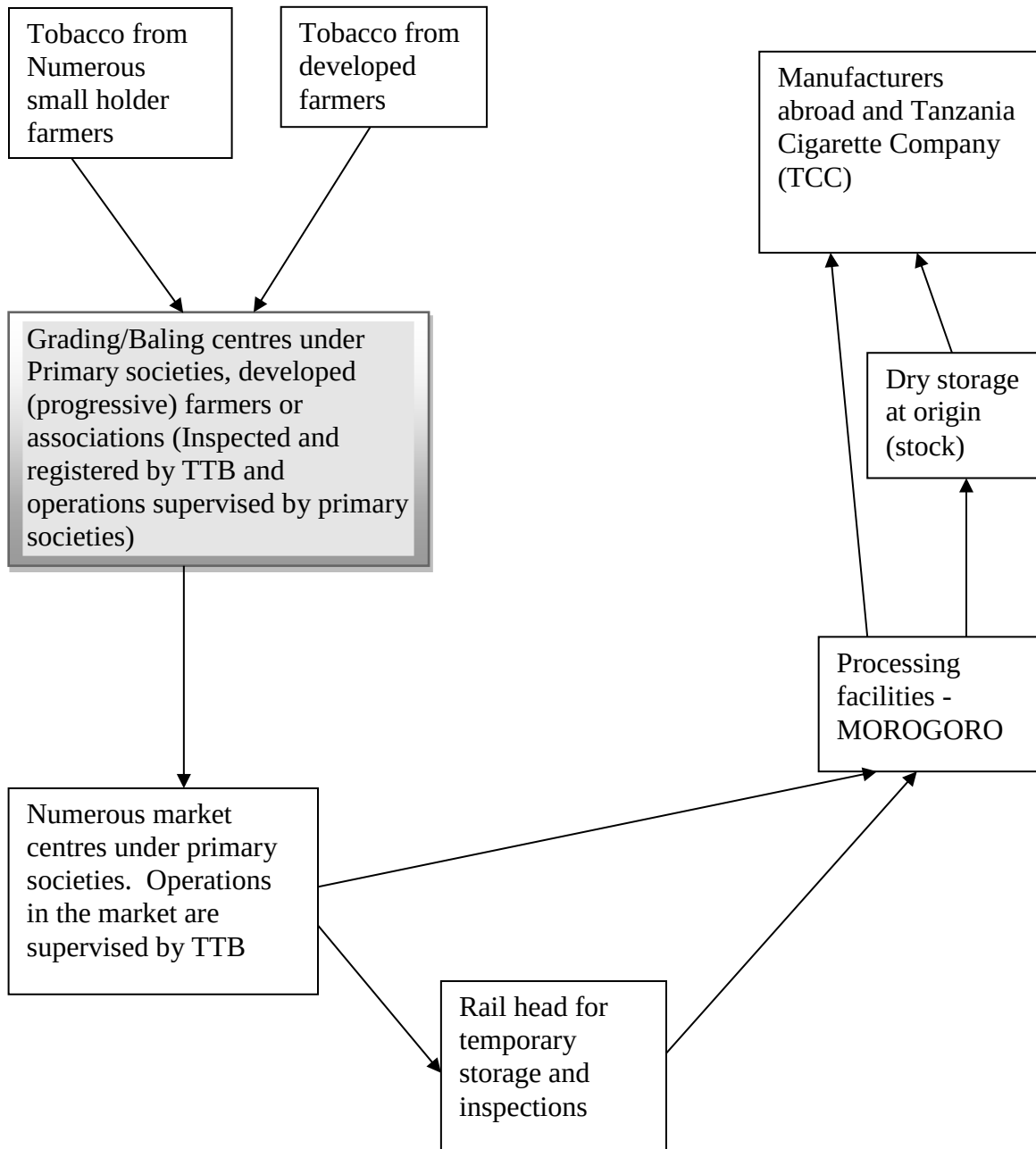
Seeds are used to produce seedling when they are planted in nurseries. Strong seedling will be transferred to fields.

Matured tobacco leaves are harvested, tobacco leaves matures starting with those at the bottom of the plant to the top of the plant. Tobacco harvested should be cured immediately. Leaves are cured to remove all the natural sap. The process uses air, flue, or sun depending on the type of tobacco. After curing the tobacco should be graded and baled by stalk position, colour, quality and texture before being presented for green tobacco markets. At this level, the grading/baling centres come into scene. This study has covered this portion of the tobacco value chain.

Primary processing is done by tobacco dealers by using available processing facilities. Tobacco is stored, aged, blended, conditioned, threshed, cut, dried, cased and then stored as dry tobacco to be used by cigarette manufacturer.

Cigarettes manufacturing and packaging: Manufactured by machine and put through quality, control checks, wrapping, and printing. Packaging involves inserted cigarettes into packs and wrapped to preserve the quality.

Figure 2.2: Tanzania tobacco industry, value chain – Farmer to Manufacturers



Source: TTB (2011)

2.2 Empirical literature

According to Tobacco Industry Act, 2001 there is requirement for rules and regulation for the grading of green tobacco. The tobacco baling centres should be registered as per Tobacco Industry Regulation, 2005. Reports for baling centre registration shows that there are enough balling centres for proper baling of the tobacco produced. The contradiction is when the tobacco which is so said that have been passed through baling centres is found poorly graded and contaminated with Non-tobacco related materials.

The figure below shows some realities in the so called baling centre. Many questions raises from this figure; how many baling centres are like this? Is this a registered baling centre or not? In going forward do we need such type of a baling centre?

Figure 2.3: Farmers doing baling of tobacco under a tree

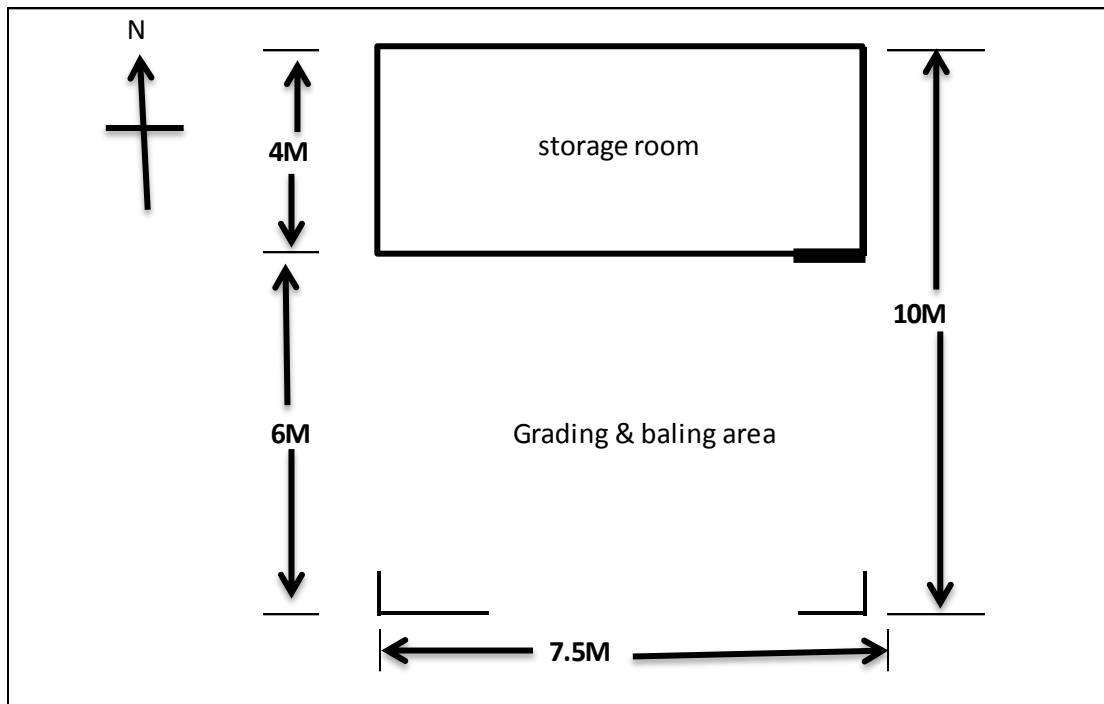


Source: TORITA, 2010

Tanzania tobacco showed an increase in NTRM and thus difficult in processing. A Need of improvement was suggested by processors, TTB (2010).

In addressing the baling centres construction, in order to achieve purposes of the baling centres, Tanzania Tobacco Board, 2011 presented a plan for proper baling centres. The board suggested the minimum dimension of 10 metres X 7.5 metres which gives a minimum area of 75 square metres. This size of a baling centre can be used to handle one hundred and fifty (150) bales. The baling centres should be divided into two areas; one is the area for grading and baling activities and two is for tobacco storage after baling.

Figure 2.4: Baling centre's construction plan (Measurement in metres).



Source: ATTT (2011)

According to ATTT's baling centre's procedures, the Primary Society board member (Supervisor) must verify the following main procedures: grading, tobacco weight, bale dimension, butt size, hessian and cotton twine, and NTRM removal.

The PS supervisor must verify that all tobacco hands going into the bale constitute one national grade/no mixing of grades.

Basing on Tobacco regulation (URT, 2004), TTB accepts bales between 25-75 Kilograms in the markets. Bales that fall outside the stipulated weights are rejected. Bale dimensions - TTB will accepts bales that are the following dimensions; fixed width of 45cm, length of 80cm and a variable height of 30-60cm. Primary societies' leadership is responsible with checking and ensuring that all baling centres have the correct size baling boxes. Tobacco regulations also requires to classify (when in tobacco markets) hands of tobacco that have the butt sizes as follows: Ideal butt size is 50mm with a minimum of 40mm and a maximum of 60mm. Baling centre supervisor to verify all hand butt sizes before baling.

Tobacco regulations (URT, 2004) requires that before issuing hessian to registered baling centres, primary societies leadership must make sure that all hessian has no holes and discoloration. Primary society's leadership must only issue cotton twine to a baling centre for stitching. Baling centre supervisors should verify that all tobacco hands are 100% free of NTRM before baling begins.

Farmers will bring well-conditioned graded hands of tobacco to a baling centre for baling under the direct supervision of the nominated PS supervisor. PS Supervisor must fill in the verification ledger book at the market centre, making certain that all bale details are correct before signing off, verifying that he/she has checked the baling (URT, 2004).

According to TTB Crop Survey Report (2011) the volume of the crop will reach 120 million kilograms in the year, 2011. The increase of tobacco production volume needs extra effort to ensure quality.

According to TTB (2011), Tobacco growing primary societies in Tanzania are under unions called Kahama Co-operatives Union (KACU Ltd), Western-zone Co-operative Union (WETCU Ltd), Chunya Tobacco Co-operative Union, Songea Namtumbo Co-operative Union (SONAMCU Ltd), and Lake-Tanganyika Tobacco Co-operative Unions (LATCU Ltd). These unions are under Tanzania Tobacco Co-operatives Apex (TTCA). There are two farmers' associations dealing with tobacco namely Agricultural Food and Tobacco Growers (AFTG) and Mishamo Tobacco Growers (MTG).

2.3 Conclusions from other studies

There was no specific study done for the problem in question, in Tanzania. The system was copied from other countries at which a lot of changes have already been done to suit their situation.

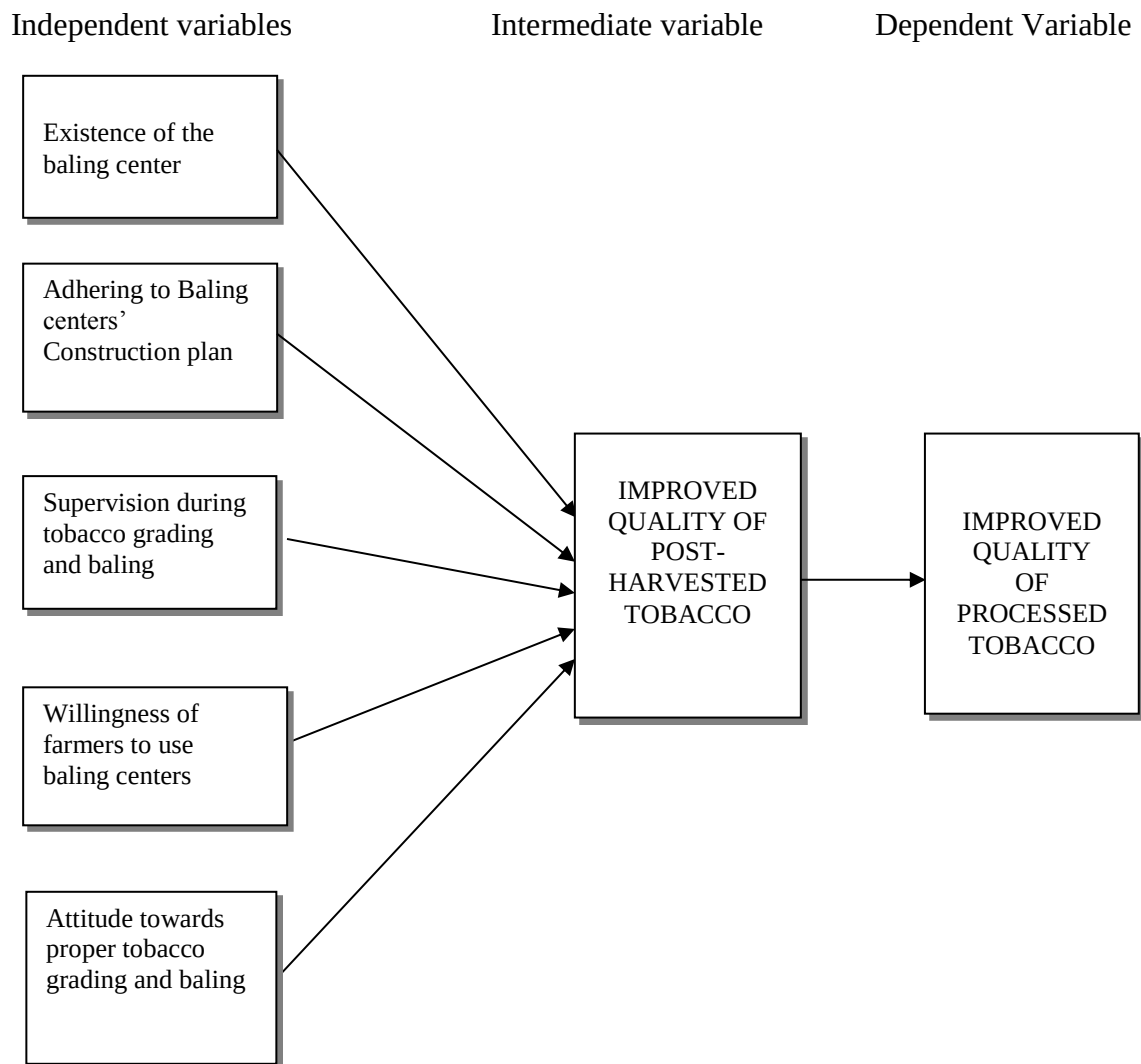
For example according to Zimbabwe Tobacco Industry and Marketing Rules, 2000 there are private grading and baling institutions for that purpose only. A seller or a grader shall not deliver to an auction floor a bale unless such a grader has graded the tobacco.

2.4 Conceptual framework

The conceptual framework composes logical sense of the relationship among several factors that have been identified as important to the problem (Sekaran, 2000). According to Ndunguru (2007), conceptual framework is assemblage of concepts cum variables with their logical relationships in form of: diagrams, charts, graphs, flow charts, or mathematical equations.

In this study it was asserted that better utilisation of balling centre depends on whether each group have a baling centre, if the construction plan has been followed, supervision, willingness of farmers to use baling centres, and attitude of farmers towards tobacco handling during grading and baling. In this study all the factors have been investigated.

Figure 2.5: Conceptual framework of the baling centres' utilization along tobacco value chain in Tanzania.



CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The research design was one short - case study design. The approach which was used is abduction where errors in the practise are to be spotted, that is, specific – general – specific.

The research environment was actual field setting where primary societies were visited and baling centres for the survey were randomly picked visited and respondents interviewed. This is an explanatory research particularly for explaining why post-harvest tobacco, from some farmers, is still poorly graded even after the requirement that all tobacco should pass through baling centres.

3.2 Study area

The study area was Urambo tobacco region. The region covers Ussoke, Urambo East, Urambo South, Urambo North, Nguruka South, Nguruka North, Kariua East, and Kariua West tobacco growing areas.

Urambo is the region with the highest volume of tobacco production (refer appendix V) and the region has a farmer's base of 14, 320 in 44 primary societies (refer table 1.1). This is the main reason of the researcher choosing this region for the study.

Table 3.1: Regional farmer base 2009/10 – 2010/11 Compares

AREA	2009-10 FARMER BASE	NEW FARMERS	2010-11 FARMER BASE
CHUNYA	2,321	676	2,997
IRINGA	81	6	87
KAHAMA	3,425	986	4,411
MANYONI	1,333	141	1,474
MPANDA	6,364	1,747	8,111
KAGERA	2,001	581	2,582
SONGEA	364	1,135	1,499
TABORA	9,497	3,068	12,565
URAMBO	10,825	3,495	14,320
TOTAL	36,211	11,835	48,048

Source: ATTT (2011)

Table 3.2: Tobacco growing areas and their primary societies – Urambo tobacco region

TOBACCO GROWING AREAS	PRIMARY SOCIETIES
USSOKE	Chapajembe, Kalemela, Sipungu, Uyela, Igembesavilo, Kigodi, Isundauduki, Kiloleni.
URAMBO EAST	Katunguru, Usisya, Itundu, Kitete, Mkombozi.
URAMBO SOUTH	Mtakuja, Musisi, Mwenge.
URAMBO NORTH	Igunguli, Kalemela, Kamgomoli, Kazimoto, Mirambo, Nsanjo, Cheki maendeleo.
NGURUKA SOUTH	Juhudi, Malagarasi, Matendo, Mbohora, Mganza.
NGURUKA NORTH	Nyamagoma, Tupendane, Luganjo.
KALIUA EAST	Mlinda, Balatogwa, Amani, Nguvukazi, Katuma, Igwisi.
KALIUA WEST	Issoga, Tumaini, Mwamko, Wako, Ighobanguru.

Source ATTT, 2011

Urambo tobacco region extends to Urambo District (Tabora region), Nguruka ward and Maragarasi ward (in Kigoma region).

3.3 Study population

The study population was all the baling centres in Urambo tobacco region. There were forty-four (44) primary societies in the region, with three hundred and fifty (350) baling centres during crop 2011.

3.4 Sampling unit and elements

For this study the units of research was baling centres. The baling centre supervisors, farmers, primary society's council member, and group leaders were the elements of the study.

3.5 Sample size

Sample size is the number of observations to include in a statistical sample. The sample size is an important feature of any empirical study in which the goal is to make inferences about a population from a sample.

Forty two primary societies (95% of all primary societies) were selected and 42 baling centres (12% of all the baling centres) were studied.

3.6 Sampling methods.

Sampling is the selection of some part of the whole in such a way that we can use the part to give information about the whole.

Probability (simple random sampling) and non-probability methods (accidental/convenience sampling) were used in the sampling process. Non-probability sampling was used to pick forty two primary societies out of forty four primary societies in Urambo.

Purposive sampling technique was used to select key informants on the issue of baling and grading. Eight key informants were chosen, one from each tobacco growing area. Key informants included area managers, field coordinator, regional manager and senior tobacco buyer. These are knowledgeable people on tobacco operations.

Under probability sampling, a simple random sampling technique was be used to select forty-two baling centres, one from each primary society picked for the study

Baling centres' list for each primary society was obtained and random sampling of these centres was done, per each primary society, to get one baling centre for the study.

3.7 Variables and their measurement

According to Ndunguru (2007), Measurement is the assignment of numbers, numerals, or symbols to objects or events according to some rules.

Table 3.3: Utilisation of baling centres – parameters and its measurements

PARAMETER	MEANING AND MEASUREMENT
Existence of the balling centres for each farmer's group	Number of baling centres as reported by respondents (Scale)
Adherence to Construction plan.	Actual situation as will be reported by respondents, the option will be Yes/No (Nominal)
Presence of supervision during baling	Information on who supervises the tobacco baling centres in the given group. (Nominal)
Number of farmers using baling centres for baling	What number of famers (compared to all farmers) makes use the baling centres available (Scale)
Willingness of farmers using baling centres?	Opinion on usefulness of baling centres to farmers. Where do most of the farmers prefer to do tobacco baling?
Attitude towards proper tobacco handling during grading and baling	How tobacco is handled during tobacco grading and balling (nominal)

Source: Researcher, 2012

3.8 Type and sources of data

There are two kinds of data used in any research, namely primary and secondary data. These data will be derived from several sources. The type of data which were collected was both primary and secondary data.

3.8.1 Primary data

According to Kothari (2004), Primary data is information collected by the researcher directly through instruments such as surveys, interviews, focus groups or observation. Tailored to his specific needs, primary research provides the researcher with the most accurate and up-to-date data.

In this study primary data were collected by the use of combination of techniques, namely administered personal interview, observation, and structured questionnaire. Key informants were conducted for the purpose of enriching the findings and getting suggestions.

The questionnaire (refer appendix I and appendix II) was designed to capture both qualitative and quantitative data type. The questionnaire contained both open – ended and closed – ended questions. Closed – ended questions were offered to the respondents to make choice among two or more alternatives. Open – ended questions allowed respondents to explain his or her views.

Checklists of questions for semi – structured interview were used to key informants and in the focused group discussion.

3.8.2 Secondary data.

According to Kothari (2004), Secondary data, on the other hand, is basically primary data collected by someone else. Researchers reuse and repurpose information as secondary data because it is easier and less expensive to collect. However, it is seldom as useful and accurate as primary data.

In this research the following secondary data sources was used; websites, journals, publication, research papers and organizational records.

3.9 Data collection methods

Interviews were done with the elements of the study as respondents to identify hindrances for effective baling centres utilization. The rule used for measuring concepts and variables on which data are to be collected was interviewing the Primary society chairman or the primary society secretary, baling centre supervisors, primary societies' council member, or group leaders.

Visits were made by enumerators at the sampled primary societies. The unit of research was baling centres. The purpose of the visits was to interview the baling centre supervisors, farmers, primary society's council member, or group leaders on the utilization of the balling centres.

Primary data were collected through explanatory design of research questions. The method of data collection involved communication mode between the enumerators and the respondents. The respondents were knowledgeable on utilization of baling centres.

Secondary data from websites, journals, publication, research papers and organizational records were collected through reading. Most of the secondary data have been presented in the literature review.

3.10 Validity issues

Because the questionnaire was in English, the translation to Swahili was done. The procedure was; translate to Swahili version then translate the Swahili version to English and then compare the two English versions.

3.11 Data analysis methods.

Data processing refers to operations performed on a given set of data; extract the required information format such as diagrams, reports, or tables.

Data analysis is a practice in which raw data is ordered and organized so that useful information can be extracted from it.

Raw data took a variety of forms, including measurements, survey responses, and observations.

Over the course of the data analysis process, the raw data were ordered in a way which will be useful. For example, survey results were tallied, so that people can see at a glance how many people answered the survey, and how people responded to specific question. Tables and textual write-ups of data have been used.

In this study, the survey data were coded and entered into Excel for data analysis. Distributive statistics and frequency distributions from pivot tables were used to determine the relations between pairs of variables.

Descriptive analysis was used to identify challenges/constraints to better utilization of grading/baling centres.

CHAPTER FOUR

PRESENTATION OF THE FINDINGS

4.1 Introduction

The main objective of this chapter is to present the findings of the study. Five objectives of this study have been addressed. The first objective was to relate the reported baling centres' list with the actual situation. The second was to assess the training background of the baling centres' supervisors. The third was to determine tobacco handling and transport means to the registered baling centres. The fourth was to identify farmers' opinions on the use of baling centres. The fifth was to suggest strategies for efficient utilisation of baling centres for the elimination of tobacco mixing, nesting and no-tobacco related material problems.

Before presenting the findings relating to each objective, the researcher presents the characteristics of the respondents.

4.2 Characteristics of the respondents

4.2.1 Age of the respondents

The researcher wanted to know the age of the respondents because. This information helps the researcher to get more reliable answers from mature persons of richer insights into the issue investigated in this study.

The response to the question regards age was; 88% of the respondents were between 18-45 years old and 12% were between 45-80 years old. Thus, most of the respondents were of the age of 18-45 years. Data shows that responses were received from mature person because the majority of the respondents were between 18-45 years old.

Table 4.1: Age of respondents

Range of Age	Frequency	Percentage
18-45	37	88%
45-80	5	12%
Total	42	

Source: Field data 2012

4.2.2 Gender of the respondents

All key informers were male.

79% of the other respondents were male and 21% were female. Table 4.2 below summarises the gender of the respondents in this study.

Table 4.2: Gender of the respondents

Gender	Frequency	Percentage
Female	9	21%
Male	33	79%
Total	42	

Source: Field data 2012

4.2.3 Education level of the respondents

Enquiring on the education level of the respondents was necessary. The result for the question on the education level of the respondents have been summarise in table 4.3.

Table 4.3: Educational level of the respondents

Education Level	Frequency	Percentage
Primary School	39	93%
Secondary School	3	7%
Total	42	

Source: Field data 2012

From the responses received from respondents, it can be concluded that most of the respondent's level of education are primary school.

Another type of respondents was the key informers. The education level of the key informers has been summarised in table 4.4.

Table 4.4: Educational Level of the key informer

Education Level	Frequency	Percentage
College Education Level	1	13%
College education Level	5	63%
University Level	2	25%
Total	8	

Source: Field data 2012

4.2.4 Tittle of the Respondents

The titles for key informers were; 63% area managers, 13% field coordinators, 13% regional managers and 13% Western zone buyers.

Below is table 4.8 which summarises the titles of other respondents (excluding key informers) in this research.

Table 4.5: Job designations of the respondents

Titles of Respondents	Frequency	Percentage
Baling Centre Supervisors	16	38%
Farmers	2	5%
Group leaders	10	24%
PS Council Member	14	33%
Total	42	

Source: Field data 2012

In this regards, responses were received from respondents with understanding on the management of tobacco baling centres.

Key informers who were questioned in this study comprised of the following title: area managers 63%, field coordinator 13%, regional manager 13%, and western zone buyer 13%.

Table 4.6 summarises the result for titles of the key informers. These are respondents with best understanding of the operations and importance of baling centres in the tobacco supply chain.

Table 4.6: Job designation of the key informer

Title of the respondent within the primary society	Frequency	Percentage
Area manager	5	63%
Field Coordinator	1	13%
Regional Manager	1	13%
Western Zone Buyer	1	13%
Total	8	

Source: Field data 2012

4.3 Baling centres listed compared to actual situation

4.3.1 Average number of baling centres per group in each growing area

The researcher wanted to know the number of baling centres per group of farmers. The average number of baling centres per each group of farmers is 3.

Table 4.7: Average number of baling centres per group in each area

Area	Average Number of Baling Centres per Group
Kaliua East	2
Kaliua West	2
Nguruka North	3
Nguruka South	2
Urambo East	4
Urambo North	4
Urambo South	2
Ussoke	5
Grand Average	3

Source: Field data 2012

4.3.2 Adequacy of Baling Centres

Respondents were asked if the number of baling centres registered were enough for their tobacco volume. 76% of the respondents said the baling centres registered were not enough while 24% said the registered baling centres were enough. Table 4.8 summarises the results.

Table 4.8: Adequacy of Baling Centres

Adequacy of baling centres	Frequency	Percentage
Not enough	32	76%
Enough	10	24%
Total	42	

Source: Field data 2012

This implies that the number of baling centres for the volume required to be baled is not adequate.

4.3.3 Adherence to Construction plan

The researcher wanted to know if those baling centres adhere to the plan of construction plan given by Tobacco Council of Tanzania.

The response was 81% per cent of the respondent said no while 19% said yes. Table 4.9 summarises these results.

Table 4.9: Adherence to the Construction Plan

Baling centres' adherence to the construction plan	Frequency	Percentage
Not adhered to the plan	34	81%
Adhered to the plan	8	19%
Total	42	

Source: Field data 2012

From the information from table 4.9 baling centres constructions didn't adhere to the simple plan construction plan given by Tobacco Council.

4.3.4 Adequacy of the storage capacity

Respondents were asked on if the storage capacity of their baling centre was adequate. 90% of the respondents said the storage capacity of the baling centres is not adequate and 10% said it is adequate.

The response to the question on the storage capacity have been summarised the table 4.10 below.

Table 4.10: Storage capacity

Adequacy of storage capacity for the tobacco graded	Frequency	Percentage
Not adequate	38	90%
Adequate	4	10%
Total	42	

Source: Field data 2012

4.4 Training background of the baling centre supervisors

4.4.1 Formal Education

In order to know the literacy rate of the tobacco graders at baling centres, respondents were asked a question on the education level of their tobacco graders. Table 4.11 shows the educational level of the tobacco graders. 95% of the graders from the sampled baling centres have primary education and 5% have secondary education.

Table 4.11: Education Level of graders

Education level of the tobacco graders at baling centres	Frequency	Percentage
Primary School	40	95%
Secondary School	2	5%
Total	42	

Source: Field data 2012

4.4.2 Other Training

The researcher wanted to know where the graders received their training on tobacco grading. Since training for the job they are doing is important for the success of the job,

the research asked the respondents on where their tobacco graders get their training on tobacco grading.

The results have been summarised in table 4.12 where it shows that most of the graders didn't get any career training on tobacco grading.

Table 4.12: Career Training for Graders

Response to where was your grader trained	Frequency	Percentage
Other graders	20	48%
Merchants' Road Shows	12	29%
TTB classifiers	3	7%
Union classifiers	5	12%
Urambo Seed farm	2	5%
Total	42	

Source: Field data 2012

Other graders trained most of tobacco graders. No grader was certified to grade.

4.4.3 Other Technical Assistance

Respondents were asked if they are getting any other technical assistant from Tanzania Tobacco Board (TTB). The responses show that farmers are getting technical assistances from TTB. 76% of the respondent showed that TTB provides them with assistance. According to respondents, example of the areas where TTB gives assistance is registration of baling centres and market centres. Table 4.13 summarises the responses of the respondents on whether TTB gives them any technical assistance.

Table 4.13: Technical Assistance from TTB

Technical Assistant from TTB	Frequency	Percentage
Didn't received technical assistance from TTB	10	24%
Received technical assistance from TTB	32	76%
Total	42	

Source: Field data 2012

76% of the respondents said they received technical assistant from their union while 24% said they didn't receive technical assistant from their unions. Table 4.14 summarises the responses on whether the baling centres received technical assistance from unions.

Table 4.14: Technical Assistance from Unions

Technical assistant from Unions	Frequency	Percentage
Didn't receive technical assistant from union	10	24%
Received technical assistant from union	32	76%
Total	42	100%

4.5 Tobacco handling and transport

4.5.1 Type of transportation of tobacco to and from baling centres

Responding to the question which wanted to know the type of transport farmers are using to transport their tobacco to and from baling centres, the type of transport mentioned were: by bicycle, on head and oxen.

Table 4.15 summarises the findings on the issue of transport of tobacco from area it is cured to the baling centres and from baling centres to markets or storage.

Table 4.15: Type of Transport to bring tobacco to baling centres

Response	Frequency	Percentage
Bicycle	2	5%
On-head and Bicycle	21	50%
Oxen, Bicycle	19	45%
Total	42	

Source: Field data 2012

4.5.2 Walking Hours to Baling Centres

The research have found that an average of one hour is required to walk to a nearest baling centre from where the tobacco curing burns are located.

4.5.3 Wrapping Material when Transporting Tobacco to Baling Centre

The research shows that 22% of the respondents say they are using hessian clothes to carry tobacco, 35% use hessian clothes and vinyl bags, and 40% use hessian and jute clothes, and 2% use hessian and plastic bags.

Table 4.16: Type of wrapping materials farmers use

Type of wrapping materials farmers use	Frequency	Percentage
Hessian bags	9	22%
Hessian and vinyl bags	15	35%
Hessian and jute clothes	17	40%
Hessian, plastic bags	1	2%
Total	42	

Source: Field data 2012

4.6 Opinions on the use of baling centres

4.6.1 Number of farmers who are using baling centres

The study found that the average number of farmers per group in Urambo tobacco region is seventeen. Farmers who are actually using baling centres to bale their tobacco are thirteen. This means 23% of farmers in the group are not using baling centres to bale their tobacco.

4.6.2 Other places where farmers prefer for baling their tobacco

Four places were named as places where farmers are doing their tobacco baling. 31% of all the respondents prefers to do baling at designated tobacco baling centres, 48% prefers to do baling at home, while 21% prefers to do tobacco baling under trees.

The table below shows the number of respondents from each growing area in Urambo tobacco region and their preference for the tobacco baling places.

Table 4.17: Preferences on places to do tobacco baling

Place	Frequency	Percentage
Baling Centre	13	31%
Home	20	48%
Under Trees	9	21%
Total	42	

Source: Field data 2012

4.6.3 Why some farmers do not prefer to use baling centres

There were reasons for farmers to prefer other places for baling as compared to baling centres. These reasons are believes on witchcraft, distance to baling centres, poor security in the baling centres, poor transport facilities, and high transport costs.

The results shows most of the farmers who prefer rather to do grading in other places than in baling centres is because of high transport costs. The responses have been summarised in table 4.18.

Table 4.18: Reasons for Some Farmers not to Prefer Using Baling Centres

Reason	Frequency	Percentage
Believes on witchcraft	8	19%
Distance from curing areas to baling centres	13	31%
Poor security from bad weather and theft	2	5%
Poor transport facilities and infrastructure	1	2%
High transport costs	18	43%
Total	42	

Source: Field data 2012

4.7 Suggested strategies for efficient utilisation of baling centres

The key informant came with the following suggestions on efficient utilisation of baling centres in short term measures. One is to improve baling centre supervision. Two is to adhere to the construction plan of the baling centres as provided by the Tobacco Council of Tanzania. Table 4.19 summarises the suggestions of the key informers

Table 4.19: Suggested plans for short term measures to improve baling centres

Response	Frequency	Percentage
Adherence to construction plan	3	38%
Improve baling centre's supervision	5	63%
Total	42	

Source: Field data 2012

In long term measures, the key informers suggested the following. One is authorities should train and certifies graders. Two the government and stakeholder in education should increase the paces to which rural people are empowered by improving education levels.

The respondents suggested that the long term measures can be done through construction of schools and training and allocating teachers to rural schools.

Table 4.20 summarise the suggestions of the key informers on the long-term measures for efficient utilisation of baling centres.

Table 4.20: Suggested plans for long term measures to improve baling centres

Response	Frequency	Percentage
Improve education level of rural people	2	25%
Train and certify graders	6	75%
Total	8	

Source: Field data 2012

CHAPTER FIVE

DISCUSSION OF THE FINDINGS

5.1 Introduction

This section is discussing the findings under five topics reflecting the objectives of the study. The first topic is relation of the reported baling centres' list with the actual situation. The second topic is assessment of the training background of the baling centres' supervisors. The third topic is tobacco handling and transport means to and from the registered baling centres. The forth topic is farmers' opinions on the use of baling centres. The firth topic is strategies for efficient utilisation of baling centres in order to improve the quality of baled tobacco.

5.2 Relation of the reported baling centres' list with the actual situation

The literature review on the assessment of utilisation of baling centres found that one of the challenges facing agricultural marketing is underdeveloped and improperly managed agricultural marketing infrastructure. However, regards tobacco infrastructure, specifically, baling centres, the list of the registered baling centres for crop 2011 showed that there are enough baling centres for the volume of tobacco produced.

Analysis of the information regards the adequacy of baling centres showed that baling centres constructed were not enough for baling properly or the tobacco produced. Further investigation showed that even when there are enough baling centres, baling boxes becomes a problem.

The study showed that the baling centres construction plan, provided by tobacco council of Tanzania, was mostly not adhered to. Baling centres with less space for baling activities were common in crop 2011. The plan from tobacco council of Tanzania wanted to ensure that baling centres are constructed in such a way that they provide space for all baling activities and storage for all the tobacco estimated to be balled in a given baling centre.

Analysis of the information from the study also showed that most of baling centres do not have enough storage capacity of all the tobacco estimated to be baled in a given baling centre. Tobacco from farmers for baling and tobacco already baled needs a safe, dry, and cool place to be stored.

5.3 Assessment of the training background of the baling centres' supervisors

According to literature review the literacy rate for Urambo tobacco region is low, just like other rural areas of Tanzania. No wonder the research shows that most of the baling centre supervisors are standard seven leavers.

Most of the tobacco graders are trained at work by fellow graders. Available organizations for tobacco farmers training (TTB, Unions and TTCA, and tobacco merchants) are doing very little to train baling centres' supervisors and graders.

The government of Tanzania uses Tanzania Tobacco Board to ensure laws and regulations made are followed. This is done through training of stakeholders on the laws and regulation in tobacco industry. Most of the tobacco farmers in Tanzania are unionised and formed organs which are also responsible for training. The organs are Primary Societies, Unions (made of several primary societies) and Tanzania Tobacco Co-operative Societies Apex (TTCA). Tobacco merchants have agronomists in all the tobacco regions. Two of the merchant companies have their association called Association of Tanzania Tobacco Traders (ATTT). One role of ATTT is to provide extension services to farmers.

All the named organisations were supposed to train farmers in all aspects of Good Agronomic Practises (GAP) and market procedures.

5.4 Tobacco handling and transportation to and from baling centres

The study has found that most of the tobacco is transported to and from baling centres on head and on bicycles. The second option used is bicycle and oxen carts.

During transportation loose tobacco can be mixed causing more difficulties in grading. Tobacco can also be damaged in the transportation process, especially when carried on bicycle or on head. Usually damaged tobacco catches low grade and low price in tobacco markets.

The research have found that an average of one hour is required to walk to a nearest baling centre from where the tobacco curing burns are located. This distance makes it even more difficult to farmers who will be carrying tobacco to baling centres.

The study also found that most of the farmers used hessian and jute clothes to wrap their tobacco when transporting it to the baling centre. This is a good attitude; however there are few farmers who are using vinyl bags to wrap their tobacco. Vinyl material is one of the NTRM categories, which can cause rejection of baled tobacco in markets. Vinyl material in a processed tobacco can also cause rejection of the processed tobacco by the cigarette processors (manufacturers who buy processed tobacco from merchants).

5.5 Farmers' opinions on the use of baling centres

The study has found that farmers mostly prefer to do baling at their residential homes. The second place most farmers prefer to do tobacco baling is under trees, close to curing burns. However there were few preferred to do baling at the registered baling centres.

Farmers have the opinion that the following are the reasons some the farmers do prefer using baling centres: One is high transportation cost. Two is distance from curing areas to baling centre. Three is believes on witchcraft. Four is poor security of tobacco at baling centres. Five is poor transport facilities to and from baling centres.

Elaborating on witchcraft, respondents believes that witches can transform tobacco quality from good to poor or can seal, through witchcraft, high quality tobacco when they see it at baling centres.

5.6 Strategies for efficient utilisation of baling centres

The key informers were asked on their opinion on what should be done in order to utilize baling centres efficiently.

In short term measures key informers advised on to improving baling centre supervision. The available trained personals should now and then visit these baling centred to assist graders and supervisors. Company tobacco classifiers, TTB classifiers should all visit baling centres during baring operations.

Key informers have also advised on following the construction plan of the baling centres as provided by the Tobacco Council of Tanzania. The plan ensures all the necessary structures required for tobacco baling are available.

In long-term measures, key informers have suggested on authorities to train and certify graders. Trained and certified graders will be able to do grading and baling, efficiently, with less supervision.

Another advice was for the government and other stakeholder in education to increase the paces to which rural people are empowered by improving literacy levels. This can be done through construction of schools and allocating teachers to rural schools.

Literacy level of people in any are affects every aspect of life of these people. Low literacy level of baling centre supervisors and graders affects the quality of job they are doing in grading and baling tobacco.

CHAPTER SIX

SUMMARY AND POLICY IMPLICATION

6.1 Introduction

This chapter has two sub sections. The first sub-section provides the summary and conclusion of the main study findings and the second subsection provides recommendation and policy implication of the study

6.2 Summary and Conclusion

This section provides the summary of key findings of the study against each specific objective the study intended to achieve.

This research report has dealt with five specific objectives. To relate the reported baling centres' list with the actual situation, to assess the training background of the baling centres' supervisors, to determine tobacco handling and transport means to the registered baling centres, to identify farmers opinions on the use of baling centres. Lastly, to suggest strategies for efficient utilisation of baling centres for the elimination of tobacco mixing, nesting and no-tobacco related material problems.

The relation between the reported baling centres' list with the actual situation is that: Baling centres were not enough for the volume of the crop handled. Availability of baling boxes was a problem in most of the baling centres. Construction plan was not adhered and most of the baling centres have low storage capacity of tobacco after and before baling.

The research has also found that training background of the baling centres' supervisors is not good. Most baling centre supervisors and graders have low literacy level. Most of the tobacco graders have only on job training, mostly provided by fellow graders. Other tobacco stakeholders are not doing enough in training graders and baling centres' supervisors

Tobacco transportation to and from baling centres is mainly on head and on bicycles. Another option second in use is oxen carts. Distance from where the tobacco is cured to baling centres is too long to carry tobacco on hand or on bicycles without damaging the tobacco.

Tobacco wrapping materials mainly used is jute and hessian clothes, however some farmers use vinyl bags which adds NTRM in the bales and later in the processed tobacco

Most farmers prefer to bale their tobacco at home. The reasons being transport poor transport facilities and infrastructure, local believes, and poor tobacco security in baling centres

Lastly, key informers have suggested (as strategies for efficient utilization of baling centres) the following: improvement of baling centres' supervision, adhere to construction plan, train and certify graders and improve literacy level of rural people

6.3 Recommendations from the study

The research has the following recommendations for improving baling centres utilization, thus, improving the baled tobacco quality:

First; registration of the baling centre should be done after inspection of those baling centres. Any baling centre which is not conforming to the standards provided by the tobacco Council of Tanzania should not be registered. Farmers who were required to use the rejected baling centre should be given technical assistance for them to construct a proper baling centre.

Second; all stakeholders should participate in graders and baling centres supervisors' training. This training should be coordinated by TTB. The Ministry of Agriculture Food Security and Cooperatives should ensure that its goals of enhancing demand driven research and development and revamp extension and training services are achieved through enabling the tobacco research institutes function to its highest level.

The researcher recommends that, in the future a regulation should be in place to require all graders and baling centre supervisors to be trained and certified.

Third; the location of baling centres should be included as other criteria to whether a baling centre can be registered or not. Those baling centres which are very far from where tobacco is cured or stored before grading should be rejected. Farmers and primary societies should be advised to buy and use simple transportation technologies like power tillers, motor tricycle, and oxen carts.

To meet all the aspirations very tight selection and education policies need to be put in place and then rigorously enforced for any education, training, demonstration or material.

The government needs to invest in agriculture education, research and extension resources. Education for the basics as well as the new technology needed to bring agriculture into the 21st century, research for the problems unique to the Tanzanian environment. Extension to take practical education to the producers and to report back problems encountered in the field so solutions can be researched at the university.

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APPENDICES

APPENDIX I: summary of the key findings of the study

SPECIFIC OBJECTIVE	KEY FINDINGS
Relation of the reported baling centres' list with the actual situation	i. Baling centres were not enough for the volume of the crop handled. Baling boxes availability was a problem in most of the baling centres ii. Construction plan was not adhered iii. Low storage capacity to most of the baling centres
Training background of the baling centre supervisors	i. Low literacy level of baling centre supervisors and graders ii. Only on job training, mostly provided by fellow graders. Other tobacco stake holders are not doing enough in training graders and baling centre supervisors
Tobacco handling and transportation to and from baling centres	i. Tobacco transportation to and from baling centres is mainly on head and on bicycles. Another option second in use is oxen carts. ii. Distance from where the tobacco is cured to baling centres is too long to carry tobacco on hand or on bicycles without damaging the tobacco. iii. Tobacco wrapping materials mainly used is jute and hessian clothes, however some farmers use vinyl bags which adds NTRM in the bales and letter in the processed tobacco
Farmers' opinions on the use of baling centre.	i. Most farmers prefer to bale their tobacco at home. ii. The reasons being transport poor transport facilities and infrastructure, local believes, and poor tobacco security in baling centres
Suggested plans for efficient utilisation of baling centres.	i. Improve baling centres supervision ii. Adhere to construction plan iii. Train and certify graders iv. Improve literacy level of rural people

APPENDIX II: questionnaire

MZUMBE UNIVERSITY

SCHOOL OF BUSINESS

A QUESTIONNAIRE ON ASSESMENT OF BALING CENTRES' UTILIZATION
ALONG TOBACCO VALUE CHAIN IN TANZANIA: A CASE STUDY OF
URAMBO.

A. Personal Particulars of the respondent

a. Name of the respondent

b. Gender of the respondent (Tick one): Male/Female

c. Title of the respondent within the Primary society: (Tick one)

Farmer/Primary Society Council Member/Baling centre supervisor/Group
leader

d. What is the education level of the respondent? (Tick one)

Primary school/Secondary school/College education

B. Particulars of the group

a. Name of the area:

b. Name of the primary society:

c. What is the name of the group/baling centre:

C. Existence of the baling centres for each farmer's group

a. How many grading/baling centres are there for this group
.....

- b. Are the grading/baling centres enough for the volume of tobacco you sale: Yes/No

D. Construction plan if followed

- i. Is the baling centre constructed as per the plan suggested by tobacco council: Yes/No
- ii. Is the storage capacity enough for the tobacco graded: Yes/No
- iii. What type of transport most of the farmers use to bring tobacco to the baling centres? and
- iv. How many hours a farmer use from the furthest distance to the baling centre:-..... Hours
- v. How many hours a farmer has to walk from the nearest distance?Hours

E. Extent of balling centre's utilization

- i. How many farmers in the group:
- ii. How many farmers are actually using the baling centre:

F. Presence of supervision during baling

- i. Where do the baling/grading canters supervisors mainly get their training?
- ii. Do you get any technical assistance from Tanzania Tobacco Board? Yes/No
- iii. Do you get technical assistance from your Union? Yes/No
- iv. What is the age of people who supervises balling in your group

G. Willingness of farmers using baling centres

a. Where do most farmers prefer to do tobacco Grading/baling? (tick one)

- i. Home
- ii. Grading/balling centres
- iii. Under trees

b. Why some farmers do not prefer to use balling centre:

- i.
- ii.
- iii.
- iv.

H. Attitude towards proper tobacco handling during grading and baling

What type of wrapping materials do farmers use to wrap their tobacco when transporting it to grading/balling centres? (Tick)

- a. Hessian clothes,
- b. Jute clothes,
- c. Plastic bags,
- d. Fertilizer bags
- e. Others (Name)

APPENDIX III: Questionnaire form key informers

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A QUESTIONNAIRE, TO KEY INFORMANTS, ON ASSESMENT OF BALING CENTRES' UTILIZATION ALONG TOBACCO VALUE CHAIN IN TANZANIA: A CASE STUDY OF URAMBO.

A. Personal Particulars of the respondent

- a. Name of the respondent:.....
- b. Gender of the respondent : (Tick one)
Male/Female
- c. Title of the respondent:
- d. What is the education level of the respondent? (Tick one)
Primary school/Secondary school/College education/University education level

B. Suggestions on strategies to improve quality of baled tobacco

- a. What is the most important thing in short term, which can be done to improve the quality of baled tobacco?
.....
- b. What is the most important thing in long term, which can be done to improve the quality of baled tobacco?

APPENDIX IV: Tobacco production estimate for crop 2011

AREA	Primary societies	Gross Has	Net Ha's	Mortality	Locked Production
CHUNYA	8	3,481	3,385	7.9	3,400,003
IRINGA	6	210	225	7.6	299,000
KAHAMA	18	6,784	5,913	14.4	6,986,860
MANYONI	9	1,788	1,611	7.7	2,264,000
MPANDA	3	7,022	6,686	7.4	7,676,000
KAGERA	10	1,714	1,548	9.1	1,325,395
SONGEA	21	930	893	8.0	908,590
TABORA	55	12,494	11,782	11.5	14,670,732
URAMBO	44	15994	13,930	16.4	18,020,000
TOTAL	174	50418	45,973	12.5	55,550,580

Source TTB