

NETWORK OF FARMERS' GROUPS IN TANZANIA



Research Report

On

Assessment of Factors Hindering use of Standard Weight and Measures in Potato Trading in Njombe Region

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GLOSSARY

DAI	Development Alternative, Inc.
DAICO	District Agriculture, Irrigation and Cooperative Officer
DC	District Council
FGD	Focus Group Discussion
LGA	Local Government Authority
MVIWATA	Mtandao wa Vikundi vya Wakulima Tanzania
PESA	Private Enterprise Support Activities
SFOAP	Support to Farmer Organizations in Africa Program
TBS	Tanzania Bureau of Standards
TC	Town Council
TCCIA	Tanzania Chambers of Commerce, Industry and Agriculture
TFDA	Tanzania Food and Drugs Authority
TPRI	Tanzania Pesticides Research Institute
URT	United Republic of Tanzania
VEO	Village Executive Officer
WEO	Ward Executive Officer
WMA	Weight and Measure Agency

1.0 INTRODUCTION

The main economic activities in Njombe region are Agriculture, Livestock keeping, forestation and small businesses. The region has cool climate, fertile soil and reliable rainfall that provide favourable conditions for agriculture development (URT, 2016). Agriculture in the region has huge potential to create employment, food security, income generation and to further agro processing. The main crops grown in the region include: potatoes, maize, and other cereals, horticultural crops– avocados, peas, apples, plums, peaches, oranges and mangoes, tea, coffee and pyrethrum.

In terms of economic importance Irish potato is the leading crop playing a dual role as a food and commercial crop followed by maize. In the 2014/2015 growing season, the total area cultivated potato was 129,815 ha of land of which 507,951.8 tons of potatoes were harvested (URT, 2016). Most of farmers who cultivate potato in the region are smallholders with the farm size ranging from 2.23 to 10 acres and productivity ranging from 15 tons/ha and 20 tons/ha (Netherlands Enterprise Agency, 2017). The difference in productivity among farmers is contributed by variation in investment, agronomic practices, varieties, diseases and pests.

Apart from productivity problems with associated factors, marketing of Irish potatoes suffers from a problem of non-standard weight and measure. Traders opt to package their produce in large bags famous known in Kiswahili as “*lumbesa*” in order to maximize profit and minimise the crop cess levy paid to the local government and transport costs which are normally charged per bag. Over the last three decades the practice of non-standard measures has existed, despite various efforts by different actors to address the challenge. The problem of non-standard weight and measure of agricultural produce started in the early eighties when the government of Tanzania adopted trade liberalisation policies (TCCIA, 2013). It was at this time when the private sector was given legal freedom to operate business with minimum regulations

The use of unauthorised measures in Njombe is widespread due to weak enforcement of the Act and lack of awareness among farmers (TCCIA, 2013). Nearly all the crops produced by smallholder farmers, such as maize, onions, tomatoes and rice suffer from the same problem of over-packaging (*lumbesa*), a practice that is favoured by middlemen or agents, who are able to coerce constrained farmers into selling their produce on terms that favour the buyer (DAI-PESA, 2014). MML (2008) reports that the use of non-standard weight and measure is one of the causes of farmers' exploitation leading to poverty. More so, using non-standard measures has an impact on the health of porters, the majority of whom suffer from muscular pains, headaches and numbness in the arms and legs and even morbidity problems (TCCIA, 2013). Lastly, Non-standard measures contribute to the overloading of vehicles, which causes serious damage to roads and contributes to the problem of maintaining road safety.

In view of the socio-economic implications of non-compliance to standard weight and measures, MVIWATA and East Africa Farmers' Federation through the Support to Farmer Organizations in Africa Program (SFOAP) thought a need to intervene this challenges by commissioning the research from the Department of Policy Planning and Management of the Sokoine University of Agriculture to assess factors hindering use of standard measurements in potato trading in the region. The findings of this research provide policy recommendations on how best the government and other partners should address this challenge to ensure rights of farmers and consumers are protected but also the government receive proper revenue.

1.3 Objectives of the Study

1.3.1 Main objective

The objective of this assignment was to identify factors hindering proper use of standard weight and measures in potatoes trading in Njombe region and recommend possible solutions to address the challenge.

1.3.2 Specific objective

Specifically this study intended to:

1. Determine the current practices as far as potato trading is concerned, i.e. the measurements currently used by stakeholders.
2. Identify factors limiting the use of standard weight and associated factors by stakeholders in potato value chain
3. Determine the impact of using improper weights in trading potato to different stakeholders (farmers, government, porters, etc.): estimate the revenue loss by farmers and the district council
4. Propose possible solutions to address the challenge.

2.0 APPROACH AND METHODOLOGY

This study was carried out in Njombe region specifically in Njombe Town Council and Wanging'ombe District Council where most of potato farming is practised in the region. In Njombe Town Council two wards were selected namely Uwemba and Luponde represented by two villages each. On the other hands, in Wanging'ombe District Council one ward was selected namely Ulembwe with two villages namely Igagala and Ulembwe villages.

2.1 Data Collection

The study used both secondary and primary data. A combination of method was used during data collection; field survey was used to collect primary data coupled with the review of relevant documents for secondary data that was adopted to generate relevant information to the study.

2.1.1 Desk review

The desk review encompassed review of relevant documents such as Weight and Measure Act (Cap 340) and its amendments, fee and levy by laws for Wanging'ombe local authority, and various reports related to the assignment. The essence of reviewing these documents was to learn from the legal and regulatory requirement and compare with the current practice to ascertain if the regulations and the national laws on weight and measures are adhered to.

2.1.2 Field Survey

Field work in selected villages involved triangulation approach to validate information collected from different sources i.e. personal interviews, focus group discussion, and personal observation. Personal interviews were carried out to farmers, traders, transporters, and brokers involved in potato trade in the region to determine the current practices in the potato trade with the emphasis in packaging. The Focus Group Discussions (FGDs) of between 6 – 8 people were carried out in

each village and the key informant interviews guided by a checklist was used for the District officials such as District Agricultural Irrigation and Cooperative Officer (DAICO), Crop Officer, Trade Officer, Cooperative Officer and Chairman of Revenue Committee), ward and village leaders such as Ward and Village Executive Officers (WEO & VEO).

2.2 Data analysis and interpretation

Data analysis and interpretation followed right after data collection. Descriptive statistics such as frequencies were used to indicate the distribution of characteristics of interest. Direct observation was used to identify current measurements used to sell potato compared to the standard measure as per regulations. To identify factors limiting use of standard measure researchers interviewed farmers, traders, brokers, Weight and Measure Agency (WMA) and Local Government Authority (LGA) officers. For the sake of computing losses experienced by the local government and farmers it was necessary to sample and measure weight of bags full of potatoes as per current practices and compare with the standard weight as per Weight and Measure Act (Cap 340) and its amendments. The difference between the two weights (current practice vs standard) was used to compute the number of unaccounted bags and multiplied by the current price for farmers and the tax charged per bag by the local authority to estimate the income and tax losses for both farmers and the local government, respectively.

2.3 Reports

A draft report was prepared and presented during the validation / feedback workshop held on 07th June 2017 in Njombe Region. The workshop attracted a number of stakeholders involved in potato trading in the region, WMA officers from Njombe and Iringa regions, LGA officers, Councillors, District commissioners from all districts of the two regions Njombe and Iringa, farmers, traders, brokers, transporters and other actors. The stakeholders had an opportunity to validate the

information and added constructive comments which accounted to develop the final draft.

3.0 MAIN FINDINGS

This chapter is structured with four subsections namely current practices in potato trading, impact of non-compliance to standard weights and measures, challenges on compliance to standard measure, and recommendations on the way forward. The details of each section are presented in the subsequent sections.

3.1 Current Practices in Potatoes Trading

The current practices in potato trading in Njombe region was examined for several reasons. First, was to identify major players in the potato trade and understand their practices (i.e. current measurements used in potato trade), second, was to study and understand the power dynamics among actors in potato trade, third, examine compliance of actors in potato trade to the regulation governing standard weight and measures. Understanding of the current practices set a benchmark for comparison with the standard procedures and ascertain if there is a fair deal among actors engaged in potato trade from farmers to consumers.

3.1.1 Major actors in the potato supply chain

The general practices of potato trading was done by examining the potato supply chain and identify key actors. Along the supply chain it was clear that there are several actors positioned in different nodes such as farmers who are responsible for farming and selling of potato mainly at farm gate price, local brokers who link buyers/traders with farmers and are responsible to buy potatoes directly from farmers and sell to buyers from different parts of the country and outside the country, transporters who are responsible to haul produce from farm/production centers to different market outlets within and outside Njombe region, brokers in fresh produce markets who receive potato in bulk and sell to a wider network of

retailers in the retail outlets, and finally to consumers.

In view of the above, it is clear that brokers appears in two different nodes between buyers and farmers and these are generally local brokers who resides in the same or nearby villages and are well known to farmers. The second category of brokers are those who are stationed in fresh produce market located in other regions and normally they are responsible to receive produce in bulk and distribute to retail outlets. The haulers were observed to facilitate transportation of potatoes from one place to another i.e. from farm to collection centers, collection centers to Njombe Town, then from Njombe to other regions or outside the country.

On the other hands, there is a regulatory framework composed of Weight and Measure Agency (WMA), Tanzania Pesticides Research Institute (TPRI), Tanzania Bureau of Standards (TBS), Tanzania Food and Drugs Authority (TFDA), and Local Government Authority (LGA) to mention a few. The WMA is responsible for enforcement of the regulations governing weight and measures to protect consumers' rights, verify measurement scales, create awareness on compliance to standard measures. The Agency also is responsible to conduct annual inspection of weighing scales in various business enterprises to ensure consistency and penalise individuals who tampered with the weighing scales and organize ad hoc inspection through roadblocks to inspect trucks hauling potatoes if the volume of potato is according to the legal standard of not more than 100Kg per bag.

However, the WMA lack capacity in terms of manpower to deliver effective services since they do not have officers at the district level and they rely only on regional office, which is usually understaffed. Taking an example of Njombe Regional Office, has only 3 officers who are responsible for the whole region, with six districts. The limited number of staff at the region office and failure of WMA to hold offices at the district level hampers its efficiency in service delivery. To improve efficiency of service delivery including enforcement of regulations governing weight and

measures; the WMA should consider increasing the number of staff at the regional office and possibly establishing a supporting desk at the LGA. Moreover, the TPRI, TFDA and TBS are responsible for quality checks specifically on quality of agrochemicals used by farmers and suitability of produce to consumers.

With regards to the potato trade, the LGA is responsible to create supportive environment for farmers to optimize production of potatoes through provision of agricultural extension services to farmers. In the study area each Ward had an Agricultural Extension Officer, who serves several villages within a given Ward to provide agricultural technical support to farmers. However, the efficiency was observed to be constrained by the meagre resources allocated to support agricultural development, which does not support movement of officers to reach farmers in diverse villages. This situation has constrained extension service delivery system and has opened up a parallel line of local brokers to fill the gap by providing market information to farmers which subsequently has lead to farmers exploitation.

Moreover, the LGA also observe the conduct of potato business in their jurisdiction area given the fact that the crop is the major source of own source income. According to both Local authorities Njombe Town Council and Wanging'ombe District Council, potato account for about 45% and over 80% of their own source income collected as a cess levy, respectively. The LGA after collection of cess levy pays back 20% of collected tax to each Ward that is devoted to support development activities in respective villages based on the priority areas, which is not necessarily agriculture.

In view of the fact that agriculture is the major contributor to the own source income one would expect the sector to be allocated with large proportion of budget from the local authority to promote agriculture development and sustain LGA cash flow. On contrary for both district councils it was clear that large proportion of the budget was directed to the so called priority sectors such as health and education, and

agriculture receive only the least budget allocation of less than 5% of the total collection from own source income. This is contrary to the LGA regulations that requires at least 20% from own source be allocated for agriculture development. This suggest that LGA are not getting their priority right since investment are intensified on productive assets rather than liabilities to ensure sustainability of cash flow. This is not to say education and health sectors are liabilities but rather the LGA should strike a balance to support productive sectors so that they are able to maximize income and support other sectors.

3.1.2 Measurement Practices

In the course of research it was necessary to observe and identify types of measurement used in selling potato at different point along the supply chain. As mentioned earlier along the potato supply chain there are several actors positioned on different nodes. In view of the measurements used by different actors was observed to be different from one node to another. For example, between farmers and the middle men / local brokers the dominant measurement used was bags of different sizes but normally of carrying capacity beyond recommended weight of not more than 100Kg. The same measurement was used to estimate cess levy, and transportation of potato from farm to collection points and selling to bulk buyers who supply to the fresh market in Dar Es Salaam and other market outlets. However, the retail outlets used mixed measurements some used 20 or 10 Liters plastic containers known as “*debe*” or *ndoo*” in Kiswahili, and *sadoline* (3 liters plastic containers) and others used standard weighing scale.

While it is a common practice for using unstandardized measurement in potato trade in the study area, it is evident that those containers were not meant for measuring weight but rather were meant for measuring liquid products such as cooking oil, paints, chemicals and other products. Using such facilities to measure weight is a gross violation of the Weight and Measure Act (Cap 340) that protect the rights of

consumers and does not ensure fair deal between buyers and sellers as it should be.

3.1.3 Power dynamics among actors in potato supply chain

The essence of examining power dynamics among actors in potato supply chain was to identify who own power to dictate business terms in different nodes of the supply chain. For example, this was accomplished by investigating how farmers obtain market information, who determine price of produce at farm levels, who determine the sales volume at farm level, and how farmers are organised in their settings.

With regards to the sources of market information to farmers, the findings indicated that farmers obtain market information from local brokers who obtain market information from different sources through their well developed network across the country. Local brokers also take advantage of poor agricultural extension system and rural infrastructure to block farmers to have direct contact with buyers coming from different location of Tanzania or outside Tanzania like Kenya. Given the fact that farmers have no other sources of market information and they operate in isolation; they are on weaker side to negotiate price with local brokers. While potato industry has operated under free market conditions for many years smallholder farmers have not benefited from the open market economy since farmers are price takers from price offered by local brokers. With the view that farmers are not organized and operate in isolation they open up for exploitation by local brokers who are profit driven.

Capitalising on the monopoly of market information, brokers dictates not only price but also the volume of bag to be bought in the market. Although the standard weight of a bag of potato is not more than 100Kg, what is in practice a bag of potato ranges between 120Kg and 130 Kg. This is the volume that is widely accepted by farmers throughout the study area, which suggest that farmers lose between 20 and 30Kg per bag which also has an implication on the LGA revenue loss as detailed later

in this report.

3.1.4 Compliance to regulations among stakeholders

The compliance to regulations among actors was examined based on the comparison of the current practice in packaging compared to the standard packaging stipulated in the regulations governing weight and measures. There are several Acts and regulations guiding on Irish potatoes packaging and transportation. The Weight and Measures Act (Cap 340) provides guidelines for standard weight of various crops. However, for unstated crops like Irish potato the Act provides a maximum weight limit of not more than 100Kg. As indicated earlier the Weights and Measures Agency (WMA) is an Executive Agency, responsible for fair trade transactions through certification of weights and measures. It is the sole agency in Tanzania for enforcing the Weights and Measures Act (Cap 340).

The WMA ensures that all traders comply with the requirements of the Weights and Measures Act (Cap 340) in order to protect producers and consumers against malpractices. Thus the Mandate of WMA is to verify and re-verify all weights, measures, weighing or measuring instruments used or intended to be used for trade in Tanzania Mainland. The roles of WMA as stipulated under the Weights and Measures Act (Cap 340), and the Executive Agencies Act (Cap 245) are to: protect consumers in trade, health, safety and environment in relation to weights and measures; Protect society from the consequences of false measurements in public and private transactions, safety, health and environment sectors; Control pre-packaging of products to mention a few.

The regional government in Njombe region in collaboration with the WMA and other actors in the Irish potatoes value chain, have been striving to implementing the Weight and Measurement Act (Cap 340) and subsidiary regulations to protect farmers as well as enabling the government to collect due crop cess levy. For

example, the Agency in collaboration with the Regional and Local Authorities organises sensitisation workshop and seminars to farmers and traders in 6 administrative Districts of the Njombe region, where relevant sections of the W&M Act (Cap 340) were presented. Even though several attempts have been made by the WMA and others actors, the use of non-standard Weight and Measures is still prevalent to date. It was clear during the research that there were no “*Lumbesa package*” rather there was a shift to a new way of packaging known as “*Ngoma package*”.

According to farmers a major difference between the two packages modes “*Lumbesa*” and “*Ngoma*” the former has a capacity of between 140Kg and 160Kg while the later has a capacity of 120Kg and 130Kg. While farmers acknowledge a positive shift from “*lumbesa*” to “*Ngoma*” it is evident that they are still victim of exploitation to local brokers since the current practice violate the regulations governing standard weight and volume of less than 100Kg. This practice suggest that the malpractice of over packaging goes beyond farmers exploitation, it also has an implication on the amount of cess levy collected by the LGA, effect on roads due to overload, and health condition of porter. The implication of over package is covered in detail in the subsequent sections.

3.2 Impact of non-compliance to standard weights and measures

The standards for weight and measure are set to protect rights of farmers, traders, and consumers. Understanding the impact of non-compliance with Weights and Measure Act (Cap 340) requires understanding of the standard requirement of the act compared to general practices. In this case it was necessary to review the Weight and Measure Act (Cap 340) and amendments and compare with the current practice to set a context to estimate farmers and the LGA income losses.

3.2.1 Estimates of farmers` economic loss

The Weight and Measure Act (Cap 340), does not specify the packaging weight of

potatoes but set a maximum weight limit. The Act stipulate that “where the farm produce and its manner of packaging is not specified in the Act, it shall be pre-packed in containers other than rigid containers of glass, plastic or metal whose weight shall not exceed 100Kg. Looking at the maximum specified weight package, traders and farmers are required to package in bags of no more than 100kg. The regulation does not specify the type of bag to be used although it set a maximum weight. This shortfall has opened up an avenue for local brokers and traders to continue exploiting farmers by using large bags with the capacity beyond 100Kg recommended by the regulations.

Generally, Njombe region is using some bags with estimate of 100kg if zipped. During discussion with Weight and Measure Agency officers, it was stated that proper zipping of the bag weigh between 95 to 100kg and hence they found it relevant using since is very hard to control weighing process as they lack human and financial capacity for daily supervision. After control of using *lumbesa*, traders now use the so called *ngoma*. The direct measurement revealed that ngoma package weight range between 120 and 130kg with an average of 125Kg per bag. Therefore farmers lose up to 30% of income due to using improper weight and measure. Considering an average price of ngoma package in 2016/17 season of about TZS 50,000 per bag, farmers lose up to TZS 15,000 per bag of potato. This is substantial amount of money farmers lose due to non-compliance to Weight and Measure Act (Cap 340).

The study explored more on how the price has been varying from using zip and ngoma modes of package and it was found that for example at Igagala village, there was a price difference of TZS 5000. This means that while *ngoma* was sold at TZS per bag on the other side 50,000 zip was being sold at TZS 45,000 per bag, which is about 10% of the price differences. Converting this price per Kg by considering an average weight of ngoma of 125Kg you will learn that on average if a farmer decides to sale

his/her produce through ngoma package will sell at TZS 400 per Kilogram of potato while zip package considering the maximum recommended weight of 100Kg will sell at TZS 450 per Kilogram. This gives a difference of about TZS 50 per Kilogram and translate to a loss of TZS 6,250 per bag for a bag of 125 Kg which is an average weight for the current practice. Albeit the situation, there is great achievement of implementing weight and measure act in Njombe region. For example in 2013, TCCIA found that the weight of lumbesa was estimated to range between 140kg and 180kg, between 40% and 80% of the weight loss. Declining from 80% to 30% is the great achievement and therefore the study commend for the efforts made by the Weight and Measure Agency in Njombe and Iringa regions.

Despite the recorded achievement, the study noted that a shift from “*lumbesa package* to *ngoma package*” is associated with the traders using bags of different sizes some with the capacity of *lumbesa* even when they are zipped and farmers have no power to choose the type of bag to be used. This practice was common to almost all villages visited during the research and it calls for an urgent intervention to identify a common package bag that is standard rather than a current practice that allow brokers / traders to use package materials which vary in size. Leaving this practice to continue will accelerate exploitation of farmers, LGA will continue losing revenue and it threatens the health of porters. To address this challenge the government through WMA should call for a support from other law enforcers such as police to launch a countrywide campaign to stop over-package through roadblocks inspection of potatoes on transit (i.e. ngoma package). Similarly, this campaign should control imported potatoes entering our markets to comply with our package standards to set a fair ground for competition among traders in Tanzania markets, since this has been an advanced argument by traders that if they do not over-package they face difficulties to sell their produce in the fresh market since buyers prefer “ngoma” package rather than zip package for profit maximization.

3.2.2 Estimates of revenue loss by the Local Government Authorities

The LGA revenue from agriculture produce is governed by the cess levy policy, which stipulates that, the charge of cess levy is not more than 5% of market price of specified agricultural produce. However, the policy allows each council to develop bylaws and specify specific percent of the cess levy provided does not exceed 5%. In Njombe region, each Council has set own percent of cess levy charged for each bag of potato. For example, Njombe Town Council charge TZS 700 per zipped bag while Wanging`ombe charges 5% of market price for the same. As described in section 3.2.1, the weight of ngoma package exceed by 30% of the standard weight (100Kg per bag) recommended by the Weight and Measure Act (cap 340).

With the view that the LGAs charge the cess levy per bags with an assumption that all bags have standard weight of 100Kg; on contrary the current practice of “ngoma” package is up to 130Kg per bag, which is 30Kgs beyond the standard package. This suggest that LGA lose revenue due to over package. It is from this context this study considered crucial to establish how much revenue is lost by the LGAs. For the sake of computing revenue loss the study used two scenarios: the first scenario on Table 1 established expected revenue (cess levy) accrued from standard package (the assumption is that trade is based on standard bag of 100Kg), the second scenario on Table 2 computed the revenue (cess levy) accrued from current practice of ngoma package (130Kg per bag).

Table 1: Expected Cess Levy from the Standard Package (100Kg per bag)

Council	Cess levy Rate			
	Production (Tons)	Number of Bags	Njombe TC (Tsh. 700)	Wanging'ombe (Tsh. 2500)
Wanging'ombe DC	93,224.84	932,248.40	652,573,880.00	2,330,621,000.00
Njombe TC	243,504.00	2,435,040.00	1,704,528,000.00	6,087,600,000.00
Njombe DC	12,600.00	126,000.00	88,200,000.00	315,000,000.00
Makambako TC	4,896.00	48,960.00	34,272,000.00	122,400,000.00
Ludewa DC	35,357.00	353,570.00	247,499,000.00	883,925,000.00
Makete DC	118,370.00	1,183,700.00	828,590,000.00	2,959,250,000.00
TOTAL	507,951.84	5,079,518.40	3,555,662,880.00	12,698,796,000.00

Source: Njombe Regional Secretariat, 2017

Considering scenario 1 for the six Councils (i.e. Wanging'ombe DC, Njombe TC, Njombe DC, Makambako TC, Ludewa DC, and Makete DC) in the Njombe region, which produced about 507,951.84 Tons of potato in 2015/2016 growing season. Assuming that the information available is for potatoes traded, then compliance to the requirement of the Weight and Measure Act of packaging 100Kg per bag it makes a total of about 5,079,518.4 bags. If we assume further that Njombe region adopted cess levy modality for Njombe Town Council of TZS 700 per standard bag (100 kg), the total revenue generated through cess levy by Njombe region could be TZS 3,555,662,880 (TZS 3.6 billions).

On the other hand if we consider Njombe region adopted Wanging'ombe DC cess levy modality of charging 5% of market price per bag with the current market price of TZS 50,000 per bag then the Njombe region with six Councils could have earned about TZS 12,698,796,000 (TZS 12.7 billions) (Table 1) as part of own source income generated from potato cess levy. Looking at the two modalities of charging cess levy

between Njombe TC and Wanging'ombe DC it is clear that using Njombe TC cess levy arrangement the regions loses up to 9,143,133,120 (TZS 9.1 billion) in situation where the trade is based on the standard weight of 100Kg per bag.

Table 2: Expected Cess Levy from the Current Package Practice / Ngoma (130Kg per bag)

Council	Cess levy Rate			
	Production (Tons)	Number of Bags	Njombe TC Scenario (Tsh. 700)	Wanging'ombe Scenario (Tsh. 2500)
Wanging'ombe DC	93,224.84	717,114.15	501,979,905.00	1,792,785,375.00
Njombe TC	243,504.00	1,873,107.69	1,311,175,388.00	4,682,769,225.00
Njombe DC	12,600.00	96,923.08	67,846,156.00	242,307,700.00
Makambako TC	4,896.00	37,661.54	26,328,078.00	94,028,850.00
Ludewa DC	35,357.00	271,976.92	190,383,844.00	679,942,300.00
Makete DC	118,370.00	910,538.46	637,376,922.00	2,276,346,150.00
TOTAL	507,951.84	3,907,321.84	2,735,125,288.00	9,768,304,600.00

Source: Njombe Regional Secretariat, 2017

Given scenario 2 of the current packaging practices of “ngoma” with up to 130Kg per bag with the total production of potato for all six Councils in the region of about 507,951.84 Tons (Table 2); considering the Wanging'ombe DC and Njombe TC tax rates for cess levy the total revenue generated could be TZS 9,768,304,600 (TZS 9.7 billion) and TZS 2,735,125,288 (TZS 2.7 billion), respectively. The findings are interesting for both scenarios; looking at the differences of revenue accrued through cess levy between Wanning'ombe DC and Njombe TC resulting from differential applicable tax rate calls for harmonization to avoid unfair treatment of traders within the same region but also to minimize loss of income from own sources.

Comparing the standard package (100Kg per bag) and “ngoma” package which is in the current practice, results on Table 3 shows that there is a significant loss of revenue for each Council. For Example, consider the two Councils covered during this study i.e. Wanging’ombe DC and Njombe TC results show that the former lost TZS 2,933,616,400.00 (TZS 2.9 billion) and the later lost TZS 820,572,587.00 (0.8 billion). This is a significant loss of revenue that could have assisted to cover several social services in the area of jurisdiction. In view of the fact that Councils are not able to fund agriculture for a reason of budget constrain; this could be one avenue to generate adequate income from own source that could subsequently be used to support agriculture extension services and minimize possibilities of local brokers to exploit farmers on grounds of monopoly of market information which is currently not available to farmers due to poor extension services.

Table 3: Revenue loss for the Local Government Authorities

Council	Revenue based on standard package (100Kg)			Revenue based on current Practice (130Kg per bag)		Revenue Loss	
	Production (Tons)	Njombe TC (Tsh. 700)	Wanging'ombe DC (Tsh. 2,500)	Njombe TC (Tsh. 700)	Wanging'ombe DC (Tsh. 2,500)	Njombe TC (Tsh. 700)	Wanging'ombe DC (Tsh. 2,500)
Wanging'ombe DC	93,224.84	652,573,880.00	2,330,621,000.00	501,979,905.00	1,792,785,375.00	150,593,975.00	537,835,625.00
Njombe TC	243,504.00	1,704,528,000.00	6,087,600,000.00	1,311,175,388.00	4,682,769,225.00	393,352,612.00	1,404,830,775.00
Njombe DC	12,600.00	88,200,000.00	315,000,000.00	67,846,156.00	242,307,700.00	20,353,844.00	72,692,300.00
Makambako TC	4,896.00	34,272,000.00	122,400,000.00	26,328,078.00	94,028,850.00	7,943,922.00	28,371,150.00
Ludewa DC	35,357.00	247,499,000.00	883,925,000.00	190,383,844.00	679,942,300.00	57,115,156.00	206,982,700.00
Makete DC	118,370.00	828,590,000.00	2,959,250,000.00	637,376,922.00	2,276,346,150.00	191,213,078.00	682,903,850.00
TOTAL	507,951.84	3,555,662,880.00	12,698,796,000.00	2,735,125,288.00	9,768,304,600.00	820,572,587.00	2,933,616,400.00

Source: Njombe Regional Secretariat, 2017

3.3 Initiatives to rescue porters

The Njombe Town council has realized that the current packaging of ngoma has a negative impact on the health of porters, the majority of whom suffer from muscular pains, headaches, and numbness in the arms and legs, mobility problems and even deaths. To combat the situation, the council is piloting to use other standard package material which is estimated to have a capacity of about 50kg when zipped.

The study explored on the practicability of the new packaging in respect to the current practices. In this view, if the proposed packaging is implemented without precaution, it will be another source of exploitation of farmers. Traders are likely to buy at agreed price (half of the current packaging) but if not controlled may exceed the standard weight and create another `ngoma`. If the extra potatoes added to the bag are estimated at say 20kg or above then using new package is likely to create extra weight of up to 40kgs or above in 2 bags of 50Kgs. For this case it will be very important to take great care in implementing the new package.

Given the argument raised by local brokers and traders that they prefer over volume (ngoma) because if they comply to standard weight of not more than 100Kg per bag they face difficulties to sell their produce in the fresh produce markets in Dar es salaam and other markets since potatoes from other regions and neighbouring countries like Kenya they still use lumbesa package. In such an environment they won't compete fairly in the market. However, while this argument was raised but in fact it might be an escape goat among traders and local brokers but the central point is the tendency of traders to seek maximum profit by minimizing transport costs which is charged per bag regardless of the weight, aversion of cess levy which is also charged per bag regardless of the weight and exploitation of farmers who end up being losers in the transaction.

3.4 Challenges hindering the use of standard weight in potatoes trading

The following are challenges on the implementation of weight and measure act in Njombe region

- i. The Weight and Measure Act (Cap 340) provides standard weight limit of 100Kg per bag for potato but the trading practice is based on volume.
- ii. Inadequate number of personnel in the WMA to enforce effectively the Weight and measure Act (Cap 340).
- iii. There is no standard bag for packaging potato a situation that open up for traders / middlemen to use bags with carrying capacity beyond 100Kg.
- iv. Inadequate market infrastructure / centres and facilities developed to cater for potatoes trading restrict traders to have direct link with the farmers.
- v. Inadequate capacity of farmers to negotiate with the middlemen / traders and failure to make decision on volume and price of their produce.
- vi. The LGA do not see agriculture as a priority sector despite the significant contribution it makes to the own source income. This has resulted into low allocation of the budget and has affected enormously the extension services.
- vii. Weak extension services has created dependency syndrome for farmers to rely on the market information from middlemen / brokers. The middlemen and brokers have taken advantage to deceive farmers on the weight/volume and price of the produce.
- viii. Variation of tax rates among LGA within the same region create unfair ground for traders to operate smoothly but also account to the loss of revenue among councils charging lower rates.

3.5 Proposed solutions to using improper weights in trading potatoes

Based on findings this study draws the following recommendations on the way forward:

- i. Awareness creation should continue to stimulate and motivate actors in the potato trade to demand the use of standard weight and measure.

- ii. Market infrastructures and facilities should be constructed / installed to have common market centres, where farmers will bring their potato to sell at a common point. This should eliminate the exploitation of farmers by middlemen since traders will be able to come to the market and have direct link / contact with farmers.
- iii. Introduce a common / standard package bag for potato which will be adopted countrywide. The same package material should be used by traders from outside the country (this should be one of the nontariff barrier for foreign traders to comply before allowed to enter our market)
- iv. Establish information centres for farmers to provide market information and other agronomic information necessary to them. This will minimize monopoly of information to brokers/middlemen which is used as weapon to exploit farmers.
- v. Build capacity of farmers to negotiate market price to withstand pressure from middlemen and brokers.
- vi. The WMA should work with LGAs to supervise and facilitate law enforcement and mobilise resources for the development and implementation of bylaws. In long run the number of WMA staff should be increased to reflect the magnitude of the responsibility they hold.
- vii. The LGA should consider agriculture a priority sector since it is one of the sector contributing significant revenue through own source income. This should be done by increasing the budget allocation to the sector to be able to strengthen extension services.
- viii. Harmonise tax rates for cess levy to create favourable environment for traders and build spirit of voluntary compliance to tax payment.

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Appendix 1: List of respondents

Sn	Name	Position	Affiliation	Contact
1	Fanue Matiku	Ag Regional Manager	Regional WMA	0766586941
2	Emanuel Malanga	Weight and Measure officer	Regional WMA	0769228771
3	Athanas Kayombo	Revenue Accountant	Njombe TC	0754888410
4	Charles Lewanga	Trade officer	Njombe TC	0766336436
5	Nolasco Kilumule	Crop officer	Njombe TC	0753533043
6	William Kinyaga	Cooperative Officer	Njombe TC	0764675193
7	Huruma Mwapinga	Farmer	Luponde Village	0757380564
8	Emelda Mlelwa	Farmer	Luponde village	0759600707
9	Yuditha Chaula	Farmer	Luponde village	0766874333
10	Ereneusi Nyamle	Trader	Luponde village	0757495788
11	Reward Mjema	Trader	Luponde	0686392773
12	George Mgaya	Counsellor	Uwemba ward	0762625334
13	Ndunguru Odo	WEO	Uwemba ward	0743295839
14	Chrisobinus Manga	Farmer	Uwemba ward	0753178793
15	Savio Henerick	Village Chair person	Ikisa	0758521651
16	Suzane Njomlo	Extension officer	Uwemba ward	0766486...
17	Atle kayuni	Ag Director	Wanging`ombe	0713637021
18	Bernadetha Fivawo	DAICO	Wanging`ombe	0754870409
19	Kasmir David	Chairperson Revenue Committee	Wanging`ombe	0755635034
20	Upendo Mwankemwa	Trade officer	Wanging`ombe	0759980987
21	Pasifiki Mhapa	Crop officer	Wanging`ombe	0767765108

Sn	Name	Position	Affiliation	Contact
22	Tijara Kupaza	WEO	Ulembwe ward	0765385706
23	Venance Ngimbuji	Regional chairperson- MVIWATA	MVIWATA Njombe	0765335829
24	Melekzedek Mandele	Farmer	Igagala village	0754257258
25	Yekonia Mgya	Farmer	Igagala village	0763909868
26	Aldo Mgeni	Farmer	Igagala village	0762927972
27	Wilfred Mligo	Farmer	Igagala village	0652158977
28	Maiko Kawogo	Farmer	Igagala village	0762577959
29	Beno Mwalongo	Famer	Igagala village	0763517359
30	Debora Gunda	Trader	Igagala village	0753497747
31	Grace Shirima	Trader	Igagala village	0762372564
32	Atilio Mlowe	Farmer	Igagala village	0764171174
33	Fanuli Mlogo	Farmer	Igagala village	0762781442
34	Godlove Nziku	Farmer	Igagala village	0756221938
35	Veronica Bange	Farmer	Igagala village	0759062766
36	Amani Bimbiga	Farmer	Igagala village	0752036434
37	John Kiswaga	Farmers	Igagala village	0763553589
38	Dominicus Marko	Farmer	Igagala	0764254172
39	Aida Mwepele	Farmer	Igagala	0742665507
40	Brown Kaogo	Farmer	Igagala	0762821421
41	Valentina Mlelwa	Farmer	Igagala	0754211358
42	Isdory B. Sampula	Farmer	Igagala	0757326081

Sn	Name	Position	Affiliation	Contact
43	Isaya U. Kitaponda	Village Executive Office (WEO)	Igagala	0759042626