STAPLE FOODS VALUE CHAIN ANALYSIS

COUNTRY REPORT - MALAWI

November 2009

This publication was produced for review by the United States Agency for International Development. It was prepared by Chemonics International Inc.

ACRONYMS AND ABBREVIATIONS

ACE	Agriculture Commodity Exchange for Africa
AGRA	Alliance for a Green Revolution in Africa
AISP	Agriculture Input Subsidy Program
ADMARC	Agriculture Development and Marketing Board
CISANET	Civil Society for Agriculture Network
CPL	Chibuku Products Ltd.
CHDI	Clinton Hunger Development Initiative
COMESA	Common Market for Eastern and Southern Africa
COMPETE	Competitiveness and Trade Expansion Programme
EAC	East African Community
FEWSNET	Famine Early Warning System Network
FNSJTF	Food Nutrition and Security Joint Task Force
GAC	Group Action Committee
GMAC	Grain Marketing Advisory Council
GOM	Government of Malawi
GTPA	Grain Traders and Processors Association
ICRISAT	International Crops Research Institute for the Semi-Arid Tropics
MACE	Malawi Agricultural Commodity Exchange
MBS	Malawi Bureau of Standards
MoAFS	Ministry of Agriculture and Food Security
MoIT	Ministry of Industry and Trade
MRA	Malawi Revenue Authority
NASFAM	National Smallholder Farmers Association of Malawi
NEPAD	New Partnership for Africa's Development
NFRA	National Food Reserves Agency
NPQS	National Plant Quarantine Service
NSO	National Statistics Office
SMIP	Sorghum and Millet Improvement Programme
SPS	Sanitary and Phytosanitary
SABI	Sustainable Agri-Business Initiative
SADC	Southern Africa Development Community
SFRFFM	Smallholder Farmer Revolving Fertilizer Fund of Malawi
USAID	United States Agency for International Development
VCA	Value Chain Analysis
WFP	World Food Program
WRS	Warehouse Receipt System

Exchange rate

Local Currency	=	Malawi Kwacha (Mkw)
USD 1.00	=	MK 140

Weights and Measures

1 hectare (ha)	=	2.417 acres (ac)
1 kilogram (kg)	=	2.204 pounds (lbs)
1,000 kilograms (kgs)	=	1 metric tonne (MT)
1 kilometer (km)	=	0.62 miles

CONTENTS

List of Tables

List of Figures

List of Annexes

INTRODUCTION

Context

The Competitiveness and Trade Expansion (COMPETE) program, in collaboration with EAC, COMESA and EAGC has selected staple foods, among other sectors, for value chain analysis (VCA) with the objective of enhancing economic growth and food security in East and Central Africa.

COMPETE is part of the USAID/East Africa's new regional Agriculture, Competitiveness and Trade Activity, which aims to increase African trade and competitiveness in regional and global markets by reducing barriers to trade, improving market access, and furthering regional integration. Trade in staple foods is identified as being particularly important as the majority of small holder farmers in Southern Africa depend on this trade for their livelihood and food security. It responds to four major US Government initiatives – the African Growth and Competitiveness Initiative, the Initiative to End Hunger in Africa, the Global Food Security Response, and the African Growth and Opportunities Act.

The Significance, Objectives and Scope of the Study

The overall objective of this assignment is to conduct a value chain and trade policy environment assessment for select staple foods in Malawi geared towards providing a framework for the development of a strategic plan to improve the volume and value of staple foods marketed in Malawi. The specific objectives of the assignment are to:

1. Synthesize of value chain assessment reports (staples and non-staples) by Governments development partners and map out activities of development partners by identifying who is doing what and where.

2. Conduct a **VCA** starting with production/farm gate, and moving through all points of market transfer and value-added including but not exclusive to: service providers (input/service suppliers), producers, traders, grain reserves, parastatals, exporters, and processing companies. Include all primary products and by-products. Produce a VCA flow chart for each of the products.

3. List all "**players**" along the chain by name, location type of entity and contact information. This will include all major producer organizations, cooperatives, and key corporate (commercial) estates if any; all processing companies, status of operation, i.e. dormant, % capacity, and ownership structure.

4. Identify and explain all **issues, problems and constraints** at each transfer point in the chain; i.e. yields, prices, payment systems, transport, quality, frequency of transfers (points of sale); storage limitations; processing limitations (low technology), etc.

5. Identify **volume** flow between sectors and cover all local use (rural) and consumption of Staple foods and Staple foods by-products. Do farmers keep a portion of their Staple foods crop and if so, for what purpose?

6. Identify and explain the **value change** between transaction points adjusting for measurement differences (baskets to kilograms) and conversions from one type to another type (Staple foods to processed product such as ugali or pop corn).

7. Identify and analyze, using COMPETE template for trade policy platform, all trade regulations that govern intra-country flow; exports and imports of Staple foods – Local Authorities regulations, Quality Standards, Sanitary and Phytosanitary and Pest Risk requirements, tariff and other non tariff charges on Staple foods imports, customs clearance procedures.

8. Assess the status, impact, opportunity for reform and measures necessary to facilitate reform of pricing and marketing policies

9. Assess the status, policy framework and opportunities of the structured trading system

10. Provide insight and personal perspective on the issues and problems. Make recommendations on interventions at "links" in the value added chain that may assist the industry in general and the smallholder farmer in particular to improve on volume and/or value of the produce.

11. Develop a five year base line of data for volume and value ending with the 2008/2009 season if possible.
    i) Production – volume, value and price (in US$ equivalent), 2004 – 2008
    ii) Exports – volume and value (in US$ equivalent), 2004 – 2008, disaggregate by destination countries
    iii) Domestic sales – volume and value (in US$ equivalent)
    iv) Imports – volume and value (in US$ equivalent), 2004 – 2008, disaggregate by countries of origin

This report presents the results of a market assessment and baseline survey of agricultural value chains for nine staple foods in Malawi:

- Maize
- Wheat
- Rice
- Sorghum
- Millet
- Beans
- Pulses
- Cassava
- Groundnuts

Methodology

The report adopts a value chain approach which is used to evaluate the market potential of agricultural commodities. The value chains for each of the staple foods are analysed from farm inputs, through the production and processing sectors to wholesale and retail. The study has made use of existing data with the National Statistics Office (NSO), Ministry of Agriculture and Food Security (MoAFS), Ministry of Industry and Trade (MoIT), Malawi Bureau of Standards (MBS), Malawi Revenue Authority (MRA) and individual farmers, traders and processors. Questionnaires were sent with explanatory notes to representatives in the relevant ministries and executives of farmers associations, traders, processors and retailers. Follow-up visits were made to discuss replies and explore opinions. Interviews were also held with NGOs involved in development of various commodities and the information was cross-checked where possible with other components of the industry. For the sake of

completeness, the results of other recent value chains undertaken in Malawi were also processed and the main conclusions synchronized with those from this particular analysis.

Limitations

A limitation of this study was that the volume of work was considerable given the amount of information required relative to the time available and lack of recent VC studies on these crops. To capture all the complexities of a single product value chain would take many weeks of field visits, numerous interviews with small traders, large traders and processors as well as government actors throughout the country. It was not feasible to attempt this level of research for nine separate products in the time allocated, therefore the depth in any one value chain was sacrificed for breadth across the nine staple foods examined. The true value of this study therefore lies in having identified cross-cutting issues between the staple food value chains rather than specific strategy solutions for each staple food crop. Having established the baseline data and vertical/horizontal linkages for each crop, the consultants believe there is scope for further analysis and strategy formulation with all the major actors using this study as the starting point for such dialogue.

While government data collection has improved significantly as a result of increased funding and technical expertise at the NSO, there is still doubt expressed over the reliability and accuracy of official figures, particularly in relation to crop production and imports and exports. Many clerical errors were encountered in the processing of the data, with the inaccurate recording of units of measurement being the most common. In the case of import and export data, where possible, official figures were corroborated with traders to determine accuracy of quantities.

Maps of the geographical area where the staple food crops are produced were unavailable so data from the Agricultural Statistics Bulletin (2008) was used to compile data of the relative geographic distribution of the crops by a north, south and central criteria.

Finally the disclaimer needs to be made that a value chain approach only provides an overall picture of underlying costs, profits, and trade competitiveness. Individual producers, local traders, processors, and distributors all have their own cost and pricing structures that can vary significantly from the overall estimates, and costs and returns are subject to seasonal and local variations in crop yield, price, and market opportunities. Therefore the results of the analysis should be considered as providing indicative distribution of the value added along the chain of actors.

Report Structure

The paper is organized in four parts and 17 sections including the present introduction. Section one has provided a brief overview of the context, objectives, methodology and study limitations for this value chain analysis research. **Part I** provides the country economic context (2), highlighting the importance of agriculture to the Malawi economy (3). **Part II** sets out the value chain analysis for each of the select staple commodities in nine sections covering, respectively, maize (4), wheat (5), rice (6), sorghum (7), millet (8), beans (9), pulses (10), cassava (11) and groundnuts (12). **Part III** examines the business enabling environment for trade in agricultural commodities with two sections covering the policy environment (13) and regulatory framework (14). **Part IV** presents the conclusions (15), policy implications (16) and recommendations (17) in three final sections. A comprehensive list of references and value chain actor contacts are provided in the annexes.

PART ONE: THE ECONOMY

OVERVIEW OF MALAWI'S ECONOMY AND AGRICULTURE

The current macroeconomic environment is fairly positive and stable, contrasting with the previous record of years of soaring budget deficits and erratic growth. Malawi has recorded respectable economic growth in recent years, with the rate of growth of GDP increasing incrementally from low and negative growth to high growth rates: -5% in 2001 to 8.6% in 2007, and 9.7% in 2008.[1] The high growth rate of 2008 was attributed mainly to improvements in agricultural sector performance – maize output, for example, has increased from 1.2 million MT in 2004/5 to 3.8 million MT in 2008/9 – as well as the commencement of uranium mining in the north of the country. Indeed, Malawi was ranked 4th in *The Economist*'s top growers for 2009.[2] However, these figures must be seen in the context of extreme poverty – it is estimated that 73.9% of Malawians earn less than $1.25 per day[3] – a low base income relative to other economies, both regionally and internationally (see Table 1).

Table 1: Gross national income per capita (PPP international $), 2008[4]

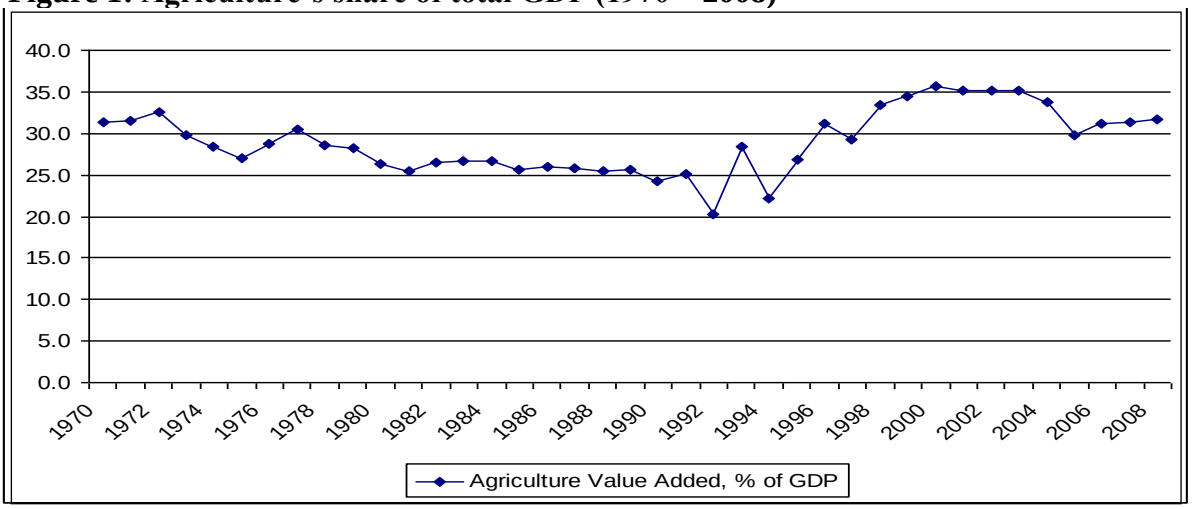
Country	PPP ($)
UK	36,130
South Africa	9,780
Malawi	830

Source: World Bank

2.1 The Significance of the Agricultural Sector

Agriculture in Malawi contributes over 30% to GDP (Figure 1), employs over 80% of the labour force and contributes over 80% of the export earnings. It is the only sector that is still by far critical for the economy in terms of job creation, export diversification, poverty reduction and overall growth.

Figure 1: Agriculture's share of total GDP (1970 – 2008)

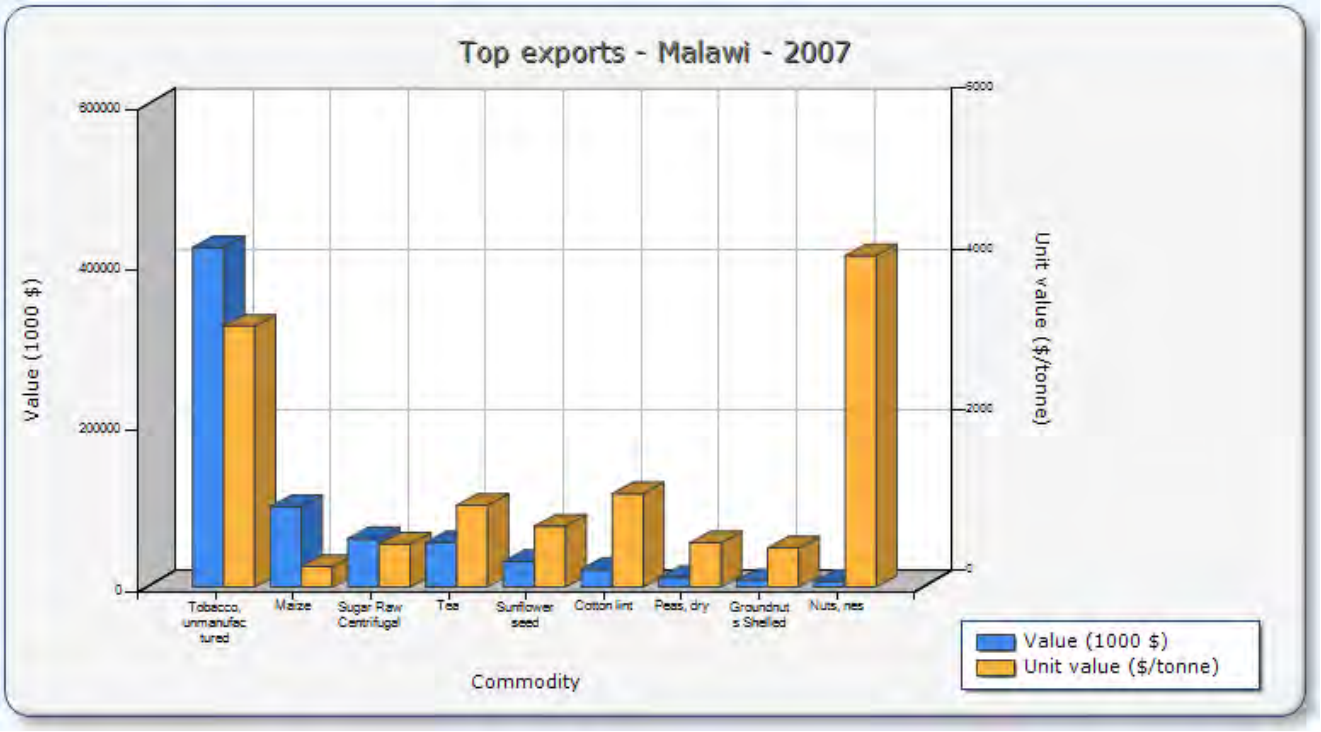


Source: World Bank VCA report (2008)

[1] IMF, World Economic Outlook, April 2009
[2] The Economist, 'The World in 2009'
[3] Human Development Index, 2009, online at: http://hdrstats.undp.org/en/indicators/102.html
[4] The World Bank Group, 2009, online at: http://siteresources.worldbank.org/DATASTATISTICS/Resources/GNIPC.pdf

In terms of staple food contributions to export earnings maize, pulses and groundnuts are the most significant (Figure 2).

Figure 2: Top exports from Malawi by value, 2007



Source: UN/FAO

The smallholder sub-sector contributes more than 70% with the estate subsector contributing less than 30% to agricultural GDP. Smallholders grow mainly subsistence food crops such as maize, cassava and legumes with tobacco, paprika and cotton grown as cash crops on customary held land. The average smallholder land holding is 1.2 ha and has been declining due to an annual population growth of 3%.

2.2 Dynamics of Growth in the Agriculture Sector

Total agricultural output has shown a trend of positive growth in recent years. Cereal production in particular has increased dramatically. Official figures from MoAFS show Malawi's cereal production for the 2008/9 season as having increased by 30%, from almost 3 million MT in 2008 to 3.9 million MT in 2009. Maize accounts for the majority of this increase with production having risen from 2.63 million MT in 2008 to 3.77 million in 2009. Production figures and percentage growth for the other staple foods covered in this report are shown in the table below:

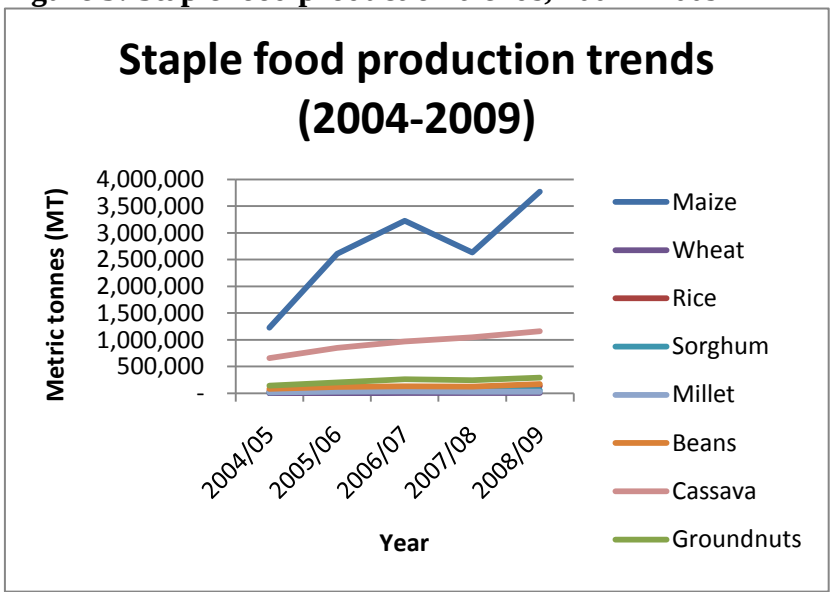
Table 2: Staple food production in MT, 2007- 2009

Crop	2007/8	2008/9	% growth
Maize	2,634,710	3,769,102	43%
Cassava	1,047,355	1,162,412	11%
Groundnuts	243,215	293,948	21%
Pulses	179,716	216,035	20%
Beans	124,702	170,553	37%
Rice	114,885	137,130	19%
Sorghum	61,999	60,025	-3%
Millet	31,869	26,866	-16%
Wheat	2,386	2,811	18%
TOTAL	**4,440,837**	**5,838,882**	**31%**

*Cassava production recorded in dry weight i.e. 30% of wet weight

Source: MoAFS

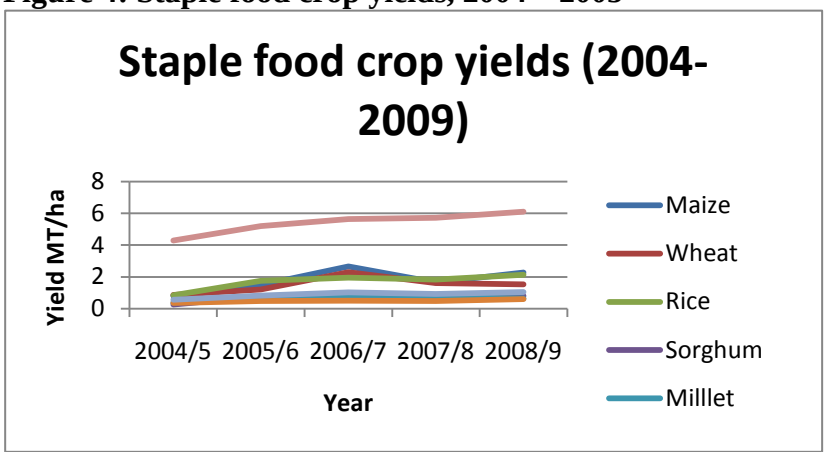
Figure 3: Staple food production trends, 2004 – 2009



Source of data: MoAFS

Increased production can be attributed to favourable weather conditions and the timely and increased uptake of improved seed and use of fertilizers from the agricultural input subsidy programme. However, while total agricultural output has been increasing, Malawi's agricultural productivity in staple food crops (except maize and cassava), has shown signs of stagnation over the past five years (see figure 4). Most of the yield stagnation can be attributed to low adoption and less intensive use of productive agricultural technologies, unreliable rainfall pattern and also production inefficiencies.

Figure 4: Staple food crop yields, 2004 – 2005



Source: MoAFS

2.3 Main Commodities Produced

The agricultural sector in Malawi is still highly dominated by a few food and cash crops. In spite of past attempts to diversify the food and export basket, there is still high concentration on maize and tobacco as key food and cash crops, respectively. For example, in 2008, both maize and tobacco both achieved positive volume growth rates of over 40%. While estates focus on high value crops for export such as tobacco, tea, sugar and coffee, the majority of smallholder farmers concentrate of food crops such as maize, cereals, beans and pulses and roots and tubers.

As smallholder farmers occupy over 80% of total arable land, food crops can be said to form the basis of agricultural production in Malawi. Within the staple food set (as defined by this study), maize accounts for almost 60% of land cultivated by the smallholder sub-sector, followed by groundnuts and beans at 10% each (Table 3).

Table 3: Ranking of staple food crops by hectarage, 2008/9

Crop	Hectarage 2008/9	Distribution %
Maize	1,660,374	59%
Groundnuts	282,054	10%
Beans	282,032	10%
Pulses	236,957	8%
Cassava	190,803	7%
Sorghum	75,332	3%
Rice	64,303	2%
Millet	42,539	1%
Wheat	1,841	0%
TOTAL	**2,836,235**	**100%**

Source: MoAFS

2.4 Main Challenges and Constraints

Some of the core challenges affecting the productivity and development of the agriculture sector in Malawi have been identified as follows:

Low productivity
Cultivation methods among smallholder farmers remain traditional, with low levels of mechanisation and low productivity. The agricultural sector is heavily dependent on rain-fed cultivation. A weak agricultural credit system, unorganised market structure, unfavourable weather, small land holding sizes and inadequate technology development contributes to low productivity in the smallholder sector. The absence of more productive agricultural technologies has resulted in land degradation due to continuous cultivation, soil erosion, deforestation and limited technology adoption on land and water.

Poor Rural Finance
Rural finance has already been identified by many actors as a key constraint to boosting cash crop production. Major supply of rural finance services is still poor and more 'Microfinance and poverty alleviation' oriented.[5] Rural finance is currently provided through two main governmental institutions although private and non-governmental institutions are gradually becoming more interested.

- Malawi Rural Finance Company, which serves small, medium scale agriculture farmers, with almost 80% of loan portfolio being agriculture loans in the past but a lower proportion in recent years.
- Malawi Rural Development Fund is a Government run microfinance programme established in 2005. It has a nationwide coverage with an outreach of 130,000 individuals as of March 2008. It targets the rural poor and other vulnerable groups in society, providing loans to groups of women, men, and youth.

2.5 Agriculture sector policies

The agriculture sector has been prioritised as the main focus of the *Malawi Growth and Development Strategy: From Poverty to Prosperity 2006-2011 (MGDS)* which sets out to provide an environment that: (1) increases agriculture productivity (2) increases exports of food staples, (3) increases the contribution of agro-processing to economic growth and (4) increases exportation of agro-processed products.

The draft agricultural strategy that followed the MGDS, *Agriculture Development Programme 2008 - 2012* also focuses on food production and food security with the ultimate objective of improving the nutritional status of the country. Specifically, the framework sets out to strengthen smallholder linkages to markets and agro-processing through:

- increasing smallholder cooperatives supplying agro-processing industries
- supporting commercialization of technologies in key areas
- increasing the contribution of agro-processing to Gross Domestic Product
- increasing value added to agricultural products
- orienting smallholder sub-sector to greater commercialization and international competitiveness

[5] Providers of microfinance in Malawi are in different forms: Government owned (Malawi Savings Bank, Malawi Rural Finance Company, Malawi Rural Development Fund, DEMAT, SEDOM) Private and not for profit companies (CUMO, FINCA, OIBM, PRIDE Malawi), Financial Co-operatives (affiliated under MUSSCO) and NGOs (such as FITSE, NABW, Microloan Foundation, ECLOF)

To address these goals Malawi has undertaken one of the most ambitious drives to develop its agricultural sector witnessed in a generation. The initiative involves targeting fertilizer and seed inputs aimed at supporting the poor smallholder farmers in the country. The policy, known as the Agriculture Input Subsidy Program (AISP),[6] was launched in 2005 following a drought which left close to 5 million people in need of food aid (Fewsnet, 2009). Since 2005/6, the scale and scope of the AISP has grown dramatically. In its first year 166,000 MT of fertilizer was distributed throughout the country. In the most recent growing season (2008/9), 218,000 MT of fertilizer was distributed plus an additional 24,000 MT was later distributed to deal with 'flood relief' (MoAFS, 2009). The subsidized fertilizer was targeted to reach 1.7 million farm families and 750,000 hectares of land under maize, while the maize seed was targeted to reach 1.2 million farm families on 600,000 hectares and the legumes, 200,000 farm families. The seed subsidy aimed to cover all farming households in the country – approximately 2.56 million households.

As a result of the AISP, in combination with good weather, Malawi experienced record harvests in 2008/9, achieving its goal of 'national food security' and potentially allowing it to export much needed maize to the region. In five years Malawi has shifted from a gross maize deficit situation of –500,000 MT in 2004/5, to a gross surplus situation of over 1 million MT in 2008/9. However, there are significant doubts of the scale of the reported surpluses, and the question of sustainability of the program is also pertinent. Since the start of the AISP the price of fertilizer has risen by over 250% and the price of seed has nearly doubled, as a result of soaring global oil and chemical prices.[7] The value of other seed types and inputs are relatively small. The increase in scale of the fertilizer and seed subsidy, the dramatic increase in the cost of inputs and the increase in scope (new seed and input subsidies) has led to a massive increase in net costs (these figures exclude government administrative costs, which are not published). In 2005/6 the net cost of the AISP was $51m, but over time this rose fivefold to $262m[8] in 2008/9 (MoAFS, 2009). The net cost in 2008/9 therefore represents around 84% of the MoAFS budget; 16% of the national budget; and 5.6% of GDP. Significant cost over-runs have been a consistent feature of the AISP since 2005.

The subsidy on inputs does not increase overall competitiveness of Malawi because the full input costs are still borne by the Government. The value for money and the opportunity cost of the resources used in the scheme need to be considered, as well as the effect on the macro-economy. There is a risk that government resources are being diverted away from long-term beneficial economic development activities in order to meet current social obligations.

The impact of government intervention in staple food markets is more closely examined in Part III and other mechanisms for tackling agricultural finance failures are suggested. For example, directly through measures that increase regular and adapted finance market for crop diversification and rural income generation and through the availability of efficient private sector rural finance mechanism. Supporting warehouse receipt systems and contract farming arrangements are also strongly recommended as an alternative to government subsidies and price-setting policies.

[6] Before then there were other variants of input support programs such as the Starter Pack in the late 1990s and early 2000s and the Targeted Inputs Program from 2003/04. Nb, the AISP is also known as the Farm Input Subsidy Program.
[7] 'Going Against the Grain: Fertilizer Subsidy in Malawi', 2008
[8] The Ministry of Finance figures exclude the cost of the fertilizer used for 'flood relief' and a one-off 'special subvention' to the SFRFFM

PART TWO: VCA FOR SELECT STAPLE COMMODITIES

THE MAIZE SUB-SECTOR

3.1 Production & Consumption

Maize is by far the most important food crop in Malawi. Over 60% of national calorie consumption derives from maize; 97% of farmers grow maize; and over half of households grow no other crop.[9] Smallholder production reached an all-time high of 3.77 million MT in the 2008/9 season. In contrast, estate maize production is very low, at an estimated 142,737 MT in 2008.

The official figures show that production has more than doubled in the last five years since 2004/5 (see table 4). Favorable weather conditions and input support to smallholders through the Agricultural Input Subsidy Program (started in 2005) are the two main factors behind the 2008/9 bumper season.[10] However, there is concern that official maize production forecasts may have been overestimated.

Reduced confidence in official crop forecasts creates difficulties in determining whether formal imports are required. Evidence of overestimated official crop estimates is that while national maize production estimates for the 2007 and 2008 harvests were both far above national consumption requirements, imports from Mozambique and Tanzania have been streaming into the country almost continuously since mid 2007 (see section 3.2). According to Fewsnet, Malawi imported 59,000 MT of maize in the 2007/8 season through informal cross-border trade flows. In the first 3 months of the 2008/09 season alone, Malawi imported over 40,000 MT of maize.

Table 4: Maize hectarage, production and yield, 2004/5-2008/9

Year	2004/5	2005/6	2006/7	2007/8	2008/9
Hectarage	1,513,929	1,762,839	1,215,356	1,596,955	1,660,374
Acreage	3,739,405	4,354,212	3,001,929	3,944,479	4,101,124
Production (MT)	1,225,234	2,611,486	3,226,418	2,634,710	3,769,102
Yield (MT/ha)	0.81	1.48	2.65	1.65	2.27

Source: MoAFS

As can be seen in the table above, the area under maize cultivation is still increasing. Although the government tries to promote diversification, most people tend to keep growing maize in order to secure their own food supply and are encouraged to do so by the subsidy.[11] That maize has been so expensive in recent years only encourages this action at the expense of cash and other subsistence crops.

[9] See GoM's Integrated Household Survey, 2006 and GoM's and World Bank's joint Poverty and Vulnerability Assessment, 2006.

[10] The climate is one of the most important factors affecting the maize production. In Malawi there is one growing season (Nov – March) and production is heavily influenced by prevailing climatic conditions such as temperature, rainfall, wind and humidity. The timing and evenness of rainfall are the critical variables to the final yield. In addition to climate, access to inputs plays a significant role in determining production levels. A poor farmer who cannot afford fertilizer and certified seeds has very little potential of increasing his/her crop production.

[11] It is the primary supplier of cereal-based calories where it comprises over 90% so fluctuations in its production have always had significant implications on the country's food security.

Farming households consume most of the maize they produce themselves. Most rural consumed maize is milled in local mills that serve a radius up to 5 km, although in very remote areas this might be a longer distance.

During the harvest season, the maize is pounded first before milling into flour. As pounding reduces the volume of the maize by up to 35%, people tend not to pound the maize from October to March. After pounding, the products are the kernel and maize bran. The former can be processed in two different ways: It can be ground into flour right away or it can be soaked in water for 2-5 days, dried and then taken to the maize mill to be ground into flour. This form of flour is known as white flour and is the preferred form for most Malawians.

The maize bran can be kept for consumption during the hungry period, either after grinding into flour for own consumption or sold to people who cannot afford to buy maize. Others use the maize bran for feeding livestock such as chickens, goats and pigs, or it is sold by millers as livestock feed. Small quantities of maize are processed locally into sweet, non-alcoholic beer or by fermentation into spirit.

Table 5: Projected maize surplus for the 2009/10 season

ITEM	MAIZE (MT)
Domestic Availability	**3,415,438**
Net production	3,281,412
Official opening stocks	134,026
Domestic Utilisation	**2,458,123**
Food Use*	2,133,002
Seed Requirement	41564
SGR Replenishment	40,000
Feed and Industrial uses	250,000
Domestic Food Balance (Gap)	**957,315**
Total projected net imports	**65,000**
Actual net imports (30/07/09)	**40,797**
Total Food Gap (Apr 09-Mar 10)	1,022,315
Actual Food Gap (Apr 09-Nov 10)	998,112

* Based on revised estimated population of 13,187,632 by NSO and kilocalorie requirement/person/day of 2100 from SADC/FAO Early Warning Food Balance Sheet Guidelines

Source: Technical secretariat at MoAFS

With national consumption at 2.2 million MT and informal imports coming in, Malawi expects to have a maize surplus of around 1 million MT. The food balance sheet will be further discussed in section 12.

1.2 Exports and Imports

The main border posts in Malawi through which maize trade takes place are:

1. Songwe in the Northern Region at the border with Tanzania
2. Mchinji in the Central Region at the border with Zambia
3. Mwanza in the Southern Region at the border with Mozambique

Table 6: Maize exports, 2004-2008

	Extra/Intra EAC/COMESA Maize Exports 2004-2008 in volume and value (by destination countries)									
	2004		2005		2006		2007		2008	
Destination	**MT**	**USD**	**MT**	**USD**	**MT**	**USD**	**MT**	**USD**	**MT**	**USD**
INTRA COMESA/EAC										
Congo	0	0	0	0	0	0	30	4,512	0	0
Zimbabwe	833	60,450	0	0	15	4,865	370,459	9,300,179	41,833	1,628,027
Zambia	0	0	0	0	0	0	11,888	559,130	310	82,770
EXTRA COMESA/EAC										
Mozambique	0	0	0	0	0	0	0	0	0	0
RSA	30	2,121	0	0	0	0	1,708	165,650	0	0
TOTAL	**863**	**62,571**	**0**	**0**	**15**	**4,865**	**384,055**	**10,024,959**	**42,143**	**1,710,797**

Source: NSO

Table 7: Maize imports, 2004-2008

	Extra/Intra EAC/COMESA Maize Imports 2004-2008 in volume and value (by country of origin)									
	2004		2005		2006		2007		2008	
Origin	**MT**	**USD**	**MT**	**USD**	**MT**	**USD**	**MT**	**USD**	**MT**	**USD**
INTRA COMESA/EAC										
Tanzania	2,014	304,276	10,279	2,254,336	14,871	3,437,909	11	451	545	18,370
Uganda	8	32,835	0	0	0	0	0	0	0	0
Zambia	23,979	5,077,382	410	58,232	22	552	0	0	20,126	924,558
Zimbabwe	0	0	120	19,178	0	0	300	3,885	0	0
EXTRA COMESA/EAC										
Canada	0	0	0	0	390	48,683	0	0	0	0
India	3	198	1	218	11	672	15	341	0	0
Italy	0	0	0	0	825	154,834	0	0	0	0
Mozambique	22,119	1,570,059	8,249	1,332,064	25,964	2,268,237	151,124	1,465,218	50,584	4,308,647
RSA	104	4,443	54,559	14,965,850	12,669	4,060,853	74	1,403	106	4,047
UAE	0	0	0	0	1	181	0	0	0	0
UK	0	0	0	0	0	0	0	0	1	123
USA	2	82	79	6,553	289	62,900	0	0	4,881	67,774
TOTAL	**48,229**	**6,989,275**	**73,697**	**18,636,431**	**55,042**	**10,034,821**	**151,524**	**1,471,299**	**76,243**	**5,323,519**

Source: NSO

Informal trade by unregistered traders and information on quantities does not enter the national statistics. This trade goes either through the official border posts or across Malawi's long and porous border. Curiously, Malawi informal exports to neighbouring countries have been significantly low over the years despite the previous three seasons having been exceptionally good in terms of maize production. This factor could be due to the fact that the high production (and surplus) areas are situated around high production areas in neighbouring countries like Zambia and Tanzania. It also indicates that the price of Malawi maize is not as competitive as it neighbours. Informal maize imports continue to be dominated by flows from Mozambique (Table 8).

Table 8: Informal cross-border maize export and imports, 2005/6 – 2008/9

	Informal cross border maize EXPORTS by destination country (MT)					
	2005/6	**2006/7**	**2007/8**	**2008/9**	Apr-May 08/09	Apr-May 09/10
Mozambique	133	591	3,755	203	42	156
Tanzania	944	2,928	1,581	239	196	286
Zambia	81	202	1,779	129	86	8
TOTAL	**1,158**	**3,721**	**7,115**	**571**	**324**	**450**
	Informal cross border maize IMPORTS by source country (MT)					
Mozambique	71,218	77,394	56,078	54,223	16,465	11,807
Tanzania	84,862	1,888	1,073	2,910	4	0
Zambia	419	378	2,500	5,388	255	27
TOTAL	**156,499**	**79,660**	**59,651**	**62,521**	**16,724**	**11,834**

Source: FEWSNET

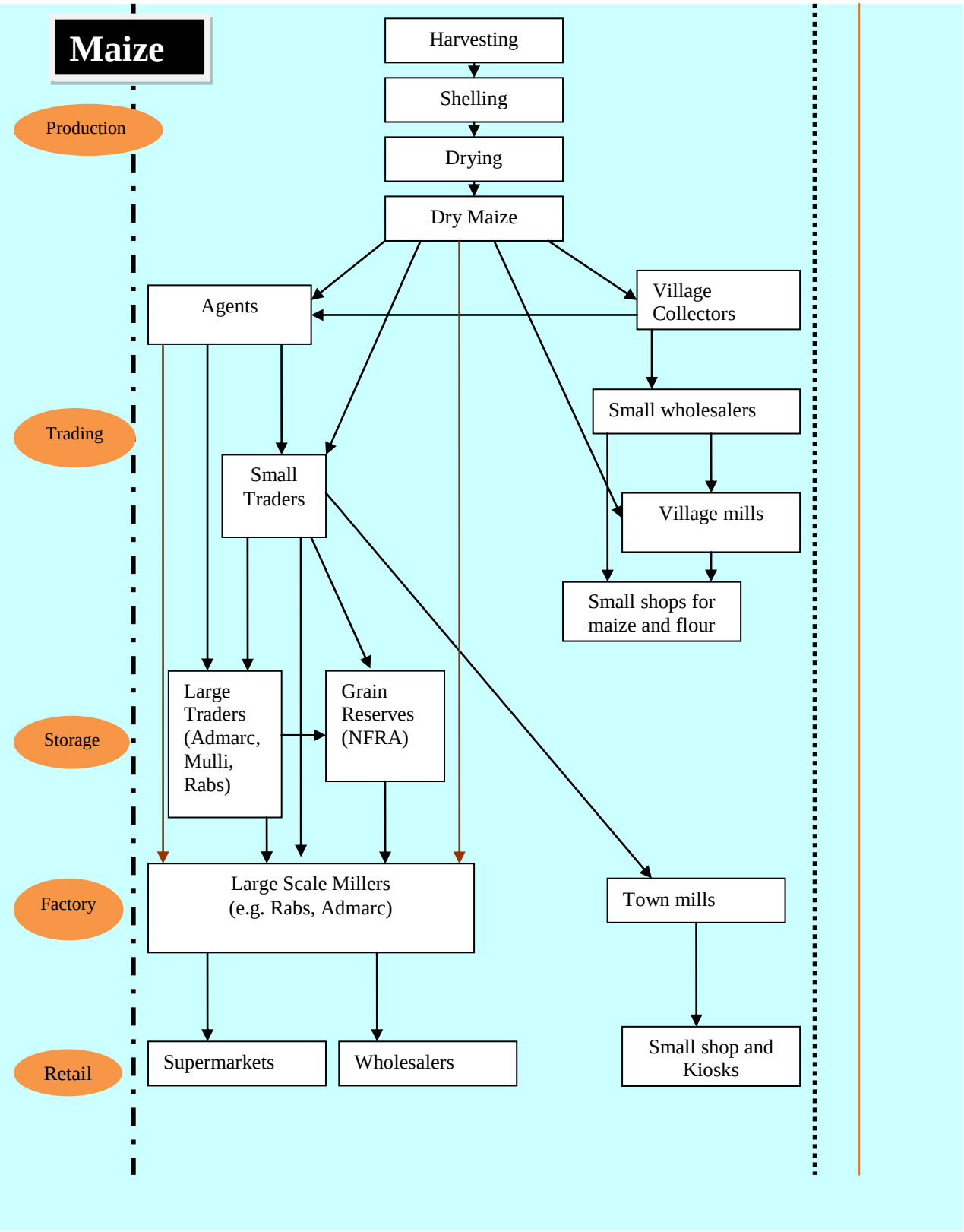
3.3 Maize Value Chain Mapping

3.3.1 Functions matrix

To develop a VC map for each commodity it was necessary to determine the main actors in the staple food product value chain. For instance; input suppliers, producers, brokers, traders, millers, processors, etc. The functions of the various actors in the staple food product value chain were also noted bearing in mind that functions may be performed by more than one actor, and each actor may perform more than one function. For example; input supply, production, storage, trading, processing, exporting, importing. Once the functions and actors were identified they were put in a matrix to show who does what for each staple food commodity. For each commodity function matrix, the functions are listed along the side and actors across the top, as illustrated in the maize matrix below. The boxes are shaded to match functions with actors.

Functions	**Participants/Actors**					**Support Markets**
	Domestic/Export-Import Market Channels					
	Input suppliers	Farmers	Traders	Processors	Wholesalers	Support services: Financial Services, SPS/Standards Certification, **Research stations, Ministry of Agriculture extension services, Agriculture Input Subsidy Program**
Wholesale, Retail, Exporting, Importing				Rabs, Transglobe	Rabs, Transglobe, ADMARC, NFRA	
Processing			Rabs, Transglobe, Mulli Brothers	Rabs, Transglobe, Mulli Brothers	Rabs, Transglobe	
Trading			Rabs, Transglobe, Mulli Brothers, Export Trading, HMS, ADMARC, Farmers World	Rabs, Transglobe, Mulli Brothers		
Collecting, Bulking, Storage		Small holders; Estates		Rabs, Transglobe, Mulli Brothers	NFRA, ADMARC	
Production		Small holder farmers (1.6 mill ha); estates (50,259 ha): Illovo; tea estates; press corporation				
Input Supply	MFC, Optikem, Fertilizer Association			Rabs, Transglobe, Mulli Brothers		

3.3.2 Value Chain map



3.3.3 Geographic distribution

The central region produces over half of the maize cultivated in Malawi. The southern region is the smallest producer partly as a result of high population density and therefore a higher pressure on land use. Moreover, the climatic conditions in parts of the south are not very favorable for maize, particularly the Shire Valley, which is too dry and the highland areas that are too wet (Thyolo/Mulanje). Maize deficits are also most common in this part of Malawi.

Table 9: Maize geographic distribution, 2007/8

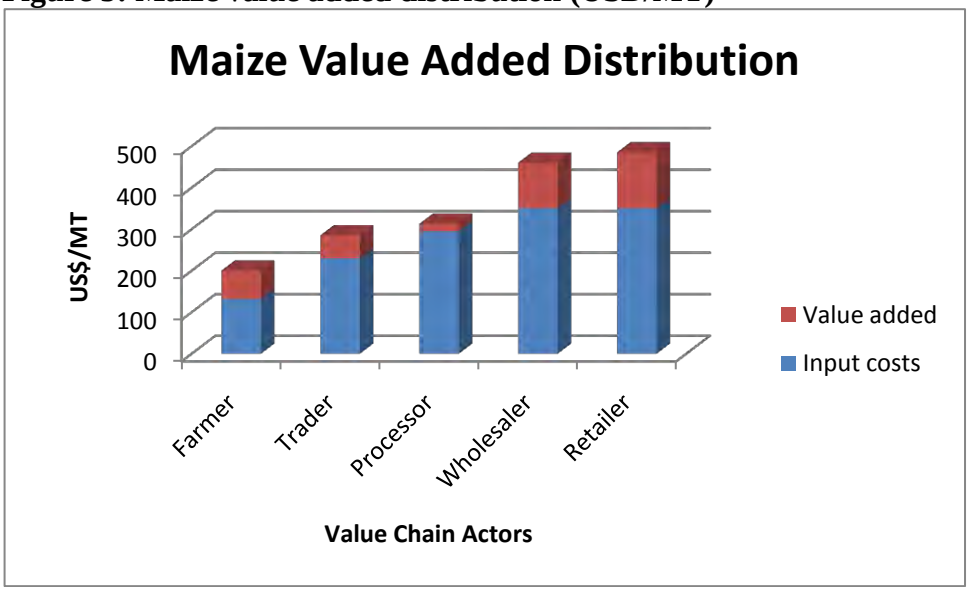
Area	Hectares (ha)	Production (MT)	Yield (MT/ha)	Region	Distribution
Karonga	43,314	98,510	2.27	**North**	**24%**
Mzuzu	142,931	246,386	1.72		
Kasungu	171,413	512,825	2.99		
Lilongwe	283,368	718,457	2.54	**Central**	**59%**
Salima	38,715	516,348*	13.34		
Machinga	223,716	841,644	3.76		
Blantyre	171,873	363,333	2.11	**South**	**17%**
Shire Valley	44,300	220,378	4.97		
National	**1,119,630**	**3,517,881**			

Source: 2007/8 Agricultural Statistical Bulletin, MoAFS

* Figures in the ASB 2007/8 for 'composite' maize show unusually high production and low hectarage compared to previous years and compared to 'local' and 'hybrid' maize types for the same year. There is evidently a major clerical error in the bulletin which has been brought to the attention of MoAFS.

3.3.4 Value added distribution

Figure 5: Maize value added distribution (USD/MT)



Source: Value chain actor interviews

3.4 Constraints and opportunities

3.4.2 End market analysis

The form of	Users (e.g.	Volume of	End	Source of the product

the product at the end market	millers, households, dairy farmers	National Requirement in MT per year	Market Price in July 2009 in US$ per metric ton	Domestic Market	Imports	
					Intra regional i.e from EAC/COMESA	Extra regional i.e. outside EAC/COMESA
Green Maize	Households	2,133,002 MT (FBS 2009/10)	285.7	3,281,482 MT (FBS 2009/10)	0	0
Dry Maize (Grain)	Millers, households		357.14		20,671 MT (NSO 2008)	55,572 MT (NSO 2008)
Flour – Roller Mill (cream of maize)	Households, food aid organizations		571.43 – 714.28	100%	0	0
Flour – Straight Grind (maize meal)	Households, food aid organizations		464.29 – 535.71	100%	0	0
Poultry Feed	Poultry farmers	250,000 MT (FBS 2009/10)	428.6	100%	0	0
Corn/Soya Blend	Households	Not available	714.28 – 857.14	100%	0	0
Beverage (Chibuku beer)	Households	13,000 MT	607.14	100%	0	0

3.4.2 Vertical linkages

It is important to note that the bulk of the smallholder production goes to self-consumption (approximately 70-80%) within the producing household and never enters the market other than for local milling into 'Ufa' (maize meal) flour for cooking into 'Nsima'. There are a range of small and large-scale traders including the parastatal ADMARC that bring maize into the traded market (some are indicated in the functions matrix). The maize may be traded through several organizations before being sold to a consumer or processor. It is then usually processed by large-scale millers into maize meal or for brewing and for animal feed, though some quantity is milled in the urban areas by the consumer. These processors then link into their own market chains to the final consumer or business user (animal feeds.)

The 20-30% of maize production entering the market used to be sold primarily to ADMARC (pre 1990s) for historic regulatory and subsequently market dominance reasons, however private traders and local markets have now progressively taken over ADMARC's position in recent years. The difference between local markets and private traders is very subtle. Local market refers to those trading locations where there are very small-scale buyers and sellers of agricultural produce and inputs. In a local market, farmers come to sell one or a few bags of maize, in most cases to people who come to buy in the same or smaller quantities. On the other hand, private traders, as companies or individuals, are involved in the business at a larger scale. Usually they have a vehicle or the ability to hire one and they usually have access to storage facilities as well. This enables them to purchase when the price is low immediately pre or post harvest and to release stocks as the price increases during the 'hungry season' from December to March of the following year. Whilst this concentrates profits in the hands of the traders, it does also act as a smoothing of supply so that higher prices in the market will call forward stored domestic supplies.

The number of players in the small trading segment is enormous compounded by the fact that there are often several traders involved before the maize finally reaches the final buyer. With respect to larger

traders, they also mill, export and import as part of their activities as well as producing animal feeds. They often buy from the small-scale traders to enable them to get larger volumes than making many small direct purchases from individual farmers.

Another option for the small-scale trader is to sell to the processing industry, including:
1. Commercial milling companies
2. Animal feed industry
3. Beverage industry

Out of the above three, the commercial milling companies process most maize, estimated at around 80,000 MT. They mill the maize into flour products, mostly Super Cream of Maize, Cream of Maize or Whole maize meal, but may also add soya, sugar and other ingredients such as iron, zinc and calcium. Large milling companies usually purchase through traders or are traders themselves.

The processing industry purchases in two ways: Traders make contracts with the processing industry and then try to find the cheapest maize, locally or from other countries mostly Mozambique; or traders find cheap maize and offer it to the feed and beverage industry.

Currently there are few formal vertical linkages between farmers, traders and processors in the maize value chain. Communication is direct, either by phone, or face-to-face at the point of purchase. Official representation on points of policy is managed through the associations. The Farmers Union is the main lobbying body for farmers and processors are represented by the Grain Traders and Processors Association (GTPA). Dialogue is limited, poorly coordinated and generally one-sided with farmers communicating to processors and traders in a crisis situation.

Farmers, traders and millers all aim to use their capacity for storage and financing to take advantage of seasonal price fluctuations in staple food crops. In the case of maize, small-scale farmers are the first to sell, partly because they have very limited storage capacity but primarily because the sale of their crop is often the only source of cash income that they have in the year. Their need for cash to pay off debts, buy school uniforms and purchase household items and farm inputs is acute by the time they come to harvest their crops. They are also usually not aware of their true costs of production because they do not value their labour input highly enough. The result is that they tend to be price-takers and they enter the market at the lowest point in the seasonal price fluctuation. In contrast, commercial farmers tend to avoid selling close to the harvest as they aim to benefit from the steady price rise as the season progresses. They store to the best advantage dictated by the financing cost and storage capacity, thereby facing storage, fumigation, insurance and interest charges in anticipation of improved prices.

Apart from lowering farm gate prices for producers, the phenomenon of immediate post-harvest crop sales is also unhelpful for the processors as they have to find capital to purchase in bulk at the start of the season rather than make purchases at intervals throughout the season. There is an opportunity to upgrade this linkage through a warehouse receipt system (WRS) whereby farmers could deposit their crop in storage and wait for an optimal time to sell. This approach could be further enhanced by promoting backwards integration with farmers in the industry through the mechanism of contract farming whereby farmers agree to a production target and price with processors and some payment can be made upfront for inputs and the rest of the payment staggered over the season.

Some WRS projects are already in operation in Malawi. Sometimes driven by a third party, i.e. donor or NGO, processors and farmers and/or input suppliers coming together to form a collaborative agreement. For example, EDV has allocated EUR 825000 to set up a warehouse receipt system by a company from South Africa, Avignon Holdings Pty (trader in fertilizers and agricultural

commodities), and a company in Malawi, Farmers World Ltd. The latter is involved in the buying and selling of agricultural commodities, mainly maize, soya and beans from predominantly smallholder farmers through its more than 120 regional depots in the country. These depots also deliver services to the smallholders by selling fertilizers, seeds and equipment.

The government has allocated $200,000 per year until 2010/11 for establishing a warehouse receipt system (see Annex 2.) This is a small share of the overall maize intervention budget (0.2%) but it does signal the government's interest in such initiatives. In the 2007/8 AISP Programme Document the rationale for providing some up-front investment to enable the launch of a warehouse receipts system is to 'ensure that there is a clearer indication about the level of private sector maize stocks held in country. This would reduce the political pressure on Government to increase its own physical stocks.'

3.4.3 Horizontal linkages

Within Malawi, hardly any farmer organizations are active in the maize sector, as these organizations mostly deal with pure cash crops not dual subsistence/cash crops like maize. The logic of maize production in the smallholder sub-sector is not primarily determined by output prices, as most maize is for consumption rather than for sale. Although some smallholders sell some maize just after the harvest to buy other basic needs, they generally obtain more cash from sales of other cash crops than from sales of maize. The National Smallholder Farmers Association (NASFAM) is an exception to this rule. It is the largest independent smallholder owned organization in Malawi with over 100,000 members and acts as one of the main voices of the smallholder.

The GTPA acts as the voice for the grain trading sector in Malawi. It has the core objective of educating, and influencing government and donors on policies pertaining to food security, more specifically in grain production and marketing. Other key objectives include private sector capacity building and trade facilitation. When the GTPA established the secretariat in September 2006, the association had 24 members, most of which were large processors and traders. As of September 2009 GTPA has 180 fee-paying members, 50% of which are small scale traders and even farmers.

Grain traders and processors, due to distrust or lack of information, often operate in isolation without being aware of new developments within their local settings, but also at a global level. Understanding the market advancements in the sector and their implications can arm a commodity trader to take advantage of positive changes and strategise in the case of negative developments. GTPA has established a network of linkages with COMESA, East African Grain Council, Regional Agricultural Trade Intelligence Network South Africa market information providers. These aid the GTPA to give its membership current and relevant market information and their significance in the Malawian context. In Malawi GTPA has also established linkages with other relevant government ministries, NGOs, donors and other private sector players who share similar disposition in grain marketing

In September 2007, after sustained lobbying by the GTPA for the government to lift the export ban on maize in Malawi, the government allowed the exportation of 400,000 MT of maize to Zimbabwe. As of February 2008, 300,958 MT of maize had been exported to Zimbabwe, but then no further maize was available. The export to Zimbabwe was facilitated by the National Food Reserve Agency with a loan from GoM to the Government of Zimbabwe, which was still outstanding as at July 2009.

The association does not engage in grain trading but does facilitate trade where the opportunity presents itself. The GTPA was active in lobbying government to lift the maize export ban that was imposed in 2005, to create market access for its members. GTPA is involved in negotiating better

contracts terms and prices on behalf of its members in government contracts. The association also processes export permits for its members when exports are permitted.

Plans for the future include a more active role in grain trading in Malawi, administering the pilot warehouse receipt initiative in the country, offering more training to members and joining other regional bodies to expand their business network. It is also envisioned that the GTPA will gradually expand its scope from just maize to all other and staple food crops such as beans, groundnuts and soy beans.

3.4.4 Supporting markets/services

The AISP is a government provided input support service that has the greatest outreach to maize farmers in Malawi. Before subsidy coupons are allocated, a list of eligible recipients at village and district level is drawn up by Traditional Authorities, in partnership with Ministry of Agriculture extension workers. In the most recent AISP, coupons could only be redeemed at ADMARC and the Smallholder Farmer Revolving Fertilizer Fund of Malawi (SFRFFM), another government institution. In previous years, private sector retailers had been allowed to participate, but this was stopped due to fears from government that abuse of the system was taking place. Seed is issued to farmers through ADMARC, SFRFFM and eight private sector retailers, who later redeemed the coupon value from government. There are thought to be around 2.5m households benefitting from the 5.9m coupons distributed in 2008. The maize fertilizer coupons allow farmers to redeem a 50kg bag for a 'top-up' payment of around $6, which represents around a 90% subsidy (given 2008 fertilizer prices). Although the system of 'targeting' the subsidy is prone to abuse, the AISP has at least created nationwide awareness about the benefits of fertilizer that was not previously appreciated in traditional farming communities. Production has soared as a result.

NFRA has a mandate to maintain adequate buffer stocks of grain, to protect Malawians against fluctuations in food production, availability and prices. NFRA was established as an independent trust in July 1999. Previously, the National Strategic Grain Reserve was managed by ADMARC, but it was decided that the national grain reserves should be run independently and on a cost recovery basis, although the latter has not been achieved yet. NFRA buys from ADMARC, private traders and imports maize whenever necessary. Their sourcing depends mostly on availability of maize and in times of emergencies on availability of transport. NFRA has not imported since 2006 due to the maize surplus in 2007, 2008 and 2009. With new 20,000 MT storage facilities being built at Mzuzu (north), Mangochi (central) and Luchenza (south) – in addition to the existing 180,000 MT in Lilongwe and 80,000 MT in warehouse – there is an opportunity for the NFRA to provide storage facilities to farmers associations and other traders to help avoid post harvest losses.

A donor-driven initiative that is providing support services to maize farmers is the 'Millenium Village' project in Mwandama that currently supports a population of 35,000 in 7 villages with high quality seed and fertilizer as inputs to the households. At harvest time they are running a warehouse receipting scheme that allows the farmers to store their produce in the warehouse and will be able to get the benefit of a much better price at the time of sale in the low season. The warehouses are regularly fumigated to minimize post-harvest losses and they are currently considering establishing a milling plant that would convert the maize to maize flour for further value addition.

Most agricultural traders lack both formal skills and trade finance. They operate small-scale businesses with few assets and trade only with people they know, in cash terms over very short distances. Contracts are verbal and there is no strong legal system of enforcement. In Malawi, two-thirds of traders cannot get bank loans, only 6% own a vehicle, and less than half have permanent storage

facilities The GPTA has started an initiative to help its members to access finances through the banks and other financial institutions. Banks have been invited to meetings with GTPA members in order to enhance understanding about the roles and financial requirements of the grain traders in the grain markets so that they can work towards extending financial services to this sector.

THE WHEAT SUB-SECTOR

4.1 Production and Consumption

Wheat has the lowest production figures of all of the staple foods covered in this report. Up until recently, production has remained below 2,000 MT per year from around 2,000 hectares of land. This represents 0.1% of all the area grown with cereals in the country and 0.1% of all the cereal production. In 2006/7 production figures more than doubled from 2000 in 2005/6 to 4605 MT. This can be attributed to a Clinton Hunger Development Initiative project that aimed to encourage wheat production in Southern Malawi.

Table 10: Wheat hectarage, production and yield, 2004/5-2008/9

Year	2004/5	2005/6	2006/7	2007/8	2008/9
Hectarage	1,987	1,656	2,005	1,479	1,841
Acreage	4,908	4,090	4,952	3,653	4,547
Production (MT)	1,730	2,000	4,605	2,386	2,811
Yield (MT/ha)	0.87	1.21	2.30	1.61	1.53

Source: 2007/8 Agricultural Statistical Bulletin, MoAFS

If grown with quality inputs and appropriate agricultural techniques, wheat yields could reach at least 2-3 MT per ha and expanding this crop to the potential hectarage, Malawi may attain wheat self-sufficiency and probably produce surplus for the export market.

Traditionally grown under rain-fed conditions, wheat is used mainly as a cash crop and almost never used at household level for self consumption. Currently, production does not meet the demand that is increasing with time due to population growth, gradual urbanization and improvements in living standards. With the world increase in wheat prices, more interest has been shown in Malawi in growing wheat to replace some of the 100,000 MT imported every year. Malawi currently imports almost 97% of wheat consumed domestically, even though conditions are favourable for local wheat production. The main obstacle to wheat and wheat derivate products consumption remains the purchasing power of the Malawians.

4.2 Exports and Imports

The two millers in Malawi rely on importing wheat for processing into wheat flour. Currently only around 3% of wheat is sourced domestically and around 97% is imported, mainly from non-COMESA/EAC countries. The official figure for wheat imports is 88,000 MT which seems underestimated because one of the millers, reported that they process 100,000 MT of wheat per annum, only 3 MT of which is locally produced.

There are no formal exports of wheat as a raw material but the main by-product, wheat bran, is mostly exported to South Africa (10,000 MT), or used for dairy cattle feed.

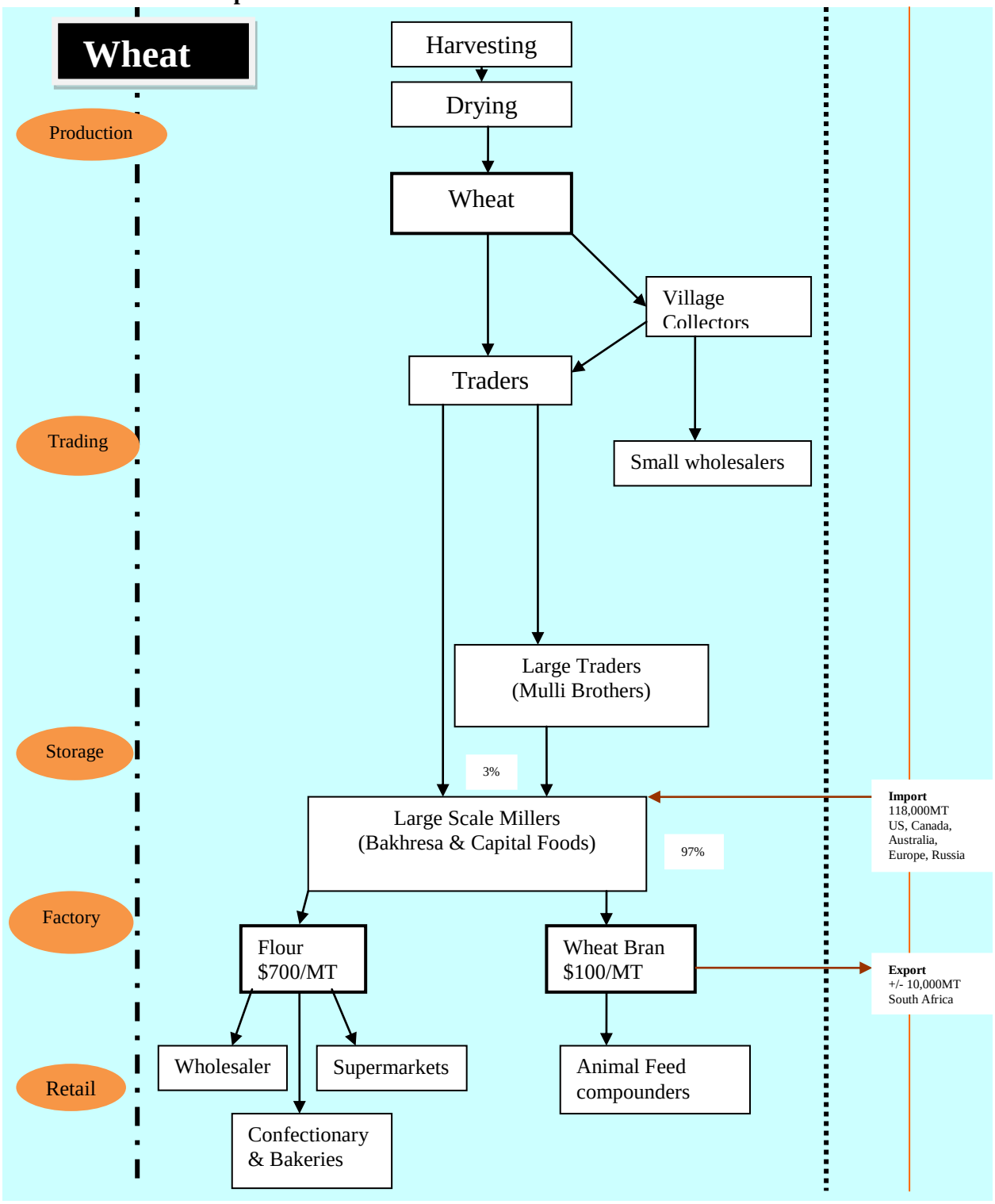
The possibility of imposing tariffs on wheat imports was discussed in 2006 but as Malawi only produces 3,000 MT of wheat per year against the annual importation of +/- 100,000 MT the tariff would not be justified until the area planted with wheat increased significantly.

4.3 Wheat Value Chain Mapping

4.3.1 Functions matrix

Functions	Participants/Actors					Support Markets
	Domestic/Export-Import Market Channels					
	Input suppliers	Farmers	Traders	Processors	Wholesalers	SPS/Standards Certification, Chitedze research station, MoAFS extension services
Wholesale, Retail, Exporting, Importing				Bakhresa, Capital Foods	(Of wheat flour) Kulima Gold, Farmers World Agora, Right Price	
Processing				Bakhresa, Capital Foods		
Trading			Mulli Brothers, small traders			
Collecting, Bulking, Storage			Mulli Brothers	Bakhresa, Capital Foods		
Production		Small holder farmers (1479 ha); Estates (62 ha)				
Input Supply	Seedco					

4.3.2 Value chain map



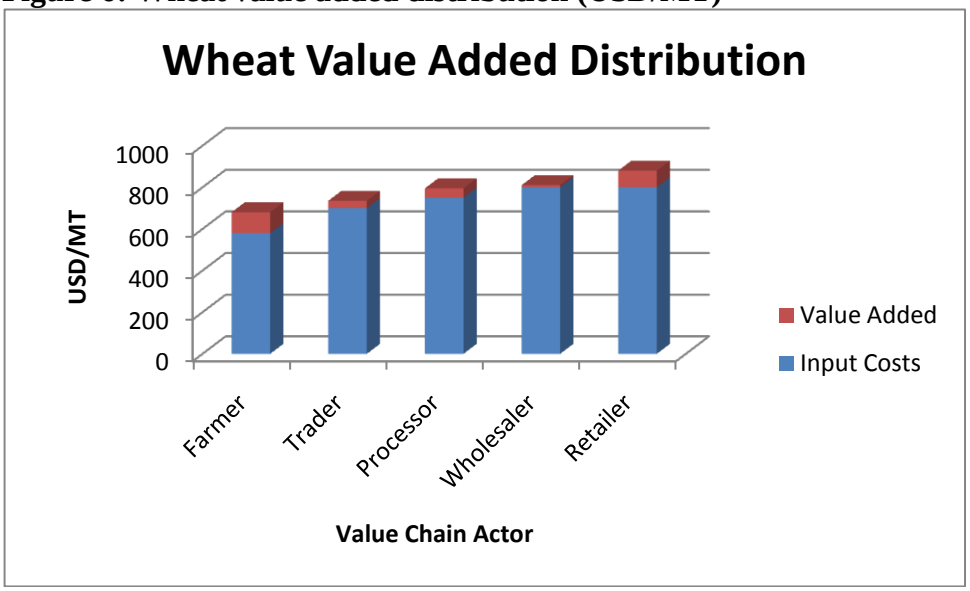
4.3.3 Geographic distribution

Wheat was introduced into Malawi in late 19th century and was grown mainly at 1,500 metres above sea level during the cold season to be used for bread making. Data on the exact distribution of wheat farms in Malawi was unavailable but it is generally grown only in the Tsangano area (Ntcheu and Neno) in Southern Malawi.

While the current hectarage rarely exceeds 2,000 ha, the *potential* area is estimated at 30,000 ha covering Dedza district, Ntchisi/Mwera Hills, Viphya plateau, (Chikwina, Mphompha, Usingini), Phoka and Misuku Hills. If irrigated, wheat can be grown also in Zomba, Upper Shire, Namwera, Mchinji, Kasungu and Lilongwe Plains and Kazuni area in the Northern Region.

4.3.4 Value added distribution

Figure 6: Wheat value added distribution (USD/MT)



Source: Value chain actor interviews

4.4 Constraints and opportunities

The wheat industry suffers at each level of the VC:

a) Before production: the availability of quality input supply is a major problem; fertilizers and pesticides are expensive, quality seed of different wheat varieties seem to be available but have not been multiplied and distributed to farmers while rural finance is almost completely missing.

b) During production: irrigation is missing thus wheat remains a rain fed crop – this in Europe is the normal cropping pattern, but in Malawi irrigation would allow for a second harvest (provided there is proper soil fertility balancing), agriculture practises are poor and the land used is not always the most suitable for the wheat crop. Storage is difficult, and storing facilities are missing.

c) Post production: producers are too small with weak negotiating capacities, logistics is complicated and difficult, traders and middleman control the market. Wheat farmers associations don't seem strong enough to dialogue with buyers.

d) Processing: the tiny size of the wheat market in Malawi means millers have to import wheat from abroad. Problems are encountered in obtaining the foreign currency required and the logistics to import, in addition to the limited purchasing power of the Malawians which represents the main limitation for expansion and growth.

4.4.1 End market analysis

Without the facilities for small-scale processing almost all the wheat produced is sold to Bakhresa (which absorbs around 75% of the raw wheat available on the market) and Capital Foods (25%) for milling. These two millers are entirely dependent on local consumption and have limited export market for their products. The flour produced by these millers is distributed to an end-market of wholesalers, supermarkets, bakeries and biscuit factories. So wheat is grown mainly as a cash crop, not for personal consumption. As the price of wheat and wheat derivatives is consistently higher than maize, bread and other wheat products, such as biscuits, are considered luxury products by the majority in the country where purchasing power is low. So the small size of the domestic market (both in supply of the raw material and in demand of finished products: flour, bread, biscuits and cakes) represent a significant obstacle for local enterprises. Millers have to seek wheat abroad, struggling for foreign currency to fund imports, and even then the local market is uncertain due to the limited purchasing power of the Malawians. The current trend of urbanization and increase in standard of living, however, is pushing the demand for wheat.

Wheat bran is currently exported to South Africa (+/- 10,000MT p/a) showing that there is also a market for wheat by-products that could be developed.

The form of the product at the end market	**Users (e.g. millers, households, dairy farmers**	**Volume of National Requirement in Metric Tons per year**	**End Market Price in July 2009 in US$ per metric ton**	**Source of the product**		
				Domestic Market	**Imports**	
					Intra regional (i.e from EAC/COMESA)	**Extra regional (i.e. outside EAC/COMESA)**
Wheat flour	Households, bakeries, biscuit factories, confectionary industry	100,000 MT	$500	97%	0.5%	2.5%
Wheat Bran	Animal feed	Dependent on availability of other bran (e.g. maize)	$60	100%	0%	0%

4.4.2 Vertical linkages

Challenges for farmers in wheat production include the poor availability of quality input supply; expensive fertilizers and pesticides, lack of access to quality seed of different wheat varieties and the absence of rural finance. Added to this, the absence of 'producer prices,' contract farming and guaranteed prices, means there is virtually no incentives for farmers to grow wheat.

In this environment where producers are small with weak negotiating capacities and logistics are complicated and difficult, traders and middleman control the market.

Contract farming could be a solution to this problem, but the two millers reported that unless investments can be protected, it is unlikely that this option would be considered due to concerns of opportunistic behaviour of farmers in accepting inputs by one company supported to buy the product at the end of the production cycle- and selling at higher prices to another (or to traders offering a better price).

However, Bakhresa, one of the two commercial millers of wheat in Malawi, reports that it sells inputs at cost price to farmers and would formally guarantee a minimum price for the product after harvest in

the interests of promoting domestic production. Unfortunately, in most cases farmers cannot take advantage of this offer due to the high transport fees associated with dealing with the miller directly. The 7% withholding tax applied to direct sales from farmers is a further disincentive. A solution to this problem could be to organise the farmers into an association or club with a chairmen who could arrange the transporting in bulk to the miller.

A case study of this kind of action is a Clinton Hunger Development Initiative (CHDI) which implemented a project in 2006 to assist the organization of 1,200 wheat farmers into the Neno Hills Farmers' Association, and helped them to access financing for their first-ever purchase of improved wheat seed and fertilizer. CHDI also negotiated the purchase of the farmers' resulting wheat harvest by a local wheat miller at prices 50% higher than they received in previous periods. Although, this did account for a peak in wheat production for that season, illustrating the potential of such initiatives, the project terminated abruptly and production levels fell by almost half again the following season. This highlights a typical problem of donor interventions – short-termism and lack of follow up.

4.4.3 Horizontal linkages

There are only five farmers associations involved with wheat out of the 2,175 associations registered at the MoAFS.[12] Of these, only two deal specifically with wheat as a crop, and the others are dominated by other larger staple food crops. Four of the five have been founded within the last 3 years.

The two commercial millers do not have any formal link or communication system. There is an opportunity for improvement if the two millers could meet to discuss ways to promote wheat production, for example, by identifying new high yielding varieties and supporting initiatives to distribute these varieties through agriculture extension services.

4.4.4 Supporting markets/services

Storing capacity at the household level is weak. The Farm Income Diversification Project (FIDP) granary technology may be usefully applied for this crop to reduce post-harvest losses. There is a specific chemical (Actellic Super) used for post harvest treatment which is very effective at preventing deterioration although it is expensive. For the past three years FIDP has supported farmers to produce wheat for market as grain and not processed. The production has been both rainfed and irrigated. Production base has been in three districts supported by the programme out of eleven; namely Chitipa in Misuku EPA, Rumphi at Mphompha and Nchenachena EPAs and Mzimba in Eswazini EPA along the bottom valleys of Chikangwa. Most of the wheat was sold to Raiply for use in timber products. Mzuzu Coffee Planters Union also has been involved in production of wheat as a way to diversify from the usual coffee production among their farmers.

Chitedtze research station have developed several promising varieties both for rain-fed, with a mean of production ranging from 1.8 – 2.6 MT/ha, and irrigated, with a mean of production ranging from 3.2 – 3.8 MT/ha. These could impact production significantly given that current yields are around 1.5 MT/ha. More varieties produced by a Zimbabwean company are under trial in Kasinthula research station. These varieties have allegedly produced yields of up to 8 MT/ha.

[12] Matipa Wheat Producer Association, Changoni Agriculture Group (rice, wheat maize, Irish potatoes, vegetables) Sopani Cassava Association (cassava, soya, maize, wheat), Mchenga Irish Potatoes Farmers Association (Irish potatoes, wheat & beans), Neno Wheat Promotion Project

More NGOs and Governmental projects are needed to assist farmer organizations and help farmers to access financing for their first-ever purchase of improved wheat seed and fertilizer. Support to farmers is also needed in marketing and sales, including negotiating the purchase of the wheat harvest by millers.

The following strategies could improve linkages in the wheat VCA:

1. Start negotiation between milling companies and associations
2. Research stations, in cooperation with the extension service of the MoAFS could lead the development of farmers associations and equip them with the skills to produce high-yielding seeds.
3. Find a solution for protecting investments of large companies if they decide to produce locally through contract farming. As an alternative, the MoAFS could support farming households wishing to produce wheat with start up including inputs supply and extension services

This strategy would be in line with the MGDS which outlined the medium term expected outcomes for agro-processing as being focused on tea, tobacco, sugar, cotton and wheat.' The strategy indicated the ambitious goal of increasing production of wheat from the current hectarage of 2,000 to 30,000 hectares (half of domestic requirement) with the key strategies of improving irrigation, processing and marketing.

THE RICE SUB-SECTOR

1.3 Production and Consumption

Rice is another important smallholder crop in Malawi, grown mostly in areas along the lake shore. Although the land area (only 3% of the area under food crops) and production volume (about 3.4% of total food production) are small compared to maize, it is often believed that Malawi has the potential to produce aromatic rice varieties such as Kilombero and Faya which can compete favorably with rice from major producing countries such as Thailand. Currently, rice is considered by the government as one of the strategic crops to be promoted primarily as an import substitute, but also as an export crop. However, past studies that looked at the costs, profitability and efficiency of rice production have reported mixed results about Malawi's competitiveness in rice production.

A 2005 NEPAD-CAADP assessment identified rice as a high value crop suitable for commercialisation,[13] arguing that the present low yield of 1.5MT – 2MT per ha for Faya and other cultivars under rainfed conditions could be increased to 3.5MT – 4MT per ha. They also predicted that the present cultivated rainfed area of 26,000 – 30,000 ha could be increased to the potentially available area of 70,000 ha. For irrigated rice, it was pointed out that the yield of 4MT per ha is low in comparison with the potential yield of 6MT per ha.

A 2008 World Bank quantitative VCA analysis, however, showed that Malawi's polished rice is more costly to produce compared to Thai (import parity) or Zambian (export parity) rice. Based on 2007 prices, Malawi's production cost was estimated at about US$570 per MT while the import parity price for Thai rice was estimated at US$450 per MT and the export parity price for Zambian rice was estimated at US$480 per MT. This implies that Malawi should rather pursue rice production as an import substitution strategy, except when there are opportunities to exploit regional market niches. For instance, Malawi may specialize in producing special varieties such as *Kilombero and Faya* which are aromatic, long-grain and are likely to attract increased demand from millers and consumers compared to other varieties.

Table 11: Rice hectarage, production and yield, 2004/5-2008/9

Year	**2004/5**	**2005/6**	**2006/7**	**2007/8**	**2008/9**
Hectarage	48,993	52,031	58,091	63,124	64,303
Acreage	121,013	128,517	143,485	155,916	158,828
Production (MT)	41,270	91,450	113,166	114,885	137,130
Yield (MT/ha)	0.84	1.76	1.95	1.82	2.13

Source: 2007/8 Agricultural Statistical Bulletin, MoAFS

1.4 Exports and Imports

Table 12: Rice exports, 2004-2008

	Extra/Intra EAC/COMESA Rice Exports 2004-2008 in volume and value (by destination countries)									
	2004		**2005**		**2006**		**2007**		**2008**	
Destination	**MT**	**USD**	**MT**	**USD**	**MT**	**USD**	**MT**	**USD**	**MT**	**USD**
INTRA COMESA/EAC										

[13] Malawi Invest Project Profile 'Commercialization of high-value crops' (2005)

Zimbabwe	2,904	43,326	1,533	118,904	3,722	145,256	345	124,978	1,011	114,794
Zambia	0	0	150	60,882	250	87,933	16,893	1,004,325	23,089	1,006,190
EXTRA COMESA/EAC										
RSA	45	13,855	30	11,932	152	28,267	2,112	36,962	1,521	22,340
Botwana	0	0	0	0	1	25	0	0	0	0
UK	0	0	0	0	0	0	1	8	0	0
Mozambique	0	0	1	7	0	0	83	46,710	993	59,836
TOTAL	**2,949**	**57,180**	**1,714**	**191,725**	**4,125**	**261,480**	**19,434**	**1,212,983**	**26,614**	**1,203,160**

Source: NSO

Table 13: Rice imports, 2004-2008

	Extra/Intra EAC/COMESA Rice Imports 2004-2008 in volume and value (by country of origin)									
	2004		2005		2006		2007		2008	
Origin	**MT**	**USD**	**MT**	**USD**	**MT**	**USD**	**MT**	**USD**	**MT**	**USD**
INTRA COMESA/EAC										
Tanzania	24	3,262	86	9,765	365	15,397	0	0	13	211
Uganda	0	0	0	0	0	0	48	165	0	0
Zambia	0	0	0	0	0	0	40	950	0	0
EXTRA COMESA/EAC										
Algeria	0	0	0	0	540	6,850	0	0	0	0
Belgium	0	0	0	0	30,000	11,436	0	0	0	0
Belize	180	50,725	120,000	46,611	210,270	175,108	0	0	0	0
Canada	0	0	0	0	0	0	0	0	10	911
China	4	955	5	67	4	3,799	36,702	565,134	22,013	236,142
Egypt	0	0	0	0	0	0	0	0	88	50,703
India	1,480	352,830	1,293	181,090	77,413	38,118	2,601	79,124	1,197	199,823
Ireland	0	0	0	0	64	1,049	0	0	0	0
Italy	0	0	10,500	1,819,340	280	100	0	0	13,000	244,188
Japan	1	155	0	0	0	0	0	0	8,619	1,267,970
Kuwait	1	208	0	0	0	0	2,352	622	0	0
Mozambique	148	40,410	36	9,660	5,343	200,585	6,005	82,656	0	0
Netherland	0	0	0	0	1	30	0	0	0	0
Pakistan	82	24,078	6,447	299,965	112,469	196,130	2,500	48,952	359	84,352
RSA	2,609	735,369	16,075	281,413	160,561	335,930	2,131	26,831	3,462	84,773
Singapore	0	0	30	12,287	0	0	0	0	0	0
Switzerland	0	0	0	0	0	0	0	0	6,800	14,522
Taiwan	0	0	0	0	0	0	15,600	19,616	34,000	161,570
Thailand	287	85,877	280	52,297	11	198	0	0	3,600	181,720
UAE	0	0	270	7,161	3,037	84,690	1,139	10,429	314	7,073
UK	2	287	1	8	0	0	0	0	0	0
Ukraine	0	0	0	0	0	0	0	0	9	1,042
USA	2,881	674,259	0	0	0	1	44	14,410	71	51
Vietnam	60	16,981	18,534	636,773	0	0	0	0	2,000	385,773
TOTAL	**7,759**	**1,985,396**	**173,557**	**3,356,437**	**600,358**	**1,069,420**	**69,162**	**848,890**	**95,555**	**2,920,824**

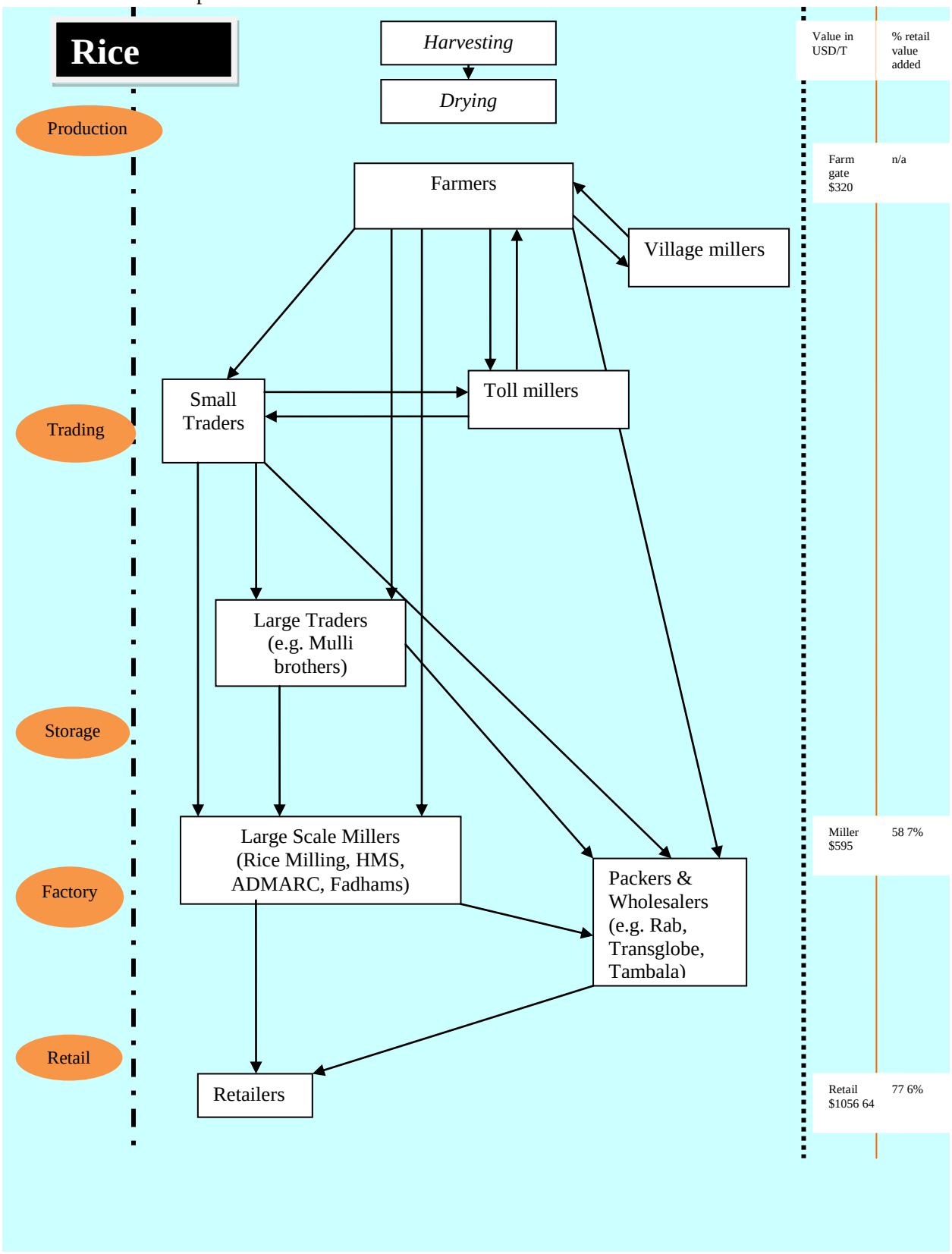
Source: NSO

1.5 Rice Value Chain Mapping

5.3.1 Functions matrix

Functions	**Participants/Actors**					**Support Markets**
	Domestic/Export-Import Market Channels					
	Input suppliers	Farmers	Traders	Processors	Wholesalers	SPS/Standards Certification, Chintedze research station, Ministry of Agriculture extension services
Wholesale, Retail, Exporting, Importing		NASFAM		NASFAM, Rice Milling Rabs	Rice Milling, Rabs, Tambala, Transglobe, HMS	
Processing			NASFAM	NASFAM, Rice Milling, Rabs, Admarc	Rice Milling, HMS, Admarc	
Trading			NASFAM, Mulli Brothers, small traders	NASFAM, Rice Milling, ADMARC		
Collecting, Bulking, Storage			NASFAM, Mulli Brothers	NASFAM, Rice Milling, Rabs		
Production		Smallholder farmers (63,124 ha)				
Input Supply	e.g. Rab, Farmers World, Agora, Seedco					

1.5.1 Value chain map



1.5.2 Geographic distribution

Rice is one of the cereals grown along the Lakeshore, Phalombe Plain, the Shire Valley and areas around Lake Chilwa. The national aim is to increase paddy yields per unit area in irrigated rice schemes and also to increase both the yield and area of rain–fed rice to meet both the domestic and export demand.

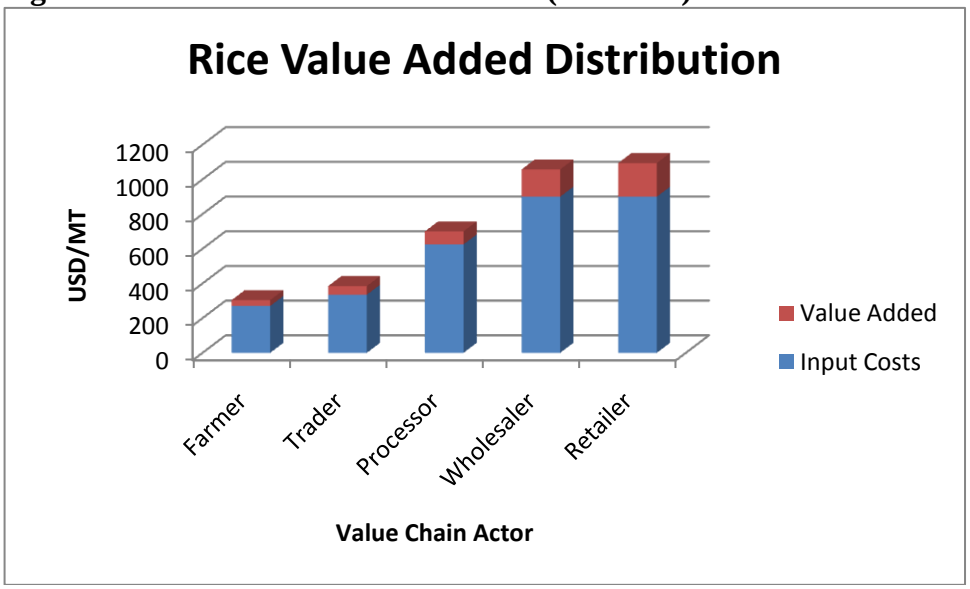
Table 14: Rice geographic distribution, 2007/8

Area	Hectares (ha)	Production (MT)	Yield (MT/ha)	Region	Distribution
Karonga	9,532	20,938	2.20	**North**	**29%**
Mzuzu	3,099	7,571	2.44		
Kasungu	1,584	1,641	1.04		
Lilongwe	3,874	7,437	1.92	**Central**	**46%**
Salima	6,790	12,129	1.79		
Machinga	20,367	28,140	1.38		
Blantyre	10,337	18,353	1.78	**South**	**25%**
Shire Valley	4,569	7,653	1.67		
National	**60,152**	**103,862**			

Source: 2007/8 Agricultural Statistical Bulletin, MoAFS

1.5.3 Value added distribution

Figure 7: Rice value added distribution (USD/MT)



Source: Value chain actor interviews

1.6 Constraints and opportunities

5.4.1 End market analysis

The domestic demand for rice is not nearly as high as that for maize as rice is not a traditional part of the Malawian diet – it constitutes 5% of the kcal/capita/day of cereals compared to the 90% that maize occupies (see Annex 1.) However, as diets are beginning to diversify with increased urbanization and shifting socio-economic status, it has the potential to become a more important component in the consumption of staple foods.

There is also opportunity to create domestic demand for rice by-products by promoting the use of 'briquettes' for fuel that could use husk as a component. This would have the added benefit of reducing deforestation for wood for home fires. The machinery costs about $150,000 however, and the sale price of the briquettes would not cover these costs, especially considering further investment would have to be made in marketing the briquettes to local populations who are used to using easily accessible firewood. One of the rice processors, Rice Milling Ltd, has presented the idea of making briquettes to MoAFS with the intention of securing partial funding for investments. Currently MoAFS has shown very little interest in the scheme despite the benefits to the environment that could result.

The form of the product at the end market	**Users (e.g. millers, households, dairy farmers**	**Volume of National Requirement in Metric Tons per year**	**End Market Price in July 2009 in US$ per metric ton**	**Source of the product**		
				Domestic Market	**Imports**	
					Intra regional (i.e from EAC/COMESA)	**Extra regional (i.e. outside EAC/COMESA)**
Polished rice	Households	60,711 MT (FBS 2009/10)	$1056	99,407 MT (FBS 2009/10)	13 MT (NSO 2008)	95,542 MT (NSO 2008)
Broken rice	Households (for porridge)		$500	100%	0	0
Rice Bran	Animal feed	Dependent on availability of other bran	$100	100%	0	0
Rice Husk	n/a	0	No commercial value	100%	0	0

1.6.2 Vertical linkages

Due to the availability of village mills and 'toll mills' to mill rice, farmers have options about how to sell their rice – in what form and to which actor. Farmers can sell paddy rice to a vendor or small trader, or have it milled themselves and then sold to traders (small or large) or even directly to retail outlets. Transport is, as usual, the main issue preventing smallholders from taking advantage of the latter scenario with the potentially higher prices to be gained from vendors and retailers. Compounding this problem is the closure of ADMARC farm-gate markets where smallholders used to be able to bring their crop to trade –there used to be around 94 farm gate markets, now there are almost none.

Another common issue that the rice value chain faces along with the other staple food crops is minimal storage capacity hampering farmers their ability to take advantage of seasonal price hikes. Rice farmers end up being the 'price-takers' as they enter the market at the lowest point in the seasonal price fluctuation and require immediate sale to release the cash value of the crop. In contrast, commercial farmers tend to avoid selling close to the harvest as they aim to benefit from the steady price rise as the season progresses. They store to the best advantage dictated by the financing cost and

storage capacity, thereby facing storage, fumigation, insurance and interest charges in anticipation of improved prices.

This phenomenon of immediate post-harvest crop sales is also unhelpful for the processors as they have to find capital to purchase in bulk at the start of the season rather than make purchases at intervals throughout the season. Several millers complained at the logistical and financial challenge of having to buy all their years stock in a 2 month selling season. A WRS whereby farmers could deposit their crop in storage and wait for an optimal time to sell could alleviate the pressure on processors and provide better pricing opportunities to farmers. The receipts provided to farmers for their deposits could also be used to leverage funding from financing institutions or even from the processors themselves for inputs for the following season.

The rice sector has a comparative advantage in setting up this kind of system due to a network of research stations in the country that could provide the warehousing facilities given the right amount of support and funding. The research stations could serve as a central depot with a handle on quantities and quality of available produce, and traders and millers could use this information to develop contracts with farmers for provision of a set quantity per season at an agreed price. The Sustainable Agri-Business Initiative (SABI) is currently pushing forward a pilot scheme of this type in the districts of Chikwawa, Nsanje and Machinga. The initial structure would be a collaboration with MoAFS, key local leaders, Rice Milling and the Nkhate Irrigation Scheme. Rice Milling would guarantee purchase of 2000 MT but draw 500 MT every quarter at incremental price increases to take into account storage fees and seasonal increases. This scheme is in the very early stages of action planning so no progress data is available as yet.

Milling yields also play a major part in the value adding of rice paddy and the increase in value/return on paddy. e.g. to make 1MT of 15% broken rice you would have to mill 1.75MT of rice paddy. Of this rice paddy depending on the quality of the paddy 20-25% would be husk (which basically has no commercial value), 10% rice bran, 1% admixture, 8-10% broken and +/-57% polished rice for sale. The quality of the polished rice, especially the broken content, has a major bearing on the cost of the rice. Small mills and ‘toll mills’ currently cannot compete with the large millers in terms of quality of machinery and therefore of the percentage of quality unbroken polished rice that is yielded.

1.6.3 Horizontal linkages

Due to the geographical clustering of rice production and the specific nature of the inputs and processes involved with rice growing and processing, rice clubs are fairly common although many go without formal recognition and have a weak organising and negotiating skills due to their small size. NASFAM has, however, been instrumental in organising these clubs into associations which are formed on the foundations of democratic membership and leadership. NASFAM has 43 member (affiliated) associations. Each of the affiliated associations are democratically governed smallholder farmers’ groupings which operate on the principles of collective action.

A club comprises 10 – 15 individual smallholder farmers from the same area who willingly decide to come and work together in farming business. Different clubs from one locality form what is called a Group Action Committee (GAC). At GAC level the clubs access training, conduct meetings and share different ideas on agri-business. The GACs are also used as marketing blocks, where farmers sell their farm produce.

The day-to-day operations of associations are handled by a management team. This team comprises, among others, the following key staff:

1. Associations Business Manager – responsible for overall management and supervision
2. Area Field Officer – responsible for mobilization of members, capacity building and training (extension work); marketing organization
3. Accounts Officer – responsible for associations financial management

The association management reports to a democratically elected board, which provides the oversight on governance issue. The board comprises of association members who are elected from club level all the way up to the association main board. NASFAM has a secretariat which provides technical support to the member associations. The secretariat is headed by the Chief Executive Officer and he is supported by different technical experts in different fields.

One example of a new supply chain being formed from a strong horizontally linked producer base is the trading between smallholders in Karonga and Scottish buyers through the Scotland Malawi Trade Partnership. The price of rice is agreed between the association, the Kaporo Smallholder Farmers Association (KASFA), and NASFAM, based on the cost of production, plus an additional welfare sum, per kg. NASFAM then buys rice from KASFA at that agreed price (in 2009, at MK62/kg). This can act as a price-leading mechanism which should drive up prices by other potential buyers. The rice is processed by the KASFA-owned, local mill in Karonga, then shipped to Scotland after undergoing quality sampling. This process encourages value-addition in an economically depressed region of Malawi, though it is possible that a more cost-effective way of proceeding would be to use a more efficient mill elsewhere in Malawi and also packing in-country. This will be established through the course of the project.

The millers do not have any formal link or communication system although some millers are members of the GTPA that is rapidly expanding its membership and its influence with government actors.

1.6.4 Supporting markets/services

There are currently just fewer than twenty rice schemes, known as 'research stations' in Malawi that are supporting rice farmers to improve their yields, adopt new farming practices and utilise irrigation technology. The Taiwanese were particularly active in promoting and supporting these research stations until Malawi changed its political allegiance to China in January 2008. There has since been a decline in activity and some of the irrigation schemes have fallen into disrepair due to broken pumps, faulty irrigation channels and the lack of spare parts or technical skills to repair them.

A report in September 2008 made the following recommendations of how to address the slow development of irrigation schemes in Malawi[14]:

1. Setting up the Irrigation Board as envisaged in the 2001 Irrigation act. This would be a concrete step to overcoming the current deficiencies regarding coordination in the irrigation sector.
2. For the MoAFS and the Department of Irrigation to request for clear rules from the MRA on the duty to be paid for imported irrigation equipment. Also for the same government entities to request from ESCOM a review of the electricity tariff structure for irrigation schemes that are pumping.

[14] Wiyo, Kenneth and Jean Mthethiwa (2008), "Determining the major factors that have led to slow development of irrigation"; Final Report; CARD, Bunda College

3. All agencies (projects and NGOs included) to be advised that regarding irrigation equipment the following standardized approaches should be followed:
a. It should not be narrowly focused on the poorest of the poor, but
b. Targeted at smallholder farmers with potential
c. It should be distributed through technical field staff
d. It should not be given out free
e. Sprinklers and motorized pumps are usually too “difficult/expensive” for smallholders
4. More resources are urgently needed for irrigation training, to fund a comprehensive programme that can produce both enough trainers and enough well trained farmers.

Sustainable Agri-Business Initiative (SABI) is piloting an integrated value chain project in southern Malawi, bringing together farmers, millers and government to resolve inefficiencies in the value chain and pilot innovative schemes such as warehouse receipt systems using the existing network of research and irrigation stations that have fallen into disrepair.

THE SORGHUM SUB-SECTOR

6.1 Production and Consumption

Sorghum hectarage has been increasing gradually over the last five years but productivity has hovered around 0.8 MT/ha in the last four years. Sorghum, along with millet, is one of the two staple food crops in this report to have suffered a loss in production from 2007/8 to 2008/9. For sorghum, this is likely to be due to the droughts in the south where 68% of the crop is grown. The loss was not severe, however, as sorghum is a drought-tolerant grain with a strong adaptive advantage and lower risk of failure than other cereals in such environments.

Most of the sorghum produced is consumed by producing households or sold in informal markets, primarily for traditional beer production. There is a niche market for red sorghum with Chibuku Products Ltd (CPL) who use it to brew a popular commercialized maize-based alcoholic beverage.

One of the reasons that have been suggested for not increasing the production of sorghum is that the productivity is low. The average yield is almost a third of that of maize even in the semi-arid areas of Malawi. Although the total production costs are often lower than those for maize, the productivity of small grains measured in terms of returns of labour tend to be low. To make sorghum competitive it is necessary to improve their productivity with an assured quality of the grain. The area under sorghum will not increase significantly unless the productivity of the grain is improved substantially. Therefore there is an urgent need to improve the production technologies for these grains and to disseminate this knowledge to the farmers' fields. Only in this way can these cereals compete locally with maize. Identifying a few well-researched alternative uses for sorghum would yield new avenues for increased utilization and thus act as a catalyst to improve production and productivity.

Table 15: Sorghum hectarage, production and yield, 2004/5-2008/9

Year	2004/5	2005/6	2006/7	2007/8	2008/9
Hectares	68,419	70,644	74,131	74,569	75,332
Acreage	168,995	174,491	183,104	184,185	186,070
Production (MT)	18,175	54,309	63,698	61,999	60,025
Yield (MT/ha)	0.27	0.77	0.86	0.83	0.80

Source: MoAFS

1.2 Exports and Imports

There are currently no exports of sorghum from Malawi. Sorghum imports are shown in the table below.

Table 16: Sorghum imports, 2004-2008

	Extra/Intra EAC/COMESA Sorghum Imports 2004-2008 in volume and value (by country of origin)									
	2004		2005		2006		2007		2008	
Origin	**MT**	**USD**	**MT**	**USD**	**MT**	**USD**	**MT**	**USD**	**MT**	**USD**
INTRA COMESA/EAC										
Tanzania	0	0	2,124	14,499	0	0	0	0	0	0
Zambia	0	0	0	0	40	11,910	5	964	0	0
EXTRA COMESA/EAC										

Italy	0	0	5,300	607,464	28,600	183,763	0	0	0	0
Mozambique	0	0	130,000	924,112	200,000	1,253,139	0	0	0	0
USA	1,026	252,781	70,000	1,057,735	39	284	0	0	0	0
RSA	0	0	3,948	45,987	0	0	0	0	9,020	208,303
TOTAL	**1,026**	**252,781**	**211,372**	**2,649,797**	**228,679**	**1,449,096**	**5**	**964**	**9,020**	**208,303**

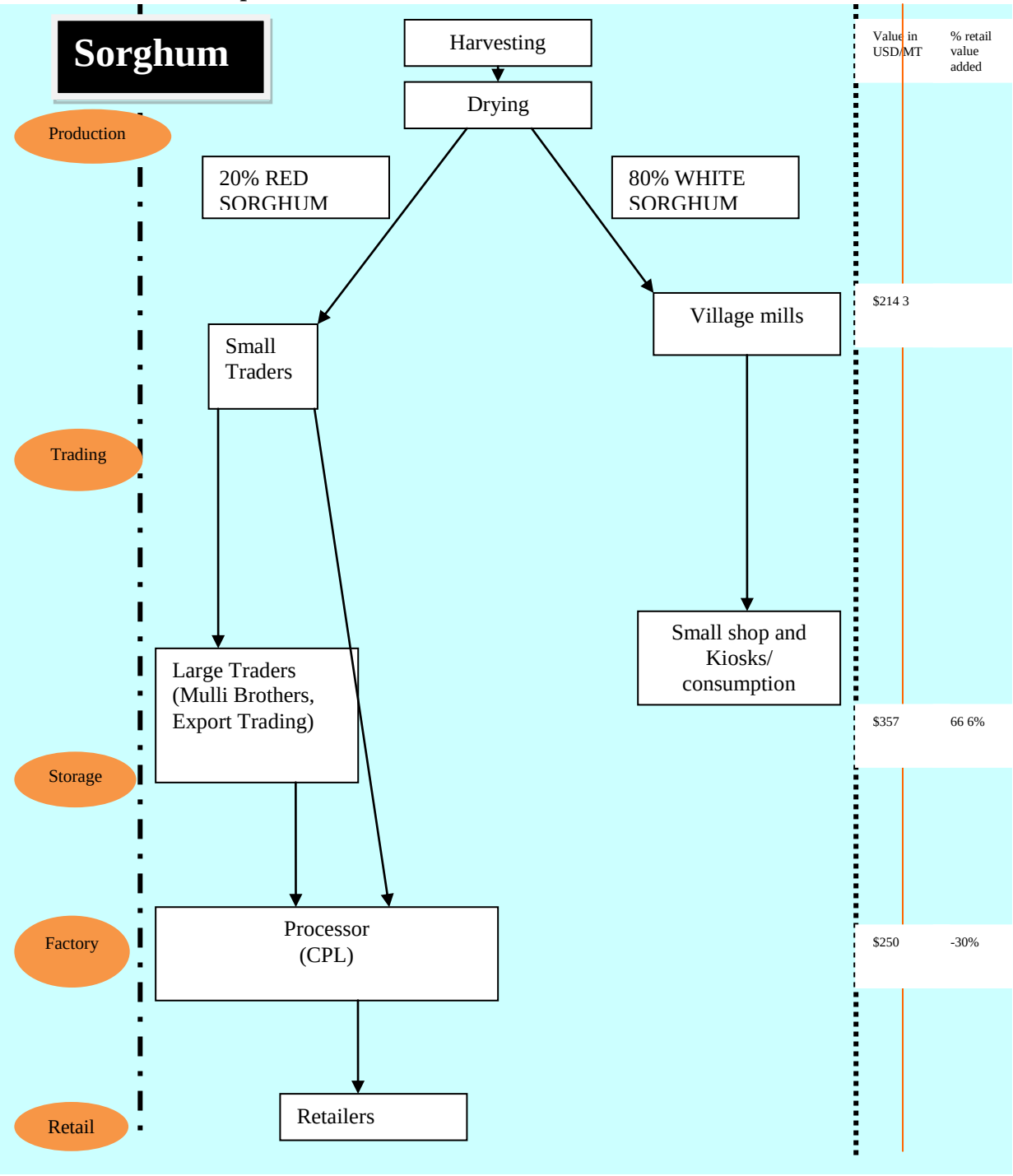
Source: NSO

1.3 Sorghum Value Chain Mapping

6.3.1 Functions matrix

Functions	**Participants/Actors**					**Support Markets**
	Domestic/Export-Import Market Channels					
	Input suppliers	Farmers	Traders	Processors	Wholesalers	SPS/Standards Certification, Ministry of Agriculture extension services
Wholesale, Retail, Exporting, Importing					Chibuku, importing red sorghum for brewing, sales of Chibuku	
Processing		Farmers, milling of white sorghum for consumption		Chibuku, milling of red sorghum for brewing		
Trading			Small traders, Mulli Brothers			
Collecting, Bulking, Storage						
Production		Small holder farmers (74,569 ha)				
Input Supply	Chibuku, Rab, Farmers World, Agora, Seedco					

1.3.2 Value chain map



1.3.3 Geographic distribution

Almost 70% of sorghum is grown in Southern Malawi, where rainfall is lower than the rest of the country. Sorghum is a drought resistant crop and fares better than other crops in this area in the absence of irrigation.

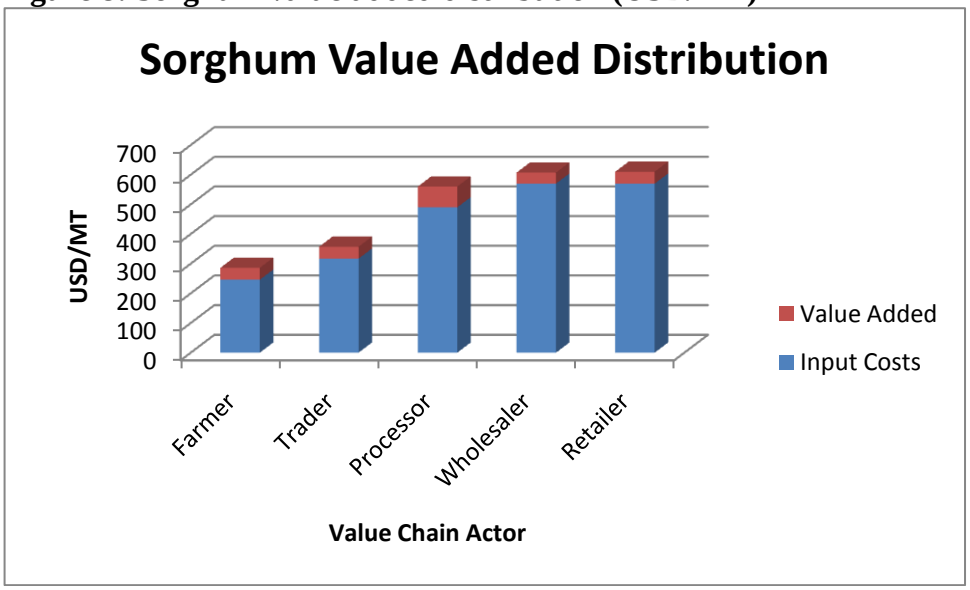
Table 17: Sorghum geographic distribution, 2007/8

Area	Hectares (ha)	Production (MT)	Yield (MT/ha)	Region	Distribution
Karonga	73	57	0.78	**North**	**0%**
Mzuzu	0	0	0.00		
Kasungu	25	11	0.44		
Lilongwe	1,505	1,291	0.86	**Central**	**32%**
Salima	261	190	0.73		
Machinga	21,144	16,205	0.77		
Blantyre	29,559	26,082	0.88	**South**	**68%**
Shire Valley	14,576	11,666	0.80		
National	**67,143**	**55,502**			

Source: 2007/8 Agricultural Statistical Bulletin, MoAFS

1.3.4 Value added distribution

Figure 8: Sorghum value added distribution (USD/MT)



Source: Value chain actor interviews

1.4 Constraints and opportunities

1.4.1 End market analysis

Sorghum as a staple food is not widely appreciated or consumed since maize has long been the staple of preference and has been promoted vigorously by agricultural policy. However, sorghum has a high value in drought-prone areas as it can grow in areas that receive less than 650 mm of annual rainfall. These areas extend beyond the borders into Mozambique where there is also market demand.

CPL has long been in demand for the sweet red sorghum for its sorghum and maize based beer such that a marketing chain has now developed and stimulated production in areas where few alternative sources of income have been developed.

There is a potential alternative market for sorghum. Grain use for animal feed has been a dynamic element in the stimulation of global sorghum consumption. The demand for sorghum for feed purposes has been the main driving force in raising global production and international trade since the early 1960s. The demand is heavily concentrated in the developed countries, where animal feed accounts for about 97 %of total use, and in some higher-income developing countries, especially in Latin America where 80 % of all sorghum is utilized as animal feed. The United States, Mexico and Japan are the main consuming countries, followed by Argentina, the former Soviet Union and Venezuela. These countries together account for over 80 % of world use of sorghum as animal feed.

The form of the product at the end market	**Users (e.g. millers, households, dairy farmers**	**Volume of National Requirement in Metric Tons per year**	**End Market Price in July 2009 in US$ per metric ton**	**Source of the product**		
				Domestic Market	**Imports**	
					Intra regional (i.e from EAC/COMESA) percentage	**Extra regional (i.e. outside EAC/COMESA)**
Red Sorghum (grain)	Chibuku brewing	1000MT	$250 (75kw/litre, sorghum: 1% of brew)	60%	30-40% South Africa	0%
White Sorghum	Household consumption: food staple, animal feed, home brewing	unknown	$357	100%	0%	0%

1.4.2 Vertical linkages

The majority of sorghum in Malawi is white sorghum grown for domestic consumption. It is also traded in informal markets, primarily for traditional beer production. It is usually stored in small quantities in traditional containers, often on the farm. Large quantities are seldom accumulated and bulk storage is uncommon.

Processing involves the partial separation and/or modification of the three major constituents of the cereal grain - the germ, the starch-containing endosperm and the protective pericarp. Traditional methods of processing are still widely used and are laborious, monotonous and carried out by hand. They are almost entirely left for women to do. To some extent, the methods that are used have been developed to make traditional foods to suit local tastes and are appropriate for these purposes. Traditional techniques that are commonly used include decorticating (usually by pounding followed by winnowing or sometimes sifting), malting, fermentation, roasting, flaking and grinding. These methods are mostly labour intensive and give a poor-quality product. Sorghum could be more widely used if processing were improved and if sufficient good-quality flour were made available.

In general, industrial methods of processing sorghum is not as well developed as the methods used for processing wheat and rice, which in Malawi are held in much higher regard than sorghum and millets. There is potential for industrial processing but it would require government policy and investment to promote the uptake of new techniques and technology. Custom milling has had a significant impact in

several African countries where it has recently been introduced. In Nigeria alone, where about 80 percent of sorghum and millets is now custom milled into whole flour, over 2.5 million tonnes of sorghum have been processed in this way.

As the main commercial processor of red sweet sorghum with increasing demand for the crop, CPL is an interesting case study of a processor attempting to stimulate local production. Traditionally CPL has behaved the same as most of the other staple food processors in choosing to buy from small traders rather than directly from the smallholder farmers, and it imports the shortfall from South Africa. However, frustrated with the high freight fees and unreliable supply and quality involved in importing, in recent years CPL has actively sought to increase contract farming arrangements with sorghum farmers. This move has been encouraged by the holding company in South Africa, SABMiller, whose successful experience with organising contract farming in Uganda is worth noting.

By guaranteeing prices of 280,000 Uganda Shs (US $150) per tonne at the time, and with purchase agreements signed in advance, Uganda's Nile Breweries Ltd. managed to go from 350 farmers growing *Epuripur* sorghum in 2005 to over 8000 farmers across 19 districts in 2009. This represents moving from an initial 10 hectares planted at the Serene Agriculture and Animal Research Institute, to over 5,000 hectares. According to monitoring estimates, from the inception of the project in 2002/3, production of sorghum has increased from 240 MT in the first year to a peak of 11,600 MT in 2006/7. Farmer income has risen proportionately form UGX 500 million (US$ 294,000) to UGZ 3.5 billion (US$ 21 million) by end of 2006/7.

The contract farming initiative in Malawi has not met the same success. In 2006/7 seed was offered to smallholder farmers in exchange for a contract assuring sale of product to CPL for a pre-negotiated price. Seed for a projected 650 MT of production was distributed after signing contracts for this amount. The expected benefits to the farmer was economic empowerment due to guaranteed source of income, free seed, limited inputs required and the drought resistance of sorghum. For CPL, they were hoping for reliable supply, a quality product that would meet the requirements and a continuous relationship with farmers which assists in budgeting and planning.

The scheme encountered several challenges and only +/- 150MT of the expected 650 MT was reportedly delivered back to CPL. Farmers had chosen to sell to traders rather than deliver the harvest back to CPL, whether for a higher price or for ease and immediacy of sale. Transport to the depot was the main issue as well as trust within the farmers clubs as to who would be responsible for making the delivery. CPL was only able to pay the head of the club by cheque so there was a margin for disputes about the distribution of income amongst the farmers.

The system worked better the following year when a third party, Oxfam International, approached CPL and offered to manage the process through the church, suggesting that there is a role for management of contract farming systems.

1.4.3 Horizontal linkages

Sorghum producers are members of agricultural clubs in the areas of production but have not formed specific associations. There is only one large processor of sorghum, CPL, and it is a member of the GTPA.

1.4.4 Supporting markets/services

SADC/ICRISAT Sorghum-Millet Improvement Program has distributed over 130,000 sorghum and pearl millet genotypes to SADC national programs, assisting them in the development of a range of new varieties suitable for their own environments. Over the past 15 years, 27 sorghum varieties have been released by 8 SADC countries - Botswana, Malawi, Mozambique, Namibia, Swaziland, Tanzania, Zambia, and Zimbabwe. The improved NARS/SMIP varieties give 20% higher yields than traditional varieties, with the potential for further gains if improved crop management methods are used. Equally important, they mature earlier (up to one month earlier than traditional varieties), reducing the risk of drought-induced crop failure and significantly improving food security in semi-arid areas.

THE MILLET SUB-SECTOR

7.1 Production and Consumption

Millet hectarage in Malawi has been maintained at a steady level over the last five years, commonly viewed as a food-stock buffer against periods of drought, with centres of production spread approximately evenly across the Northern, Central and Southern regions of Malawi. Millet varieties are mainly pearl millet in the poor-nutrient, low-rainfall areas and finger millet in the damper areas of the North and Central regions. With virtually 100% of production consumed directly by the farmer or local community, basic processing is done in-home. Without more sophisticated processing facilities to create higher value product such as multigrain and gluten free, as well as lack of cultivation of demand markets for associated health food products, stakeholder questionnaires, interviews and government data have shown little to no trading of millet products domestically or for export. With millet production levels at a reasonable 27 MT in 2008/09, this is perhaps an area with most potential for advances from value chain management and support.

It is important to note, however, that Government data in the millet sector appear particularly erratic, with small regions regularly showing variation of more than 10,000 MT per year. To a certain extent this could be attributed to the nature of small scale sustenance farming and the associated poor farming techniques and practices resulting in inconsistent yields. However it is also likely given the relative insignificance of millet in Malawi's domestic and international trade that data collection and sampling in this sector could be sporadic and non-uniform from year to year.

Table 18: Millet hectarage, production and yield, 2004/5-2008/9

Year	2004/5	2005/6	2006/7	2007/8	2008/9
Hectares	41,192	41,491	44,878	43,988	42,539
Acreage	101,744	102,483	110,849	108,650	105,071
Production (MT)	15,970	27,037	32,251	31,869	26,866
Yield (MT/ha)	0.39	0.65	0.72	0.72	0.63

Source: MoAFS

7.2 Exports and Imports

There are no exports of millet from Malawi and only 250MT was recorded as having been imported from Tanzania in 2008.

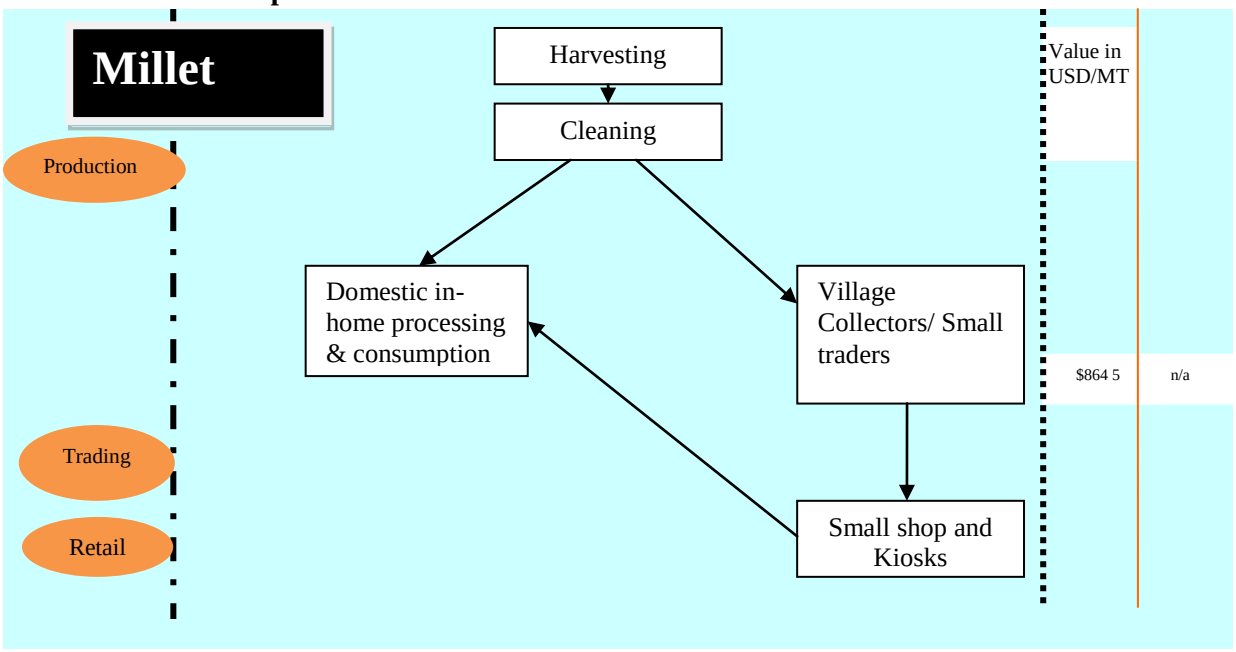
1.3 Millet Value Chain Mapping

1.3.1 Functions matrix

Functions	**Participants/Actors**					**Support Markets**
	Domestic/Export-Import Market Channels					
	Input suppliers	Farmers	Traders	Processors	Wholesalers	ICRISAT, Ministry of Agriculture extension services
Wholesale, Retail, Exporting, Importing						
Processing		Small scale 'in-				

		house' processing				
Trading		Small village retail outlets	Small traders			
Collecting, Bulking, Storage		Small scale domestic storage only				
Production		Smallholder farmers (42,539 ha)				
Input Supply	e.g. Rab, Farmers World, Agora, Seedco					

1.3.2 Value chain map



1.3.3 Geographic distribution

Millet production is approximately spread evenly over the Northern, Central and Southern regions, mainly from single farmers or families, producing for local consumption. Finger millet is the main crop among the millets in the damper production centres of Mzuzu and Machinga, while pearl millet is predominant in the poor-nutrient, low-rainfall areas such as Shire Valley and Chiradzulu.

Table 19: Millet geographic distribution, 2007/8

Area	Hectares (ha)	Production (MT)	Yield (MT/ha)	Region	Distribution
Karonga	2,233	2,053	0.92	**North**	**34%**
Mzuzu	10,679	7,889	0.74		
Kasungu	1,348	907	0.67		
Lilongwe	9,451	5,496	0.58	**Central**	**37%**

Salima	0	0	0.00		
Machinga	11,693	6,520	0.56		
Blantyre	1,183	5,294	4.48	**South**	**29%**
Shire Valley	6,910	4,067	0.59		
National	**43,497**	**32,226**			

*Note: it is likely there has been a clerical error in the Government data for millet production in the Salima region in 07/08
Source: 2007/8 Agricultural Statistical Bulletin, MoAFS

1.3.4 Value added distribution

With no real end market for millet products in Malawi or for export, 100% of value is retained by the farmers or local community traders. Opportunities to develop vertical linkages and increase value in the millet chain are discussed in section 7.4.3.

1.4 Constraints and opportunities

7.4.1 End market analysis

The form of the product at the end market	**Users (e.g. millers, households, dairy farmers**	**Volume of National Requirement in Metric Tons per year**	**End Market Price in July 2009 in US$ per metric ton**	**Source of the product**		
				Domestic Market	**Imports**	
					Intra regional (i.e from EAC/COMESA) percentage	**Extra regional (i.e. outside EAC/COMESA)**
Millet (grain)	Home consumption: food staple, animal feed and brewing	unknown	864.5	100%	0%	0%

1.4.2 Vertical linkages

Currently there are limited vertical linkages in Malawi's millet value chain, largely because millet is produced on a sustenance basis, reaching the farmer or local community home as an unfinished product. Without an established demand market for millet based products this further compounds the lack of incentive to develop a more sophisticated value chain and value add stakeholders.

Potential capacity building and improvements within the farming and production phase is discussed in section 7.4.3, however with reasonably large production volumes already in place, the millet sector perhaps presents one of the largest opportunities for improved vertical linkages and value add to a sector often associated with some of the most impoverished farming areas.

To date, millet value chain enhancement programmes in large millet production countries, such as India and Mali, have focused on a somewhat top-down approach. A potential three step approach would include:

(1) assessment of consumer demand, pricing and cost/benefit for higher value millet products such as gluten free, multi grain or health foods, as well as development for an appropriate associated marketing strategy. Interim measures may also be put in place by government to protect against output price collapse and incentivise uptake lower down the value chain;

(2) develop processes for conversion of millets into finished or semi-finished products in response to initial assessment feedback. This would include supporting the extension of select mechanized processing technologies to entrepreneurs and processor groups, and raising awareness of benefits of producing cleaner grain for premium value, insect and mite management so that grain can be stored to achieve peak prices during food shortage periods and enhanced value in provision or ready to consume products;

(3) commercialization, popularization and up scaling of identified demand products through entrepreneurship, group initiatives, skill development and marketing. Millet farmer groups and associations should be developed at the regional and national level to further support awareness raising and value chain development.

1.4.3 Horizontal linkages

Current millet production practice is based on individual farmer or family production on a sustenance basis. This leaves significant potential for horizontal linkage to improve production yields and decrease apparent erratic production yields suggested by national data. However it is likely that incentive of appropriate end market demand would have to be generated before there was widespread change in production practice.

While large scale millet farming is unlikely due to preference for competing cash crops, collectives of small scale farmers could potentially supply local processing units and in return acquire together enhanced seed, fertilizer and chemicals. Farming collectives also gives rise to potential for technology transfer through demonstration and training workshops, which have been successfully carried out in other millet producing areas such as India and Namibia.

1.4.4 Supporting markets/services

Limited support has been provided to the millet sector, most of which has been centered around the improvement of seed varieties and hybrids to enhance yield, drought and disease/pest resistance. Governments in southern Africa grouped together in the early eighties to form the Sorghum and Millet Improvement Programme (SMIP), which, under the management of the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), mainly was used to acquire new and enhanced germplasm from a variety of sources. Cooperation between the regional national agricultural research systems being limited, Malawi's national programme released their own pearl millet varietals of Tupatupa and Nyankhombo (similar to Okashana 1) in 1996. However in general uptake of new varietals has not had widespread success with limited exceptions, such as the Okashana 2 varietal in Namibia, due to poor performance in the field compared to laboratory conditions.

New programmes such as ICRISAT's Harnessing Opportunities for Productivity Enhancement, financed by the Bill & Melinda Gates Foundation, target increasing millet farmer yields by 35-40%, again by focusing on enhanced seed varieties, but also capacity building, financial support and fertilizer supply.

THE BEANS SUB-SECTOR

8.1 Production and Consumption

Bean[15] production in Malawi is predominantly for domestic production, with 80% of production coming from small farmers and the remaining 20% coming from commercial scale farming. Production is focused on the red kidney bean and the white pea bean. Beans for export had previously been preserved through freezing, however in recent years non-frozen, unshelled preserved beans has been predominant as well as small scale export of fresh unpreserved beans.

The bean value chain is dominated by major trading companies (eg Rabs, Muli Brothers and Transglobe) who provide seeds, are active in collecting, storage, processing and trade. Interviews with these stakeholders suggested that as much as 90% of production was for local consumption through local markets and current production yields meant there was not sufficient supply to meet local demand limiting potential for export.

Table 20: Beans hectarage, production and yield, 2004/5-2008/9

Year	2004/5	2005/6	2006/7	2007/8	2008/9
Hectarage	233,845	242,568	260,306	260,287	282,032
Acreage	577,597	599,143	642,956	642,909	696,619
Production (MT)	85,759	117,808	128,632	124,702	170,553
Yield (MT/ha)	0.37	0.49	0.49	0.48	0.60

Source: MoAFS

8.2 Exports and Imports

Table 21: Beans exports, 2004-2008

	Extra/Intra EAC/COMESA Beans Exports 2004-2008 in volume and value (by destination countries)									
	2004		2005		2006		2007		2008	
Destination	**MT**	**USD**	**MT**	**USD**	**MT**	**USD**	**MT**	**USD**	**MT**	**USD**
INTRA COMESA/EAC										
Zambia	0	0	0	0	15	2,404	0	0	0	0
Zimbabwe	0	0	0	0	0	0	106	56,157	4	2,857
EXTRA COMESA/EAC										
Mozambique	6	911	18	139	0	0	860	269,536	0	0
RSA	0	0	0	0	172	103,699	116	67,237	143	88,719
UK	10	772								
TOTAL	**16**	**911**	**18**	**139**	**187**	**106,102**	**1,082**	**392,930**	**147**	**91,577**

[15] The production of soya beans is currently exempt from the scope of the terms of reference; however the soya bean has potential for significant growth in value to the Malawian economy. Global soya bean demand has been growing at a rapid pace given the unique attributes of the commodity for edible oil, animal feed, flour and other uses. However high transportation costs, relative to production cost can give competitive advantage to developing counties remote from leading global producers such as Brazil, Argentina and USA. Demand from the Southern African market has seen the value of exports of soya beans and soya bean products from Malawi increase 291% from 2004/5-2007/8 (194% increase by volume).

Source: NSO

Table 22: Beans imports, 2004-2008

	Extra/Intra EAC/COMESA Beans Imports 2004-2008 in volume and value (by country of origin)									
	2004		2005		2006		2007		2008	
Origin	**MT**	**USD**	**MT**	**USD**	**MT**	**USD**	**MT**	**USD**	**MT**	**USD**
INTRA COMESA/EAC										
Tanzania	13	2,013	32	175,075	67	17,609	61	11,118	0	0
Zimbabwe	10	7,938	45	43,585	24	25,868	11	12,983	7	11,794
EXTRA COMESA/EAC										
Italy	0	0	0	0	5	450	977	549,662	0	0
Mozambique	0	0	928	352,423	0	0	0	0	0	0
RSA	12	19,102	17	22,147	8	17,811	0	11,198	28	38,856
UAE	0	542	0	0	1	810	0	0	0	0
UK	84	28,406	0	0	0	0	0	0	0	0
USA	0	0	20	4,583	0	0	0	0	0	0
TOTAL	**119**	**58,001**	**1,042**	**597,813**	**105**	**62,548**	**1,050**	**584,961**	**35**	**50,650**

Source: NSO

In addition to formal trade, FEWSNET monitor informal trade of food commodities. In the case of beans production, this data supports comments from traders during stakeholder interviews that production yields of beans, primarily farmed for local consumption, are not sufficient to meet local demand, resulting in a trading deficit when examined on the local trade level and limiting potential for export on a commercial scale.

Table 23: Informal cross-border beans exports and imports, 2005/6 – 2008/9

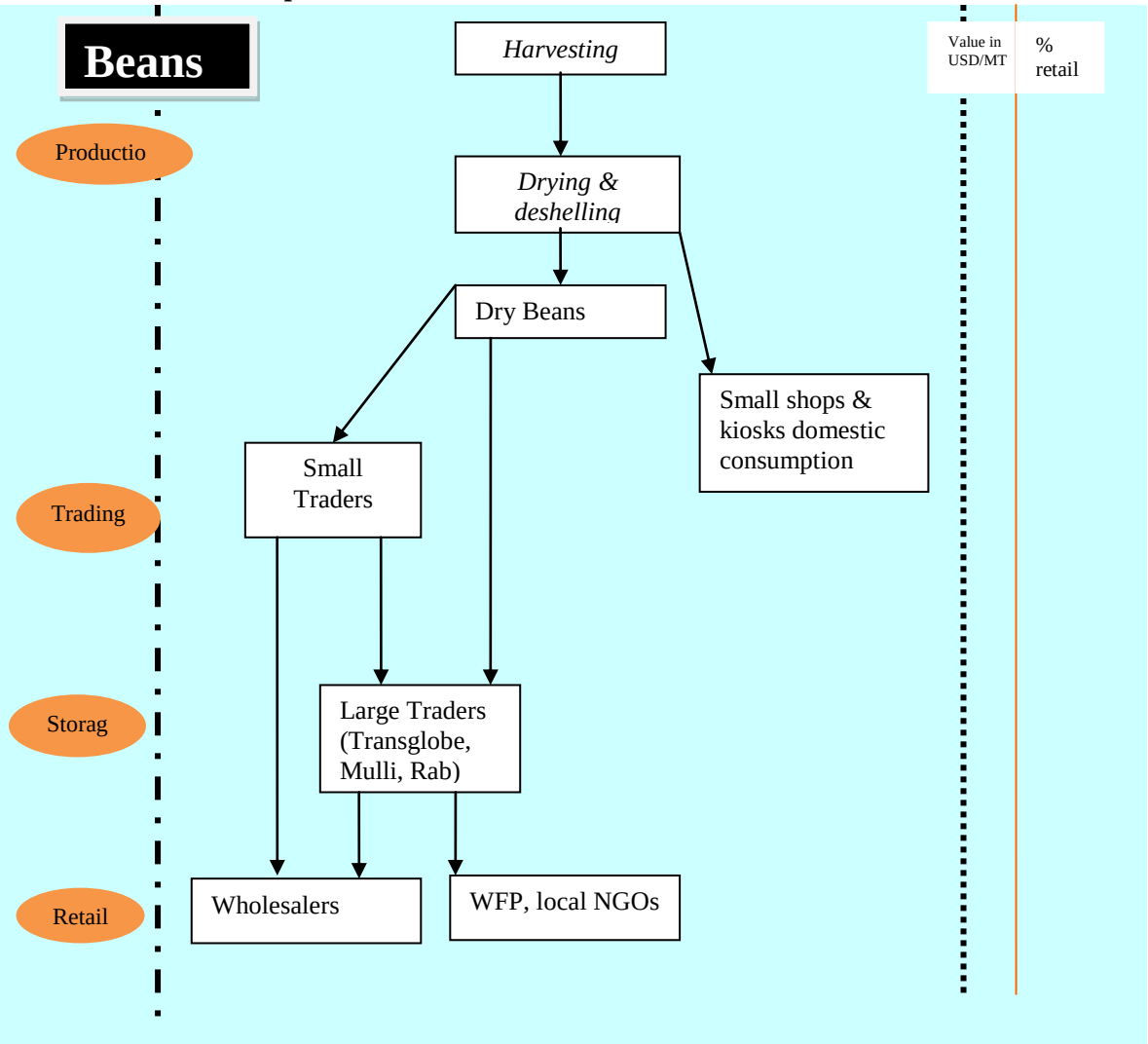
	Informal cross border BEANS exports by destination country (MT)					
	2005/6	**2006/7**	**2007/8**	**2008/9**	Apr-May 08/09	Apr-May 09/10
Mozambique	76	269	149	19	2	153
Tanzania	0	0	169	6	0	0
Zambia	19	268	338	124	37	15
TOTAL	**95**	**537**	**656**	**149**	**39**	**168**
	Informal cross border BEANS imports by source country (MT)					
Mozambique	2,741	2,798	2,375	3,045	341	245
Tanzania	2,459	3,646	3,468	2,749	132	47
Zambia	-	-	-	-	-	-
TOTAL	**5,200**	**6,444**	**5,843**	**5,794**	**473**	**292**

1.3 Beans Value Chain Mapping

8.3.1 Functions matrix

Functions	Participants/Actors					Support Markets
	Domestic/Export-Import Market Channels					
	Input suppliers	Farmers	Traders	Processors	Wholesalers	Support services: Financial Services, SPS/Standards Certification, **Research stations, Ministry of Agriculture extension services, fertilizer subsidy program**
Wholesale, Retail, Exporting, Importing			Rabs, Transglobe, Mulli		Rabs, Transglobe, Mulli, NGOs	
Processing			Rabs, Transglobe, Mulli	Rabs, Transglobe, Mulli		
Trading			Rabs, Transglobe, Mulli			
Collecting, Bulking, Storage			Rabs, Transglobe, Mulli			
Production		80% Smallholder farmers, 20% Commercial farmers. (282,032 ha)				
Input Supply	Rabs, Transglobe, Mulli		Rabs, Transglobe, Mulli			

1.3.2 Value chain map

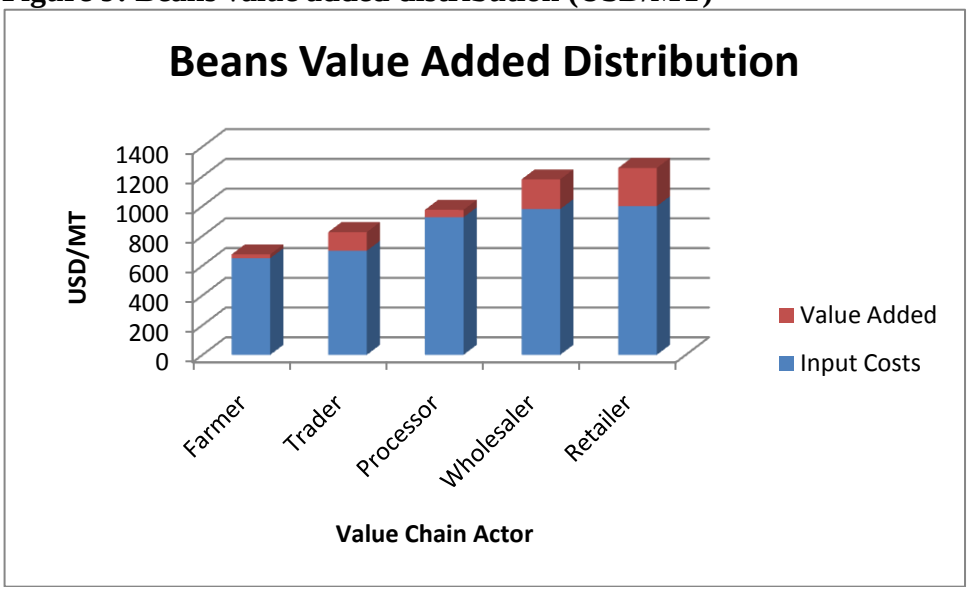


1.3.3 Geographic distribution

There was no official data available on the distribution of production of beans from the MoAFS. Beans are generally intercropped with maize and other staple food crops and are therefore found throughout the country.

1.3.4 Value added distribution

Figure 9: Beans value added distribution (USD/MT)



Source: Value cahin actor interviews

1.4 Constraints and opportunities

8.4.1 End market analysis

The form of the product at the end market	Users (e.g. millers, households, dairy farmers	Volume of National Requirement in Metric Tons per year	End Market Price in July 2009 in US$ per metric ton	Source of the product		
				Domestic Market	Imports	
					Intra regional (i.e from EAC/COMESA)	Extra regional (i.e. outside EAC/COMESA)
Dried beans	Households, farmers, exports	Not available	$1180	170,553 MT (MoAFS)	7 MT (NSO 2008)	28 MT (NSO 2008)

1.4.2 Vertical linkages

According to stakeholder interviews approximately 75% of beans produced are sold in the informal market for local domestic consumption. For this majority there is little in terms of a value chain with small scale farmers selling excess produce in local markets and any processing or storage occurring within-home. The main vertical linkages within the bean value chain for the remaining 25% occur between the small scale farmer and the already vertically integrated trading companies, as well as between the NGOs who purchase from the traders at the processing step approximately 60% of the remaining production volume, the final 10% being available for export.

Feedback through stakeholder interviews suggested that vertical linkages within this chain are very informal. While the farmers union does get involved with GTPA and ministry if farmers have issues or complaint, this vertical dialogue only happens during a crisis. The trading houses who support most of the value chain also highlighted that the vertical linkage between NASFAM and GTPA is one sided, such that NASFAM only takes into consideration the concerns of the farmers, not the GTPA.

Difficulties associated with unreliability and unenforceability of contracting small scale farmers was also presented as a constraint on further growth of the value chain, lack of security of supply preventing the entry of processing specialist stakeholders.

1.4.3 Horizontal linkages

With 80% of bean production carried out by small scale famers, there is little coordination between farmer groups and their representation when dealing with major trading partners. Lack of coordination means poor dissemination of technical assistance from national services and NGOs, as well as distribution of improved seed varieties. Given that there is already a basic value chain infrastructure available for the bean sector, principal efforts could be focused on capacity building and awareness raising for small scale farmers as to the benefits associated with the formation of farming collectives of supporting strengthened local/regional farmers associations.

1.4.4 Supporting markets/services

NGOs have attempted to support the growth of the bean value chain through providing a stable demand market at the wholesale level. Questionnaire feedback indicated approximately 15% of total beans produced were purchased by NGOs after the processing step. This security of demand may have contributed towards the trend of diversifying finished bean products from only frozen beans to alternative more value added preservation techniques such as tinning or polypropylene packing.

Low yields, typically less than 0.5MT/Ha, has been a significant issue for the Malawian bean sector. Aside from requiring improved farming and land management practices, small scale farmers have been supported by the national agricultural research system, as well as international research bodies such as IITA, to developed enhanced bean seeds more resistant to local conditions and pest/disease resistance.

THE PULSES SUB-SECTOR

(pigeon pea, cow pea, chick pea)

9.1 Production and Consumption

Pulses are rain-fed and usually intercropped with maize, cassava, and beans, making it difficult to accurately estimate production figures. Pulses are largely produced by smallholder farmers who are usually unable to significantly increase the area of cultivation because their landholdings are limited. Pulses have the advantage of being able to tolerate dry spells. Other advantages include nitrogen-fixing capability, and the ability of deep taproots to recycle nutrients in the soil and for use as a protein-rich food and livestock feed. These factors make pulses a potentially important crop to smallholder farmers.

Pigeon pea is the most common pulse in Malawi. Indeed Malawi is the second largest pigeon pea producer in the eastern and southern African region, with an estimated 175,000 ha grown every year. However, yields are low, averaging about 0.9 MT/ha, which is around 50 % of the potential yield. Research efforts in the past decade have led to the development of a range of improved production technologies which include improved, high yield potential cultivars but uptake of new seed varieties is low. The majority of the farmers use their own recycled seed for planting, with only 35% reported buying seed from fellow farmers in open markets. Makoka (2009) found that around 62% of the farmers were planting local pigeon pea varieties and only 38% reported using an improved pigeon pea variety, known as ICP9145.

Although there is both domestic and regional trade in pulses in eastern and southern Africa, what makes pigeon pea, in particular, different from other food crops is the export trade to India. Being the world's largest producer, as well as the major consumer of pigeon peas, India is by far the focal point for international pigeon pea trade. Malawi is already one of the largest exporters of tur dhal in Africa. Its dhal industry has efficient decorticators and cleaning and drying machines, capable of meeting the quality standards required by the international markets.

Production of cow peas is only 20% of the production of pigeon peas in terms of MT. They are also grown in marginal soils due to their ability to fix nitrogen in the soil. Dry cow peas are an important source of affordable protein, B vitamins and minerals in the predominantly carbohydrate based diet of people in Malawian rural communities. The wider utilisation of dried whole cow peas is limited due to long cooking times (35min – 120min) and limited variety in cow pea based products. Boiled dry cowpea seeds (stew) are the main form of consumption in Malawi. The long cooking time is a challenge to consumers because of the time and energy requirements. Changing lifestyles in urban areas has placed convenience as a crucial factor in food choices. In addition fuel wood is a major source of household energy in both urban and rural areas in Malawi and is fast becoming a scarce resource. It has been reported that people adjust their diets in order to optimise the use of energy resources, in that preparation of food items with high energy and time requirements is replaced with fast cooking foods, regardless of nutritional value.

The chick pea is a relatively new crop in Malawi and is considerably further behind pigeon peas and cow peas in terms of production at only 1,105 MT. In terms of productivity, however, both pigeon peas and chick peas have shown dramatic increases in production on the same, and occasionally decreasing, hectarage (the hectarage data for cow peas was unavailable).

Table 24: Pulses hectarage, production and yield, 2004/5-2008/9

Year	2004/5	2005/6	2006/7	2007/8	2008/9
Hectarage	-	-	-	-	**236,957**
Pigeon peas	155,990	150,173	161,508	167,787	175,734
Cow peas	-	-	-	-	59,119
Chick peas	2,185	1,814	1,612	1,656	2,104
Production (MT)	**72,600**	**151,691**	**188,049**	**179,716**	**216,035**
Pigeon peas	63,883	130,987	159,365	149,873	184,156
Cow peas	8,584	19,737	27,721	29,058	30,774
Chick peas	133	967	963	785	1,105
Yield (MT/ha)	-	-	-	-	**0.91**

Source: 2008/9 Annual Statistical Bulletin, MoAFS

9.2 Exports and Imports

Table 25: Pulses exports, 2004-2008

	Extra/Intra EAC/COMESA Pulses Exports 2004-2008 in volume and value (by destination countries)									
	2004		2005		2006		2007		2008	
Destination	MT	USD	MT	USD	MT	USD	MT	USD	MT	USD
INTRA COMESA/EAC										
Kenya	0	0	10	4,125	0	0	43	30,996	0	0
Mauritius	1,019	200,536	108	12,857	45	18,214	387	114,812	43	26,352
Swaziland	1,017	217,905	0	0	0	0	0	0	0	0
Tanzania	0	0	0	0	0	0	22	8,834	0	0
Zambia	0	0	561	88,226	198	55,172	1,533	636,755	749	448,012
Zimbabwe	656	187,559	0	0	0	0	216	69,169	532	190,209
EXTRA COMESA/EAC										
Australia	22	4,464	0	0	43	12,143	65	18,214	0	0
Bangladesh	22	2,679	43	8,750	22	5,179	22	6,071	0	0
Barbados	0	0	22	2,679	0	0	0	0	0	0
Botswana	87	24,495	0	0	372	223,548	87	35,530	252	159,016
Canada	0	0	0	0	0	0	66	65,248	123	7,480,241
China	0	0	43	19,920	0	0	0	0	0	0
Fiji	282	69,039	259	68,036	174	71,698	108	30,357	129	47,500
Finland	0	0	22	6,071	0	0	0	0	0	0
Greece	0	0	0	0	0	0	23	20,999	0	0
UK	409	191,540	260	141,397	280	160,504	712	441,641	201	194,903
Hong Kong	0	0	0	0	0	0	23	20,999	0	0
Indonesia	232	99,000	0	0	0	0	0	0	0	0
India	6,619	1,845,017	2,613	254,158	1,976	1,078,054	10,777	7,305,989	552	347,815
Kuwait	0	0	0	0	0	0	0	0	43	17,145
Malaysia	690	235,002	1,184	506,650	775	465,633	1,512	1,052,430	615	569,981
Mozambique	0	0	0	0	360	59,889	582	143,530	463	281,594
Netherlands	0	0	0	0	0	0	65	10,536	0	0
New Zealand	0	0	22	12,857	0	0	0	0	0	0
Singapore	237	81,844	301	139,042	366	242,328	804	480,059	428	369,020

USA	108	24,643	43	10,536	129	36,429	504	318,187	149	162,654
RSA	358	125,731	582	227,546	330	144,516	442	230,060	1,019	465,712
UAE	0	0	43	12,143	781	444,851	137	557,221	471	437,246
TOTAL	**11,758**	**3,309,453**	**6,116**	**1,514,993**	**5,851**	**3,018,156**	**18,130**	**11,597,637**	**5,769**	**11,197,399**

Source: NSO

Table 26: Pulses imports, 2004-8

	Extra/Intra EAC/COMESA Pulses Imports 2004-2008 in volume and value (by country of origin)									
	2004		**2005**		**2006**		**2007**		**2008**	
Origin	**MT**	**USD**	**MT**	**USD**	**MT**	**USD**	**MT**	**USD**	**MT**	**USD**
INTRA COMESA/EAC										
Uganda	1	172	0	0	0	0	0	0	0	0
Tanzania	0	0	71	19,110	0	0	0	0	150	48,762
Zambia	0	0	0	0	12	919	0	0	0	0
EXTRA COMESA/EAC										
Canada	3	729	7	1,052	0	0	0	0	1	485
Italy	0	0	2,225	852,611	0	0	0	0	0	0
Mozambique	0	0	354	86,096	0	0	448	26,482	461	39,204
RSA	0	0	0	0	0	0	0	0	1	1,349
USA	0	0	0	0	50	13,577	0	0	0	0
TOTAL	**4**	**901**	**2,657**	**958,869**	**62**	**14,497**	**448**	**26,482**	**613**	**89,799**

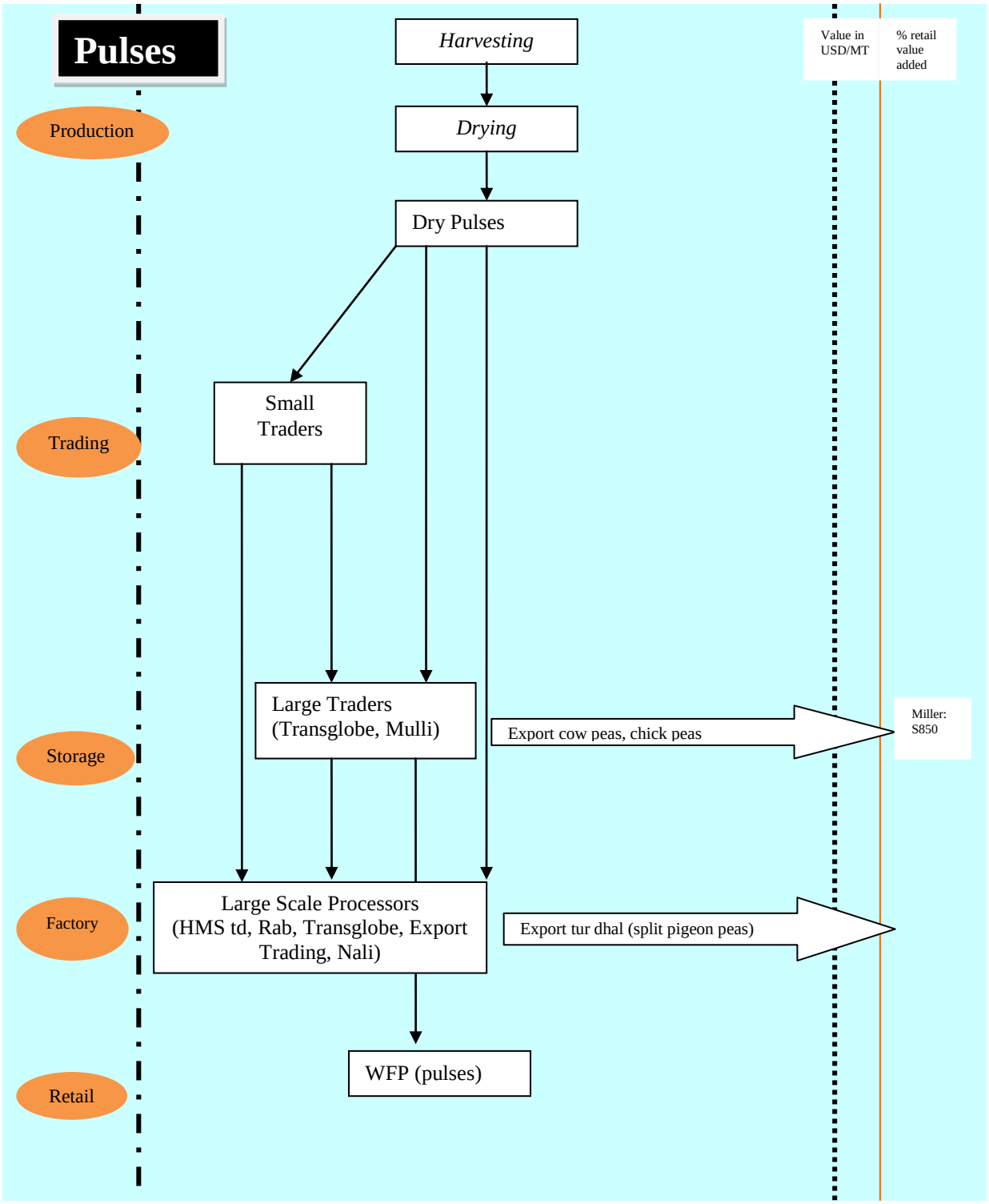
Source: NSO

1.3 Pulses Value Chain Mapping

9.3.1 Functions matrix

Functions	Participants/Actors					Support Markets
	Domestic/Export-Import Market Channels					
	Input suppliers	Farmers	Traders	Processors	Wholesalers	Support services: Financial Services, SPS/Standards Certification, **Research stations, Ministry of Agriculture extension services, fertilizer subsidy program**
Wholesale, Retail, Exporting, Importing				Rabs, Transglobe	Rabs, Transglobe	
Processing				Rabs, Transglobe	Rabs, Transglobe	
Trading			Mulli	Rabs, Transglobe		
Collecting, Bulking, Storage			Mulli	Rabs, Transglobe		
Production		Smallholder farmers (236,957 ha)				
Input Supply				Rabs, Transglobe		

1.3.2 Value chain map



1.3.3 Geographic distribution

Pulses are grown all over Malawi, with a relative concentration in the southern region. The ability of pulses to tolerate dry spells and such harsh conditions make it a suitable crop for the area.

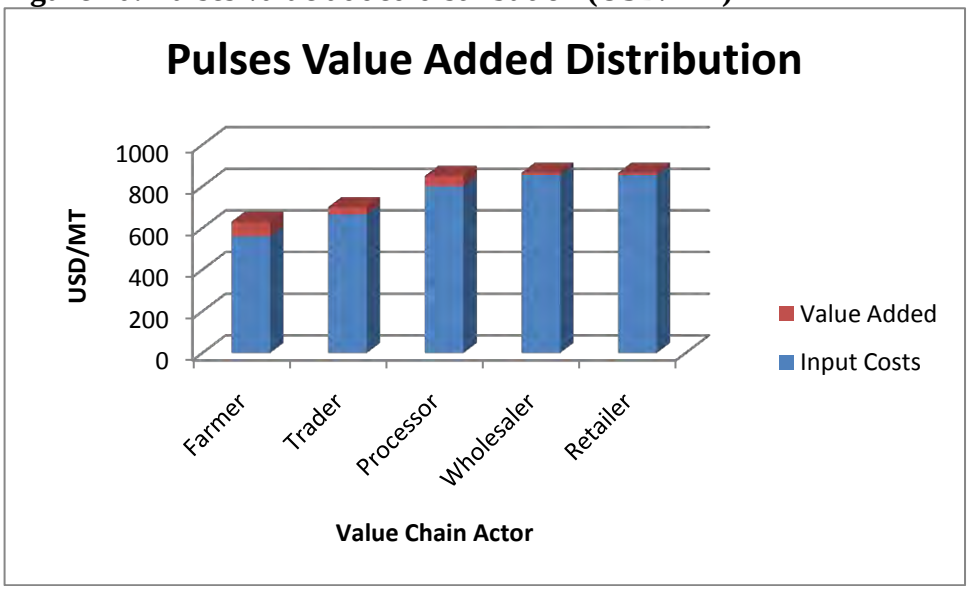
Table 27: Pulses geographic distribution, 2007/8

Area	Hectares (ha)	Production (MT)	Yield (MT/ha)	Region	Distribution
Karonga	11,446	7,700	0.67	**North**	**26%**
Mzuzu	42,564	21,929	0.52		
Kasungu	94,246	59,408	0.63		
Lilongwe	115,042	55,276	0.48	**Central**	**32%**
Salima	1,124	716	0.64		
Machinga	81,426	52,335	0.64		
Blantyre	157,450	124,942	0.79	**South**	**42%**
Shire Valley	23,717	15,121	0.64		
National	**527,015**	**337,427**			

Source: 2007/8 Agricultural Statistical Bulletin, MoAFS

1.3.4 Value added distribution

Figure 10: Pulses value added distribution (USD/MT)



Source: Value chain actor interviews

1.4 Constraints and opportunities

9.4.1 End market analysis

Pulses are grown for consumption and export. Interviews with processors revealed that there is a growing international market for pulses. Transglobe, for example, exports pigeon peas to India, cow peas to South Africa and chick peas to South Africa and Italy, yet there is little formal investment in the industry.

India is by far the focal point for international pigeon pea trade. In India, nearly all the pigeon peas are processed into dhal, which is prepared into a thick soup for mixing with rice.

The form of the product at the end market	**Users (e.g. millers, households, dairy farmers**	**Volume of National Requirement in Metric Tons per year**	**End Market Price in July 2009 in US$ per metric ton**	**Source of the product**		
				Domestic Market	**Imports**	
					Intra regional (i.e from EAC/COMESA) percentage	**Extra regional (i.e. outside EAC/COMESA)**
Semi Processed	Households, export	Not available	$850	216, 035 MT (MoAFS)	150 MT (NSO 2008)	463 MT (NSO 2008)
Tur dhal	Export			100%	0	0
Cow pea	Household	Unknown		100%	0	0
Chick pea	Household	Unknown		100%	0	0

1.4.2 Vertical linkages

The value chain for pigeon peas is worth focusing on due to its relative importance as a crop by virtue of its high production and developed export linkages.

From the smallholder producer, the pigeon pea grain goes to an intermediate buyer. Although intermediate buyers are common in all the pigeon pea growing districts of Malawi, their presence is more prevalent in areas where the National Smallholder Farmers Association of Malawi (NASFAM) does not operate. Intermediate traders act as a linkage between small-scale farmers and the processors of pigeon peas. They usually set up a central marketing place within the community during the harvesting season where they buy pigeon peas from the small farmers.

The pigeon peas are transported to processors who are all based in the commercial city, Blantyre. In terms of processing, there are several companies that are involved in processing pigeon pea into tur dhal for export with the capacity to process approximately 20,000 MT per annum. Companies like Transglobe, Produce Exports, Rab Processors, Bharat Trading Company, and others have an established reputation and good market contacts in India. Although it is realized that the existence of middlemen means that small-scale farmers get less from their pigeon pea sales, their existence is crucial in facilitating trade between the farmers and the exporters.

Some processors are expanding their production capacity to take advantage of the international market for pulses. Transglobe, for example, is investing in machinery to allow it to process 400-500MT per month, almost doubling its current capacity. To ensure the raw material is available to feed this demand, Transglobe is supporting initiatives to promote the growing of pulses as a cash crop in rural farming communities. A pilot scheme that shows promise is the Millenium Village programme in

Mwandama that aims to put 75 hectares of land under 3 seasons of cultivation by developing an irrigation scheme and guaranteeing a buyer (Transglobe) for speciality crops. A unique component of this scheme will be the inclusion of Opportunity International Bank of Malawi to provide bank accounts to the farmers and loan money for inputs, with the contractual arrangement with the buyer as security against the loan.

1.4.3 Horizontal linkages

Asymmetric flow of information puts pigeon pea farmers at a disadvantage. Farmers are mostly unaware of grain quality required by the market, where it is sold, and price levels that prevail at different levels of the marketing chain. It was observed that farmers were being offered uniform prices by the middlemen regardless of the grain quality. Access to this type of information would empower farmers to have a good perception of market demand and avoid being subjected to the opportunistic behaviour of middlemen and traders. It is in this respect that promotion and expansion of the activities of NASFAM and other farming associations would greatly improve farmers' access to important market information.

A source of inefficiency in the pigeon pea is the role of intermediate traders who are aimed at maximizing profit at the expense of poor farmers. The introduction of NASFAM collection centres within associations has eased the problem of lack of access to reliable markets for the smallholder farmers. However, in areas where NASFAM does not operate, farmers still rely on the village-based middlemen who are often blamed of using dubious weighing scales. The establishment of permanent storage depots and warehouse receipt systems

1.4.4 Supporting markets/services

Grain contracting through NASFAM, collective marketing, and improved collection points may need to be introduced to test and evaluate their efficiency and performance. If successfully implemented, these innovations would lower transactions costs and foster transparency in market organization and coordination through providing a facility for bulking, implementation of grades and standards required by the international market, and dissemination of production and market information.

THE CASSAVA SUB-SECTOR

10.1 Production and Consumption

Much doubt has been expressed about the reliability of the data on cassava yields and total area planted in the country. It is a difficult crop to estimate as the crop is left in the ground and only harvested when it is required for consumption. Also, unlike maize, which is harvested and sold in 50kg sacks, cassava is harvested and sold by the roots in any available sized containers. As such, crop yields have to be estimated leading to unreliable data. Nevertheless, official 2008 estimates are 190,803 hectares planted producing almost 3.9 million MT (wet weight) at an average yield of 20.31 MT/ha. The figures represent the highest production figures achieved in the last 20years in Malawi.

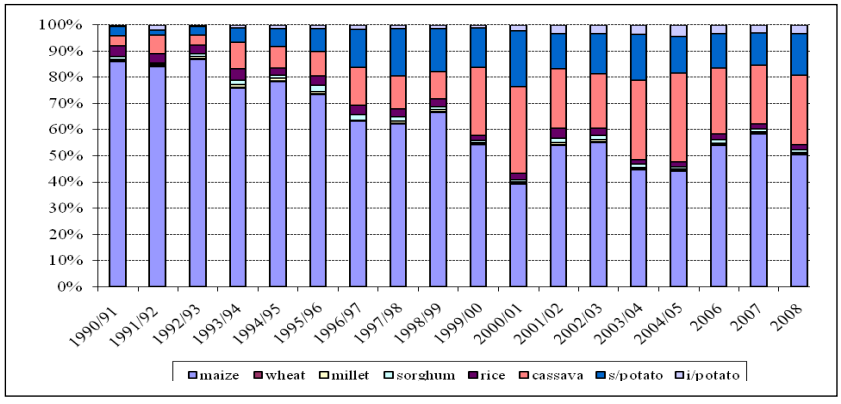
Since the drought in 1991/92, the cassava growing has been increasing by the introduction of improved higher yielding and more disease resistant cassava varieties. Some NGOs have reported that in areas badly hit by HIV/Aids, where rural labour is becoming more scarce, cassava is being grown in preference to maize because cassava is more tolerant of delayed planting and harvesting and so requires less labour at peak seasons of the year. Among other factors that has led to cassava surge in Malawi is that maize production has been affected by unpredictable and precarious environmental factors such as rainfall and the skyrocketing prices of important inputs like inorganic fertilizers and improved seed. These disasters and policy shifts have significantly affected the agriculture production especially maize and thereby increasing the absolute necessity of drought tolerant food security crops like cassava both at national and household level.

Table 28: Cassava hectarage, production and yields, 2004/5-2008/9

Year	2004/5	2005/6	2006/7	2007/8	2008/9
Hectarage	153,687	163,598	172,539	183,014	190,803
Acreage	379,607	404,087	426,171	452,045	471,283
Production (MT) Wet weight	2,197,640	2,832,141	3,238,943	3,491,183	3,874,705
Production (MT) Dry weight	659,292	849,642	971,683	1,047,355	1,162,412
Yield (MT/ha)	14.30	17.31	18.77	19.08	20.31

In terms of total dietary calorie intake, roots and tubers have become increasingly important, especially after the 1990s.

Figure 11: Malawi calorie consumption, 1990-2008



Source: WB (2008) quantitative value chain report

It has been estimated that the Malawian domestic market requires 2 million MT of starch per year for use as a substitute for wheat in bread and biscuit manufacture as well as glucose production and as an industrial starch in the production of batteries, cotton spinning, matches, and the manufacture of packaging chipboard and plywood. Potential also exists for cassava starch to be included in animal feeds as well as starch extraction by-products. Presently in Malawi, very little cassava is being processed for starch but the potential does exist with a number of companies beginning to undertake their own manufacture of starch to be used in the manufacture of their own core products.

10.2 Exports and Imports

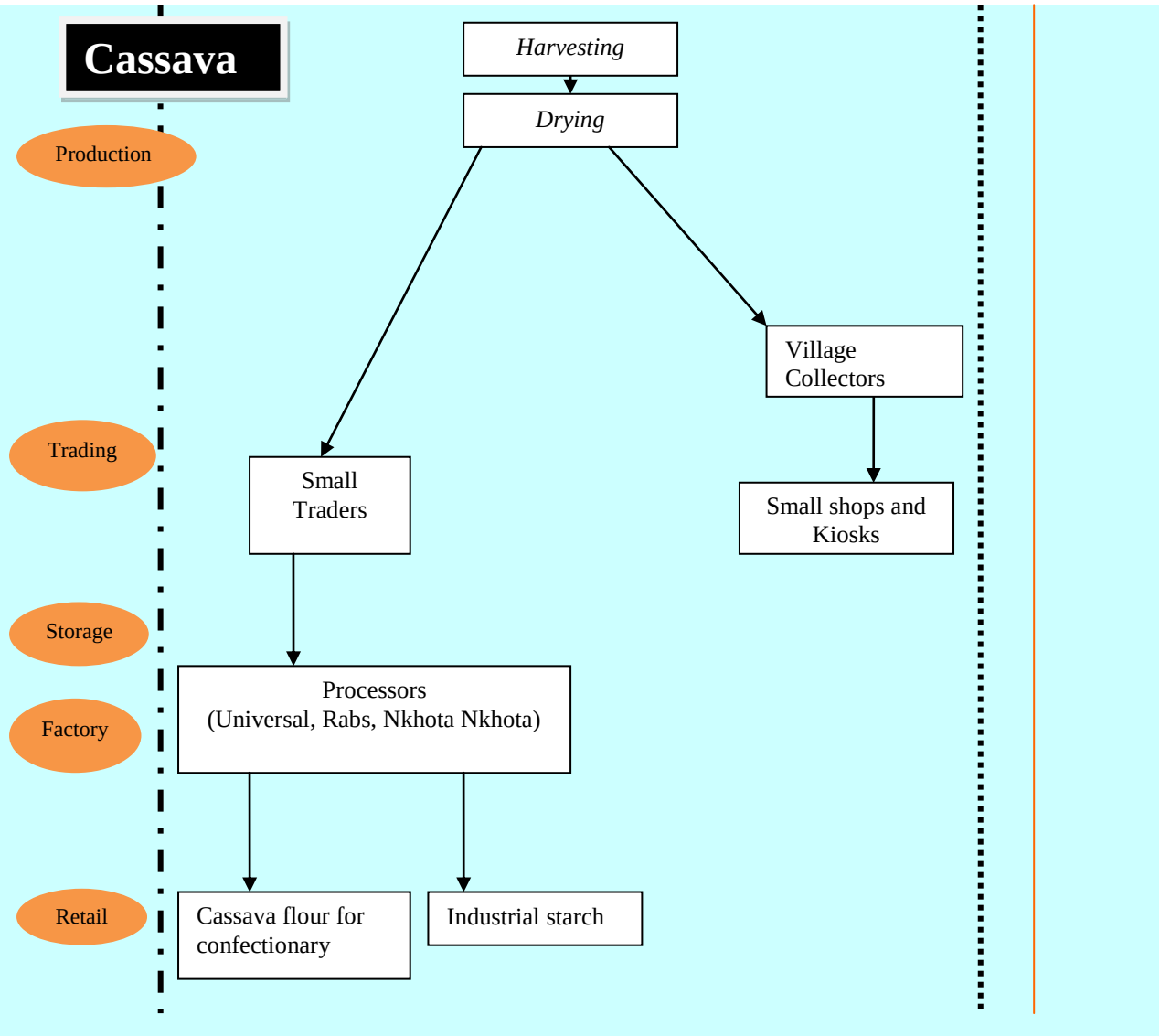
Up to now, Malawi has not been involved in cassava exports or imports, either in raw or processed form. It is very unlikely that fresh cassava can have a comparative advantage as a tradable export commodity due to its perishable nature. There exists a good market for cassava starch in South Africa but it is arguable not worth developing this market until Malawi has firstly satisfied its own domestic market. Malawi then needs to produce cassava starch to recognised international HACCP standards.

1.3 Cassava Value Chain Mapping

10.3.1 Functions matrix

Functions	**Participants/Actors**					**Support Markets**
	Domestic/Export-Import Market Channels					
	Input suppliers	Farmers	Traders	Processors	Wholesalers	Support services: Financial Services, SPS/Standards Certification, **Research stations, Ministry of Agriculture extension services, Agriculture Input Subsidy Program**
Wholesale, Retail, Exporting, Importing				Rabs, Universal	Rabs	
Processing			Small traders	Rabs, Universal, Nkhota	Rabs	
Trading			Small traders			
Collecting, Bulking, Storage				Universal		
Production		Small holder farmers (183,041 ha); estates (2,456 ha):				
Input Supply	Roots and Tubers Association					

1.3.2 Value chain map



1.3.3 Geographic distribution

Traditionally cassava has been mainly grown along the northern lakeshore districts of Nkhotakota, Nkhata Bay, Rumphi and Karonga and in the southern districts of Mulanje, Zomba and Machinga. In recent years, production of cassava has increased in those areas that are easily accessible to large urban populations such as Lilongwe, Limbe and Blantyre where cassava is being consumed for breakfast instead more expensive bread.

Table 29: Cassava geographic distribution, 2007/8

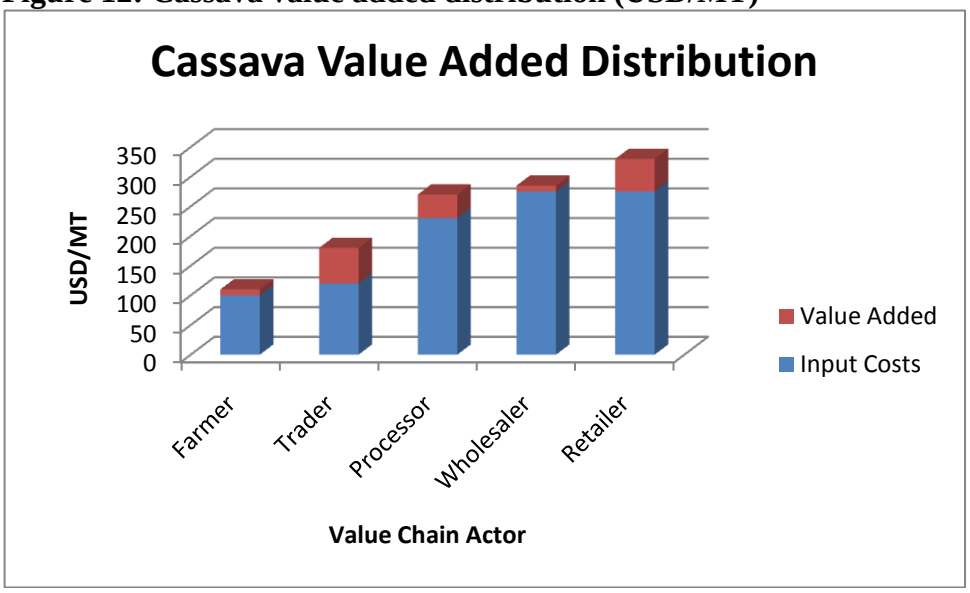
Area	Hectares (ha)	Production (MT)	Yield (MT/ha)	Region	Distribution
Karonga	16,613	344,992	20.77	**North**	**45%**
Mzuzu	37,402	927,909	24.81		
Kasungu	15,344	272,724	17.77		
Lilongwe	19,656	284,470	14.47	**Central**	**37%**
Salima	31,491	666,751	21.17		

Machinga	24,179	339,569	14.04		
Blantyre	35,035	600,895	17.15	**South**	**18%**
Shire Valley	1,905	25,558	13.42		
National	**181,625**	**3,462,868**			

Source: 2007/8 Agricultural Statistical Bulletin, MoAFS

1.3.4 Value added distribution

Figure 12: Cassava value added distribution (USD/MT)



Source: Value chain actor interviews

1.4 Constraints and opportunities

Cassava has proved to be drought tolerant, has the potential of providing a high level of dietary calories, readily adapts to agro-ecological conditions, efficiently utilises mineral reserves of infertile soils, withstands climatic variations, is flexible over planting and harvesting times and is a good source of starch. New improved varieties are available with increasing demand from urban consumers and starch processors with a potential export market in South Africa. An opportunity exists as global warming worsens to grow cassava a drought tolerant food crop, making it a valuable cash crop supporting a starch processing industry run under modern hygienic conditions with production undertaken through equitable contract farming agreements.

However, cassava is not supported on the same scale as other crops; new varieties not freely available to smallholder farmers; poor market linkages and market information for a perishable crop is poor; no small scale farm mechanisation or irrigation has been introduced exasperated by scattered areas of production; no contract farming agreements made or levels of trust between processors and farmers improved; and no support or capital given to develop associations for traders and processors and to start or develop their businesses. Unreliable data on yield levels, area planted, areas of surplus production, potential areas for increased production and feasibility studies on establishing starch processing factories makes the situation worse. Lack of a clear government strategy, or guidelines does not help the industry to develop.

Most farmers spoken to say they do not apply fertilizer to cassava. Very little mechanisation is practiced in Malawi with land preparation, planting, weeding and harvesting undertaken by hand.

Vegetative reproduction also means the rate of multiplication of new, improved cassava varieties is slow. In areas of surplus production, transportation of the tubers to deficient cassava eating areas has proved to be difficult to achieve because once harvested, cassava starts to deteriorate after 48 hours. Internationally, far less research and development has been devoted to cassava than to rice, maize and wheat and has received considerably less emphasis in genetic improvement.

In one of the main cassava growing areas of Nkhotakota, the district agricultural staff estimate less than 30% of the area planted to cassava was actually planted to improved varieties. On research plots, using new improved disease resistant high yielding varieties and applying fertilizer, yields can be as high as 30MT/ha fresh weight.

There is a lack of information amongst producers and traders about availability, prices and potential markets which creates uncertainty. In an atmosphere of uncertainty traders have to include larger margins to cover potential risks

Lack of established grades and standards means growers do not know what the market requires, what different types of cassava consumers prefer to buy or what any potential processor prefers.

1.4.1 End market analysis

The main Malawian market for cassava is the selling of unprocessed fresh tubers for consumption within the country's main urban centres with Lilongwe being the biggest of all these markets. Although Malawians prefer consuming maize in the form of nsima, more urban households are consuming boiled cassava roots for breakfast as the price of bread becomes more expensive. Farm households that grow cassava consume the bulk of their own production. At national level, about 70% of the national cassava production is consumed, leaving about 30% for the market.

The bitter higher yielding type cassava is grown for fermented flour meal and for producing industrial starch. Sweet types are grown for selling in urban areas and for producing glucose. It has been estimated that the domestic market requires 2,000 MT of starch per year. At present, only 30% of cassava grown is sold for off-farm consumption or to starch processing. Cassava prices have increased with the present market price at 28 KW per kilo. No cassava tubers or meal is sold in supermarkets. An export market for cassava starch exists in South Africa.

The form of the product at the end market	**Users (e.g. millers, households, dairy farmers**	**Volume of National Requirement in Metric Tons per year**	**End Market Price in July 2009 in US$ per metric ton**	**Source of the product**		
				Domestic Market	**Imports**	
					Intra regional (i.e from EAC/COMESA)	**Extra regional (i.e. outside EAC/COMESA)**
Cassava tubers	Households	190,723 MT (FBS 2009/10)	$180	865,302 (FBS 2009/10)	0	0
Cassava flour meal	Households		$285	100%	0	0
Industrial starch	Industry	2,000 MT	$643	100%	0	0

1.4.2 Vertical linkages

Despite increases in cassava production, its contribution is marginal due to the subsistence nature of its production and a lack of linkages to a starch industry and developed market links. Any cassava sold mainly goes to the main urban areas with Lilongwe being the biggest.

Traders visit farms, to buy and harvest the crop. Cassava is taken to markets in a truck, or bicycles. Cassava processing remains limited and on a small-scale. Some processors have tried to purchase cassava but have been thwarted by a lack of supplies. Farmers are unwilling to grow more cassava until they are sure of a reliable market. From interviews undertaken, it seems little credit is requested for cassava with farming families preferring credit for growing more easily marketed cash crops.

For five years the Masinda Cooperative Society near Nkhotakota has produced starch but has stopped since July 2008 through a lack of the cassava raw material.

Both middlemen and traders, who are often vilified as profiteers, play a vital link in the marketing chain for cassava. Most cassava traders who are supplying urban areas start their purchasing by visiting scattered farms, bargaining for and gathering fresh cassava roots until enough has been obtained to make a full load. Considering that most of the traders only have bicycles, wide areas that surround urban areas are effectively covered. The whole trading system provides a lot of employment opportunities. However, small-scale and fragmented production units results in high transaction costs for traders and middlemen. This is further exacerbated by a lack of mobile phones amongst potential sellers and the need to travel from farm to farm on a bicycle.

The potential of the cassava starch processing has been pointed out as a domestic market of 2,000 MT annually to replace the cassava and maize industrial starch already being imported for use in the cotton spinning, battery production, chipboard and plywood industries. Raiply plywood factory near Mzuzu, for example, is trying to buy 200 MT for glue making for use in plywood production. A number of other industrial users of starch have tried to purchase cassava but have been thwarted by a lack of supplies. Farmers are unwilling to grow more cassava until they are sure of a firm market purchasing cassava tubers for a reasonable price. Until recently value adding processing activities and investments have remained limited and mostly small-scale. There is a need to get producers, middle men, and processors together to develop trust between the main actors and establish contract farming or marketing agreements.

Using the successful model of farming contracts they have used for potato producers, Universal Industries is planning to have similar contractual arrangements with farmers in Lilongwe District to produce cassava to make glucose. This agreement is still provisional but looks promising because credit is handled by an organisation experienced in rural credit, extension advice comes from a knowledgeable NGO and Universal Industries can concentrate on buying and encouraging quality standards. The farmers gain from having a guaranteed market and price whilst Universal Industries benefits from having a reliable supply of cassava meal.

1.4.3 Horizontal linkages

The MoAFS should encourage the sharing of information amongst farmer associations and cassava processors on establishing fair contract farming agreements between cassava growers and starch processors/users so that growers use new high yielding cassava varieties who can then sell on to processors at agreed prices with the crop harvested by the processors as and when they require the cassava for processing.

Government, donors and NGOs could also provide funding to assist starch processors and starch users to set up starch processing units at small towns with reliable electricity and clean water supplies in the main potentially cassava producing areas.

1.4.4 Supporting markets/services

There is very little support provided in the cassava sector for assisting traders and middlemen to form associations, improve marketing structures, flows of information and to assist in the use of more efficient transportation systems, such as motor bicycles, for inaccessible rural areas. Cassava production is scattered causing marketing problems. Efforts to increase the amount of new high yielding disease resistant varieties being planted seem to be disjointed and uncoordinated in approach. No Government encouragement is being given to help establish entrepreneur run starch processing factories.

To date, three organisations (IITA/SARRNET, FAO and USAID) have been involved in funding research and development of cassava. USAID has supported cassava research in the recent past by providing funding. IITA/SARRNET is carrying out basic research in coordination with the MoAFS Research Department. FAO is encouraging the processing of cassava in conjunction with NGOs such as Total Land Care. A number of commercial users of cassava starch such as Raiply Plywood and Universal Industries have started the process of producing starch in Malawi.

THE GROUNDNUTS SUB-SECTOR

1.5 Production and Consumption

Groundnuts account for the second largest crop acreage in Malawi, after maize, despite the small size of the farms which constitute a real constraint for investing in quality products. Groundnuts are mainly cultivated in small producer farms (93%) and in estate farms (7%).

After the failure of the 1980s following the ban on exports due to high Aflatoxin levels, groundnut production restarted after 1991 with market liberalisation and with wider availability of the CG7 variety, which yields approximately double the traditional Chalimbana. Since then, productivity has been gradually improving with production in 2008/9 almost reaching 300,000 tonnes.

There are three main types of groundnuts with the largest being the red skinned Virginia type used for confectionary purposes and the medium sized Runner and smaller Spanish varieties used for oil production and cake. Technically the 'three cycle rotation' of maize with groundnut provides evidence for the substantial improvement in the productivity of maize for smallholder-farmers. It still has to be widely promoted.

According to the available information which has been confirmed by NASFAM and ICRISAT, only 40% of groundnuts are channelled to the main processing, wholesale, and retail markets. The other 60% is locally consumed by farmers or sold directly by the producers on the local markets.

Table 30: Groundnuts hectarage, production and yields, 2004/5-2008/9

Year	2004/5	2005/6	2006/7	2007/8	2008/9
Hectarage	248,276	244,567	258,111	266,115	282,054
Acreage	613,242	604,080	637,534	657,304	696,673
Production (MT)	141,078	203,071	261,810	243,215	293,948
Yield (MT/ha)	0.57	0.83	1.01	0.91	1.04

Source: MoAFS

1.6 Exports and Imports

There was a time when Malawi had a good reputation for its high quality Chalimbana variety of groundnuts (Virginia type) and was an important exporter but with problems with Alfatoxin in the 1980s, exports have declined.[16]

Exports from Malawi, are concentrating more and more on SADC countries. South Africa is an attractive market due to its deficit in production, even if they re-export large quantities. The international market, especially the European market is still problematic for export companies who cannot control the level of Aflatoxin.

[16] Because of the toxicity of Aflatoxins, the European Union, one of the most important trading partners for Malawi, effectively banned the import of groundnuts from the country in the early 1990s because contamination exceeded acceptable levels.

The high demand for South Africa is beyond 100,000 MT per annum, and is mainly due to due to rainfall conditions, price unpredictability, reduced exports due to food safety policies in importing. However while South Africa does not satisfy its domestic groundnut needs from domestic production, its advanced processing industries with adequate quality control enable it to export groundnuts and groundnut products to Europe, adding to demand from regional neighbours including Malawi. It means that some part of Malawi groundnuts transit through South Africa to be sold in Europe. This means that Malawi may have a good opportunity in improving the Aflatoxin control in the overall VC and improving also the processing.

Table 31: Unshelled groundnuts exports, 2004-2008

	Extra/Intra EAC/COMESA Unshelled Groundnuts Exports 2004-2008 in volume and value (by destination countries)									
	2004		2005		2006		2007		2008	
Destination	**MT**	**USD**	**MT**	**USD**	**MT**	**USD**	**MT**	**USD**	**MT**	**USD**
INTRA COMESA/EAC										
Kenya	5	857	0	0	0	0	0	0	0	0
Tanzania	43	4,830	0	0	85	17,464	223	29,688	2,055	8,311
Zambia	0	0	0	0	6	9,154	53	20,958	0	0
Zimbabwe	11	6,565	467	111,458	0	0	0	0	0	0
EXTRA COMESA/EAC										
Botswana	0	0	68	34,567	0	0	0	0	0	0
RSA	467	240,364	1	209	226	131,598	424	302,875	0	0
UK	0	0	0	0	36	19,416	1,650	1,306,325	0	0
TOTAL	**526**	**252,616**	**536**	**146,234**	**353**	**177,632**	**2,350**	**1,659,846**	**2,055**	**8,311**

Source: NSO

Table 32: Shelled groundnuts exports, 2004-2008

	Extra/Intra EAC/COMESA Shelled Groundnuts Exports 2004-2008 in volume and value (by destination countries)									
	2004		2005		2006		2007		2008	
Destination	**MT**	**USD**	**MT**	**USD**	**MT**	**USD**	**MT**	**USD**	**MT**	**USD**
INTRA COMESA/EAC										
Congo	0	0	20	28,627	0	0	0	0	0	0
Kenya	0	0	1	819	160	29,500	1,219	659,139	2,835	438,865
Tanzania	647	85,991	0	0	1,735	383,516	6,508	844,648	5,392	812,074
Zambia	199	44,538	1,610	82,775	188	102,212	798	332,552	1,092	200,354
Zimbabwe	968	374,084	657	177,177	356	194,653	883	707,893	176	112,287
EXTRA COMESA/EAC										
Bolivia	0	0	0	0	0	0	10	3,571	0	0
Botswana	0	0	56	32,471	0	0	0	0	0	0
India	0	0	112	53,990	0	0	49	331,647	0	0
Indonesia	0	0	0	0	0	0	1,455	987,570	25	18,500
Malaysia	0	0	0	0	0	0	500	125,000	0	0
Mozambique	0	0	0	2,319	60	33,613	38	132,362	0	0
Netherlands	0	0	0	0	0	0	0	0	38	37,389
Pakistan	0	0	45	26,932	0	0	50	328,748	0	0
Philippine	0	0	0	0	0	0	95	174,849	0	0
RSA	5,188	1,935,885	1,035	503,067	2,926	6,894,780	3,406	2,746,822	1,598	1,153,322
Turks CA.I	0	0	0	0	0	0	0	0	15	1,821
UAE	54	19,034	0	0	0	0	0	0	0	0
UK	0	0	0	0	66	44,765	234	191,268	273	226,609

TOTAL	**7,056**	**2,459,532**	**3,536**	**908,178**	**5,491**	**7,683,039**	**15,245**	**7,566,070**	**11,444**	**3,001,222**

Source: NSO

Table 33: Shelled groundnuts imports, 2004-2008

	Extra/Intra EAC/COMESA Shelled Groundnuts Imports 2004-2008 in volume and value (by country of origin)									
	2004		**2005**		**2006**		**2007**		**2008**	
Origin	**MT**	**USD**	**MT**	**USD**	**MT**	**USD**	**MT**	**USD**	**MT**	**USD**
INTRA COMESA/EAC										
Zambia	30	11,825	30	26,168	0	0	0	0	0	0
Zimbabwe	0	0	8	8,039	4	7,963	0	0	112	101,617
Kenya	0	0	0	0	50	45,890	0	0	0	0
EXTRA COMESA/EAC										
Mozambique	0	0	5	5,540	0	0	0	0	0	0
RSA	56	22,462	8	17,362	11	23,026	9	19,899	14	34,707
USA	0	0	0	0	72	23,580	170	123,918	0	0
TOTAL	**86**	**34,287**	**51**	**57,110**	**137**	**100,459**	**179**	**143,818**	**126**	**136,324**

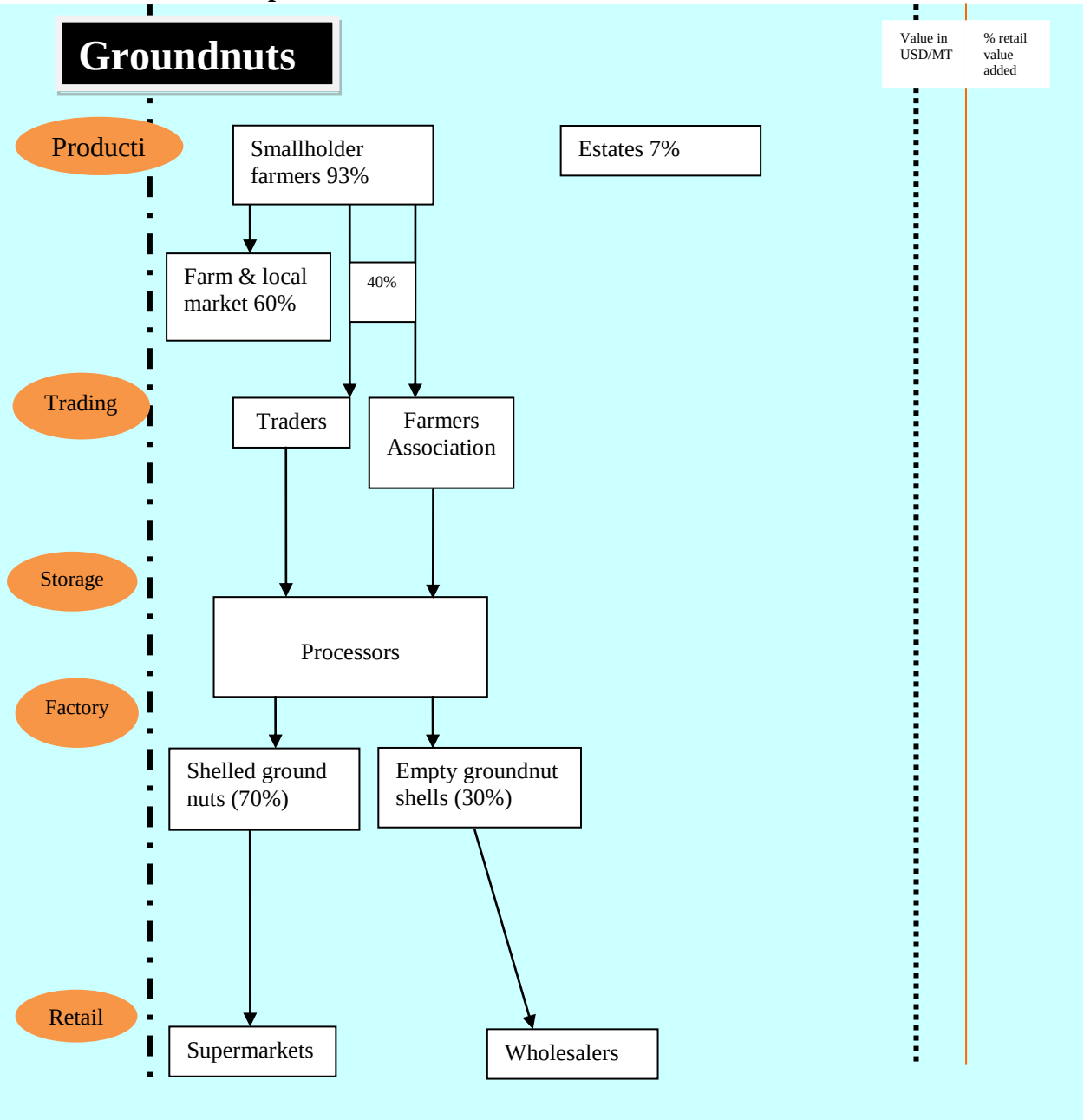
Source: NSO

1.7 Groundnuts Value Chain Mapping

1.7.1 Functions matrix

Functions	Participants/Actors					Support Markets
	Domestic/Export-Import Market Channels					
	Input suppliers	Farmers	Traders	Processors	Wholesalers	Support services: Financial Services, SPS/Standards Certification, **Research stations, Ministry of Agriculture extension services, fertilizer subsidy program**
Wholesale, Retail, Exporting, Importing			NASFAM	Rabs, Transglobe	Rabs, Transglobe	
Processing			NASFAM	Rabs, Transglobe	Rabs, Transglobe	
Trading			Small traders, NASFAM, Mulli Brothers	Rabs, Transglobe		
Collecting, Bulking, Storage				Rabs, Transglobe		
Production		Smallholder farmers (236,957 ha)				
Input Supply				Rabs, Transglobe		

1.7.2 Value chain map



1.7.3 Geographic distribution

Groundnut is suitable for many areas of Malawi, it can grow on a variety of soils, but does best on sandy loams and other deep well drained soils with a loose surface layer.

In Malawi, the main growing areas are plains areas of Lilongwe, Kasungu, Mchinji and Mzimba, parts of Salima, Balaka, Ntchisi, Dowa and Thyolo.

Although they are found in all districts, production is very concentrated in Lilongwe and Kasungu districts probably due to the availability of seeds and proximity of markets. In most of the areas, groundnuts are produced by small holders, except Kasungu which accounts for more than 15 000 hectares hold by estate farms.

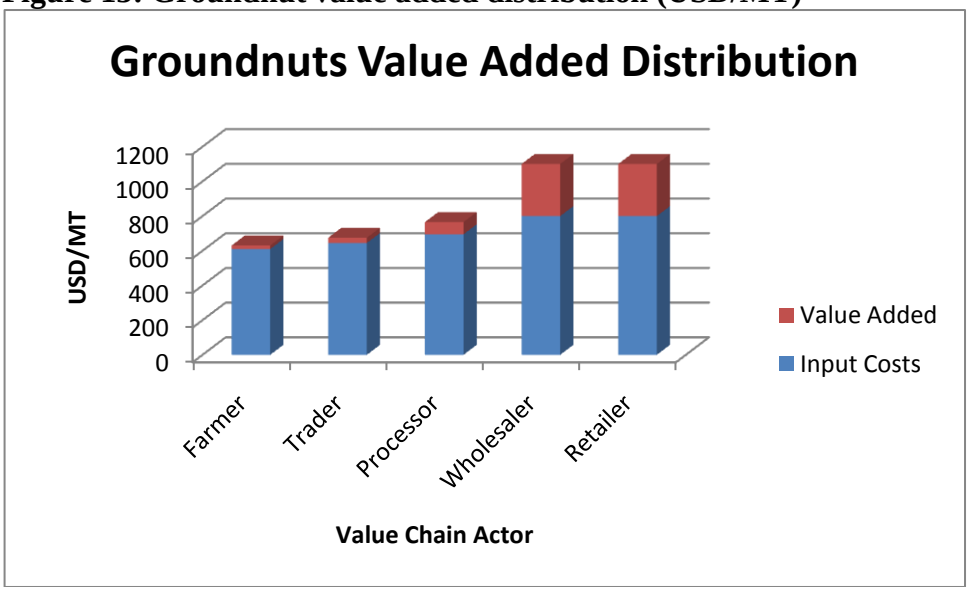
Table 34: Groundnuts geographic distribution, 2007/8

Area	Hectares (ha)	Production (MT)	Yield (MT/ha)	Region	Distribution
Karonga	6,939	5,554	0.80	**North**	**43%**
Mzuzu	28,995	25,130	0.87		
Kasungu	69,828	72,509	1.04		
Lilongwe	75,023	76,909	1.03	**Central**	**46%**
Salima	10,645	9,004	0.85		
Machinga	36,541	23,946	0.66		
Blantyre	28,906	24,286	0.84	**South**	**11%**
Shire Valley	3,797	2,892	0.76		
National	**260,674**	**240,230**			

Source: 2007/8 Agricultural Statistical Bulletin, MoAFS

1.7.4 Value added distribution

Figure 13: Groundnut value added distribution (USD/MT)



Source: Value chain actor interviews

1.8 Constraints and opportunities

The presence of Aflatoxin is probably the major constraint for a larger expansion of groundnuts in Malawi and the lack of internal control is recurrent, especially for products that are consumed locally. The only mechanism that has been identified is the selection of suitable products by NASFAM, which means that other products are discarded and sold back on the local markets of Malawi. Therefore from the economic point of view, the process would be acceptable, because it leaves room for exporters and traders in their negotiations, thus higher mark-up at many levels, and possible additional revenues for the producers. From the social point of view the danger is to select the best products for export, but in larger quantities, leaving the Malawians with groundnuts contaminated by the Aflatoxin. In other words: 'more groundnut exports, more Aflatoxin in Malawi.'

Aflatoxin fungus can start to develop during the crop period but grows mainly on harvested crops under warm and moist conditions especially during the storage. The drought also exacerbates the entry of the fungi into the shell by increasing the cracking of groundnut shells underground especially before harvest. Insect damage to shells provides another entry point. Many preventives actions can be undertaken but it starts with 'awareness campaigns' that should not only involve farmers but also processors and traders.

Groundnut variety improvements are the outcome of efforts undertaken in by ICRISAT, which selected the Virginia type CG7 and new short cycle the Spanish type JL24 which is more drought resistant. They also introduced rosette resistant varieties which are not yet disseminated (ICGV-SM 90704 and ICG 12991). The ICRISAT has already tested an Aflatoxin resistant variety for which dissemination will start once they find technical partners.

Yields are quite low for the main varieties Chalimba and CG7 (below 1 ton/ha) while potential is up to 2500 kg/ha if appropriate techniques are used.

1.8.1 End market analysis

It can be estimated that from the total production 60% is consumed at household level or sold in local markets, 25% is sold in national markets, and 5% goes to export markets.

In Malawi groundnuts are consumed in different ways: in general as flour, roasted, peanut butter, but at farm level it is also consumed as fresh or dry boiled or cracked to produce oil. Of the marketed proportion, most is consumed within Malawi as confectionary nuts and peanut butter.

Groundnuts varieties in Malawi have an oil content ranging from 38 to 42%. However, the price of groundnut oil does not compete with other cheaper vegetable oils and compared to the price of whole groundnuts it does not currently encourage oil processing; however farmers or small village processors traditionally process oil for their own consumption.

Groundnut tops are also valuable livestock feed, with between 12 and 16% crude protein. Shells are good surface mulch and compost ingredients, but it is not very much practiced in Malawi.

The government strategy aims to promote both economic and social development. The development of groundnut production for the domestic market and the export market can address both these objectives. Groundnut as cash crop can contribute to the economy, and as a food crop can contribute to a more protein-rich diet for Malawians:

(a) Due to the high nutritional value of peanuts (21% to 30% of proteins and 41% to 52% of lipids, with high concentration in calcium, magnesium and vitamin E1) growing groundnuts may represent a real opportunity to improve the food security through better nutrient value of the predominantly maize based Malawian diet. The groundnut is the major constituent of the Ready-to-Use Therapeutic Food (RUTF), initiated by the Project Peanut Butter in 2001. The RUTF shows the wide range of alternative development of groundnuts, due to its natural nutrient value.

(b) Export supply is still low as compared to the potential that could be exported from Malawi. South Africa could absorb more than 100,000 MT and Europe more than 300 000 MT. Slow development of export markets is partly due to the competition of other cash crops such as

tobacco, but also to the difficulties for the farmers to control the diseases. Malawi has already been banned from exporting groundnuts to Europe because of the high level of Aflatoxin. Therefore the quality has to be improved and properly valued in order to improve Malawi's groundnut standards and enhance farmer incomes. The farmers dealing with fair-trade in Malawi have been able to improve the quality and allocate more inputs to intensify their groundnut production.

1.8.2 Vertical linkages

The main processors are NASFAM, Rab Processors, Transglobe, Mulli Brothers, Equator Nuts, and ADMARC. Usually processors engage middlemen traders to buy directly from farmers. The processors are meant to monitor these traders and control prices that are actually paid at farmgate, but in practice the traders, working independently of the large processors, are more likely to buy from smallholders indiscriminately and therefore provide no incentive for quality, especially when the trade is in unshelled nuts when quality cannot be observed.

This unorganised market structure and lack of decentralized agro-processing facilities forces smallholders to sell raw materials with limited added value. In general the product quality is not remunerated; it is either accepted as 'standard' or rejected if the quality is extremely poor when the demand is low.

At present, it is only NASFAM who has a well-established quality control system in place within the value chain and consequently is the main exporter outside of the region mainly through the Fairtrade organisation.

1.8.3 Horizontal linkages

Out of 3.4 millions farmers in Malawi, the total number of groundnut producers is about 100,000 farmers, of which 15,000 are NASFAM members, which is the main association uniting groundnut producers dealing with export.

At the farm level there needs to be more promotion of marketing by smallholder associations, utilisation of Market Information Systems and improved storage facilities.

Processors usually have storage facilities, but do not seem to be aware of the storage norms in general and pest/disease control for groundnuts. Mulli Brothers and Rab Processors consider that the overall process entails 15% to 20% of losses (stones, dusts and fungus rejects). Farmers do not have suitable space to store the products below 13% moisture. Establishing multipurpose storage facilities to combine grains with and groundnuts or pigeon peas at farmer level would decrease crop losses and enable farmers to exert more control over their selling season and prices.

1.8.4 Supporting markets/services

Increasing groundnut production is one of the objectives of the Malawi agricultural strategic plan, which includes rosette resistant varieties and on farm seed selection and storage.

This aim has been realised and the new groundnut varieties are the outcome of research efforts undertaken by the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), a

regional initiative established to address concerns about low groundnut yields and other important production constraints in the region. The study monitored farmers' use of three improved groundnut varieties, CG 7, ICGV-SM 90704, and JL 24, and improved crop management practices. The seed banks, which involved only CG 7 has widely influenced the diffusion of this variety which is the most common now, with the traditional Chalimbana.

Average seed yield reported in demonstration plots in different sites of the country show that it is possible to reach at least 1.2 MT/hectare with CG7 – Malawian groundnut yields are creeping closer to this figure with the 2008/9 yield officially reported at 1.02 MT/ha.

No awareness campaign for Aflatoxin has been established, and extension services are not really involved in this commodity, leaving the responsibility to ICRISAT and NASFAM. Their research has made significant efforts to find new resistant varieties in all rosette endemic areas such as Phalombe plain, but it will take another 5 years to reach the farmers.

Rural finance is lacking and has been identified as a key constraint to boost the cash crop production in Malawi.

There is an opportunity to establish quality standards and payments on quality with better Aflatoxin testing through a warehouse receipt system with grading facilities that could ensure premium prices for farmers with quality product. Detection of Aflatoxin levels is becoming much easier with the less expensive ELISA[17] kit. At about 1 USD per sample, ELISA is a testing tool that group of farmers can afford, as compared to HPLC[18]. So far NASFAM is the only trading institution which has made some efforts in collaborating with ICRISAT and USAID to assist farmers in Aflatoxin awareness campaigns, but focussing on export markets.

[17] Enzyme-Linked Immunosorbent Assay

[18] The High-Performance Liquid Chromatography (HPLC), used by pre-shipment inspection agents costs around 230 USD per sample

PART THREE: THE BUSINESS ENABLING ENVIRONMENT FOR TRADE IN AGRICULTURAL COMMODITIES

THE POLICY ENVIRONMENT

12.1 Pricing and Marketing Policies

The Government of Malawi intervenes in pricing and marketing of staple foods with the aim of ensuring food security for the nation. In the official programme document for the Agriculture Input Subsidy Programme (2007/8) the GOM emphasizes the following three objectives for its intervention:

1. Improving accessibility and affordability of key agricultural inputs (fertilizer and improved seed) to the smallholder farmers in Malawi.
2. Ensuring availability and access to food (through physical Government storage, consumer ceiling prices, and export bans);
3. Guaranteeing a return to the farmer for their produce (through producer floor prices).

The ceiling and floor prices are usually decided by the Agricultural Development and Marketing Corporation (ADMARC) – a GoM parastatal participating in the following facets of agriculture and agri-business within Malawi:

1. Supplies agricultural inputs to farmers;
2. Purchases agricultural produce;
3. Markets agricultural produce for export and domestic consumption;
4. Plays a food security role in maize markets by acting as a buyer and seller in remote areas, providing grain storage across seasons and supporting a large marketing structure.

Food markets in Malawi therefore operate in a mixed policy environment of legalized private trade within the context of continued strong government operations. State operations in the market are defended as being necessary to stabilize prices for producers and ensure the availability of food for low-income consumers when markets become tight.

In May 2008 the Government of Malawi reported that the country had produced another major maize surplus, estimated at 500,000 tons. In an effort to provide a floor price for this surplus and to accumulate food security stocks, the government instructed ADMARC to purchase more maize this year than in previous years. To achieve this, ADMARC announced commodity buying prices early in the season and also started buying earlier than usual.

ADMARC also opened more seasonal markets and temporary buying points. ADMARC began procuring maize at 20,000 kwacha (US$140) per ton at the start of the 2008 harvest, but quickly raised its price to 25,000, then 30,000, and then 40,000 ($280) per ton to outbid private traders. However, market prices rose dramatically in response to ADMARC's actions. By early August, ADMARC and the National Food Security Reserve Agency (NFRA) had procured only 60,000 tons combined, which by most accounts would be far too little to meet the demand for grain at ADMARC depots through the upcoming lean season before the 2009 harvest in May. By early August, only 2-3 months after the reportedly good harvest, maize prices had reached historic highs in nominal terms. Many in Malawi felt that these price rises were orchestrated by private traders. On August 19, the Government of Malawi announced that private maize trade was banned and that ADMARC was the sole legal buyer and seller of maize in the country, buying at 45,000 kwacha (US$316 per ton) and selling at 52,000 (US$366) per ton. The Government then developed a contract with one large trader to supply maize to ADMARC.

The FUM communicated an official response to this move in September 2008:

'The Farmers Union of Malawi has grave reservations regarding the recently announced plan by the government that ADMARC will be the sole buyer of all the maize produced in Malawi. Concerns have been raised both about ADMARC's operational inefficiency and the extent to which ADMARC actually provides useful marketing services to smallholder farmers and poor consumers. ADMARC last year failed to access many rural areas first blaming it on a lack of funds then on impassable roads due to the rains. Being the sole buyer is not a direction the government is supposed to be going. This directive is not well timed and is in contravention with our current era of market liberalization. FUM feels that there is a role for both ADMARC and the private sector in maize purchasing and selling, especially in remote areas of considerable distance from ADMARC depots and that the directive enforcing ADMARC as the sole buyer/seller of maize, if necessary, may have been better implemented in partnership with the private sector. Competition is good for creating both effective markets as well as leading to a better livelihood for Malawian farmers, better livelihood leads to increased food security.'[19]

Whilst there are strategic reasons for setting the selling price, this restricts ADMARC from operating as a truly commercial company. ADMARC has been restructured several times in the past and the impact of these reforms has led to increased private sector activity in producer markets. However, inefficiencies in factor input markets, market information, credit delivery and inadequate infrastructure have all constrained the growth of the maize sub-sector and private traders have not always stepped in smoothly when the state market presence was removed. This is more apparent in the more remote parts of the country. The current view in GoM appears to be that ADMARC should be more commercial but not privatized, because of its social function. This is a very sensitive political issue as might be expected.

Nevertheless, the government believes the price of maize for this year will remain stable, around ADMARC's price of K52/kg, because most 'households have adequate stocks from own production which will reduce demand for purchases and because inputs for subsistence food production are subsidised thereby reducing production costs.'

However it is interesting to note that the price of maize, (and other staple foods) in Malawi has fluctuated greatly despite having aggressively pursued a policy of price stabilization. Indeed, food prices in general and maize in particular are generally much higher compared to the trends experienced in previous years. As can be seen in the table below, in February 2008, the price of maize had more than doubled from MK21 per kg in the previous year (Feb 2007) to MK43 per kg, and from 2008 to 2009, the price increased by 25%. The maize harvest period which started in March in some parts of the country did not result in the weakening of the prices, as expected. In the first half of 2009, maize prices have kept on an upward trend, currently reaching over MK60 per kg.

Table 35: Selected staple food market prices, 2005-2009

[19] 'Farmers Union of Malawi Expresses Reservations Over the ADMARC Directive' (September 2008)

Selected staple food market prices (Mkw/kg): Feb 2005 to Feb 2009					
	Feb '05	Feb '06	Feb '07	Feb '08	Feb '09
Maize	21	53	21	43	52
Beans	85	130	123	172	180
Cassava	14	36	21	26	30
Pigeon Peas	39	64	42	72	60
Polished Rice	84	131	100	119	140
Shelled groundnuts	94	131	146	166	175
Sorghum	47	90	80	120	110

Source: WB (2008) quantitative value chain report

Although much of the discussion of agriculture policy revolves around how to increase farm gate prices, these data show that producer prices in Malawi are already relatively high. Naturally, this helps to make maize production a more profitable enterprise for the producer, but equally contributes to higher food costs for urban consumers and higher total shipment values for assembled grain. A 2005 survey on maize marketing and trade policy in Southern Africa warned that maize producer price supports or stabilization policies that involve altering the mean price levels over time, can have unanticipated income distributional effects that run counter to stated poverty alleviation goals. To the extent that the poor are net purchasers of staples such as maize, cassava, and rice, they are directly hurt by policies that raise the prices of these commodities. Further study is necessary to examine the distribution of small-scale farm population according to their position in the staple grain market – buyers, sellers, or both – and therefore determine the impact of pricing policies on the poor.

A vehicle through which to submit the findings of such a report could be the newly established Grain Marketing and Advisory Council (GMAC). The council was established by presidential order with the goal of 'ensuring food security at household and national level and to promote a sustainable and vibrant agricultural commodity market' (GMAC TOR, 2008, see Annex). It is an encouraging development in that its membership of 8 includes a representative from the Farmers Union of Malawi, the Grain Traders and Processors Association, the Poultry Association and the Civil Society for Agriculture Network. These representatives join the MoAFS, ADMARC and NFRA for monthly meetings (rotated between Blantyre- the home of industry, and Lilongwe- the administrative capital) to discuss government policy on grains. Included in the TOR are the objectives to:

- Obtain accurate and timely crop estimates to prioritise allocation of the crop in the following order:
    - National food security by ensuring that both ADMARC and NFRA are adequately stocked.
    - Requirements of agro-processors and other value adding industries.
    - Local agricultural commodity trading.
    - Agricultural commodity exports
- Ensure that national food security requirements are a priority.
- Ensure that ADMARC is adequately funded by Government for it to effectively perform its social function.
- Ensure that crop estimates are accurate and timely to allow for appropriate planning activities and market decision making.
- Develop policies and costs of production and levels of which government intervention will stabilise the market while protecting farmers from exploitation.

- Establish a 'Central Export Agency' such as NFRA for maize through which all maize exports are to be undertaken.
- Ensure that traders and buyers of maize are licensed through Grain Traders and Processors Association.
- Ensure that apart from ADMARC, the private sector also participates in selling of maize at all times and across the whole country to ease the pressure on ADMARC.

The council reports directly to the Minister of Agriculture, who is also the President of Malawi, so one can assume the potential for great influence on food security policy making and the other issues outlined above. Although the council's meeting minutes are confidential, the vice-chair (also Poultry Association representative) was able to share the fact that the council has already determined the farm gate prices for 2010 crop of maize and soya, and that these prices have been adopted by government. They are currently working on determining the prices for other grains. He feels the council is 'definitely influential, but we do face some resistance from ADMARC especially with regards to the profit margins that they wish to include in the maize and soya pricing models.'

The 2007-2011 budget for Government of Malawi inputs and maize market interventions can be found in the Annexes. In terms of investments in production and post harvest storage facilities, the government has spent $10 million constructing 20,000 MT of NFRA maize silos in Mzuzu (northern capital), Mangochi (central lakeshore town) and Luchenza (southern capital). This is in addition to the 180,000 MT of storage capacity in Lilongwe and a further 80,000 MT in warehouses. The chief executive also reported an improvement of the quality of the facilities, stating that the percentage storage loss had decreased from 7% in 2003/4 to less than 0.1% last year (2008). He also pointed out that the NFRA has not had to import maize since 2006 as every year since 2005 has seen a surplus. The NFRA rents out its storage space to actors in the market; one major tenant is the World Food Programme.

The private sector has had an increasing role in the marketing of staple foods since the part liberalization of the markets beginning in the 1990's. In terms of input supply services the main actors are Farmers World, Kulima Gold and Agora. An inventory of the private sector firms/associations that are involved in trading of the specific staple foods is provided in Annex 2.

Key contacts:

ADMARC
Contact: Chief Executive, Dr Matabwa
Add: P.O. Box 5052, Limbe
Tel: +265 1 840 500
Email: admce@admarc.co.mw

National Food Reserve Agency (NFRA)
Contact: Chief Executive Officer, Nasinuku Saukila
Add: Kanengo Silos Complex, Lilongwe, Private Bag B450
Tel: +265 1 713092/ 711025
Fax: +265 1 712131
Email: nsaukila@nframw.com

1.2 Tariffs and Non-tariff Charges

1.2.1 Tariffs

Table 36: Import duty applicable on staple food products

Product	Import duty applicable on imports from:			
	EAC Countries	COMESA Countries	SADC Countries	Rest of the World (EAC CET)
Maize	Free	Free	Free	Free
Wheat	Free	Free	Free	Free
Rice	10%	Free	10%	Husked, Paddy 10% 15%
Sorghum	10%	Free	10%	10%
Millet	10%	Free	10%	10%
Beans	Free	Free	Free	Free
Pulses (Pigeon Pea, Cow pea and Chick pea)	25%	12%	25%	25%, Import excise duty 20%
Cassava	10%	Free	10%	10%, Import excise 20%
Groundnuts	Free	Free	Free	Free

Source: MRA

The possibility of imposing tariffs on wheat imports was discussed in 2006 but as Malawi only produces 3,000 MT of wheat per year against the annual importation of 60,000 MT the tariff would not be justified until the area planted to wheat increased significantly.

Chibuku, sorghum processor would like to see increased tariffs on exports of red sorghum to promote sorghum production in Malawi for the domestic market.

1.2.2 Non-Tariff Charges

Table 37: Non-tariff charges on imports of staple food products

Non Tariff Item (e.g. SPS Inspection Fees, Standards Inspection Fees, Health Inspection Fees, Clearing Agents Fees, etc	Description	Charges	Estimated Cost per 1 tonne US $
Inspection fees by MRA	Since phase out of pre-shipment inspection services by Intertek, MRA is charging Destination Inspection Fees	MK15000 on imported goods worth MK300 000 and above.	n/a
Standards Inspection fees by Malawi Bureau of Standards	On imported goods at the point of entry [Food products, Wheat flour, Rice, Maize Grain, Beans]	MK2000: Import Inspection Request Form (IIRF) IQM 01 MK3000: Report/certificate + testing fees (variable depending on parameters)	MK5000+
SPS Inspection fees by Bvumbwe Research Station	On some of the imported goods [Food grain legumes, maize, rice, other cereals]	MK500: Phytosanitary certificate + transport fees for inspector if called away from Bvumbwe Research Station for inspection	MK500+
Clearing agents fees by authorised clearing agents	On imported goods for clearance	The amount is 0.5% of the value for import duty	-

Table 38: Charges incurred on in-country movement of staple food products

Non Tariff Item (Local Authority Cess, etc.)	Description	Charges	Estimated Cost per 1 tonne US $
Escort fees or deposit by MRA	Escort fees are charged by MRA for escorting the consignment in transit In the case of no escort fees, deposit charge is paid at the point of entry on the goods in transit and is refundable at point of exit.	MK7500 per day The deposit charge paid is equivalent to the duty payable on the goods in transit	- -
Toll fees by National Roads Authority	Toll fees are paid by transporters on the loaded trucks travelling on the roads of Malawi	SADC vehicles $15/100kg/100km Mozambique vehicles: $28/100kg/100km Tanzania vehicles: $16/100kg/100km	SADC: $150/100km Mozambique: 280/100km Tanzania: $160/100km

1.3 Regional Structured Trading System Platform

1.3.2 The Food Balance Sheet

Malawi's food balance sheet (FBS) covers the products of maize, rice, sorghum/millet, wheat and cassava. The 'food gap' is calculated taking into account the total utilization – food use, seed requirement, strategic grain reserve requirement and feed and industrial uses – and comparing the total figure with net production and national stocks. Malawi follows the *SADC/FAO Early Warning System Food Balance Sheet Guidelines Vol. 1* for constructing the FBS. Data is collected from the MoAFS, DoPDMA, FEWSNET, NSO, WFP, NFRA and ADMARC for the calculations and follows the following criteria:

Production figures

- Based on Third Round figures from Ministry of Agriculture and Food Security Crop Production.
- Cassava gross production is in dry weight (i.e. 30% of freshweight and 10 % of this production flows to the other season.)

Domestic Availability

- Private Traders Carryover stocks survey findings, MoAFS
- Revised Post Harvest Losses from findings of MoAFS Food survey

Food use

- Population for that particular year – NSO estimated population census
- The Kcal requirement per person per day from SADC/FAO Early warning System Guidelines;
- Kilocalories/kg: Based on Food Consumption Table for Eastern and Southern Africa developed by CTA and ECSA.
- The Food Dietary Contribution: Kcal contribution: Maize (73%), Rice (2.0%), Cassava (6.0%), Wheat (2.0 %), Sorghum/Millet 1.0%); based on Food Survey by MoAFS, 2004

Seed requirement:

- Based on the current hectarage and seed rate from the Guide to Agricultural Production - (Maize (25kg/ha), rice (63kg/ha), millet (6kg/ha), wheat (80kgs/ha) and sorghum (4kg/ha).

- On farm Stocks included from findings of MoAFS Food Survey, 2004.

SGR Replenishment

- The level of SGR is determined by the government and its co operating partners.
- Currently the approved SGR requirement is at 60,000 mt.

Feed and Industrial Uses

- Estimated on Feed and Industrial Use Requirement obtained from 2003/2004 season CFSAM

Trade data

- Food Imports for 2007/08 marketing year for Humanitarian Aid interventions and commercial purposes to be included if required
- Monitoring of the crossborder trade done through FEWSNET.
- Estimated informal imports and exports based on the 2004/05 marketing season

There is no private sector consultation in the preparation of the FBS. There is no large-scale national consultation mechanism on the food balance sheet although it is used by the Presidential Grain Advisory Council to assist agricultural policy-making. Information on the food balance sheet is not widely disseminated nor included in the Agricultural Statistics Bulletin 2008. However, the MoAFS supplies FBS on request.

The 2009/10 FBS reinforces that food security has not been as precarious since 2006 due to the recorded surpluses in maize and other food crops. The food balances sheets have shown a positive trend since 2006 season (see Table below) Cereal production for the 2009-10 consumption year shows that Malawi produced 3.6 million MT of maize against a national requirement of 2.4million MT. This means that it has 1.2million MT surplus. For a third year running Malawi will get all its cereal requirements from its own production and there will be no need for formal staple imports. However, in spite of the national food surpluses, the market signals indicate some increases in the producer price of maize which is inconsistent with the declared surpluses. Many attribute the market tightening to speculation among the private traders, and an anticipation of over-estimation of the food production level. Availability of grain in ADMARC markets which offers a standard lower price throughout the consumption season will be crucial to ensuring that the number of households facing food shortage in affected areas remains low.

Table 39: Malawi Food Balance Sheet: Apr 2009-Mar 2010 as of 30/07/09

ITEM	Maize	Rice	Sorghum/ Millet	Wheat	Cassava	MAIZE EQ
A. NET PRODUCTION	**3,281,412**	**99,407**	**52,702**	**2,471**	**865,302**	**4229949**
Gross Production	3,767,408	135,988	60,025	2,746	985,538	4869649
Post-harvest losses (%)	12.90%	26.90%	12.20%	10.00%	12.20%	
B. OFFICIAL OPENING STOCKS	**134,026**	**6,900**	**2,190**	**0**	**0**	**142863**
On-farm stocks	30,000	400	2,190	0	0	32,563
SGR (physical stocks in silos)	101,868	0	0	0	0	101,868
ADMARC	2,158	6,500	0	0	0	8,432
WFP (humanitarian aid)	0	0	0	0	0	0
Private traders	0	0	0	0	0	0
C. DOMESTIC AVAILABILITY	**3,415,438**	**106,307**	**54,892**	**2,471**	**865,302**	**4,372,812**
D. KILOCALORIES/KG	**3,450**	**3,330**	**3,430**	**3,640**	**3,180**	
E. TOTAL UTILIZATION	**2,458,123**	**64,741**	**30,060**	**55,701**	**190,723**	**2,785,062**
Food Use	2,133,002	60,711	29,470	55,540	190,723	2,455,296

Seed Requirement	41564	4030	589	160	0	46,209
SGR Replenishment	33,557	0	0	0	0	33,557
Feed and Industrial uses	250,000	0	0	0	0	250,000
F. DOMESTIC FOOD BALANCE	**957,315**	**41,567**	**24,832**	**53,229**	**674,579**	**1,587,750**
G. CROSS SUBSISTITUTION	**630,435**	**40,121**	**24,688**	**56,161**	**621,786**	**1,207,576**
H. SHORTFALL/SURPLUS	**1,587,750**	**0**	**0**	**0**	**0**	**1,587,750**
I. TOTAL IMPORTS EXPECTED (APR 09-MAR 10)	**65,000**	**3,000**	**300**	**37,000**	**1,500**	**108,614**
(i) Planned Commercial Imports as of 01/04/09	0	0	0	0	0	0
Received as of 30/07/09	0	0	0	0	0	0
Not received as of 30/07/09	0	0	0	0	0	0
(ii) Planned Imports for SGR Replenishment as of 1/04/09	0	0	0	0	0	0
Received as of 30/07/09	0	0	0	0	0	0
Not received as of 30/07/09	0	0	0	0	0	0
(iii) Projected Informal Cross Border Trade Imports 01/04/09	65,000	3,000	300	37,000	1,500	108,614
Received as of 30/07/09	41,085	275	17	15,670	180	58,066
Not received as of 30/07/09	23,915	2,725	283	21,330	1,320	50,548
(iv) Planned Food Aid Imports as 01/06/09	0	0	0	0	0	0
Received as of1 30/07/09	0	0	0	0	0	0
Not received as of 30/07/09	0	0	0	0	0	0
(v) Public Works Programme 01/04/09	0	0	0	0	0	0
Received as of 30/0709	0	0	0	0	0	0
Not received as of 30/07/09	0	0	0	0	0	0
J. TOTAL EXPORTS EXPECTED (APR 09-MAR 10)	**1,000**	**1,000**	**10**	**0**	**0**	**1,975**
(i) Planned Official Exports as of 01/04/09 (NFRA to any country)	0	0	0	0	0	0
Actual exports as of 30/07/09	0	0	0	0	0	0
Not Exported as of 30/07/09	0	0	0	0	0	0
(ii) Planned Official Exports as of 01/04/09 WFP - Zimbabwe for Humanitarian aid	0	0	0	0	0	0
Actual exports as of 30/07/09	0	0	0	0	0	0
Not Exported as of 30/07/09	0	0	0	0	0	0
(i) Projected Informal Border Trade Exports as of 1/04/09	1,000	1,000	10	0	0	1,975
Actual exports as of 30/07/09	288	2,273	96	379	3	2,980
Not Exported as of 30/07/09	712	1,273	86	379	3	1,005
K. ACTUAL NET IMPORTS as of 30/07/09	**40,797**	**1,998**	**79**	**15,291**	**177**	**55,086**
L. PROJECTED NET IMPORTS (APR 09-MAR 10)	**64,000**	**2,000**	**290**	**37,000**	**1,500**	**106,639**
M. TOTAL FOOD GAP (APR 09-MAR 10)	**1,021,315**	**43,567**	**25,122**	**16,229**	**676,079**	**1,694,389**
N. ACTUAL FOOD GAP (30/06/09)	**998,112**	**39,569**	**24,753**	**37,938**	**674,756**	**1,642,836**
O. CROSS SUBSISTITUTION	**644,724**	**38,192**	**24,610**	**-40,028**	**621,949**	
P. SHORTFALL/SURPLUS	**1,642,836**	**0**	**0**	**0**	**0**	**1,642,836**

Malawi, along with other member states, used to submit its annual food balance sheets to the Regional Early Warning Unit (REWU) of SADC, which published a bulletin that was much appreciated until it stopped being circulated three or four years ago. The member states have now lost their enthusiasm for

submitting their data and the US $100,000 annual contribution to the training and publication because training was no longer provided and the bulletins ceased to appear.

Nevertheless the public sector is still pursuing the idea of a regional food balance sheet as an information tool on regional availability of staple foods to meet regional food security needs. Little detail was provided on an appropriate mechanism for assembling such a regional food balance sheet but a representative from the Ministry of Agriculture suggested the possibility of a regional food security network that could collect the data from existing national food security research centres such as the Food Nutrition and Security Joint Task Force (FNSJTF). Both private and public sector actors agreed that a regional food balance sheet could improve transparency of food stocks in the region and help to avoid vulnerability after poor production seasons and external market shocks. Co-ordination between regional states would need to include reference to the same calendar dates for completion of each stage of the build up to the balance sheet and standardized conversion standards.

Key contact:

Food Nutrition and Security Joint Task Force (FNSJTF)
Contact: Technical Advisor
Add: Room 63/64, MoAFS, Capital Hill, Lilongwe
Tel: +265 1 789 121
Fax: +265 1 788 434
Email: techsec@moafsmw.org

1.3.3 Warehouse Receipt System

The promotion of a sustainable and efficient rural and urban financial system remains a major development challenge in Malawi. Formal financial institutions are risk averse and have a highly reduced exposure to agricultural and rural economy. Agricultural commodity traders face barriers in accessing credit due to lack of credible track record. They also lack assets, which can be collateralised, as usually required by the formal financial institutions. A regulated system of transferable warehouse receipts can help smallholder farmers and small scale commodity traders overcome some of these problems and ease access to rural and urban finance.

Currently there is no formal warehouse receipt system operating in Malawi. However, following a technical paper from the World Bank Commodity Risk Management Group in 2007, the Government announced that it is seeking donor funds to provide some up-front investment to enable the launch of a WRS. The Government budget for maize market interventions shows an anticipated $200,000 being spent on WRS until 2011 (see Annexes). A representative from the MoAFS was enthusiastic about a WRS ensuring that there is more accurate information about the level of private sector maize stocks held in country. This could reduce the political pressure on Government to increase its own physical stocks. The private sector also feels it could benefit from such a system through more reliable registering and insurance about the quality and quantity of goods being traded. A WRS would allow the market producers, traders, processors and even speculators to store commodities in regulated and certified warehouses in exchange for a receipt, which can then be traded, transferred to an individual or used to access credit from a bank with the deposited commodity acting as collateral.

A pilot project is underway that seeks to set an example of best practice for the system in Malawi. Steered by the Agricultural Commodity Exchange (ACE), the implementation will occur through the Grain Traders and Processors Association (GTPA). The GTPA was selected as it represents the majority of the companies and individuals who would utilise the warehouse receipt system. As yet there is no official legal framework for this pilot WRS but ACE was able to provide some information on how the system would be administered. ACE will cover the initial costs of administration and together with GTPA, will process application from interested participants in the warehousing scheme. Inspections of storage facilities by consultants will then be carried out and the warehouse assisted to source official receipts (including information on commodity, location, quantity, quality and valid period of storage).

The results of such a WRS are expected to have a major impact on all actors in the value chain, specifically including smallholder farmers.

1. Ability for the **farmer** to deposit his harvest of crop and to obtain a Warehouse Receipt which can be redeemed later in the season for a modest fee against return of the crop that has been well stored, OR, to discount receipts for classified crops with a trader for cash with which the farmer can buy or reserve farm inputs for the following season at the prices prevailing at the date of deposit, eliminating exposure to inflation or exchange risk.
2. Ability for **traders** either to sell on at the discounted price further up the value chain (or direct to a miller if the quantity is large enough), or to discount the Receipt with a financial institution and re-enter the market to purchase more crop for cash, thereby increasing market liquidity and holding capacity.
3. Availability to **millers, vendors,** and **exporters** at any time of year of crops as it is required for their business operations through acquiring Warehouse Receipts at prices including an interest factor from traders and financial institutions, in marked contrast to the current situation where traders and millers have to exert and divert great resource and, in the case of millers and higher level traders, large, and collateralised, cash resources to buy in the crop at harvest time.

Other general benefits include:

- Storage and handling losses reduced from 10% or more to 2% or less to immense food security and financial benefit.
- Much more predictable and uniform prices for both producers and consumers of staple foods, and sharply reduced opportunities for rent-seeking (‘profiteering’)
- Greatly reduced unnecessary transportation of staple crops from one area of the country to another, and eventual relocation of some milling activities closer to the consumers, also accessible to NGO’s and other relief and social marketing suppliers.

There remains a need for ACE to be supported in its proactive approach to identify traders with storage capacity that can be applied to the WRS when the legal provisions have been put in place. Such storage facilities can be used to bulk up stocks for delivery to larger facilities. Support is needed to install electronic monitoring systems to keep track of stocks in the warehouses, to inspect the facilities on a regular basis and to have access to laboratory facilities with counter-checking capabilities with other laboratories to increase credibility among the clients. This implies training as well as capital investment. ACE is in the process of securing funding from the Common Fund for Commodities that has supported similar projects in Ethiopia and Tanzania. The project is scheduled to start in January 2010 and will seek to provide both technical assistance and training support in areas related to the implementation of warehouse receipt systems. Specific actions envisaged include review of legislation, development of official registries and registry management procedures, development of warehouse certification/ licensing procedures, refurbishing and upgrading of selected warehouses,

testing and rollout of new warehouse inventory credit systems, promotion of the new system and training of new system users.

Key contact:

Grain Traders and Processors Association of Malawi (GTPA)
Contact: Executive Secretary, Paulo Chiziwa
Add: Plot 28/251, Kanengo, Lilongwe
Tel: +265 1 711378
Fax: +265 1 710258
Email: gtpa@sdnp.org.mw

1.3.4 The Commodity Exchange

There is a strong role for commodity exchanges to play in an emerging market like Malawi: for provision of reliable market intelligence/information both pre and post harvest; for improved market access; for more competition; for the encouragement of quality standards; improved communication; full transparency; enforceable contracts/dispute resolution; and more efficient/cost effective markets.

Currently there are two operational commodity exchanges in Malawi, Agricultural Commodity Exchange for Africa (ACE) and the Malawi Agricultural Commodity Exchange (MACE). ACE was what evolved from the former NASCOMEX, which is now rebranded. ACE is a genuine exchange, with deals conducted by willing buyers and sellers who conduct their business through their brokers and who earn an agreed rate of commission for the work they do. ACE has operating regulations governing the conduct of the exchange itself and the members and brokers and the clients who use it. ACE also has contracts and a dispute resolution system (arbitration) in the event of any disagreement arising. MACE has none of these and operates more as a market information supplier than an exchange.

Established in 2004, one of MACE's major achievements has been to broker a deal with a local telecommunications provider, TNM, company to disseminate market information to the small holder farmers throughout the country. The information is transmitted through the Short Messaging System, SMS, at a minimal charge equivalent to the normal SMS text charge. By dialing a special number, small holder farmers are able to access information on available commodities, prices, quality and quantity descriptions anytime and anywhere in the country. The information disseminated by the telecommunication company is obtained from the MACE central hub which processes all the information obtained from the rural market information points (MIP) that serve as data posts for the small scale to centers in the major markets, where consumers can access through the website or through radio programs. At the MIP's, the information is also displayed on the black boards where the rural traders can easily access and place bids to sell and offers to buy available agricultural commodities.

MACE has also gained recognition by the Ministry of Agriculture which supports part of its activities in the collection and dissemination of market information. The private—public partnership was established to facilitate and improve the co-ordination of information dissemination to the small holder farmers throughout the country. MACE is also spear heading a horticultural marketing project, through which it supplies chain stores and supermarkets with fresh farm produce. The products are graded and packaged before supply to the major stores, including schools and hospitals. The project also markets vegetable seed and other inputs such as insecticides at very competitive prices at their rural market

information points. Other market information tools used by the exchange include the internet based virtual library, the interactive voice response system and a weekly radio program.

For ACE, regional market facilitation is the ultimate goal. The aim is to link national marketing institutions to create free information flows and facilitate regional trade growth. Launching its operations in October 2006, ACE is setting its bait on regional agricultural commodity marketing. The idea is to improve access for people operating in Africa, not only by providing price information but supplying relative real time market information. It is designed specifically to assist both the small holder producers and traders and the commercial traders and processors to more efficiently and effectively buy and/or sell their commodities at a more regional level. ACE has thus far attracted the interest of companies in Malawi, Zambia, Zimbabwe and a growing number of members from South Africa, who are also members of the South African Futures Exchange, SAFEX. Trading with ACE is relatively simple. Commodity offers and bids are placed on the ACE website and members can make sales and purchases following the rules and procedures set by the Exchange, on behalf of their clients. ACE has plans to establish links to MACE, and the Kenya Agricultural Commodity Exchange, as well as the commodity exchanges in Uganda, Ethiopia and Zambia.

ACE has been registered as a non-profit making Trust and as an NGO and will in the beginning be dependent on donor funding. In time ACE as an organization aims to become sustainable through membership fees and levies against the members.

ACE cited the following challenges for the effective functioning of a commodity exchange in Malawi:

- The supply of commodities in Malawi all occurs at the same time, flooding the market and creating a downward pressure on prices, particularly at harvest time. Add to this the high cost of production, low yields and the lack of real competition in the marketplace and it is easy to see why farmers struggle to get a reasonable return on their investment.
- There is a lack of awareness, willingness and capacity to agree to and to enforce standardization or grading classifications and this is being resisted by the private sector in some instances.
- Government pricing policies interfere with the trading environment
- Major commercial interests need to support the exchange but the local market in Malawi is quite insular – commercial actors are used to closed-door trading.
- Traders still shy away from transparency and protect their market information and contacts. The commodity exchange would require traders to form a united front with regards to communication with government but many large traders have their own personal relationships with the Ministries.
- Services and infrastructure facilities are not well functioning (a CE requires good, or at least passable, access to roads, availability of transport companies, weigh bridges, quality control services, efficient administration, warehousing, telecommunications, etc)

Key contacts:

Agricultural Commodity Exchange for Africa (ACE)
Contact: Chief Executive, Ian Goggin
Add: Plot 28/251, Kanengo, Lilongwe, PO Box 40139
Tel: + 265 1 710204/304
Fax: + 265 1 710258
Email: icgoggin@gmail.com

Malawi Agriculture Commodity Exchange (MACE) Ltd

Contact: Elizabeth Manda
Add: P/Bag B345, Lilongwe 3
Email: ideaa@ideaamis.com, emanda@ideaamis.com

THE REGULATORY FRAMEWORK

13.1 Customs Documentation and Clearing Procedures

Customs require the following documents for exporting staple foods:

1. An Export License to control/monitor how much is exported and to which destination.
2. Exchange Control – CD I Form – is an exchange control document, which must be completed for all shipments that exceed MK 2,000. Copies are sent to Ministry of Commerce and Industry (MCI) and the Reserve Bank of Malawi (RBM). RBM will query the exporter at the end of the stated period to check if payment has actually been received.
3. Custom Transit Declaration Form for staple foods transiting Malawi,
4. Form 12 – Former Bill of Entry
5. Bill of Lading, when goods are shipped by sea
6. Commercial Invoice – The commercial invoice is completed to enable the importer to clear his goods in his country. It contains the name of the exporter, weight, value and description of goods.
7. Certificate of Origin establishes in the importing country the origin of the goods to ensure whether they are entitled to preferential duties or not. The Certificate of Origin is issued by MCI at a cost of MK 1,200.
8. The phytosanitary certificate assures that the materials being exported are free from diseases and pests (as explained in section 14.3).

A Batch Certificate of Conformance or an Import Quality Certificate is required for all imports of staple foods. This applies specifically to wheat flour, maize grain, rice and beans, as well as a general category of 'food products' which covers the rest of the staple foods. Conditional release of an import shipment from MRA custody may be issued by MBS upon importer's compliance with MRA's requirements if completion of testing for the BCC will take more than 40 days. The import commodity clearance, BCC, is issued on a consignment basis by MBS if the imported commodity is deemed to conform to Malawi standards, allowing sales and transfers of the shipment.

According to the interviewees, the access to the import and export requirements is good, although changes are often not communicated properly. A general complaint is the number of documents involved. Moreover, there is a lack of harmonization between in trade documentation and competing regional trade regimes (COMESA, SADC, WTO) that have their own rules and documents. The language used in the documents (Portuguese in Mozambique) forms an extra barrier.

Table 40: Documents and procedure required for customs clearance

Documents Required to clear imports of staple foods	Procedure for Customs Clearance			
	Location where the documents are obtained from	Fee for accessing the documents	Procedure for lodging the documents for customs clearance	Traders concerns with fees and procedures
Customs declaration Form 12	Clearing agents	MK200 per bunch	Documents are lodged at the point of clearance.	No concerns
Commercial invoice	Manufacturer/ producer	n/a	The commercial invoice is lodged together with	No concerns

			other documents.	
Import Inspection Request Form (IIRF) IQM 01 [Food products, Wheat flour, Rice, Maize Grain, Beans]	MBS	*Registration:*MK2000 *Inspection & Sampling:* 0.65% FOB *Testing:* (dependent on parameters of standard) *Report/ certificate:* MK3500 *Subsistence allowance:* (varie depending on whether inspectors have to travel to consignment) *VAT*: 16.5%	IQM 01 submitted in triplicate with import entry packing list, original copy of any quality or test certificates and other shipping documents	MBS testing facilities are based in Blantyre so importers either have to arrange to have samples sent to Blantyre or sponsor an MBS inspector to travel to the warehouse location. This is a time-consuming process. Traders would prefer to have testing facilities available at point of entry.
Import permit with SPS conditions	Bvumbwe Agricultural Research Station	MK500	The import permit is lodged together with other documents.	Permit only available from Bvumbwe Research Station. Traders recommended increasing availability of the forms (e.g. online)
SPS certificate from exporting country	SPS authority in exporting country	-	The SPS certificate is lodged together with the other documents	Concerns about harmonization of standards across borders
Clearance licence from govt. agents	Responsible govt. agent	-	The clearing licence is lodged together with other documents.	No concerns

Traders recommended the establishment of a 'one-stop-shop' for the allocation of export permits since the need to visit different offices to collect all the necessary documents imposes considerable cost on exporters. Traders also recommend that the allocation of export permits should be computerised such that copies would immediately be distributed to all relevant authorities and records consolidated through the internet in all relevant monitoring organisations. This would help to curtail the repeated use of permits.

Key contact:

Malawi Revenue Authority
Contact: M.K Misomali
Add: MRA, Private Bag 247
Tel: +265 999463323
Email: mmisomali@mra.mw

13.2 Standards

The Malawi Bureau of Standards has standard specifications for maize grain, maize flour, wheat grain, wheat flour, rice, cowpeas, pigeon peas, bean, groundnuts and edible cassava flour (see Annex 2). Sorghum, millet and chick pea currently have no standard specification although a 'determination of tannin content' exists for sorghum. Maize is the only standard that is currently being harmonised with regional standards for COMESA and EAC, and the Bureau as a whole is currently seeking accreditation from SADC. In order for an interested party to learn what the standards are for a

particular commodity, they must make a request to MBS and pay the requisite fee. These fees are listed in the MBS catalogue and, for staple food crops, are around $5 per crop for domestic purchase and $15 per crop for foreign purchase.

Standard inspection service is available at all points of entry, although the testing facilities are only in Blantyre. The import procedures are governed by the MBS (Import Quality Monitoring) Regulations of 2003 (see Annex 3.) MBS advises suppliers to send a pre-shipment sample to MBS for testing to speed up the import commodity clearance process. However, in practice import commodity clearance can be applied for upon arrival of shipments at port of entry, and are subject to sampling and testing by MBS once the goods have entered the country.

Export procedures are governed by the MBS (Exports Quality Certification) Regulations 2003 (see Annex 4) but of the staple food crops, only applies to rice. An application for an export quality certificate has to be made through an Export Inspection Request Form (EIRF) EQM 01 obtainable from MBS. The form needs to be filled in triplicate together with the export packing list, copy of any quality or test certificates, (including results, if any) and any other shipping document. The export consignment then has to be evaluated by MBS to determine its conformity to the requirements of the applicable Malawi or foreign standard. Export quality certificates are issued on a consignment basis by MBS and then a batch certificate of conformance is issued for commodity clearance.

Challenges that MBS has identified in facilitating cross border trade in staple foods, included the high testing fees for small traders (the fees are the same regardless of volume of consignment). These fees are high partly because all the testing is all done manually, without advanced equipment for rapid testing, and partly because the absence of this equipment also means all the parameters are tested separately. New technology could address this issue and the MBS suggested plans to seek donor funding.

Traders complained about lack of smallholder knowledge about quality specifications as a challenge that could be overcome by sensitization campaigns. For example, the major quality aspects that international buyers look for in pigeon peas include large seed and white colour, and Malawian exporters continue to have difficulties to meeting the quality standards both for the dried pigeon peas and the processed dhal because of limited supply of quality grain from the producers. To overcome this inefficiency, pigeon pea producers need adequate training in grades and standards required by the different markets. Aflatoxin content in groundnuts is another good example.

This kind of feedback and from stakeholders on standards development is rare. Although the national enquiry point for food safety and technical barriers to trade is based at the Malawi Bureau of Standards, it is seldom used and it was suggested by some traders that the Ministry of Industry and Trade would be a more appropriate location, especially as it is also the national notifying authority.

Key contact:

Malawi Bureau of Standards
Contact: Fred Sikwese
Add: MBS, Moya Rd, Blantyre
Tel: +265 1 875488
Email: fsikwese@mbsmw.org

13.3 Sanitary and Phytosanitary Requirements

According to plant quarantine regulation in Malawi, all plants or plant parts whether living or dead are subject to plant quarantine and must be submitted to an inspector authorized to perform the duties specified under the Plant Protection Act (1969). If found diseased or suspected of being diseased they may, at the discretion of the inspector, be treated or destroyed. There are SPS specifications defined for all of the staple food crops covered in this report (see Annex 5.)

Permits for imports are essential for the following materials and are obtained from the relevant authorities at Bvumbwe Research Station or Chitedze Research Station before making the import.

1. Seeds and plants for sowing or planting and storage or processing.
2. Seeds, plants and plant products for consumption.

Applications for permits to import require the full details and addresses of both consignee and consignor. Preference is given to seed as a means of propagation. A plant import permit is not issued for the importation of vegetative propagating material of a species that can equally well be grown from true seed. All seeds and plant materials have to be accompanied by a Phytosanitary Certificate (PC) and inspection certificate issued by the National Plant Quarantine Service (NPQS) of the exporting country.

Seed consignments need to be dispatched within 14 days of inspection and issue of the PC. A PC is also required for seeds brought in as accompanied baggage. A customs declaration at the port of entry and release by the NPQS are compulsory.

Groundnuts and cassava require post entry quarantine growing for closer observations and must be grown in post-entry quarantine facilities approved by the Plant Quarantine Services.

Food grain legumes, maize, rice, other cereals, imported or donated in bulk for consumption in addition to requiring a trade permit should be accompanied by phytosanitary and fumigation certificates.

SPS plant inspection services are available at the 5 main entry points to Malawi – Kamuzu International, Songwe, Mchinji, Mwanza and Muloza. There are an additional 5 official entry points which are not manned by SPS inspectors but the MRA inspectors are given training on how to do the inspection and what certificates are required for which product. However, the SPS officials at Bvumbwe Research Centre, the SPS authority of Malawi, pointed out that, being a landlocked country, the whole country is porous and there are many informal entry and exit points used by traders from Mozambique, Zambia and Tanzania.

Plants and plant products exported from Malawi are also generally accompanied by a phytosanitary certificate. This however depends very much on the importing country. Normally the importing country will have conditions of its own so that the importer should endeavor to know the conditions to enable the Malawi authorities to issue the required phytosanitary certificate. Such certification is only issued after examination of the materials or a representative sample of it. A fee of MK500 ($3.60) accompanies every application for a phytosanitary certificate.

Along with the issue of unchecked border crossings, the SPS authority identified several other challenges to monitoring and facilitating cross-border trade. Chief among these was the issue of

unharmonised SPS conditions with neighbouring countries. There has not been a review of regional SPS requirements for some time and the information used for Malawi's SPS requirements is outdated. Bvumbwe Research Station has written a proposal to the FAO for funding and technical advisory services to carry out this review. A review of the Plant Protection Act has already taken place but has yet to be approved or adopted officially.

The facilities at Bvumbwe Research Station are severely lacking. There are no incinerators and the only quarantine facility that is functional is one sponsored by the sugar industry (i.e. Illovo). An SPS inspector commented that they usually 'improvise' quarantine facilities with cubicles but even these are operating at full capacity. Communication between the two research stations at Bvumbwe and Chitedze and the border posts is also a serious challenge. The process is not at all computerised and inspectors rely on cellphones to communicate with the stations – as most cellphones in Malawi operate as pay-as-you-go, 'running out of airtime' was cited as frequently causing delays at the border. This issue is especially important considering half of the border posts are not manned by fully trained SPS inspectors so the ability to make instant queries and validations with the research centres is critical.

As there are relatively small volumes of official trade of staple food crops in the region there is low awareness about other countries SPS requirements. The SPS conditions are not harmonised in the region and there is little regional enforcement or common understanding of the tenets of an SPS regime. This problem is compounded by a lack of communication between national SPS authorities and regional bodies. Within Malawi, there is lack of coordination of government departments and other stakeholders on issues of biosecurity. The Ministry of Agriculture has a Plant Health department responsible for aspects of biosecurity as does the Ministry of Industry and Trade and the Department of Planning.

There are plans to address some of these issues through a 'Strengthening Biosecurity Capacity in Malawi' project. The FAO is supporting the initiative through offering funding for technical services to achieve the following suggested actions in a five-year plan drafted in 2008 and agreed to at a national stakeholder workshop in January 2009:

Policy Framework

1. Establish a national working group/ task force to guide the implementation of this action plan, including policy development.
2. Develop an integrated overarching biosecurity policy, including stakeholder consultations.

Regulatory Framework

1. Develop a general umbrella Biosecurity Act to address the integration of biosecurity matters; Act should include the formation of a Biosecurity Council (or Authority) to implement the activities.
2. Review various legislations related to biosecurity to identify any gaps, overlaps, or inconsistencies; amend legislations in view of that review and ensure alignment with international requirements. Must recognize initiatives of other regional/ international organizations, such as SADC and COMESA review of legislation.
3. Review various legislations related to biosecurity to identify any gaps, overlaps, or inconsistencies; amend legislations in view of that review and ensure alignment with international requirements. Must recognize initiatives of other regional/ international organizations, such as SADC and COMESA review of legislation.

Organizational arrangements

1. Raise awareness about biosecurity roles and responsibilities at all levels.

2. Develop the mandate and responsibilities of the Biosecurity Council (to be specified in the Biosecurity Act)
3. Define roles and responsibilities, develop and agree on procedures for collaboration and interaction between stakeholders involved.
4. Obtain stakeholder consensus and high-level commitment on respective biosecurity roles and responsibilities.
5. Strengthen capacity of all agencies involved in biosecurity through staff training and changes to mandate, organizational structure, budget, etc. as required

Communication

1. Strengthen the SPS Enquiry Point:
   - develop and implement a work plan and budget for SPS Enquiry Point
   - develop a web site for SPS Enquiry Point
   - create awareness among internal/external stakeholders on WTO SPS Agreement and functions of Enquiry Point
2. Develop and implement an effective national communication strategy for biosecurity.
3. Train biosecurity spokespersons and communicators in concerned agencies and work with media to disseminate messages to general public
4. Improve coordination and communication within and between national SPS committee, National Codex Committee, Biosafety Committee, COMESA STR, and other related committees

Inspection verification and enforcement

1. Review capacity of inspectorate (number, skills, location of inspectors and budget available, etc.) and recommend specific improvements / changes to appropriate agency
2. Formulate inspection guidelines based on existing international manuals (e.g. FAO inspection manuals) for use by inspectors
3. Provide training on inspection guidelines, modern inspection techniques, etc. to inspectors
4. Strengthen capacity of inspectors to check and counter-check entry of alien invasive species
5. Upgrade capacity of inspectorate (financial and technical)
6. Clearly demarcate the roles of various agencies involved in food safety inspections
7. Implement a single- window policy for all agencies to work together in border inspections

Quarantine and certification

1. Create/ upgrade new plant quarantine stations
2. Establish animal quarantine facilities at major entry points (particularly near Mwanza)
3. Review and update quarantine and certification manuals addressing sampling protocols, procedures (guidelines for import/export of plants/animals, their products and derivatives), quality assurance, reporting, etc.
4. Training of quarantine inspectors
5. Clarify roles for food export certification agencies

Diagnostic services

1. Update, and develop as appropriate, test methods, lab manuals, protocols, Standard Operating Procedures, benchmarks, etc.
2. Train analysts and technicians on chemical analysis, microbiology, pesticide analysis, etc. and use and maintenance of available equipment
3. Review capacity of labs (staff, equipment, etc.), identify ways to improve capacity and seek support for modernization
4. Improve efficiency in sample testing and communication of results.
5. Develop plan for accreditation for appropriate labs as long-term goal

Key contacts:

Bvumbwe Research Station
(+265)471522/206/207/503/507/334 (Fax 471323)
Plant Pathologist: Misheck Soko, m.soko@bvumbweresearch.com

Chitedze Research Station
(+265 767 222/225/257)

Biosecurity project consultant
Londa VanderWal, londa.vanderwal@hotmail.com

Plant Protection Act review consultant
SEPA Consulting, George Phiri (+265) 995611748

13.4 Trade (Import and Export) Restrictions

In general, Malawi operates a liberal trade system under which very few commodities (around 5%) are subject to import and export licensing. However, since food security has been become an issue of national priority, the Control of Goods Act (1967) has been used to add food products onto the list of goods for which import and export permits are required. Under the original 'Import and Export Licensing Rules and Procedures' only wheat flour,of all staple foods, was listed as requiring an import license, and only maize and rice were listed as requiring an export license. But in May 2008, a press release from the Ministry of Industry and Trade announced that the list of restricted items had been expanded for food products 'to ensure food security', citing Section 3 and Regulation 3 of the Control of Goods Act.[20]

The list of goods for the import of which a permit is required now included the following staple foods:

1. Grain of any variety, including rice, barley, beans, groundnuts in all forms including meals, flours and residues
2. Maize including –
   (a) dried maize, on or off malt;
   (b) Crushed maize; or
   (c) Samp;
   but excluding green maize on the cob.
3. Maize meal, including –
   (a) Maize grits;
   (b) Maize cones;
   (c) Hominy chop; or
   (d) Maize offals.
4. Sorghum, including meals and malt

Goods for the export of which a permit is required now includes all of the above, plus cassava.

[20] Section 3(1) and Regulation 3(1) (a) and (b) on Control of Goods (Import and Export) (Commerce) Regulations and (Import and Export) (Agricultural) Regulations of the Control of Goods Act, Chapter 18: 08 of the Laws of Malawi

The MoIT insists these licensing procedures are primarily for monitoring purposes and for most staple foods is merely an administrative requirement. Traders in rice and maize, however, have experienced license application rejections and therefore view the procedures as a mechanism for imposing restrictive trade control measures.

The procedure for obtaining an import/export license can take up to three weeks. First an export request must be sent to the MoAFS with the details of the consignment, including quantity and value. The MoAFS then issues a letter of objection or no-objection to accompany the application to the MoIT who can approve or reject the application. The principal secretaries of MoAFS and the deputy minister of MoIT must personally sign their approval for each application. If either official is travelling or unavailable this can cause delays to the application process. A permit is required for each specific consignment being imported or exported and licenses are only valid for a period of three months from the date of issue (subject to extension application provided that an adequate and acceptable explanation is given.) There are no annual licenses given to traders.

Maize is the primary strategic crop of the country, followed by rice, and both have been subject to export restrictions in times of uncertainty surrounding domestic surplus. Export restrictions (effectively a ban, although the MoIT prefers not to refer to it as such) have been applied during the 2004/5, 2005/6 and 2007/8 seasons for maize, and during 2007/8 season for rice. The process of exercising the restriction, according to the MoIT, is simply to reject the export permit applications. No reason needs to be assigned to an application refusal and this is indicated on the permit application itself. Up until recently there has been little to no consultation with value chain actors preceding an export restriction although MoIT insists it is always has an open door to the views of all the actors, either via direct written correspondence or private meetings.

This 'open door policy' and absence of pre-determined conditions under which exports may be prohibited, creates an environment in which the Minister and his staff are subject to pressure from lobbyists whose appeals are based on claims that are often tailored to the commercial benefit of the lobby group. Traders, millers or farmers can claim that stocks are surplus to requirements and that exports must be permitted in order to avoid wastage. On the other hand, political pressure can be brought to bear on the Ministry to prohibit exports, when there is a known surplus, in order to reduce the cost to consumers. Without the facts at his disposal the Minister can bow to the lobbyist's persuasion and act in their interests. The lack of transparency in executive decision-making creates the impression of an unpredictable policy environment that is unattractive to large traders and investors. The restriction on rice exports in 2008, for example, was only apparent to traders on rejection of their export applications – having already committed to export consignments, traders had to cancel their export contracts at short notice, damaging their relationships with their customer and their own reputation as a reliable supplier.

However, there are signs of a more integrated consultative process emerging through the Grain Marketing Advisory Council. Established by presidential order in 2008, the council members include the Grain Traders and Processors Association, the Farmers Union and the Civil Society Agriculture Network. One of the council's mandates is 'to develop policies and costs of production and levels of which government intervention will stabilise the market while protecting farmers from exploitation.' Presumably this will include input on government import/export policies thereby giving a voice to value chain actors around the same table. It is too early tell how influential the council will be on this issue, but it is a promising development.

During the periods of export restriction of maize, informal cross-border exports were high and imports were relatively low suggesting the restriction was unnecessary.

Table 41: Informal cross-border maize exports (MT), 2005/6 – 2008/9

	2005/6	2006/7	2007/8	2008/9	Apr-May 08/09	Apr-May 09/10
Mozambique	133	591	3,755	203	42	156
Tanzania	944	2,928	1,581	239	196	286
Zambia	81	202	1,779	129	86	8
TOTAL	**1,158**	**3,721**	**7,115**	**571**	**324**	**450**

Source: FEWSNET

Table 42: Informal cross-border maize imports (MT), 2005/6 – 2008/9

	2005/6	2006/7	2007/8	2008/9	Apr-May 08/09	Apr-May 09/10
Mozambique	71,218	77,394	56,078	54,223	16,465	11,807
Tanzania	84,862	1,888	1,073	2,910	4	0
Zambia	419	378	2,500	5,388	255	27
TOTAL	**156,499**	**79,660**	**59,651**	**62,521**	**16,724**	**11,834**

Source: FEWSNET

The same phenomenon occurred during the period of export restrictions on rice, - informal cross-border exports peaked and imports decreased:

Table 43: Informal cross-border rice exports (MT), 2005/6 – 2008/9

	2005/6	2006/7	2007/8	2008/9	Apr-May 08/09	Apr-May 09/10
Mozambique	12	1	822	58	7	2
Tanzania	135	1,217	1,568	291	222	216
Zambia	31	74	2,360	990	390	60
TOTAL	**178**	**1,292**	**4,750**	**1,339**	**619**	**278**

Source: FEWSNET

Table 44: Informal cross-border rice imports (MT), 2005/6 – 2008/9

	2005/6	2006/7	2007/8	2008/9	Apr-May 08/09	Apr-May 09/10
Mozambique	1,691	1,718	444	690	62	129
Tanzania	912	4	100	154	119	0
Zambia	0	0	30	0	0	0
TOTAL	**2,603**	**1,722**	**574**	**844**	**181**	**129**

Source: FEWSNET

Exercising of import restrictions for staple foods are less common, although licensing is still required for monitoring purposes. Wheat flour is a key staple food end-product that has been restricted to assist the wheat processing industry in Malawi.

Key contacts:

Ministry of Industry and Trade
Contact: The Secretary for Industry and Trade
Add: MoIT, Gemini House, Lilongwe, PO Box 30366
Tel: +265 1 770244
Fax: +265 1 744709
Email: minci@malawi.net

Malawi Export Promotion Council
Contact: The General Manager
Add: Zainab House, Masauko Chipembere Highway, Blantyre, PO Box 1299
Tel: +265 1 988957
Fax: +265 1 820995
Email: mepc@malawi.net

13.5 Non-Tariff Barriers

There is very little awareness by traders of the COMESA NTB monitoring mechanism. Even when traders are aware they are unlikely to use the designated reporting channels due to lack of conviction that their grievances will be addressed.

PART FOUR: CONCLUSIONS, POLICY IMPLICATIONS AND RECOMMENDATIONS

MAIN CONCLUSIONS

14.1 Staple food sector specific issues

Staple Food	*Constraints*	*Opportunities*
Maize	• Decreasing size of smallholdings with 3% population growth; • Predominance of subsistence farmers meaning maize is not seen as a commercial crop but primarily as a staple crop. This results in limited trade potential, as there is limited demand and purchasing power; • Price and marketing controls; • Seasonal export restrictions.	• Surplus harvest for three consecutive years; • Potential for regional export markets; • Increased storage capacity through National Food Reserve Agency.
Wheat	• Competition with maize for natural resources; • Reduced purchasing power by Malawians for wheat products; • Monopolistic market (only two industries deal with the wheat produced in Malawi).	• Potential for additional production increasing the area (estimated 70,000 ha); • Improving the yield (presently less than 1 MT/ha) to 2-3 MT/ha which is the demonstrated local potential applying proper inputs and agricultural techniques; • Potential market (domestic, regional and international).
Rice	• Lack of investment in irrigation; • Research stations fallen into disrepair; • Seasonal export restrictions.	• Regional export markets (especially Zimbabwe); • Existing potential network of collecting centres through upgrading research stations; • Growing domestic demand as a staple alternative to maize; • Emerging integrated value chain projects such as the Sustainable Agri-Business initiative.
Sorghum	• Low yielding (almost a third of that of maize); • Not a preferred staple cereal (falls behind maize and rice); • High labour input for processing with traditional methods.	• Drought tolerant; • International market for animal feed; • Niche guaranteed domestic market for red sorghum for brewing with CPL.

Millet	• Low yielding; • Low importance in terms of contributing to domestic diet (1.5% of kcal/capita/day accounted by cereals); • Absence of sophisticated processing facilities to create higher value product such as multigrain and gluten free.	• Drought resistant; • Easily realised benefits of producing cleaner grain for premium value;
Pulses	• High energy and time requirement for cooking cow peas (35 – 120 min); • No domestic market for chick peas.	• Nitrogen-fixing properties for improving fertility of soil, good for intercropping; • High demand for pigeon peas from India; • Affordable protein, B vitamins and minerals in the predominantly carbohydrate based diet; • Large processors may be willing to invest in promoting pulses as a cash crop in order to ensure reliable supply of quality raw material to feed export demand.
Beans	• Very little processing undertaken;	• Regional and international demand;
Cassava	• Inadequate storage facilities, rapid rate of deterioration of cassava crop; • Cassava is not supported on the same scale as other crops; • New varieties not freely available to smallholder farmers; • Poor market linkages and market information for a perishable crop	• Introduction of higher yielding and disease resistant varieties; • Roots and tubers becoming more important in total dietary intake; • Market opportunities for industrial starch (2 million MT for use as a substitute for wheat in bread and biscuit manufacture as well as glucose production and as an industrial starch in the production of batteries, cotton spinning, matches, and the manufacture of packaging chipboard and plywood.) • Potential also exists for cassava starch to be included in animal feeds as well as starch extraction by-products
Groundnuts	• Quality issues to do with Aflatoxin levels in the nuts;	• Enormous regional and international market; • Grown in all parts of Malawi;

	• Adds nutritional content to Malawian diet with protein.

14.2 Cross-cutting issues

Productivity

The basic issue at farmers' level is that the production system is based upon low inputs with low outputs scheme leading to a limited return, low productivity and slow growth. This is cause and at the same time effect of lack of capital and consequent inadequate technology development both contributing to low productivity in the smallholder sector, with two major consequences:

- Land degradation due to continuous cultivation, soil erosion, deforestation and limited technology adoption on land and water management;
- Lack of value addition in agricultural products with little agro-processing and with most smallholders selling raw agricultural produce without adding value receiving no additional payment for quality.

Transport

Poor road infrastructure and costly and inefficient communication systems increase the costs for the staple food traders and makes some potential supply routes unreliable and demand areas unreachable. This drives down the prices for the farmers and drives up the prices for the processors.

Weak agricultural credit system

The promotion of a sustainable and efficient rural and urban financial system remains a major development challenge in Malawi. Formal financial institutions are risk averse and have a highly reduced exposure to agricultural and rural economy. Agricultural commodity traders face barriers in accessing credit due to lack of credible track record. They also lack assets, which can be collateralised, as usually required by the formal financial institutions.

Unorganized market structure

The agricultural industry has indicated that they are anxious to get more order into the market. Farmers are experiencing difficulty in identifying and accessing markets, buyers are concerned at the number of contracts that are broken and all sectors are concerned with quality issues. The cost of doing business in Malawi remains high, with checks having to be made on each bag delivered, processors having to run the commodities through the manufacturing process a number of times due to the large variation in grain sizes and the desired qualities are often mixed with poorer grades. There is a lack of regional information on production, prices, and demand. The available information is disseminated poorly.

Small land holding sizes

Small-scale and fragmented production units results in high transaction costs for traders and middlemen and at the end of the day in reduced competitiveness and market access.

Access to warehouse storage facilities

With the current organization of production, most smallholder farmers need cash immediately after harvest to prepare for the next crop. This necessitates immediate sale of new crop; since the situation of nearly every farmer is the same, the new crop floods the local market shortly after harvest, dropping the price. As the result, most smallholder farmers have no choice but to sell for the lowest price. Effectively, this amounts to redistribution of income from smallholder farmers to middlemen who can

arrange storage. Farmers, traders and millers all aim to use their capacity for storage and financing to take advantage of seasonal price fluctuations in staple food crops. Commercial farmers tend to avoid selling close to the harvest as they aim to benefit from the steady price rise as the season progresses. They store to the best advantage dictated by the financing cost and storage capacity, thereby facing storage, fumigation, insurance and interest charges in anticipation of improved prices. With better storage facilities crop losses could be significantly improved for the main value chains such as maize and groundnuts.

Compliancy in contract farming

From the contract-buyers' perspective, the major issue is compliance by farmers to their contracts with high levels of side-selling to other buyers. This is often linked to farmers seeking to avoid loan repayment to the contract-buyers that have provided them with inputs on credit. Traders and processors not party to the farmer-contract-buyer contract can take advantage of contract farming arrangements to buy from contracted farmers. This has left contract-buyers with unpaid loans and limited crop to process. These third-party buyers generally operate with lower overheads and operating costs as they do not carry the costs of input provision and extension service support to the farmers.
Contract-buyers are frustrated with free-riding third-party buyers, but see that farmer contracts cannot practically be enforced through legal or regulatory mechanisms.

Trade & policy environment

The government's involvement in the maize sector (AISP, price setting, etc) discourages private sector investment in maize as potential profits are limited or perceived to be limited, resulting in inadequate private sector development. Simultaneously, ADMARC has been scaling back which has left some rural farm communities without an effective vehicle for marketing their products. In some cases small traders fill the void but not always due to bad infrastructure.

There is a perceived lack of consultation on government agricultural policy, although this is improving with the establishment of the Grain Marketing Advisory Council which reports directly to the Minister of Agriculture and that both the Farmers Union and the Grain Traders and Processors have seats on. Decision-making may now be more representative of all the actors of the value chain but there is still a high dependency on statistical crop estimates which are have not been sufficiently accurate in the past. This is important given that decisions are made on the issuing of export licenses and also on price setting based on these production estimations.

Barriers such as non-harmonized weight restrictions and insurance requirements, non-harmonized quality standards, non-harmonized documentation, and language barriers prevent trucks crossing the border adding cost, time and interrupting the free flow of trade.

The poor accessibility of Government institutions and Standards Bureau involved in import and export process makes it difficult for the importers and exporters to gather the necessary documents thereby increasing the cost and hassle thus fuelling more informal trade.

Competing regional trade regimes and differences in regulations and duties can result in confusion at borders and delays of trade.

POLICY IMPLICATIONS

The Government of Malawi has the responsibility of ensuring food security for the nation. It also has a major role in setting quality standards, policies, creating a pro-business environment and creating a strategic direction for the agriculture sector that can benefit all actors in the value chain. Currently government policy is defined by the imperative of the former while working towards the long-term goal of achieving the latter. This creates a policy environment that is part socially driven and part market driven. This can be confusing for actors in the staple food value chains who are trying to develop commercial avenues for staple foods but are not receiving the required support from government policy.

Food security is generally equated to achieving sufficient maize production to fulfil the national requirement. This assumed priority after the deficit year of 2004/5 when the large-scale Agriculture Input Subsidy Programme was launched to intervene in the maize market with seed and fertilizer subsidy – 80% of the $159.9 million AISP budget for 2007/8 was allocated to the purchase and distribution of subsidised seed and fertilizer. While this has undoubtedly had a major impact on maize production – there has been an increase in production of almost 2.5 million MT from 2004/5 to 2008/9 – it is arguably time to concentrate on more sustainable (at least in budgetary terms) initiatives to ensure continuity of productivity and food security. The need to explore new and more efficient options to achieve the balance between guaranteeing availability and affordability of food and providing conditions that lead to an increase commercialization of maize production was recognised in the AISP programme report but the budget allocation was minor. The new schemes of systematic use of call and put options, the use of weather insurance and the establishment of a warehouse receipts system accounted for less than 2% of the whole budget.

Government is also intervening in the staple foods market with respect to controlling imports and exports. Both maize and rice have previously been under export restrictions without any formal announcement or government explanation. This intervention can damage exporters' relationship and reputation with foreign clients when regular orders suddenly cannot be filled. This is an example of where social priorities conflict with commercial priorities as mentioned above. Government is often the main formal importer of maize. This intervention has resulted into an additional cost for the country and deterred significant private sector investments. However, if the government simply withdraws from the market, the private sector may or may not step in and not necessarily smoothly and evenly. Because the social consequences cannot be foreseen with certainty, and because it is such a sensitive issue, it seems highly unlikely that the government would take this step. For now at least a consultative council has been set up by presidential order which is mandated to advise the president (also the minister of agriculture) on agricultural policy. The Farmers Union sits on this Grain Marketing Advisory Council (GMAC) and is likely to push the following recommendations, based on a position paper submitted to government in September 2008:

'FUM feels that there is a role for both ADMARC and the private sector in maize purchasing and selling, especially in remote areas of considerable distance from ADMARC depots and that the directive enforcing ADMARC as the sole buyer/seller of maize, if necessary, may have been better implemented in partnership with the private sector. Competition is good for creating both effective markets as well as leading to a better livelihood for Malawian farmers, better livelihood leads to increased food security.

FUM recognizes a role for properly licensed and reputable buyers. Properly monitored, the private sector can play a role in alleviating food security problems by enhancing competition and providing effective purchasing and distribution networks. Therefore what is required is for the private sector,

with monitoring from Government, to ensure that buyers are credible, honest and reputable. The licensing regime should be strict and punish those who do not meet these criteria. This will provide for a viable private sector marketing structure allowing the Government to ensure food security while continuing to allow the pursuit of a liberalized economy.'

To reduce intervention seems to be a reasonable option and by commercializing ADMARC, the first steps have already been taken. Indeed, it is reiterated in GMAC's TOR that the council must 'ensure that apart from ADMARC, the private sector also participates in selling of maize at all times and across the whole country to ease the pressure on ADMARC.'

The continuing practice of setting minimum prices for maize, however, is set to continue but with increased consultation through the council. Another task of GMAC is 'to develop policies and costs of production and levels of which government intervention will stabilise the market while protecting farmers from exploitation.' This could result in the continued high cost for the Government while distorting signals to producers away from more profitable cash crops. While the minimum prices do benefit the producers, they inflate the total shipment values and thus reduce trade competitiveness. Furthermore, high minimum producer prices undercut the margins for other chain players such as contractors and processors. This implies that some contractual services such as extension, transport and others may not be provided. This has long-term implications on agricultural performance.

FUM's suggestion of licensing for staple food buyers appears to have been taken on board by the government. One of the terms of reference for GMAC is 'to ensure that traders and buyers of maize are licensed through Grain Traders and Processors Association.' This could add more cumbersome procedures for staple food traders but on the other hand it could create the much needed 'order' in the market that so many respondents complained was lacking.

Order would be welcomed but further controls of imports and exports should be monitored with caution. Another task of GMAC is to advise on the establishment of a 'Central Export Agency' such as NFRA for maize through which all maize exports are to be undertaken. This could create inefficiencies in trading and hamper Malawi's ability to become a commercial grain exporter. A more appropriate strategy could be to pursue the more effective operation of the NSGR to ensure that interventions are cost effective and not distorting of the functioning of the market save for exceptional years. The Government will need to enforce strict oversight on the activities of the NFRA to ensure no maize deficits occur due to wrong timing of exports and imports.

Ultimately, it is the role of Government to establish an industry wide forum to plan and delegate responsibility for developing the different links in the value chain. This process has started with the formation of GMAC but could be extended to include more staple food actors – perhaps by organising staple food sector committees that report to their representative on the GMAC.

RECOMMENDATIONS

To enhance productivity:

Productivity gains are probably the most important link for cost savings along the value chain. A focus on productivity enhancing measures and increased access by many more farming households fits well with MoAFS current strategy and the current approaches of the various directorates.

Technology and technique transfer

Proven technological and institutional innovations provide an incentive for private and public sector investments in agricultural research and development. For such innovations to benefit farmers, they have to be made accessible to farmers in a cost-effective way. Contract farming arrangements have proven to be effective in bringing technology to farmers while at the same time providing better incentives for continued investments. In order to improve and sustain the competitive edge, there is need for more rapid technology transformation targeting productivity growth, such as irrigation. More efficient farming practices should also be promoted through agriculture extension services, educating farmers about good husbandry, optimal planting timing and crop distribution, etc.

Reducing the cost of fertilizer, seed and other agricultural inputs.

This can be achieved through interventions aimed at reducing the transport costs, such as for example, rationalization of levies on fuel, reduction in domestic taxes and duties. It is also important to consider implementing some innovative approaches in the management of fertilizer and inputs supply chains such as timely procurement and bulk-buying arrangements with other countries in the region so as to be able to get lower prices at the origin.

To improve quality:

Improving quality of crops is value addition in its simplest form. A focus on quality should involve farmers earning a premium for high quality crop and therefore incentivise the continued improvement of output at the farmer-level.

Farmer-level grading mechanisms

Farmers need to be empowered with the correct grading mechanisms. Currently private traders pay for the lowest grade in the bag and make the money from the quality after sorting. Grading at each level of the chain, as is currently the case for many staple foods is expensive.

In some staple foods the requirements for improving quality are quite high, but the return on investment can also be high. Improving the quality of groundnuts, for example, requires awareness campaigns on pre and post harvest Aflatoxin prevention, control devices for storage and Aflatoxin, easy to use testing kits, capacity building in Aflatoxin testing, quality pricing and grading the product at farm level, dissemination of Aflatoxin tolerant varieties, with more partners, and a regulatory framework that enforces strict adherence to international market quality standards.

For other food crops, such as sorghum and millet, the value addition can come through the simple process of more intensive cleaning procedures for the product.

To upgrade vertical linkages:

Encourage collaborative contract farming arrangements

No small farmer will grow a speculative crop of any type unless they know there is a guaranteed market and that a fair price is being offered. It is a waste of time, funds and extension effort to encourage farmers to grow any crop until a guaranteed market chain exists. Too much effort has been put into getting farmers to increase production of existing crops or new ones without firstly ensuring entrepreneurs, processors or businesses exist to competitively purchase the crop with a market guaranteed through a contract. There were several examples of collaborative contractual arrangements encountered in these staple food value chains. A notable case study is the Millenium Village project in Mwandama, that has involved farmers, processors and a financial institution in an integrated value chain to ensure maximum returns to the farmer, guaranteed supply to the processor and risk reduction to the financial institution in providing agricultural credit. For the government to get involved with promoting such schemes there needs to be reciprocal trust and confidence between public and private sector. This will largely contribute to improve the business climate mentioned before.

Support to the Commodity Exchange and Warehouse Receipt System

In its simplest form, a commodity exchange provides a venue at which buyers and sellers are brought together to conduct business, normally through a group of registered brokers. A properly run exchange should accommodate people active in the production, trade, processing and consumption of commodities, and reduce their costs of doing business.

Warehouse Receipt Systems (WRS) allows the market producers, traders, processors and even speculators to store commodities in regulated and certified warehouses in exchange for a receipt, which can then be traded, transferred to an individual or used to access credit from a bank with the deposited commodity acting as collateral.

GTPA is strategically positioned to implement the Warehouse Receipt Systems in Malawi, because it represents the majority of the companies and individuals who would utilise the warehouse receipt system. WRS is seen as a crucial means of assisting commodity traders access finance in order to grow their business.

To improve horizontal linkages:

Building capacity of associations

Setting up/strengthening farmer organizations that can promote staple foods as cash crops instead of food crops and organize farmers with respect to marketing. Farmers must also be encouraged to organize themselves in order to receive inputs at a more competitive price and consolidate loads for transport. This will give smallholders the chance to make better returns and make marketable surpluses available. NASFAM, the Farmers Union and the GTPA are umbrella associations that could assist the development and of smaller clubs and associations and include them in the larger networks.

Market Information Services

Grain traders and processors, due to distrust or lack of information, often operate in isolation without being aware of new developments within the local setting, but also at a global level. Understanding the market advancements in the sector and their implications can arm a commodity trader to take advantage of positive changes and strategise in the case of negative developments. GTPA has established a network of linkages with COMESA, East African Grain Council, Regional Agricultural Trade Intelligence Network South Africa market information providers. These aid the GTPA to give its membership current and relevant market information and their significance in the Malawian context. In Malawi GTPA has also established linkages with other relevant government ministries, NGOs, donors and other private sector players who share similar disposition in grain marketing

Distributing such market information to farmers in remote locations remains a challenge. A successful case study is that of the Malawi Agricultural Commodity Exhange in developing SMS market information systems. By dialing a special number, small holder farmers are able to access information on available commodities, prices, quality and quantity descriptions in most parts of the country. It is recommended that MoAFS develops price informational and analytical capacity principally, but not exclusively, to assist farmers to engage in negotiations with contract-buyers and other agricultural buyers.

A generalised blueprint for increasing the effectiveness of staple food value chains through marketing includes the following five strategies:

(i) Producing a higher quality grain and charging a price premium for it;

(ii) Storing and selling later in the year to benefit from the seasonal price increase;

(iii) Selling (and purchasing) bulk quantities of outputs and buying inputs in bulk to increase negotiating power; and

(iv) Selling to premium markets that are willing to pay more like food processors and the animal feed industry; and

(v) Convincing policy makers not to drive down the price increases of bad rainfall years with food aid or subsidized food imports.

To promote regional trade:

Regional trade holds the potential to reduce Malawi's vulnerability to supply shortages by making up for deficits through efficient and responsive regional trade. Malawi has maintained a surplus for three consecutive years so there is a growing need to access potential export markets quickly and efficiently. Stimulating exports of maize must first address the quantity of maize produced in Malawi and in particular the productivity of smallholders who are the dominant producers by far. Although food security is of primary strategic importance to Malawi, during surplus years, Malawian maize can find export markets in mainly Mozambique, Tanzania, Kenya and even European countries such as Ireland and Switzerland. Guaranteeing a structural surplus will be hard due to climatic and economic reasons but the food balance sheets can provide some indication if the accuracy of production data could be improved.

In general, the economic circumstances of Malawi play a major role in the buying power of the local consumers for both fresh produce and processed goods. High interest rates will always hamper local investment and need to be brought down as soon as possible. Industry infrastructure such as electricity supply, telephone lines and roads need to be improved to reduce the costs of the processing and trading industry and make Malawi's products competitive versus other regional producers. Most of these cross-cutting issues affecting businesses are being addressed through the Growth Strategy for Malawi.

Harmonization of quality standards and trade documentation will encourage freer movement of maize within the region. Other issues in this respect are:

- Clarification at borders with respect to duties and charges with up to date information on changes to be available more quickly
- Increase regional information regarding production, demand and price
- Increase credibility of international organizations involved in quality control
- Increase accessibility of Government services involved in documentation
- Faster decision making by the Government to grant export permission

Overall, this research would suggest that the role of trade is significant in smoothing areas of surplus and deficit within Malawi and between different countries in the region. Better trade flows of staple foods could and should be a key component of any agricultural strategy, particularly given Malawi's likely ongoing vulnerability to maize deficit and the potential of her neighbors to produce regular surpluses. Better trade flows can only be to the advantage of the poor and the nation.

REFERENCES

IDAF, Value Chain Analysis of Selected Commodities Institutional Development across the Agri-Food Sector, May 2009

World Bank (2008) Quantitative Value Chains for Key Crops in Malawi

Maize

Rates Report (Sept 2003) Maize Market Assessment and Baseline Study for Malawi

Food Security Joint Task Force (2005) Improving Private Sector Participation in the Maize Market

2007 Study of the operation of the Maize Market in Dowa Market

In-preparation- World Bank Comparative Regional Value Chain Analysis of Maize

Wheat

(2006) A Study of the Wheat Industry – The case of Malawi

Pulses

Soko, H.N. (2001): Pigeon pea Production in Malawi and Opportunities for the Future in Pigeon pea Production Technology Training Course, 10-12 July, 2001, ICRISAT/DARTS/USAID Training Manual, Lilongwe.

Hillocks, R.J., Minja, A. Mbwaga, S.M. Nahdy and P. Subrahmanyam (2000): Diseases and Pests of Pigeon pea in Eastern Africa: a Review. In: International Journal of Pest Management 46 (1): 7-18

Jones, R.B., H. Ade Freeman and G. Lo Monaco (2002): Improving the Access of Small Farmers in Eastern and Southern Africa, Agricultural Research and Extension Network Paper No. 120. In: http://www.odi.org.uk/agren/papers/agrenpaper 120.pdf.

Lo Monaco, G. (2003): Competitiveness of African Pigeon pea Exports in International Markets. Socio-Economics and Policy Working Paper Series no. 15. International Crops Research Institute for the Semi-Arid Tropics ICRISAT), Bulawayo.

Makoka, D., (2003), A value chain analysis of pigeon peas in Malawi, unpublished manuscript: International Crop Institute for the Semi Arid Tropics

Beans

Kachule, R.N., (1994), Economic analysis of bean production in northern Malawi: Implications for agricultural policy, Rural Development Department, Bunda College of Agriculture, University of Malawi.

Cassava

Ministry of Agriculture and Food Security and the University of Malawi (2001): Cassava Commercialization for Economic Development in Malawi ,Proceedings of a Symposium held in May 2001, funded by USAID with papers from IITA/SARNNET

Schouten, M.J. (2003): Cassava in Malawi: A Brief Overview, Kadale Consultants

Haggblade, S. and Zulu, B. (2003): The Recent Cassava Surge in Zambia and Malawi, Conference Paper No9

L. Chiwona-Karltun, P. Kambewa, M. Yajima, N.M. Mahunga and J.Jiggins, (2005) Market-Orientated Responses among Cassava Farmers in Domasi

IITA/SAARRNET (2006): Cassava Industry Promotion Project, Malawi.-Terminal Report (2003-2006)

FAO (2007): Global Market Study on Cassava

Garrod, G (2008): Value Chain Analysis Report: CASSAVA

IITA/SAARRNET (March 2008): Enhancing Food Security in Cassava Based Farming Systems in Malawi Baseline Survey Report

Groundnuts

Babu, S.C., Subrahmanyam, P., Chiyembekeza, A.J., and Ng'ong'ola, D. (1994), Impact of Aflatoxin contamination on groundnut exports in Malawi, African Crop Science Journal 2:215 –220.

Chiyembekeza, A.J., Subrahmanyam, P., Kisyombe, C.T., and Dzilankhulani, A.M., Tchale, H., and Boughton, D., (1998), Small-scale seed programs and adoption of groundnut technology: The case of CG7 groundnut variety in Malawi, Lilongwe, Malawi: International Crops Research Institute for the Semi-Arid Tropics

Dzilankhulani, A.M., Tchale, H., and Boughton, D., (1998), Small-scale seed programs and adoption of groundnut technology: The case of CG 7 groundnut variety in Malawi, Lilongwe, Malawi: International Crop research Institute for the Semi-Arid Tropics.

International Crop Research Institute for the Semi-Arid Tropics (ICRISAT) newsletter, (2003), Bolstering Malawi's groundnut and pigeon pea trade through technology and market improvement.

Zeller, M., Diagne, A. and Mataya, C., (1997), Market access by smallholder farmers in Malawi: implications for technology adoption, agricultural productivity, and crop income.

Annex 1: Importance of maize in Malawi's food basket

	Area (000 ha)			Yield (kg/hectare)			Kcal/capita/day (Production)		
	2006	**2007**	**2008**	**2006**	**2007**	**2008**	**2006**	**2007**	**2008**
Wheat	2	2	3	1 211	2 297	1 981	2	4	4
Maize	1 620	1 688	1 647	1 590	2 040	1 790	1433	1883	1427
Millet	41	45	44	658	719	758	22	26	24
Sorghum	71	74	75	769	859	847	44	51	45
Rice (Padd.)	53	53	53	1 743	1 743	1 743	50	49	44
Rice (Mill.) - imports	53	53	53	1 129	1 129	1 129	50	49	43
Total Cereals (coarse Grains + milled rice)	**1 733**	**1 807**	**1 766**	**1 534**	**1 959**	**1 724**	**1601**	**2062**	**1587**
Cassava	162	169	185	17,300	18,200	19,400	706	764	793
S. potatoes	130	142	159	13,400	14,500	15,900	370	428	475
I. potatoes	41	39	46	13,000	15,400	14,700	97	107	108
Total roots/tubers	333	350	390				1173	1299	1376
Total (Cereals + roots and tubers)	**2066**	**2157**	**2156**				**2874**	**3361**	**2963**
% maize in total cereals	**93.5**	**93.4**	**93.3**				**90**	**91**	**90**
% maize in total Calories	**78.4**	**78.3**	**76.4**				**52**	**56**	**48**

Annex 2: Indicative medium term budget for GOM imputs and maize marketing interventions

Government of Malawi inputs and maize market interventions 2007-11

	US$			
	2007/08	***2008/09***	***2009/10***	***2010/11***
GoM fertilizer procurement	67,000,000	50,000,000	40,000,000	25,000,000
Tons assumption	*130,000*	*100,000*	*80,000*	*30,000*
GoM handling, storage and distribution costs	5,000,000	4,000,000	3,000,000	
Tons assumption	*70,000*	*60,000*	*50,000*	-
Market-based voucher redemption mechanism	44,000,000	46,200,000	50,400,000	71,400,000
Tons assumption	*100,000*	*110,000*	*120,000*	*170,000*
Remoteness incentive	2,000,000	2,000,000	2,000,000	2,000,000
Unsold fertilizer financing (60,000 tons)	3,000,000	3,000,000	3,000,000	3,000,000
Seed subsidy	6,000,000	6,000,000	6,000,000	6,000,000
Maize silos construction (Mangochi, Luchenza, Mzuzu)	10,000,000	-	-	-
SGR purchases	3,400,000	3,400,000	3,400,000	-
Tons assumption	*20,000*	*20,000*	*20,000*	-
Maize purchases at producer floor price (100,000 tons)	16,000,000	16,000,000	16,000,000	16,000,000
ADMARC handling and storage	1,500,000	1,500,000	1,500,000	1,500,000
Tons assumption	*100,000*	*100,000*	*100,000*	*100,000*
Weather insurance premium (for a 100,000 ton call option)	300,000	300,000	300,000	300,000
REPO financing arrangement (80,000 tons)	2,240,000	2,240,000	2,240,000	2,240,000
Warehouse receipts system	200,000	200,000	200,000	200,000
Logistics costs, M&E, communications, MOAFS administration	600,000	600,000	600,000	600,000
Weather insurance and options technical support	160,000	200,000	-	-
Total expenditure	**159,900,000**	**134,140,000**	**127,140,000**	**126,740,000**
Fertilizer sales	9,100,000	7,800,000	6,500,000	-
Fertilizer financing	32,400,000	30,000,000	30,000,000	30,000,000
Maize sales (including financing)	16,000,000	16,000,000	16,000,000	16,000,000
Total receipts	**57,500,000**	**53,800,000**	**52,500,000**	**46,000,000**
Total net expenditure	**102,400,000**	**80,340,000**	**74,640,000**	**80,740,000**

Annex 3: Terms of Reference for the Grain Marketing Advisory Council (GMAC)

Goal of the council

1.0 To firstly ensure food security at household and national level and to promote a sustainable and vibrant agricultural commodity market.

Specific TOR's

2.0 To obtain accurate and timely crop estimates to prioritise allocation of the crop in the following order:

2.1 National food security by ensuring that both ADMARC and NFRA are adequately stocked.

2.2 Requirements of agro-processors and other value adding industries.

2.3 Local agricultural commodity trading.

2.4 Agricultural commodity exports

3.0 Ensure that national food security requirements are a priority.

4.0 To ensure that ADMARC is adequately funded by Government for it to effectively perform its social function.

5.0 To ensure that crop estimates are accurate and timely to allow for appropriate planning activities and market decision making.

6.0 To develop policies and costs of production and levels of which government intervention will stabilise the market while protecting farmers from exploitation.

7.0 Establishment of a 'Central Export Agency' such as NFRA for maize through which all maize exports are to be undertaken.

8.0 To ensure that traders and buyers of maize are licensed through Grain Traders and Processors Association.

9.0 To ensure that apart from ADMARC, the private sector also participates in selling of maize at all times and across the whole country to ease the pressure on ADMARC

Annex 4: MBS Standards

MAIZE GRAIN SPECIFICATION	
Table: Limits of Blemished (defective) grains	
Characteristics	**Limit (% max)**
Total Blemished (defective) grain	11.5
Insect damaged	2
Stained	0.5
Diseased	1
Shrivelled	1
Broken	5
Discoloured	2
Germinated	0
Frost damaged	0
Table: Limits for other grains, foreign matter and filth	
Characteristics	**Limit (% max)**
Other grains, foreign matter and filth (total):	2.5
other grains	1
Foreign matter:	
Inorganic	0.5
Organic	0.5
Filth	0.1

WHEAT FLOUR SPECIFICATION						
Requirement						
Class of Product	**Moisture Content max % m/m**	**Ash Content max % m/m**	**Pat Content max % m/m**	**Fibre Content max % m/m**	**Protein Content % m/m**	**Color grade**
White bread flour (Bakers Flour)	13	0.8	2	0.3	10.0min	6.5 max and 2.5 min
Cake Flour	13	0.5	2	0.3	8.0min	2.5 max
Brown bread (Chapati flour)	13	1	2	2.5	10.0min	13.5 max
whole wheat flour	13	1.5	2	2.5	10.0min	N/A not accountable
Self raising flour	13	0.8	2	0.3	10	

RICE SPECIFICATION					
Requirements					

Defects	Reference to the definition	Husked rice %	Milled (non-glutinous) %	Husked par boiled rice %	Milled par boiled rice %
Extraneous Matter	2.7				
a) Organic		1.5	0.5	1.5	0.5
b) Inorganic		0.5	0.5	0.5	0.5
Paddy	2.1	2.5	0.3	2.5	0.3
Husked rice	2.2	-	-	1	1
Milled rice	2.3	-	-	2	-
Heat damaged kernel	2.8	**4***	3	0	6
Damaged kernel	2.9	4	3	4	3
lasature kernels	2.1	12	2	12	2
Chalky kernels	2.11	11	11	-	-
Red kernels	2.12	12	4	12	4
Yellow coloured kernels	2.13	-	0	-	0
Glutinous rice	2.5	**1***	1	1	1
Pecks	2.14	-	-	**4***	2

* after milling

PIGEON PEAS SPECIFICATION	
Requirements	
Charactersistics	**Maximum Limits (%)**
Foreign matter, m/m	2
Damaged peas, m/m	1
Shrivelled peas, m/m	2
Weevil damaged peas, m/m	1
Contrasting peas, m/m	1
Splits, m/m	1

COW PEAS SPECIFICATION	
Requirements	
Characteristics	**Maximum Limits %**
Foreign matter % m/m	1
Damaged cow peas	1
Shrivellled cow peas	2
Weeviled damaged cow peas	1
Contrasting cow peas	1
Splits	1

EDIBLE CASSAVA FLOUR SPECIFICATION
Table: Composition and Chemical requirements for edible cassava flour

Characteristics	Requirement
Cynogen Content	10mg HNC eq, max
Moisture Content	13% m/m, max
Crude fibre content	2% m/m, max
Ash content	3% m/m, max

Table:Microbiological requirements

Characteristics	Requirement per gram (except salmonella, per 25g)
Mesophilic aerobic bacteria	10_6 max
Coliform Bacteria	10^2 max
Escherichia coli	10 max
Salmonella	0
Yeast and moulds	10^3 max

GROUNDNUTS SPECIFICATION		
Requirements		
Charactersistics	**In-shell**	**Kernels**
Extraneous matter content % (m/m) max	2	0.1
Damaged pods/kernels % (m/m) max	0.5	1
Shrivelled pods/kernels % (m/m) max	3	0.5
Broken and split kernels % (m/m) max	-	0.5
Empty pods % (m/m) max	-	9
Admixtures of other varieties % (m/m) max	2	0
Aflatoxin Content ppb max	10	3
Moisture content % (m/m) max	9	7

Annex 5: MBS (Imports Quality Monitoring) Regulations 2003

MALAWI BUREAU OF STANDARDS

(CAP 51: 02)

MALAWI BUREAU OF STANDARDS (IMPORTS QUALITY MONITORING) REGULATIONS, 2003

IN EXERCISE of the powers conferred upon me by Section 30 of the Malawi Bureau of Standards Act Chapter 51:02, I, SAM MPASU, Minister of Commerce and Industry, hereby make the following regulations governing the issuance, to importers of a Permit in relation to commodities covered by a mandatory Malawi Standard or other foreign or international standard:-

Citation, Effectivity and Scope of the Scheme

(1) These regulations may be cited as Malawi Bureau of Standards (Imports Quality Monitoring) Regulation, 2003. The regulations will cover imported products as specified in the First Schedule as amended from time to time.

Interpretation

(2) In these regulations, unless the context otherwise requires, the expression:

"*Batch conformance certificate*" means a document issued by MBS upon being satisfied by the evaluation on an import shipment of same brand from same manufacturer and same country of origin.

"*Consignment"* means products bearing same brand name from same manufacturer and country of origin.

"*Foreign/international standard*" means a standard developed by a foreign standards body or International Organisation for Standardisation (ISO), International Electrotechnical Commission (IEC), Codex Alimentarius Commission or other international body, which may be accepted by MBS for purposes of the MBS Certification Mark Scheme.

"*Importer*" means any individual, firm or organisation involved in the direct procurement or provision of commodities from outside the boundaries of the Republic of Malawi, for the purposes of selling, distributing or processing or any other use.

"*Import quality certificate*" means a document issued annually by MBS to an importer of a commodity of same brand from same manufacturer and same country of origin after four consecutive import shipments have been evaluated and been found to conform to the relevant Malawi standard.

"*Malawi standard*" means the standard promulgated by the MBS and issued by the Board relating to product specification, test methods, terminology, standardisation procedures, guidelines or practices.

"MBS" means the Malawi Bureau of Standards

"*MRA"* means the Malawi Revenue Authority

Application for Import Commodity Clearance

3 (a) Importers of designated products covered by Malawi standards and listed in the First Schedule shall apply for import commodity clearance to MBS prior to or upon arrival of shipments at port of entry, and shall be subjected to sampling and testing by MBS prior to MRA's release of the same.

(b) An application for an import commodity clearance shall be made through an Import Inspection Request Form (IIRF) IQM 01 as shown in Second Schedule obtainable from MBS. The form shall be filled in triplicate together with the import entry packing list, the original copy of any quality or test certificates (including results if any) and any other shipping document.

(c) An import consignment shall be evaluated by MBS to determine its conformity to the requirements of the applicable Malawi Standards.

(d) The samples so drawn shall be for the purpose of laboratory analysis and a Sampling Request Form (SF) shall be filled by authorised MBS personnel.

(e) However, sampling and testing of import consignments comprising those of the product brand by same importer and from same supplier and country, shall be waived, provided that:

(i) The consignments are certified as meeting the applicable Malawi standards by a reputable competent testing organisation in the country of origin and duly recognised by MBS and/or relevant government authorities; and

(ii) The first four (4) consecutive import consignments, notwithstanding their certification as meeting Malawi standard are sampled and tested by MBS and the technical findings are found consistent with the foreign test certificates that the commodity meets the applicable Malawi standard

(f) In the event that random checks at market outlets, which may include sampling and testing reveal inconsistencies between (on one hand) the actual quality of imported products that are no longer subject to inspections and (on the other hand) the foreign test certificate issued that they meet the Malawi standards, all subsequent arrivals of such products of same brand from same country and regardless of who the importers are shall revert to sampling and testing by MBS, notwithstanding their certification abroad, as meeting Malawi standard. The evaluation shall continue for no less than 4 consecutive consignments until such time that corrective measures have been taken by the importer(s) on the quality of product.

Issuance of Conditional release of Imports Shipments

4. (a) Conditional release of an import shipment from MRA custody may be issued by MBS upon importer's compliance with MRA's requirements if completion of testing will take more than 20 working

days.

(b) The transfer of import shipment from MRA custody to importer's or consignee's warehouse where evaluation may be performed shall be escorted by MRA personnel Pending the issuance of the Import Commodity Clearance, no sale or transfer of the shipment to any other place in whole or in part shall be made by the importer or any person.

Issuance of import commodity clearance

5. (a) The import commodity clearance shall be issued on a consignment basis by MBS if the imported commodity is deemed to conform to Malawi standards.

(b) A certificate will be issued for import commodity clearance. The certificates shall be in two categories: A Batch Certificate of Conformance, shown in Third Schedule and an annual Import Quality Certificate, shown in Fourth Schedule.

(c) The validity of the batch certificate of conformance ceases upon expiration of the purported shelf life of the product or the date shown on the certificate. The re-issuance of the certificate is subject to re-evaluation.

Withdrawal of import quality certificate

6. (a) The Import Quality Certificate shall be withdrawn from the importer on the following grounds:

(i) If random sampling on the open market of a commodity covered by the certificate and imported by the certificate holder is found to be non-conforming then regulation 3 (f) shall apply;

(ii) Contravening provisions of any relevant Act or regulations; and

(iii) Failing to pay fee under these regulations.

(b) MBS shall upon withdrawal of the Import Quality Certificate:-

(i) demand of the importer to withdraw the imported product from the market;

(ii) inform the public through appropriate means about the dangers of using or consuming the particular non-conforming product(s) and

(iii) demand that the importer arranges the re-exportation or appropriate disposal of any recoverable non-conforming imported product(s).

(c) The expenses incurred in undertaking all the activities under Regulation 6 shall be borne by the importer of the non-conforming product(s).

(d) It shall be the responsibility of vendors to ensure that products being supplied for the open market have been duly certified as

conforming to relevant quality standards by MBS.

(e) In the event that a vendor of an imported commodity refuses to disclose the name of the supplier of the imported commodity falling under the imports monitoring, MBS shall still carry out an evaluation on the commodity following the procedures laid down in this regulation. The vendor will thus pay for all the costs incurred during such evaluation.

(f) Importers will be required to seek information relating to specific requirements of the designated imported products under this scheme to enable them include such information in their contractual terms.

Disposition of samples

(7) (a) All samples drawn from a consignment for monitoring and laboratory analysis shall, wherever possible, be returned to the importer excluding those that have undergone destructive testing.

(b) The importer shall withdraw the samples from the MBS within 30 days after receipt of notice to recover such samples.

(c) If the importer fails to withdraw the samples after due date, MBS shall dispose off these samples in any manner it may deem appropriate.

Fees

(8) (a) The following fees shall be charged and payable by importer prior to the consignment being cleared by MRA:

(i) All expenses incurred by an inspector for the purpose of attending at the place and carrying out the quality inspection and sampling and returning there from at specified rates, including registration fee.

(ii) All testing fees charged by MBS and/or any designated laboratories for testing the imported products.

(iii) All fees charged for the issuance of the report and the batch conformance certificate, as the case may be.

(b) The importers who have been issued with an annual Import Quality certificate will be required to pay an annual fee as prescribed for each type of product. Such fees shall be paid on collection of the certificate.

Warranties

(9) Every person who imports, displays, distributes or sells any product which is subject to a mandatory Malawi standard and designated under the Imports Quality Monitoring Scheme is deemed to warrant to the immediate purchaser that the product conforms to all regulatory requirements and meets the relevant specifications. If no written warranty is provided to the ultimate consumer, one shall be assumed.

Penalties

(10) Any violation to these regulations shall be subject to legal action according to the Laws of Malawi.

Appeals

(11) . Any person who is dissatisfied with the rulings of the Board or persons acting under its authority in regard to these regulations may appeal to the Minister in accordance with the Act.

_Sam Mpasu_____
Minister of Commerce and Industry

FIRST SCHEDULE

LIST OF DESIGNATED PRODUCTS SUBJECT TO IMPORTS QUALITY MONITORING

	Column 1	*Column 2*
1.	Afridev hand pumps	MS 348
2.	Fertilizers	MS 255, 272, 351, 354, 355, 353, 258,, 265
3.	Edible Cooking Oils	MS 51, 77, 78, 79, 154
4.	Galvanised Iron Sheets	MS 509
5.	Mosquito Coils	MS 458
6.	Cements	MS 29
7.	Primary Dry Cells	MS 35
8.	Safety Wood Matches	MS 251
9.	Skin Care Products	MS 334,471,475,557,108,470
10	Toothpaste	MS 111
11.	UPVC pipes and pipe fittings	MS 2, 3, 4, 5, 617
12.	Wheat flour	MS 30
13.	Bottled or canned beer (clear)	MS 50
14	Paints & varnishes	Various
15.	Flexible electrical cords	MS 15, 528, 617,16
16	Salt	MS 188
17	Spirits	MS 210
18	Food products	Various
19	Rice	MS 177
20	Maize grain	MS 32
21	Beans	MS 245
22	Leather Shoes	MS 312-315
23	Laundry Soap, detergents, dish wash	MS 250, 253, 372
24	Toilet Soaps, super fatted soaps	MS 49, 671
25	Wines	MS 178
26	Wax Shoe Polish	MS 566
27	Lead acid starter batteries	MS 420
28	Ballpoint Pens	MS 186
29	School Chalk	MS 187
30	Black lead pencil	MS 221
31	Pasta products	MS 224
32	Zinc-coated fencing wire	MS 321
33	Methylated spirit	MS 370
34	Candles	MS 33

35	Scouring powders	MS 373
36	Apparatus connector for domestic appliances	MS 16
37	Black polyethylene	MS 374
38	Carbolic soap	MS 48
39	Chitenje	MS 588
40	Liquid toilet soap	MS 52
41	Soap powder or chips	MS 65
42	Antibacterial liquid toilet soap	MS 66
43	Agricultural hand hoe	MS 76
44	Wax floor polish	MS 84
45	Industrial and safety rubber boots	MS 94
46	Industrial pvc boots	MS 123
47	Fish products	MS 115, 116, 117

SECOND SCHEDULE
(Regulation 3)
IMPORT INSPECTION REQUEST FORM (IQM 01)

(Please complete sections 1 to 10 of this form and fax/forward it to the Malawi Bureau of Standards. Please note that lack of complete information may cause unnecessary delays).

<table>
<tr><td colspan="3">1. Importer (Name & Address)

Tel: Fax:</td><td colspan="3">2. Supplier (Name & Address)

Tel: Fax:</td></tr>
<tr><td colspan="3" rowspan="3">3. Forwarding Agent (Name & Address)

Tel: Fax:

Container Nr(s):

Seal Nr (s):</td><td colspan="3">4a. Product Brand:

4b. FOB Value:</td></tr>
<tr><td colspan="2">5. Nr & Kind of package</td><td>6. Quantity</td></tr>
<tr><td colspan="2"></td><td></td></tr>
<tr><td>7. Parameter</td><td colspan="2">8. Applicable Malawi Standard</td><td colspan="2">9. Importer’s specification</td></tr>
<tr><td></td><td colspan="2"></td><td colspan="2"></td></tr>
<tr><td colspan="3" rowspan="7">10. TO THE DIRECTOR GENERAL
MALAWI BUREAU OF STANDARDS
Please kindly inspect an import consignment as described above and issue an import Batch Conformance Certificate.

The consignment can be inspected at …..…… which is .....km from nearest MBS Office.</td><td colspan="3">11. FOR OFFICIAL USE ONLY
IQMS FEES</td></tr>
<tr><td>Item</td><td>Rate</td><td>Amount (MWK)</td></tr>
<tr><td>Registration</td><td></td><td></td></tr>
<tr><td>Inspection & Sampling</td><td>0.65% FOB</td><td></td></tr>
<tr><td>Testing</td><td></td><td></td></tr>
<tr><td>Transportation</td><td></td><td></td></tr>
<tr><td>Report/certificate</td><td></td><td></td></tr>
</table>

I undertake to settle all fees chargeable and abide by the regulations governing the Import Quality Monitoring Scheme (IQMS). .... **NAME OF IMPORTER/REPRESENTATIVE** .... **SIGNATURE OF IMPORTER/REPRESENTATIVE** .... **DATE**	Subsistence Allowance		
	IQMS Fees Subtotal		
	Vat 16.5%		
	TOTAL		
	.... Director-General Date: _____		

THIRD SCHEDULE

(Regulation 5)

MALAWI BUREAU OF STANDARDS

P O BOX 946, BLANTYRE
TEL: +(265)1 870 488
FAX: +(265)1 870 756

IMPORT BATCH CONFORMANCE CERTIFICATE

<table>
<tr><td colspan="2">Consignee (name & address)</td><td colspan="2">Certificate nr: Reference nr:

Date issued:</td></tr>
<tr><td colspan="2" rowspan="2"></td><td colspan="2">Country of origin:</td></tr>
<tr><td colspan="2">Agent (name & address):</td></tr>
<tr><td colspan="4">Mode of transport: □ Sea □ Rail □ Road
□ Air</td></tr>
<tr><td>Port of entry:</td><td>Place of customs clearing:</td><td colspan="2">Final destination:</td></tr>
<tr><td colspan="4">Product brand name and description:

Batch identification</td></tr>
<tr><td>Parameter</td><td>Specification</td><td colspan="2">Result(s)</td></tr>
<tr><td></td><td></td><td colspan="2"></td></tr>
</table>

CERTIFICATION & CONDITIONS OF ISSUE

THIS IS TO CERTIFY that the above mentioned branded product bearing the indicated batch identification has been found to conform to the national product standard. This certificate only applies to the consignment or batch from which the sample was obtained and tested. Issued under the regulations and procedures governing the Import Quality Monitoring Scheme of the Malawi Bureau of Standards. Issued on this ..... day of ...…....., ……....., by:

Seal of MBS

_____

____

Director-General

This certificate is valid till _____

Date:

_____

FOURTH SCHEDULE

(Regulation 5)

MALAWI BUREAU OF STANDARDS

P O BOX 946, BLANTYRE
TEL: + (265) 670 488
FAX: + (265) 670 756

ANNUAL IMPORT PRODUCT CONFORMANCE CERTIFICATE

Consignee (name & address)	Certificate nr: **AI/0**…….Reference nr: BS/QAD/58/……. Date of issue: Certificate valid until:
Consignor (name & address)	Agent (name & address):
Product brand name and description: Applicable Malawi Standards: MS Country Of Origin of Products: Preceding Batch Certificates Nrs:	

CERTIFICATION & CONDITIONS OF ISSUE

THIS IS TO CERTIFY that the above mentioned branded product bearing has been found to consistently conform to the national product standard mentioned above on four consecutive imported consignments. The product is therefore allowed for clearance with MRA for a period of 12 months from the …….. day of ……**200..** to the …….day of …….**200…** on the following conditions.

1. The Importer is the same.
2. The Supplier (consignor) is the same.
3. The product and brand are the same
4. The country of origin

The certificate is valid until……..**200**…and is issued under the regulations and procedures governing the Import Quality Motoring Scheme of the Malawi bureau of Standards in this……..day of……..**200**…by me:

Seal of issuing Authority

Name:

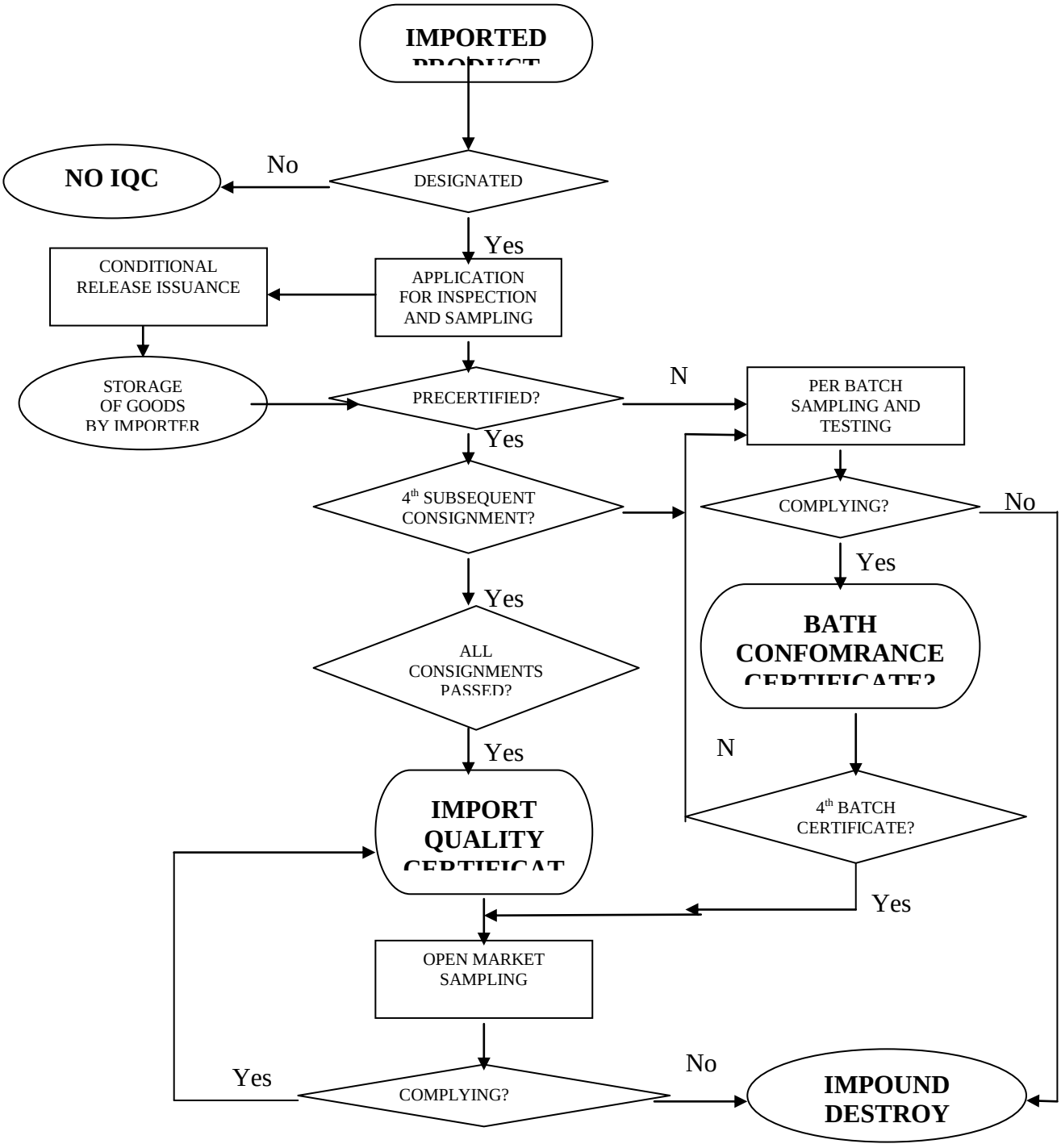
Signature

Designation:

Date:

THE MALAWI BUREAU OF STANDARDS

IMPORTS QUALITY MONITORING SCHEME
FLOW CHART OF OPERATION



Annex 6: MBS (Exports Quality Certification) Regulations 2003

MALAWI BUREAU OF STANDARDS

(CAP 51: 02)

DRAFT:
MALAWI BUREAU OF STANDARDS (EXPORTS QUALITY CERTIFICATION) REGULATIONS, 2003

IN EXERCISE of the powers conferred upon me by Section 30 of the Malawi Bureau of Standards Act Chapter 51:02, I, SAM MPASU, Minister of Commerce and Industry, hereby make the following regulations governing the issuance to exporters of a Permit in relation to commodities covered by a mandatory Malawi Standard or other foreign or international standard:-

Citation, Effectivity and Scope of the Scheme

1. These regulations may be cited as Malawi Bureau of Standards (Export Quality Certification) Regulation, 2003 and shall be deemed to have come into force on _____. The regulations will cover exported products as specified in the First Schedule as amended from time to time.

1.3.5 Interpretation

2. In these regulations, unless the context otherwise requires, the expression:

"*Batch conformance certificate*" means a document issued by MBS upon being satisfied by the evaluation on an export consignment of same brand from same supplier.

"*Consignment"* means products bearing same brand name from same supplier.

"*MRA"* means the Malawi Revenue Authority

"*Foreign/international standard*" means a standard developed by a foreign standards body or International Organisation for Standardisation (ISO), International Electrotechnical Commission (IEC), Codex Alimentarius Commission or other international body which may be accepted by MBS for purposes of export certification.

"*Exporter*" means any individual, firm or organisation involved in the direct procurement or provision of commodities to outside the boundaries of the Republic of Malawi, for the purposes of selling, distributing or processing or any other use.

"*Export quality certificate*" means a document issued by MBS to an exporter of a commodity of same brand from same supplier after the export consignment has been evaluated and been found conform to the relevant Malawi, foreign or international standard.

"MBS" means the Malawi Bureau of Standards

Application for Export Quality

3. (a) Exporters of designated products covered by Malawi standards of quality and shown in the First Schedule shall apply for export quality

Certificate

certificate to MBS, and shall be subjected to sampling and testing by MBS prior to exporter's release of the same.

(b) An application for an export quality certificate shall be made through an Export Inspection Request Form (EIRF) EQM 01 as shown in Second Schedule obtainable from MBS. The form shall be filled in triplicate together with the export packing list, copy of any quality or test certificates (including results if any) and any other shipping document.

(c) An export consignment shall be evaluated by MBS to determine its conformity to the requirements of the applicable Malawi or foreign standard.

(d) The samples so drawn shall be for the purpose of laboratory analysis and a Sampling Request Form shall be filled by authorised MBS personnel.

Issuance of export quality certificate

4. (a) The export quality certificate shall be issued on a consignment basis by MBS if the exported commodity conforms to the Malawi or foreign standards.

(b) A batch certificate of conformance, shown in Third Schedule and an annual Export Quality Certificate shall be issued for export commodity clearance.

(c) The validity of the batch certificate of conformance ceases upon expiration of the purported shell-life of the product or the date shown on the certificate. The re-issuance of the certificate is subject to re-evaluation.

Withdrawal of export quality certificate

5. (a) The Export Quality Certificate shall be withdrawn from the exporter on the following grounds:

(i) Contravening provisions of any relevant Act or regulations; and

(ii) failing to pay fees under these regulations.

(b) Exporters will be required to seek information relating to specific requirements of the designated exported products under this scheme to enable them include such information in their contractual terms.

Disposition of samples

6. (a) All samples drawn from a consignment for monitoring and laboratory analysis shall, wherever possible, be returned to the exporter excluding those that have undergone destructive testing.

(b) The exporter shall withdraw the samples from the MBS within 30 days after receipt of notice to recover such samples.

(c) If the exporter fails to withdraw the samples after due date, MBS shall

dispose off these samples in any manner it may deem appropriate.

Fees

7. (a) The following fees shall be charged and payable by an exporter prior to the consignment being cleared by MRA:

(i) All expenses incurred by an inspector for the purpose of attending at the place and carrying out the quality inspection and returning therefrom.

(ii) All testing fees charged by MBS and/or any designated laboratories for testing the exported products.

(iii) All fees charged for the issuance of the report and the batch conformance certificate, as the case may be.

(c) The exporters who have been issued with an annual Export Quality certificate will be required to pay an annual fee as prescribed for each type of product. Such fees shall be paid on collection of the certificate.

Warranties

8. Every person who exports any product which is subject to a mandatory Malawi standard and designated under the Exports Quality Certification Regulations is deemed to warrant to the immediate purchaser that the product conforms to all regulatory requirements and meets the relevant specifications. If no written warranty is provided to the ultimate consumer, one shall be assumed.

1.3.6 Penalties

9. Any violation to these regulations shall be subject to legal action according to the Laws of Malawi.

1.3.7 Appeals

10. Any person who is dissatisfied with the rulings of the Board or persons acting under its authority in regard to these regulations may appeal to the Minister in accordance with the Act.

Dated this _____ day of _____, 2003

_____

Minister of Commerce and Industry

FIRST SCHEDULE(Regulation 1): LIST OF DESIGNATED PRODUCTS SUBJECT TO EXPORTS QUALITY CERTIFICATION

Column 1	*Column 2*
Name of product	**Applicable Malawi Standard**
Chillies,	MS 96
Macadamia nuts	MS 228
Rice	MS 179
Sugar, raw or refined	MS 209, MS 202
Tea	MS 43
Tobacco	-

Form AS/F/3/01

EXPORT INSPECTION REQUEST FORM

(Please complete sections 1 to 13 of this form and fax/forward it to the Malawi Bureau of Standards. Please note that lack of complete information may cause unnecessary delays).

1. Consignee (Name & Address) Tel: Fax:	2. Consignor/Exporter (Name & Address) Tel: Fax:
3. Forwarding Agent (Name & Address) Tel: Fax: Container Nr(s): Seal Nr (s):	4. Product description: Nr & Kind of package 5 Country of origin 6. Final destination 7. Port of loading 8. Port of discharge

9. Mode of transport ☐ Sea ☐ Air ☐ Road ☐ Rail

10. Parameter to be certified	11. Applicable Malawi Standard	12. Buyer's specification (if any)

13. TO THE DIRECTOR GENERAL
MALAWI BUREAU OF STANDARDS

Please kindly inspect an export consignment as described above and issue an Export Quality Certificate.

The consignment can be inspected at ..... which is ..... km from nearest MBS offices.

I undertake to settle all fees chargeable and abide by the regulations governing the Export Quality Certification Regulation (EQCS)

.....

NAME OF EXPORTER/REPRESENTATIVE

.....

SIGNATURE OF EXPORTER/REPRESENTATIVE

.....

DATE

14. **FOR OFFICIAL USE ON LY**
EQCS FEES

Item	Rate	Amount (MWK)
Registration		
Inspection & Sampling		
Testing		
Transportation		
Reporting		
Certification		
Subsistence Allowance		
TOTAL		

.....
SIGNATURE OF DESIGNATED MBS OFFICIAL

THIRD SCHEDULE

(Regulation 5)

MALAWI BUREAU OF STANDARDS

P O Box 946, **Blantyre**
Tel: +(265) 670 488 Fax: +(265) 670 756

EXPORT QUALITY CERTIFICATE

Consignee (name & address)	Certificate nr: Reference nr: Date issued Country of origin:	
Consignor (name & address)	Agent (name & address):	
Mode of transport: ☐ Sea ☐ Rail ☐ Road ☐ Air		
Port of exit:	Place of customs clearing:	Final destination:
Product brand name and description: Batch identification		
Parameter	Specification	Result(s)

CERTIFICATION & CONDITIONS OF ISSUE

THIS IS TO CERTIFY that the above mentioned branded product bearing the indicated batch identification has been found to conform to the stated standard. This certificate only applies to the consignment or batch from which the sample was obtained and tested. Issued under the regulations and procedures governing the Export Quality Certification Regulations.

Issued on this ..... day of ……, by:

Seal of MBS

_____

_____

Director-General

This certificate is valid till _____

Date:

_____

Annex 7: SPS Requirements

Crop	Form	Import location	Import requirement	SPS requirements
Maize *and other Madae*	Seed	a) All countries in Asia, East of 60°L	Prohibited	
		b) Africa South of Sahara	Permit	1. Seed is treated with insecticide and fungicide, Gaucho 75WP and Thiabandazole + Thiram before dispatch.
				2. Chaff and residues should not exceed 1%
		c) Elsewhere	Permit	1. Sclerospora sacchari, S. phillipinensis and S. Spontaneum are not known to occur in the country or state of origin.
				2. Xanthomonas stewartii is not known to occur in the country or state of origin.
				3. The mother plants were inspected and found free from *Drechslera maydis* race T.
				4. The seed is form plants free from virus and virus like diseases.
				5. The consignment does not contatin any cytoplasmic male sterile lines.
				6. The seed is treated with an insecticide and fungicide (as above) before dispatch.
				7. The seed was harvested from fields free from Cephalosporium *maydis* and *Kabatiella.*
				8. Mother plants were inspected and found free from Sclerospora sacchari, *S. phillipinensis, S. spontaneum, Xanthomonas* stewartii and virus and virus like disease.
	Hay or meal	b) Southern Africa	Permit	No restriction
Cereals *other than maize and*	Seed for growing	a) All countries	Permit	1. Urocystis agropyri is not known to occur in the country of origin.
				2. The seed is free from Anguina triici Khapra beetle, Canal Bunt disease and wheat streak virus.

sorghum e.g. Wheat, Barley, Rye, Oats, Triticale				3. The consignment does not contain wild oat seed.
				4. To be treated with an approved fungicide and insecticide like Thiabendazole + Thiram and Gaucho 75WP.
	For consumption	b) All countries	Permit	1. Certification of fumigation before dispatch.
				2. Cereals were rendered non-viable before dispatch.
Rice *Oryza*	Seed	a) Southern Africa	Quarantine	1. The seed was harvested from fields inspected in active growth and found free from seed borne diseases, pests and also free *from Aphelenchoides besseyi and Ditylenchus angustu*.
				2. The seed is treated with an approved fungicide and insecticide like Thiabendazole + Thiram and Gaucho 75WP, respectively.
				3. The seed was hot-water treated at 52^{o}C for 15 minutes before dispatch.
		b) Elsewhere	Quarantine	
	Consumption	c) Elsewhere	Permit	Free from storage pests such as Tribolium castenian and Rhizopertha and be milled.
Sorghum	(i) Vegetative material	All countries	Prohibited	
	(ii) Seeds	All countries	Permit	1. The parent plants were inspected during active growth and found free from *Pseudomonas andropogonis*, maize dwarf mosaic virus and *Periconia circinata.*
				2. The seed was harvested from a field free of *Sclerospora sorghi.*
				3. Seed is treated with an approved fungicide and insecticide before dispatch.
				4. The seed is free from *Claviceps spp.*
Beans and grams *Phaseolus spp. Dolichos sp. Vigna sinensis cajanus inducus, Cajanus cajan*	Seed	a) Africa , South of Sahara	Permit	1. Bacterial wilt (corybebacteriaum flaccumfaciens) is not known to occur in the country of origin.
				2. The seed was harvested from plants inspected during active growth and found free from viral diseased.
				3. Seed is free from Bruchidae sp.
				4. The seed is dressed with fungicide like metalaxyl + Thiabandazole + Thiram (Capron combi 453FS and insecticide (Actellic dust) before dispatch.

		b) North and South America, Asia	Quarantine	
Broad beans, peas and sweet peas *Vicia spp, Pisum spp, Lythyrus spp*	Seed	All countries	Permit	1. Bacterial blight (Psedomonos pisi) is not known to occur in country or state of origin.
				2. The mother plants were inspected and found free of alfalfa mosaic virus, pea mosaic virus and potato spotted wilt virus.
				3. Seed is dressed with fungicide and insecticide like Thibandazole + Thiram or Carboxin + gamma + Thiram.
	For consumption	All countries	Permit	1. Bacterial bligh (Pseudomonas pisi) is not knows to occur in country or state of origin.
				2. The mother plants were inspected and found free of alfalfa mosaic virus, pea mosaic virus and tomato spotted wilt virus.
				3. Free from insect pests.
Cassava *Manihot spp*	Seed and vegetative propagating material	All countries	Quarantine only	Indexed against all known viral diseases of cassava
	Dried cassava chips	All countries	Permit	Should be treated and fumigated against insect pests e.g. Larger grain borer.
	For consumption	All countries	Permit	1. Should be free from chaff and of Aflatoxin levels of less than 4%.
				2. The consignment should be free from Larger grain borer.
Groundnuts *Arachis pinto*	Seed	a) All countries	Permit	1. The parent plants were inspected in active growth and found free from viral diseases
				2. The consignment is free from *Carydon gonogra* and *Khapra* beetle *Trogoderma granarium.*
				3. The seed must be treated with an approved fungicide and insecticide before dispatch like Thiram + Thiabendazole or captan + tosetyl alluminium + Thiabendazole.
	Vegetative material	b) All countries	Quarantine	