



EXECUTIVE SUMMARY:

MARKET STUDY OF GRAPE JUICE INDUSTRY IN DODOMA, TANZANIA

BACKGROUND

Between 2006 and 2010, Lutheran World Relief (LWR), in partnership with UWAZAMAH and the HOZEM Savings and Credit Cooperative (SACCO), successfully implemented the “Tanzania: Grape Farming and Marketing Project” in Hombolo. It resulted in a 740 percent increase in membership (22 in 2006 to 185 members in 2010), a 6,700 percent increase in annual grape production (5 to 340 metric tons), a 2,445 percent increase in grape acreage under production (11 to 280 acres) and an 8,900 percent increase in producers’ annual income from grape production (TSH 2 to TSH 180 million). This work was scaled up through a second grape initiative, “A Strong Grape Value Chain Contributes to Increased Smallholders Farmers’ Food Security in Dodoma Region,” implemented from July 2011 to December 2015 in partnership with UWAZAMAM Agricultural Marketing Cooperative (AMCOs) to reach over 2,000 grape farmers in the Mbabala, Mpunguzi, Hombolo and Gawaye areas of Dodoma region. LWR also worked with other stakeholders in the region, including processors such as CETAWICO, Bihawana and ALKO VINTAGE (KATO), traders, government extension systems, and research and financial institutions. This project also built a small factory to produce bulk wine. While this new factory presents a significant business opportunity for UWAZAMAM, stakeholders in the region do not have a clear sense of the potential for growth within the industry. To address this knowledge gap, LWR commissioned a study of the grape bulk wine industry. The study was completed in June 2016 and carried out by Mr. Shedrack Willilo, an independent consultant. The purpose of this study is to identify opportunities available to farmer

groups, processors and other local stakeholders within the grape juice/bulk wine market in Tanzania to inform future investment in the sector. This summary provides details on recent grape juice/bulk wine production in Dodoma, the current supply and demand gap and recommendations on how local stakeholders can effectively address this gap.

GRAPE PRODUCTION IN DODOMA

Dodoma is the main region in Tanzania where grapes are grown. According to data compiled by the Dodoma regional agricultural office, in the 2014/15 season there were about 4,810 acres (1,924 ha) under grape production in the region. The total annual production was about 10,800 tons (2015), equal to an average yield of 2.25 tons per acre. Above, Table 1 shows the grape production trend in Dodoma, which has steadily increased over the last 5 years, partially due to the increased processing capacity of local processors.

The recent introduction of smaller, more affordable processors, such as HOMCO and UWAZAMAM, have also given farmers incentive to produce grapes. As more processing options become available to farmers, production will increase as farmers are able to respond to the demand, as influenced by the price received. Aside from price, farmers consider many other factors to determine profitability of grape farming, including the costs of water resource management, inputs, transport and labor.



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Table 1: Grape Production Trend in Dodoma

Year	Chamwino District		Dodoma Municipal Council		Bahi District		Regional Total	
	Acreage (Hectares)	Annual Yield (Tonnes)	Acreage (Hectares)	Annual Yield (Tonnes)	Acreage (Hectares)*	Annual Yield (Tonnes)*	Acreage (Hectares)	Annual Yield (Tonnes)
2010/11	192	1,450	590	3,576	110	550	892	5,576
2011/12	462	2,272	764	6,408	110	550	1,336	9,230
2012/13	488	2,980	955	6,413	110	550	1,553	9,943
2013/14	540	3,240	1,010	6,818	110	550	1,660	10,608
2014/15	572	3,432	1,242	6,831	110	550	1,924	10,813
2015/16	583	2,915	NA	NA	110	550	NA	NA

*Note: Estimate Figures from Dodoma Municipal Council

Of course, profitability is also strongly tied to price. While the typical price for raw grapes ranges between TZS 500- TZS 1,000 per kg, traders offer relatively higher prices i.e. TZS 800 - 1,200 per kg. However, traders, who are the ones to grade produce, only take high-grade grapes, while processors will take everything in the vineyard. Because traders won't buy all of their crop, farmers prefer to work with processors. In spite of this, payment delays from processors have discouraged farmers as sometimes it takes up to six months to get paid. Bulk wine offers attractive prices i.e. TZS 1,600 - 2,500, depending on the quality of grapes. Therefore training is vital for small processors to ensure they meet standards. Farmers consider many of these factors related to profitability when deciding if and how much to invest in grape production.

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Table 2: Cost Analysis for Grape Farming in Dodoma

Activity	Descriptions	Unit	Qty	Rain Fed System		Irrigation System	
				Unit Costs (TZS)	Amount (TZS)	Unit Costs (TZS)	Amount (TZS)
Initial works – Farm Preparation and Planting		Acre	1	3,000,000	3,000,000	6,500,000	6,500,000
Watering	Irrigation Scheme						
Manuring	Once per year	Acre	1	108,000	108,000	282,000	282,000
Weeding	2 times per year	Acre	1	117,000	117,000	117,000	117,000
Pesticide Control	4 times per season	Acre	1	150,000	150,000	150,000	150,000
Cutting	2 times per year	Acre	1	103,000	103,000	103,000	103,000
Trailing	Continuous	Acre	1	183,000	183,000	183,000	183,000
Harvesting	2 times per year	Acre	2	73,000	146,000	73,000	146,000
Transport							
Add: Contingency & Own Labor	20% of cost under rainfed system		1	761,000	761,000	761,000	761,000
Total Cost					4,568,000		8,242,000

Source: Consultant Evaluation following Field Survey - March, 2016

Table 3: Profitability Analysis for Producers

Description	Year 1		Year 2		Year 3	
	Costs/ Revenue – Rain Fed System (TZS)	Costs/ Revenue – Irrigation System (TZS)	Costs/ Revenue – Rain Fed System (TZS)	Costs/ Revenue – Irrigation System (TZS)	Costs/ Revenue – Rain Fed System (TZS)	Costs/ Revenue – Irrigation System (TZS)
Average Cost – New Farm	3,000,000	6,500,000				
Average Cost – Existing Farm	1,568,000	1,742,000	1,568,000	1,742,000	1,568,000	1,742,000
Average Total Cost – Farming and Management	4,568,000	8,242,000	1,568,000	1,742,000	1,568,000	1,742,000
Average Annual Yield/Acre (Kgs)	3,000	7,500	3,000	7,500	3,000	7,500
Average Sales Price/Kg	750	750	750	750	750	750
Average Total Annual Sales Revenue (TZS)	2,250,000	5,625,000	2,250,000	5,625,000	2,250,000	5,625,000
Average Sales Margin – Net of Initial Investment	682,000	3,883,000	682,000	3,883,000	682,000	3,883,000
Average Sales Margin – With Initial Investment	(2,318,000)	(2,617,000)	682,000	3,883,000	682,000	3,883,000
Percentage Sales Margin – Net of Initial Investment	30%	69%	30%	69%	30%	69%
Percentage Sales Margin – With Initial Investment	-103%	-47%	30%	69%	30%	69%
Average Sales Margin – Net of Initial Investment	30%	69%				
Average Sales Margin – With Initial Investment	-14%	31%				
Overall Average Sales Margin	8%	50%				

Source: Consultant Evaluation following Field Survey - March, 2016

Table 4: Bulk Wine Production Trend in Tanzania

Year	Month	HOMCO		UWAZAMAM		Total Bulk Wine Produced – HOMCO & UWAZAMAM (Litres)
		Grapes Received (Kgs)	Bulk Wine Produced (Litres)	Grapes Received (Kgs)	Bulk Wine Produced (Litres)	
2013	February	10,000	7,000			7,000
	August	150,751	100,375			100,375
	Total/Year	160,751	107,375			107,375
2014	February	38,594	27,840			27,840
	August	162,303	101,300			101,300
	Total/Year	200,897	129,140			129,140
2015	February	33,350	20,100			20,100
	August	113,692	102,100			102,100
	Total/Year	147,042	122,200			122,200
2016	February	45,586	27,500	18,000	14,000	41,500
	August					
	Total/Year	45,586	27,500	18,000	14,000	41,500
	Annual Average		119,572			119,572

Source: Field Survey in Dodoma - March 2016

BULK WINE SUPPLY AND DEMAND GAP IN DODOMA

Tanzania has fewer sizable wine cellars, which are the major processors and potential buyers of bulk wine. The key potential domestic buyers are M/s KATO, M/s CETAWICO and M/s Tanzania Distillers Limited. On the supply side, Tanzania has a limited supply of bulk wine from small local producers. For example, both M/s HOMCO and M/s UWAZAMAM have an annual installed capacity of about 150,000 liters. With UWAZAMAM's entry, the bulk wine production trend will continue to increase.

However, on account of lack of supply for bulk wine, the key buyers are forced to import bulk wine from South Africa despite serious tariff barriers (excise duty of TZS 2,130/ liter and 18 percent Value Added Tax). As illustrated in Table 5, the growth of bulk wine production in Dodoma has the potential to reverse the trend of importing from South Africa.

This study revealed that the total supply and demand gap for bulk wine processors in Tanzania is about 5.2 million liters per year. The survey also indicates that there is significant foreign demand from nearby countries that are already purchasing grapes in Dodoma, such as Rwanda and Kenya. Rwanda buys at least 30 tons of grapes annually. On the other hand, Kenya purchases about 450 tons per year. This could be translated into 350,000 liters of juice and bulk wine. In addition, based on the reputation of Dodoma grapes, bulk wine from Tanzania is likely to fetch good market prices in developed countries, especially in Europe, Asia and the United States. The domestic supply and demand gap cannot be met by the leading processors under the current capacities. Therefore, there is a need to increase capacity and establish new processors. This study demonstrates that there is a significant opportunity in the grape juice and bulk wine sector for farmers, processors and other local stakeholders. The next section presents recommendations that should be implemented in order to meet the supply and demand gap.

Table 5: Bulk Wine Purchased from South Africa and Dodoma by M/s Alko Vintage

S/N	Year	Bulk Wine from Dodoma (Litres)	Bulk Wine from South Africa (Litres)
1	2010	NIL	NIL
2	2011	NIL	NIL
3	2012	NIL	NIL
4	2013	50,000	50,000
5	2014	100,000	100,000
6	2015	100,000	200,000
7	2016	300,000**	100,000

Source: Alko Vintage March, 2016

**To be purchased

RECOMMENDATIONS

The following measures should be implemented in order to address the supply and demand gap:

- Develop a harmonized framework contract between buyers and grape farmers.
- Develop and carry out an awareness campaign on grape pricing and its associated products (i.e. bulk wine to grape farmers and local leadership).
- Engage local government to promote compliance to the framework contract among parties, especially grape farmers.
- Establish a credible institution to manage the quality of grapes and grape products (i.e. bulk wine as a key driver for price setting as per the would-be terms of the framework contract).
- Promote extension services for farmers to increase productivity.
- Support farmers on basic infrastructure (i.e. development of irrigation schemes).
- Liaise with the Tanzania Chamber of Commerce, Industries and Agriculture (TCCIA) Dodoma branch to lobby the government for promotion of the grape subsector in Dodoma.
- Increase acreage per household to take advantage of economies of scale.
- Persuade educated community members and groups, who will eventually be sector think tanks and/or association leaders, to invest in the grape sector.
- Sensitize farmers to work closely with processors to understand and produce according to industry standards.
- Promote small-scale bulk wine producers through farmers associations as potential large-scale processor partners.
- Develop further branding of grape products, especially grape juices and other non-alcoholic sparkling grape drinks, to widen the grape market.
- Establish a loan facility and organize farmers to form Savings and Credit Cooperatives (SACCOS).



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