Value Addition Practices to Agricultural Commodities in Tanzania

By Joel J Mmasa

According to Agricultural Marketing Policy (2008), majority of crops in the country are marketed in their raw forms, losing opportunities for higher earnings and generating employment. The main constraints facing the agro processing industry include high operational costs mainly because of high prices of imported fuel and spare parts, unavailability of appropriate processing machines and spare parts and limited knowledge in operation of the machines.

Despite these constraints, agro processing has a tremendous potential for increasing income through value addition and increasing shelf life and access to food security through the establishment of small scale agro processing businesses and rural agro based industries. Economic growth in the rural areas will in most cases be led by the growth of commercial agro industries which are efficiently run and responsive to evolving market demands.

Financial supports to farmers to engage in commercial farming are urgently needed to form a policy development, project design and implementation
VALUE ADDITION PRACTICES TO AGRICULTURAL COMMODITIES IN TANZANIA - CHALLENGES

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Workers process cashews in the Condor Nuts processing plant. Established with Techno Serve’s support, the factory employs more than 1 500 people- (Courtesy -Techno serve)

1. EXECUTIVE SUMMARY

A value addition technique of agriculture product is of paramount important if Tanzania need to develop and benefit from the sector. Value addition plays a significant role in improving livelihood of small scale farmers. This policy brief examined the rationale of value chain in improving livelihood of the small-scale farmers in Tanzania. The data was collected from various publication and journal, papers and articles related to this topic. According to various studies it was revealed the sector has strong forward and backward linkages with other sectors. low productivity due to low skills among the farmers and other stakeholders,
hence no sustainable food production, lack of strong farmer’s associations or cooperatives, high potential for a faster and sustainable growth as well as equitable distribution of the growth benefits to a wider population in the country, no sufficiently strong farmers oriented agricultural research, extension services and training, for development of new technologies and no sufficient collection and dissemination of market information. Despite its great potential, the sector is facing a number of challenges including: low performance; low levels of production; low quality of output and low contribution to the national socio-economic goals; underutilization of available resources, limited market and value addition possibilities; and weak implementation of legal and regulatory framework.

2. BACKGROUND INFORMATION

Tanzania is endowed with abundant natural resources, which include land, water, forage and a large livestock resource base (URT, 2005). Agriculture sector in Tanzania is a driving force of the economy (Tanzania Economic Profile, 2013). The sector employs over 80 percent of the population, who constitute majority of the poor (URT, 2012). Similarly, Agriculture provides 27.8 percent of Tanzania’s Gross Domestic Products GDP, Contrarily to the past where the sector generated up to 50 percent of gross domestic product (ibid). On the other hand, the sector is characterized by low production capacity caused by low output, poor quality products and low returns which calls for transformation. Tanzania Agricultural Sector has been the main GDP earner for the country but remained one of the least explored industry for investment, as the sector reveals its full capacity with incentive to produce for the market the investment interest in agribusiness is expected to increase. Tanzania is among the world’s poorest countries with a per-capita income of about US$ 280 (NBS, 2011).

Tanzania agriculture is characterized by smallholder farmers, who are the dominant leaders in the sector as a whole, support average farm sizes of between 0.9 hectares and 3.0 hectares and cultivate 5.1 million hectares annually, of which 85 percent is food crops (Nyomora and Nduguru, 2012). The majority staples that are produced by Tanzania include maize, sorghum, millet, rice, wheat, pulses (mainly beans), cassava, potatoes, bananas and plantains with the bulk of the country’s export crops being composed of coffee, cotton, cashew nut, tobacco, sisal, pyrethrum, tea, cloves, horticultural crops, oil seeds, spices and flowers (URT, 2012). Currently, women compose the primary source of the agricultural labor force in the country, however as a result of the application of poor technology and a dependence on unreliable and often unreliable weather conditions, both the labor force and land productivity of the sector have begun to act as a limitation to the sector.

The sector has been largely influenced by past and current macro-economic reforms, which have helped to open up the sector to private investment in production and processing as
well as input importation and distribution (TAFSIP, 2011). The Government of Tanzania in 2010/2011 allocated 7.78 percent of the budget to Agriculture in contrast to 10 percent target of Maputo accord. But there is a need and effective delivering system to monitor all Agriculture projects. Moreover, policy is not important for pro poor growth what is needed is to make things happen in the ground (Chris Tan 2013). Cooperatives and to private traders are the big buyers of the farmers produce hence increase competition with other buyers. Currently, the private sector has absorbed much of the responsibility for the production and processing functions, while the Government has maintained its position in the facilitation of regulatory and public support functions. Likewise, the sector relies heavily on rainfall, hence adequate irrigation methods are crucial to the stabilization of agricultural production in the country, a result of which will be improved food security, increased productivity and incomes for farmers, and an increase in the production of higher valued crops such as vegetables and flowers (URT, 2012). The potential for attaining sustainable irrigation development exists in the availability of the country’s natural water resources via its network of rivers and lakes as well as the availability of 1 million hectares of irrigatable land at 1.0 million, only 150 000 of which are cultivated under irrigation.

Furthermore, National Irrigation Development Plan and an Agriculture Policy have also been put in place in order to help develop the country’s irrigation system, which will act as a potential source of revenue in the form of a user charge once it has been regulated (URT, 1997). In addition to its firm connection to the farming sector, the Tanzania agriculture sector is also linked to the non-farming sector through its associations with agro-processing, consumption and export as well as through the provision of raw materials to various industries and by acting as a market for manufactured goods in the country. General opportunities for investment in the sector included the;

i. Establishment of farm machinery and equipments plants

ii. Operation of tractor hire centers and the establishment of ox training centers

iii. Establishment of research and training institutes

iv. Development of human and animal power technologies
v. Operation of agriculture mechanization centers, the provision and/or training of extension experts, the employment of agriculture researchers and the establishment of agricultural information centers.

2.1. The introduction of Southern Agricultural Growth Corridor of Tanzania (SAGCOT)

The Southern Agricultural Growth Corridor of Tanzania (SAGCOT) was initiated at the World Economic Forum (WEF) Africa Summit 2010 with the vision to rapidly develop the region's agricultural capacity and potential. SAGCOT is an agricultural partnership designed to; Improve agricultural productivity, food security and livelihoods in Tanzania. SAGCOT has the potential to make a serious and significant impact by bringing together government, business, donor partners and the farming community to pool resources and work together towards a common goal. It is a comprehensive and inclusive initiative. By addressing the entire agricultural value chain, the SAGCOT approach will go beyond raising agricultural productivity and ensure the necessary infrastructure, policy environment and access to knowledge to create an efficient, well-functioning agricultural value chain. SAGCOT is about doing things differently to get things done and to make a real difference. This is about business as unusual.

2.2. The area under irrigation of paddy (Courtesy of Southern Agricultural Growth Corridor of Tanzania (SAGCOT))

2.2.1. Value Addition activities

Adding value to products can be accomplished in a number of different ways, but generally falls into one of two main types:

- Creating Value
- Innovation
- Industrial Innovation

i. Creating Value – occurs with actual or perceived value to a customer for a superior product or service
• Innovative new products
• Enhance a product’s characteristics
• Enhance services
• Create brand names and Develop unique customer experiences

ii. Creating Value through - Innovation: Improving existing processes, procedures, products and services or creating new ones

• Market unique or branded products
• Produce identity-preserved or specialty crops and Combine family activities or recreation associated with direct on-farm marketing

iii. Creating Value through - Industrial Innovation: Processing traditional crops into nonfood end uses

• Ethanol from corn
• Biodiesel from soybeans and Particle board from straw

iv. Capturing Value

• Capturing Value: Changing the distribution of value in the food/fiber production chain. Meant to ‘capture’ more of the consumer dollar through Direct Marketing and Vertical Integration

This policy brief is in line with;

• Tanzania Development Vision 2025 and National Strategy for Growth and Reduction of Poverty (NSGPR) II
• Tanzania Agricultural Food Security Investment Plan (TAFSIP), Agriculture Sector Development Plan (ASDP)
• Agriculture first “Kilimo Kwanza”

2.3. Definition of terms and Concepts

2.3.1. Value addition and Value chain analysis concepts

Adding Value – Process of changing or transforming a product from its original state to a more valuable state. Value chain is defined as the full range of activities/tasks that are required to bring a product or service from conception,
through the different phases of production, delivery to final consumers and final disposal use (Kaplinsky and Morris, 2001). Likewise, IFAD (2006). Porter (1990) defined the value chain framework as “an interdependent system or network of activities, connected by linkages”.

Gibbon (2001) described a value chain as a chain of activities, where products pass through all activities of the chain in that order and at each activity, the product gains some value.

Kaplinsky and Morris (2001) describes value chain as the full range of activities which are required to bring a product or service from conception, through the different phases of production (involving a combination of physical transformation and the input of various producer services), delivery to final consumer and final disposal after use.

2.3.2. Value chain governance

According to Morris (2001), there are three key element of value chain analysis which includes chain government, barrier to entry/rent and the different types of value chains.

Figure 1: The Value Chain components as perceived by Porter

Porter (1985) used the word ‘margin’ as the difference between the total value of the certain products and the cost associated. Other scholars have used the word ‘added value’ instead of margin in order to describe the same (Lynch, 2003).

(Courtesy by Porter, 1985)

2.3.3. Six (6) Key Strategies for Adding Value

- Changing physical state of products
- Producing enhanced value products
- Differentiating products
- Bundling products
- Producing more products that improve efficiency up the supply chain
• Owning assets up the supply chain

3. METHODOLOGY

This section explained the methodology used in conducting the study and justification for using those methods. It described the techniques selected and its rationale and procedures and data how the data was collected, analysed and presentation plan. Secondary data was the main source used to obtain sufficient and realistic information (Kothari, 2004). This method included review of relevant literature including journals, papers, thesis and various documentation. Under this design the data was collected from the following sources. Sokoine National Agricultural Library (SNAL), Ministry of Agriculture, Food Security and Cooperatives (MAFSC) website, Tanzania Bureau of Statistics (NBS), websites, journals and other sources relevant to the study. This approach was very useful hence the reviewer selected the relevant articles for the study (Adam and Kamuzora, 2008).

4. KEY FINDINGS

The Government of United Republic of Tanzania strives to commercialize crops by demonstrating approaches to profitable agricultural production systems, increased market access and value-added activities in targeted rural communities (URT, 2008). It is essential to focus on activities that focus on strengthening market access and expanding markets for valued added products, intensifying production; improving the quality and promoting engagement in post-harvest value addition (ibid).

Women participating in Agriculture Activities; Courtesy of Southern Agricultural Growth Corridor of Tanzania website (SAGCOT)
4.1. The Agriculture value added in Tanzania

According to a World Bank report published in 2012. The Agriculture value added (US dollar) in Tanzania was last reported at 5 780 320 208.80 in 2011.

4.2. The Agriculture value added in Uganda

According to a World Bank report published in 2012. Furthermore, the value for Agriculture, value added (current US$) in Uganda was $3 870 911 000 as of 2010. Over the past 50 years, the value for this indicator has fluctuated between $3 870 911,000 in 2010 and $211 043 400 in 1960.

4.3. The Agriculture value added in Kenya

Kenya the value from 2008 to 2011 was to 6 941 825 513, 7 306 739 453, 7 076 002 758 and 8 346 408 890 respectively. In East Africa Kenya has highest Agriculture value added (US dollar). While malaysi the latest value for Agriculture, value added (current US$) in Malaysia was $25 270 820 000 as of 2010 five times to Tanzania value. Over the past 50 years, the value for this indicator has fluctuated between $25 270 820 000 in 2010 and $837 692 100 in 1960 (World Bank and OECD, 2013).

4.4. Manufacturing Industries in Tanzania

Manufacturing activities in Tanzania have demonstrated a steady growth, registering average annual growth of over 4 percent. Nevertheless, manufacturing activities in Tanzania are relatively small and at an infancy stage. Its contribution to GDP has averaged 8 percent over the last decade, with most activities concentrated on manufacture of simple consumer goods - food, beverages, tobacco, textiles and furniture and wood allied products. Most of the present industries were established in the light of import substitution strategy, whereas production focused in substituting previously imported goods in view of saving the country’s meagre foreign exchange.

The government decision to liberalise trade and investment policies, effected since 1986, witnessed a number of firms even those believed to be as strong, clumping down as they could hardly withstand competition from imported manufactures. A number of measures were taken in view of revamping competitiveness of the local industries and enhancing their penetration into export markets. However, the existing industries though not performing well in Tanzania included;

- Food, Beverage and Tobacco
- Textiles, Clothing, Leather and Footwear
- Wood and Wooden Products, excluding Furniture Activities
Furthermore, Food industry is one of the largest branches of industries in Tanzania which is made up of micro, small, medium and large processors. Micro and small food processors operate in an informal sector and use labour intensive and poor technologies, while medium and large scale industries use improved and modern technologies with large capacity output. Small and medium industries are the majority of local manufacturers of consumer goods. The largest production sectors of food industry are brewing, milling, baking, confectionery, animal and vegetable oils, sugar, dairy products, fruits and vegetables, soft drinks, fish and meat processing, ethyl alcohol distillation, spirit blending, wines, bottling of natural spring and mineral waters, among others.

4.5. Examples of Cashew nuts processing in Tanzania

Tanzania is Africa's largest cashew nut grower after Nigeria and Ivory Coast, and the world's eighth biggest producer. The country exported about 158 000 metric tonnes of cashew nuts in the 2011/2012 season. According to the Eastern and Southern Africa Agriculture network (ESAANET) cashews provide an important source of income for some 250 000 smallholder farmers in Tanzania in the southern coastal region, where the districts of Mtwara, Lindi, and Ruvuma account for 80-90 percent of Tanzania's marketed cashew crop. Although 90 percent of the crop was harvested in the country, less than 10 percent was processed locally. Cashew nut Board of Tanzania and the Cashew nut Industry Development Trust Fund (CIDF) set aside Tsh10 billion (nearly $6 million) to boost local processing capacity. Amazingly the data revealed that if Tanzania's cashew nut sector performed to its full potential, it would create over 45 000 jobs in the country and make a significant contribution to the economy (Agriculture Non Status Actors Forum (ANSAF) a research report).

Agriculture in Tanzania is mostly dominated by peasant farmers producing traditional agricultural commodities (URT, 2006). Despite this huge dependency on the agricultural sector, the country has not been able to fully develop agricultural processing and industries. Value adding to main agricultural products is mostly done at small-scale secondary level. However; most of it is of low quality. Otherwise, smallholder farmers do just sell crops without any value addition. Establishment of cereals processing industries, fruit processing industry is inevitable if the country want to boost production. As part of promoting income generating activities, farmers in Tanzania
Farmers have also been trained to make fruit juice, jam and wine from baobab tree and bread.

4.6. Post-harvest losses

Farmers produce raw materials for the food market. Agro-industries add value to produce, and they are an essential component of the value chain in modern economies. The development of small-scale processing industries in rural communities would help add value close to the source of raw materials. Rural industry would grow to benefit the rural communities, initiating the path towards commercialization of agriculture. This would reduce the current high levels of waste of fresh produce and would encourage producers to participate in rural commercial economies.

Cognizant, 30 to 40 percent of agricultural produce is lost owing to poor post-harvest handling, storage and processing methods. Therefore, there is high potential for lateral expansion of the agriculture sector at all levels. The low level of engineering technology inputs in agriculture has been cited as one of the main constraints hindering the modernization of agriculture and food production systems in Africa.
Agro processing and especially small-scale processing is becoming very important in the country as means to reduce crop losses and value addition at production and collection sites and a way of income generating activity. However, the sector experience losses during and after harvest. Post harvest losses of fruits and vegetables are estimated at 50 to 80 percent. These losses are more meaningful economically compared to the cost of compensating for losses through increased crop production. Losses are caused by among another factors, mechanical, physical and biochemical aspects.

5. POLICY IMPLICATIONS

5.1. Sustainable Industrial Development Policy (SIDP)

Establishment of Sustainable Industrial Development Policy (SIDP) gives direction to the future industry survival. The main purpose of SIDP is to set out a path for industrialising Tanzania so that by the turn of the first quarter of the 21st Century it becomes a semi industrialised country with industry, broadly defined, accounting for over 40 percent of GDP. In its approach SIDP embraces the principles of a market-led economy and competitiveness. It points out plainly that industry would only prosper in the hands of increased private sector participation both in decision making and implementation. The government in this aspect has vowed to increasingly provide an environment which is welcoming, attractive, stable and that can encourage private sector investment.

5.2. Challenges

- Lack of both skilled human capacity as well as developed agro-processing industries in the country
- Weak interaction between the private sector and the government to create enabling environment such that agro-processing lacks proper development and coordination.
- Inadequate capacity of domestic industries to produce and compete favourably at International markets
- Weak information sharing that can enhance agro-processing

6. CONCLUSION

Tanzania’s industry which had collapsed and lagged behind for many years in terms of technology and equipment is still facing enormous, diverse and demanding challenges which hinder the sector from growing at a noticeable pace to significantly contribute to the country’s economic development. In addition to technology and equipments, other
challenges identified by processors include; technical knowhow, research and development, capital, managerial and physical infrastructure. Foreign investors have grabbed a bigger market share by using their advanced technologies and huge capital resources posing great pressure to small and medium entrepreneurs as they are still not able to generate sufficient value added products. Small scale of production due to low investment capital and irrationally structured firms make them less competitive. It is important to engage the private sector in value chains ensures demand-led chains and sustainability. There is also a need for an integrated approach across all areas of value chain, including seed improvement and processing techniques. In this respect, farmer organizations/cooperation can be established/strengthened to empower farmers to benefit more from this approach. A strengthened value chain can make a positive to livelihood of small-scale farmers in Tanzania.

7. **RECOMMENDATIONS AND IMPLICATIONS**

There are a number of challenges facing the development of value chain techniques in Tanzania.

- Government should encourage efficient and sustainable use of the existing cultivable land, by investing in agricultural research and extension, with a view to increase the agricultural output as well as the corresponding income for households especially for those investing in commercial agriculture.
- Financial supports to farmers to engage in commercial farming are urgently needed to form a policy development, project design and implementation agenda.
- Provision of good quality seeds for crop production is inevitable
- Deliberate efforts on increasing electrification, still electricity are not a reliable commodity in Tanzania. It does not only affects production processes but also products that depend on cold chain distribution and storage for example, pasteurized and fermented dairy products, meat and meat products, fish etc. Prolonged electricity black out accompanied with favorable tropical condition for microbial growth result into a great loss to the processors, wholesalers, retailers, consumers or the entire supply chain system.
REFERENCES


Value-Added Agriculture [pptwww.ffa.cccs.edu] Site visited on 30 May 2013.


