

Challenges and Prospects for unexploited Soya Production in Tanzania

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Key Message

- *Basing on global best practices productivity is around 3,370kg/ha, which is far above Tanzania productivity of 1,030kg/ha*
- *USA and Ethiopia are leading exporter globally and in Africa respectively. China is the main importer of global Soya production (it accounts for 63%);*
- *Soybean consists of 40% of protein content and 20% of oil content;*
- *Weak farmers associations, less use of farm inputs and improved seed varieties, high postharvest loss and poor marketing systems are challenges impeding growth of subsector;*
- *Registration of farmers association, provision of credit facilities, engagement into contracting farming and seed breeding are suggested measures to revamp soya subsector*

1. Introduction

Soybean is an important legume plant rich of many advantages; it is a major source of oil and protein in livestock feeds and human consumption, it provides inputs in industrial products such as soy inks, non-toxic adhesives, candles and paints. In addition to that soybean play an important role in improving soil fertility due to its ability to fix atmospheric nitrogen. It has about 40% high protein content of good nutritional quality and a high oil content (20%) which together with other numerous beneficial nutrients and bioactive factors makes soybean the crop of choice for improving the diets of millions of people in developing world including Tanzania.

2.Global Perspective

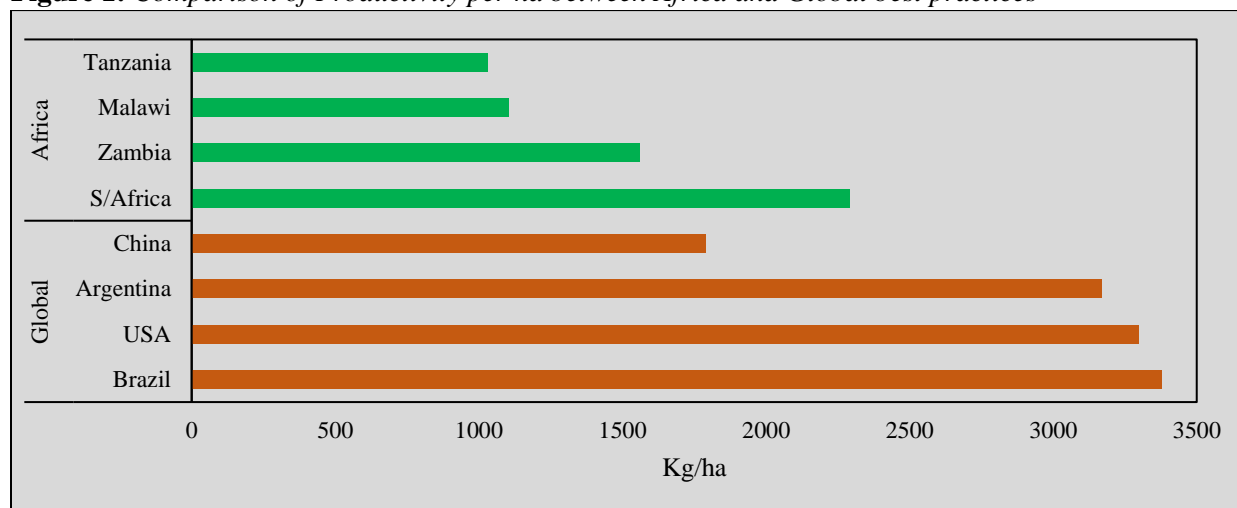
Soybeans production is carried out by smallholder farmers who owns an average of 1 – 2 ha. There are large scale farmers who accounts for small portion of producers. The crop grows in a broad range of well-drained soil types but medium – texture soils are ideal for soybean productivity. In order to realize good yield of crops, choice of proper variety is paramount factor, farmers are argued to select seeds based on desirable plant characteristics like high yield, ability to withstand drought, colour, or withstand weather. Other desirable factors include proper application of farm inputs and uses of good agricultural practices.

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In 2015 the Food Agricultural Organization recorded USA as a leading producer of soybean accounting for 32% of global production, other giant producers with their global contribution in the brackets are Brazil (29%) and Argentina (17%). Statistics published by FAOSTAT (2017); recorded Brazil with the highest global productivity of 3,370 Kg/ha followed by USA (3,299 kg/ha). Figure 1, gives comparison of global best practice productivity as compared to regional level where by, South Africa is leading with productivity of 2,293kg/ha followed by Zambia Malawi and Zimbabwe.

Figure 1: Comparison of Productivity per ha between Africa and Global best practices



Source: FAOSTAT (2017)

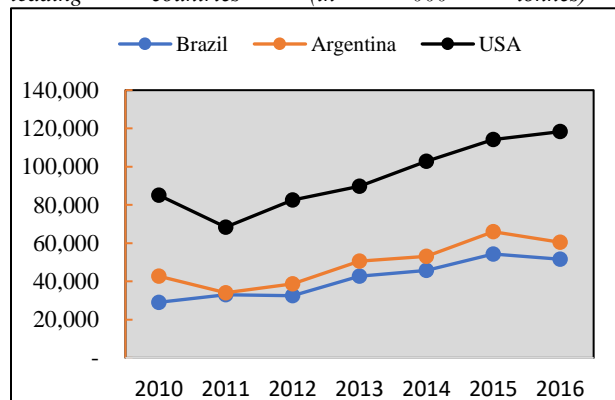
USA was recorded as the leading exporter of soybeans with \$25.9 billion of forex earning. The other leading exporters are Argentina and Brazil whose forex contribution worth \$22billion and \$2.8billion respectively [Fig. 2 (a)]. Of total imports that goes to China; 56% comes from Brazil, USA (34%), Argentina (6.6%) and Uruguay (1.4%). Significant (almost 63%) amount of global exports is consumed by China followed by Mexico (3%) Netherland (2.8%) and Japan (2.4%). Other countries consume insignificant amount of global import.

Africa Perspective

Despite of endowed with enough arable land, Africa is lagging behind in tapping the existing export market opportunities. So far there exist no African country which is exporting significant quantity soybeans to the global market. According to statistics published by FAOSTAT (2016), In the region Ethiopia is leading exporter followed by Malawi Nigeria and South Africa [Fig2 (b)]. In

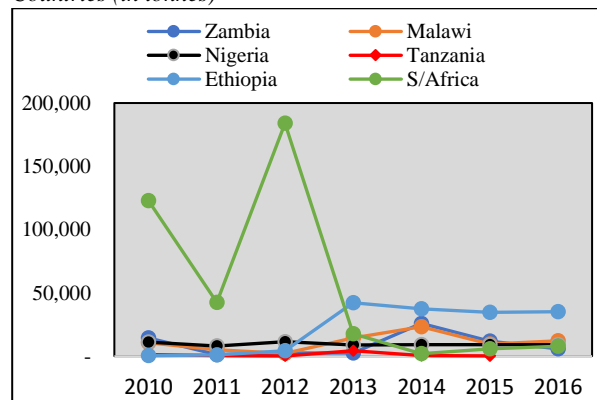
the same period, Tanzania which is not producing enough to sustain its local demand exported only 279 tonnes.

Figure 2 (a): Soybean export trend among the global leading countries (in '000 tonnes)



Source: FAOSTAT (2017)

Figure 2 (b): Soybean exports trend among African Countries (in tonnes)



Source: FAOSTAT (2017)

Unlocking Constraints for Soybean production in Tanzania

Domestically, the overall domestic demand of Soya for human consumption is low compared with regional and global demand. Few rural households use soya for making porridge as part of nutritional supplement unlike urban households whose use of soya and soya products is gradually increasing. Nonetheless there is significant use of soya for making animal feeds due to its high nutritional contents. This high demand relative to production creates market shortage which makes processors of animal feed to import soya cake from Zambia China and India. Domestic production is characterized with concentration of smallholder farmers with little focus on commercial farming, limited applications of pesticides to control diseases and recycling of seeds. Non-use of machinery leads to low efficiency and high labour costs which in turns makes cost of soya production unnecessarily high.

The relatively small-scale soya production does not give incentive for construction of warehouse for collection and storage as a results animal feed processor tends to buy soya at farm gate price through traders or middle men. Threshing of soya is done manually and then stored traditionally; this leads to low quality and high post-harvest loss. The implication is that, increasing consistency quality and supply of Soya requires farmers to believe in economic value of the crop. There is weak farmers organization under soya sub sector, this critical challenge makes soya producers not being able to share the potential benefits of economies of scale and access of joint services such as training on good agricultural practices, access to market and access to financial services.

Recommendations

There is huge untapped potential of soya production in the country which if properly used can contribute to food security and poverty alleviation to our rural community. The nutritional content obtained from soya is given little importance for human consumption when compared to other sources of protein such as animal and fish. Nonetheless the same is given utmost importance by animal feed processors which makes the demand of Soya higher for animal feed relative to human consumption. The individual small-scale production model with limited low productivity, low use of improved seeds, application of pesticides and other farm inputs needs a joint intervention by different stakeholders, nonexistence of farmers organizations has made contribution soya subsector to the GDP and welfare of farmers insignificant. To this end, Tanzania has all reasons to improve soya subsector and contribute to economic growth of the country. The suggested interventions include the following:

- a) Government to engage our agricultural research institutes (such as Uyole – Mbeya and Naliendele – Mtwara) to develop seeds varieties that are suitable to counties climatic condition and that are resistant to disease;
- b) Local government authorities (LGA) to organize farmers into associations for them to qualify to access joint services including training on GAP, access to finance and market services;
- c) Enter into contract farming between farmers association and animal feed processors to as incentives to encourage farmers to produce;
- d) Provision of credit facilities to soya subsector to unlock various constraints in the value chain (production, inputs, storage facilities etc).