

BUSINESS CASE ANALYSIS

TANZANIAN GRAIN VALUE CHAIN PROJECT

March 2023

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1. EXECUTIVE SUMMARY

The Tanzanian Government, Ministry of Trade and Ministry of Agriculture, along with Longping Agriscience (Longping), a China-based company has agreed to collaborate in implementing **Tanzanian Grain Value Chain Project** that will be executed in various suitable planting regions in Tanzania. Longping Agriscience has set up a joint venture company with a local agribusiness partner to independently establish and manage the project, this Tanzanian entity is called Longping Agriscience Tanzania Limited (herein referred to as “Longping”).

The total project investment will be more than USD 400,000,000 in block farming for two seasons of soybean and yellow maize rotation planting, covering 100,000 hectares per season and farming 140,000 hectares in total for two seasons in year 5 of the project, with 10,000 hectares as a pilot project in the first phase. The Project will develop the land into a fully operational modern farm, divided into blocks of 20 hectares that will be leased and managed by 5000 farmers (youth and women) in the soybean and yellow maize value chain. The participants will explicitly grow soybeans and yellow maize, then sell the grains to Longping, who will offtake the soybean and yellow maize grown at full capacity. To accelerate and ensure the large scale of project implementation, Longping is currently looking to raise commercial loans for expanding and operationalizing the farms. Financially, the investment is feasible with positive cash flow throughout the investment. Therefore, general project profitability will enhance the income of participants from the project.

The project aims to create over 5,000 direct sustainable jobs for the youths and over 10,000 indirect jobs through this investment, including farm management, machine operation, grain processing, storage, logistics and seed production in the future. Also, through this project, Tanzanian soybean and yellow maize export to China will increase by 700,000 metric tonnes per year, consisted by 350,000 metric tonnes of soybean and 350,000 metric tonnes of yellow maize.

2. INTRODUCTION

2.1 About the Background

Youths in Tanzania comprise about 40% of the entire population and over 80% of the national labor force. However, despite the increase in skilled graduates from learning institutions, the country's economic ability to produce formal employment for nearly 800,000 annual new entrants in a highly competitive labor market has remained substantially disproportionate at less than 10%. Therefore, more than 20 million youths in Tanzania remain unemployed or competing for hands-to-mouth informal jobs provided by a highly unorganized informal sector. Several factors contributed to and maximized the youth unemployment situation over the years, such as the rapidly growing population at an average rate of 3%, the slow relative inclining productivity growth rates of the Agriculture Sector at about 4% and disproportionate relations between the skillsets of graduating populations and the immediate skillsets demanded by the labor-intensive sections of the national economy.

Over the years, the Tanzanian government has employed cross-sectoral interventions primarily targeting the supply-side of the labor-intensive sectors of the national economy, such as technical skills development and providing funds for youths. In this direction, projects like Soya ni Pesa have been introduced as an intervention to take advantage of the locally evolving production resources and trade value chains specific to geographical localities and populations. In this case, regardless of the efforts put by the government and partners, and while Tanzania stands on competitive geographical and climatic advantage for agricultural production, there has not been sustainable and scalable efforts that harness the readily available workforce for agriculture to create sustainable jobs and increase agricultural production in the country. The critical challenge in soybean and yellow maize production arises from an imbalanced supply-demand relationship between smallholder farmers, primary processors, and industrial food producers. Seasonal fluctuation in farm productivity means processing factories cannot rely on a sufficient, regular supply of soybean and yellow maize when there is demand and so are forced to operate below capacity. In turn, industrial processors cannot contract local farmers, given the inconsistency in soybean and yellow maize production. This creates a regular demand-supply deficit, which has resulted in the under-development of the soybean and maize industry in Tanzania, regardless of the massive available local and international market opportunities.

To this end, Longping will provide agriculture inputs (such as seeds, fertilizers, and crop protection products) to farms in the project regions in Tanzania to grow and export soybean and yellow maize to China, or to support local consumption if necessary. With China being the largest importer of soybean and yellow maize globally, the investment will successfully turn Tanzania into a strategic production hub of soybean and yellow maize for export to China in the future.

Longping will manage the operations of the project farms, and oversee the process of onboarding the youths and women. The participants will rent or already own operational farms and hire machinery field services from Longping, grow soybean and yellow maize, then sell the grains to Longping or its designated commodity trading company. Longping has commitment from Tanzanian government to facilitate land in tune of 100,000 hectares and Tanzanian government will identify, organize, and manage the youths and women which will participate in the project.

2.2 Investment Scale and Funding

Up to the 5th year of the project, the expected total investment from Longping will be more than USD 400 million, consisted by USD 171.5 million of fixed assets investment, USD 58.5 million of operational cash flow for agricultural inputs in the early stage, and USD 220 million for purchasing grains from local farmers. To accelerate and ensure the large scale of project implementation, Longping is currently looking to invest in facilities and equipment to support the operation of the designated farms in the project regions in Tanzania.

Longping will provide agriculture inputs and techniques to farmers in the soybean and yellow maize value chain, where they will grow soybeans and yellow maize grains, then sell to Longping, which will be responsible for selling soybean and yellow maize to customers in China. Longping will deduct the costs of agriculture inputs and services provided, then distribute the profits of farming activities to the farmers.

3. MARKET ANALYSIS SUMMARY

3.1 Status of Soybean Farming

Soybean is one of the world's largest protein crops and the most efficient protein source per hectare. Global production stood at 320 million tonnes, mainly from North America and Brazil, while Africa contributes less than 1% of global soybeans production. China by far is the world's largest consumer and importer of Soybeans, with demand exceeding 100 million tonnes per year, and yellow maize, with demand exceeding 28 million tonnes per year. In 2020, China imported Agricultural produces worth USD 110 billion; out of that, USD 35 billion alone went into buying soybeans and USD 8 billion on buying yellow maize.

Tanzania's production of soybean is little around 40,000 tonnes, up 100% from 2 years ago, highlighting appetite to start producing more soybean due to recent promotions by the government and demand from a ready market both local and exportation. While Tanzanian production is insignificant compared to the world production level, the country has one of the strong farming ecosystems driven by a significant number of the energetic youth and woman population, political stability, stable economic growth, good geography, and a supportive government. If well nurtured and supported, the farmers in Tanzania can successfully boost soybean and yellow maize production and export potential.

Tanzania has approximately 44 million hectares of land suitable for cultivation, of which 29 million hectares are ideal for irrigation but currently not under cultivation. Also, Tanzania enjoys direct access to the Indian ocean and seaports to facilitate exports of its products. Also, the government, in line with its goal to support farmers in Tanzania, is currently reviewing its development policy to enhance the macro and micro regulatory environment to be conducive for farmers.

As a result of strong support and commitment from the Tanzanian government in soybean and yellow maize industries, Longping will establish operational teams to support Tanzanian farmers for two seasons of soybean and yellow maize rotation farming, covering 100,000 hectares per season and farming 140,000 hectares in total for two seasons in year 5 of the project, with 10,000 hectares as a pilot project in the first phase. Once fully implemented, the total grain export to China will increase by at least 700,000 metric tonnes per year, consisted by 350,000 metric tonnes of soybean and 350,000 metric tonnes of yellow maize. In year 5 of the project, the total turnover of grain value chain will be above USD 400 million, including grain revenue, planting inputs, storage, and transportation.

3.2 Market Opportunity

Longping is the largest Chinese seed company based in Changsha, China, it is also a subsidiary of CITIC Group, the largest Chinese conglomerate. Longping owns seed and farming service businesses in countries such as China, Brazil and Southeast Asia. Longping is interested in building value chain of soybean and yellow maize in Tanzania, covering agriculture inputs supply, farm management, grain processing, logistics and seed production in the future. To suffice this market, Longping and the local partner have arranged to execute the expression of interest in phases one by starting with 90,000 metric tonnes per year.

The project farms designated by the Tanzanian government will enter into a legal agreement with Longping, such that all the soybean and yellow maize produced will be sold through Longping Tanzania to Chinese customers facilitated by Longping at a market price.

4. OPERATION AND IMPLEMENTATION

4.1 Operational Strategy

Management: Longping, a fully independent management company, through the support from Tanzanian government (Ministry of Agriculture and Ministry of Trade), will oversee and run the project.

The Model: In this project, each farm will be responsible for an appropriate land area for cultivation and provided with a range of technical services including training, inputs, and extension services to ensure effective growing and harvesting of sufficient crops to meet processors' needs. The model will link different components to operationalize the farm.

The Location: The farm will operate from the Mbeya and Rukwa regions at first, then extend to Iringa, Ruvuma, Songwe, Arusha, Katavi, and Mwanza regions. Mbeya region is located in the southwestern part of Tanzania, sharing its borders with Malawi, Mozambique, and Zambia. The region is well known for agriculture as the main economic activity and contributor to the national food reserve. The area has fertile land to produce food and cash crops, including soybeans and yellow maize. Apart from farming crops, the region is involved with livestock keeping and dairying, which could open a market for product of feeds after processing. Further, the geography and climate of the region have created huge potential in two season crop rotation planting and have attracted interest from actors in the agricultural sector, leading to the establishment of crucial infrastructures needed for large-scale farming. Through initiatives like SACGOT, the government, in partnership with the private sector, has worked to establish hard and soft infrastructures geared towards making farming in the Southern Highlands attractive to local and international investors. This collective effort makes the region the most suitable location for the block farms.

The Service Provider: In this project, Longping will deliver structured services within the supply chain including land preparation, inputs, training, transportation, mechanization, logistics, and management. Further, the service provider, as an independent entity, may be contracted to deliver selected services to the residential SMEs at agreed times and negotiated prices. Longping will provide both soybean and maize seeds, fertilizers, and crop protection products to farms, ensuring real and good quality of inputs for high yield. In addition, Longping will build farm management offices located in 5 major production areas, covering 20,000 hectares per office. Meanwhile, Longping will purchase full set of machines to cover each 3,000 hectares farm, including planter, sprayer, tractor, and harvester, to provide mechanical services to those farms.

The Off-taker: Longping Tanzania takes on the role of the off-taker, committing to buying the crops from the farmers. This commitment will be cemented by a contractual agreement followed by a purchase agreement with the farmer groups. The terms of the purchase, including the volume of the crop and costs involved in the production, are agreed upon by all the parties before commencement.

Production Capacity: The farm size is 10,000 hectares with the capacity to produce 25,000 metric tonnes for a single season’s soybean harvest, and 65,000 metric tonnes for a single season’s yellow maize harvest. The farm will have two growing seasons per year, with soybean and yellow maize rotation, bringing the annual harvest to 90,000 metric tonnes. The area will grow gradually year over year, so the total farming area will reach 100,000 hectares in year 5 with processing and storage facilities installed in each region.

Logistics: The management company will ship the produces to the ports of Tanzania, where the off-taker will take over and facilitate international shipping until the consignment arrives in China.

4.2 SWOT Analysis

The SWOT analysis aids in displaying the internal strengths and weaknesses that the project must address. In addition, it allows us to examine the opportunities presented to the project and the potential threats.

Strength	Weaknesses
<ul style="list-style-type: none"> i. A team with over 25 years of combined experience in the key areas of the business. ii. Ability to produce throughout the year which ensures consistent supply to the buyers. iii. Partnership with reliable off-taker for all the farms produce which also meant to cut distribution costs. 	<ul style="list-style-type: none"> i. Longping Tanzania’s major weakness is lack of local facilitation in obtaining project farm lands in each region.
Opportunities	Threats
<ul style="list-style-type: none"> i. Increased handling capacity by the partner. ii. Growing trends for soybean and yellow maize subsector in local and global markets as people move to plant-based proteins. 	<ul style="list-style-type: none"> i. Competition from the rest of the producers in the world, such as US and South America.

iii.	Production gap that smallholder farmers fail to fill due to inconsistent production caused by climate changes.	
iv.	Availability of “precision farming” technological tools meant to make our farm highly efficient.	

4.3 Implementation Plan

Below is the anticipated project plan for the construction and operationalization of the farms in the Rukwa and Mbeya regions. The construction activities shall commence once funding is released.

SN	Main Task	Resource	Timeline
1.	Consultant work execution planning	Longping and MoA	March 2023
2.	Design work and open lands	Longping	June 2023
3.	Supplying and construction plan	Longping	July-October 2023
4.	Farming activities	Longping	November 2023
5.	Construction work and technical supervision	Longping	October 2023-June 2024
6.	Monitoring, Evaluation and Learning	Longping	-

5. FINANCIAL PLAN

The project total investment will be more than USD 400 million, which Longping will raise as a loan of USD 200 million from the China Development Bank to accelerate the project implementation, with a payback period of 5.4 years. Further details on the financial plan are highlighted below:

5.1 Important Assumptions

- The farm will conduct rotation planting in two seasons.
- Start with 10,000 hectares in Year 1, then grow to 100,000 hectares in Year 5.
- Yield per hectare is considered to grow year by year, considering virgin land needs to be prepared and become mature year over year.
- Sales price is considered conservatively, as the current price is at historical high point.
- Variable costs include all necessary inputs are required in actual farming scenario.
- Depreciation has considered the fixed assets depreciate in 10 years, including machines, office buildings, and processing plant and storage facilities.

Inputs	Soybean	Yellow Maize
Fertilizers	233	233
Agrochemicals	156	156
Seed/ Seedling	141	156
Operations	50	40
Labor	70	44
Maintenance	36	40
Storage	60	70
External Transport	160	160

5.2 Investment and revenue generation

From year 1 to year 5, the expected total investment will be more than USD 400 million, consisted by USD 171.5 million of fixed assets investment, USD 58.5 million of operational cash flow for agricultural inputs in the early stage, and USD 220 million for purchasing grains from local farmers. At year 5, when the planting

farms reach to the maximum area, the total revenue to be generated by those SMEs farms will be around USD 313.6 million with a positive operating profit of USD 103.3 million.

5.3 Payback and IRR Analysis

The estimated payback period is 5.4 years with the IRR at 20.5% for a 10-year loan scenario. The major factors for high return are yield per hectare should increase year over year, also the total planting area should increase.

5.4 Projected Cash Flow and business ratios

The total estimated planting area is 100,000 hectares, with machinery, irrigation, storage & grain processing, and farm management office buildings invested.

Processing & Storage	50,000,000	located in 5 areas, covers 20,000 hectares per center
Irrigation Pivots	60,000,000	each pivot will cover 70 hectares (assuming 400 pivots)
Machines	52,500,000	1 set of machines covers 3,000 hectares (35 sets in total)
Office Buildings	9,000,000	located in 5 areas, covers 20,000 hectares per building
Total Fixed Asset	171,500,000	

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
58,702,600	71,822,940	56,414,558	8,737,169	55,342,430	76,613,641	85,815,474	101,668,642	118,905,449	124,593,472
8.47%	11.28%	19.91%	27.00%	32.95%	37.99%	39.30%	41.75%	44.01%	44.01%
-174.48%	-61.09%	-18.57%	5.48%	17.40%	23.86%	25.68%	28.89%	31.84%	32.02%

Financial Result - 10 years		
NPV (Net Present Value)	R\$	43,288,793
IRR (Internal rate of return)		20.5%
Payback (Years)		5.4

6. CONCLUSION

Grain farming for exportation is, therefore, an income-producing undertaking. In addition, the soybean and yellow maize value chain is driven by the capacity to supply in scale, which is an element currently missing in the Tanzanian market. Therefore, Longping will leverage its own equity along with loans through project financing, which will invest in agricultural inputs, farm operational management service, mechanical equipment, construction of farm infrastructures, and the human capital needed to manage the farm. Our shared drive and capacity to build a sustainable business, experienced industry knowledge, and the supports from both Chinese and Tanzanian governments will give us confidence on meeting the demand and financial obligations to work in line with the investment commitment and business objectives.