Growing Inclusive Markets

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CASE STUDY

Sub-Saharan Africa • Ghana

Integrated Tamale Fruit Company: Organic Mangoes Improving Livelihoods for the Poor

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Sector • Agriculture

Enterprise Class • Local SME

Summary

Integrated Tamale Fruit Company (ITFC) is a private, Limited Liability Company incorporated in 1999 under Ghana Company code of 1963 (Act 179). The Company cultivates certified organic mangoes for both local and export markets. It operates in the Savelugu-Nanton District in the Northern Region of Ghana, an area that has a very high incidence of poverty. ITFC operates an outgrower scheme, started in 2001, which currently includes 1,300 outgrower farmers (a total of 2,000 projected), each having a farm of about 1 acre with 100 mango trees. ITFC provides an interest free loan to the outgrowers exclusively in the form of required inputs and technical services. The farmers start paying for the loan from the sale of mangoes after five years. This arrangement guarantees that ITFC can source a large volume of quality organic mangoes and the low-income farmers can produce mangoes, enabling them to earn a long-term sustainable income for their families. This case examines the key challenges of running the outgrower scheme and the implications of this arrangement for the business of ITFC.

Integrated Tamale Fruit Company: The Nucleus Farm

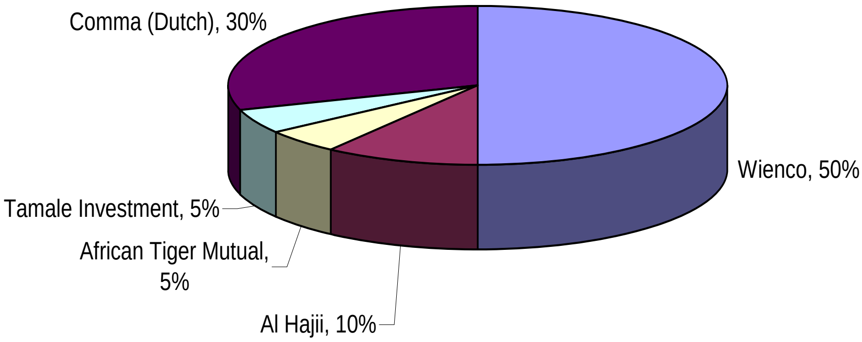
Integrated Tamale Fruit Company (ITFC) is a Ghanaian, private, Limited Liability Company incorporated in 1999 and operating in the Savelugu-Nanton District of the Northern region of Ghana (see map below[1]). Although the company's focus is cultivating certified organic mangoes for exportation, it anticipates that some proportion (about 10 percent to 20 percent) of the mangoes will end up being sold on the local market. ITFC runs a company farm with approximately 250 employees and works with over 1,300 small scale outgrower mango farmers (with a target of 2,000 by end of 2007) by providing technical assistance and extending interest-free loans that are only paid back when the trees begin to bear fruit.

The largest shareholder of ITFC, with 50 percent of shares, is Wienco Ghana Limited, a leading Ghanaian fertilizer and agrochemicals manufacturer. The next largest shareholder, with 30 percent shareholding, is Comma, a Dutch company. The remaining shareholders are Tamale Investments

[1] Source: Kevin McKague and Rebecca Langstaff.

(a collection of local Tamale-area investors) at 5 percent, African Tiger Mutual Fund (a Ghanaian investment company) at 5 percent and Alhaji (the Nanton chief) at 10 percent. This means that about 70 percent of the shareholders are Ghanaian (see Figure 1).

Figure 1: Shareholder Structure of ITFC



Source: ITFC

ITFC has a nucleus farm covering an area of about 160 hectares (with over 38,000 trees), located 10km from the towns of Gushie, at Dipale. ITFC runs the nucleus farm with hired labour and extensive mechanization. It has invested over US$2.5 million in the farm since 1999 and approximately US$1 million in the outgrowers and surrounding community. Operational costs are approximately US$500,000 per year. Since the mangoes begin maturing after three years, the farm is expected to turn a profit around the sixth year of operation. With conservative yield estimates, profits on the nucleus farm and its nursery should rise to around US$1 million per year by the tenth year (2010) of the farm’s existence.

The Need for an Outgrower Scheme

Operating an outgrower scheme alongside the nucleus farm required significant costs in terms of financial and time investments. Financially, ITFC invests an average of about US$7,000 per outgrower (or a total of about US$14 million for the target of 2,000 outgrowers). ITFC management has also dedicated a significant amount of time to convince farmers to adapt to a new crop, which requires considerable upfront commitments (particularly in terms of time and effort). However, it has a long and profitable payback period. Although this adds to the operational costs of ITFC, management views it as an important component of their investments and therefore a prudent business decision. Key factors, which influenced ITFC’s decision to undertake this outgrower business model, include the following:

CORPORATE SOCIAL RESPONSIBILITY

The organic mango outgrower scheme, which was started in 2001, was seen as part of ITFC's corporate social responsibility. ITFC's ultimate goal is to reduce poverty in the surrounding population, which has a high incidence of poverty.

COMMANDING GREATER MARKET POWER

ITFC sees the outgrower scheme as a way of getting the required volumes to enable it to command a higher degree of market power in the organic mango export markets. Market power is directly related to the volume of exports. The 2,000 acres of extra mango production from the outgrower farmers (each farmer cultivates an average of one acre) can provide a maximum output of about 24,000 tons of mangoes. In the less optimistic case of about 50 percent to 70 percent yield,[2] output from the outgrower scheme alone will provide between 12,000 to 17,000 tons of organic mangoes. This is still significant given that in 2001 the total export of mangoes to the EU was about 120,000 tons. This will certainly give ITFC increased power in the organic mango market in Europe, which is the export target market for ITFC.

ACCESSING GREATER PRODUCTIVE CAPACITY

The 155 hectares (about 383 acres) of land for the nucleus farm was acquired at great cost. Acquiring over 2,000 acres of land to grow organic mangoes would have been an extremely difficult proposition. Individual families with customary land titles own most of the land in the area, and in Ghana as a whole. Acquiring over 2,000 acres of land would have required dealing with many individuals, family heads and chiefs. Operating the outgrower scheme helps ITFC access greater productive capacity without needing to purchase additional land at great cost.

REDUCING AVERAGE COST OF OPERATIONS

Various aspects of the operations of ITFC will require some minimum fixed costs (including a packhouse for packing the mangoes for export). The volumes assured by the outgrower scheme help ITFC reach economies of scale and reduce average costs of operations.

The Outgrower Scheme

ITFC embarked on its outgrower scheme in 2001. A key objective of the outgrower is to reduce poverty by providing the local people with a sustainable income-generating venture through organic mango production. The scheme provides an interest free loan to the outgrowers in the form of required inputs and technical services.

ITFC management targets an outgrower population of about 2,000. As of November 2006, the registered outgrower population was 1,327, and each farmer has one acre of land. Each farmer therefore has about 100 mango trees, because the practice is to plant 100 trees per acre. ITFC

[2] Yields could be affected by bush fires, which are quite common in the Northern region, given the long dry season.

A Cluster of Outgrower Farms

ascertained that the land would qualify as organic agriculture because many wild mangoes grow in the area. Also, because of the long dry season, pest control is relatively easy. The farms planted with mango trees are dotted around the villages in the Savelugu-Nanton District including the villages of Dipale, Dinga, Tigla, Tunayilli, Sogo-Tampia, Gushie, Nabogu, Gbanga and Nakpanzo. Each outgrower farm is provided with a plastic water tank, which is filled with water at regular intervals by a tanker truck paid for by ITFC as part of the loan to the farmer. The farmers undertake the watering of the trees themselves and typically use buckets.

OMOA Executives visiting farmers on their farm

In order to ensure local participation in the management of the scheme, the farmers are organized into an association known as the Organic Mango Outgrowers Association (OMOA). This association primarily plays an intermediary role between ITFC and the local farmers; it is also the mouthpiece and advocate for the farmers. The association meets quarterly with farmers and monthly with ITFC.

Although OMOA initially began with funding from ITFC and later from NGOs and other donors such as Cordaid, Senter, and Wienco, the plan is for OMOA to eventually become self-sustaining with contributions from their members.

Contractual Agreement with ITFC

The nature of the contractual arrangement between ITFC and the individual outgrowers is summarized as follows:

- A commitment fee of one bag of maize is required from the outgrower (value of about US$15) to begin the process of working with ITFC.
- ITFC gives the outgrower farmer an interest free loan. This is not a cash loan but comes in the form of farm inputs, such as cutlasses, fertilizer, water tanks for watering the farms, seedlings, and technical assistance.
- ITFC assists farmers in obtaining licenses and certifications, which are a requirement for the organic export markets. One of the key certifying organizations is Soil Association, which is based in the United Kingdom.

- The outgrower has a four-year grace period to begin repaying the value of the loaned inputs. This means the outgrower only starts repaying the loan in the fifth year.
- From the fifth year, the outgrower pays 30 percent of their sales to ITFC until the debt is repaid. The outgrower is expected to the pay the Ghanaian cedi equivalent of the US dollar amount of the loan.
- Until the outgrower finishes repaying the loan, all mangoes must be sold through ITFC. After the outgrower finishes paying the loan, they are free to sell to ITFC or any other buyer they choose.

OMOA Views on the Contract

The executives of the outgrowers association are generally satisfied with the contract they have with ITFC. The two main factors that they cite for their satisfaction all relate to the credit facility that they get from ITFC: the access to the interest free loan and also the repayment terms, which they think, is fair.

Since the start of the outgrower scheme, there have been no major disputes with ITFC. Minor disputes, such as ITFC increasing the costs of water supplied to the outgrowers, have been resolved through discussions with ITFC. OMOA was satisfied with the explanation given by ITFC that the increase in costs was necessitated by the increase in petroleum prices in the country.

In the view of the outgrowers, key challenges that they face include the following:

- *Water* – Currently ITFC only admits outgrowers who are within a certain radius of a water source. This is because ITFC is now moving towards a system where it will pump water from different sources to different clusters of farms.
- *Credit* – Additional credit to hire labour is not provided by ITFC. The view of the outgrowers is that they need additional hands to help them on their farms since not all of them have additional farmhands in their immediate family, and the typical outgrower cannot afford to pay for hired labour.

Cash Flow of the Outgrower

The outgrower incurs a start-up cost of approximately US$2,236, with annual operating costs of about US$944. These costs, which exclude labour costs, are financed by ITFC for the first five years. Beginning in the fifth year, the farmer pays 30 percent of their revenue to ITFC to begin repaying their loan. The mango sales start at around US$150 in the third year and rise to about US$3,000 by the tenth year (see Table 1). This is based on the conservative assumption that only 50 percent of the expected yields are attained for the various years. This also assumes that 40 percent of the outgrowers' produce are exported, 40 percent are sold to a local processor, and 20 percent are sold on the local market. The total loan of about US$6,958 owed to ITFC is expected to be paid off at the end of the fourteenth year, after which, the farmers are expected to earn annual profits of approximately US$2,000. The revenue stream from the mango farm represents a substantial increase in income over that gained from subsistence farming. The average farm income in the Tamale area is about US$300 per year.

Table 1: The ITFC Outgrower Farmer Cash Flow

Year	0	1	2	3	4	5	6	7	8	9	10	…	20
Expenditures	$ 2,236	$ 944	$ 944	$ 944	$ 944	$ 944	$ 944	$ 944	$ 944	$ 944	$ 944		$ 944
Direct Exports	$ -	$ -	$ -	$ 85	$ 283	$ 453	$ 623	$ 907	$ 1,190	$ 1,417	$ 1,700		$ 1,700
Sales to local Processor	$ -	$ -	$ -	$ 55	$ 182	$ 291	$ 401	$ 583	$ 765	$ 911	$ 1,093		$ 1,093
Sales to Local Market	$ -	$ -	$ -	$ 12	$ 40	$ 65	$ 89	$ 130	$ 170	$ 202	$ 243		$ 243
Total Sales	$ -	$ -	$ -	$ 152	$ 506	$ 810	$ 1,113	$ 1,619	$ 2,126	$ 2,530	$ 3,036		$ 3,036
Total debt	$ 2,236	$ 3,165	$ 4,110	$ 5,054	$ 5,998	$ 6,791	$ 6,548	$ 6,214	$ 5,728	$ 5,090	$ 4,331		
Servicing of Debt	$ 15				$ 152	$ 243	$ 334	$ 486	$ 638	$ 759	$ 911		
Cash flow	$ (15)	$ -	$ -	$ 152	$ 354	$ 567	$ (165)	$ 189	$ 544	$ 827	$ 1,181		$ 2,092

Source: ITFC

Key Challenges

CHALLENGES TO STARTING THE OUTGROWER SCHEME

Two key challenges that ITFC encountered when starting the outgrower scheme were changing attitudes about new farming practices and low literacy rates.

Changing attitudes

Farmers in the area have an orientation often quite different from one that is required for commercial farming. Re-orienting farmers to adopt farming practices, conforming to organic standards demanded by the export markets, required significant attitudinal change.

Low literacy rates

Compounding the difficulty in changing attitudes are the low literacy rates in the area. Because of the low literacy rates, educating farmers on best practices required significant efforts due to the few first-hand examples of successful plantations.

CHALLENGES TO SUSTAINING THE BUSINESS MODEL

Some of the main problems that can threaten the sustainability of this nucleus outgrower model are as follows:

Diversion of produce

A critical issue with respect to sustainability is ensuring that diversion of produce is minimal, even after the outgrowers have finished paying off their debt to ITFC. ITFC believes this will be a real challenge because they pay the farmers 20 percent when they collect the fruit from them, and it is only after ITFC has sold the produce that they pay the remaining 80 percent.

The time between collecting the produce from the farmers and making the final payments could take between two to four weeks. There is, therefore, the possibility that an exporter could come and offer ready cash for the outgrowers' mangoes. This could potentially threaten its export volumes and, accordingly, its command over the market.

Repayment of loans

Even though the agreement between ITFC and the outgrower allows ITFC to deduct 30 percent of the proceeds from sales, it is still the case that outgrowers will have to produce mangoes on their farms before they can be sold and the debt repaid. There are always going to be productive and unproductive farmers, which is the case all over the world, and unproductive farmers will have lower yields. In the case where the proportion of unproductive farmers is large, this could affect the repayment of the loan.

Problem Mitigating Measures

Some of the measures taken by ITFC to reduce the probability of the occurrence of some of the challenges discussed above include the following:

- Continuing to work very closely with OMOA to maintain the trust they have built with them over the years.
- Continuing to give farmers very competitive prices for their produce.
- Continuing with farmer education to ensure that a significantly high proportion practice good commercial farming practices.
- Outgrowers who choose to sell their produce to other exporters will be required to pay cash for goods and services that they will require from ITFC in the future.

The Area: Savelugu Nanton District of the Northern Region, Context for Development Impact

LOCATION

A three-year old outgrower farm in the Savelugu Nanton area

Savelugu Nanton is a district in the Northern region of Ghana, with a population of approximately 88,000. The district shares boundaries with the Tolon/Kumbugu District to the west, the Tamale Municipality to the south and the Yendi Ditrict to the south-east.

ECONOMIC ACTIVITY

A typical Village in the Savelugu Nanton Area

Farming remains the main economic activity of the people, engaging about 44 percent of the population. Other economic activities include retail trading (24 percent) and small-scale manufacturing (22 percent). Of those engaged in retail trading and manufacturing, most will also use farming as a secondary economic activity.

Although only about 1.7 percent of the residents are classified as unemployed, over 46 percent are classified as inactive. Thus, the percentage of people not working in this district is about 48 percent.[3] A large proportion of those engaged in trading and manufacturing are considered underemployed. Lack of jobs and seasonal inactivity are the main reasons why people are economically inactive in this district. The savannah climate of the area contributes to this situation because it creates a long season of inactivity in the agriculture sector, and this compels large numbers of young people to migrate south during the dry season to look for work.

INCIDENCE OF POVERTY

The incidence and depth of poverty is higher in Northern Ghana (Savannah region), than it is in the south. In the rural parts of northern Ghana where ITFC is situated, poverty affects whole communities, and the problem is worse during the lean, dry season.

The most recent poverty data shows that the incidence of poverty in the Savelugu-Nanton is about 77 percent. This poverty incidence is based on the 1999 poverty line which is ¢900,000 (or US$363 per year) in 1999 prices. Rural poverty is even higher, at about 91 percent. The situation in the surrounding districts is similar; East Dagomba, East Gonja, and Tolon Kumbugu having incidence levels at about 84 percent, 85 percent and 90 percent, respectively. Tamale, the regional capital, has the least incidence of poverty in the region, at 59 percent.[4]

Poverty in Ghana has been attributed to low output levels, especially in the agricultural sector, which employs about 62 percent of the population. Some of the key characteristics of the poor populations are that they tend to have many young dependants, few assets or safety nets to protect them against external shocks and limited access to markets, credit, safe drinking water, health care and education. The result is that poverty incidence is correlated with high levels of malnutrition, disease, disability, infant mortality and illiteracy rates.

[3] Data obtained from the 2003 Core Welfare Indicator Questionnaire (CWIQ 2003).

[4] The data on the incidence of poverty was obtained from the Growth and Poverty Reduction Strategy, 2006 – 2009 (GPRS II), which is produced by the National Development Planning commission.

Table 2: Selected Socio-Economic Indicators for Savelugu Nanton District

	Savelugu Nanton	Tamale	National
Adult Literacy (% of population)	19.5	46.8	53.7
Youth Literacy	39.3	64.6	69.4
Access to Health facilities	54.4	57.3	57.6
Child stunted growth	37.1	38.3	32.4
Percentage of households with safe water	31	3	
Percentage of households with adequate toilet facility	10	0	
Type of housing unit (Huts)	77.1	25.5	9.2
Type of material used in building (mud)	96.4	44.8	52.1
Thatch roofing	77.6	26.8	14.7
Main source of fuel for cooking (firewood)	91.8	45.0	56.6
Main source of fuel for cooking (charcoal)	8.2	50.1	32.0

Source: 2003 Core Welfare Indicator Questionnaire

SOCIAL INFRASTRUCTURE DEVELOPMENT

Mud huts built with thatch roofs are the main type of housing in the Savelugu Nanton District. About 92 percent of residents in the district use firewood for cooking.

Development Impact

Given the high incidence of poverty and the low levels of economic activity in the area, ITFC offers significant opportunities for human-centred development. These come in the form of income generation opportunities, a significant positive environmental impact and increased human capital, as described below:

SUSTAINABLE INCOME

The ITFC outgrower project has the potential to significantly increase the income of participating farmers. Compared to an estimated average annual income of between US$250 and $300, an outgrower will be earning about US$1,200 by the tenth year of operation, with the amount increasing to about US$2,000 by the fifteenth year and beyond (see Table 1). This income will be in addition to income already generated by other existing food crops. The income from mangoes also tends to come in June and July when farmers are often most in need of money. Employees on the IFTC farm earn salaries of approximately US$650, or double the average income in the area.

POSITIVE ENVIRONMENTAL IMPACT

The Northern region of Ghana is in the Savannah zone and is noted for a high level of deforestation and, consequently, degradation of the environment. Part of the environmental degradation problem stems from the high dependence on traditional farming of mainly perennial crops. The typical practice is to burn the farms each year, exacerbating the degradation problem. The ITFC enterprise not only provides the people of Northern Ghana with a cash crop and income, but it also reinforces government re-forestation programs. The organic production of the mangoes also ensures that the natural environment is protected for future generations.

INCREASED HUMAN CAPITAL

ITFC is supporting a Children To School Project (CTSP), which has the objective of improving the infrastructure of primary schools in the district. The project tackles different aspects of primary education in the area including the following:

- Ensuring that all students get one nutritionally balanced meal a day, consisting of local dishes and one chocolate drink.
- Building housing facilities as an incentive to attract teachers to the area.
- Providing teaching materials and other facilities such as swings, slides, skipping ropes and footballs to create a more friendly educational environment.
- Supporting the Parent Teacher Associations to plant five-acre mango farms for each school in the area; income from these farms will be used to support the CTSP.

Teachers Bungalow under the CTSP

Replicability & Scaling up

CHALLENGES

Some of the key problems associated with replicating and/or scaling up include the following:

- The mangoes require some form of good irrigation and therefore water availability is a crucial requirement for the mango plantation.
- Finding the right soil types is also important for the success of the farms.
- The ITFC model requires significant capital outlay. The initial capital outlay is beyond the majority of what farmers in the Northern region can afford, and the returns from mangoes become significant only after about the sixth year. This means that the nucleus farm will have to find a loan to finance the outgrowers for at least the first five years. As already mentioned, an amount of about US$6,960 is required for each outgrower for the first five years.

POTENTIAL

Both in terms of the horticulture product as well as the ITFC business model, the potential for replication is significant.

In terms of the business model, the nucleus-outgrower scheme is already being expanded into the pineapple industry in Ghana. The ITFC model is therefore a good example that can be further implemented in other agriculture sectors.

ITFC Packhouse under construction

The potential of scaling up the production of mangoes in Northern Ghana is well known. ITFC has written to the Ministry of Agriculture to suggest to the government how it can increase the output of mangoes in Northern Ghana by about 50,000 tons in the next ten years. However, when asked whether ITFC would be willing to go beyond the targeted outgrower population of 2,000 in the short term, the response was that they needed to start paying off part of their loans before they considered further expansion.

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September 2007

Design: Suazion, Inc. (N, USA)

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