

Building the banana chain in Somalia: Support to Agricultural Marketing Services and Access to Markets (SAMSAM) experiences

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Support to Agricultural Marketing Services and Access to Markets (SAMSAM)

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Abstract

Somalia's main agricultural areas are located along its and Juba Rivers providing year round quality irrigation water from the Ethiopian highlands to the fertile riverine soils. Through an ingenious system of barrages and dams over 135,000 ha have access to gravity irrigation. In this area the Somali banana industry was flourishing as the largest exporter in East Africa with 12,000 ha under cultivation employing 120,000 people. During the 1991 civil strife, banana production ceased. However, from 1993 to 1997, the sector was partly revived with exports to Europe and the Middle East, amounting to six refrigerated ships per month loading at the Mogadishu port near the production areas. Due to devastating El-Nino floods and loss of the preferential access to the European markets, exports ceased late 1997, although interest in Somali bananas from Middle East markets remained. Currently bananas are cultivated on 3,000 ha producing which suffices for year-round supply of the local market but does not meet the production and profit potential compared to exports, hence the latter's revival remains high on the agenda. Over the last 5 years, the EC supported rehabilitation of the productive infrastructure in the said agricultural areas but this did not lead to banana export revival. To shine more light on the opportunities and constraints of the Somali banana sector, CEFA implemented the EC funded SAMSAM project which is designed to map and quantify the past and present banana sector, whilst conducting International Business to Business and consumer research in the Middle East. The project applied the value chain approach analyzing chain actors and stakeholders including potential chain leaders. Based on feasibility studies, the project objective is to formulate a chain strategy and organization towards chain design. The paper describes the Somali current and potential banana chain, a SWOT analysis and cooperation scenarios between the Somali banana sector and prospective trade partners abroad.

INTRODUCTION

By creating employment opportunities sweet bananas form a key component in food security and agricultural income for the rural poor in Somalia. Despite a once flourishing banana industry, the fall of Siad Barre in 1991 and the El Niño floods plus the loss of preferential market practices in Europe in 1997, brought the banana export industry to a standstill (EURATA 2003).

In Somalia bananas for export were grown in the Lower Shabelle, Lower Juba and Middle Shabelle region. Currently the main production area for bananas is Lower Shabelle region that before 1991 produced 50% of the exportable produce in Somalia. Lower Shabelle region covers an area of about 40 km along the Shabelle River and an ingenious system of barrages and dams provides irrigation for around 30,000 ha of potentially arable land (EURATA 2003). Presently Lower Shabelle region accounts for almost 90% of the total Somali banana production with an estimated size of 3,000 ha (SWALIM, 2007).

Due to its geographical location the market outreach for Lower Juba bananas is currently limited to Kismayo district, part of Lower Shabelle region and occasionally cross border trade with Kenya. This very limited market compared to former export opportunity brought the once second largest banana production area to a near collapse.

The Somali banana sector once renowned and the largest exporter in East-Africa

became a white spot on the international map. For near 18 years the Somalia banana sector lacked constructive data collection. Different sources indicate varying yields for exportable and domestic market qualities, varying from 7.5 t to 24 t per ha for export and from 3-15 t per ha for the domestic market. (Compendium of Agricultural Statistics, 1988, McDonalds & Partners, 1980, EURATA, 2003)

The lack of understanding about the current banana market, as well as limited knowledge about the potential for Somali bananas in overseas markets were the main reasons to design this study in order to identify a way forward for the Somali banana sector.

MATERIALS AND METHODS

The tools and methodology used in this study are part of the wider value chain concept. When talking about the value chain, different concepts and terms are at stake. A value chain can be defined as “a vertical alliance of enterprises collaborating to achieve a more rewarding position in the market” (Agriculture and Food Council of Alberta. 2002).

“In general the data about primary and market production, market volumes, supply and demand are weak and of very limited use.”(Elfring, W. 2005) In this respect the project aimed to combine market research and value chain development. As a result the value chain approach used can be understood as a program design with results/models depending upon pre-determined variables, which initially have to be identified. The measurement points established during the project provide a feedback on the effectiveness of program intervention and therefore allow for evaluating and readjusting the respective chain activities.

The value chains disadvantage is, that “commonly only qualitative information are available. However it is important to combine with quantitative data.”(Elfring,W. 2005). This idea was incorporated in the research concept. Qualitative and quantitative research were used alongside to complement each other and to retrieve a comprehensive picture of the current banana market and its actual potential.

The main objectives of the SAMSAM project were to identify how to improve the local market and the potential of re-exporting bananas from Somalia.

Local banana study

The local market study target groups comprised banana farmers, traders, consumers, agro-input suppliers and former employees and agents of banana exporting companies. For its information collection, the study methodology comprised desk research, focus group discussions, key informant interviews that were used alongside- and gave input to qualitative, quantitative research, monitoring and field observations. The research set-up aimed to collect data within representative sample sizes in selected key locations. The research tools applied were discussion guides, face-to face pen and paper questionnaires and telephone interviews. The initial output consisted of verbatim reports and databases which analyses was partly done separately and partly fed into quantitative models revealing production technical social and economic parameters, spatial product flows, historic and recent supply and demand including their trend and gaps over time.

The main objective of the local survey was to map the current market, identify constrains, fluctuations, shortcomings, opportunities and to identify potential chain leaders for the export market.

All questionnaires and interview guidelines used were designed by the SAMSAM project whilst trained Somali staff conducted most of the field work and data entry.

Initially 24 banana farmers in Lower Shabelle (20) and Lower Juba (4) were interviewed to collect information on past and current agricultural practices. Following this intake questionnaires that also recorded basic farm and farmer characteristics, farmer panels were established for further monitoring and general cooperation in information provision for the project duration. 21 traders from Mogadishu (5), Baidoa (4), Merca (2), Afgoi (2), Balad (2), Belet-Weyn (2) and Kismayo (2) areas were initially interviewed on their past and present practices including source, market areas, costs structures and the share each area took up over time. After this intake 12 traders residing in Mogadishu (5), Merca (2), Belet-Weyn (2) and Kismayo (3) were selected as panels for further monitoring and general information provision as deemed appropriate. Agrochemical import suppliers were interviewed qualitatively to identify reasons for supply shortages supplies and strongly fluctuating prices. Former banana companies' employees were interviewed to understand the past and current banana industry structure and to incorporate the quantitative data in an overall framework.

Early in the study price and overall supply data was collected in all major towns in south central Somalia assessing price elasticity and price relations between a range of other commodities versus sweet bananas. Consumers households were similar to the other target groups subjected to an intake questionnaire on basic demographics, usage of sweet bananas and general consumption patterns. Therefore consumer panels consumption was recorded on daily basis for one year to assess the influence of supply and price trends on local banana consumption patterns.

After an initial analysis of the local market data the information was shared for verification and discussion with the study target chain actors and to receive feedback for a joint prospective way forward for improvement of the sector.

International banana study

International banana research in Iran and the UAE was carried out using two modules. The first module covered qualitative business-to-business interviews with importers, wholesalers and retailers to understand the respective banana market chain structure. The second module comprised quantitative consumer research defining consumers' perceptions, preferences, consumption and usage to predict the potential market share and prospective best price positioning of Somali bananas. In both cases, Tehran/Iran and Dubai/UAE, renowned research companies, namely Maktoob Research, Feedback, IPSOS (UAE) and JMR (Iran) were contracted.

For the consumer research SAMSAM designed a semi-structured questionnaire. The study consisted of five segments: 1. awareness and usage of different varieties of bananas, 2. usage preferences – ratings of the various bananas for different usages, 3. product testing – ranking of the various bananas on specific attributes, 4. conjoint measurement – brand, price trade-off analysis and 5. segmentation where a number of demographic data collected served to explain preference differences within the respondent sample allowing appropriate marketing strategies to be designed for specific market segments.

Eight banana brands in UAE and eleven in Iran were incorporated in the study, which included a sample of Somali bananas. The bananas used in the study were coded and the order was rotated for each subsequent respondent. This system avoids possible biases and gives all banana brands an equal chance to be tried out at each order. A specific order was designed to rank the various bananas to maintain uniformity in the results. This design also facilitated the ranking process on behalf of the respondents and aided to avoid ambiguous rankings. The respondents (55 in each country) for the survey were recruited by the research companies and invited to come to a central location point. Upon arrival at the venue, the respondents were directed to a trained interviewer where the survey was conducted. The bananas used for the research were bought fresh each day for the study and coded at the venue using a pre-designed code list [1 to 8/11].

The primary objective of the consumer surveys was to measure the satisfaction of Somali bananas relative to competing brands and test the bananas among different consumer segments. Other objectives included respondent awareness, usage and consumption pattern of sweet bananas.

Besides a table book providing descriptive analysis and cross tabulations, the consumer research quantitative data on demographics, awareness, usage, perceptions and preferences were analysed using advanced statistical techniques including factor, cluster, regression and conjoint analysis. Conjoint analysis is a technique that breaks down different attributes to derive the part-worth associated with each level of a product. It is based on the overall preferences of choice alternatives by a group of respondents. In this study conjoint analysis was used to predict the price levels versus market shares of Somali bananas compared to other brands currently available in the target markets.

For the qualitative interviews guidelines and discussion guides were prepared by SAMSAM. The objective of the qualitative research was to (1) to define current market practices and trends, (2) identify market changes over the last 5 years in the respective markets and (3) to scope the potential of new brands in the market in particular for Somali bananas. The target groups comprised 5 importers, wholesalers and retailers in each country under study. Narrative reports and table books were produced by the contracted research companies including a Power Point presentation and thereof further analyzed and reported on by the SAMSAM project.

Lab analyses were conducted to connect physical attributes to perception preferences.

The analysis were comprising colorimetry, Total Soluble Solids (TSS), sugars, pH, fruit volume, peel and pulp weight, fruit density, peel and pulp moisture, fruit diameter and length. In Iran four and UAE six samples were taken from brands available in the market and tested in the lab. Somali bananas were not put into lab analysis in the respective country due to logistical limitations.

RESULTS AND DISCUSSION

The current average sweet banana production levels reach 35t per ha per year (see Table 1). Supply and demand for the sweet banana domestic market are largely in balance (Baars, E., Riediger, A. 2008) and improvement of the Somali banana sector depends on the ability to re-develop the export market. Despite past experiences and current shortcomings, farmers have a high interest in reviving their export market.

The quality of Somali bananas is satisfactory to Middle Eastern countries consumers. The quality of Somali bananas ranks even with brands imported from Central-American countries and receives higher ranking than produce from the Philippines and India. Somalia can provide a cost-beneficial product for the Middle Eastern markets that were under study.

A business man from Somalia conversant with the sector took up the idea of becoming the chain leader for banana export. The technical infrastructure and expertise required is still available in Somalia. The potential exporter cum local chain leader is prepared to raise the current production within 6 months to an initial 1,850t per month exportable quality.

Local market (Baars, E., Riediger, A., IFTIIN 2007/08)

The banana study recent field research indicates a current cost of production averaging USD 670/ha/year. Average production levels are at 35t/year/ha where a new plantation takes about 1 year from planting to maturity and about 2 years of actual production. Picking intervals are timed every 15 days. During the study large variations in yields and cultivation practices were observed, mostly subject to local market forces.

The current farming practices applied reflect the prices available for the local market. However if export quality is to be achieved within six month, practices will have to be adjusted upwards to USD 2,849 per ha and year. It is prospected that for the first year 30% of the produce will reach export quality resulting in a farm-gate break-even price of USD 102 per t of exportable bananas. For the second year up to 50% and finally 70% could be exportable resulting in break-even prices of USD 84 and USD 77 per t consecutively.

The study indicated that among farmers technical know-how is still largely available. Soil and water analysis show high nutritional contents with minimum supplementary fertilizers required to optimize them. Diseases prevalent in the Somalia banana are limited to nematodes, weevils and at times a slight fungal attack by the *Mycosphaerella fijiensis*.

Currently the supply of fertilizers and agrochemicals pose a constraint where irregular supply and high prices hinder the farmers' planning ability. Moreover, the machine park available in the area for land preparation, supplementary pump irrigation and most importantly maintenance of its irrigation systems are in a poor state, costly to operate and inefficient. If not improved, the input supply and machinery related constraints are likely to hinder farmers' ability to secure the quality and quantity of produce essential to the banana export revival.

Production generally fluctuates depending on climatic conditions during Somalia's 4 main seasons. The peak production is generally between October and March, whilst declining to June/July with almost half of the production compared to the highest level and only increasing late September and October (see Figure 1). Today Somali bananas are mainly sold in South Central Somalia, though they are indications that at least 15% of the volume is reaching Somaliland and Puntland (Distance over 800km). Farmers either directly negotiate with urban traders or sell the produce through brokers.

International market/Tehran/Iran

1. Consumer research. (Baars, E., Riediger, A., JMR Iran 2007/08) Consumer research in Iran indicates that 7% of the respondents when assisted are familiar with Somali bananas. This can be explained because Somali bananas in the mid-nineties were exported to Iran. The highest awareness was received by the brands Chiquita (62% spontaneously/ 84% assisted), Dole (11% spontaneously/ 64% assisted) and Del Monte (5% spontaneously/ 30% assisted). Other brands were only recognized with assistance: Century21 (15%), Gracio (15%), Uni

Frutti (11%), Golden Dew (11%), Fruterra (7%), Sterella (6%) and Musa de Ora (2%). Asked whether one of the brands was bought recently, Chiquita was mentioned by 69%, Dole by 24% and Del Monte by 4%.

Asked why people change to buy different brands 25% said it was quality related and 16% it was not available anymore. This indicates a high fluctuation of brands in Iran and also the Iranian market depending on quality produce.

The average per head consumption in the urban area of Tehran is about 250gr per week. Most respondents usually buy bananas in “Fresh fruit and vegetable markets” (47%) and “Green groceries” (38%). The reason for people to buy in “Fresh fruit and vegetable markets” was mainly the low price (49%) and quality of produce (36%), whilst people buying in “Green groceries” main reasons are quality (41%) and the fact it was located near to their home (25%). 67% of the respondents said they eat bananas as fruit whilst 69% also use it in milk and 4% appreciate it in ice cream and fruit salads.

Somali banana receive highest rankings in taste-related testing whilst for overall performance it was ranked third (see fig. 2) after the brands Century 21 and Dole; Chiquita ranks fourth. Weaknesses of the Somali banana are appearance-related characteristics, in particular when presented with peel to the respondents.

The correlation with the main “competitive” brands Chiquita and Dole showed Dole receiving significantly better rankings for appearance-related attributes compared to Somali bananas, while for taste related attributes ranking for Somali bananas was significantly better than Chiquita. Thus results reflecting overall performance were Dole ranks second before Somali bananas and Chiquita ranking fourth below Somali bananas.

The number of attributes used for Somali bananas were reduced to the most significant factors. For the model used, 4 attributes would explain 61% of the rankings given: taste, appearance with peel, appearance without peel and peeling. For the cluster analyses the attributes were reduced to two factors: taste and appearance. For Somali bananas 58% of respondents with similar opinions on Somali bananas can be found in the first cluster (good taste and moderate appearance), 22% in the second (bad taste and good appearance) and 20% in the third cluster (very good taste and moderate appearance), thus emphasising the strength of taste, while necessary to improve on appearance.

The conjoint analysis comprised three brands from Iran, namely Dole, Chiquita and Gracio. The price levels were ranging from the lowest price found in the market (650 Tomans) to the highest retail price (1,100), the third price level was the average of both. The three brands were given the price levels according to their overall performance ranking (e.g. Gracio ranks 5th in overall ranking and lowest of the four brands = 650 Tomans). To predict the potential market share of Somali bananas, the Somali banana samples were subjected to all three price levels in different rounds. Results indicate the highest potential turnover/market share at about 22% at a price level of 1,000 Tomans, which equals about USD 1/kg at retail level (see fig. 5). The outcome of this predictive model indicates that Somali bananas can potentially be sold in a high-price market segment. The respondent-results of the conjoint results were also put in clusters of respondents with similar opinions. The first cluster (31%) gives highest preference to Somali bananas but also indicates high price elasticity, whilst the second cluster (38%) still gives high preference to Somalita with low price elasticity. The third cluster (31%) gives low preference to Somali bananas and also indicates high price elasticity. These results underline the assumption to target a high-price market segment with low price-elasticity in the Iranian market.

Connecting rankings of different brands and physical characteristics of bananas showed correlations between TSS (Total Soluble Solids), Lskin (Brightness of peel) and a/skin (colour ratio between red and yellow of the skin) to Appearance/Shape of the banana. A moderate degree of brightness was positive for the perception of Bananas, whilst a higher ratio of yellowish colour in the peel compared to red is also positively affecting the perception. A higher level of TSS is also positively affecting the appearance perception of bananas. The main component of TSS is sugars, which increases during ripening. High levels of TSS are positively correlated with yellowish colour of the skin, thus increasing positive perception of bananas. Even though high TSS/ sugar levels were increasing positive perception of appearance, they were clearly negatively correlated with taste perception.

Since both taste and appearance are antagonists in terms of sugars and pH-levels, the optimum at the Point of Sale is likely to be between the two extreme levels of taste and appearance related physical characteristics i.e. pH: 5.07>5.05>5.03 and sugar (w/w)

15.9<16.9<17.9.

2. Qualitative research. (JMR-Iran, 2007) Qualitative research shows that the most important attributes are appearance and size, indicating that no spots or brownish colour should appear on the peel. The length of bananas should exceed 20 centimetres, which is on average achieved by 70% of the Ecuador bananas and 30% of the Philippine bananas. These long-size bananas are bought by higher middle class and high class costumers. Bananas shorter than this were mentioned to be bought by lower middle class and low class costumers.

Some of the respondents could remember the Somali bananas and said they had in principal good quality. Main constrains appearing in the quality of Somali bananas were related to inhomogeneous weight of the boxes (12.5 or 18.5) and spots on the peel resulting from poor post-harvest-handling.

Most respondents regarded Chiquita and Del Monte as the best banana quality in the market. Regarding the taste they indicated bananas should be mild sweet, which is influenced by the ripening process but also depends on the variety and origin. The best taste in general is said to be the bananas from Ecuador. The main volume however comes from the Philippines. The main port for banana imports is Boushehr. The favourite brands from Ecuador are Chiquita, Adria, Victoria and Favorita. Besides Ecuador a considerable amount of imports comes from Costa Rica and Colombia.

The imports are dominated by five importers. Mr. Razazian is the largest and accounts for 40% of the imports. He owns a number of ships and cooling facilities for banana ripening in Iran and mainly imports Chiquita, Del Monte, Estrella and Consol. The second largest importer is the Arjomandi brothers. They stand for about 30 % of the Iranian banana market share and import brands from Ecuador e.g. Favorita, Adria and Victoria and managed to monopolize Gracio imports from the Philippines. In addition they also import small shares of Chiquita, Arya, Dana and Banabol from the Philippines and also possess ripening facilities in Iran. Number three are the Rasderesht brothers with about 20 % of Iranian banana market share. Dr. Mehrdad Radsersht is the representative for the Global Dole Company and imports Dole Banana from the Philippines. They used to be stronger in the market but Mr. Razazian took the lead by the emergence of Chiquita taking up market share from Dole and Gracio. Mr Taheri, number four, is considered a new importer and stands for 7 percent of the Iranian banana market share. He is the representative of Uni Frutti, which he imports from the Philippines. Mr. Sa'adati is also considered a new importer and has about 3% of the Iranian banana market share. He imports various brands to Iran among them Dole Amoll from the Philippines and Adria, Favorita, Chiquita and Estrella from South America.

International market/Dubai/UAE

1. Consumer research. (Baars, E., Riediger, A., FeedBack, 2007/08) Consumer research shows that spontaneously 10% of the respondents mention to know Somali bananas. This can be explained as some Somali banana export had been going on in the nineties to Dubai. Most referred to was Chiquita (67%) followed by Dole Sweetio (20%), Raskadali (12%), Dole Normal (10%) and Indian Poovan red (10%). Chiquita (73%), Dole Sweetio (30%) and Raskadali (22%) were said to be bought most recently. Most respondents buy bananas in supermarkets (83%), followed by open markets (13%) and merchants (3%). The main reasons for buying in supermarkets are the location's larger choice of different brands, clean place, good packaging, fresh produce and cooling facilities.

During product testing Somali bananas received very good rankings on all attributes. Apart from shape with peel, Somali bananas rank first in all attributes and overall performance (see fig. 3). Somali bananas are followed by Estrella (ranked second) and Cardava (ranked third). Ranking for taste-related attributes is generally better than appearance for Somali bananas. The factor analysis showed three main factors: taste, usage and appearance. These three factors can explain 57% of the respondents' choices. For cluster analysis taste and appearance were significant to explain consumer differences in opinion. The first cluster (47%) indicates very positive ranking on appearance and moderate good taste, whilst the second cluster (7%) stands for bad taste and appearance. The third cluster (47%) indicates low ranking on appearance and high ranking on taste. Only a small number (7%) of respondents are in Cluster two for Somali bananas indicating 94% of the respondents give positive preference to Somali bananas with 47% highly appreciating both taste and appearance. There is a significant correlation between "age group", "income" and cluster membership. Cluster one relates to older people and low income, cluster two medium income

and age and cluster three high income and comparable young age. Cluster three can be considered high end costumers and of first interest to be targeted, the weakness of cluster three remains however the appearance of the Somali bananas.

The conjoint analysis indicates Somali bananas could be sold at the highest price level (7AED/kg or USD 1.9/kg) with a predicted market share of 49% (see fig. 4) and it gives a good idea about consumer appreciation and achievable price levels as far as quality is concerned. Clusters retrieved from the conjoint analysis indicate very similar opinions on Somali bananas although varying preferences on the other brands. Four out of five clusters thus gave high or highest preference to Somali bananas and indicate low price elasticity. Only cluster 5 (17%) shows a high price elasticity but still high preference for the Somali brand. Consumers in Dubai seemed to be more inclined towards quality of bananas rather than price.

Lab analysis indicates appearance is positively correlated with length of the banana, TSS (Total soluble solids) and fruit volume. Sweetness and taste ranking are correlated with low fruit density, indicating lower sugar/TSS levels.

2. Qualitative research. (IPSOS, 2007) Qualitative research indicates the main bulk of banana produce is coming from the Philippines. Other countries or areas that were scarcely mentioned are Sri Lanka, India, Malaysia and Central America. Importers source directly from the country of origin, wholesaler either source from importers although some are also involved in trading and source from the country of origin. Some of the brands have a single representative in UAE such as Dole and Chicko. Chiquita is considered to be of high quality in terms of shelf life and taste as well as being more expensive than other brands. Dole offers pre-packed and pre-priced packs, suitable for consumers where they only have to pick the pack and get to the cashier. Uni Frutti, Estrella and Del Monte are considered medium, but satisfying quality. Some of the importers buy from big suppliers such as Dole but sell under their own brand name. Other not so popular brands sold in the market are Gracio, Sungold, Cabana and Chicko. The most common variety sold in the market is Cavendish while there is a niche market for other varieties such as Kerala Bananas, Red bananas used for cooking and frying, Eliachi bananas, which are indigenous to Mumbai and small in size, Cardava, Sinora and Tindok. The latter two are liked by migrant workers from India and the Philippines.

The main quality attributes mentioned to be of interest are taste, size, texture, colour and peel. Taste should be medium sweet, the size should be consistent, the texture firm (not to hard, not to soft), yellow colour and the peel clear with no marks.

Banana processed products have a limited market. Some banana crisps are said to be imported from India directly and a small number of restaurants and cafeterias buy bananas to process it into juice or milk shakes.

The best time for sales is Ramadan when demand increases by 30-35%. Demand reduces during summer when people are on holiday and other seasonal fruits such as oranges and mangoes are available.

The common terms of payment are credit sales where for purchase the common payment period was 90 days with exceptions of 30 or 60 days and for sales payment is normally done within 30-60 days. It was mentioned that formal payment guarantees are low and relationships mainly depend on trust and reputation.

Importers buy their bananas unripe and store them in a cool place between 25 and 30 days. Bananas are usually stored at 12°C when ripened adding ethylene gas for 48 hours brought at 14°C and again stored at 16°C. Wholesalers depend on quick turnover and are usually not involved in the ripening process using short term air conditioned stores. The shelf life at retail level varies between 2-3 days. Most supermarkets and some smaller retailers use air conditioned display areas for bananas.

Importers sell to wholesalers or supermarket chains, wholesalers to retailers, hotels, supermarkets, cafeterias, restaurants and catering companies, retailers usually only sell to their walk in customers.

Most of the chain actors interviewed mentioned there has been a high increase of banana consumption (10-15%) due to increases in population. They also agreed prices have gone up varying from the type of chain actors between 5-25%. Techniques and infrastructure have been improved mainly in terms of ripening facilities. It was also mentioned that the variety of brands is high although a lot of brands have disappeared as well. The main reason why brands vanish is lack of good and consistent quality. Packaging methods and size also improved in time and depending on the client, different box sizes are available e.g. 7kg, 13kg boxes with varying numbers of bananas i.e. 7 or 5 dozen per box.

To enter the market it was mentioned that quality should be as good as brands currently in the market and that the quality is consistent. Another issue was the timing of entering the market. It was said the best time to enter the market is Ramadan since consumption during this period is very high and the new brand can position itself. Prices should be competitive and initially lower than products of the same quality. Another issue mentioned is that exporters should have sufficient financial resources as it usually takes one year to get a grid in the market and that there is the risk of produce being rejected due to spoilt quality.

Asked about the quality of Somali bananas it was mentioned that in principal it is very good but they will have to manage to maintain good logistics in terms of quality and consistency. For innovation it was proposed to pre-pack 6 pieces in plastic bags for easy sales.

SWOT analysis

The export of Somali bananas is an opportunity for Somalia to earn foreign currency and increase income among farmers, employees, input suppliers, exporter and importers abroad. The study clearly indicates a high potential of Somali bananas in the Middle Eastern markets.

1. Strength

Somalia build-up decades of expertise in banana growing and exports on a large scale were still going on as recent as 1997. Production systems with about 3,000 ha are already in place whereas most is located within 50-100 km to the country's main seaport Mogadishu. Somali bananas receive high consumer preferences in Middle Eastern markets and their quality is considered to match bananas from Central America. With about 5-6 days by sea, Somalia is close to the Middle East main ports and the overall cost-price structure for Somali bananas shows a favourable profit potential for Middle East exports. Somalia's main agricultural areas are located along its country's Shabelle and Juba Rivers providing year round quality irrigation water from the Ethiopian highlands to the fertile riverine soils. Through an ingenious system of barrages and dams over 135,000 ha have access to gravity irrigation. Somali bananas know relatively few pests and diseases that during past export endeavours were easily controlled.

2. Weaknesses

Generally the banana sector supportive machine park, agro-input supply and road infrastructure are in a poor condition. There is a state of mind within the sector based on the former Somalfruit company production and trade policies providing a highly organized support system for the banana farmers. This former exporter provided logistics, considerable credit facilities, maintained the main productive infrastructure, provided packaging and required inputs, had field officer present in Somalia and due to preferential market access in Europe a virtual market and price guarantee. The beliefs and attitudes within the sector is that such a system can be reproduced easily whilst this may no longer be realistic and even part of such services could be subject to stern negotiations. A possible export chain structure and organization is thus to be carefully initiated whilst Somalia has its own mode of operation not always obvious for outsiders. Moreover, Somalia is currently limited in its access for travel from abroad. Not necessarily a major bottleneck for trade but Somalia to date lacks effective governmental institutions and hence regulations and supportive policies.

3. Opportunities

The potential historically growing area for bananas is about 12,000 ha, whereas about 1,000 ha out of currently 3,000 ha under production can be developed for export quality within six month time. The distance of Somalia from Middle Eastern markets allows a delivery time by sea of 3-6 days. Considering that the Somali banana quality matches with bananas from Central America puts the Somali banana sector in a comparably favourable position. In times where food commodity prices are rising, Somali bananas can attract high end consumers and therefore potentially and once established, be sold at high price levels. Over the last 5 years the EC through various projects provided broad based support to the agricultural sector in Somalia. Besides irrigation system rehabilitation this comprised training, capacity building, environmental impact studies and marketing of which the latter the SAMSAM project forms an example. Although not guaranteed future EC support directly or indirectly for the revival of the Somali banana export could enhance the system to be established. Moreover, the

SAMSAM project in combination with market research results so far introduced and received good report for the value chain approach within the Somali banana sector to the extent that a local chain leader conversant with the industry is willing to invest and organize the chain from within, which also facilitate deal farmers expectations and organizing the value chain within the complex Somali environment.

4.Threats

The threat for the Somali banana sector striving to revive export is the seemingly complex social-cultural environment in which the value chain needs to be developed. This requires its specific step by step approach and understanding of the situation at hand which if not respected can easily stall mobilization and cooperation of the chain actors and stakeholders. Although trade in Somalia is thriving even in the worst political turmoil, a worsening political situation could affect the prospective export of Somali bananas. Security also hampers access of foreign experts if deemed convenient for supervision in for instance quality control. Hence strong local communication and control structures would be required to guide the export process and this remains an area to be developed.

Developing chain strategy and organization

The research results open up the floor for negotiations to revive the export whilst with minimum strain on prospective trade partners overseas.

To take the value chain development further towards a chain strategy and organization, SAMSAM facilitates the meeting of the potential exporter and potential importer(s), while also offering support in formulating a chain strategy.

Objectives to be discussed in formulating a chain strategy comprise responsibilities, inputs and activities, frequency of supply, end market(s), cost sharing, terms of payment, investment requirements, technical expertise, transport, packaging, supervision and monitoring, risks concerning the current political situation, the management structure of the chain, supportive national/international institutions and as well defining the outputs for each chain actor.

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Tables

Table 1. Local and potential export banana production in figures

LOCAL BANANA PRODUCTION IN FIGURES ¹	
Current production level in t/year/ha	35
Local banana price currently in USD/t	58
Current production costs/year/ha	670
Current turnover in USD per ha/year	2049
POTENTIAL EXPORT PRODUCTION IN FIGURES ¹	
Cost improved production/ year/ha	2849
Production volume improved situation t/year/ha	40
Cost in USD per t/ha/year improved production level, exportable 30%	102
Cost in USD per t/ha/year improved production level, exportable 50%	84
Cost in USD per t/ha/year improved production level, exportable 70%	77

¹Figures display averages

Table 2. Results Conjoint analysis: Predicted market share/ price/ turnover for banana brands at different price levels for Somali bananas

IRAN				UAE			
Brand	Predicted market share	Price levels given	Turnover (Price*Market Share)	Brand	Predicted market share	Price levels given	Turnover (Price*Market Share)
Scenario 1 Somali banana given the lowest price level of USD 6.5/kg				Scenario 1 Somali banana given the lowest price level of AED 4/kg			
Somalita	31	6,5	205	Somalita	58	4	232
Dole	21	11	233	Dole	23	5,5	125
Chiquita	21	9	190	Indian Poovan	7	4	26
Gracio	26	6,5	170	Raskadali	13	5,5	71
Scenario 2 Somali banana given the medium price level of USD 9/kg				Scenario 2 Somali banana given the medium price level of AED 5.5/kg			
Somalita	25	9	226	Somalita	54	5,5	299
Dole	23	11	249	Dole	21	5,5	118
Chiquita	19	9	170	Indian Poovan	13	4	54
Gracio	33	6,5	217	Raskadali	11	5,5	60
Scenario 3 Somali banana given the highest price level of USD 11/kg				Scenario 3 Somali banana given the highest price level of AED7/kg			
Somalita	20	11	224	Somalita	49	7	343
Dole	21	11	230	Dole	25	5,5	136
Chiquita	23	9	211	Indian Poovan	13	4	50
Gracio	35	6,5	229	Raskadali	14	5,5	76

Figures

Fig. 1. Turnover traders between April 2006 and March 2007, displaying the average production cycle with peak in January/ February and lowest levels in June/July/August.

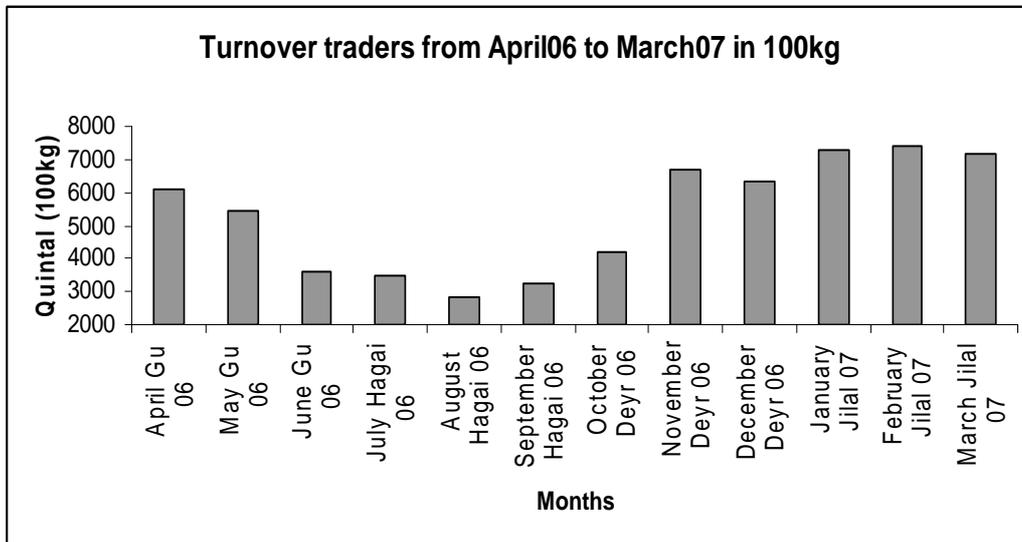


Fig. 2. Ranking product testing in Iran. Consumers voted on a scale from 1(worst)-9(best).

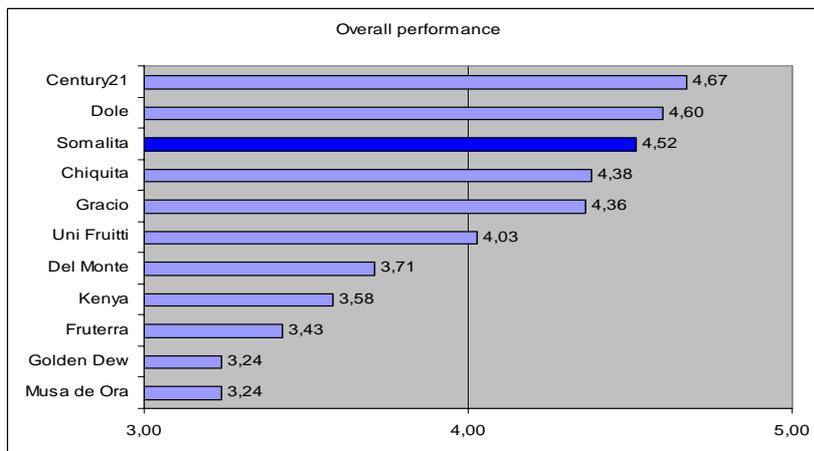


Fig. 3. Ranking product testing in UAE. Consumers voted on a scale from 1(worst)-9(best).

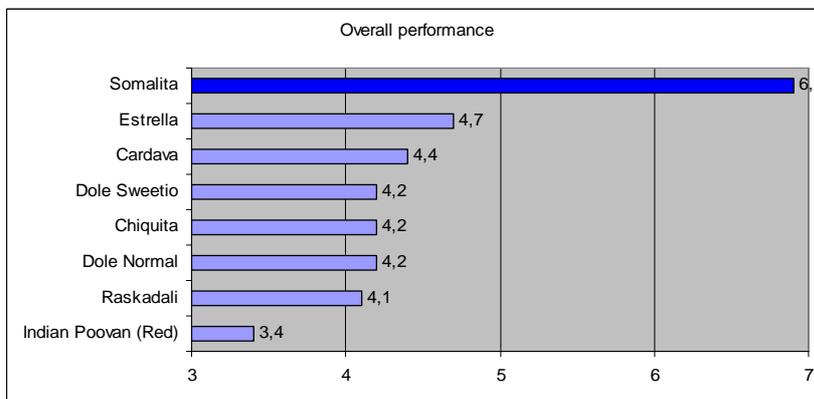


Fig. 4. Conjoint analysis displaying relation between potential market price, market share and turnover in Iran.

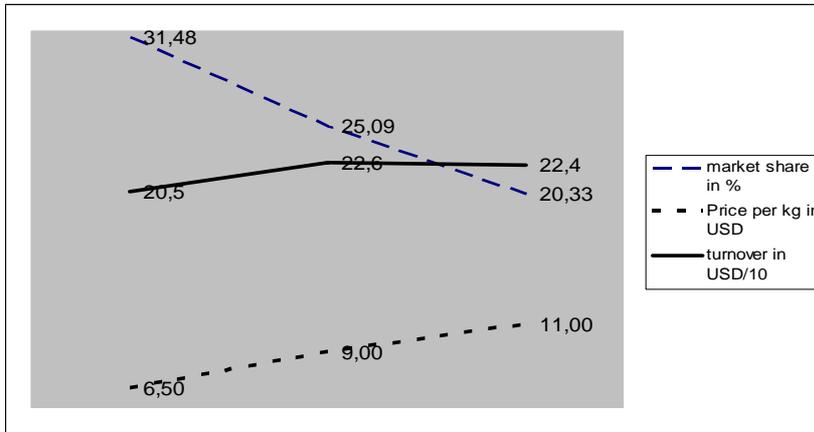


Fig. 5. Conjoint analysis displaying relation between potential market price, market share and turnover in UAE.

