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Summary

This report summarises research into the marketing and regulatory Opportunities and including value chains of a group of three functional foods based traditional African foods: bissap, baobab and jaabi. It constitutes one of six reports that review the market for these traditional foods in certain European and African markets using value chain analysis as part of the European Union funded project the African Food Tradition Revisited by Research (AFTER).

The three products considered here are:

- Bissap, a beverage made from *Hibiscus sabdariffa* in Senegal, using an infusion made from dried calyx;
- Baobab powder from the seed pods of *Adonsonia digitata* used in Senegal as a beverage; and,
- Jaabi, a small cake made from flour which comes from *Zizyphus Mauritania* and is commonly sold in Northern Cameroun.

The purpose of this report is to understand all aspects of the marketing and regulatory constraints and opportunities and including value chains for these food products and to use this information to guide food businesses who may, in future, decide to supply re-engineered African traditional foods made from meat and fish in the EU. This report focuses on the regulatory framework and value chains for AFTER Group 3 products in the European Union. With respect to market access the key findings of the report were that all the functional food products reviewed have market access in the EU. However, maintaining market access against the back-drop of public and private compliance issues will required substantial additional investment.

For Group 3 product there seems to be considerable commercial potential outside the diaspora market in the EU, particularly for baobab and bissap where some market penetration has already occurred. Possible value chains for these products are described, though more detailed research and test marketing will be needed before products are ‘launched’ in the EU. Considerable patent activity was found for bissap and baobab suggesting that freedom to operate might be an issue for new products. Functionality for jaabi found in the patent search offers an exciting opportunity but will require significant investment in testing and compliance. The importance of certification to ‘new’ standards such as ‘sustainability’, ‘organic’ and ‘fair trade’ for this sector was highlighted in the review and needs to be included in any business development plans going forward.

Market mix analysis of AFTER Group 3 suggests a market entry strategy for re-engineered products based on presentation at specialist food fairs. The relatively high prices available to ‘exotic’ and ‘new’ foods was observed along with the importance of stressing both novelty and demonstrating functionality in this ‘early adopting’ and ‘experimental market segment.

SWOT analysis shows that, despite there already being many Baobab and Hibiscus products in the EU market, key market actors think that there is still space for new products using these ingredients.

Market research among a sample of potential retailers of Baobab and Bissap in France, the UK and Portugal shows that both Baobab and Bissap have genuine potential as ingredients for different food and beverage products in all target markets. Jaabi biscuits may take some more consideration. The aspect of food preparation of Jaabi biscuits means that greater investment will be needed in food safety compliance than might be needed for a bulk food ingredient.

Consumer acceptance research gives a very positive response to blind testing of both Baobab and Bissap, with a slightly more encouraging response from France and Portugal than the UK.

1. Introduction

This report considers the factors that influence market access for re-engineered traditional foods from Africa. The products under investigation are “Bissap” (*Hibiscus* sp.), “Buy” or “Baobab” (*Adonsonia digitata*) and “Jaabi” (*Ziziphus Mauritania*) which together form ‘Group 3’ of the range of African food products being investigated as part of the European Union funded project “The African Food Tradition Revisited by Research” (AFTER). The report contributes towards the objective of Work Package 5. The products are described in Table 1.

Table 1: AFTER Group 3 product range

| Product (local name) | Latin name | Raw material | Country |
|-----------------------------|---------------------------|--|----------------|
| Bissap | <i>Hibiscus</i> | Calyx based jam and beverage (syrup and juice) | Senegal |
| Buy (Baobab) | <i>Adonsonia digitata</i> | Seed pulp and ‘nectar’ | Senegal |
| Jaabi | <i>Ziziphus</i> | Seed pulp | Cameroon |

The purpose of this research was to clarify the barriers to market access for this group of re-engineered foods and to suggest possible pathways for businesses to take up the opportunities afforded through market research.

The research framework was two directional involving in-country research (interviews and literature searches) in the producing countries to identify the range of existing products, and, using these product categories, a review of existing market access barriers that might impact on export of these products to the European Union (EU). The focus on the EU is because of an expectation that ‘re-engineered’ AFTER products will partly focus their marketing efforts on these markets. A series of country reports complement this work. The reports scope includes for example, private, public, standards, regulations, rules etc.

The research framework included a review of the re-engineered AFTER products against existing market access rules for the EU, as well as application of a number of analytical tools. These included, working with the research partners to develop marketing plans (e.g., ‘marketing mix’, ‘SWOT Analysis), application of a survey instrument to a sample of key informants in the partner EU countries, and the use of Check-All-That-Apply (CATA) sensory analysis to assess consumer acceptance (Bissap and Baobab only – in Portugal). In addition, a set of promotional fiche have been developed using the research, knowledge of African partners and understanding of the possible EU markets. These fiche give basic product information targeted at possible EU based buyers in key identified markets.

1.1 Report layout and scope

This research is presented in several sections. First we define the product and their re-engineered forms. Then the base case for re-engineered products is considered. This work was done at the beginning of the AFTER research period to guide re-engineering efforts. This is followed by a

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review of the market entry requirements to identify constraints and opportunities for AFTER Group 3 products.

In the later part of AFTER it was agreed that not all products would be re-engineered for the European market. As a result, the scope of the regulatory and marketing research has been limited here to Baobab and Bissap. Much of the information is, however, relevant to Jaabi and therefore useful.

1.2 Methodology

To address the question of market access to the EU for re-engineered fish-based African foods, it was decided to use a range of research techniques and lines of enquiry.

A review of the target EU countries (United Kingdom, France and Portugal) was conducted to identify whether any existing trade in these traditional products was on-going and where there was what could be learned from that trade.

The AFTER Team worked together to develop a series of product SWOT analyses to understand the re-engineering potential of the products better and to highlight possible points of research entry.

A survey instrument was developed (see Annex 1 – survey guide) and applied to a sample of respondents in the target market segments. These respondents were selected purposively for their likely knowledge of the market for re-engineered African food products. A total of 19 interviews were conducted and a series of separate reports prepared (see Annex 2).

A case study approach was used based on guide questions and using a purposive sample of different types of food retailers, wholesalers and market outlets in the three target countries, France, Portugal and the United Kingdom. The case study sample for this group is shown in Table 2.

Table 2: Location and number of case studies

| Product | Country | | | Total |
|---------|---------|----------|----------------|-------|
| | France | Portugal | United Kingdom | |
| Baobab | 3 | 5 | 1 | 9 |
| Bissap | 9 | - | 1 | 10 |
| Jaabi | - | - | - | - |
| Total | 12 | 5 | 2 | 19 |

It was decided to add questions to the Check-All-That-Apply (CATA) analysis being conducted during consumer acceptance studies in the European Union. This analysis strongly enriches the findings from talking to actors in the market by other data sources with views garnered directly from consumers and statistically analysed.

Finally, the market entry requirements for the identified re-engineered products were reviewed and are summarized here.

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Outputs from the research include:

- ‘Market Profiles’ or ‘Fiche’ designed to be ready to give to potential European market actors with an interest to distribute the products (see Annex 3).
- A perspective on market potential from European Consumers based on questions added to individual consumer acceptability tests (baobab and bissap in Portugal).
- 19 specific market studies for products in EU countries based on market interviews with key actors (see Annexes 2).

2. Product Description

The ‘functional food’ group of the AFTER Project consists of three natural products derived from plants. These are:

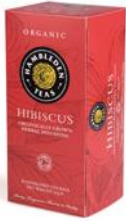

Bissap, a beverage made from *Hibiscus sabdariffa* in Senegal, using an infusion made from dried calyx.

Baobab powder from the seed pods of *Adonsonia digitata* used in Senegal as a beverage.

Jaabi, a small cake made from flour which comes from *Zizyphus Mauritania* and is commonly sold in Northern Cameroon.

Hibiscus products are common in the EU imported from a number of sources, notably Sudan, but also Turkey. The main form of consumption of Hibiscus in the EC is tea, but a number of countries have firms making Hibiscus syrup (figure 1).

Figure 1: Examples of Hibiscus products for sale in the EU




| Segment | Example | Uses | Unique selling propositions | Web example |
|---------|---|--|--------------------------------|---|
| Tea |  | Herbal tea | Blood pressure lowering claims | http://www.hambledenherbs.com/ |
| Syrup |  | Cocktail ingredient Flavour additive (e.g. milk shakes) | | http://www.wildhibiscus.com |

The approval of baobab powder as an approved Novel Food Ingredient by the EC has led to a crop of new baobab offerings on the EU market. Gebauer (2014) reported more than 300 products

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containing baobab in Germany alone. Some examples are given in Figure 2. Key features of these new products are a focus on origin, fair and organic certification and high vitamin C content.

Figure 2: Examples of Baobab products in the EC

| Segment | Example | Uses | Unique selling propositions | Web example |
|---------|--|--------------------|-----------------------------|---|
| Yoghurt |  | Yoghurt ingredient | High vitamin C | http://www.martin-bauer-group.com |
| Pill |  | Food supplement | High anti-oxidants | http://www.minvita.co.uk |
| Snack |  | Cereal bar | Healthy and natural | http://www.wowbab.com/ |

Although *Zizyphus Mauritania*, is a common species in Europe, Jaabi as a flour derived from its fruit is not known. In fact Jaabi is uncommon even in Cameroon outside its production zone. No formal or informal export to the EC is known and despite requests for information among members of the diaspora interviewed in the survey no EU supply was found.

Jaabi was not included in the products targeted for re-engineering in the EU and therefore we do not consider it in detail in this report.

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Bissap and Baobab are described below in Table 3. Detailed marketing ‘fiche’ is attached at Annex 3.

Table 3: summary of key product facets

| Facet | Bissap | Baobab |
|-----------------|--|--|
| Profile | Freeze dried powder made from Hibiscus calyx | Free flowing whitish powder made from seed pods. |
| Properties | Strongly red coloured powder producing a high quality and consistent reconstituted beverage with a distinctive astringent taste. | Whitish dried powder that produces an extremely tart/sharp, high Vitamin C, beverage when reconstituted. |
| Target consumer | Health conscious beverage consumers | Health conscious beverage consumers |
| Place | In the fruit juice and natural beverage sections of general stores. | As an ingredient in a wide range of food products, mostly in the specialist health food sector. |
| Packaging | Bottles as a syrup or vacuum packed as a free flowing powder | Vacuum packed as a free flowing powder |
| Price | Not determined | Not determined |

The key properties/formats of the re-engineered Group 3 functional food products are:

Bissap concentrate extract. Optimised new liquid of powder from vacuum evaporation with a strong red colour, slight astringency and well maintained anti-oxidant properties, made to high food standards with a longer shelf-life and improved packaging.

Baobab fruit powder. Food safe and consistent powder with extended shelf-life and improved packaging.

Jaabi fruit powder. Food safe and consistent flour of Jaabi fruit with a longer shelf-life and better maintenance of key nutritional properties such as anti-oxidants and vitamins A and C.

Photos of the re-engineered products can be found in the Product Profiles at Annex 3.

3. Possible market segments for re-engineered products

This section considers the potential market segments for AFTER Group 3 products using a series of tools including: the market mix, a framework that helps understand the market offer and SWOT analysis, a review of the competitive environment for the products.

This work was a before and after ‘snap-shot’ with the market segment research being conducted before the application of the field survey of potential consumers of the products.

The key actors in the EU diaspora goods markets are shown in Table 4.

Table 4: Typology of actors: diaspora market

| Actor | Role |
|--|---|
| Diaspora goods importer/wholesaler | Brings bulk African food product into the EU and sells to wholesalers |
| Diaspora goods specialist importers | Brings certain specialist African products into EC (e.g. baobab powder) |
| Diaspora restaurant/catering suppliers | Buy catering ingredients from wholesalers and specialist importers and sells to restaurants |
| African restaurants | Buys African ingredients and sells meals to the diaspora and others |
| Diaspora specialist retailers | Buys a range of African foods and sells to the diaspora market |
| On-line diaspora retailers | Buys a range of African foods and sells to the diaspora market |
| Diaspora consumers | Buys African foods |
| Non-diaspora consumers | Buys African foods – often characterized by having lived in Africa and returned to the EC |

Hibiscus sp is produced widely throughout the tropics and sub-tropics and exported to most developed markets in the form of raw calyx of varying standards. Major buyers for on-sale to manufacturers existing in the USA and Germany. Hibiscus is used in a wide range of products including herbal teas, beverages, herbal medicines, syrups and for food colouring. It has become an increasingly popular natural ingredient because of its colour and strong flavor elements. Traditionally, the best quality comes from Sudan and the largest volume from China. The wide range of origins for Hibiscus and the relatively small total global demand means that primary producers tend to be price takers (Plotto, 2004).

Baobab has a long tradition of use in Europe going back to its first arrival in medieval times. More recently, efforts in Senegal and Malawi to supply the EU market for a safe, consistent, free-flowing Baobab powder has resulted in widespread uptake as a novel food ingredient. It can now be found

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in a diverse range of high quality products including jams, yoghurts, drinks, energy bars and alcoholic beverages. Its present across the EU, but particularly popular in France, Germany, Holland and the UK.

Statistics for Baobab flour imports are unavailable, largely because the product is often mis-coded on arrival in the EU (i.e. as a fruit flour). Anecdotal evidence suggests that there are presently about five baobab flour processing plants in Sub-Saharan Africa (Senegal 3, Malawi 1 and Ghana 1), all producing on a fairly small scale.

The key market agents for import into the EU are shown in Table 5.

Table 5: Typology of actors – non-diaspora market

| Actor | Role |
|---------------------------------|--|
| Harvester/Group | Wild harvests and delivers pods to a central processing facility. |
| African Processor | Buys from harvester groups, extracts flour (and oil), sells flour to extraction plant. |
| Flour processor | De-pectinises raw Baobab flour and sells to different food manufacturers |
| Food and beverage manufacturers | Buys flour and makes branded food products |
| Wholesaler/distributer | Buys branded food products and sells to retailers |
| Retailer | Buys branded food and beverage products and sells to consumers |
| Consumers | Buys and consumes. |

The market seems to be for raw Baobab flour or processed flour that has the pectin extracted.

After interviewing a number of traders and retailers in the diaspora segment for these products it was realized that neither are considered specific or unique to African populations other than those within the range of the species. Baobab and Hibiscus sp are used as the basis for a range of beverages and syrups throughout their range in varying degrees.

Baobab

The current EU value chain for baobab consists of sellers of certified baobab flour (currently two, one in South Africa and one in Senegal) selling in bulk to EU based food ingredient suppliers. These companies act as brokers, selling baobab flour as an ingredient to various (largely small scale) food processing companies who make yoghurts, smoothies, cereal bars, and other exotic beverages including baobab gin. The key actors in this value chain are exporters, who bulk up sufficient certified baobab flour to meet the demands of EU small-scale food manufacturers, and food ingredient wholesalers such as Martin Bauer in Germany, who promote the ingredient to manufacturers of exotic foods.

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Table 6: Examples of existing baobab flour products in the EU

| Product | Picture | Retail Price | Website |
|-----------|---|----------------|-------------------|
| Gin |  | £21.40 | whitleyneill.com |
| Powder |  | £20 per 250g | minvita.co.uk |
| Tea |  | \$13 – 36 bags | Republicoftea.com |
| Snack bar |  | €1.59 per 30g | Wowbab.com |

Bissap

The current value chain for Hibiscus syrup in the EU consists of small specialist food manufacturing companies who make a range of branded syrups. They generally source Hibiscus calyx from wholesale ingredient ‘houses’ who in turn buy from wholesalers in source countries who have bulked up containers. These exporters use a network of traders and agents to gather sufficient bulk from individual farmers.

The key markets for specialist flavoured syrups are catering (for sale to restaurants and bars at wholesale prices) and retail directly to consumers – usually as a ‘mixer’ for other beverages.

Jaabi

There is no formal market for specialist ‘cakes’ with functional properties such as Jaabi. Specialist flours with functional properties such as buckwheat and millet tend to sell through specialist health food stores. These stores have their own separate wholesale supply chains.

3.1 Marketing Mix

The marketing mix is a framework for trying to understand the key element of a potential market offer. In this case, each AFTER product is reviewed against a series of criteria. Product defines what possible products are being considered in the analysis. Price looks at the likely sales price of the product compared with possible competitors in this market space. Place suggests where in the market consumers from that market segment might want to buy the product. Promotion suggests how that consumer profile might want to learn about the product. Finally, ‘people’ suggests the likely consumer profile for that product. When launching a new product, it is theorized that a firm has a choice of investing in setting a lower price than the competition, heavily promoting the product, making the product better than the competition or trying to get the product into a particular market place that is attractive to the sort of people interested to consume that product (figure 3).

Price in this analysis is ‘point of sale’ price. A general rule of thumb is that the point of sale price of a product is x2 the wholesale price, which in turn is likely to be 30% higher than the landed export price. These high margins reflect ‘normal’ overhead costs incurred in wholesaling and retailing in the EU. They can be avoided with direct markets methods.

This analysis sets aside the diaspora market. As discussed above, the diaspora market is of quite limited scope and has relatively few barriers to access. Here we focus more on the possibility of re-engineered products.

Figure 3: Marketing mix – Group 3

| | |
|---|--|
| <p><u>Product</u></p> <p>a) Baobab based pre-prepared fruit drink in a bottle</p> <p>b) Baobab based health snack bar</p> <p>c) Bissap syrup in a bottle</p> | <p><u>Price</u></p> <p>a) €3-4/100ml</p> <p>b) Specialist health bars sell for €1-1.5 each</p> <p>c) €6-10/300ml</p> |
| <p><u>Place</u></p> <p>a) Exotic fruit drinks sell in specialist food stores and health focused restaurants</p> <p>b) Health food stores</p> <p>c) Catering wholesalers</p> | <p><u>Promotion</u></p> <p>a) Start at specialist organic and natural trade fairs</p> <p>b) Start at specialist organic and natural trade fairs</p> <p>c) Start at specialist organic and natural trade fairs. Promote directly to bars.</p> |
| <p><u>People</u></p> <p>Exotic functional foods enter the market through early adopters and trend setters who buy from high-end stores (e.g. Harrods in the UK). Recently there has been a trend to promote exotic foods through the European summer festival market which targets the 18-30 age range.</p> | |

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Basic marketing mix analysis shows that there are more promising market possibilities for re-engineered AFTER Group 3 products than might be expected. Key findings are:

- Presentation to specialist food fairs of ready to launch re-engineered AFTER foods is the most important market entry point.
- Relatively high prices are available to the ‘exotic’ food market
- Novelty and function are important in this consumer segment

3.2 SWOT

The purpose of SWOT analysis is to assess products against their likely competitors. The SWOTs chosen are taken from the marketing mix analysis in the previous section. For each group a SWOT for a diaspora product and one for a possible re-engineered product has been done (figure 4 and 5).

Figure 4: Group 3 – diaspora product

| | |
|---|---|
| Strengths | Weaknesses |
| <ul style="list-style-type: none"> • Bissap strongly desired by Senegal diaspora • Baobab widely consumed throughout Africa | <ul style="list-style-type: none"> • Strong flavours – not liked by all |
| Opportunities | Threats |
| <ul style="list-style-type: none"> • Diaspora food shops and restaurants | <ul style="list-style-type: none"> • Many competing exotic beverages available |

Figure 5: Group 3 – exotic beverage

| | |
|--|---|
| Strengths | Weaknesses |
| <ul style="list-style-type: none"> • Novelty • Functionality | <ul style="list-style-type: none"> • Strong flavours limit total market size |
| Opportunities | Threats |
| <ul style="list-style-type: none"> • Novelty much desired in exotic beverage market | <ul style="list-style-type: none"> • Many alternative exotic beverages currently on the market so hard for the consumer to differentiate |

In summary, the SWOT analyses show that there is real potential for developing re-engineered AFTER baobab and bissap products despite considerable evidence of competition. Novelty, functionality and health benefits seem to be the key to successfully finding markets.

4. Market opportunities in target EU countries

This section summarizes the results of the questionnaire interviews and case studies (see Annex 1 and 2) with the aim of highlighting the appropriate market location, format, price and entry strategy for the target products and geographies. A whole range of guide questions were used aimed at understanding how different target market segments might respond to re-engineered products. These findings are summarized by here.

4.1 Baobab

Product

Powdered instant beverage or ready-made drink.

What kind of consumer will buy this product and why?

The market for ‘teas’ and exotic health beverages seems to be mainly women over the age of 45 from the higher income bracket. This consumer group is interested in anti-oxidants for anti-aging, energy and general health.

Baobab is well known among all African diaspora consumers but a processed baobab product is often distrusted as not being ‘original’ and “lacking the sensory characteristics” expected.

What products are in the same marketing space?

In the health drink market segment, Baobab would compete with Ginko Biloba, Goji berry juice (see pictures), Acai, cranberry and pomegranate.

| | |
|--|--|
|  |  |
| <p>Ginko Biloba juice – Schweppes Australia</p> | <p>Goji Berry juice – the Berry company UK</p> |

Several baobab powder products already exist in the EU market segment for beverages.

In Portugal, traders were aware of similar ‘fruit concentrates’ such as ‘Goiabada’, a kind of quince cheese or guava conserve from Brazil.

What format would the consumer like?

Consumers want a glass bottle or high quality sealable container that can be kept in a refrigerator. Most beverages are sold in amounts between 300ml and 1 litre. Information on the packaging is important to this type of consumer, particularly where the product is concentrated and has to be prepared.

Sachets and capsules are the best format for powdered products.

Transparent plastic bottles are best for a liquid product.

How important is shelf-life?

A very long shelf-life is expected for powders and instant drinks. In Portugal, for example, a minimum shelf-life for baobab powder of six months was required.

Place

Delicatessen (not a commonly understood term in Portugal), gourmet, world food and specialist food outlets all show interest in Baobab.

Natural or health food stores are also potential outlets.

High quality fruit drinks sell well in health food stores and increasingly in the pharmacy sector as a complement to other healthcare products.

Products containing Baobab are now becoming mainstreamed in the EU (though not in Portugal), so can be found in some higher end supermarket outlets.

Price

What price would the typical consumer pay?

In Portugal the retail price for 500ml of baobab concentrate could be €2-3. In other markets higher prices are already being achieved – for example Minerva Baobab powder retails in the UK at £14.99 for 250g. In higher end specialist organic and natural food stores in Portugal, Baobab powder sells retail for €7.5 for 125g (with organic certification).

Most respondents expected a relatively slow product turn-over, so a high margin is needed to cover this.

Promotion

There was a feeling in Portugal that people with Brazilian roots would like a baobab product and that promoting to this segment would be successful. Providing samples and explaining the use of the product would be critical for its uptake.

The use of chefs and promotion through bloggers is recommended particularly by gourmet and delicatessen stores.

Strong highlighting of the excellent nutritional benefits of baobab on any packaging would be important for all markets reviewed.

Many respondents pointed to the importance of promoting recipes and use-tips alongside the product.

The importance of a strong internet presence was repeatedly stressed.

4.3 Bissap

Product

What kind of consumer will buy this product and why?

Well presented health drinks tend to sell to older, health conscious women (+45 years) from higher income groups. This group of consumers is very sensitive to presentation and quality. Certification (organic, fair trade) and labeling (health virtues) are also important for this consumer group.

In the diaspora market space the average age of consumer is slightly younger (30-40) but predominately women.

Respondents in the exotic/specialist food sector considered Hibiscus to be a ‘standard’ that they must supply even if the volumes are not very great.

Most agreed that those consumers interested in ‘organic’ produce would also like Hibiscus.

What products are in the same marketing space?

In addition to the competing products mentioned under Baobab, hibiscus competes against existing products from hibiscus available in the market including loose hibiscus flowers and hibiscus syrup.

What format would the consumer like?

A preference for packaging that allows the customer to see the colour of the product was demonstrated.

A juice package should be 250-300ml. A 25g sachet works best for powdered beverages.

In the diaspora segment sachets would be a novelty and appreciated to make the product different, but powders are commonly sold in glass jars.

How important is shelf-life?

A very long shelf-life is expected (up to 2 years).

Place

Respondents expected the re-engineered Bissap to be sold next to, and competing with, existing Hibiscus products.

Some interviewed thought that specialist food shops and delicatessen were the best potential outlet for re-engineered Bissap.

Retailers also thought that placing Bissap next to their existing tea range would work well.

Price

What price would the typical consumer pay?

A price of Euro 5 for 250ml for a concentrated hibiscus drink and Euro 1-1.5 for a 25g sachet of Hibiscus powder.

Promotion

Most respondents said that good packaging and information would be necessary to promote the difference between Bissap in powder form and existing Hibiscus products. Samples and in-store promotion would be needed to highlight the entry of this new product.

Promotion and availability on the web is important. Explaining the story behind the products in women's magazines would be a good way to increase interest among the key target market.

5. Results of additional questions added to the Consumer Acceptability research: Baobab and Bissap

Consumer acceptability blind tasting was conducted in Portugal on Baobab and Bissap with the aim of understanding the response of European consumers to these re-engineered traditional African foods. This work is reports in Deliverable 5.4.2. Some marketing questions were added to this research and the results are reported here.

The questions address to European consumers concerned the frequency of consumption of fruit juice and the reasons for selecting fruit juice over alternative beverages. The overall acceptability of re-engineered Baobab juice among European consumers is reported here as well as the likelihood of consumption of a re-engineered Bissap beverage.

5.1 Method

Baobab powder was produced in Senegal under improved transformation process and possessing optimized microbiological and nutritional qualities, sensory evaluated was conducted in Portugal in June and consumer acceptance tests were conducted in October. The near market consumer acceptance tests for improved Baobab power products, panel of a 75 consumers were recruited considering their interest and availability to participate in the study. At recruitment stage, information about the specific aim of the study was provided.

The Baobab samples for sensory tests were four different samples. Two syrups were obtained from Baobab powder by two different processes: hot dissolution and cold dissolution. The other two samples were syrup produced from Baobab fruit and pulp fruit. Four different samples were presented to the panellists as the following:

- Syrup from Baobab power cold dissolution
- Syrup from Baobab power cold dissolution
- Syrup from Baobab fruit (Esteval)
- Baobab fruit pulp

All samples were diluted in order to become even with a Brix in the range of the sample used for comparison (pear nectar) about 11.1 °B in the testes of sensory evaluation.

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For data analysis an analysis of variance (ANOVA) was performed on sensory and consumer overall liking scores considering assessor and sample as fixed source of variation. Mean ratings and honestly significant differences were calculated using Tukey's test, and were considered significant when $p \leq 0.05$.

Tests were performed on the acceptability of reengineered Hibiscus drinks by Senegalese consumers and were also applied to a sample Europe consumers.

For European study, the sensory quality and acceptability of a hibiscus infusion, prepared freshly from dried calyces according to Senegalese tradition, and two new hibiscus drinks developed by AFTER project – an ultra-vacuum concentrate (UVc) and an improved syrup (REs) – were evaluated by comparable consumer samples in France (n=123), Portugal (n=133) and United Kingdom (n=124), between March and July 2014.

Marketing questions concerning the purchase attitudes were presented to participants in the consumer tests conducted in Portugal.

As with Baobab, consumers were asked about their consumption habits and reasons for consumption as well as the likelihood of purchase.

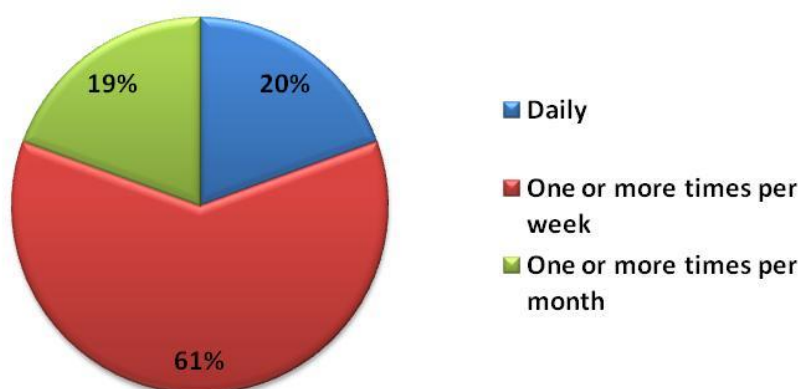
5.2 Results

Consumption habits of fruit juice

In this question (see Figure 6) it was evaluated if participants consumed fruit juices and how often. The conclusion showed that most of the participants were current fruit juice and (61%) consumed fruit juice one or more times per week, (20%) consumed these types of juices daily and (19%) one or more times per month.

Figure 6: Frequency of fruit juice consumption

Consumption of fruit juices



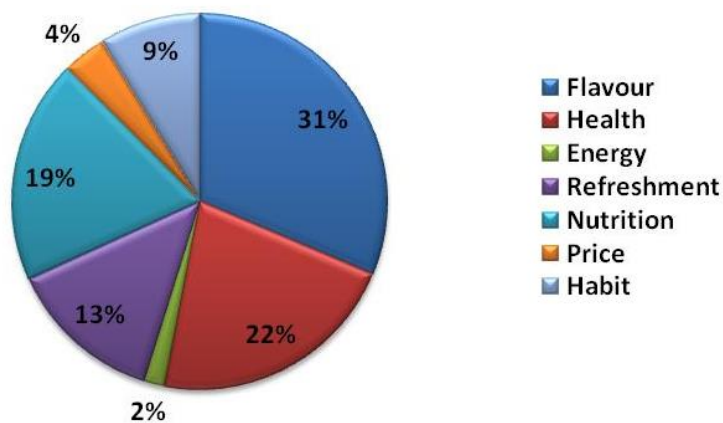
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Reason for consuming fruit juice

Consumers had a broad range of reasons for consuming fruit juice. Flavour was most important (31%), followed by health (22%) and nutrition (19%) (Figure 7). However, refreshment and habit also play a role. Price was considered an important element of the decision to consumer by only 4% of respondent. This suggests that fruit juice consumers are driven by health, nutrition and flavour issues far more than by price.

Figure 7: Reasons for fruit juice consumption

Why consume fruit drinks



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Overall acceptance of Baobab and Bissap fruit juices

As shown in Table 7, for Baobab fruit juices used in this consumer study, it was possible to verify that all fruit juices were in the acceptable range since the average scores were between 5 (neither like nor dislike) and 7 (like moderately).

Table 7: Mean overall acceptability scores for the Baobab juices tested

| Statistic | Most liked | Least liked |
|--------------------------------|------------|-------------|
| Maximum | 9,000 | 9,000 |
| Minimum | 2,000 | 1,000 |
| 1 st Quartile | 7,000 | 7,000 |
| Median | 7,000 | 6,000 |
| 3 rd Quartile | 6,000 | 4,000 |
| Mean | 6,581 | 5,689 |
| Standard deviation (n-1) | 1,365 | 1,887 |
| Standard error of the mean | 0,159 | 0,219 |
| Lower bound on mean (95%) | 6,897 | 6,126 |
| Upper bound on mean (95%) | 6,265 | 5,252 |
| Confidence interval mean (95%) | 0,316 | 0,437 |

Scale and acceptability mean:

- 1 Dislike extremely
- 2 Dislike very much
- 3 Dislike moderately
- 4 Dislike slightly
- 5 Neither like nor dislike
- 6 Like slightly
- 7 Like moderately
- 8 Like very much
- 9 Like extremely

Likelihood of consumption

Evaluation was also done regarding the issue whether participants would consume these beverages if they were available in the market, the results showed (Table 8) that all fruit juices were in the acceptable range since the average scores were between 4 (fair possibility) and 5 (fair good possibility).

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Table 8: Mean overall acceptability scores for Baobab juices tested if product become available in the market place

| Statistic | Most liked | Least liked |
|--------------------------------|------------|-------------|
| Maximum | 0,000 | 0,000 |
| Minimum | 10,000 | 10,000 |
| 1 st Quartile | 3,000 | 2,000 |
| Median | 5,000 | 4,000 |
| 3 rd Quartile | 8,000 | 7,000 |
| Mean | 5,243 | 4,203 |
| Standard deviation (n-1) | 2,852 | 2,848 |
| Standard error of the mean | 0,331 | 0,331 |
| Lower bound on mean (95%) | 4,583 | 3,543 |
| Upper bound on mean (95%) | 5,904 | 4,862 |
| Confidence interval mean (95%) | 0,661 | 0,660 |

Scale and acceptability mean:

- 0 No chance
- 1 Very slight possibility
- 2 Slight possibility
- 3 Some possibility
- 4 Fair possibility
- 5 Fairly good possibility
- 6 Good possibility
- 7 Probable
- 8 Very probable
- 9 Almost sure
- 10 Certain

For four of Baobab fruit juices evaluated in blind tested consumers in general did not recognize the drink as an unknown juice fruit, most of consumers identified the juices as a pear juice drink or fruit mixture.

Willingness to consume Bissap

Similar sensory characterizations and preference profiles were obtained across countries, although French participants were generally the most appreciative of hibiscus drinks.

The most frequently selected CATA descriptors were fruity and red fruits, strongly suggesting that participants misidentified the drink as a red fruits beverage. Oppositely, tisane and new were among the less frequently chosen terms, suggesting consumers in general did not recognize the drink as an extract of an unknown plant.

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The willingness to consume the drinks varied across countries according to consumers preference patterns as shown in figures 8 to 10.

Figure 8: Consumption probability Portugal (by cluster)

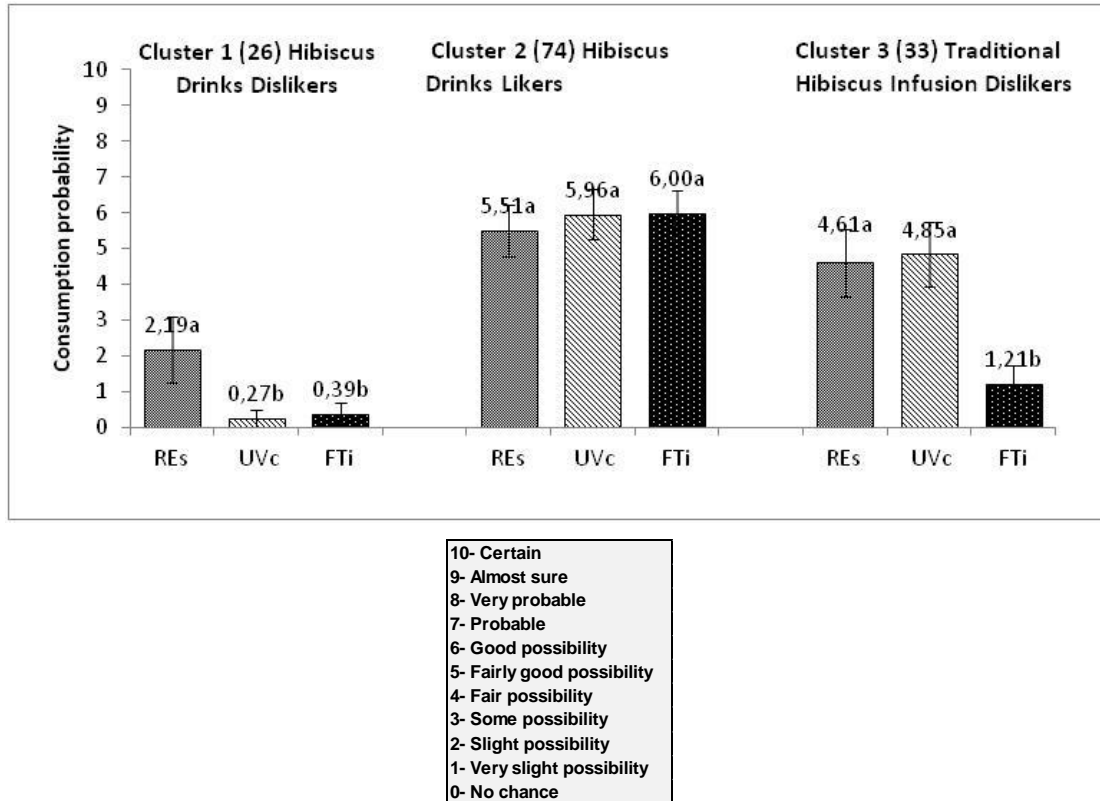


Figure 9: Consumption probability France (by cluster)

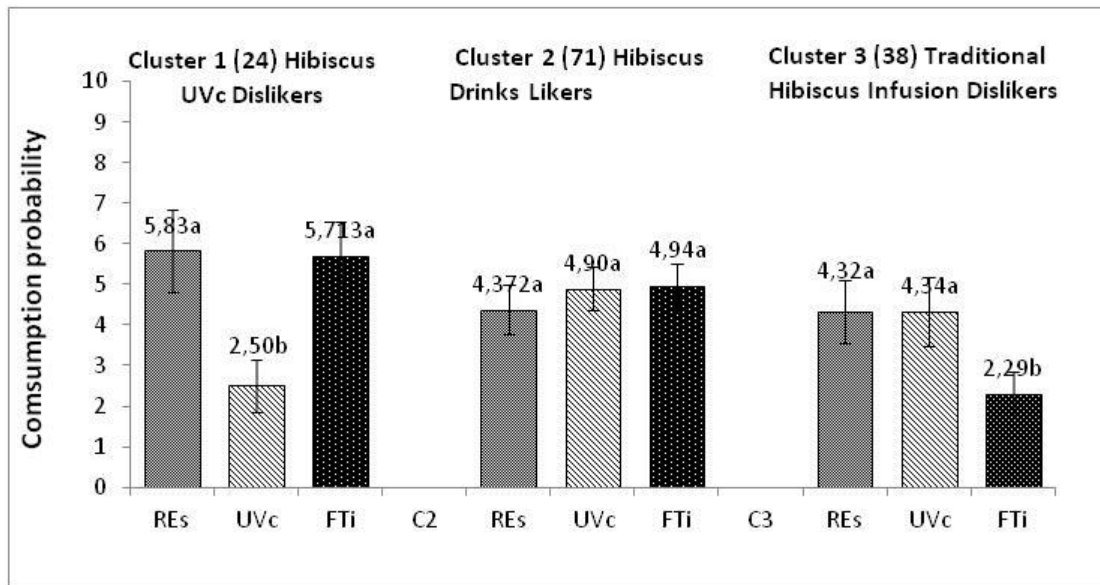
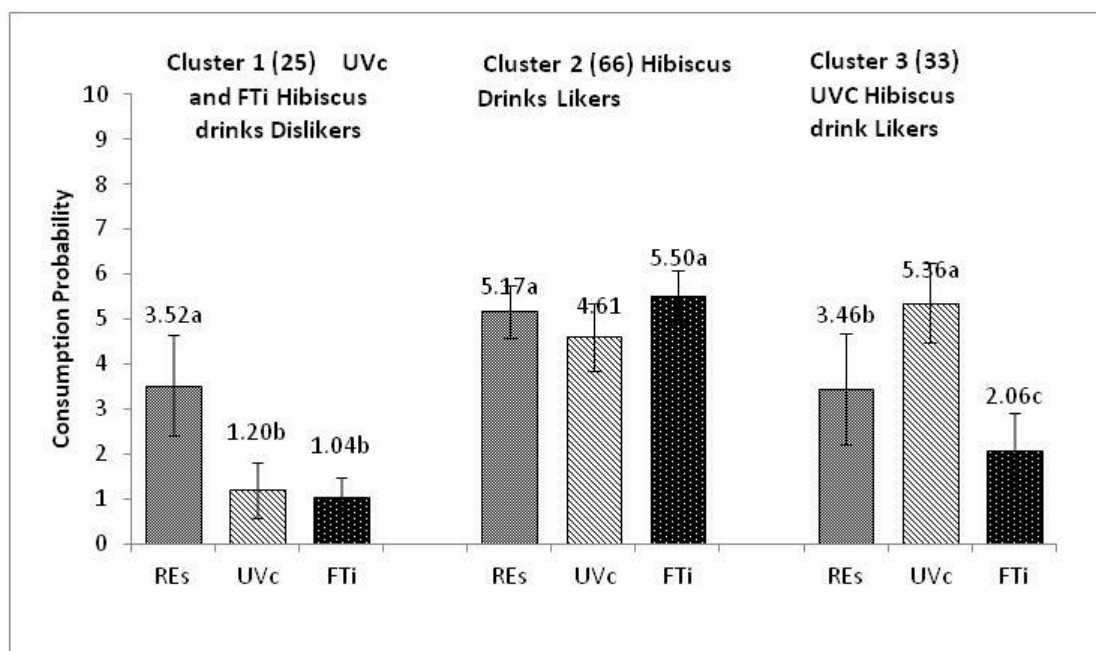


Figure 10: Consumption probability UK (by cluster)



6. Market entry requirements

This section considers the regulatory requirements for the AFTER meat and fish based re-engineered products proposed for the EU market.

6.1 The regulatory landscape

The food safety of the European citizen is the paramount objective of both public and private regulation and standard setting in the EU. AFTER products have to comply with these existing market norms. Products have to be safe for European consumers and this has to be actively demonstrated (e.g., the onus is on the producer to prove that food is safe to eat and to maintain that safety in the chain).

The degree to which a particular market is regulated depends on a number of factors including: the nature of the product itself, the place where it is produced and the type of end market use that it or its derivatives might have.

Some retailers in the EU applied higher, more stringent, private standards¹.

Having said this, the EU market is huge (the food manufacturing industry has a turnover of Euro 917 billion, agricultural exports are over Euro 90 billion and agricultural imports even higher than this) and potentially lucrative. Many thousands of African food businesses small and large successfully comply with the regulations and sell profitably to a range of different sectors in the EU. The import of fresh fruit and vegetables is a good example. However, examples of African processed foods being imported to the EU outside the diaspora market are far less common. The

¹ See for example www.globalgap.org

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section that follows highlights the regulatory and compliance hurdles that need to be overcome by food businesses in third countries aiming to export re-engineered AFTER products to the EU.

6.2 EU market rules

This section is sub-divided into two main areas: public standards and private standards. Public standards are often mandatory whereas private standards are voluntary, and therefore not subject to the disciplines of the WTO. Finally, consideration is given to marketing ‘norms’ in the EU.

6.2.1 Public standards and the EU

To import products for human consumption into the EU the importer must comply with regulations on hygiene, safety, labelling and food composition. In addition you have to ensure that all the packaging complies with EU rules on packaging. There are special rules for products of animal origin (POAO) and specialist foods (e.g. functional foods, herbal remedies, food supplements)².

The key laws, regulations and standards that might impact on market access for AFTER Group 3 products in the EU are:

a) Environmental safety – sanitary and phytosanitary regulations

To prevent entry and spread of disease and pests into the EU importers have to comply with regulations to manage the associated risks. For the EU this means complying with the plant and animal health regulations and demonstrating this by issuance of a sanitary or phytosanitary certificate from the national Competent Authority.

See: <https://www.ippc.int/IPPEn/nppo.jsp> and http://europa.eu.int/eur-lex/en/consleg/pdf/2000/en_2000L0029_do_001.pdf

You can find the content of a typical phytosanitary certificate on the IPPC website (www.ippc.org)

b) EU General Food Law (EC 178/2002)

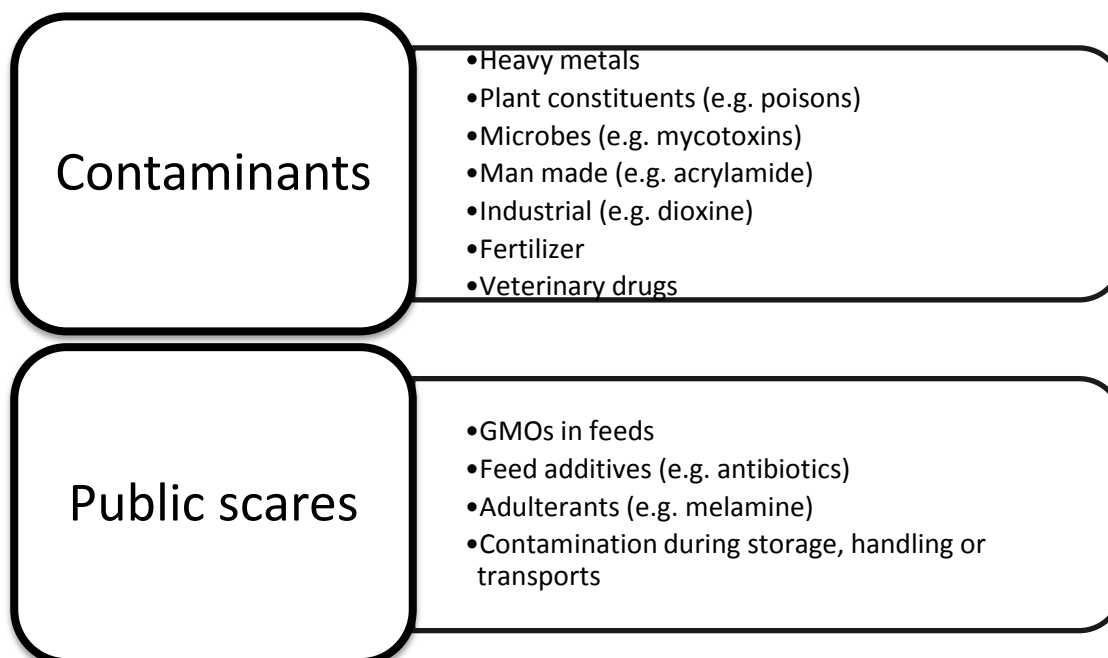
The general principles of the EU Food Law are that food must be proven **safe** for human consumption from the point of production to the point of consumption (“farm to fork”). The **labeling** and presentation of the food must not mislead the consumer. The food must be fully **traceable** from point of production, and, any food found to be unsafe must have a system for its **recall**.

Food can also be rejected if it is unfit. This means that it is unacceptable due to contamination, presence of foreign objects, odour, putrefaction or decomposition.

EC regulations focus on risks to the consumer. There are two main sources of these risks: contaminants entering the food chain and, even more powerfully, public concerns about safe food resulting from scares and outbreaks. These are summarized in Figure 11.

² The EU and UK Food Standards Agency websites have clear advice on how to comply

Figure 11: Drivers of EC Regulations



Source: Author

Issues to note:

- This applies to one-off sales and samples
- It applies to all scale of businesses (small and large)
- Problems with part of the batch apply to the whole shipment

Traceability under the EU General Food Law

- All food (and animal) suppliers must be identified
- All business to which products are supplied have to be identified
- All this information has to be produced to the Competent Authority on demand
- Nb: This does not include veterinary medicines, pesticides, fertilisers or seed (unless the seed is to be consumed directly)
- It has to be possible to recall all the product if necessary
- As a minimum, traceability records should include the address of the customer or supplier, nature and quantity of products, and the date of the transaction and delivery
- Also record the batch number or durability indication (where applicable).
- It is the information (records) that matters not the traceability system as such.
- Within a business cross-traceability is not required. So how batches are split and combined within the business to create the final product is not necessary.

Nb: See (UK 2007), “Guidance Notes for Food Business Operators on Food Safety, Traceability, Product Withdrawal and Recall” at <http://www.food.gov.uk>

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c) Pesticide residues

Plants treated with pesticides for their protection from pest and plant diseases before and after harvest and subsequently included in food or feed must comply with Maximum Residue Levels (MRLs) set the EC. The relevant harmonized regulation is EC 396/2005. Only approved treatments can be used and updated list is on the Europa website.

Most small scale production related to AFTER products will be free of agricultural chemicals because small scale farmers cannot afford to use them. Nevertheless, the presence of chemical on farms or in households nearby and the unregulated sale of non-compliant chemicals are common (table 9).

The onus to prove the products comply with EU MRLs is on the importer.

Table 9: MRL risk and AFTER products

| Product (local name) | Risk |
|----------------------|--|
| Bissap | Harvest from fields with inter-crops subject to agricultural chemical use. |
| Buy (Baobab) | Storage of product near to household subject to anti-malarial spraying programmes. Re-use of bags or sacks |
| Jaabi | |

Source: Author

d) Packaging (EC 1935/2004)

Three types of packaging are needed to ship food: transport packaging (the outer layer for protection during handling), outer packaging (the transit protection such as a box) and the sales packaging which surrounds the goods.

Aluminum is safe except for highly acid foods. Plastics have a limit of 10mg per square decimeter of plastic surface area or kg of food migration. Cellulose, ceramics, seals, coatings, and adhesives are also regulated.

Packaging must not allow constituents to migrate into the food in quantities that could harm human health.

Packaging is potentially an important part of AFTER re-engineering. The EC regulation will need to be taken into account when packaging is chosen if export to the EC is planned.

e) Labeling (Directive 2000/13/EC)

The EU requires certain information on food labels for pre-packed food (food in packaging and/or ready to sell to the consumer)

- A name
- A list of ingredients
- Allergen information
- If GMOs are included
- If irradiation has occurred
- The amount of certain ingredients
- A 'best before' or 'use by' date
- Conditions for storage and use (cooking instructions)
- Name and address of the manufacturer, packer or EC seller

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Labeling must be clear and indelible and in the language of the country where the product is sold.

Nutrition information in voluntary unless certain claims are made (such as ‘low fat)

There are specific labeling rules for some AFTER products: fruit juice, meat products, fish and jam. These specific rules can be found at: http://ec.europa.eu/food/food/labellingnutrition/foodlabelling/comm_legisl_en.htm

f) High risk foods (EC 669/2009)

Certain products are considered to be a high risk to the public because of recent high profile food scares in the EC. These are products which might contain dangerous substances such as aflatoxin or salmonella. These products can only be imported through Designated Points of Entry (DPEs).

There is no particular evidence that any AFTER products fall into this category as yet.

g) Novel foods

Originally introduced to protect EU consumers from unregulated import of the product of biotechnology (e.g. Genetically Modified Organisms), the Novel Foods Regulation (EC 258/97) also ‘captured’ some traditional foods such as baobab and so has been the subject of a number of revisions. Companies wanting to import foods and food ingredients that have not previously been in common safe use within the EU must apply for authorization and demonstrate safety through either science or by history of safe use. Application requires a professional dossier to be compiled. This can cost up to Euro 100,000 per application.

The following companies have authorization to import baobab fruit pulp under the Novel Food Regulation:

Baobab Fruit Company S.a.r.l. Via A. Mondadori 15

I – 46025 Poggio Rusco (MN)

Mighty Baobab Ltd. Bostall Lodge

Bostall Heath London SE 2 0AT United Kingdom

Fruit'Art SAS Residence Mont Joli

F – 14600 Equemauville

BAOBAB de saveurs Médina Fall

BP 547 Thiés Senegal

Healey Group Ireland Ltd. HCL House, Second Avenue Cookstown Industrial Estate, Tallaght, Dublin 24 Ireland

Jaabi (Ziziphus) is commonly grown and has a history of EC use and so is not bound by the regulation.

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h) Aflatoxin limits (EC 1152/2009 and 165/2010)

Aflatoxin is a highly carcinogenic substance secreted by a mold. It is one of a number of dangerous mycotoxin that can be found in foods. Its presence in very small quantities is potentially lethal to human and animal health and therefore it is not tolerated in the EU. Aflatoxin limits and sampling arrangements depend on the product.

EU general aflatoxin limits for cereals are:

B1 2ppb

B1 x B2 4ppb

Products from humid climates that are not dried quickly after harvest or which are stored poorly have a greater chance of aflatoxin contamination. Products that which are in contact with soil also have a greater susceptibility to aflatoxin contamination (e.g. groundnuts).

Exporters have to demonstrate absence of aflatoxin in their products before shipment. If the shipment arrives in the EU above the level, the exporter will have to pay for its destruction (table 10).

Table 10: Assessment of aflatoxin risk of AFTER products

| AFTER Product | Ingredients | Discussion | Aflatoxin risk (low to high) |
|----------------------|--------------------|---------------------------------|-------------------------------------|
| Baobab | Fruit | Emerges from seed already dried | Very low |
| Bissap | Calyx | Air dried | Medium |
| Jaabi | Fruit | Air dried | Medium |

Source: Authors opinion

Aflatoxin (and other mycotoxins) are a concern for AFTER and will have to be controlled in finished products.

i) Other contaminants

There are numerous other EU Directive relating to a wide range of potential food contaminants. None of these are obviously relevant to AFTER products assuming that general food hygiene and handling practices are applied.

j) Traditional Herbal Remedy Directive and Dietary Supplements (2004/24/EC)

In order to sell traditional herbal remedies in the EU they have to be proven as safe. There are two routes for this: by showing evidence of common use in the EU before 30th April 2004; and, provision of scientific proof of safety and efficacy through testing. In both cases an elaborate dossier has to be prepared and approved. For a new product this can be expensive (from Euro 100,000 up).

For new dietary supplements approval must be sought for food supplements and food additives. This would apply to new pro-biotics for example especially if functional claims are to be made.

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Substances that were available in the EC before the 12 July 2004 are accepted. All other substances have to apply to be included in the safe list by provision of suitable scientific dossier. Pre-biotics, probiotics, yeast extracts botanical extracts and various other substances (such as glucosamine) fall into this category.

Totally new food supplements, functional foods or remedies from AFTER products will have to be approved under these directives if functional claims are to be made.

6.2.2 Private standards

Private standards are those set by the buyer. They are not mandatory, but in some cases, these standards have become so pervasive in the EU that sales outside the standard can be difficult. Companies and individuals can set any standard they want for private transactions – the seller is not obliged to sell at these standards.

With a great deal of value now concentrated in brand names of foods and supermarkets, companies set internal standards in order to protect this investment from the risk of a food scare. In recent years, reputations built up over many years have been lost as a result of contaminated ingredients. Firms manage risk by setting standards, often higher than public standards, for their suppliers. To prevent high standards becoming a source of inter-firm competition, some sectors have combined to share private standards, notably the European food retail sector through EurepGap and now GlobalGap standards.

a) GlobalGap

GlobalGap is a private sector body, owned and operated by a consortium of global food retailers, that sets and certifies voluntary standards for a range of food including fresh food, grains, fish and meat. The standards are commonly higher than national (e.g. EU standards) and more comprehensive in that they include social, animal welfare and environmental elements not required by WTO member states. The standards are voluntary and therefore not subject to scientific scrutiny. The purpose of GlobalGap is to manage the risk to food retailers of food contamination and scares by applying standards. The cost of compliance is the responsibility of the producer. For small-scale producers, compliance with GlobalGap (including inspection and certification by a third party agent annually) usually renders trade uneconomic. This is particularly the case for meat products where all the feed and the transport system also have to comply.

It is worth re-iterating that these standards are voluntary. When supermarkets want to buy a product they can easily waive the GlobalGap standard at their discretion.

If AFTER products are to be sold into a mass market in the EU, GlobalGap standards will apply. At the moment this does not seem likely, but it may become applicable after re-engineering.

b) EU marketing norms

EU buyers have certain expectations of the products they buy. An important issue is one of trust and meeting normal marketing practices. These are rather hard to define and highly variable. An example might be the use of recycled material (newspapers, previously used boxes) can be usual in some countries, but is unexpected and unacceptable to most EU buyers. What the buyer finds in the consignment is considered a general reflection of the cleanliness of the sellers premises, so any unexplained extraneous material is a source of concern.

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Critically, promises in terms of quantities, qualities and timing of shipment are considered binding. Communication with the buyer is expected if any promise is to be broken.

Most EU importers set parameters for the products that they buy and these can vary substantially (different companies have different needs). Usually these are provided by the importer and the seller is expected to comply. An example of such a product standard for Hibiscus calyx is given below in table 11:

Table 11: Import norms for dried H sabdariffa

| Guidelines | Specifications |
|--|---|
| Description | Hibiscus sabdariffa |
| Packaging | Item must be packed in 50 lb. poly (or less) lined boxes or multi-walled sacks (adequately protecting product for shipment) with clear markings indicating the item contained. Shipment must be accompanied by packing list clearly indicating the consignment, weight and country of origin. |
| Raw ingredient sample: | |
| (a) Visual | Purple-red color. |
| (b) Aroma | Floral, berry-like aroma. Free from objectionable off odors. |
| (c) Texture | Lump free, free flowing particles |
| Prepared sample: | |
| (a) Visual | (a) Visual |
| (b) Aroma | Slight berry aroma. |
| (c) Flavor | A well balanced, tart and astringent flavor. Some cranberry notes as well as a slight drying effect. Not excessively tart, acidic or bitter. Should be free of off- flavors and other undesirable spice/botanical notes. |
| <i>Test Units:</i> | <i>Specifications</i> |
| (a) Free Flow Density | G/CC Minimum 0.45, Maximum 0.60 |
| (b) Moisture | 12% |
| (c) Total Ash | 10% |
| (d) Acid Insoluble Ash | 1.50% |
| (e) Sieve Analysis | Thru US#20 95.0% |
| 5 Min Rotate | Thru US#60 5.0% |
| (f) Insect Fragments each | 400 |
| (g) Whole Insects (field/storage) each | 25/5 |

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| | |
|--------------------------|---|
| (h) Salmonella | Negative |
| (i) Coliform | 2 of 5 over 10 CFU, 0 of 5 over 100 CFU |
| (j) E. coli (MPN) | 2 of 5 over 3 CFU, 0 of 5 over 20 CFU |
| (k) E. coli (Film) | 0 of 5 over 10 CFU |
| (l) S. Aureus | 1 of 5 over 100 CFU, 0 of 5 over 1000 CFU |
| (m) Standard Plate Count | 0 of 5 over 1,000,000 CFU |
| (n) Yeast/Mold | 0 of 5 over 10,000 CFU |

Source: (Plotto 2004)

Nb: this example is for a US buyer

For new or re-engineered products these terms or standards will have to be negotiated between the seller and buyer.

c) Other issues – intellectual property

A cursory review of the patent activity on AFTER products is shown Table 12 below.

Table 12: AFTER Patent Activity – Group 3

| Product | No. of patents on WIPO | Example |
|----------------|-------------------------------|----------------|
| Baobab | 82 | Cosmetic |
| Bissap | 1290 | Immune booster |
| Jaabi | 105 | Immune booster |

Source: WIPO

The substantial patent activity for Bissap, Jaabi, Baobab suggests that these products have properties which are commercially interesting. Re-engineering will have to take into account existing intellectual property rights.

6.3 Summary of the regulatory challenges – Group 3

Assuming compliance with basic food safety parameters including evidence of freedom from contaminants, there is no reason why AFTER Group 3 products cannot access the EC market.

Where re-engineered products are manufactured within the EU, compliance with the regulations will be no different from all other foods.

Target markets for Baobab and Bissap are sensitive to food quality and will expect a high level of compliance with food safety parameters.

6.5. The possibilities for compliance based re-engineering

Increasingly, consumers seek reassurance of certain product qualities. In most cases (but not all) they are prepared to pay a premium price for these so-called ‘embedded’ qualities. A brief review is provided here.

6.5.1 Areas of certification

There are many potential areas of certification that could be used for re-engineering. Some are considered here.

a) Fair trade

There has been a huge increase in interest by EU consumers in assuring that the producers of foods get paid a fair and reasonable proportion of the final on-shelf retail price for their products. A small number of consumers will only buy products with a fair trade label. The movement is stronger in some EU countries than others. For example, the fair trade movement has more market penetration in Germany than, say, Spain.

Fair trade certification requires third party inspection and may mean higher production costs. Premiums are usually in the 5-10% range. In order to have a fair trade certificate the Fair Trade Labelling Organisation (FLO)³ has to have a fair trade standard available. For AFTER products there are fair trade standards for Hibiscus calyx and for Baobab powder.

In order to get fair trade certification production has to be from recognized groups or cooperatives (not individual farms).

b) Organic certification

Organic foods do not use modern synthetic inputs such as inorganic fertilizer or pesticides. The organic movement is also interested in the environmental impact of food. To ensure compliance, the area of production has to be designated as free of non-accepted chemicals (this is called ‘conversion’) and products must be tested and inspected regularly. The cost of reduced productivity and lower quality is born by the producer in return for a premium. In recent years the demand for organic products has grown dramatically in the EU. However, the recent economic downturn has put pressure on premium products and the margin between premium and extra cost has declined.

Some market segments (e.g. health foods, traditional herbal remedies and food supplements) now expect organic certification.

In order to facilitate organic production some countries have developed national organic standards and regulations. As far as the author is aware, Ghana, Cameroon, Senegal, Egypt and Madagascar have national organic regulations. The position of Benin is unknown.

Different countries, markets and products use different organic certification bodies. The range is large⁴. Not all these bodies have representatives in AFTER countries. If there is no local representative of the certification body required by your chosen market then you have to pay for them to fly out to certify your production.

³ See www.fairtrade.net

⁴ See <http://www.organic.com.au/certify/>

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Most AFTER products are currently produced organically because small-holders do not have access to expensive external inputs such as fertilizers. Nevertheless, conversion to organically certified production can still be very difficult and costly. Most small-scale producers struggle to find the cost of regular certification.

c) Environmental products and wild harvesting standards

EU consumers are aware that some products are harvested from the wild and that by consuming them they may be contributing to environmental degradation. To meet this challenge, a number of wild harvesting and forest friendly certification systems have emerged. For wild harvested tree products, EU buyers will require evidence of sustainable harvesting. For fisheries products this is currently less important.

A key element of wild harvesting standards is the establishment of the initial resource and the assessment of how much sustainable harvesting is possible. For Baobab, for example, the harvesting are will have to be defined, the status of the existing resource established by a survey, the sustainable annual harvest calculated and a system put in place to trace product and record all harvesting. For some sectors sustainable wild harvesting certification is now the norm (e.g. for traditional herbal remedies).

For wild harvested products organizing production and producers into cohesive groups that can keep records, organize supply and negotiate with buyers is key to success (UNCTAD 2009).

d) Appellations, geographical indicators and traditional knowledge

The area that a product is produced and the traditional knowhow that is used to make that product can be protected under various international agreements including appellation of origin (under the Lisbon Agreement of 1958), the World Trade Organisation Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS) and, more recently, the Convention on Biological Diversity (CBD). All these agreements give protection to the intellectual property associated with making traditional foods. However, application of these treaties and benefiting individual and group rights has proved challenging, especially in developing countries. The absence of organized production and associations of interest groups who protect food forms is a problem for traditional foods because no records of production locations or norms (e.g. recipes) exist. Also, without domestic legal infrastructure it is very hard for individuals and groups to apply their rights. Few countries in Africa have yet successfully passed and implemented the necessary laws that allow registration of domestic geographical indicators (GIs) or the mechanisms for protecting and sharing the benefits of traditional knowledge. Access and Benefit Sharing (ABS) legislation is in its infancy in much of Africa and successful stories limited so far. The Nagoya Protocol agreed in 2011 will increase the importance and strength of ABS legislation, but this in turn may discourage investment by third parties who are nervous about how their profits will be shared. A summary of the IP status of AFTER countries is given below in Table 13.

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Table 13: IP status of AFTER countries

| Country | Treaty, protocol or law | | | | | | | |
|------------|-------------------------|----------------------|------------------------------|---------|-------------------|------------|-----|---------------------|
| | WIPO | Signatory of the CBD | Signatory of Nagoya Protocol | ABS law | GI law (and type) | | | |
| | | | | | Sui generis | Trademarks | GIs | Certification marks |
| Benin | X | X | | | | | X | |
| Cameroon | X | X | | | X | | | |
| Egypt | X | X | | | | X | | |
| Ghana | X | X | X | X | X | X | | |
| Madagascar | X | X | | | | X | | |
| Senegal | X | X | | | | | X | |

Source: (O'Connor and Company undated)

Only Ghana has signed the Nagoya Protocol and has an extant ABS law. Only Benin and Senegal of laws in place for Geographical Indications.

e) Safety compliance standards

For food products exported to the EU some means of assuring safety is needed to comply with the General Food Law. One way for a producer to achieve this is to use a food safety certification system such as Hazard Analysis and Critical Control Point (HACCP) or ISO 22000, which is a food safety management standard. ISO 22000 incorporates HACCP and is becoming the food industry norm within the EC. The ISO standard requires third party inspection and is, therefore, relatively expensive.

Much food exported from AFTER countries to the EC is not produced using a food management standard. It is not a requirement for export, but a voluntary certification system provided by a private company. In countries with a significant tourism industry (e.g. Senegal and Egypt) more and more hotels and airlines are implementing food management standards to reduce the risk of loss of reputation.

If re-engineered AFTER products are to enter mainstream markets, food management certification may be necessary because it is demanded by customers.

f) Other product specific certification - The Slow Food Movement

New concepts to protect and promote traditional foods that are threatened by mass production methods are emerging. The Slow Food Movement is a good example. It combines a number of concepts discussed above such as environmentally friendly, fair trade and organic with the concept of local and small-scale production⁵. Members exist in Benin, Cameroon, Egypt, Ghana and Senegal but not in Madagascar. Benefits seem to be conferred by mutual promotion among Slow Food aficionados.

⁵ See <http://www.slowfood.com>

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Numerous other food promotion groups exist in Europe and could be beneficial for AFTER products which are safe to eat but not so re-engineered that they are no longer recognisably connected with their traditional method of production.

6.6 Summary of the potential for re-engineering through certification

Table 14 below summarises the types of certificates that might be used by the products and considers whether the market either expects them for market entry or is prepared to pay a premium price if the certification is achieved.

Table 14: Assessment of certifications

| Product | Type of certificate | Expected by markets | Will give premium |
|----------------|--|----------------------------|--------------------------|
| Baobab | Environmental Organic Fair trade | Yes | Yes |
| Bissap | Organic Fair trade | Increasingly expected | No |
| Jaabi | Environmental Organic Fair trade | Yes | Yes |

Source: Authors opinion

Most certificates require initial application followed by regular inspection by a third party. A typical third party inspection costs from Euro 2-3,000. Costs can be shared among a number of establishments. Where local certification bodies exist this can save costs. Different end EU markets expect different certification bodies – so this needs to be checked before you get the certification.

In summary, certification is not necessary for AFTER products, but in some cases, the market now expects it (e.g. environmental assurances for wild harvested products). Normally, certifications can be combined. So wild harvesting, organic and fair trade certifications together are not much more expensive than one certificate on its own.

7. Conclusions and recommendations

Baobab and Bissap have promise in all three EU markets researched: France, UK and Portugal. Jaabi is not yet ready for EU marketing.

The markets for Baobab and Bissap already exist. Whether specific re-engineered products from Senegal can get market share will depend upon a series of issues including quality, certainty of supply, and the identification of suitable product ‘champions’ to partner EU market launches.

Re-engineered Baobab flour and Bissap powder have full market access to the EU as long as they comply with the general and specific food regulations. Provided that risks are managed, this should not constrain their successful development for the EU market.

Consumer acceptance research gives a very positive response to blind testing of both Baobab and Bissap, with a slightly more encouraging response from France and Portugal than the UK.

Market research among a sample of potential retailers of Baobab and Bissap shows that both have genuine potential as ingredients for different food and beverage products in all target markets.

Jaabi biscuits may take some more consideration. The aspect of food preparation of Jaabi biscuits means that greater investment will be needed in food safety compliance than might be needed for a bulk food ingredient.

For Baobab and Bissap certification may be essential in certain high value target markets. Jaabi’s is so novel that it is unlikely to need certification.

Intellectual property exists for all AFTER Group 3 products. Further assurance of freedom to operate may be needed for some market applications where functional properties are claimed.

For novel food ingredients, private standards are not yet a limiting factor as these standards usually only apply to very large scale retailers.

Baobab powder is a Novel Food. New companies exporting or importing the product will have to register.

Bissap is already imported into the EU and only has to comply with food safety regulations.

Jaabi is already produced and consumed in the EU and therefore not a novel food. It regulatory requirements will depend on the format of the re-engineered products.

Annex 1: Survey questionnaire and instruction manual



AFTER WP5

EU Market Survey Manual

About this guide

We are trying to get a general impression of the likely market entry points for our re-engineered AFTER products in France, the UK and Portugal. We will do this by using a qualitative survey instrument (i.e., guide questions which will start a conversation that is recorded as a case study).

The purpose of this guide is to help you conduct the interviews and prepare the case studies in a way that allows us to compile them into a report which can be useful for the future launch of re-engineered products.

The guide explains the sampling protocol, the ethical form and the reason for the different questions. We have tested these questions in Paris between 11-13 February 2014 and in the UK from 18-21 February 2014, and found that, if applied correctly, these give some really useful pointers about the future markets for AFTER.

Sampling

The desk market research and impressions from AFTER collaborators have indicated two key general market segments for the ‘improved’ AFTER products. These segments are the:

- EU African diaspora market; and,
- Exotic/health/epicure market.

We define these segments as follows:

Diaspora

First or second generation African residents in the EU, mainly living in cities and buying food from ‘home’ regularly. This market also includes ‘urban experimenters’; people who have visited African and who want to follow up with the interesting foods that they found there, as well as ‘epicures’; those who experiment with ‘exotic’ foods as a hobby.

Exotic/health/epicure

This group, which slightly overlaps with the group above, includes people buying healthy and exotic foods for the experience and for the benefits that the food confers. So, for example, this can be people with no interest in the ‘African’ origin or the story behind our products necessarily, but who want the product for its inherent qualities (e.g., natural, healthy, with fibre, without gluten). This group is much larger than the diaspora group and is rather fragmented. It ranges from specialist health food stores and chains, specialist food section of larger food stores and delicatessen stores. There may be many others categories in the three countries that we have not yet identified – so please suggest.

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The sample consists of 8 products, 3 countries and 2 market segments. We suggest that this is broken down as follows, but we are conscious that you might find somebody very interested in a product in your country that we have not included in the list below. In the UK test, for example, we found people very interested in selling Lanhouin when we did not expect it, so we did follow-up questions on this.

The sample framework looks like this – but, as explained above, it is flexible (table 1).

Table 1: Products, forms and locations

| Product | Re-engineered form | Testing Country | | | Total of each product tested |
|------------------------|----------------------|-----------------|--------|----------|------------------------------|
| | | UK | France | Portugal | |
| Bissap | Concentrate | ☐ | ☐ | | 2 |
| Baobab | Powder | | | ☐ | 1 |
| Jaabi | | -----No----- | | | 0 |
| Lanhouin | Condiment | | ☐ | | 1 |
| Kitoza | | -----No----- | | | 0 |
| Kong | Improved smoked | | ☐ | | 1 |
| Akpan | Bottled beverage | | ☐ | | 1 |
| Gowe | Flour | | | ☐ | 1 |
| Kenkey | Improved traditional | ☐ | | | 1 |
| KS | To be agreed | ☐ | ☐ | ☐ | 3 |
| Total for each country | | 3 | 5 | 3 | |

We have three product groups (fermented products, functional foods, fish and meat), so we need to have coverage of as many as possible in each country (at least one from each group). We suggest the products above, but you might want to change this or do more depending on the response from the interviewees.

In the survey test we found that it takes about one hour for each product. In some cases, people were kind enough to allow us to do two products in one store.

For the purposes of triangulation (i.e., checking what you found from one respondent with another to see if it is consistent) we recommend at least two interviews for each product per segment. It would be preferable to have more if this if possible.

Locating people to interview

We would recommend a team of two with one taking notes and one asking questions.

You need to make an appointment with the shop owner or buyer of produce.

Ask what the quietest time of day is.

Be prepared to do the interview standing up while a shop owner keeps breaking off to deal with customers. However it is best to find a quiet area to sit down with the interviewee if you can.

We have prepared a general interview background to help you get interviews and to explain why we are doing this work. We suggest that you adapt this format to meet your local conditions (change the logos and signatory for example).

If you do not email this ahead, then you should present it to the interviewee at the start of the interview.

Ethical form

It is important that we get prior informed consent to use the information that we gather. The form looks difficult, but we found in testing that people were quite happy to sign it. Please get one form signed for each interview and send them to us for retention. Some people may need some time to understand the form and its purpose.

At Annex 1 and 2 you will find:

An example of a letter of introduction

An example of the consent form

The interview process

Ask background questions (section 1)

We suggest you start with the easy background questions which are general to all the products. This also gets the interviewee responding.

Present Product Profiles for respondent to read

You should present the Product Profile for the product you are focussing on to the interviewee and let them have time to read it and ask questions. Record any interesting questions and discussion.

Ask the questions

Ask respondent each question and get views against all products for that question/ or alternatively ask respondent each question for one product and then go through the questionnaire again with another product.

The questionnaire

The questionnaire is based around the 4 P's concept (Product; Place; Price; Promotion).

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General advice

Some questions are optional – you have to use your ‘good sense’.

It might be a good idea to number the questions because it makes it easier to write down the answers related to the question’s number.

Sometimes the order of the questions can be changed depending on how the conversation flows.

Follow up questions are very important, particularly if someone offers some new information of relevance.

List of questions

The table below explains each question in detail.

| Question | Discussion |
|--|--|
| <u>General information</u> | |
| 1 Name | We will not use this name in the report but we need to be able to contact the respondent if necessary |
| 2 Location of store | Area (the store might be located in a different place to the contact) |
| 3 Contact details | Address and phone number |
| 4 Type of business | Describe what the respondents classify themselves as – e.g. family store, chain store, company, supermarket etc. |
| 6 Size of business | Small, medium, large |
| 7 Type of customer using this outlet/store | For example from Africa (countries), European, young, old, mainly women, from what economic groups. Please indicate the country of origin of customers if possible. |
| <u>PRODUCT: Questions about the product(s)</u> | |
| 8 What kind of consumer might buy the product? | How does the respondent describe the type of person that might buy the product you have described? The language used is important so record anything useful e.g., people who have been on holiday to Africa, experimenters, health nuts etc. (this question is specific to the |

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| | | |
|----|--|---|
| | | product presented to the respondent). |
| 9 | What reasons might they have to purchase (or not purchase)? | What aspects of the product do they think might be attractive to their customers (or unattractive)? |
| 10 | What problems do you envisage persuading customers to try this new product and how would you overcome them? | This question is to establish how vendors persuade customers to try something new. For example, giving samples, explaining the product, comparing the product to another similar. Sometimes there will be no problems. |
| 11 | Do customers consider the African origin of this product an advantage or a disadvantage? | Different markets can either gain a positive from the African origin or a neutral/negative response. We need to know which market responds to what stimulus. |
| 12 | What products might compete with this one? | It really helps to know the competing products so that can set the format, size, price etc. The price of competing products is very interesting to us. |
| 13 | What size and format would work best for this product? | This refers to the format of the product that the consumer takes away (e.g. the bottle, bag etc.). The colour, feel, quality, weight, size, transparency etc., of the packaging may be important to different customers. |
| 14 | What sort of volume of this type of product might be sold a month (range of units)? (sales volume) | How many carton/boxes/units of what size would they buy wholesale per month? This gives us an idea of the scale of this market opportunity if multiplied by the number of outlets. |
| 15 | What is the minimum/typical size of wholesale packaging for this type of product e.g. no. of units in a box, minimum order? (wholesaler volume received) | Retailers have strong views about the type of bulk packaging and the level of stocks that they hold (many have no space for example). Sometimes they do not want too few units, so we need to know what is the smallest/typical number of units |

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that would be convenient for them.

| | | |
|----|---|---|
| 16 | What shelf-life would you expect on this type of product? | How long can they keep it before it is spoiled (the date that the product has to be used by)? You might find that some stores have limited refrigeration storage and don't like to keep too much chilled or frozen product. |
|----|---|---|

PLACE: Questions about the location of sale

| | | |
|----|--|---|
| 17 | Where (what type of outlet) would you expect this product to sell best – e.g. specialist store, supermarket, on-line outlet, open market, door-to-door, peer-to-peer etc.? | It is interesting to know from retailers what their perception of the 'best' place for the sale of the product would be (if it is not their own shop). This can guide us to new market opportunities. |
|----|--|---|

PRICE: Questions about price

| | | |
|----|--|--|
| 18 | What price would consumers be willing to pay for this type of product (range – from x to y)? | Sometimes you have to ask in respect to competing products to get an idea. It is important to be clear on the packaging and size of product that the price is referred to. |
| 19 | What margin would you expect between the wholesale price and the retail price (%)? | This is the difference between the shop buying price (wholesale) and the consumer buying price (retail). It is best to ask for a percentage. |
| 20 | What are the typical payment terms you use (timeframe between reception of the product and payment to the wholesaler)? | Normally the shop keeper will get on credit and pay the wholesaler after some time. It is useful to know how this works for planning cash flow. |

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PROMOTION: Questions about promotion and presentation

| | | |
|-------|--|---|
| 21 | What makes this type of product sell well e.g., advertising, chef recommendations, recipes, customer holiday experience, etc.? | Please give details on how best the product should be promoted to best attract the consumer |
| <hr/> | | |
| 22 | What kind of information would you need on the product or associated with the product? | Please give details on which information should be on the packaging to best attract the consumer |
| <hr/> | | |
| 23 | What point of sale advertising is needed? | This refers to the way the product is promoted on the shelf of the shop and located in the store. Please give details on where the product should be presented to best attract the consumer |
| <hr/> | | |
| 24 | What kind of branding (if any) works well for this type of product? | Do they expect this product to have a clear brand name or would it be sold without a name? What brand works well for this market/outlet? Is an African brand name attractive? |

Writing up the case study

We have attached some examples of case studies prepared in Paris during the test. The narrative does not have to follow the format of the interview exactly. All information, including your impressions, is potentially useful.

The case studies do not need to be very long.

It would be good to have some key findings highlighted at the end. What were the important points that came out of this interview?

We will gather these case studies and cluster the key findings to draw some general conclusions about our research questions.

Example of a letter of introduction



Dear Sir/Madam

Request for an interview

The Natural Resources Institute (NRI) of the University of Greenwich is a world-renowned centre for research into poverty reduction in developing countries (www.nri.org). Along with partners in France, Portugal, Italy, Ghana, Nigeria, Senegal, Benin, Cameroon, Madagascar, Egypt and South Africa, NRI is implementing a European Union funded research project to ‘re-engineer’ traditional selected African foods for international markets. This project is called the African Food Tradition Revisited by Research (AFTER) – see <http://www.after-fp7.eu/en/>.

As part of this research we are visiting a limited number of targeted food retailers in France, Portugal and the UK to find out how retailers and consumers might respond to the re-engineered African food products. We will introduce some of the products and discuss with you what you feel about them. The interview should take around one hour.

The results of this study will allow a better assessment of the likely market with respect to these products and will greatly increase the chances of their successful European launch. In the longer term, demand for novel African foods may create much-needed jobs and livelihood opportunities.

The information you provide will be used only for scientific purposes and will be treated as strictly confidential. We guarantee anonymity.

Yours faithfully

Ben Bennett

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Head, Food and Markets Department

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E-mail: ben.bennett@gre.ac.uk

This project has received funding from the European Union’s Seventh Framework Programme for research; technological development and demonstration under grant agreement no 245025

Example of the ethical form

Participant consent form

| | |
|---|---------------------------|
| Title of Research: Market study on potential African products for the UK/EU market | |
| Investigator's name: | |
| To be completed by the participant | |
| 1. Have you read the information sheet about this study? | YES / NO |
| 2. If you asked questions did you receive satisfactory answers? | YES / NO / Not applicable |
| 3. Do you understand that you are free to withdraw from this study at any time and without the need to give a reason? | YES / NO |
| 4. Do you agree to take part in this study? | YES / NO |
| Signed | Date |
| Participant name in block letters | |
| Signature of investigator | Date |

This Project is Supervised by: Dr Dominique Pallet

UMR QualiSud Cirad Département PERSYST Montpellier, France

Contact Details (including telephone number):

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Annex 2: Product case studies

Case study 1

Date: 8/10/14

Location: Santa Catarina Street, Oporto

Type: Small, Exotic food- specially African foods, family owned.

Product: Baobab, Gowé and Kishk Sa'eedi

It is a small store that exclusively sells African food products and it is located in downtown Porto. Owners also have another shop, a hairdresser with hair products for African brands. This store is similar to the typical stores in the Greater Lisbon, neighbourhood stores directed towards selling typically African products, whose clients are mostly residents from the communities, majority Cabo Verdean and Guinean. The shop has little variety of food products, it is targeted for specific African products that are used in traditional African cuisine and consumed by this kind of client, for example, corn flour, cassava flour, couscous, palm oil, etc., and also frozen and refrigerated products from Africa.

In this store, although the husband manages the business, who volunteered to give the interview was the shop owner, but did not want her name and signature on any document with the risk of not responding to the questionnaire.

This store clients are largely from PALOPs countries and Cabo Verdean, although some clients are repatriated, who returned from the former colonies.

Products that were presented were the Baobab, Gowe and Kishk Sa'eedi and none of these existed in this store. The shop owner initially said that she was unaware of all these products. However, in the case of Baobab, although initially not recognizing the name Baobab, when she saw a picture of the fruit and syrup, immediately identified as being a tree, called the "imbomdeiro", "embomdeiro" or "Calabaceira", in Cabo Verde, with the same name for the fruit or "breadfruit", "Mukua" or "Malambe". As the shop owner explained, the designation of plants or fruits in Africa vary greatly from within countries and regions, even between ethnic groups, often known by different names.

However, the Baobab and the other two products are not sought in the shop. To market any of the three products in her store, she considered that African origin is an advantage once that her clients are Africans born and raised in Africa, some of them may even know these products, both for their nutritional properties or health benefits. The shop owner recognizes that in Africa the Baobab is considered a very good fruit for health and its consumption is even advised in cases of malaria.

However, she expects to find difficulties in placing this product to be sold, because of the knowledge lack of the products and raw materials which may constrain their sale. Although, she could introduce these products as novelties and highlight in all three products their benefits to health, she did not believe in their success, once that her customer no not like to try new products and do not like to taste unfamiliar products. They are faithful to their roots and they do not usually buy different products. Additionally, as these products were submitted to reengineering, the

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customers also dislike processed foods as they usually say that the sensory characteristics of products are changed. Even publicizing the product in the store and through tasting, the customers would be reluctant to tasting and shopping these products, especially in the case of Kishk Sa'eedi.

She considers that there aren't products that can compete with the Gowé flour and Kishk Sa'eedi in the national market. Concerning Baobab, some can compete if the market product is a concentrated fruit, and she gave the example of some Brazilian fruit concentrates, such as concentrated Goiaba. Regarding the type of packaging, she considered appropriate for Baobab concentrate a transparent plastic bottle of 500 ml. In the case of flour Gowé, considered for marketing, bags of 500 g (polyethylene) or cardboard as a good solution, but could be sold in clear plastic bags, because African customers like to see the product they are buying and probably it would be cheaper. As for the packaging proposed for Kishk Sa'eedi, a box of 80 g seemed too refined for the type of customer who frequents her store and they would probably endear the final product.

For the shelf life of the products, she considered that they must all have at least more than six months, for Baobab concentrated juice the shelf life should be at least 6 months and if the Baobab powder is marketed, expected shelf life should be of at least 1 year. For flour Gowé, from 1 to 2 years and the Kishk Sa'eedi, a shelf life of at least six months. The range price expected for the Baobab plastic bottle (500 mL) was 2-3 €. As for gowé, she thinks that 2.5 € per bag of 500 g would be quite reasonable, because the price of some flours in her store is around 6 € the bags of 500 g. Regarding Kishk Sa'eedi box containing approx. 80g, she considered the suggested price of 5 € very expensive, and suggested 2-3 € /box as a good price. She suggested some marketing strategies as a Facebook page (although the shop has not yet a Facebook page), once that similar stores using Facebook include online sales and it would be a good alternative to advertise the introduction of a product in the store.

As some advertising actions to be implemented, as she does not usually introduce unfamiliar products at the store, it is unusual to resort to marketing campaigns in her shop. She does not believe in the importance of a trademark, because many of the products of her store do not have a trademark, only appearing on the packaging: the name of the product, country, preservation method, weight or quantity of the product and shelf life. However, she considers important to appear the country, in order to more easily identify these products. Finally, she considered that her store is not appropriate for the sale of these products, because these are more targeted for the African Francophone communities, while their main customers are from Lusophone communities. However, among the three products presented, possibly Baobab would have higher viable sales, followed by the flour Gowé, whereas Kishk Sa'eedi would not successful in her store.

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Case study 2

Date 13/10/14
Store name: Glood
Location: Dom Manuel II Avenue, Maia
Type of store: International food store
Type of business store: Medium, store franchise
Product: Baobab, Gowe and Kishk Sa'eedi

This store is defined as a grocery store of the world where it is possible to buy products from several continents; they have products from over 35 different countries. In the Greater Lisbon there are 5 identical stores, but this store is the only one in the Northern region, and currently the Glood stores operate as franchise.

In this store there are several products like naans from India; raz al hanout humus from Morocco; seaweed and rice for sushi from Japan; concentrated juices from America; Bilong from South Africa; ginger, curry genuine, diabetic jams, frozen in different types of bread, fish, sausages, cereal for breakfast in muesli versions and for those concerned with health, there is a bit of everything.

Store owners are two brothers who were emigrants in South Africa and who responded to the questionnaire was the sister, which is usually in the store. Many of their customers are also emigrants who returned from South Africa, and settled in the North. However, customers of this store are diverse, from clients who enjoy to travel and discover new flavors and unusual ingredients, full of willingness to try when coming back home, or people who love to watch cooking shows on television and looking for specific ingredients and also clients who are concerned about eating healthy products. This shop also organizes workshops.

Of the three products shown (Baobab, Gowe and Kishk Sa'eedi), she did not know any of the three, and considers that the potential customers for Baobab fruit powder or concentrates can be Africans who know these fruits or Brazilians who also consume exotic fruits concentrates or customers who purchase the product due to its nutritional properties. For flour Gowé, the potential consumers are the ones who know these products, as Africans or people who knew the product on trips or people with gluten or lactose intolerance. Regarding Kishk Sa'eedi, she believes that it will be more difficult to sell this product because the potential consumer will be probably a customer who already met this product on trips to Egypt. What can lead customers to buy these products will be mainly the nutritional characteristics of the product and the curiosity to try new flavours. She thinks that persuading potential consumers to buy these products, could be achieved highlighting its nutritional properties, however the lack of knowledge of the products and the fear that sometimes customers have to experiment could represent barriers to their sale, especially in the case the Kishk

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Sa'eedi, as she thinks the product presentation does not help. Once that all of the products are unknown on her shop, to overcome these difficulties, she thinks it would be good to promote these products to consumers. Advertising in the store, is a measure that would work well and they usually adapt the store when they want to put new products in line. For a few days, and they have a person to explain the type of product, highlighting its nutritional properties and its health benefits would be possible. Customers must be persuaded to taste the product or even be offered with small samples of the product, since hardly anyone will buy these products without knowing and tasting them, unless it is a curious customer and like to try new foods. Then, the product could be highlighted for some time on the shelf. At the same time, they could also advertise these products on the Facebook page of the store. The type of advertising with posters shown in the store windows is not adapted for this store, but could have small pamphlets with information of products, on top of the sales counter. Other marketing strategies would promote these products to chefs and bloggers. There are many followers of bloggers, they advertise on their blogs recipes and talk about products and have a lot of influence in the dissemination of an unknown product. Sometimes they are visited by bloggers who write about products bought in her shop, and almost always the demand for these products increases significantly.

The owner thinks that the products being practically unknown, the origin being Africa is a disadvantage, since people always have the fear of consuming in terms of food safety, although for Kishk Sa'eedi, its Egyptian origin may be an advantage, because people may consider it an exotic product. She thinks that there are no similar products in the national market that can compete with these. Regarding to the type of packaging, for Baobab, if this product is sold in powder, it might be placed in plastic bags, with 100-250 g, and as a concentrated juice, it could be in transparent bottles of 500 mL, as usually for identical products in her shop, for wholesale packaging 6-8 bottles. As for the flour Gowé, it could be sold in card boxes, plastic or paper bag with 500 g, while recognizing that card boxes are more presentable for the consumer, for wholesale packaging with 6-10 packs. Regarding Kishk Sa'eedi, she doubts that this is the ideal packaging for commercialization but maybe it will depend on the purpose of its consumption. If the product is to consume with snacks, in the form of balls as presented, she believes that the size of the box would be the ideal, however maybe typical format of cereal bars might be more advantageous. If this product is to be consumed cooked, she thinks that should also be sold with higher packaging, for household consumption. She believes that the packaging of the 3 products should bring, besides the mandatory information by legislation, especially in the case of Baobab, their nutritional properties and health benefits, and in the case of flour Gowé and Kishk Sa 'eedi, it would be also important to mention how to prepare and how to present the final product, tasting tips and/or recipes. She considers important to sell products that have a trademark, for example, or to try strong brands that are dedicated to the commercialization of identical products or importers/distributors conferring their mark, as very advantageous for customers to buy more. In the case of Baobab, a trade market of concentrated Brazilian juices would be an option, and for the consumption of Kishk Sa'eedi snack, maybe a company producing cereal bars. Interestingly, in the case of flour Gowé, if it is to market as diet product, is it not so important to have a trademark, but to highlight their most important properties. She believes that shelf life of these products is a very important factor in this type of store, since they have many products and when they are unknown and unpopular, they should have a large shelf

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life. In the case of Baobab, at least 6 months, in the case of flour Gowé at least 12 months and in the case of Kishk Sa'eedi from 8 to 12 months. She considers that potential consumers would pay for Baobab, 2 € to 2.5 € for a bottle of 500 mL, for flour Gowé from 2 € to 3 € for box or bags of 500 g and by box of Kishk Sa'eedi with 80 g she considers from 2 € to 3 € a good price, and 5 € as very expensive for this amount. As the amount expected to sell in the store, although these products are unknown and their sale will be dependent on several factors, the experience with identical products in her store provides for Baobab 2 packs per month, for flour Gowé 10 packages and to Kishk Sa'eedi she does not have a forecast. The margin of profit it provides is identical to that obtained with other products in her store, from 30-40 %. Usually, the payment terms used in her store is 30 days, mainly for products with higher sales volume, if sometimes only buying a small amount of a given product, payment is made in the moment. Finally, she believes that her store would be ideal for selling powder or Baobab concentrate, being from the 3 products, the one which most pleased her. Considered that the Kishk Sa'eedi would not sell well in her store, but could possibly sell well in a macrobiotic store; the flour Gowé could even sell in her shop, but considers it an appropriate product for macrobiotic stores with healthy food. It is noteworthy that this store also sells dried meat, called Biltong on South Africa, and as there is demand for this type of product, probably would Kitoza as a similar product that could sell well in this store.

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Case study 3

Date: 10/10/14
Location: Fernando Tomás Street, Oporto
Type of store: Grocery store or delicatessens/gourmet store
Type of business store: Medium, traditional old store, family owned. Historic shop (existing from 1934)
Store name: A Favorita do Bolhão
Product: Baobab, Gowe and Kishk Sa'eedi

The store is located in downtown Porto and with 76 years of existence, this business has been passed from parents to children. The products are geometrically organized in the shop windows, ranging from the genuine dried salted cod fish to a wide range of breads from all around the country. The store has a great selection of wine, nuts, dried fruits, cheese and deli meats. These types of groceries are much more than gourmet stores, they might come close to those delicatessens that exist around the world (the term is not recognized nor widely used in Portugal).

The owner's son who also works at the store spoke with us. The type of customers of this store are diverse, many are local residents from all ages but as it sits in the Porto city centre, it also has quite few tourists, who come to buy traditional Portuguese products and are curious to know what they have to sell from their countries.

Products presented were Baobab, Gowé and Kishk Sa'eedi, and these three products are not familiar to him and did not exist for sale in his store. He considered the potential consumers of these products may already be knowledgeable of them, specifically African people who seek this type of products or consumers who see the products for sale and feel willingness to try, customers that love to try new products with added health benefits. Usually customers do not seek this type of African products, however he has clients seeking organic food because it is advertised in the media or in social networks as being good for health, e.g. "Chia seed" or Goji Berries" which he sells in his shop, and which were unknown to the Portuguese and are now sought after by presenting excellent health benefits.

He believes the Africa origin of the products can be an advantage if customers specifically seek these products. However if customers do not know the products they can become more reluctant to purchase products from Africa for food safety reasons, customers still question products originating from these countries for reasons relative with food safety. He thinks in our market, there are some fruit concentrates or flour comparable to these, although with different nutritional characteristics, but in the case of Kishk Sa'eedi, he did not know any products that can compete with it. Regarding the type of packaging, he considered appropriate for Baobab powder the opaque plastic bags, like

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powder packets jelly approx. 100 g, and if it is a concentrate it may be sold in bottles of 250 mL or 330 ml. For the flour Gowé, he considered the package shown photographically ideal, weighing 500 g to 750 g, and in the case of Kishk Sa'eedi he considered the carton box ideal. Beyond all the legal information that should appear on package labels, he thinks the on packaging of all products should also come explained the health benefits of each product. The shelf life that he considered appropriate for the Baobab powder would be 2 years and concentrates 1 year. Flour Gowé shelf life must be between 1 and 2 years and for Kishk Sa'eedi until at least 6 months.

Regarding the price that consumers would be willing to pay, for a Baobab bottle of 330 mL perhaps € 1.5; for flour Gowé the price indicated of 2.5 € seemed appropriated to him, and for Kishk Sa'eedi the indicated price of 5 € he thinks quite expensive for our market and suggested 3 € maximum. He can't predict what will be the sales volume is this type of product, as it depends on several factors, but perhaps 5-10 units per month. Gross margin he expected to get with these products would be equal to that which he obtains with most products he sells in its store, between 30 and 40%. Usually, the payment is made to suppliers to 30 days, but for some products he makes payment immediately because he has good discounts. As for the measures and marketing strategies that he considers appropriate for these products, he said that advertising by a nationally known nutritionist or already famous bloggers in this area, who advise products for healthy ingredients in recipes they publish. He considers that for these unknown products, tastings inside store are an important way of advertising as well as on Facebook, because the Facebook page of his store has quite a number of followers on this moment. While in his shop there are many products sold in bulk, they are usually products that consumers know, but for these products it is important that they have a trademark, because having a strong brand gives other consumer a safety idea. Of the three products he considers that Baobab powder or concentrate may be the one with the greatest potential to enter the market, since it is more for direct consumption and easier to use as a supplement for to other foods, and also believes that consumers are usually more likely to buy and consume drinks that foods when it comes to lesser known products. Even for its store, Baobab is the product that he considers will have more potential and in his opinion the flour Gowé and Kishk Sa'eedi could be more targeted products for macrobiotic stores or biological products, which consumers may seek for benefits in their food and buy healthy products.

Case study 4

Date: 14/10/14

Location: Rosário Street, Oporto

Type of store: Organic grocery store, retail supplies of biological products

Type of business store: Small, family owned.

Store name: Quintal bioshop

Product: Baobab, Gowe and Kishk Sa'eedi

The store is an organic grocery store with a coffee corner and a terrace with Wi-Fi. Their owners select brands that seek to combine quality and design, with the concern about being socially responsible and safe for the environment, and along with products from organic farming, the use of natural cosmetics and the use of natural methods of healing, such as homeopathy and naturopathy.

The store belongs to two brothers, and who talked to us was one of the shop owners. She is a very active young woman, informed and has the constant concern about placing in her store healthy products that are mostly organic products. Customers of his shop are diverse, they are residents of the area who will buy fresh vegetables of biological origin, and people with higher education who have the philosophy of healthy Lifestyle, they like to consume products of biological origin combining beneficial properties for health. Usually people of mixed ages, but mostly middle-aged, well informed and who enjoy travelling and are open to trying new products.

Baobab is a powder product that she would sell in her store. The flour Gowé and Kishk Sa'eedi are products unknown to her. Considers that the potential consumers of these products can be customers trained who like to buy novelties and dietary supplements. Also, may be customers with food intolerances, to whom there are still a reduced number of foods in our market. But in either case, the success of any of the products will go through for information of their health benefits that will reach out to potential customers in different ways. She thinks that potential clients are people seeking information on the internet, therefore this type of advertising in bloggers and Facebook can be very useful, if validated through scientific information and consumer tips and healthy recipes. In his shop she could put leaflets, do product tastings and offer small samples of each product so that people experience, sometimes also invite experts linked to the food area to give workshops, which would also be an opportunity to promote these products. Thinks that the price and the form of consumption of these products can however be limiting thereof.

Considers the African origin of these products may have advantages and disadvantages, as they depend largely on the type of consumer. Some customers are very selective regarding the origin of products, however others are not concerned with the origin of the product but with the benefits for their health.

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She recognizes that for Baobab, although there are very few products in our market that can compete with it, there is a Baobab brand product that she sells in her shop, Baobab 100% native dried powder (Ox natura) and there are other similar products as "Camu camu" originating from South America. Regarding the flour Gowé and Kishk Sa'eedi she cannot identify products that can compete with them.

The adequate packaging for Baobab is similar to the Baobab product she sells in her store (Fig 1.), the product has a plastic package of 125 g and is shielded from light as not to change the properties of the product; the Baobab concentrate may be a glass or plastic bottle with 500 ml. As flour Gowé, she has in the store different types of flour packaging, plastic bags, paper bags and cardboard boxes, the most common with the weight of 0.5 to 1 Kg, personally pleasing her paper bags wholesale. Regarding the Kishk Sa'eedi, she considers the shown packaging proper but somewhat small, however the price and type of consumption of this product also condition the type of packaging. In its store packaging wholesale typically contains 6 to 12 boxes or bottles. Regarding the price considered ideal for these products, she recognizes this Baobab fruit as an expensive product, the powder she has for sale of brand "nature Ox" costs about 7.5 € packing 125 g, although the brand is certified for marketing of organic products, which in itself enhances the product, the Baobab is sold as a concentrate, a bottle of 500 mL which can cost between 2-3 €. As flour Gowé, the price indicated of 2.5 € seems good to her because she has other more expensive flour in her store. Regarding the Kishk Sa'eedi presented for packing 80g, 3 € seems an appropriate value. As for a prediction of quantity and sales volume relative to the Baobab, she believes it could sell 3 packs, for flour Gowé possibly 2-3 packs, but for the Kishk Sa'eedi she cannot make a prediction for being the most different product. Gross margin she would expect to get with these products will be equal to the majority of the products she sells in her store, which is between 30 and 40%. Usually the payment to suppliers is made in 30 days or for small amounts she pays immediately. She considers that these products should have a strong trademark, because it will be easier to put them on the market. In the case of Baobab it could use Super-Food brands that already exist in the market (e.g. Ox nature, Föld, Biosamara, etc.) and it would have easier distribution channels. She believes that Baobab and flour Gowé are products with potential that could easily be introduced in their store, although the Baobab has the most potential, the Kishk Sa'eedi if well publicized could possibly also market it, the store owner was very curious about this product, stating that she would like to taste it.

Case study 5

Date: 30/09/14
Location: Rua do Outeiro, Gemunde, **Maia**
Type of company: Agro-industry
Type of business company: Large company
Store name: Frulact
Product: Baobab, Gowe and Kishk Sa'eedi

Frulact is a food industry company specialized in fruit processing, headquartered in Maia, Portugal. Its aim is the manufacture of food products like fruit compounds for food industries. It produces fruit based products by developing fruit transformation activities in a number of different ways. At this survey, answered by the Director of Innovation and Quality, to whom we ask for an input as representing Frulact. She considers that potential consumers of Baobab may be young and seniors, who buy this product by curiosity and by its distinctive nutritional value, while in the case of flour Gowé, consumers may be curious and people familiar with the product in the original version, who purchase for African ethnicity. For the Kishk Sa'eedi, consumers may be children and young people or travellers who have become familiar with the product in its original geography and may be curious in trying this product. She considered as an advantage being an African product for Baobab and Kishk Sa'eedi, but for flour Gowé she is not sure. In our market there are products that can compete with Baobab, like yogurt and some drinks and in the case of Kishk Sa'eedi e.g. dehydrated fruit snacks, but can't find products in our market products that can compete with the flour Gowé.

She considers that the appropriate packaging for Baobab powder, sachets to enrich the existing product and packaging should highlight the nutrition information and the geographical origin of the product; in the case of flour Gowé in boxes or bags of 500 g or in smaller bags to be able to try, highlighting the nutritional properties of products and the health benefits with e.g. the absence of gluten; and for Kishk Sa'eedi bags with snacks, should contain nutrition information on the packaging referring to the fact that it is a natural product without food additives. As regards the shelf life she considered that dry food should have at least 6 months.

In the questions of marketing and advertising of products, she believes that information campaigns highlighting the nutritional properties of these products will be very useful, in the case of flour Gowé should highlight the fact that it is an alternative to gluten and lactose intolerant people and for Kishk Sa'eedi the fact that a natural and healthy snacks. Difficulties likely to arise because they are virtually unknown products for Portuguese consumers, the issue of habituation to these new flavors will be a problem to overcome, and the problem that they are not prepared for direct consumption, as in the case of flour Gowé, that requires reconstitution of these products in your market. The product price may also be a limiting factor in sales too. Some marketing strategies that she considers that would be successful for the launch of these products in the market would be for

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example an advertising campaign launched by an "ambassador" who may be a public figure (African preferably), who teaches as to prepare and consume the products. In retail outlets what can be done is launch with tastings of products, with a knowledgeable person in store, to clarify how consumers can consume and prepare these products. May be advertised in stores through leaflets for each product and placing small movies on their websites or Facebook. For any of the three products considered, it is important to have a trademark connected to the geographical origin of each product. The questions about the selling price of products as the company has no direct sale of products were not responded relating to this subject due to lack of data. But she considered that this type of products can be commercialized in specialized types of stores, grocery stores or gourmet shops and online sales. The product that she claims to have the greatest potential to be released in the market is the Baobab, among the three products, as probably the only one that some consumers already know and for its flavor also appealing.

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Case Study 6

Date: 12/2/14
Name of outlet: Horizon Uni Address: 25 rue Poulet 75018 Paris
Name of interviewee: Mrs Chang (owner)
Location: Paris
Type of store: Small, African foods outlet, family owned.
Product: Bissap, baobab

Customers are Africans from West or Central Africa, some Ghanaians. Product presented was bissap as a powder and as a concentrate. The customers for this product are Malians and Senegalese and the highest sale peak/consumption period is during the Ramadan. Ivoirians also buy the product there are less and tend to buy more ginger products. Powder product - it was not clear if it was a new product. Competitive product could be tamarind paste. Powder 100g in a clear packaging. Concentrate in a plastic or glass bottle. Cans were not the best presentation. Discussion about the shelf life of the concentrate (I have checked characteristics since and shelf life much longer 2 years). Discussion about the presentation of the concentrate. Diluted form (ready to drink would be better). African origin of the product is very important for customers and very positive. Expected 50 sachets of 250g each of bissap powder expected to sell per month. This was based on calculated volumes with Bouye (Baobab) powder 50bags of 250g per month 4.90 euros per sachet (foil aspect) whilst the Racine product with much nicer packaging was 2.90 euros per sachet only. Per month, the expected volume coming from the wholesaler to the shop would be 10kg equivalent to 1 cardboard box. The range of prices expected for the powder are 2-3 euros for 100g of powder and 2 euros for a drink made from concentrate in glass/plastic bottle (75 ml?). Margin expected between wholesale and retailer price is 35% on average and the typical payment terms is 30 days. The packaging for the products of bissap should indicate the origin of the product, the instructions on how to prepare the product (i.e. powder); no need for instructions if diluted drink. A picture representing the product would also be important to attract the consumer and a transparent/clear packaging (light through). Indicating that the product is natural is important because. When doing the promotion of the product, free samples would be good to attract the customer and discussion with customers about the product is important.

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Case study 7

Date: 8/10/14
Location: Santa Catarina Street, Oporto
Type: Small, Exotic food- specially African foods, family owned.
Product: Baobab, Gowé and Kishk Sa'eedi

It is a small store that exclusively sells African food products and it is located in downtown Porto. Owners also have another shop, a hairdresser with hair products for African brands. This store is similar to the typical stores in the Greater Lisbon, neighbourhood stores directed towards selling typically African products, whose clients are mostly residents from the communities, majority Cabo Verdean and Guinean. The shop has little variety of food products, it is targeted for specific African products that are used in traditional African cuisine and consumed by this kind of client, for example, corn flour, cassava flour, couscous, palm oil, etc., and also frozen and refrigerated products from Africa.

In this store, although the husband manages the business, who volunteered to give the interview was the shop owner, but did not want her name and signature on any document with the risk of not responding to the questionnaire.

This store clients are largely from PALOPs countries and Cabo Verdean, although some clients are repatriated, who returned from the former colonies.

Products that were presented were the Baobab, Gowe and Kishk Sa'eedi and none of these existed in this store. The shop owner initially said that she was unaware of all these products. However, in the case of Baobab, although initially not recognizing the name Baobab, when she saw a picture of the fruit and syrup, immediately identified as being a tree, called the "imbomdeiro", "embomdeiro" or "Calabaceira", in Cabo Verde, with the same name for the fruit or "breadfruit", "Mukua" or "Malambe". As the shop owner explained, the designation of plants or fruits in Africa vary greatly from within countries and regions, even between ethnic groups, often known by different names.

However, the Baobab and the other two products are not sought in the shop. To market any of the three products in her store, she considered that African origin is an advantage once that her clients are Africans born and raised in Africa, some of them may even know these products, both for their nutritional properties or health benefits. The shop owner recognizes that in Africa the Baobab is considered a very good fruit for health and its consumption is even advised in cases of malaria.

However, she expects to find difficulties in placing this product to be sold, because of the knowledge lack of the products and raw materials which may constrain their sale. Although, she could introduce these products as novelties and highlight in all three products their benefits to

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health, she did not believe in their success, once that her customer no not like to try new products and do not like to taste unfamiliar products. They are faithful to their roots and they do not usually buy different products. Additionally, as these products were submitted to reengineering, the customers also dislike processed foods as they usually say that the sensory characteristics of products are changed. Even publicizing the product in the store and through tasting, the customers would be reluctant to tasting and shopping these products, especially in the case of Kishk Sa'eedi.

She considers that there aren't products that can compete with the Gowé flour and Kishk Sa'eedi in the national market. Concerning Baobab, some can compete if the market product is a concentrated fruit, and she gave the example of some Brazilian fruit concentrates, such as concentrated Goiaba. Regarding the type of packaging, she considered appropriate for Baobab concentrate a transparent plastic bottle of 500 ml. In the case of flour Gowé, considered for marketing, bags of 500 g (polyethylene) or cardboard as a good solution, but could be sold in clear plastic bags, because African customers like to see the product they are buying and probably it would be cheaper. As for the packaging proposed for Kishk Sa'eedi, a box of 80 g seemed too refined for the type of customer who frequents her store and they would probably endear the final product.

For the shelf life of the products, she considered that they must all have at least more than six months, for Baobab concentrated juice the shelf life should be at least 6 months and if the Baobab powder is marketed, expected shelf life should be of at least 1 year. For flour Gowé, from 1 to 2 years and the Kishk Sa'eedi, a shelf life of at least six months. The range price expected for the Baobab plastic bottle (500 mL) was 2-3 €. As for gowé, she thinks that 2.5 € per bag of 500 g would be quite reasonable, because the price of some flours in her store is around 6 € the bags of 500 g. Regarding Kishk Sa'eedi box containing approx. 80g, she considered the suggested price of 5 € very expensive, and suggested 2-3 € /box as a good price. She suggested some marketing strategies as a Facebook page (although the shop has not yet a Facebook page), once that similar stores using Facebook include online sales and it would be a good alternative to advertise the introduction of a product in the store.

As some advertising actions to be implemented, as she does not usually introduce unfamiliar products at the store, it is unusual to resort to marketing campaigns in her shop. She does not believe in the importance of a trademark, because many of the products of her store do not have a trademark, only appearing on the packaging: the name of the product, country, preservation method, weight or quantity of the product and shelf life. However, she considers important to appear the country, in order to more easily identify these products. Finally, she considered that her store is not appropriate for the sale of these products, because these are more targeted for the African Francophone communities, while their main customers are from Lusophone communities. However, among the three products presented, possibly Baobab would have higher viable sales, followed by the flour Gowé, whereas Kishk Sa'eedi would not successful in her store.

Case study 8

Date: 13/10/14
Store name: Glood
Location: Dom Manuel II Avenue, Maia
Type of store: International food store
Type of business store: Medium, store franchise
Product: Baobab, Gowe and Kishk Sa'eedi

This store is defined as a grocery store of the world where it is possible to buy products from several continents; they have products from over 35 different countries. In the Greater Lisbon there are 5 identical stores, but this store is the only one in the Northern region, and currently the Glood stores operate as franchise.

In this store there are several products like naans from India; raz al hanout humus from Morocco; seaweed and rice for sushi from Japan; concentrated juices from America; Bilong from South Africa; ginger, curry genuine, diabetic jams, frozen in different types of bread, fish, sausages, cereal for breakfast in muesli versions and for those concerned with health, there is a bit of everything.

Store owners are two brothers who were emigrants in South Africa and who responded to the questionnaire was the sister, which is usually in the store. Many of their customers are also emigrants who returned from South Africa, and settled in the North. However, customers of this store are diverse, from clients who enjoy to travel and discover new flavors and unusual ingredients, full of willingness to try when coming back home, or people who love to watch cooking shows on television and looking for specific ingredients and also clients who are concerned about eating healthy products. This shop also organizes workshops.

Of the three products shown (Baobab, Gowe and Kishk Sa'eedi), she did not know any of the three, and considers that the potential customers for Baobab fruit powder or concentrates can be Africans who know these fruits or Brazilians who also consume exotic fruits concentrates or customers who purchase the product due to its nutritional properties. For flour Gowé, the potential consumers are the ones who know these products, as Africans or people who knew the product on trips or people with gluten or lactose intolerance. Regarding Kishk Sa'eedi, she believes that it will be more difficult to sell this product because the potential consumer will be probably a customer who already met this product on trips to Egypt. What can lead customers to buy these products will be mainly the nutritional characteristics of the product and the curiosity to try new flavours. She thinks that persuading potential consumers to buy these products, could be achieved highlighting its nutritional properties, however the lack of knowledge of the products and the fear that sometimes customers have to experiment could represent barriers to their sale, especially in the case the Kishk

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Sa'eedi, as she thinks the product presentation does not help. Once that all of the products are unknown on her shop, to overcome these difficulties, she thinks it would be good to promote these products to consumers. Advertising in the store, is a measure that would work well and they usually adapt the store when they want to put new products in line. For a few days, and they have a person to explain the type of product, highlighting its nutritional properties and its health benefits would be possible. Customers must be persuaded to taste the product or even be offered with small samples of the product, since hardly anyone will buy these products without knowing and tasting them, unless it is a curious customer and like to try new foods. Then, the product could be highlighted for some time on the shelf. At the same time, they could also advertise these products on the Facebook page of the store. The type of advertising with posters shown in the store windows is not adapted for this store, but could have small pamphlets with information of products, on top of the sales counter. Other marketing strategies would promote these products to chefs and bloggers. There are many followers of bloggers, they advertise on their blogs recipes and talk about products and have a lot of influence in the dissemination of an unknown product. Sometimes they are visited by bloggers who write about products bought in her shop, and almost always the demand for these products increases significantly.

The owner thinks that the products being practically unknown, the origin being Africa is a disadvantage, since people always have the fear of consuming in terms of food safety, although for Kishk Sa'eedi, its Egyptian origin may be an advantage, because people may consider it an exotic product. She thinks that there are no similar products in the national market that can compete with these. Regarding to the type of packaging, for Baobab, if this product is sold in powder, it might be placed in plastic bags, with 100-250 g, and as a concentrated juice, it could be in transparent bottles of 500 mL, as usually for identical products in her shop, for wholesale packaging 6-8 bottles. As for the flour Gowé, it could be sold in card boxes, plastic or paper bag with 500 g, while recognizing that card boxes are more presentable for the consumer, for wholesale packaging with 6-10 packs. Regarding Kishk Sa'eedi, she doubts that this is the ideal packaging for commercialization but maybe it will depend on the purpose of its consumption. If the product is to consume with snacks, in the form of balls as presented, she believes that the size of the box would be the ideal, however maybe typical format of cereal bars might be more advantageous. If this product is to be consumed cooked, she thinks that should also be sold with higher packaging, for household consumption. She believes that the packaging of the 3 products should bring, besides the mandatory information by legislation, especially in the case of Baobab, their nutritional properties and health benefits, and in the case of flour Gowé and Kishk Sa 'eedi, it would be also important to mention how to prepare and how to present the final product, tasting tips and/or recipes. She considers important to sell products that have a trademark, for example, or to try strong brands that are dedicated to the commercialization of identical products or importers/distributors conferring their mark, as very advantageous for customers to buy more. In the case of Baobab, a trade market of concentrated Brazilian juices would be an option, and for the consumption of Kishk Sa'eedi snack, maybe a company producing cereal bars. Interestingly, in the case of flour Gowé, if it is to market as diet product, is it not so important to have a trademark, but to highlight their most important properties. She believes that shelf life of these products is a very important factor in this type of store, since they have many products and when they are unknown and unpopular, they should have a large shelf

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life. In the case of Baobab, at least 6 months, in the case of flour Gowé at least 12 months and in the case of Kishk Sa'eedi from 8 to 12 months. She considers that potential consumers would pay for Baobab, 2 € to 2.5 € for a bottle of 500 mL, for flour Gowé from 2 € to 3 € for box or bags of 500 g and by box of Kishk Sa'eedi with 80 g she considers from 2 € to 3 € a good price, and 5 € as very expensive for this amount. As the amount expected to sell in the store, although these products are unknown and their sale will be dependent on several factors, the experience with identical products in her store provides for Baobab 2 packs per month, for flour Gowé 10 packages and to Kishk Sa'eedi she does not have a forecast. The margin of profit it provides is identical to that obtained with other products in her store, from 30-40 %. Usually, the payment terms used in her store is 30 days, mainly for products with higher sales volume, if sometimes only buying a small amount of a given product, payment is made in the moment. Finally, she believes that her store would be ideal for selling powder or Baobab concentrate, being from the 3 products, the one which most pleased her. Considered that the Kishk Sa'eedi would not sell well in her store, but could possibly sell well in a macrobiotic store; the flour Gowé could even sell in her shop, but considers it an appropriate product for macrobiotic stores with healthy food. It is noteworthy that this store also sells dried meat, called Biltong on South Africa, and as there is demand for this type of product, probably would Kitoza as a similar product that could sell well in this store.

Case study 9

Date: 10/10/14

Location: Fernando Tomás Street, Oporto

Type of store: Grocery store or delicatessens/gourmet store

Type of business store: Medium, traditional old store, family owned. Historic shop (existing from 1934)

Store name: A Favorita do Bolhão

Product: Baobab, Gowe and Kishk Sa'eedi

The store is located in downtown Porto and with 76 years of existence, this business has been passed from parents to children. The products are geometrically organized in the shop windows, ranging from the genuine dried salted cod fish to a wide range of breads from all around the country. The store has a great selection of wine, nuts, dried fruits, cheese and deli meats. These types of groceries are much more than gourmet stores, they might come close to those delicatessens that exist around the world (the term is not recognized nor widely used in Portugal).

The owner's son who also works at the store spoke with us. The type of customers of this store are diverse, many are local residents from all ages but as it sits in the Porto city centre, it also has quite few tourists, who come to buy traditional Portuguese products and are curious to know what they have to sell from their countries.

Products presented were Baobab, Gowé and Kishk Sa'eedi, and these three products are not familiar to him and did not exist for sale in his store. He considered the potential consumers of these products may already be knowledgeable of them, specifically African people who seek this type of products or consumers who see the products for sale and feel willingness to try, customers that love to try new products with added health benefits. Usually customers do not seek this type of African products, however he has clients seeking organic food because it is advertised in the media or in social networks as being good for health, e.g. "Chia seed" or Goji Berries" which he sells in his shop, and which were unknown to the Portuguese and are now sought after by presenting excellent health benefits.

He believes the Africa origin of the products can be an advantage if customers specifically seek these products. However if customers do not know the products they can become more reluctant to purchase products from Africa for food safety reasons, customers still question products originating from these countries for reasons relative with food safety. He thinks in our market, there are some fruit concentrates or flour comparable to these, although with different nutritional characteristics, but in the case of Kishk Sa'eedi, he did not know any products that can compete with it. Regarding the type of packaging, he considered appropriate for Baobab powder the opaque plastic bags, like

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powder packets jelly approx. 100 g, and if it is a concentrate it may be sold in bottles of 250 mL or 330 ml. For the flour Gowé, he considered the package shown photographically ideal, weighing 500 g to 750 g, and in the case of Kishk Sa'eedi he considered the carton box ideal. Beyond all the legal information that should appear on package labels, he thinks the on packaging of all products should also come explained the health benefits of each product. The shelf life that he considered appropriate for the Baobab powder would be 2 years and concentrates 1 year. Flour Gowé shelf life must be between 1 and 2 years and for Kishk Sa'eedi until at least 6 months.

Regarding the price that consumers would be willing to pay, for a Baobab bottle of 330 mL perhaps € 1.5; for flour Gowé the price indicated of 2.5 € seemed appropriated to him, and for Kishk Sa'eedi the indicated price of 5 € he thinks quite expensive for our market and suggested 3 € maximum. He can't predict what will be the sales volume is this type of product, as it depends on several factors, but perhaps 5-10 units per month. Gross margin he expected to get with these products would be equal to that which he obtains with most products he sells in its store, between 30 and 40%. Usually, the payment is made to suppliers to 30 days, but for some products he makes payment immediately because he has good discounts. As for the measures and marketing strategies that he considers appropriate for these products, he said that advertising by a nationally known nutritionist or already famous bloggers in this area, who advise products for healthy ingredients in recipes they publish. He considers that for these unknown products, tastings inside store are an important way of advertising as well as on Facebook, because the Facebook page of his store has quite a number of followers on this moment. While in his shop there are many products sold in bulk, they are usually products that consumers know, but for these products it is important that they have a trademark, because having a strong brand gives other consumer a safety idea. Of the three products he considers that Baobab powder or concentrate may be the one with the greatest potential to enter the market, since it is more for direct consumption and easier to use as a supplement for to other foods, and also believes that consumers are usually more likely to buy and consume drinks that foods when it comes to lesser known products. Even for its store, Baobab is the product that he considers will have more potential and in his opinion the flour Gowé and Kishk Sa'eedi could be more targeted products for macrobiotic stores or biological products, which consumers may seek for benefits in their food and buy healthy products.

Case study 10

Date: 14/10/14

Location: Rosário Street, Oporto

Type of store: Organic grocery store, retail supplies of biological products

Type of business store: Small, family owned.

Store name: Quintal bioshop

Product: Baobab, Gowe and Kishk Sa'eedi

The store is an organic grocery store with a coffee corner and a terrace with Wi-Fi. Their owners select brands that seek to combine quality and design, with the concern about being socially responsible and safe for the environment, and along with products from organic farming, the use of natural cosmetics and the use of natural methods of healing, such as homeopathy and naturopathy.

The store belongs to two brothers, and who talked to us was one of the shop owners. She is a very active young woman, informed and has the constant concern about placing in her store healthy products that are mostly organic products. Customers of his shop are diverse, they are residents of the area who will buy fresh vegetables of biological origin, and people with higher education who have the philosophy of healthy Lifestyle, they like to consume products of biological origin combining beneficial properties for health. Usually people of mixed ages, but mostly middle-aged, well informed and who enjoy travelling and are open to trying new products.

Baobab is a powder product that she would sell in her store. The flour Gowé and Kishk Sa'eedi are products unknown to her. Considers that the potential consumers of these products can be customers trained who like to buy novelties and dietary supplements. Also, may be customers with food intolerances, to whom there are still a reduced number of foods in our market. But in either case, the success of any of the products will go through for information of their health benefits that will reach out to potential customers in different ways. She thinks that potential clients are people seeking information on the internet, therefore this type of advertising in bloggers and Facebook can be very useful, if validated through scientific information and consumer tips and healthy recipes. In his shop she could put leaflets, do product tastings and offer small samples of each product so that people experience, sometimes also invite experts linked to the food area to give workshops, which would also be an opportunity to promote these products. Thinks that the price and the form of consumption of these products can however be limiting thereof.

Considers the African origin of these products may have advantages and disadvantages, as they depend largely on the type of consumer. Some customers are very selective regarding the origin of products, however others are not concerned with the origin of the product but with the benefits for their health.

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She recognizes that for Baobab, although there are very few products in our market that can compete with it, there is a Baobab brand product that she sells in her shop, Baobab 100% native dried powder (Ox natura) and there are other similar products as "Camu camu" originating from South America. Regarding the flour Gowé and Kishk Sa'eedi she cannot identify products that can compete with them.

The adequate packaging for Baobab is similar to the Baobab product she sells in her store (Fig 1.), the product has a plastic package of 125 g and is shielded from light as not to change the properties of the product; the Baobab concentrate may be a glass or plastic bottle with 500 ml. As flour Gowé, she has in the store different types of flour packaging, plastic bags, paper bags and cardboard boxes, the most common with the weight of 0.5 to 1 Kg, personally pleasing her paper bags wholesale. Regarding the Kishk Sa'eedi, she considers the shown packaging proper but somewhat small, however the price and type of consumption of this product also condition the type of packaging. In its store packaging wholesale typically contains 6 to 12 boxes or bottles. Regarding the price considered ideal for these products, she recognizes this Baobab fruit as an expensive product, the powder she has for sale of brand "nature Ox" costs about 7.5 € packing 125 g, although the brand is certified for marketing of organic products, which in itself enhances the product, the Baobab is sold as a concentrate, a bottle of 500 mL which can cost between 2-3 €. As flour Gowé, the price indicated of 2.5 € seems good to her because she has other more expensive flour in her store. Regarding the Kishk Sa'eedi presented for packing 80g, 3 € seems an appropriate value. As for a prediction of quantity and sales volume relative to the Baobab, she believes it could sell 3 packs, for flour Gowé possibly 2-3 packs, but for the Kishk Sa'eedi she cannot make a prediction for being the most different product. Gross margin she would expect to get with these products will be equal to the majority of the products she sells in her store, which is between 30 and 40%. Usually the payment to suppliers is made in 30 days or for small amounts she pays immediately. She considers that these products should have a strong trademark, because it will be easier to put them on the market. In the case of Baobab it could use Super-Food brands that already exist in the market (e.g. Ox nature, Föld, Biosamara, etc.) and it would have easier distribution channels. She believes that Baobab and flour Gowé are products with potential that could easily be introduced in their store, although the Baobab has the most potential, the Kishk Sa'eedi if well publicized could possibly also market it, the store owner was very curious about this product, stating that she would like to taste it.

Case study 11

Date: 30/09/14
Location: Rua do Outeiro, Gemunde, **Maia**
Type of company: Agro-industry
Type of business company: Large company
Store name: Frulact
Product: Baobab, Gowe and Kishk Sa'eedi

Frulact is a food industry company specialized in fruit processing, headquartered in Maia, Portugal. Its aim is the manufacture of food products like fruit compounds for food industries. It produces fruit based products by developing fruit transformation activities in a number of different ways. At this survey, answered by the Director of Innovation and Quality, to whom we ask for an input as representing Frulact. She considers that potential consumers of Baobab may be young and seniors, who buy this product by curiosity and by its distinctive nutritional value, while in the case of flour Gowé, consumers may be curious and people familiar with the product in the original version, who purchase for African ethnicity. For the Kishk Sa'eedi, consumers may be children and young people or travellers who have become familiar with the product in its original geography and may be curious in trying this product. She considered as an advantage being an African product for Baobab and Kishk Sa'eedi, but for flour Gowé she is not sure. In our market there are products that can compete with Baobab, like yogurt and some drinks and in the case of Kishk Sa'eedi e.g. dehydrated fruit snacks, but can't find products in our market products that can compete with the flour Gowé.

She considers that the appropriate packaging for Baobab powder, sachets to enrich the existing product and packaging should highlight the nutrition information and the geographical origin of the product; in the case of flour Gowé in boxes or bags of 500 g or in smaller bags to be able to try, highlighting the nutritional properties of products and the health benefits with e.g. the absence of gluten; and for Kishk Sa'eedi bags with snacks, should contain nutrition information on the packaging referring to the fact that it is a natural product without food additives. As regards the shelf life she considered that dry food should have at least 6 months.

In the questions of marketing and advertising of products, she believes that information campaigns highlighting the nutritional properties of these products will be very useful, in the case of flour Gowé should highlight the fact that it is an alternative to gluten and lactose intolerant people and for Kishk Sa'eedi the fact that a natural and healthy snacks. Difficulties likely to arise because they are virtually unknown products for Portuguese consumers, the issue of habituation to these new flavors will be a problem to overcome, and the problem that they are not prepared for direct consumption, as in the case of flour Gowé, that requires reconstitution of these products in your market. The product price may also be a limiting factor in sales too. Some marketing strategies that she considers that would be successful for the launch of these products in the market would be for

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example an advertising campaign launched by an "ambassador" who may be a public figure (African preferably), who teaches as to prepare and consume the products. In retail outlets what can be done is launch with tastings of products, with a knowledgeable person in store, to clarify how consumers can consume and prepare these products. May be advertised in stores through leaflets for each product and placing small movies on their websites or Facebook. For any of the three products considered, it is important to have a trademark connected to the geographical origin of each product. The questions about the selling price of products as the company has no direct sale of products were not responded relating to this subject due to lack of data. But she considered that this type of products can be commercialized in specialized types of stores, grocery stores or gourmet shops and online sales. The product that she claims to have the greatest potential to be released in the market is the Baobab, among the three products, as probably the only one that some consumers already know and for its flavour also appealing.

Annex3: Product Marketing Fiche

The baobab powder

An exotic revisited food with a unique taste

Rich in calcium, antioxidants and vitamin C

Used as ingredient in your dishes and drinks

> The powder is naturally present inside the fruit of the baobab, a renowned African tree (*Adansonia digitata*). Baobab powder is treasured for its nutritional and physico-chemical proprieties. It is traditionally used to prepare drinks or as an ingredient. It offers better nutritional profiles to food.

What are Baobab powder reported key properties?

Baobab contains twice as much as calcium than milk. It also contains more antioxidants than fruits such as tomato, blackberry and grape.

Vitamin C plays an important role in protection of the cells and in staying healthy. Baobab contains more vitamin C than many other fruits renowned for their vitamin C content such as orange, kiwi and cranberry. These proprieties explain why baobab is called a "super-fruit".

AFTER "new products"

Building on traditional processes, the research conducted for the European Union funded project African Food Tradition Revisited by Research (AFTER) led to the preparation of new products. Produced in accordance with good manufacturing practices, they offer:

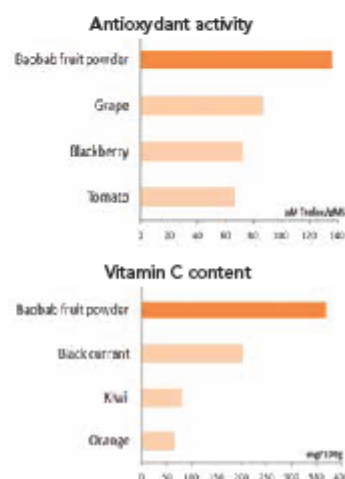
- > Optimised microbiological and nutritional qualities, thanks to a perfect command of transformation processes;
- > Adapted form and packaging for the different markets (African et European ones);
- > A longer shelf-life for a better storage and a simplified transport.

How Baobab powder will be available for consumers?

Baobab powder can be used in a large scale of food products and drinks. It can be sold with cereal base products or with health promoting products as a ready to use ingredient.

How to use Baobab powder in drinks?

You can make juice with the baobab powder. You just have to dilute the powder into water, stir for 15 minutes and filtrate. Add some sugar to meet your tastes and enjoy fresh.



Source: Nour A.A. 1980 Chemical composition of baobab fruit - *Adansonia digitata*. J. Trop. Sci. 22:283-8

FOR MORE INFORMATIONS

Appropriate scientific references can be found on the AFTER project website

<http://www.after-fp7.eu/>

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African Food Tradition Revisited by Research



The research leading to these results has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement no 245-025.

Hibiscus sabdariffa concentrated extract

A new take on a well known traditional ingredient

100% soluble and natural with a unique punchy color

A capture of all the hibiscus nutritional qualities

Ready to use in a wide range of food and drinks

> The *Hibiscus sabdariffa* flowers also known as "Roselle" or "Oselle de Guinée", or "bissap" are used in West Africa to prepare a very popular drink called bissap.

The traditional process is simple: the drink (or infusion) is obtained after a water extraction of the dried calyx, with addition of sugar and aroma (such as ginger or mint). It is served fresh and consumed any time of the day.

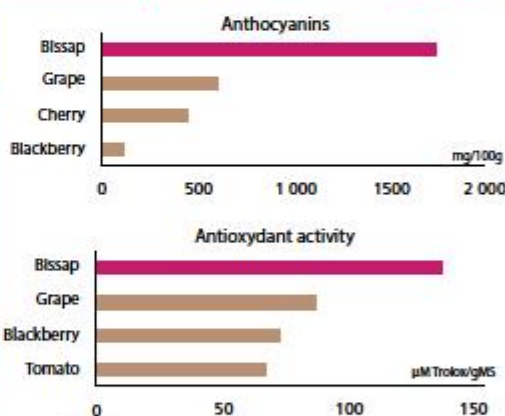


What are *Hibiscus sabdariffa* reported key properties?

Containing as many vitamin C as an orange and naturally rich in anthocyanins and organic acids, bissap is known for its significant antioxidant properties*.

AFTER process improvements enable to preserve all these nutritional qualities.

* Source: projet AFTER, UCAD-ESP, Dakar, Senegal



AFTER "new products"

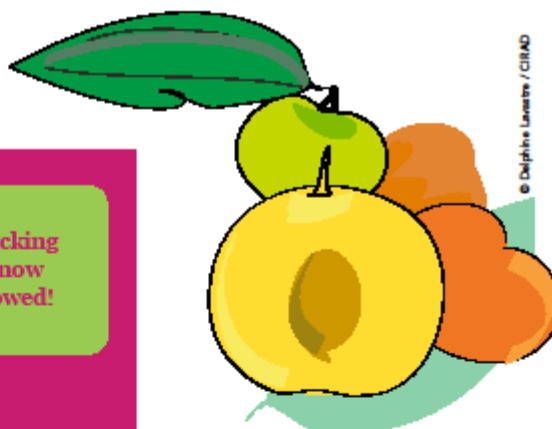
Building on traditional processes, the research conducted for the European Union funded project African Food Tradition rEvisited by Research (AFTER) led to the preparation of new products. Produced in accordance with good manufacturing practices, they offer:

- > Optimised microbiological and nutritional qualities, thanks to a perfect command of transformation processes;
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AFTER African Food Tradition Revisited by Research

Jaabi biscuit



© Delphine Lemaire / CIRAD

Rich in antioxidants and in vitamins A and C

A new affordable biscuit for children and adults

Snacking is now allowed!

> **Jaabi** (local name for the african jujube tree *Ziziphus mauritiana*) is an endemic resource of the northern savannahs of Cameroun.

The fruit is collected when dry and eaten as a snack or processed into flour to make a traditional cake called Yaabande. It has a biscuit aroma and is rich in antioxidant.

What is Jaabi reported key properties?

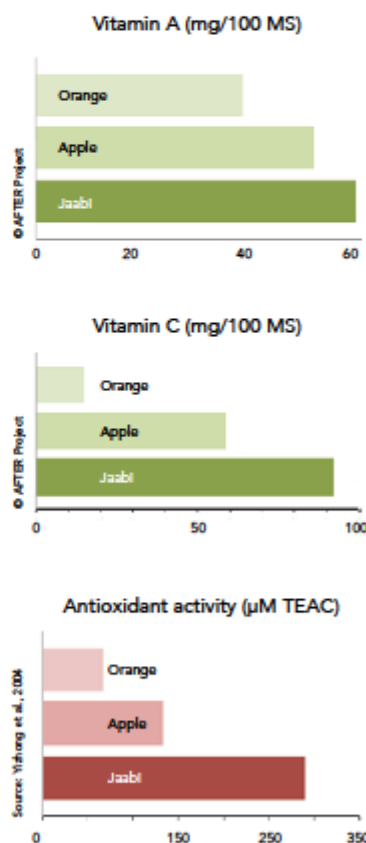
Jaabi is appreciated for its nutritional qualities: it is rich in antioxidants and contains more vitamins A and C than orange and apple.

The intense aroma of biscuit is an opportunity to develop a new product, the jaabi biscuit, by mixing its flour with cereal flour. Jaabi provides the biscuit with its nutritional qualities three times a rich in vitamin A and C content as a traditional wheat biscuit. It also provides a rich antioxidant activity to the biscuit.

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