

EU Market Assessment of Vietnamese Floating Rice



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For CBI

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1 Introduction

CBI agreed to assess the European export market potential of Vietnamese floating rice, as part of a collaborative effort to promote this rice species in An Giang Province in the Mekong Delta in southern Vietnam. CBI's partners include the Ministry of Foreign Affairs of the Netherlands, GIZ and the Vietnamese local government (An Giang Province People's Committee and The Tri Ton District People's Committee). Floating rice is a traditional variety which is well adapted to changing water levels and thus seems fit for a programme of climate adaptation, while it also may have economic benefits for farmers.

The objective of this research is to assess the market potential of the Vietnamese floating rice in Europe.

The assessment process will include the following steps:

1. Collection of relevant information concerning the product from project partners;
2. Identification of European buyers who may possibly be interested in importing and marketing this rice;
3. Contacting buyers and requesting their feedback on the proposition in a structured interview;
4. Sending samples and collecting feedback;
5. Analysis and reporting.

1.1 Structure of the report

The report will have the following contents:

1. Introduction with background, objective and research setup;
2. Description of the product, production process and the area and context of the production;
3. Sketch of the European rice market with key trends;
4. Results of the buyers interviews and tests;
5. Conclusions and recommendations.

1.2 Planning

The research was planned to take place from the second half of August to half September 2014. However, the process of collecting feedback on samples took longer than expected, and was actually finalised in November only.

Contacting project partners to gather information concerning the product and desk research started in August.

Beginning of September rice buyers in Europe were contacted to ask if they were interested to test a sample of the product, and give their feedback on product quality, chances for this rice to be included in their own product range and market opportunities for the floating rice in general. These contacts received an information sheet about floating rice (Annex 2) and were then called to ask if they were willing to participate, or else to receive general feedback on market opportunities for the described floating rice from Vietnam.

Gathering feedback after the samples had been sent proved to be more time consuming than anticipated. The research took place in a time that suppliers of some of these companies had just harvested their rice which had to be tested as well. Obviously, the testing of rice from their suppliers had more priority than testing the floating rice sample for our research.

2 The product, production process and marketing

2.1 Product Characteristics

The floating rice variety *bong sen* has a reddish colour. It belongs to the subspecies *japonica* (*Oryza sativa* L. ssp. *japonica*). Japonica rice grains are short and roundish, and do not break easily. The grains are high in amylopectin so that they stick together when cooked (Uniprot Beta, 2014).



Photo courtesy of GIZ

No consumer tests or formal studies have been undertaken to document taste and cooking characteristics of floating rice. In preparation of the floating rice project there have been informal interviews with some customers in Vietnam, the results of which will be summarised.

Consumers stated that floating rice can be cooked easily, either using modern cooking facilities or traditional ones (fire stove). Most older people (over 40) like to eat floating rice because it provides nutrition and is a healthy product (no pesticide and chemical fertilizer applied). Concerning taste, they like it because it reminds them of the past. Young people under 40 like to eat floating rice because of their perception that it has a higher nutritional value, is healthy and green. However, some people are put off floating rice because it is harder than other, more commonly used rice varieties. Some people say that they prefer the taste of floating rice compared to the common varieties. (Source: Hanington, 2014 – personal communication)

A tip on how to cook floating rice is enclosed in the bag in which the floating rice is packed for consumers. Nutritional analyses of samples of floating rice has been recently undertaken by GIZ. See test report in Annex 1. Bong sen rice has a high protein content (9,38 g/100g) compared to other rice varieties (average 7 g/100 g). Rice protein, when compared to that of other staple foods, is considered one of the highest quality proteins (Bienvenido, 1993).

2.2 Production process

Floating rice, also known as deepwater rice, is a traditional crop in the Mekong River Delta (MRD) in Vietnam. It used to be an important component of the diet for people in this area.

Prior to 1975, the total area of floating rice in the Vietnamese Mekong Delta was estimated at over 500,000 hectares, of which 250,000 ha in the province of An Giang. From the mid-1960s onwards, floating rice has been progressively replaced by high yielding varieties. Traditionally there were five different traditional varieties of floating rice. At present, only 41.3ha of floating rice of the local variety *bong sen* are said to remain in the entire Vietnamese Mekong Delta. The floating rice is currently cultivated in An Giang Province only.

In recognition of the importance of floating rice as a traditional farming practice, the Provincial People's Committee of An Giang issued a decree in March 2012 stating its intention to support, preserve and develop the floating rice farming system within Tri Ton district. The Tri Ton Commune People's Committee was assigned the responsibility for a project to conserve and develop the floating rice system with implementation of activities coordinated by the local Woman's Union. (Source: Hanington, 2014 – personal communication)

The seed is sourced and maintained by local farmers. Because bong sen is a traditional rice variety with only limited area under production, there is no substantial market for producing this type of seed. After harvesting, farmers have to select good seeds, process and keep it for the next year's crop. GIZ provided farmers with training on how to recognize non-floating rice plants in their field and remove these impurities. Training has also been provided to farmers on how to keep rice seed in good condition for next year. (Source: Hanington, 2014 – personal communication)

Generally the yield of floating rice varies depending on the land elevation. In deeper water the yield is slightly higher (Vo-Tong Xuan, 1975). The yields of floating rice are low compared to other rice varieties grown in the area; yields vary from 1 to 2.5 tonnes per ha per crop. (Nhuyen Van Kien, 2013) In areas prone to flooding only one crop a year may be grown instead of two.

In 2012, there were 41 tons produced on 41.3 ha. In 2013, 35 tons produced on the same acreage. The production was lower in 2013 because there were losses due to damage by flood waters. The 2014 crop had not been harvested at the time of writing.

The Provincial People's Committee of An Giang is planning to expand the area for floating rice to 100 ha in 2015, 200 ha in 2020 and 500 ha in 2030. This planning is integrated in the plan of Applying High Technology in Agricultural production in An Giang Province up to 2030. A specific floating rice development plan up to 2020 is being developed. A workshop to launch this plan will be organized in late July 2014. The Province plans to develop floating rice as an organic product and will start this process in 2015. Floating rice can easily be converted to organic, since fertilizer or chemical pesticides are barely used in its production.

While there is a desire to expand production in the future, it is hard to predict how large floating rice production actually will become. For the production system to be economically viable for the farmer, a rotational crop needs to be grown in the dry season (after harvesting the floating rice crop) as income from floating rice alone cannot compete with the higher yielding rice varieties.

Only one crop of floating rice per year is grown because it can only be grown in flood waters (high water level conditions). In the dry season, farmers can grow different types of vegetables such as pumpkin, cassava, egg-plant, etc. using straw from floating rice to keep humidity and provide nutrition for soil.

2.3 Marketing

The value of floating rice has increased only since 2013. Before that, farmers were facing difficulty to sell it even at local markets as the price was very low. In 2013, farmers sold it up to 25,000VND/kg (€0,89, exchange rate Sep 2013) in local markets, compared to 12,000VND/kg (€0,45, exchange rate Sep 2012) in the past. Reportedly, a small quantity of floating rice was exported to Japan, but we have not seen any documented evidence or customer feedback on the quality.

The local companies Ecofarm and ANTESCO are currently negotiating on the price and have contracts with the Floating Rice Cooperative Group. Last year, Ecofarm bought all floating rice, for selling it on the domestic market. The Tri Ton Commune is now looking for a market for vegetables which will be marketed as organic products. It is expected that these local companies will support farmers to buy organic fertilizers and that they will buy all products, floating rice as well as vegetables. The market price for Floating rice in An Giang is currently around 25,000VND/kg (€0,90, exchange rate Sep 2014), which competes at the same price point with certified organic rice.

Organic certification is a key goal of the product; initial discussions with the local farmers have started as well as the sourcing of certified organic fertiliser. The government expects organic certification to be achieved soon; potentially in 2015. However, for international certification generally a three-year conversion period is required, so this date may prove too optimistic.

Most people who have bought floating rice are wealthy. Interviews with these people show that most of them like it because it has better taste than other rice varieties and they are curious about the product. However, some of consumers don't like it because it is harder/drier than other rice varieties. At a premium price of 25,000VND/kg consumers expect a high quality organic product, however organic certification for floating rice is still lacking. (Source: Hanington, 2014 – personal communication)

Local demand for floating rice is increasing. The currently available quantity of bong sen rice is only half of the volume needed by supply companies to meet current consumer demands.

2.4 Rice Market Structure Vietnam

Before 1986, Vietnam had a centrally controlled economy, and the country was a net rice importer. Since then, market liberalisation and in particular liberalisation of the rice economy has stimulated farmers to grow more rice crops each year and to use new high yielding varieties which require more inputs. (Luu Thanh Duc Hai, 2003) Gradually rice exports increased and in 2013 Vietnam was the fifth largest exporter in the World with 1526 million US\$ exported and a trade balance of 1489 million US\$ (ITC Trade Map, 2013)

When the rice will be exported, it is often polished before weighing and packaging. Rice for export is also sold in various other forms, from freshly harvested to rice that has gone through different stages of processing. (Luu Thanh Duc Hai, 2003).

From the ITC Trade Map we learn that out of the 1526 million US\$ export value of rice exported from Vietnam, 90% is milled or semi-milled. Export of husked (brown) rice is only 1% while the export of rough rice is only 310,000 US\$, which

is 0,02% of the total export value. 9% of the export value is broken rice, which is often used as an ingredient in the production of rice snacks.

More information about the rice trade structure in Vietnam can be found in Annex 6.

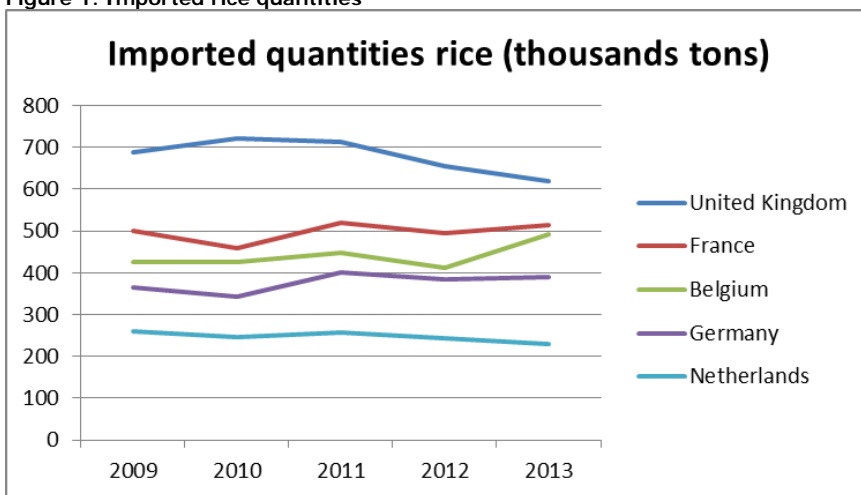
3 Sketch of the European rice market with key trends.

The EU plays a relatively marginal role in global rice consumption (0.6%), but since Europe depends largely on rice import for its consumption, the percentage of total import of rice is relatively high (CBI, 2010). In 2013 the import value of rice in EU and EFTA¹ was 2,877 million US\$, which is 12,5% of the total import value of rice in the World.

Italy is the main exporting country in Europe; its export value in 2013 was 645 million US\$. The Trade Balance for rice in EU and EFTA was -1,106 million US\$; this figure indicates total exports minus imports (ITC Trade Map, 2014).

The main rice importers in the EU are United Kingdom, France, Belgium, Germany and the Netherlands. (ITC Trade Map, 2014)

Figure 1: Imported rice quantities



Source: ITC Trade Map

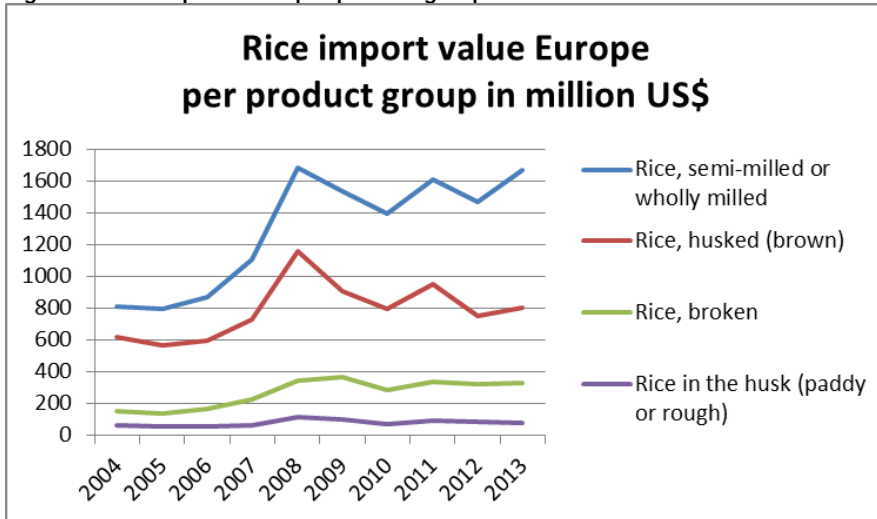
The total rice import volume in the EU and EFTA has decreased slightly from 3.29 million tonnes in 2009 to 3.28 million in 2013.

Starting in 2006, global rice prices have increased dramatically. The FAO rice-price index (100 for the base period 2002-2004) rose to 137 in 2006 and 161 in 2007, and then surged to 295 in 2008, when prices were more than double what they had been in 2006 and almost three times the base level.

An analysis of the causes of the 2008 surge in the rice price by the Centre for Global Development attributed the price surge to policy developments in India, Vietnam and the Philippines, rather than the underlying supply-and-demand situation. It noted that exceptionally high prices occurred against a background of 'record world production and not especially tight stock levels'. (Agritrade, 2010)

¹ The European Union now counts 28 countries and the European Free Trade Area comprises four other European countries who are not a member of EU: Switzerland, Norway, Iceland and Liechtenstein.

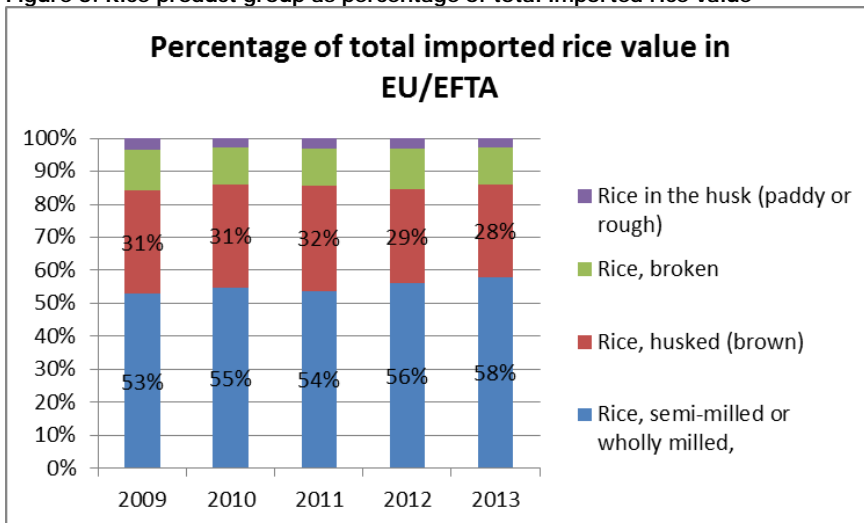
Figure 2: Rice import value per product group



Source: ITC Trade Map

Analysing imports per product group we see an increase of import value of milled and semi-milled rice as compared with the import value of brown (husked) rice.

Figure 3: Rice product group as percentage of total imported rice value



Source: ITC Trade Map

This trend is confirmed by Agritrade in their publication "Trends in ACP rice exports to the EU" on 04 February 2014. The EU now imports less husked rice (a steep drop from 52% of imports in 2006/07 to 35.6% in 2012/13) and more milled and semi-milled rice (an increase from 27% in 2006/07 to 39.6% in 2012/13). The ITC Trade Map displays the data in calendar years, while figures presented by Agritrade are indicated per season.

EU Regulations on tariffs and quotas

Rice producers within the EU receive financial support which strengthens their position on the EU rice market. The higher costs of rice production in Europe and the specific needs of the sector have historically been supported by the EU. Rice farming is one of the few agricultural sectors for which specific coupled payments are still maintained; coupled payments are payments directly connected to the production volume. Policy makers consider that without adequate financial support, farmers may switch to other more profitable crops or simply abandon agricultural production.

Until 1 September 2008, all imports of rice into the EU were subject to the issuing of import licenses. As from 1 September 2008, the licence obligation remains in place only for imports of husked, milled or semi-milled rice and for broken rice imports, as well as for all imports made under tariff rate quotas.

For rice imports into the EU there are the following preferential arrangements for certain countries of origin:

- Since 1 September 2009, the Everything But Arms (EBA) approach has allowed duty-free and quota-free access to the EU market for all types of rice originating in the Least Developed Countries.
- Furthermore, rice from CARIFORM countries² can also be imported duty and quota free since the end of 2009.
- A zero duty preferential regime is in place for imports of husked Basmati rice, whether in brown or white form, (9 eligible varieties) originating in India or Pakistan. (European Commission, 2012).

For Vietnam which is one of the major rice exporters in the world, there are no preferential arrangements in place for the imports of rice into the EU. More information about the EU trade arrangements as of 1 January 2014 can be found here: http://trade.ec.europa.eu/doclib/docs/2013/december/tradoc_152015.pdf

In 2012 Vietnam exported a total of 7.7 million tonnes of rice, of which 74% was exported to Asian countries, 20% to Africa and only 1% to Europe and CIS (Russian Commonwealth) together. Glutinous, sticky rice was only exported to Asian countries. Exports to Europe were mainly of '5% broken' (44%), '10% broken' (27%) and 'Jasmine rice' (27%).

Vietnam rice export by grade and destination in 2012 (Unit: tons)

	5%	10%	15%	25%	100%	Glutinous	Jasmine	Other	Total
ASIA	2,684,815	-	1,505,767	793,317	15,925	309,434	433,707	5,832	5,748,797
AFRICA	821,826	-	75,947	98,407	365,610	-	104,162	52,356	1,518,308
EUROPE and CIS	39,828	24,699	756	-	-	-	24,564	-	89,847
AMERICA	32,014	-	213,090	2,901	55,883	-	25,445	-	329,333
AUSTRALIA	19,235	-	-	-	-	-	11,036	-	30,271
TOTAL	3,597,718	24,699	1,795,560	894,625	437,418	309,434	598,914	58,188	7,716,556

Source: www.vietrade.gov.vn

Segments

Mainstream market Japonica – Southern Europe

Medium-grain Japonica rice was and is traditionally consumed and produced in Southern countries in the EU. Japonica rice is found in the cooler zones of the subtropics and in the temperate zones. The grains are high in amylopectin so that they stick together when cooked (Uniprot Beta, 2014). (Which is not to say that all japonica rice is also sticky rice.) These varieties are more suitable for traditional South European dishes like risotto (Italy) or paella (Spain and France).

In general, Southern European countries still have higher rice consumption levels than Northern European countries, which is related to the existence of rice production in Southern European countries. Furthermore, a difference in preferences is noticeable.

Mainstream market Indica – Northern Europe

Currently, the most widely-consumed rice in the European retail market is milled Indica long-grain rice. Demand in Northern EU countries is almost entirely for Indica (long grains, dry cooking rice), which has its origin in Tropical countries. The EU encouraged European rice producers in the years 1988 to 1993, to convert from Japonica to Indica varieties by means of direct payments. As a result of the increased demand for (Indica) rice the total acreage of rice in Europe also increased substantially (FERM, 2014)

Speciality rice

As said, Northern Europeans generally prefer dry cooked rice. However, North-European consumers also show a growing interest in special rice varieties such as waxy or glutinous rice, jasmine rice, wild rice, and coloured rice (red, black). At present, these products only account for a small share of the market.

Organic rice

Organic rice is also becoming increasingly popular; the share of organic rice is expected to increase at least in the short to medium term. Of the EU countries, Italy is the largest market for organic rice. Furthermore, Fair Trade rice is available in the market. Although the global market size of Fair Trade rice is small (4.7 thousand tonnes), it increased by 11% in 2008. (CBI, 2010)

The table below lists consumer preferences for different types of rice grain by nationality. While majority of the consumers have a preference for long grain rice, the Japanese and Korean consumer clearly prefer the short grain rice. Also North-Chinese and Taiwanese people appreciate the short grain rice.

² Caribbean Group of African, Caribbean and Pacific (ACP) States

Consumer Preferences for different types of rice by nationality

Nationality	Consumer preferences (%)					
	Long	Short	Basmati	Brown Rice	Parboil	Wild rice
Southeast Asian/South Chinese	77.2	17.2	12.3	15.8	2.6	9.6
Thai	72.3	13.6	1.7	55	6.3	0.8
Australians /New Zealanders	65	16.4	25	33.3	11.7	8.3
Americans/Canadians	54.2	31.6	19.8	26	8.3	21.9
British/Irish	51.1	10.1	43.6	18.1	4.3	10.6
Europeans (excl. British/Irish)	44.7	13.8	39.5	15.8	15.8	14.9
North Chinese/ Taiwanese	43.2	42.6	6	30.1	5.3	3.8
South Asians/Middle East	40.5	14.1	73.8	13.1	3.6	1.2
Japanese/Koreans	19.6	64.9	3.6	17.9	10.7	2.7
% Average	60	24.9	25	25	7.6	8.6

Source: Suwannaporn (without date, after 2007)

Although in Europe the majority of the consumers prefer long grain rice, within Europe there are differences per country and personal taste. South Europeans, as well as Austrians and Finns mainly eat Japonica rice (Chan Ling Yap. 1997). Consumer behaviour also tends to be heavily segmented according to ethnic groups.

Generally spoken, short-grain Japonica varieties like the floating rice *bong sen* can be seen as a speciality in Europe, which might be interesting for specific niche markets. Rice companies such as Lassie, Van Sillevoldt Rijst (VSR), Euryza and Müller's Mühle have special risotto and sushi rice in their product range. Silvo has the so called "paprijs" (porridge rice) which is presumably also a japonica type. Westmill Foods has four rice brands, of which three only have Indica rice. The brand "Green Dragon" has several types of rice, including sticky rice, as a brand with specially selected rice for the Chinese kitchen.

Trends

In the human consumption of rice and food in general, the following trends can be distinguished in Europe (CBI, 2010):

- Health trend: EU consumers are demonstrating a strongly increased interest in a healthy lifestyle and, consequently, in the consumption of health food. The aging population of the EU also stimulates interest in health foods. Health food refers to food products which are low in fat or even have calorie-burning properties and/or which have limited sugar and salt content. Rice fits well within the health trend, and specifically *Bong sen* rice which is considered being a nutritious type of rice. (see also Chapter 2.2, Product Characteristics)
- Organic food products: Organic can be seen as part of the health trend, although it also represents demand for speciality, niche and/or more luxury food products. Organic rice is becoming increasingly popular (CBI, 2010)
- Product innovation: There is a growing demand for speciality rice. Manufacturers have increased their range of speciality rice and retailers stock more exotic special rice varieties under private label. The *bong sen* rice fits well within this trend.
- Ethnic population: The EU has a growing ethnic population for whom rice is a staple food. The sticky Japonica rice is in particular favourable for people from Japanese, Korea, North China and Taiwan.
- EU consumers show a growing interest in non-European dishes. The Asian cuisine is widely known for the use of rice. Sticky rice is used in the popular sushi dishes
- Convenience trend: industry sources estimate that approximately 20% of EU demand for rice finds its way to food manufacturers, which use rice to make instant meals. The market share is expected to increase to 30%-40% in the near future. As milled rice is mostly used for these products, this product group is most likely to benefit from the growth of the convenience market.
- Food safety and hygiene: In response to increasing consumer concerns about food safety, food suppliers need to meet an increasing set of regulations to sell on EU markets. (CBI, 2010)

EU Market Structure

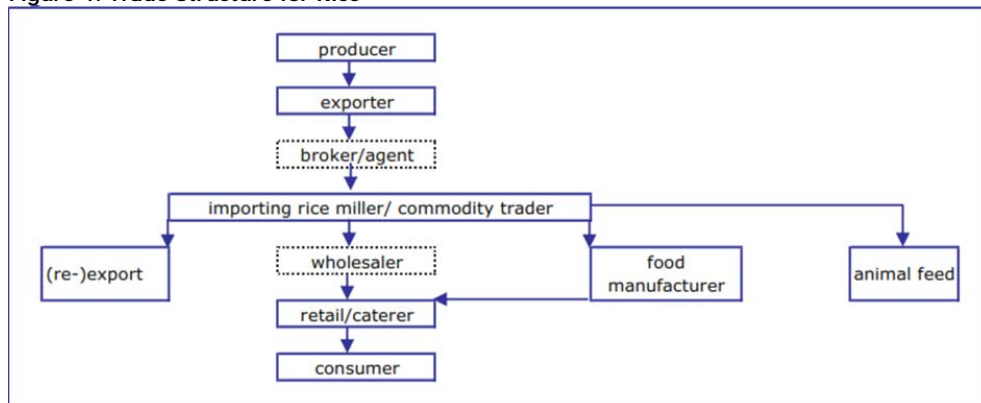
Rice available on the EU market is split between human consumption (85%), animal feed (7%), industry and seeds (3% each) and loss (1%). Human consumption is the only use increasing (FERM, 2014). In this chapter we will only consider rice trade for human consumption.

The main players in the EU trade for rice are commodity traders, rice millers and food manufacturers. Approximately 70% of rice derived from extra-EU sources is directly imported by rice millers and the remaining 30% by rice importers, mainly commodity traders. Food manufacturers are not significant importers, but are main players further down the chain. Importers buy the rice either brown or milled, but not as paddy (CBI, 2010).

The European rice millers sell the rice to food manufactures where the final production stage takes place of frozen rice products, pre-cooked dishes and other rice products. Alternatively the rice is packed by the rice millers and directly sold to

a retail outlet supermarket chain and/or wholesalers. Rice millers add value by selecting, milling, blending, packaging and branding.

Figure 4: Trade Structure for Rice



Source: CBI, 2010

The figure above shows the mainstream trade structure of rice in Europe. In addition, there is a channel for ethnic and speciality products, which is partly separate from this. In the ethnic channel, rice is often imported in consumer or catering packs. The bong sen rice from Vietnam is potentially a niche product and could use that channel as well.

The chain for organic rice fits in the model in figure 4. The importing rice miller can be a large miller having both conventional and organic rice in its product range. Organic rice is also being imported by importers of a wide variety of organic products, for example *De Nieuwe Band* (DNB) in the Netherlands which has tested a sample of bong sen rice. DNB imports rice, packs the rice in consumer packs and at the same time acts as a wholesaler.

4 Results of the buyer interviews and tests

4.1 Approach

In September 2014 a total of 14 rice buyers in Europe were contacted to request their feedback on product quality, chances for this rice to be included in their own product range and market opportunities for the floating rice in general. These companies are located in the Netherlands (7), Germany (3), Belgium (1) and the United Kingdom (3). They include large rice specialists, suppliers for the ethnic market in Europe and multinational food groups (details in Annex 3).

The companies received an information sheet about floating rice and, a few days later, were called to collect their feedback.

For the second phase of the investigation, six companies agreed to receive a rice sample for testing and giving their feedback. We sent them the samples together with the product specifications as presented in the analysis report of a sample analysed on 1 July 2014 (Annex 1). The companies were asked to give their feedback in a questionnaire (Annex 4), which was provided digitally and as paper copy, enclosed in the package with the sample.

4.2 Results

Several companies were not interested to receive a sample because the product is a speciality for niche markets. Some companies already have red rice and are not interested to invest time in assessing new red rice types like the bong sen. Even D.C. van Geest in the Netherlands, which is a wholesaler for ethnic shops with a wide range of rice specialities, was not interested to test the bong sen rice. The red rice he has in his product range is commonly used by the Tamil customers who use it for their desserts. The volumes that are sold are small.

Out of the six companies that received a sample of the bong sen rice, three returned the completed questionnaire and two described their findings during a telephone call. One company gave further feedback in the e-mail when returning the questionnaire. Annex 5 gives an overview of the feedback received from the companies that received a sample.

4.3 Feedback on the rice sample

The most evident feedback we received was the fact that the rice was not properly cleaned and that it contained a lot of broken grains. The rice seemed abraded and the sample contained quite a lot of dust. The percentage of broken grain measured by Lassie was 21% and by Müller's Mühle even 35%. The other companies mentioned the high amount of broken grains, without giving a specific percentage.

Another negative aspect on the appearance of the dry rice is the mixed colour of the rice sample. This was mentioned by Van Sillevoldt, Müller's Mühle as well as Euryza. Euryza observed that the sample gave the impression that different varieties were combined, and Müller's Mühle mentioned a semi-milled appearance of the rice.

The feedback on the bong sen rice after cooking was quite diverse. Comments on the taste varied from outright negative to positive with a nice and special taste. Lassie considered the taste "not fresh". Also they mentioned that the rice did not smell fresh. Van Sillevoldt mentioned the strong aftertaste. The taste of the rice is 'special', which is not particularly positive or negative. The aftertaste is a different issue, because this is clearly judged as a negative characteristic of the rice. Organic wholesaler "De Nieuwe Band" was positive about the taste as well as the appearance of the cooked rice. They appreciated the special taste and the pleasant pink colour of the rice after it had been cooked. Müller's Mühle is the only respondent that assessed the taste as well as the smell of the cooked rice being normal and nothing special.

The texture has been assessed by most respondents as being neutral, it was not judged positively nor negatively. Only Müller's Mühle considered the rice being solid compared to other medium grain rice types. This is judged as a positive characteristic, but it does mean that the rice is not suitable for risotto or sushi dishes.

General comment given by Van Sillevoldt was that the cooked product was much better appreciated than the dry rice and that, moreover, better cleaning should improve the cooked score.

Although the bong sen is a japonica rice which is commonly used for "sticky rice dishes" like risotto and sushi, the respondents did not have ideas for the suitability of this rice for particular dishes. Müller's Mühle even stated clearly that they did not consider this rice to be suitable for risotto and sushi, because it has a firm kernel after cooking, and is not particularly sticky.

The rice has also been tasted by the Mercadero office staff and their family members. General feedback we received from this testing confirmed the specific taste which was appreciated, but not considered very special and outstanding. The taste was described as slightly nutty. The texture was defined as being slightly sticky, but also as mealy.

5 Conclusions and recommendations

In this Chapter, the potential of the product will be discussed using the structure of the marketing mix: product, including product quality, quantity and certification, price, promotion and place.

5.1 Product characteristics

The assessment of the taste of the cooked rice gave different results. In general the cooked rice was better appreciated than the dry rice, but there were some negative comments on the cooked rice as well. The special taste of the bong sen rice was confirmed by most of the companies as well as in the informal tasting, but it was not always considered a positive characteristic of the rice. Van Sillevoldt mentioned that the rice has a foul aftertaste.

The rice clearly is a medium grain rice, but it does not have the outspoken sticky characteristics as commonly perceived of japonica rice types. The rice is generally assessed as slightly sticky, or even not sticky at all with a firm kernel after cooking (Müller's Muhle). This was also observed in Vietnam, where some customers stated that bong sen rice is harder than other, more commonly used rice varieties (Source: Hanington, 2014 – personal communication). This means that the rice is not particularly suitable for South European dishes such as risotto or paella.

5.2 Rice quality

Some of the respondents see market opportunities, but only if improvements are made in the quality. Van Sillevoldt stated that the scores for the cooked rice should be higher when the dry rice is properly cleaned. The negative aftertaste mentioned by Van Sillevoldt as well as the fact that the rice did not have a fresh smell and taste, as mentioned by Lassie, might be partly caused by the rice being not properly cleaned.

The high percentage of broken grains was also mentioned frequently as a serious quality issue. Two companies measured the broken grain percentage; Lassie found a percentage of 21% and the percentage found by Müller's Muhle was even as high as 35% broken grains. Euryza mentioned a quality requirement of < 5% broken grains. According to Euryza the broken grain percentage is particularly important if the rice is imported in relatively small units like big bags (with a content of around 1000 kg), as opposed to imports as bulk cargo by ship loads. When it is sold in bulk in big lots there is still the possibility to separate the broken grains from the head rice. Still it is recommendable to improve the quality by proper cleaning and sieving so that quality requirements are met.

Extensive improvements in quality should be made before the rice can be exported to Europe. It is also recommended to have clean, high quality rice samples available when marketing opportunities are further investigated. This will avoid quality aspects affect other aspects during the tests. Examples of quality influencing the outcome of tests are the taste that can be influenced by dust, the appearance that is influenced by the rice being half milled and containing chaff particles and the overall focus on quality instead of product characteristics.

5.3 Import volumes

Several companies that have tested the rice emphasised that apart from improvements in the quality, also sufficient volumes must be available. The volumes currently available (40 MT) can only meet half of domestic demand, let alone serve to develop an export business. Euryza mention a volume requirement of 20 – 200 MT. According to Van Sillevoldt, a minimum of 100 MT per year should be available for distribution to supermarkets. On the other hand, organic wholesaler DNB sells only 4 MT of the red rice they currently have in their product range, and could accept a smaller volume.

The target of 100 MT is possibly realised in 2016. When looking at the volumes sold by DNB and the minimum volume mentioned by Euryza, the volume available in 2016 should be sufficient to sell the bong sen rice as a niche product.

5.4 Certification

The bong sen rice is probably 'organic by default', but not yet certified organic. Organic certification is a key goal for the product, and this would certainly increase market opportunities for bong sen rice. Bong sen rice is a speciality rice, and organic certification would make it possible to sell the rice through organic market channels.

5.5 Price

The market price for bong sen rice in An Giang is currently around 25,000VND/kg (€0,90, exchange rate Sep 2014), which competes at the same price point with certified organic rice. This is relatively high for a product that is not certified organic.

European rice buyers that asked for the price considered this price quite high, even for a speciality product.

5.6 Promotion and story-telling

Bong sen is a traditional variety which is considered a speciality rice in Vietnam, with a distinct taste that reminds older people of their youth. This taste has a special (sentimental) value in Vietnam, but not in Europe.

Apart from the rice being a valuable food crop, floating rice also plays a major role in natural flood regulation. This is a major reason for the floating rice system being further developed again in the Mekong Delta.

The story behind bong sen rice does not seem very powerful in attracting customers in Europe to the rice, although it may have some value in the organic channel.

5.7 Place

Mainstream market Japonica – Southern Europe

Bong sen rice is a japonica variety which is commonly used for South European dishes and sushi. From the tests we learn that bong sen rice does not have the outspoken “sticky characteristics” of most japonica rice types. This means that it is not evident that this rice has more marketing opportunities in South European countries.

Mainstream market Indica – Northern Europe

Müller’s Mühle does not see a strong USP for the bong sen rice. The company would not consider to include it in their product range. They confirmed that it is not a suitable product for the mainstream rice business.

Speciality and organic rice

Bong sen rice clearly is a niche product that could be sold as a speciality product by large rice companies or by small wholesalers specialised in ethnic food or organic food. We did not find specialists in ethnic food willing to give feedback in this market survey, but the organic wholesaler DNB was not negative. They assessed the product characteristics of this rice as being positive.

A large rice company like Van Sillevoldt does see bong sen rice as a type of rice that could fit within their product range, provided that the rice would be properly cleaned and a minimum volume of 100 MT per year would be available.

5.8 Overall assessment

Neither the rice nor the story generated excessive enthusiasm among European buyers. Still, it may be possible to find a market niche for the rice, positioning it as a special japonica rice, possibly organic. In order to do this, the volume would need to increase and the processing quality improve.

Since the enthusiasm for the product is not very high, a relatively high marketing effort would be needed. Moreover, a supply chain would need to be set up with a focus on exports, making sure, among other things, that quality is improved. This will be quite a costly exercise. For the small volumes involved, it is doubtful if such an exercise would pay off.

This report was produced for CBI by Mercadero’s Inge Vos and Freek-Jan Koekoek.

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Annex 1 Analysis Report



SỞ KHOA HỌC VÀ CÔNG NGHỆ TP.HCM
 CHI NHÁNH CÁN TIỀN - TRUNG TÂM DỊCH VỤ PHÂN TÍCH THÍ NGHIỆM TP.HCM
 CÁN TIỀN BRANCH - CENTER OF ANALYTICAL SERVICES AND EXPERIMENTATION HCMC

Trang 3/3

KẾT QUẢ KIỂM NGHIỆM

Ref No: CT1061294

Nutrition Facts

Serving Size: 100g
 Servings Per Container

Amount Per Serving

Calories: 347,2kcal Calories from Fat: 20,9kcal

% Daily Value *

Total Fat:	2,32g	3,57%
Saturated Fat :	1,08g	5,42%
Trans Fat :	0g	
Cholesterol:	0mg	0%
Sodium:	0,52mg	0%
Total Carbohydrate:	72,2g	24,1%
Dietary Fiber	2,41g	9,64%
Sugars :	0,4g	
Protein:	9,38g	
Vitamin A :	0 IU	0%
Vitamin C :	0mg	0%
Calcium :	7,77mg	0,8%
Iron :	0,78mg	4,3%

* Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your caloric needs:

	Calories	2,000	2,500
Total Fat	Less than	65g	80g
Sat Fat	Less than	30g	35g
Cholesterol	Less than	300mg	300mg
Sodium	Less than	2400mg	2400mg
Total Carbohydrate		300g	375g
Fiber		25g	30g

Calories per gram:
 Fat 9 Carbohydrates 4 Protein 4

Nutrition facts

FAO 14/7 p.214, 1986
 GC-ISOCD 5509:94 (*)#
 Tham khảo (CASE.NC.0007)#
 GC-FID-AOAC 994.10.2002 (*)#
 Ref. AOAC 969.23, FDA
 Food composition
 a31am002 (Ref. AOAC 991.43) (*)#
 TCVN 4594-1989#
 FAO p.221-223, 1986 (*)
 HPLC-AOAC 2001.13; AOAC 981.17; Fat Soluble vitamin, p.17 (*)#
 HPLC-High performance columns for HPLC, CA 190-933C, p.36, 196 (*)#
 Ref. AOAC 969.23, FDA
 Ref. AOAC 969.23, FDA

(*) Phương pháp được VILAS công nhận
 (#) Kết quả do CASE TP.HCM thực hiện

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 CHI NHÁNH CÁN THO - TRUNG TÂM DỊCH VỤ PHÂN TÍCH THÍ NGHIỆM TP.HCM
 CÁN THO BRANCH - CENTER OF ANALYTICAL SERVICES AND EXPERIMENTATION HCMC



PTT-CTT-9081294

Mô số mẫu/ Sample Code
 BN1406037
 CT14061294

KẾT QUẢ THỬ NGHIỆM
TEST REPORT

HMNM 023
 Ngày/Date : 02/07/2014

Tên khách hàng/ Customer : TỔ CHỨC HỢP TÁC QUỐC TẾ ĐỨC
 Địa chỉ/ Address : SỐ 04 - NGUYỄN DU - P. MỸ BÌNH - TP LONG XUYÊN - AN GIANG
 Tên mẫu/ Name of sample : FRI
 Số lượng/ Quantity : 1
 Tình trạng mẫu/ Sample description : Hạt đỏ
 Ngày nhận mẫu/ Date of receiving : 24/06/2014
 Ngày hẹn trả KQ/ Date of issue : 01/07/2014

STT/ No	Chỉ tiêu kiểm nghiệm/ Parameters	Đơn vị tính/ Unit	Kết quả/ Result	Phương pháp/ Test method
1	Ca	mg/100g	7,77 (%DV = 0,8)	Ref. AOAC 969.23, FDA
2	Fe	mg/100g	0,78 (%DV = 4,3)	Ref. AOAC 969.23, FDA
3	Na	mg/100g	0,52 (%DV = 0)	Ref. AOAC 969.23, FDA
4	Calories	kcal/100g	347,2	Nutrition facts
5	Calories from fat	kcal/100g	20,9	Nutrition facts
6	Dietary Fiber	g/100g	2,41 (%DV=9,64)	x31am002 (Ref. AOAC 991.43) (*) (F)
7	Sugar	g/100g	0,4	TCVN 4594-1988(F)
8	Protein	g/100g	9,38 (Nx6,25)	FAO p.221-223, 1986(*)
9	Total carbohydrate	g/100g	72,2 (%DV=24,1)	Food composition
10	Total fat	g/100g	2,32 (%DV=3,57)	FAO 147 p.214, 1986

Chúng tôi chỉ chịu trách nhiệm về độ chính xác của kết quả phân tích dựa trên các thông tin được cung cấp và không chịu trách nhiệm về độ chính xác của các thông tin khác.
 We only accept responsibility for the accuracy of the analytical results based on the information provided and do not accept responsibility for the accuracy of other information.
 * Các giá trị tham chiếu dựa trên cơ sở dữ liệu của Viện Dinh dưỡng Quốc gia, Viện Dinh dưỡng Quốc tế và Viện Dinh dưỡng Hoa Kỳ.

Trụ sở chính: 10 Nguyễn Văn Phú, Phường Thảo Điền, Quận 1, TP.HCM
 Số điện thoại: 08.38222007 - 38222008 Fax: 08.38222007
 Email: case@case.vn

Chi nhánh (Số 1): 11 Nguyễn Văn Phú, Phường Thảo Điền, Quận 1, TP.HCM
 Số điện thoại: 08.38222007 - 38222008 Fax: 08.38222007
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Annex 2 Information Sheet



Bong sen is a floating rice variety, traditionally grown in the Vietnamese Mekong Delta. Floating rice, also known as deep water rice, grows in flooded areas. It can survive by rapid elongation of the stem when water is rising. In Vietnam it is considered a speciality rice, with a distinct taste that reminds older people of their youth. Bong sen is marketed in Vietnam at a relatively high price level.

Product characteristics:

The floating rice variety *bong sen* belongs to the subspecies *japonica* (*Oryza sativa* L. ssp. *japonica*).

Appearance

The grains are short, roundish and red in colour.



Marketing of bong sen

The Province of An Giang initiated a project to support and develop the floating rice farming system. Apart from the rice being a valuable food crop, floating rice also plays a major role in natural flood regulation. The project is being implemented in cooperation with the German Development Organisation GIZ. The area for floating rice will be expanded. Currently, floating rice is only sold on the domestic market. Because production will increase in the near future, CBI offered to assess the European export market potential. Mercaderó is conducting this survey for CBI to explore export marketing opportunities for bong sen rice.

Annex 3 Overview Approached Companies

	Company	Business type	Country	Comments	First feedback
1	Lassie	miller/packer	Netherlands	Varied assortment of rice, including rice for risotto and sushi. (Japonica) Lassie is part of Ebro Foods, multinational food group based in Spain	Lassie is interested in the floating rice, and is willing to test a sample
2	Van Sillevoldt Rijst	miller/packer	Netherlands	Van Sillevoldt Rijst is part of the French Marbour group, the main business activity is sourcing, processing cargo rice to white rice, packing, sales and distribution of rice and rice flour. Round rice is included in the product range of this company.	Is definitely interested in receiving a sample, and if possible specifications of the rice. Van Sillevoldt has several niche rice types. They sell only little of these rice types, around 20 MT per year.
3	Silvo	rice packer	Netherlands	Silvo has different types of rice, including "porridge rice", which is a japonica rice. Since 2004, Silvo is part of the McCormick group.	They buy from Van Sillevoldt Rijst, therefore they will not test a sample.
4	D.C. van Geest	Whole saler for ethnic stores	Netherlands	DC Van Geest has different types of rice in the range. Currently they also have red rice, but there is hardly demand. It is used mainly by Tamils in the preparation of desserts.	DC Van Geest was not interested to receive a sample. Demand for these rice types is low.
5	Unidex	Wholesaler exotic foods	Netherlands	Unidex specializes in the distribution of exotic foods	Unidex was not interested in the bong sen rice.
6	De Nieuwe Band	Organic Wholesaler	Netherlands	DNB sells both Japonica and Indica rice varieties. The Japonica rice is purchased from a rice miller in northern Italy, and the Indica rice (especially Basmati) comes from India. At this time, the ratio is 60% Japonica (60MT) and 40% Indica (40MT).	DNB also has red rice in its product range, of which they sell around 4 MT annually. All rice is purchased from the mill in 25 kg bags. Packing in consumer packages is being done by DNB. Their product range includes both white and brown rice. DNB will test a sample bong sen rice.
7	De Zaai Ster	Organic Wholesaler	Netherlands	Small organic wholesaler. Initially selling regional fresh products, but now they have a wider product range.	Rice is not their core business. Testing a sample would not be useful.
8	Müller's Mühle	Rice miller / packer	Germany	Müller's Mühle has one of the most modern rice mills in Europe and offers the best quality rice, legumes in fine varieties, cereals, starches, sugar variants, industrial flours and much more. Gevarieerd assortiment. Ook risottorijst en sushirijst. Müller's Mühle has one of the most modern rice mills in Europe and offers the best quality rice, legumes in fine varieties, cereals, starches, sugar variants, industrial flours and much more. Gevarieerd assortiment. Ook risottorijst en sushirijst.	MM is interested in the bong sen rice. They will test a sample.
9	Euryza	Rice miller / packer	Germany	Large rice company, part of Herba Foods, S.L. since 1999.	Rice is purchased as brown rice. Euryza is interested in the bong sen rice as specialty rice, and would like to receive a sample to test the rice.
10	Rickmers	Rice miller / packer	Germany	Traditionally a rice trader. Rickmers presents itself as a producer of a wide range of high quality products with guarantee of origin.	Rickmers is interested to receive the sample and test it. They have Japonica rice in their product range and they are interested to add new specialities.
11	Mars /UNCLE BEN'S	Food Multinational	Belgium	UNCLE BEN'S has different types of rice, including brown rice, jasmine, basmati and wild rice.	Not interested to receive a sample. Do not see a market for this type of rice.
12	Amira	Rice miller / packer	United Kingdom	Amira Nature Foods Ltd. is a provider of packaged Indian specialty rice, with sales in over 40 countries.	Not interested to receive a sample. Does not fit within their product range. Only Indica from India.
13	Veetee Rice Tld	Rice miller / packer	United Kingdom	Many different types of rice. Also sells ready to use rice dishes.	Not interested to receive a sample. Recommends niche market channels.

14	Westmill Foods	Large whole saler for ethnic food products	United Kingdom	Westmill is one of the largest flour, rice, spices, sauces, edible oils, and noodles suppliers to the UK and European ethnic market.	Only interested in long grain rice.
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Annex 4 Questionnaire Bong Sen Floating Rice

Introduction

Bong sen floating rice is a traditional variety from Vietnam, grown in the Mekong Delta. Currently the production area is limited, but it will be expanded according to a floating rice development plan up to 2020. In Vietnam, bong sen is appreciated for its special taste.

The floating rice variety *bong sen* belongs to the subspecies *japonica* (*Oryza sativa* L. ssp. *japonica*).

Questions

Please describe your findings on the following aspects. What do you consider positive, and what could be improved. Please give a detailed explanation; if you need more space when answering the questions you can add extra pages. If you have additional assessment criteria, we would be happy to receive your feedback on these as well.

Dry rice

Aspect		Score: 1 negative, 2 neutral 3 positive	Explanation
1	Colour	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/>	
2	Shape	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/>	
3	Grain length	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/>	
4	Grain quality	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/>	
5	Other aspects _____	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/>	
6	Comments		

Cooked rice

Aspect		Score: 1 negative, 2 neutral 3 positive	Explanation
1	Taste	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/>	
2	Aroma	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/>	
3	Texture	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/>	
4	Cooking requirements	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/>	

5	Suitability for particular dishes _____	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/>	
6	Comments		

Marketing opportunities of the bong sen rice

1	Is bong sen a type of rice that could fit within your product range? Please explain your answer.	
2	In which market segment do you expect the bong sen rice to be successful?	
3	In which stage of processing do you usually buy rice (husked, milled)?	
4	What would be the minimum and maximum volume you require for this type of rice to be included in your product range?	

Comments and recommendations:

Thank you for your cooperation.

Annex 5 Feedback on samples

	LASSIE	Euryza	De Nieuwe Band	Van Sillevoldt	Müllers Muhle
Dry rice					
Colour	Positive	Negative, the impression is that different varieties are combined		Negative, mixed	Negative, semi-milled appearance. If it would be fully reddish: positive
Shape	Positive	Negative, small and short		Negative	Neutral, it is a medium grain
Grain length	Positive for medium grain.	Negative, absolutely too many broken grains	Negative, too many broken grains	Negative, too many broken grains	5.5 length is a medium grain
Grain quality	positive	neutral			It has a firm and stable kernel, which is positive
Other aspects	Sample contains a lot of broken grains: 21.1%	too much abrasion - dust	Too dirty (dusty)		Percentage broken grains is far too high: 35%

Cooked rice	LASSIE	Euryza	De Nieuwe Band	Van Sillevoldt	Müllers Muhle
Taste	negative: no fresh taste	Taste: neutral, it is okay.	Positive, nice and special taste	Neutral, it has a special taste. The rice has a strong aftertaste (negative)	Neutral, no special taste
Aroma	no fresh rice smell - neutral aroma	Smell: neutral.		neutral	Neutral, nothing special
Texture	texture: positive	Texture is positive		neutral	Solid grain compared to other medium grain types
Cooking requirements	Cooked for 12 minutes in excess water	Neutral			
Suitability for particular dishes	Suitability for particular dishes: negative	No ideas yet on suitability for particular dishes.			This rice is not sticky, and therefore not suitable for risotto or sushi
Comments			Special pink colour after cooking the rice	After cooking it okay, but it needs to be cleaned first.	

Marketing opportunities of the bong sen rice				
Is bong sen a type of rice that could fit within your product range? Please explain your answer.				
LASSIE	Euryza	De Nieuwe Band	Van Sillevoldt	Müllers Muhle
No, because the taste and smell of the rice do not meet market standards.	Only due to the sustainability aspects "the Story"			No, it does not have a clear USP and volumes are too small
In which market segment do you expect the bong sen rice to be successful?				
LASSIE	Euryza	De Nieuwe Band	Van Sillevoldt	Müllers Muhle
Vietnamese stores / consumers	Toka's, Organic shops. Where the quality is not the main argument		Retail	Not for mainstram business
In which stage of processing do you usually buy rice (husked, milled)?				
LASSIE	Euryza	De Nieuwe Band	Van Sillevoldt	Müllers Muhle
Dehusked or fully miled. We use 95% long grain rice. No mediumgrain/japonica rice	Husked and milled		Husked and milled	Husked and milled
What would be the minimum and maximum volume you require for this type of rice to be included in your product range?				
LASSIE	Euryza	De Nieuwe Band	Van Sillevoldt	Müllers Muhle
N/A	20MT to 200 MT p/a		500 - 1000MT	
Comments and recommendations:				
LASSIE	Euryza	De Nieuwe Band	Van Sillevoldt	Müllers Muhle
We tested the sample as received, without cleaning, removing broken grains or milling.		The rice must be cleaned and sieved before exporting it.	The rice must go through a proper cleaning process in Vietnam before it can be offered on the European market.	

Annex 6 Rice Trade Structure Vietnam

The paddy to rice process in the Mekong River Delta starts with checking the standard requirement on moisture degree and the grain length. Secondly, the paddy is sorted according to standard quality grades. After sorting, paddy will be dried when necessary and then stored in the warehouse. The next step is milling into brown or white rice.

Modern rice milling processes consist of:

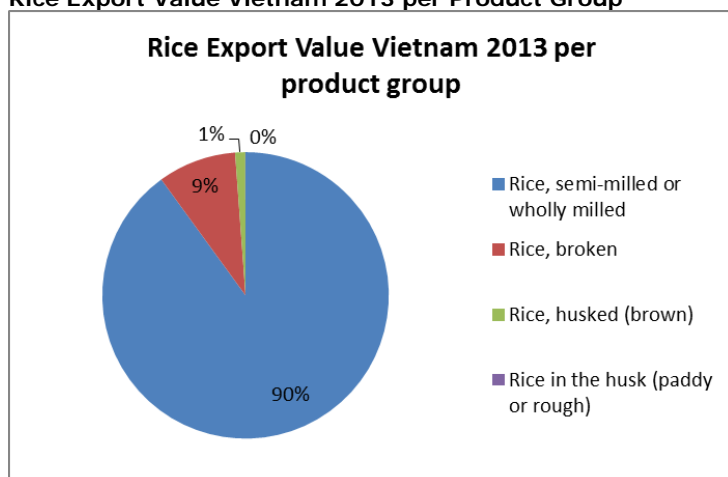
Stage	Function
<i>Pre-cleaning</i>	removing all impurities and unfilled grains from the paddy
<i>Husking</i>	removing the husk from the paddy
<i>Husk aspiration</i>	separating the husk from the brown rice/unhusked paddy
<i>Paddy separation</i>	separating the unhusked paddy from the brown rice
<i>De-stoning</i>	separating small stones from the brown rice
<i>Whitening</i>	removing all or part of the branlayer and germ from the brown rice
<i>Polishing</i>	improving the appearance of milled rice by removing remaining bran particles and by polishing the exterior of the milled kernel
<i>Sifting</i>	separating small impurities or chips from the milled rice
<i>Length grading</i>	separating small and large broken from the head rice
<i>Blending</i>	mix head rice with predetermined amount of broken, as required by the customer
<i>Weighing and bagging</i>	preparing milled rice for transport to the customer

Source: <http://www.knowledgebank.irri.org>

When the rice will be exported, it is often polished before weighing and packaging. Rice for export is also sold in various other forms, from freshly harvested to rice that has gone through different stages of processing. (Luu Thanh Duc Hai, 2003).

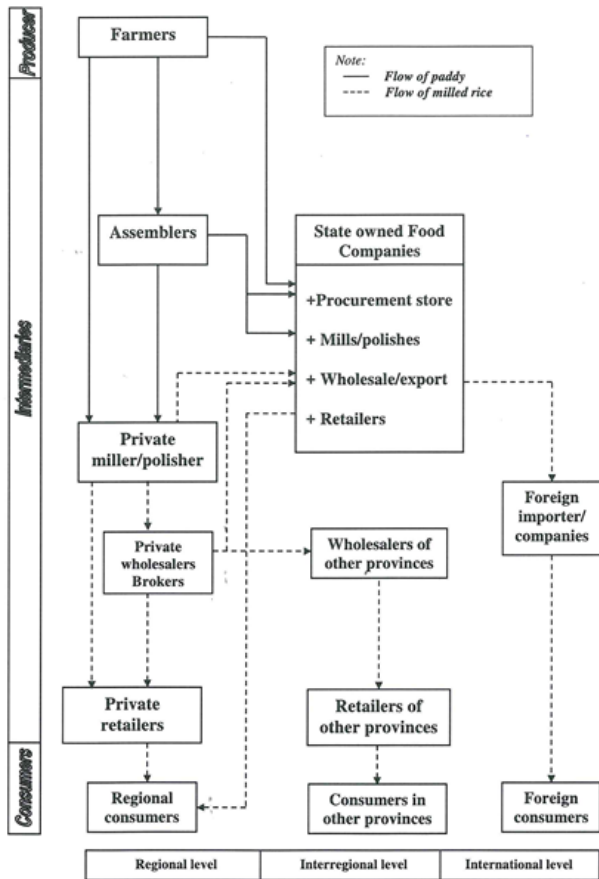
From the ITC Trade Map we learn that out of the 1526 million US\$ export value of rice exported from Vietnam, 90% is milled or semi-milled. Export of husked (brown) rice is only 1% while the export of rough rice is only 310,000 US\$, which is 0,02% of the total export value. 9% of the export value is broken rice, which is often used as an ingredient in the production of rice snacks.

Rice Export Value Vietnam 2013 per Product Group



Source ITC Trade Map

Paddy and rice marketing channels in the Mekong River Delta



Source: Luu Thanh Duc Hai. 2003

Annex 7 Pictures



Application of organic fertilizer on floating rice field



Harvesting of bong sen rice



The freshly harvested bong sen rice crop



Floods in floating rice cultivation area

Pictures on front page and in Annex 7:
Photo courtesy of Integrated Coastal Management Programme (ICMP)
Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH