Promotion of the rice value chain in Benin

Cooperation between Beninese farmers' organisations, the Belgian retailer Colruyt and the NGO Vredeseilanden/VECO

Full case study

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VECO

A better deal for farmers


Bernd Fink

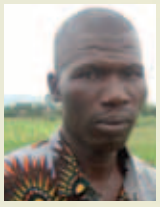
1. Introduction

In August 2010, 24 tonnes of Fair Trade rice from Beninese smallholder farmers' organisations were exported to the Belgian retailer, Colruyt. This boosted the quality of local rice production and processing, and shows good potential for improved sales in local markets in Benin.

'We made contact with the Belgian NGO Vredeseilanden/VECO, through a project on teakwood in Indonesia', says **Koen De Maesschalck**, who was **responsible within Colruyt for public relations and CSR** at the time the rice project started in Benin. 'We wanted to learn more from each other, and found a new opportunity in Benin to set up a joint partnership with the Beninese farmers' organisations. They wanted to produce and sell better quality rice and VECO was looking for an experienced partner to co-facilitate this process. And Colruyt wanted to explore how to improve sustainability in our purchasing practice. We discovered that we not only provide expertise and finance, we also opened the doors of our company, i.e. by welcoming two persons from Benin for an internship.'

Mieke Lateir, Sustainable Agriculture Chain Development Specialist, VECO:
'Together with Colruyt, we examined how to strengthen the farmers' organisations and how to improve the quality of their rice. Higher yields and better quality rice are beneficial for domestic food supply, and generate higher incomes for the rice farmers and their families. In order to compete with cheap Asian rice, the quality of the rice really needed upgrading. This was quite a challenge. Before the start of the project, farmers had little experience with rice growing, let alone with the quality standards of modern markets. From the very start, we aimed at exporting a symbolic quantity to Belgium. So there is still a long way to go, with lots of trail and errors, but with nice, motivating perspectives.'

Dènanssé Dossou, a female member of the AYIDOTE group of the Kpataba farmers' organization:
'In my family we only eat rice we grow ourselves. In this village, it is rare to find people who still eat any imported rice. About ten years ago, before New Year celebrations, vans used to arrive and unload imported rice bought to feed our the village. But for the last two years, not a single bag of imported rice has been brought to the village for the New Year holidays, because we all eat our local rice. Eating rice is no longer reserved for special holidays like it used to be. Rice is well established in our daily diet. And with the experience of Fair Trade, we now eat very good quality rice.'



Franck Todekin, secretary general of the Kpataba farmers' organization:
'We used to eat rice once a year, on New Year's day. Now every day is like a celebration! Our children now have enough rice to eat every day.'
Click here to view the video clip

Mieke Vercaeren, Colruyt:
'The moment we went to the stores to show the Beninese farmers' leaders that their product was effectively present on the shelves, a thrill went through the people present. It was amazing to be part of their pride; the proof of their hard work was right there in front of their eyes. They spoke to the customers in the store with great enthusiasm, convincing them to buy the rice; with an irresistible smile, they put in the packets of rice into their trolleys, telling them how good the rice was.'

Léopold Lokossou, chairperson of the national farmers' organization of Benin: 'This project proves that small-scale family farming has a future in Benin, and that we can improve the sustainability though practice. In the long term, Benin definitely will be able to produce sufficient rice for its domestic consumption. This is how we want to overcome poverty. There used to be a wide gap between investment and production. Thanks to this project, farmers' investments are now more profitable. I want to thank the Colruyt Group for their efforts.'

2. The start of the VECO rice programme in Benin.

VECO is a leading sustainable agricultural development organization with a long history of working in the field with farmers to improve livelihoods. Over the last five years we have come to recognise the importance of investing in farmers in ways that directly support their connection to markets. We have found that partnering with the private sector is an excellent way to optimise our impact and increase the likely sustainability of farmers' gains.

The objective of this programme is to reinforce the capacities of rice farmers and their organisations so that they can produce quality rice that is able to compete with imported Asian rice that looks attractive and appeals in Benin. The intention is also to increase farmers' income through improved access to modern, dynamic markets. Stimulating local production and the introduction of an effective local value chain helps to anticipate future food crises and contribute to poverty reduction.

The VECO programme is about improving production methods, improving access to agricultural inputs and investing in processing, quality enhancement and marketing. The programme started in 2002 in the central département of Collines, in Benin. 90% of the population in this area is active in agriculture on small-scale family farms, with plots that are between 0.5 ha and 1.5 ha per family. These families earn an average of less than one dollar a day. In this area, rice farmers have traditionally delivered their produce individually to local traders. Wholesale traders from the markets of Glazoué, Savalou and Anié (Togo) travelled from village to village to collect the stocks of paddy rice. The traders dictated the selling price, and farmers had little or no negotiating power. There was little market incentive for investment in improving the quality of the crop.

In the first 2 years of the project, 2002-3, VECO focused on improving product quality and establishing an internal quality control system. Challenges in this period led VECO to requesting funding and technical support from the Belgian supermarket, Colruyt. In 2003, the first steps were taken to improve the quality of the rice with farmers' groups in the Municipality of Savalou. They began by doing visual quality checks and establishing a simple traceability system by writing the producer's name on each bag of rice. The Tchetti farmers' groups' quality improvement and marketing experiments with rice had an

Box 1: Brief presentation of Vredeseilanden/VECO

Vredeseilanden is a Belgian-based, international NGO with 40 years' experience in sustainable agricultural development, renowned for its expertise in sustainable farming practice and efforts to strengthen farmers' organisations. We support our partner organisations through 8 VredesEilanden Country Offices (VECOs). That is why, outside Belgium, the organisation is mainly known as VECO.
VECO's main focus today is on developing sustainable agricultural chains, from local to international levels. We conduct programmes through seven regional offices, in partnership with organized farmers' groups, NGOs, research institutes, government agencies and private sector actors (traders, processors, retailers) in 20 different countries.
We play a facilitating role among the relevant stakeholders to develop shared strategies, based on close analysis and monitoring of markets and bottlenecks. The aim is to improve functioning and increase benefits to all parties within each chain – especially to improve the livelihoods of farmers – and beyond the chain, to create a more enabling environment.

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initially difficult start-up during the first two years. This improved when VECO and the Belgian supermarket chain, Colruyt, invested more funding to improve the implementation of the action plan with the Tchetti farmers' group.

In 2004-2005, the programme accelerated, and expanded into three other municipalities[1], also in the Collines département. Cooperation was also initiated between the various farmers' groups within the municipalities. In 2005, 5,000 rice farmers were involved in the programme. By 2009, there were 8,500, spread across five municipalities in the Collines département. In 2005, farmers owned a total of 832 ha of rice land; by 2009 that had grown to 9,500 ha, as more rice farmers joined the programme and also as a result of the programme's interventions. The average productivity per hectare rose from 2 tonnes/ha in 2003 to 3.3 tonnes/ha in 2009.

Box 2: The importance of rice for Benin

Benin does not have a long tradition of rice growing compared with other West African countries.

Until 1995, it produced no more than 20,000 tonnes of rice per year, and rice was eaten only on holidays or at special ceremonies. Over the past two decades, it has become one of the most important staple foods, thanks in part to large quantities of cheap imported Asian rice[4]. Since 1996, national production has also dramatically increased from 22,259 tonnes to 151,604 tonnes, for the 2009-2010 season (see table in Annex 1). Rice is now the third crop after sorghum and maize. Rice is nutritious, the preparation is less difficult than for most other grains, and it is affordable for most people.

There has also been renewed interest in the past ten years in rice growing by both the Government and donors. The producers' enthusiasm can be explained by the sharp decline in revenue from the cotton industry - forcing Benin's producers to shift their interest to other sectors of production - and since the recent food crisis of 2008. In this context, rice seems to be a sector that is able not only to ensure food security for producers, but also to raise their level of income and standard of living.

Benin aims to eventually become a net rice exporter to neighbouring countries. It has a potential of 322,000 hectares of land suitable for rice growing[5]. Of these, 205,000 ha are low-lying marshlands, and 117,000 ha are potentially irrigated plains[6]. Currently, only 33,294 ha of this potential rice-growing land is used (see Annex 1). This would enable the country to cover 70% of national rice consumption within a few years - presently this stands at 34%. The Benin government even hopes to export a rice surplus to other countries in the West African region.

However, the production system of Benin, which is predominantly agricultural, is characterized by a lack of mechanisation, deficient water control, agricultural inputs that are unavailable at the right time, the weakness of the system for transfer of technological innovation, insecurity of land tenure, lack of technical support, lack of infrastructure for economic development (transport, storage...), organizational deficiencies of actors in the sector, and the almost complete lack of funding for productive activities. All these elements represent major constraints to production, productivity and the competitiveness of Benin's agricultural produce, especially rice. Productivity has increased since 2000, from 2.1 to 3.28 tonnes/ha in the 2008 -2009 season - see Annex 1.

Competition from massive imports of Asian rice and donations from Japan, make marketing of locally produced rice more difficult[7]. The large quantities of imported Asian rice are an obstacle to the development of national production, because consumers tend to prefer the Asian rice to local produce. Asian rice is not always cheaper[8], but is attractively packaged, and has won Beninese consumer preference. Because Japanese rice is imported as food aid, it also constitutes unfair competition[9]. The import and export figures for rice show a distorted picture of the situation in Benin unless they are adjusted to take the large volumes into account that are imported from Asia and then smuggled into Nigeria, to avoid Nigerian import duties[10].

In order to promote both the production and consumption of local rice, the Beninese government has established a purchasing price for local paddy rice of 160 CFA/kg, and lowered the price of local long grain rice from 600 CFA to about 350 CFA per kg. These lower prices are also due to less local interest in local long grain rice, because the Beninese prefer imported Asian rice, even if it is more expensive (470 to 500 FCFA). This is because the rice is nicely packaged, quality perceptions are high, and it is also represents something of a status symbol.

At present 14 million tonnes of rice are produced across sub-Saharan Africa, which accounts for about 60% of total consumption. The remaining 40% are imported from Asian countries. There is a considerable untapped potential for rice production at regional level. Stimulating local production and implementation of an effective local value chain will help to anticipate to future food crises and contribute to poverty reduction.

Box 3: The organization of rice farmers in Benin

CCR-B is the national umbrella organization of rice producers in Benin. It was formally established in May 2006 by six regional rice producers' unions (URR). In terms of structure, each regional union is made up of communal rice producers' unions (UCR). About sixty communal rice farmers' unions are part of the CCR-B rice farmers' network through their regional unions.

The municipal unions are made up of rice producers' groups.

From the groups to the national level, each organization functions with a board of directors headed by an Executive Board.

Since 2009, the CCR-B has been actively involved in the design and implementation of development projects and fundraising.

Since March 2010, CCR-B has been carrying out a general census of rice farmers in Benin. This census should produce a picture of rice producers' organizations in Benin, down to the level of village groups. It will provide a precise idea as to the number of groups per municipal union of rice farmers, and the strategies that could be developed to improve their structures.

CCR-B is involved in advocacy for the protection of local rice against massive imports that prevent the development of local production.

CCR-B has contributed to the development of two documents that are crucial to the rice network. It played an active role in developing the Strategic Plan for the Re-launching of the Agriculture Sector (PSRSA) and the National Strategy for Rice Development (SNDR) in Benin. This participation has allowed more involvement of the CCR-B in the implementation of the strategy. Emphasis was placed on the role of the CCR-B in the provision of inputs (especially seeds and fertilizers), and on training for technical and organisational capacity strengthening of rice producers.

These advocacy activities are conducted with the technical and financial support of the Belgian NGO VECO.

The rice programme includes improving production techniques, improving the quality of the rice and the installation of two local rice-hulling facilities. Rice farmers improve their income by storing bags of rice from harvest time in December until the following April, when the price is substantially higher.

The programme was carried out jointly with four VECO-funded local NGOs[2]. VECO took on the role of lead-facilitator of the entire process. One of the methods used was the "Farmers' Field School[3]". As of 2005, the farmers' groups positioned themselves more independently from the local NGOs. During this period, it was not possible to establish an intense collaboration with UNIRIZ-C, the rice farmers' umbrella organization in central Benin. UNIRIZ-C does, however, open many doors to the public authorities, which is why local groups still try to maintain the relationship.

(1) Dassa, Glazoué, Savé

(2) LDLD (Levier pour le Développement Local Durable - Lever for Sustainable Rural Development), CASTOR (name of a rodent found in wetlandsregions with very strong teeth), RABEMA (Recherche Action pour le Bien être des Masses rurales - Research Action for the Welfare of the Rural Masses) and UN MONDE (One World).

(3) The Farmers Field School (FFS) is an approach to extend the rice crop management used by these structures. The experiments are carried out on a demonstration field on which two representatives from each group come to work. Upon return to their groups, they share the experience gained. Thus, experiments were carried out with producers on basic management of lowlands, sowing in rows, seeding rates, fertilizer rates to be applied, crop protection against pests, harvesting, threshing and winnowing.

(4) In 2009 about 550.000 tonnes of rice were imported, including about 110,000 for local consumption. The larger part was exported to Nigeria, to a large extent smuggled.

(5) http://www.tradingeconomics.com/benin/arable-land-hectares-wb-data.html

(6) http://www.lemaghrebdz.com/lire.php?id=19567

(7) http://www.lanouvelletribune.info/index.php?option=com_content&view=article&id=6736:plus-de-160000-tonnes-de-riz-invendu-yayi-appele-au-secours&catid=26:vie-societale&Itemid=77

(8) For a comparison of consumer prices for local and imported rice, see http://www.resimao.org/html/fr/Benin/home

(9) http://crrmc.ilemi.net/spip.php?article33

(10) Large quantities of imported Asian rice are illegally exported to Nigeria, causing Nigeria miss out on important revenue from import duties, and also hindering the start of local rice production in Nigeria. It is estimated that in 2009-2010 about half the Nigerian rice im-ports, about 1.6 million tonnes, were smuggled into the country, see http://gain.fas.usda.gov/Recent%20GAIN%20Publications/Rice%20Trade%20-%20Quarterly_Lagos_Nigeria_2-16-2010.pdf.

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Exploring new markets

As a result of the collapse of cotton sales, farmers in the 6 municipalities of the Collines département have tried to increase their income since 2004 by selling rice to the neighbouring countries of Niger and Nigeria. The border town of Malanville, 600 km away, is a transit market for sales to Niger and Nigeria. This is where farmers were paid cash for their cotton, and the same thing appears to happen with rice. Local farmers' groups organize the collection of the bags of rice among their members and transport and sales in Malanville. The added value that farmers get there is insignificant compared with local market prices, particularly once the transport and organizational costs have been taken into account. The market in Malanville can, however, absorb larger volumes. Table 1 shows the price evolution for grouped sales of paddy rice over the period 2004 - 2008. Sales were organized in Malanville for the years 2004 and 2005, but were no longer successful from 2006 onwards. VECO then organized a mission to Nigeria with the farmers' organisations to find out why their rice was no longer selling. At the storage facilities they found the bags of rice from the previous year remained unsold. To gain more insight into the quality preferences in the Nigerian region, farmers conducted surveys with salesmen, with larger retailers and even customers at the market. They discovered that their rice variety, Beris, did not meet the requirements for preparing the traditional rice paste. Following this visit, the farmers' groups started thinking more systematically about consumer preference in the regions where they hoped to sell their rice, and the subsequent impact on the choice of rice variety and processing.

Table 1 : Evolution of grouped paddy rice sales price from 2004 to 2008

Year	Market	Sales price/Kg paddy (FCFA)	Net price/Kg paddy* (FCFA)
2004	Malanville	131,25	112,5
2005	Malanville	150	131,25
2006	Glazoué	139,58	128,75
2007	ESOP	-	110
	Local markets**	-	70,80
2008	ESOP	-	130
2008	Local markets	-	-

* Net sales price = Sales price – transport costs and tax
** Local markets : Glazoué, Savalou, Tchetti and Anié in Togo
Source : Field survey, January 2011

First steps in scaling up rice processing

In order to increase income, VECO together with the farmers' organisations, introduced the possibility of improving rice processing. The aim was to have fewer broken grains, and impurities such as stones, insect remains, unhulled rice grains and black spots.

Hulling, the main rice processing operation in the area, is performed both manually and mechanically. For manual hulling, producers use a mortar and pestle. This activity is carried out by women and is carried out primarily on the rice destined for their own consumption. But following the installation of several hulling units in Glazoué, Savalou and Tchetti, mechanical hulling (after parboiling) has become well established in the producers' habits and has taken precedence over the manual process. To reduce the rate of breakage, processors parboil the rice before hulling. Some women have specialized in this activity to make rice available at the local markets.

Initially, the farmers' groups and VECO tried to find a mobile processing plant that could be used locally in the villages. This did not prove possible.

The performance was then tested by using two fixed - not mobile – machines, imported from Vietnam by VECO's contacts. Their management was entrusted to two rice traders who are also rice farmers. This was preceded by a lot of discussion:

- Local NGOs would have liked to run the installations, but the farmers' groups and the municipality objected, as they felt that the NGOs were unable to facilitate local dynamics while also participating in sales' activities. Moreover, the local NGOs had no tradition of entrepreneurship.

- The local farmers' groups at that time still had insufficient management capacity.

Neither of the two local traders had the capacity to carry the investment in a plant by themselves. VECO put up a guarantee, and a loan institution was called in to help. Arrangements were made to ensure that all rice farmers would be able to hull their rice using these machines. The aim was for the loan institution to provide further loans for new machines in other locations once the capital had been reimbursed. However this stage has not been achieved, as the results have not proved entirely positive.

Lessons learnt from using the two machines were that:

- Rice hulling should take the humidity of the rice grains into account, and the timing of the harvest was therefore very important- the rice must be dried sufficiently in the field. Rice that is either too dry or too moist produces excessive percentages of broken grains.

- The high percentage of broken rice is also due to simultaneous hulling of different rice varieties with different grain size and width. With more homogeneous grains, there is less breakage during hulling. And the sales' price for bags of rice with homogenous grain size, and from which impurities are removed, is higher.

In 2007, a new rice hulling company was started up in the region, in the municipality of Savalou by ESOP (Enterprise Service aux Organisations des Producteurs). Compared with all other support structures, ESOP has the specificity of being a commercial business that processes and sells hulled rice. ESOP itself ensures the transport of the paddy stocks bought in each village to their plant. The producers are only responsible for the transport of paddy from field to village. It supports producers ensuring a supply of raw materials at competitive prices. Its support to farmers consists of training them in rice-production techniques and facilitating access to seeds and fertilizers. In order to ensure their supply of paddy rice from the


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Table 2 : Main stages in the history of rice production in Savalou.

Period	Stage	Characteristics
Prior to 1995	Absence of any support structure; No control of modern production techniques	- Use of traditional varieties - Subsistence rice production
1995 to 2008	Intervention of support structures; Difficulties with market access and unrewarding prices for producers	- Promotion of improved rice varieties - Support for access to inputs: seeds and fertilizers - General training in modern rice-production techniques - Organization of producers in local farmer organisations and Communal Rice growers' Unions (UCR) - Commercialisation of paddy rice by producers - Support to producers for collective marketing of paddy - Organization of collective sales for some of the production on the Malanville market - Introduction by ESOP of signing of production contracts with producers - Gradual introduction of rice into the local diet
2008 to 2010	Introduction of the experimental Fair Trade project by VECO	- Certification of the Tchetti and Kpataba FOs - Improved rice quality - Rice sales to Colruyt in Belgium - Installation of increasingly performing processing units

Source : Field data[11]

[11]Capitalization study of positive experiences in family farms: the case of the experimental project on fair trade in the rice sector in the Collines department in Benin, Prof. Rigobert Cocou TOSSOU, January 2011

producers at the end of the season, ESOP introduced contractual commitments in its partnership with producers. This contract covers the quantity of paddy to be delivered by each producer, the sales' price, the supply of inputs (seed and fertilizer) and production standards.

The general approach of the ESOP programme is to modernise family farming operations by securing market access, targeting local urban markets, and establishing lasting cooperation between two complementary dynamics: producers' organisations and service companies.

Especially in 2008, ESOP paid much better prices than local markets - see Table 1.

The positive impacts of the programme for farmers up to 2008 are significant: better prices to farmers and better access to inputs for farmers, lower percentages of broken rice and fewer impurities. But more needs to be done to compete with imported Asian rice.

The percentage of broken rice of the local ESOP milling installations is still relatively high, and volumes that ESOP can process are limited. This is why the Beninese government invested in two large, modern rice processing plants that were built in 2010, one in the north of Benin, and one in the Collines département. This provides important new perspectives for meeting the quality requirements of modern markets.

Roughly speaking, three phases can be distinguished in the development of the rice value chain in the region of Savalou - see Table 2.

3. Hope for new outlets in the region thanks to a detour through Europe

From 2006 onwards, VECO placed extra emphasis on quality improvement of the rice production, together with two stronger local farmers' organisations in the municipality of Savalou. These are the Kpataba and Tchetti farmers' organisations. Colruyt continued its funding and communicated with its customers in Belgium on the subject[12].

The number of members of these two farmers' organisations is approximately 380 farmers, in 16 local groups. Daily support was still provided by four service NGOs[13]. VECO also wished to involve UNIRIZ-C, the farmers' umbrella organization in two '*départements*', but unfortunately the ongoing internal conflict within UNIRIZ-C still paralyzed relations with the local farmers' groups.

In February 2007, two Beninese, Hector Kpodonou, an employee from the local NGO 'Un Monde', and Chiaratou Oceni, a VECO employee travelled to Belgium for an internship at Colruyt to gain insight into retail product specifications and management systems for quality control.

As a result of the cooperation between VECO and Colruyt, and discussion with the farmers' organisations, the idea of the possibility of exporting a symbolic amount of rice to the Colruyt shops in Belgium was born. The objective was to increase respect for and appreciation of the local rice in Beninese consumers, compared with Asian rice that was more highly considered. This required extensive upgrading of the quality. Richie De Jong, Colruyt's rice buyer also observed this trend, during a working visit in 2008. His assessment of the situation was positive, although he considered that a lot of hard work would be necessary to achieve the quality needed to meet the stringent European standards of food safety regulations as well as those of the consumer preferences of the Belgian public . Colruyt committed to buying 36 tonnes of rice from the Tchetti and Kpataba farmers' organisations and to providing technical support.

Richie De Jong, Colruyt, responsible for rice procurement: 'I was impressed that within a few years farmers' organisations had succeeded in better internal structuring, from local to national level. Above all, I remember the positive atmosphere and the strong motivation and belief that through these new structures, they have been able to increase their income and improve their livelihoods. This is not only thanks to VECO, but they certainly contributed. As Colruyt we had to emphasise a lot that we support this project, but that they had to make the most efforts themselves, and that Colruyt's first objective is not to buy rice!'

(12) http://www.collibrifoundation.com/collibri/static/fr/projet_Benin.shtml#readmore

(13) Rabemar, LDLD, Un Monde et Castor

Working on quality improvement

In order to meet European quality requirements, a study[14] was first organized to clarify what exactly needed to be improved, and how that could be achieved. Also, the feasibility of a Fair Trade label was examined. Due to budgetary constraints there was no analysis of the capacities of the farmers' organisations to support the quality improvement process. Another study examined the quality preferences of consumers in Benin and Niger, so that the efforts could also be useful for the regional market.

The studies mainly provided insights into the choice of the rice variety - see Box 4 - and the moisture content. Rice that is either too wet or too dry results in more breakage when hulling. Rice that is too wet causes mould to grow during storage. It is important to closely monitor the moisture content of rice in the field and to harvest at the right moment. In practice it is sometimes difficult for rice farmers to give this the necessary priority, because there are other crops to be followed up as well.

On the basis of the results of these studies, two technical field trials were set up with the rice farmers. These tests provided greater clarity on the timing of planting and harvesting in order to achieve the desired moisture content. Techniques were also developed for soil erosion control, and appropriate amounts of fertilizer and pesticides established. From the results of the field trials, production standards were established to meet all quality criteria. These standards are clearly listed in a table - see Annex 2. This table is the basis for the internal control system set up in 2009.

Faustin Atomabey, Secretary General of Savalou the municipality rice group (Union Communale des Riziculteurs de Savalou).
'Our traditional methods did not produce good quality steamed rice. With the help of the NGOs through training, equipment, etc, this quality has been improved. We also have improved production techniques for water control, sowing… Previously, we had no clue about the quality of our seeds. All this has contributed to the overall profitability, and attracted more farmers to also join us in growing rice.' Click here to view the video clip

(14) Quality analysis: 'Elaboration of an action plan on the improvement of the quality of rice from Collines, Monhouanou, Jean Dansou, August 2007, financed by the Trade for Development Center http://www.befair.be/en/articles/www-befair-be/homepage.cfm

foto Colruyt

Box 4: Choice of the rice variety for export

The Belgian supermarket chain Colruyt itself has different kinds of quality requirements for the rice it purchases:

i) Examination upon arrival, before unloading the container
- Humidity < 15% (to avoid mycotoxin formation)
- Broken grains < 5% (later relaxed to 15%)
- Impurities - foreign bodies < 0.1%, green grains < 3%
- Insects (dead or alive) = 0%
- Taste (~ variety of rice)
- Prohibited residues of phyto-pharmaceutical products = 0
- Heavy metals: below applicable standards
- Length / width ratio of the grain > 3 (= long grain rice)

ii) Requirements for suppliers: HACCP or BRC (including HACCP) or IFS

iii) Comply with the Belgian and European legislation on the use of pesticides, herbicides (list of banned substances) and residues - www.fytoweb.fgov.be

Three rice varieties used in the region can possibly meet Colruyt's requirements: IR 841, Tox Long, and Nerica 3. These three varieties were tested by Colruyt for taste. Two varieties met the taste test: IR 841 and Nerica 3. The farmers' organizations finally choose IR 841 because it has the highest local yield, and is also known and appreciated by local consumers.

It is customary in this region of Benin to plant different varieties of rice in order to spread the risks of disease / pests and droughts or floods. This practice of risk management is a component of the economic and environmental sustainability, and can come under pressure from the quality requirements of modern markets and consumer preferences in the different target markets.

The long road to achieving the Fair Trade Label

VECO considered it important to achieve the Fair Trade label for the rice imported from Benin. According to VECO, the contents of the Fair Trade label offer the most far-reaching guarantees for the farmers' organisations, i.e. guarantees of a minimum price for farmers, strengthening of organizational capacities of the farmers' organisations…

The Fair Trade concept was new to the local farmers' groups. In 2008, representatives of the Tchetti and Kpataba groups participated in an exchange programme with an organization of Pineapple Producers in Benin (Union des Groupements the Producteurs d'Ananas de Toffo - UGPAT) that had been coached by VECO, and had already achieved a Fair Trade label. After their visit, the participants, together with a VECO employee listed a range of issues and action points. This formed the basis of a training programme that was designed to raise awareness on the opportunities provided by the Fair Trade label, to learn how the label can

be achieved, and to raise the entrepreneurial capacity of farmers' organisations - see Box 5.

VECO made contact with the international Fair Trade Labelling Organization (FLO) so that they could establish a minimum price for rice, below which it cannot be purchased. Farmers' organisations could only apply for the Fair Trade label once this minimum price had been set.

The Fair Trade label was requested for a three-year period by the two farmers' organisations, Kpataba and Tchetti, both second-tier farmers' organisations. The cost of obtaining the Fair Trade label is far higher than for a first-tier organization, and the procedure is also more cumbersome. In this case FLO organized a thorough audit to check that all the conditions were met, if the organisations were sufficiently independent; the environmental policy plan checked etc.

The food crisis of 2008 briefly put the entire project on hold, as the government of Benin limited the export of food crops, and Colruyt and VECO were concerned that the symbolic nature of the small volume of rice to be exported might be misunderstood as taking food from hungry mouths.

In 2009 a comprehensive system for internal control and traceability was set up with the two farmers' organisations to follow up on the FLO requirements and take corrective measures should things go wrong. As mentioned earlier, the internal control system is based on the different quality requirements - see Annex 2. VECO also organized training for the other farmers' groups in six municipalities so that the internal control system could be more widely implemented. Each local group sent two representatives to participate in a control committee of the internal control system.

At the end of the 2009 production campaign, a collection system for paddy rice was introduced. At the beginning of the season, the quantities of paddy rice required were determined for each production group and for every producer, in accordance with the quantity of hulled long grain rice to be delivered to Colruyt. Meetings were held at each FO to discuss this issue.

Between 2008 and 2010, VECO made several small investments in both farmers' organisations that also contributed to achieving the required quality for export and for FLO: a storage room, small steam engines, a moisture gauge, scales, palettes, …

In preparation for the FLO audit, a wide range of official documents had to be collected by the two farmers' organisations: proof of official registration, articles of association and by-laws, activity reports and reports of the last three years' General Assemblies, auditor's reports, activity plans for the following years.

2009: The Colruyt CEO was interested in visiting the project once it was certain that the rice would be displayed on their supermarket shelves. VECO mobilized reinforcements at their headquarters, and also in the VECO office in Benin, where available staff were called upon to help the two farmers' organisations meet the different requirements of the Fair Trade label. Finally, in June 2010, hulling of the rice for export to Belgium began. Hulling took place at ESOP, a local company. In August 2010 a long list of official formalities for rice export was declared in order, and 24 tonnes of rice shipped to Belgium. Upon arrival in Belgium, the

Box 5: Components of the training programme for achieving the Fair Trade label and strengthening the entrepreneurial skills of farmers' organizations:

- Training in financial management and administration;
- Support / coaching in organizational dynamics, the administrative and financial management of FOs;
- Support for the organization and progress of General Assemblies of the respective FOs. Organization of two workshops to help the organizations become more func-tional;
- Training members of the control committee on the Internal Control System (ICS);
- Training in market standards and the quality of rice;
- Promotion of awareness on the requirements of Fair Trade, in particular the criteria of transparency, good governance and democracy;
- Training farmers in the techniques of mulching, composting and the use of crop resi-dues.


Chris Claes

[1]The Guaranteed Minimum Price is a necessary but incomplete condition of Fair Trade. The GMP must first cover the pro-duction costs and provide a decent life for producers. This is a threshold below which producers can not sell their rice either on the local market or internationally. The GMP is determined according to several parameters. These parameters include: production costs of the product, the cost of living, the selling price of the product at national, regional and inter-national level. It also takes into account the level of responsibility of the FO in the marketing chain. The GMP is estab-lished by FLO. If the price on the local market is higher than the established GMP, then FLO allows the GMP to equal the local market price.

According to the FLO classification, there are three tiers of FOs 1, 2 and 3. Certification fees are established according to the degree of organization of producers' organizations. The higher the degree of organization, the higher the cost of cer-tification. Producers' groups (PGs) are first tier organizations while the Tchetti and Kpataba FOs are second tier organi-zations. The Communal Union of Rice farmers (UCR) of Savalou are classified as a third tier farmers' organization.

Activities related to environmental aspects are:
- The study of cultural practice and their impacts on the environment;
- Developing an environmental management plan for rice production;
- Training the Tchetti and Kpataba FOs producers in techniques for mulching, composting and the use of crop residues.

Fair Trade label had still not been granted. Exciting times, as there was no good marketing alternative available!

The clear interest by both the VECO executive management and the lead firm Colruyt helped to mobilise the necessary resources to meet these difficult requirements.

There was an obvious need for commercial knowledge to troubleshoot when the inevitable different types of problems occurred. This knowledge was supplied by VECO and Boost - see Box 6.

The slow process of certification cannot always match entrepreneurial market development. This is a risk to growers and must be carefully mitigated.


Jelle Goossens

4. Rice from Benin in the Belgian supermarket chain Colruyt's shops.

Colruyt[15] is the largest Belgian supermarket chain and the Colruyt Group aims to contribute to more training and education for people in economically developing countries or regions. They do this by selling products from those regions – products with the 'Collibri' seal: (www.collibrifoundation.be) - to their customers, and spending 5% of the proceeds in training or educational programmes[16]. Over the past two years, greater attention has been paid to trade relations with the producers involved.

Why does a Belgian retailer invest in a symbolic quantity of imported African rice as a way to enhance local markets?

Interview with Mieke Vercaeren, CSR coordinator Colruyt:

In the Benin rice project, we tested the added value of this approach via cooperation throughout the whole supply chain.

During the first years of the project we took the time to get to know each other better via a two-way exchange programme, our purchaser visited the project in Benin, and some of them came over to get to know our way of working through an internship. The

farmers returned with an open view as to what is possible, but had to transform this knowledge into their practice: how could they respond to this process?

Later, the flow of the VECO project began to have its effects on our daily business. The moment we decided to buy the first batch, the whole internal mechanism of quality control, packaging and marketing moved into the action phase. Many colleagues got involved and became interested in this Collibri project that became a real part of the company's life.

It soon became clear that this product was atypical in many ways.

We committed to selling the rice in the supermarket, but the choice of the product had not followed the normal flows of market demand of Belgian consumers. African rice is a completely new product for Belgian consumers. Mostly these kinds of "exotic" products have specific characteristics or tastes. This rice does stick a bit, though can be used for normal rice dishes, but this had to be explained to our customers.

Implementing an interesting, innovative project with all kinds of stake-holders, does not mean that there are consumers waiting to buy this kind of product. The communication challenges are especially huge, firstly with the packaging. We decided to tell the story behind the product to our consumers via a short film projected in the stores. We changed the packaging to enhance the visibility and convenience by selling it in bags. The lesson learned was the need for a critical review at the start of the project: is there a market for the product in the EU - not to combine a niche product (Fair Trade) with another niche (selling loose rice). That's why we decided to change from loose rice to rice in bags.

We organized an exchange event with all the project participants at our head office in Belgium. Many colleagues were impressed by the movie made by Vredeseilanden (VECO), which shows the lives and the struggles of the local farmers. The testimonials of the farmers who were invited to this event at our head office were strong and convincing. The moment we went together to the stores to show them that their product was effectively present on the shelves, a thrill went through the room. It was amazing to be part of their pride, the proof of their hard work was there, in front of their eyes. In their enthusiasm, they spoke to customers in the

[15] http://www.colruytgroup.com/colruytgroup/static/index.htm
[16] http://www.collibrifoundation.com/collibri/static/fr/index.shtml


Jelle Goossens

store, convincing them to buy the rice, and with an irresistible smile they put rice packages in the customers' trolleys, telling them that this was good rice. Talking about "the people behind a product", they were now in front of their own product, and the circle was complete.

It was stunning to feel their drive, to witness the first results, but also to hear about all the issues that needed to be tackled to really be able to make a difference. It became clear that even the best-labelled product in a Colruyt store cannot solve the immense market distortions in this country. But we did see that a minimum price for the rice can help the farmers to make progress and escape from the poverty trap; but in the long run, more is needed. We believe that the powerful personalities of the farmers we met can and will have to influence this political process. This is just to say that there are no simple answers to complex problems, but a combination of simple answers can be the start of something bigger.

At commercial level, we certainly have to pay a price for this learning process, and several trial and errors. We expect these costs to gradually be absorbed. This can happen via the up-take of better processing units in Benin, via a higher sales volume in Benin, better transport, conditioning, more local cooperation in the supply chain.

The added value of this project is not the selling of the product per se, but the ongoing evaluation of matching market demand to increased offer, aiming to continue to harmonise them. In the meantime we are testing this supply chain approach in some other projects. These experiences will keep on inspiring our vision on sustainable sourcing and consumption.

Of the 36 tonnes of rice from Benin that Colruyt undertook to buy from the Tchetti and Kpataba farmers' groups, a first consignment of 24 tonnes was delivered in August

Box 6: Role of the Belgian importer Boost:

'We had never previously heard about rice from Benin being exported', says Erik Van Deun from Boost Nutrition. 'But I have to admit that we were positively surprised with the quality of the rice samples that we analysed. This is not about the percentage of broken rice, but rather about different colours of the rice grains. Afterwards, it turned out that the samples were manually prepared and the later shipment of 24 tons did not reach the same quality.'

Richie De Jong, Colruyt, responsible for rice procurement: 'It was necessary to have this industrial partner in Belgium. Without them, we could not even have considered selling this Beninese rice on the Belgian market.'

Boost Nutrition is a major rice mill in Merksem, Belgium. Boost, like Colruyt, played a crucial role in helping to ensure that quality requirements could be reached for imports of rice from Benin to Belgium. Employees of Boost have supported the search for local solutions to meet the required quality standards. It soon became clear that it was not possible to meet the required HACCP quality starting from rice hulled at the two local rice-hulling devices installed at the local entrepreneurs. Next, we considered if it might be possible with rice hulled at the local company, ESOP. In March 2010 rice samples of rice milled at ESOP were sent to Belgium. Boost tested the quality of these samples to determine whether the food safety requirements were met. They considered it possible if an additional treatment were scheduled in Belgium to remove several impurities with an ultra-modern Sortex machine. Without the goodwill shown by Boost, the entire export story would have had to have been abandoned straight away. Even after arrival of the rice in Belgium, when it became clear that the percentage of impurities was much higher than agreed, and compared with the samples that had previously been sent, Boost once again demonstrated their goodwill, and thanks to the optical sorting machine, the impurities were easily removed.

More information: www.boost.be

2010. On arrival at the port of Antwerp some "beginners' mistakes" were noted. The rice was not packaged as usual, and this caused difficulties when unloading the container. More impurities were found than in previously-sent samples. It was partly based on the quality analysis of these samples that Colruyt had agreed to purchase the rice. It turned out that impurities in these samples had been further manually removed after the machine process. It is thanks to the expertise and goodwill of the importer Boost - see Box 6 - that the rice could be re-purified in Belgium so as to meet all the quality requirements. However it is clear that in the future, higher quality requirements will be applied to rice arriving in Belgium.

Having such a committed and professional importer/processor willing to work with a new supplier turned out to be critical. It allowed Colruyt to still be able to purchase the product.

Colruyt's involvement in this initiative has resulted in further deepening the cooperation between Colruyt and VECO. This is apparent among other things from the participation of the Colruyt CEO in a high-level mission to Benin, and the organization of a joint conference on September 21st. 2010, that took place at Colruyt's headquarters. At the end of August 2010, Jef Colruyt (President and CEO of Colruyt), accompanied by Rik Van Cauwelaert (Director of Knack, one of the major opinion-making magazines in Belgium), Marianne Thyssen (member of the European Parliament and former president of the Christian Democratic Party), Piet Vanthemsche (Chairman of the "Boerenbond", the largest farmers' union in Belgium), Lut De Clercq (chef Backstage Kitchen) and Luuk Zonneveld (General Director of VECO) travelled to Benin, among other things to meet the rice farmers. There were meetings with several ministers, officials, business leaders, and national and regional farmers' leaders. This high level mission generated a lot of media attention in Belgium and as well as in Benin.

"We wanted answers to some questions. What are the obstacles farming families in Benin face to selling their rice at a good price? How can a supermarket in Belgium establish sustainable trade relations with family farmers? And how can such a trade relationship contribute to the development of a community?" says Luuk Zonneveld of VECO. "The purpose of the cooperation project and the trip to Benin was to look at this project from different perspectives and learn from it."

Chairman Jef Colruyt: "For us, the commercial aspect of this rice project never came first. What does come first are the road we travelled and the learning process, which progressed at the speed of the rice producers. As the farmers' organisations become stronger, we will gradually reduce the funding and commit the resources to strengthening new projects and communities. This project is the result of the cooperation between Vredeseilanden (VECO), the Colruyt Group and the rice importer, Boost Nutrition. Together they supported rice farmers (both men and women) in Benin to improve the quality of rice and thus increase their income. But above all they took advantage of this concrete project to learn from each other."

The blessing of the seal of approval of the Fair Trade label arrived during this visit. As of September 2010, the Max Havelaar (Fair Trade) labelled packages of two rice farmers' organisations from Benin are on sale in the Belgian supermarkets of Colruyt Group (Colruyt, Okay and Spar).

Jelle Goossens

5. Preliminary results:

Profitability for the producers in the local market and the Fair Trade project

It is clear that income and profits for rice farmers depend heavily on tonnage / ha. This is true both for sales on the local market and in the Fair Trade circuit - see Table 3. The average production in the region is estimated at between 2.5 tonnes / ha and 3.5 tonnes / ha.

Table 3: Evolution of quantitative results of rice farmers involved in the VECO programme (Source, VECO Benin)

Table 3	2003	2004	2005	2006	2007	2008	2009
Farmers involved	200	260	4062	5057	6000	8210	8508
Productivity (tonnes/ha)	2.0	2.1	2.5	2.7	2.9	3.3	3.3
Area planted (hectares)	264	623	1021	4539	3296	5328	9679
Production (tonnes)	528	1308	2554	12332	9572	17635	31475
Price in CFA/tonne of paddy	110000	110000	120000	125000	140000	150000	150000

Average productivity for the farmers in this region involved in the VECO programme has risen steeply since the start of the programme: from 2.0 tonnes / ha to 3.3 tonnes / ha, see Table 3.

Taking into account the following operations: weeding, levelling, hoeing, spraying, harvesting, threshing, winnowing and chasing birds, the cost of producing 1 kg of rice is 113 CFA for a yield of 2.5 tonnes / ha and 97 FCFA for a yield of 3.5 tonnes / ha. Revenues from sales at local markets range from 308,000 FCFA / ha for a production of 2.5 tonnes / ha and 448,680 FCFA for a production of 3.5 tons / ha. Including labour costs, earnings per ha still vary between 118,000 and 218,780 FCFA / ha. See Table 4.

With the current performance and cost of hulling, little or no additional income will be obtained if the processed rice is sold on the local market. Additional income should either come from increased processing efficiency, reducing the percentage of broken rice in the long grain rice or from obtaining higher prices for processed rice[17]. That is the case for the Fair Trade farmers' groups in the experiment in Tchetti and Kpataba. The Fair Trade price is 536 FCFA / kg for long grain rice compared with an average of 370 FCFA paid on the local market. The revenue per hectare for this Fair Trade rice is theoretically 147%[18] higher than the same rice, sold on the local market. This percentage is theoretical because a total of only 24 tons was sold at that price, and therefore relatively few farmers have benefited from it, and on a relatively small quantity. These figures do prove however that it is worthwhile continuing on the track of negotiating a higher price for a better quality product.

The income obtained by individual producers is used for very different purposes. For most producers, the money has made a great contribution to: the payment of school fees for children, health-care, the purchase of motorcycles, the purchase of cement and roofing, the payment of family celebrations or other ceremonies, etc. (see Box 8).

(17) In rice processing plants such as ESOP's, 100 kg of paddy rice yields an average of 35 kg long grain rice and 35 kg of broken rice. The percentage of broken rice can be reduced significantly with more efficient hulling machines.

(18) This is without taking into account the labour cost. In this case the difference is 215%, see Table 4

Table 4: costs, income and profits for the producers of Tchetti and Kpataba compared with sales on the local market

production per kg/ha	2500	3000	3500
production costs			
cost at field site/ in FCFA*	92,000	101,200	111,320
cost/kg at field site in FCFA	37	34	32
cost – labour included - at field site/ha in FCFA**	282,000	310,200	341,220
cost - labour included - at field site/kg in FCFA	113	103	97
cost of processing (65,8 FCFA/kg)	161,914	194,297	226,680
Income and profit at local market* **			
Income/kg at local market (price paddy/kg=160 FCFA) in FCFA	123	126	128
Profit/kg at local market - labour included in FCFA	47	57	63
Income/ha at local market in FCFA	308,000	378,800	448,680
Profit/ha at local market in FCFA	118,000	169,800	218,780
Income from sales white rice (370 FCFA/kg) + broken rice (300 FCFA/kg)	320,690	384,828	448,966
Profits sales white rice + broken rice (production labour costs included)	130,690	156,828	182,966
Supplementary income after hulling - in %	104%	102%	100%
Income and profits for Tchetti and Kpataba producers* **			
Income from sales of white rice (531 FCFA/kg) + broken rice (300 FCFA/kg)	471,003	565,204	659,405
Income compared with local market	147%	147%	147%
Profit sales white rice + broken rice (production labour costs included)	281,003	337,204	393,405
Profit compared with local market	215%	215%	215%

* and **: estimation of 10% additional costs for each production increase of 500kg/ha.

***: Income: labour cost not included; Profit : labour costs are included

Box 7: Strength and weakness analysis of the rice value chain in the Collines département – 2011

The main **strengths** of this sector are centered around the following:

- There is agricultural land available (lowlands, flood plains and plateaus) for rice farming;
- This sector is experiencing strong growth (+10% per year);
- The existence of support (projects, NGOs) for the development of this sector;
- Some warehouses are available for rice storage;
- The quality of local rice has improved a lot (no more foreign bodies, calibration);
- Good profitability for processing activities;
- The efforts to label locally produced rice.
- Action plans of municipalities to promote local rice;
- Willingness of some partners to support the construction of storage infrastructure;
- Implementation of efficient large-scale hulling equipment in Malanville and Glazoué;
- Strongly growth in demand for rice on national and international markets;
- The increase in rice prices on the international market;
- Certification enables access more lucrative but demanding markets;
- Organization of parboiling: better equipment (higher performance - and more environmentally friendly equipment), market organization.

Several **weaknesses** continue to impede the expression of progress. These are mainly:

- Farm size (generally below the profitability limits). Production means have remained rudiment ry;
- Selling-off the crops by the producers immediately after harvest;
- Weak management capacity of the moisture content of paddy stocks;
- Failure to respect drying procedures;
- Poor quality equipment;
- Lack of professionalism of the va ious actors in the industry;
- Weak marketing organization (bundling of ales);
- Weak promoti n of local rice;
- Weak bundling of supply;
- Lack of efficient hulling equipment hampers the improvement of price levels of local rice

Development **opportunities** for rice in the Collines département are as follows:

- Conversion of cotton farmers to rice production;
- Interest of donors in the rice sector in Benin;

The result of the identification of the most serious **threats** is as follows:

- Low level of water management for rice growing;
- Non-availability of specific inputs for rice;
- Pressure by rice pests and predators;
- Lack of improvement of production equipment, especially for plowing;
- Disproportionate development of processing units;
- Poor management of state-owned hulling equipment in Glazoué and Malanville;
- Competition by imported rice;
- The price level influences the development of the sector;
- Selling price of paddy not rewarding for producers.

Source: Capitalization study of the positive experiences in relation to family farms: the case of the experi-mental project on fair trade in the rice sector in the Collines in Benin, Prof. Rigobert Cocou TOSSOU, January 2011

Technical Innovations:

Producers have mastered the requirements of Fair Trade certification and international quality and food safety standards. They produce certified quality rice. The producers use good practices for rice growing. These include the choice of a suitable production site, the use of certified seed, in-line sowing, limiting the quantities of fertilizer, traceability, etc..

- Traceability of the rice produced is guaranteed by the producers and the internal control system. Each producer in a given group has a their own identification code. At the warehouse, each producer's stock is identifiable by the code on the bags corresponding to his or her production.

- Certified seeds: the producers only use certified seeds to grow rice for Fair Trade. For this purpose, VECO has initiated contracting of the multiplication of certified seeds with experienced seed producers.

- Site selection for production: unlike current practice in the area, that allowed every producer the freedom to select the site for growing rice, the Fair Trade experience requires the producers to collectively choose the sites according to established criteria. Thus, sites downstream of a field treated with pesticides or chemicals or near a cotton or cowpea field are not recommended. The individual plots are no longer isolated. They are grouped on shared sites specifically for the production of rice grown for Fair Trade. These criteria also take into account the soil characteristics of the site.

- The use of chemical fertilizers by farmers has been limited. The dose used previously for growing rice in the municipality has been halved, reduced to 4 kg of NPK / plot (1 plot = 400m) and 2 kg of urea / plot from 8 kg of NPK / plot and 4 kg of urea / plot.

- The creation of added value in paddy rice by including the hulling, grading and packaging of the long grain rice prior to export.

Organisational strengthening:

The farmers' groups and the two farmers' organisations were no longer anonymous following their official registration at the municipality of Savalou and at the Ministry of Agriculture. Thanks to the mobilisation efforts of all their members, both farmers' organisations have obtained FLO certification for three successive production seasons: 2009-2010, 2010-2011 and 2011-2012. The sixteen groups, the two farmers' organisations and the Union of Communal Rice

Jelle Goossens

Box 8: Some examples of the use of individual income

Faustin Atomabey, secretary general of the Savalou municipality rice group (Union Communale des Riziculteurs de Savalou).
"The farmers' income has really improved through the production and the steaming of rice and because we sell our produce successfully. That's how we can cope with different needs, like covering the costs of schooling and housing. There is also room for investments like buying a motorcycle"
Click here to view the video clip

Léandre FADOKE, president of the IFEDOU group of the Kpataba farmer organisation:
"I delivered 800 kg of paddy. After deduction of my debts for inputs I received 110 000 FCFA for the first payment and 33 000 FCFA for the second installment. The first installment was paid a few days before New Year 2010 (27 December 2009) and in my group we all contributed to pay for an ox that we have shared. Everyone in my family had a great New Year. With the rest of the money I paid for the cement and iron sheets to build a small brick extention to my house as all the walls were made of clay."

Faolé OGOUGBE, a female member of the Kodjuma group of the Tchetti OP:
"I received 12 000 FCFA for the first installment. With this money I paid for two bags of cement that I used to finish the floor of my room. For the second installment I have only received 1 800 FCFA with which I made a good meal for my children and husband".

Ogougbé has contributed 90 kg of paddy rice for Fair Trade. Note that her 2009 production was about 1 tonne 355 (Fair Trade and ordinary rice). She planted two plots or 800 m2, for Fair Trade,. The sale of paddy rice made her 15 300 FCFA (170 FCFA / kg) and after deduction of input debts, she received 13,800 FCFA. In her group there were 44 producers who participated in Fair Trade, with 7513 kg of paddy rice, or an average of 170.75 kg of paddy per producer. An allocation key has been set up to determine quantities to be taken from each Fair Trade producer. The Ogougbé situation shows the limits of Fair Trade, given the small quantity she could deliver. It must be remembered that the producer does not only grow rice.

Paul Tonahin, Kpataba farmers' organization,
"There was too much poverty in this area. Because of the rice, this has improved a lot, our families live peacefully. I can pay for my children's schooling and for the furniture for our house. And thanks to this rice project, I have also been able to buy a motorcycle."
Click here to view the video clip

Jo Vandorpe

farmers (UCR) have developed a good relationship of cooperation with one another:

- The introduction of an internal control system and an internal monitoring committee (ISC) to follow-up the implementation of production standards by each producer, and a synoptic control form used by members of the CSI - Annex 2.

- Strengthening the bundled sales' system with a bonus to the community for building infrastructure, the birth of healthy competition at work, and the strengthening of the system of mutual aid and solidarity between producers to ensure the certification of the group's production.

- Revitalization of the functioning of groups and FOs and the promotion of transparency, good governance and democracy in the management of groups and FOs: regular General Assemblies, reporting all activities to grass-roots members, regular payment of membership contributions.

- Entry into the Fair Trade market by obtaining FLO certification for a three-year period (2009-2011) for both FOs and producers' groups involved in the Fair Trade process: contracting of production and establishing the production quota to be delivered by each group and operator in the Fair Trade framework before the start of the season.

- The contribution of the UCR to the negotiation of input loans with MFIs (Micro Finance Institutions).

6. Next steps

Difficult choices for local rice processing

Most of the local rice hulling machines in Benin are versatile mills from Nigeria that cannot sieve or clean the rice and that make winnowing very difficult. The rice produced is of low quality and not appreciated by the urban population.

Working with the local business ESOP, has produced better quality results, but the rate of broken rice is still high (50 to 60%) and with a maximum capacity of 1,000 tonnes / year per machine. With further investment it would be possible to improve the performance of ESOP's facilities.

VECO is currently calculating the feasibility of installing their own rice-processing unit, in conjunction with the farmers' organisations. An important psychological effect is at play here. The farmers would certainly be proud of a system under their own management. They also feel that it would make it easier to develop their own brand, the "Collines" rice. Their own processing plant not only requires investors, the use of the facility for the farmers of the region must be guaranteed, there must be sufficient ongoing expertise to operate the machinery, the machines must be well maintained, it must be possible to acquire spare parts etc. The rice farmers are in favour of this, not in the least because they hope VECO will provide a large part of the funding, even if VECO have always made it very clear that they will not do so. Perhaps this kind of setup could operate in accordance with the stringent HACCP standards. The cost of this kind of an installation is about 208 million CFA or 317,000 Euro. If each of the 8,500 members of the farmers' organisations were to contribute a bag of rice, it would cover more than one third of the expense. With a good business plan it is probably possible to find investors for the rest. The buildings constitute the largest cost factor. For each step in the process a separate building is required. Using a vacant building previously used for cotton storage is contrary to the local pride and is not an option.

To date, the choice of a self-managed installation has not been made, and will have to be weighed against the option of using one of two brand-new modern plants built in 2010 by the government of Benin. One of these machines is also in the Collines département, in the municipality of Glazoué. The

percentage of broken rice is lower (40%), capacity is higher (12,000 tonnes / year) and it has a modern Sortex machine that can deliver very high quality rice.

Marketing in the region

Only a small part of the Tchetti and Kpataba rice farmers' production has been sold to Colruyt at a Fair Trade price. The rest was sold at a much lower price on the local market.

The export prospects and the associated additional income have generated a lot of envy in other farmers' groups in Savalou and neighbouring municipalities. VECO soon hopes to be able to start in other areas as well.

The challenge for the coming years is to involve more farmers' groups and to sell a larger portion of their produce at higher prices.

By raising the quality of rice in the framework of the sale to the Belgian supermarket chain Colruyt, it also has a greater potential to sell at a higher price in Benin. Currently, farmers' organisations are not organized to negotiate with the big rice traders in the country or with the supermarkets in the region. There are several supermarkets in Benin: Leader Price, Champion, Bénin Marché, etc. They sell mostly imported rice from Asia. Thus far it has remained unclear how a relationship with these supermarkets could be developed. They must be willing to promote the quality of local rice where at present only the Asian rice is associated with quality. VECO will explore the opportunities themselves and discuss them with the farmers' organisations.

Planning for major water control

The Collines département is located in a climatic transition zone. This explains the very large variations in rainfall, on which production depends. Water control measures are a key concern for the stabilisation of production. The simple facilities built by the producers themselves do not protect against the adverse effects of weather conditions. The yields are frequently affected. The support of producers for the production of large-scale infrastructure development would improve their output and offer the opportunity to produce rice in the counter season.

Mechanization of tillage

The lack of mechanisation is a major constraint for producers. For many generations, the farmers of Tchetti and Kpataba have used rudimentary tools for all field work. Of these, manual tillage of the lowlands is the most demanding task. Supporting producers to access mechanised tillage would improve their performance (especially that of women), and the total of cultivated areas could be increased.

Paul Tonahin, farmer's organisation of Kpataba

"The manual labour for rice growing is really demanding, even to grow one hectare a year. If we were able to use a tractor or a rotivator, one person could work 3 to 4 hectares. In the area, there is only one tractor now. Before it becomes available, it has already begun to rain, and there have been floods, so we can no longer access the land with the tractor."

Click here to view the video clip

Jo Vandorpe


Jelle Goossens

7. Conclusions

Self-sufficiency in rice is now a reality at the level of the local population of Savalou and the Collines département in general. Good quality rice is available at local markets throughout the year. Today, all producers' households have access to quality rice for their own consumption for several months following the harvest. Rice, which only a few years ago used to be a luxury food (reserved for holidays and the better-off), has become a daily dish for these rural populations. It is present at local markets all year round, and is gradually replacing imported rice.

The experience of exporting Fair Trade rice has also demonstrated that small-scale producers of the Collines are able to meet the stringent requirements of a very demanding market. The fact that the farmers' organisations of Kpataba and Tchetti obtained the FLO certification illustrates the capacity of family farmers to develop transparent, efficient organisations and meet consumer demands.

It is now urgent to expand the size of the market, especially at national level, to reduce the food dependency of Benin, and to increase producers' other industry actors' incomes. A rice import duty policy is needed to promote local production. Indeed, competition from imported rice, which sometimes comes from old stock (of questionable quality) and (Japanese) rice donations, disrupts the markets to the detriment of local rice. It is urgent to increase import duties in order to secure a market share for the local production.

Annex 1

Table: Evolution of surface areas, yields and production of rice in Benin[19]

N°	Years	**Surface** (ha)	**Yields** (T/ha)	**Production** paddy (T)
1	1997/1998	14 233	1,889	26 891
2	1998/1999	17 079	2,082	35 562
3	1999/2000	17 561	1,938	34 040
4	2000/2001	23 323	2,252	52 512
5	2001/2002	26 504	2,071	54 901
6	2002/2003	28 787	2,196	63 219
7	2003/2004	23 440	2,312	54 183
8	2004/2005	24 754	2,614	64 700
9	2005/2006	28 904	2,710	78 329
10	2006/2007	26 108	2,368	61 818
11	2007/2008	25 531	2,858	72 960
12	2008/2009	33 294	3,285	109 371
13	2009/2010	151 604		

Sources: Statistical data MAEP- September 2009 (In Guy-Jean Abel (2009), Study on the development of the rice and market gardening sectors in Benin "Etude sur le développement des filières riz et maraîchage au Bénin" "FAREC BEN 08 015 11") - DPP / MAEP, 2004 - DPP / MAEP, 2005 (In E. ABIASSI (2006), Study on the regulatory instruments of rice imports in Benin "Etude sur les instruments de régulation des importations de riz au Bénin" CCR-B, FUPRO-BENIN.

(19) http://www.roppa.info/IMG/pdf/Rapport_CCRB_Benin.pdf

Annex 2

Technical standards for production of Fair Trade rice.

N°	Rice growing operations	Information, standards and recommendations	Critical areas and risks
1	Clearing, Removing undergrowth, De-stumping	- Felling in time (before June) - Eliminate stumps of trees and shrubs - Let weeds and leaves decompose to enrich the soil	- Use of fire - Destruction of all trees
2	Layout	- Estimate the surface area - Determine slopes and - Build dams and irrigation channels following contours - Ensure good water management for the rice	- Soil erosion - Loss of fertility - Run-off of fertilizers
3	Tillage / levelling	- Turn and loosen the soil - Incorporate crop residues and litter - Tillage can be manual or with tractor	- The depth of tillage influences the water retention capacity of the plant
4	Choice of seeds	- The variety IR 841 is recommended - Use certified seeds - Test the germination of seeds (FOs and Groups) - Renew seeds every year	- Respect required variety - Variety mixture - Acquisition of seeds before the end of May
5	Sowing	- Sow in line - Respect the density (spacing of 10 cm between stands and 30 cm between lines) - Sow 4 to 5 seeds per stand - Sow no later than June (in this zone) - Clean around fields to limit rodent attacks - Do not use rat poison or poisoned food to control rodents - Install a nursery to replace missing plants with plants of the same age	- Coating the rice with a non-recommended chemical before sowing - Exceeding the surface area compared with the quantity of seed received
6	Thinning	- Perform thinning during first weeding round - Limit to maximum 5 feet	- Weakening of plants
7	1st weeding	- Perform 1st weeding 15 to 20 days after sowing - Weed with a small hoe or pull weeds out manually depending on conditions (infestation rate or flooding)	- Use of herbicides is forbidden
8	1st fertilization	- Fertilize with the NPK right after 1st weeding - Do not exceed the dose of 4 bags of 50 kg per hectare or 8 kg per compartment of 400 m² - Fertilize in line and not whole field	- Avoid overdosing - Use the recommended type of fertilizer
9	2nd weeding	- Weed a second time 40 to 45 days after sowing - Weed with a small hoe or by pulling	- Use of herbicides is forbidden - Badly executed weeding
10	Purification	- Weed out off-variety rice plants	- Homogeneity of harvest
11	2nd fertilization	- Apply the urea 45 to 60 days after sowing, do not exceed the dose of 1,5 bags of 50 kg per hectare or 3 kg per 400 m plot - Fertilize in line and not whole wide	- Avoid over-dosage - Use recommended type of fertilizer
12	Maintenance or 3rd weeding	- This weeding depends on the weed infestation with the small hoe or by pulling - Remove off-types (follow-up of purification)	- Grass pollen affects the rice quality - The variety mixture
13	Protection against pests and birds	- Place traditional traps - Surround the field with a white cord - Use a cassette tape or netting - Avoid the use of rat poison and other toxic products	- Human health - Pesticide residues in the harvest. - Observe these rules during the entire growth cycle
14	Harvest	- Leave crop until maturity - Harvest rice when the grains are dry and hard - Install density squares to estimate yield - Use appropriate tools for cutting - Make bundles and dry for two or three days at the most - Avoid contact with water	- Loss of harvest due to lack of maturity or excessively dry grains - Mixture of products without follow- up or control at the start. - Excessively dry rice causes high rate of breakage when hulling - Excessively moist rice will go mouldy during storage
15	Threshing	- Prepare the equipment - Prepare the threshing floor - Spread the sheets - Beat lightly against wood - Use a thresher-cleaner machine	- Quality of unbroken paddy rice - Presence of foreign objects (grains of sand and other impurities in the paddy)
16	Winnowing	- Perform this operation at the time of the day when the wind is blowing - Use a winnowing machine	- Cleanliness of paddy without vegetal debris, sand grains or other impurities
17	Drying	- Dry the paddy for 2 to 3 days in the shade to dry it thoroughly before storage - Use well-cleaned sheets or drying floors - Check the moisture content with a moisture gauge	- Moisture content of the paddy - Loss of product during manipulations - Introduction of foreign objects
18	Storage	- Store in bags on supports (pallets) - Write the ID of the owner on each bag - Supervise and check the storage (moisture content, rodents, moulds and other pests) - Do not store in drums or plastic bags	- Rotting - Attacks by rodents, termites and thieves - Use of non-recommended products

Sources: Data from field survey in January 2011 and Procedure Manual of the Internal Control System, LDLD 2010.

Annex 3

PRODUCTION COSTS OF RICE FROM PLANTING OF CROP TO PROCESSING – INCOME AND PROFIT

Production costs:	U-M	Unit Cost	Quantity	Costs without labour	Cost of labour
Clearing	Ha	15,000	1	15,000	
Tillage / levelling	Ha	50,000	1		50,000
Fertilizer	Kg	14,000	4	56,000	
Seeds	Kg	350	60	21,000	
Sowing	Ha	37,500	1		37,500
Weeding rounds	Ha	12,500	3		37,500
Application	Ha	15,000	1		15,000
Harvest	Ha	20,000	1		20,000
Threshing/winnowing	Kg	10,000	1		10,000
Chasing birds	Ha	20,000	1		20,000
Total				**92,000**	**190,000**
Total production cost	FCFA/ha			**282,000**	
Average yield per hectare	Kg/Ha		2500 Kg/Ha		
Production cost at field side excluding labour in FCFA/kg				**36.8**	
Production cost at field side including labour in FCFA/kg				**112.8**	
					Processing cost of 2500 kg paddy rice
Transport and conditioning	FCFA/Kg	3	2500	7,500	
Hulling	FCFA/Kg	40	2500	100,000	
Separation of broken rice	FCFA/Kg	50	616.375	30,819	
Packagin g for long grain rice	FCFA/Kg	4	934	3,735	
Packaging for broken rice	FCFA/Kg	26	764	19,861	
Total cost for 2500 kg of paddy rice				**161,914**	
Unit cost of processing after obtaining paddy rice (FCFA/kg) = 164.552 FCFA/2.500 kg					**64.8**
Total unit cost of processing one kg of paddy rice =65,8+112,8					**177.6**
Total production cost (labour included) and processing of 2500 kg rice = 282,000 FCFA + 164,552 FCFA					**443,914**
Total production cost (labour excluded) and processing of 2500 kg rice = 92,000 FCFA + 164,552 FCFA					**253,914**

Revenue and profit of the sale of white rice				
Mixed white rice (broken + long grain) obtained (70%) from 2.500 kg	Kg			**1,750**
White rice obtained after sorting loss (3%) = 1.750 kg * 97%	Kg			**1,698**
Price obtained for long grain white rice unbroken (55% of 1.698 kg = 827 kg)): price/kg obtained at local market = 370 FCFA; = 827kg * 370 FCFA		FCFA	934	**345,441**
Price obtained for long grain white rice unbroken (55% de 1.698 kg = 827 kg)): price/kg obtained with Fair Trade = 531 FCFA; = 934kg * 531 FCFA		FCFA	934	**495,755**
Price obtained for broken white rice (45% de 1.698 kg = 764 kg); price/kg obtained = 300 FCFA; = 676 kg * 300 CFA		FCFA	764	**229,163**
Fair Trade sale of 2500 kg paddy rice processed into white rice (long grain and broken)				**724,917**
Fair Trade sales price per kg rice processed into white rice (long grain and broken)				**290**
Revenue (production labour costs excluded) from Fair Trade sales of rice processed into white rice (long grain and broken) = 724.917 FCFA - 253.914 FCFA				**471,003**
Revenue per kg Fair Trade paddy rice processed				**188**
Profit (production labour costs included) from Fair Trade s of rice processed into white rice (long grain and broken) = 724.917 FCFA - 443.914 FCFA				**281,003**
Profit margin per kg Fair Trade paddy rice processed				**112**
Local market sale of 2500 Kg paddy rice processed into white rice (long grain and broken)				**574,604**
Local market sales price per kg rice processed into white rice (long grain and broken)				**230**
Revenue (production labour costs excluded) from local market sale of rice processed into white rice (long grain and broken) = 574.604 FCFA - 253.914 FCFA				**320,690**
Revenue on the local market per kg paddy rice processed				**128**
Profit (production labour costs included) from local market sale of rice processed into white rice (long grain and broken) = = 574.604 FCFA - 443.914 FCFA				**130,690**
Profit margin per kg local market paddy rice processed				**52.3**

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