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Projet Fédérateur LabelSud

Formulation of a project for rice quality improvement in Vietnam

Report on an issues identification and stakeholder consultation mission (November 2005)



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This report presents the outcome of a mission carried out in November 2005 by Frédéric gay, Crop physiologist, and Frédéric Lançon, Economist, respectively attached to CIRAD's research Unit 6 (Rice breeding and management) et and 88 (Collective action, policies and markets). The overall prospect of the mission was to prospect for possible collaborations and opportunities to formulate a project on rice quality in Vietnam.

1. Background and objectives

1.1. Initial issues addressed by the mission.

Quality becomes a major topic for the future of the Vietnamese rice economy. This issue has various dimensions and implications.

Rice quality can be considered with respect to the ability of the Vietnamese rice economy to maintain and possibly expand its share of the rice world market by responding to changes in demand from importing countries. In particular, quality might be perceived as a key determinant of the capacity of the Vietnamese rice economy to compete with other exporting countries benefiting from a higher image in terms of quality on the market (Thailand, Pakistan...).

However, exports are only one component of the rice economy since the largest share of the rice produced is consumed on the domestic market. Quality is also becoming a crucial issue on the domestic market. Triggered by per capita income growth and urbanisation, food preferences are evolving and Vietnamese consumers become more and more sensitive to quality issues.

Furthermore, quality attributes at stake between export markets and the domestic markets may differ and within the different segment of each market as well. Eventually, the quality of the rice output is the result of complex interactions between agro-physiological traits, natural environments in which the plant is produced, technology, and supply chains agents' strategies and practices from the production stage to the processing and marketing.

1.2. Justification of the mission

CIRAD has been collaborating with the Cuu Long Delta Rice Research Institute (CLRRI) on the identification of agro-physical determinants of rice quality in the Mekong River Delta. Given the complexity of the issue, they clearly acknowledge that the impact of the on-going agronomic research could only be achieved through a holistic approach of the problem considering its agronomic, technical and socio-economic aspects. To this end, it has been decided to consider the formulation of a comprehensive project for supporting the improvement of rice quality in Vietnam.

- 5 rice retailers or half-wholesaler based in two Ho Chi Minh city retail markets
- Vinafood II
- One staff of the Casino supermarket groups sourcing rice in Vietnam for export.

1.4.2. Meeting with research and development institutions

With regards to research and development institutions the mission met:

- Institute of Agricultural Science of South Vietnam (IAS)
- Southern Sub-Institute of Agricultural Engineering and Post-Harvest Technology
- Cuu Long Delta Rice Research Institute (CLRRI)
- Vietnam Agricultural Science Institute (VASI)
- Nong Lam University
- Institute of Strategy and Policy for Agriculture and Rural Development (ISAPRD)
- GRET
- Agroconsulting
- CIRAD PCP Malica

The mission was also able to attend a workshop organized to discuss the results of a study on the impact of supermarket development on poor farmers funded within the Asian Development Bank's project entitled "market for the poor" and jointly implemented with the Malica PCP. Rice was one of the products included in the study.

1.4.3. Meeting with official and donors representative agencies

Eventually the mission met the Deputy Director of the Department of Science and Technology of the Ministry of Agriculture and officers of the Agence Française de Development and from the European Commission Delegation and CIRAD representative in Vietnam.

to maintain the attractiveness of the rice relatively to other expanding crops and activities at the farmer level.

2.1.2. Emphasis on grain physical properties.

According to the changes affecting the rice economy, most of the study quoted here above look at quality issues from a particular perspective. While the IAS/Gembloux study didn't take into consideration quality issue, the ITPR and Agrifood study emphasize the negative impact of inappropriate quality management of the efficiency on the RCC. These post-harvest losses and reduced milling recovery are caused by the mixing of different rice variety and heterogeneity of the grain which reduced the efficiency of the rice polisher and whitening at the last stage of the chain, before loading for exports. The perception of the quality is here basically confined to the physical properties of the rice (% of broken, shape, colour and chalkiness...) without any particular reference to the organoleptic properties of the various types of varieties. These low performances are induced by the double milling stage system prevailing in the RCC. The paddy rice collected from the farmers is firstly processed into cargo or pre-polished rice by millers located in producing areas in small batch of 15 to 20t and then are bulked into lot of larger sizes before being reprocessed and graded by miller exporters into white polish rice rice for export.

2.1.3. Innovation in the rice exporting sub-chain.

The liberalization of the rice exports and the increasing pressure for improving the efficiency of the miller/exporter have stimulated organizational innovations through the implementation of direct linkages between millers/exporters and rice producers. These direct linkages consist in providing quality seeds to farmers in order to recover a raw material of good and homogenous quality for processing. These innovations are associated with the development of aromatic rice exports, but still represent a minor share of the exported rice flows. The development of these aromatic rice exports is another materialization of the gradual adaptation of the export sub-commodity chain to a changing environment.

In order to improve the milling recovery ratio and the supply of rice batch of homogenous grade, rice colour sorters has been gradually introduced during the last years (around 30 sets of sorters have been installed). However, expert underlined that these equipment have to be well mastered by the miller/exporters and that their efficiency are still significantly hampered by the heterogeneity of the raw material processed (i.e cargo rice coming from different local millers). Therefore, these investments will only generate a full return when the upstream part of the RCC will be able to provide more homogenous batch of cargo rice.

terms, as each market segment may have asynchronous price variations. Lastly, Vietnam main customers are located in south East Asia and Sub-Saharan Africa; while the demand for rice of higher quality is certainly expanding in emerging East Asian economies where per capita rice consumption reach a peak, the trends might not be similar in Sub Saharan African market acknowledging a high growth in terms of per capita consumption. In SSA, lower grade of rice still have a market for many reasons related to consumers' cooking habits and purchase power and the lower efficiency of the local rice processing industry.

Eventually, exporters mention that quality was not perceived as an overriding constraint for their business. They explain that rice exports are more adversely affected by logistical problems and their capacity to handle adequately the financial aspect of the rice trade than by quality issues.

2.1.5. Configuration of the rice domestic market.

The analysis of the Vietnam Leaving Standard Survey carried out within the MALICA-consortium shows that rice per capita consumption increase for the lowest income, level off for the middle income and, then decrease for the group with the highest income. This relation has been observed in other emerging East-Asian economies, where rice is the staple food. Survey conducted by ISPARD on rice consumption in early 2000's indicates that this quantitative change is associated with a shift of consumers' preferences toward rice of higher quality. Accordingly between 1990 and 2000, the share of urban consumers eating high quality rice increased from 50% to 65%, while the corresponding figures were 10% and 30% for rural consumers;

A rapid observation of rice retailers in Ho Chi Minh city shows that a wide range of rice is proposed to the consumer. In major retailing spots one retailer can handle around 10 different rice names. The same diversity is observed in Can Tho markets, while only 3 to 4 rice names were available in Thot Not rural urban centre market.

This increasing diversification of the rice supply in terms of quality along the flow of product from the production site to the urban consumptions centres could be explain by different factors. One can make the hypothesis that there is a rather limited number of varieties produced within a given producing area which reflect in the limited diversity of type of rice supplied in rice producing areas. On the downstream side of the RCC, since the sourcing or procurement areas of large urban market is wider and thus include a larger number of type of rice produced, retailers are able to offers a larger diversity of product. The larger diversity of rice offered in large urban markets compared to rural markets can also be explained by differences in preferences between rural and urban consumers, the latter looking for a larger diversity of rice corresponding to different eating practices. The higher diversity of the demand in urban areas may also be due to a higher social heterogeneity, each group of consumers looking for a specific quality of rice.

The impact of these emerging "more integrated" marketing channels on the supply side of the RCC is rather limited at this stage. The development of direct linkages between rice producers and miller/exporters is competing with the current organization of paddy collection at the local level going through small/medium rice mills. Considering that the feasibility of direct linkages between producers miller/exporters faces several constraints (localisation of the production site, human resources needed for supervision), it is likely that these channels will developed only in the most favourable areas based on their accessibility, their capacity of production per farm and the homogeneity of the farming systems. Therefore, the development of these new rice marketing channels is likely to concentrate in certain zone, while other rice producing areas will have to rely on other market opportunities.

On the retailing side, the rapid development of new retailing channels in major cities such as supermarkets does not have yet a major impact on the domestic rice retailing systems. Rice is not a strategic commodity for supermarkets that have probably a higher comparative advantage against ordinary retailing channels for the sale of fresh and processed foods, than for rice and other staple distribution. A rapid estimation of the rice sale of one supermarket visited in HCMc amount to 150 kg per week while a standard rice retailers in one HCMc urban market declared selling around 2000 kg per week. Supermarkets are mainly sourcing their product from millers/exporters who have established their original brand and who packed their rice in bags of 5 to10kg, that are more convenient for supermarkets. Thus, the rice retailed through supermarket is a subsystem of the rice export channels for the Vietnamese rice of high quality.

Concurrently, there are several attempts to strengthen marketing channels of typical rice benefiting of high reputation among urban consumers in order to better capture price rewards at the farm level, and also to avoid that the reputation of the typical rice is jeopardize by fake products. For instance, experts consulted claim that there is more Nang Thom Cho Dao rice marketed in HCMc than actually produced in the province of origin. This means that consumers are actually not in a position to discriminate between the true NTCD and the fake one, and/or that buying NTCD is more related to symbolic traits (prestige...) than to organoleptic properties. It could also means that the NTCD cannot be distinguished easily from other aromatic rice or that consumers do not have the capacity to distinguish it. On the supply side there isn't yet a clear identification of the bio-physical determinant of the NTCD particular traits, and beyond, of their agroecological and geographical foundations.

After several decades of actions geared toward wining the challenge of the quantity, quality issue are certainly playing an increasing role in the evolution of the Vietnamese rice economy. The dualism of the RCC with one branch aiming at domestic food security and another one targeting exports will probably gradually vanish in the coming years with the emergence of more segmented rice marketing channels or sub-systems aiming at particular niche without any particular reference to the domestic and world market. The

2.2.3. Typical rice marketing channels.

The third type of research topics recorded during the mission deal with the emergence or consolidation of marketing channels for typical rice that are differentiated from the other rice on the bases of their geographical origin. Two projects have been implemented by Farming System Research units, aiming at strengthening the income base of specific rice-based system in the Mekong River Delta and in the Red River Delta, through the consolidation of market niche. The strategy pursued is to a large extent similar to the one developed for other category of product (vegetables, fruits, meat...) within the joint process of agricultural and consumers' diet diversification.

As mentioned above, in the Mekong River Delta, IAS has engaged into an R&D project to support the certification of the NTCD rice. This project is carried out with the support of the Long An province with an active participation of farmers' organization. The mission gets the opportunity to attend one of stakeholder meeting gathering farmers, traders, local authorities and researchers. While the major part of the production is targeting HCMc markets, the involvement of miller/exporters in the region indicates that there is also a potential for exporting NTCD, targeting in particular consumers of Vietnamese origin abroad. Another project has been carried out by the VASI for the Tam Xoan rice produced in the RRD and mainly targeting Hanoi consumers. The mission was also informed that a Dutch supported organization was also engaged in a similar operation for glutinous rice produced in Dien Bien province.

Beyond project focusing on rice, the mission have also benefited of the view of scientists involved in the MALICA research programs (Markets and Agriculture Linkages for cities of Asia) which also focused on safety and quality issue but for a broader range of product (vegetables fruits and meat).

In the recent years, funding agencies have provided incentives to focus on the establishment of certification mechanisms especially through the implementation of Geographical Indication (GI) of Origin system (law, procedure....). However, the experience already accumulated from project dealing with quality management confirmed that implementing a system of quality management along the commodity chain is a challenging task, which also requires time to build the needed human capacity at farm and post-harvest level, especially when new types of outlet such as supermarkets are targeted. Thus, the consolidation of market niche goes well beyond the establishment of a legal framework, although it may play a catalytic role in mobilizing stakeholders.

2.3. Relevance of research on rice quality for potential fund raising.

The third objective of the mission was to get a preliminary feedback of potential donors on the relevance of an R&D project on the interaction between quality and the competitiveness of the Vietnamese rice economy. Only two funding institutions have

3. Conclusions

The following conclusions can be derived from the information collected during the mission

3.1. Relevance of the issue and focus:

Quality management is becoming an important issue for the future of the Vietnamese rice economy, although it refers to different dimension or concept of quality depending upon the market segment (domestic versus export, ordinary rice versus aromatic rice....). In terms of focus it is felt that the priority should be given to the reconfiguration taking place on the domestic markets triggered by urban consumers' changing preferences. This option is justified by the rather higher level of knowledge accumulated on the export marketing channels and by the relative higher level of organisation and governance achieved by stakeholders involved in export marketing channels compared to agents involved in the domestic ones.

However, as the on-going rice market segmentation is affecting both export and domestic market and is leading toward a more complex structure where agents are involved on both domestic and export market along a continuum of market segments, a research focusing on the domestic markets would have also to take into account the dynamic of the export market.

3.2. Researchable areas

R&D project on rice quality are rather recent in the academic Vietnamese landscape, whether in the field of bio-physical disciplines or in socio-economic research. Since these research has been mostly initiated by scientists focusing on the supply sides, limited information and analysis are available on the consumer's preferences and the determinant and on-going changes.

Since, the long term viability of quality rice sub-commodity chain depends upon a stable and durable demand these issue should thoroughly explored to defined which type of operation should be funded in this domain; these investigations on consumers' preferences should also be backstopped with an analysis of quality management practices along the commodity chain.

Along the same line the bio-physical determinant of rice quality have to be identified to assess the relevance of the various strategies that are under consideration to strengthen quality rice sub-commodity chains. For instance what is the relative importance of agroecological factors in rice quality compared to farmers cultural practices, rice variety and so forth?

The missions have only been able to get a partial view of the rice domestic market structure through rapid observation. We think that a project proposal formulation and justification would benefit from a better and clearer understanding of consumers' preferences and quality management along the marketing chain. To this end, it is proposed to carry out a consumers' preferences survey on pilot basis to get a better understanding of the determinant of rice demand.

Mobilizing funds for organizing a national workshop on rice quality issue. On the basis of the information collected during the mission and the feedback received from the various institutions and experts met it is proposed to organize a workshop where rice quality issues would be extensively discussed in order to derive priority areas for the formulation of research proposal (a tentative program of the workshop is given in Appendix C).

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Appendix B. Calendar of the mission

Date	Place	Object
21/11/05	Ho Chi Minh city	Meeting with H.T. Quoc, IAS
	Long An province	Visit to Mecofood company
22/11/05	Ho Chi Minh city	Meeting with N.D. Duc, Post Harvest Institute
	Ho Chi Minh city	Meeting with N.Luong, Casino group
23/11/05	Ho Chi Minh city	Rapid appraisal of HCMc rice markets
24/11/05	Can Tho city	Visit to Song Hau farm
25/11/05	Can Tho city	Meeting with representatives of Mekong Company
	Au Giang province	Visit to small rice millers around Thot Not village
26/11/05	Long Xuyen city	Visit to Kitoku company
27/11/05	Ho Chi Minh city	Meeting with Pr B.C.Buu, CLRRI
28/11/05	Long An province	Workshop on NTCD at My Le village
	Ho Chi Minh city	Meeting with Vinafood 2 representatives
29/11/05	HoChiMinh city-Hanoi journey	Y
30/11/05	Hanoi	Meeting with CIRAD-MALICA team
	Hanoi	Meeting with D. Thibaut, GRET
	Hanoi	Meeting with D.Baillet, AFD
	Hanoi	Meeting with V.T Binh, VASI
01/12/05	Hanoi	Meeting with D.Smith, Agroconsulting
	Hanoi	Meeting with ISPARD team
02/12/05	Hanoi	Meeting with H. Thanh, EU delegation
	Hanoi	Workshop of "Market for the poor" project
	Hanoi	Meeting with Dr T.K. Quang, MARD

Appendix D. References

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Mission for the formulation of a research project on rice quality in Vietnam

Preliminary results.

F.Gay & F.Lançon, dec 2005

Rice quality mission - preliminary results - dec 2005

1

Purpose of the presentation

- 1. Present the objectives of the mission,
- 2. Provide elements from literature review as background to the discussion,
- 3. Introduce preliminary conclusions.

Rice sector challenges

- # Changing conditions of the agro-food systems.
 - Food transition from rice based to a more diversified diet,
 - ☑Increasing globalization of the agro-food system: AFTA, USBA, WTO application...
- # Paradigm shift from food-security to efficiency.
 - ☑Increasing competition with other crops/food product at production and consumption level
 - ☑Increasing competition with other exporters of rice on the world market.

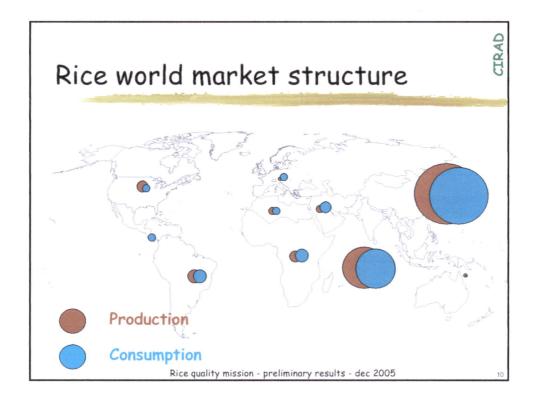
Rice quality mission - preliminary results - dec 2005

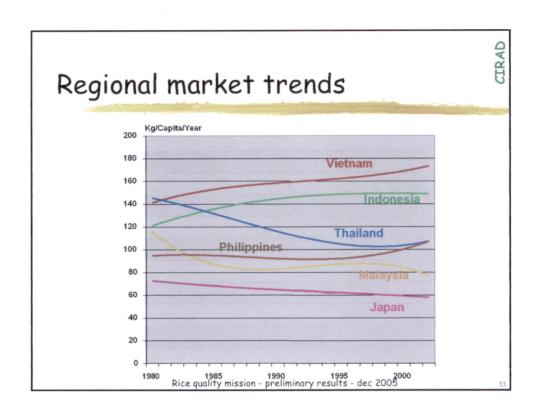
Major lessons from past studies

- ****Vietnam (MRD)** has a comparative advantage in producing and exporting rice, but...
- Rice Commodity Chain (CC) efficiency is hampered by bad quality management at the collection stage and by the "two stages" rice husking/milling and polishing process.

Possible areas for research and development actions

- TRAD
- **#Putting emphasis on export or domestic** markets?
- **#Project formulation should:**
 - □Take into account possible changes in the volume and quality traded
 - ○Consider the capacity of the actors to adjust to market changes
 - Consider the level of understanding of market changes dynamic

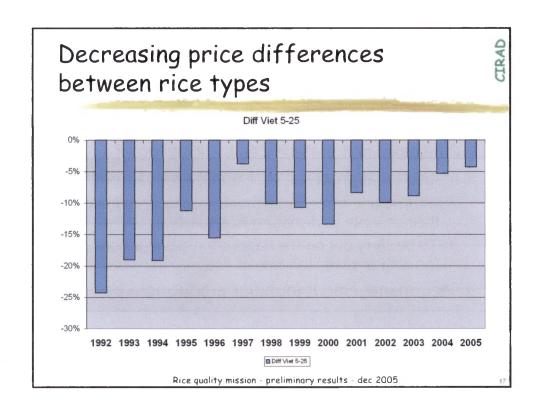


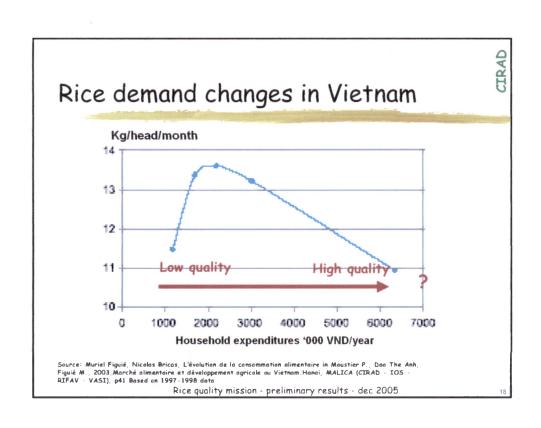


Changes in categories of rice traded

	1002	-1994	2004	-2003	Annual
	Quantity	Share	Quantity	Share	growth rate
	tonnes	%	tonnes	%	
TOTAL TRADE	15 263		26 818		6%
Variety:					
Indica	11 663	76%	20 068	75%	6%
Japonica	2 132	14%	3 186	12%	4%
Aromatic	1 353	9%	3 322	12%	9%
Glutinous	115	1%	242	1%	8%
Quality:					
High Quality<20%b)	11 781	77%	20 226	75%	6%
Low Quality	3 482	23%	6 592	25%	7%
Processing					
Paddy	263	2%	1 122	4%	16%
Husked	508	3%	1 077	4%	8%
Milled	12 559	82%	20 639	77%	5%
Parboiled	1 934	13%	3 980	15%	7%

Source: C.Calpe, FAO, World Rice Research Conference 2004 Tsukuba, 5-7 November 2004





Appendix F. Data collected on rice brand and prices at retailers shops.

Supermarkets in Ho Chi Minh

Superi	mai Kets	III HO CIII W	111111						,				,		
Date of survey	Shop name	Location	Rice name	Company	Rice type	Aromatic	Glutinous	100% Broken	Whole rice (with bran)	Colored	Texture	Cooking	Taste	Other	Variety
22/11/05	CoopMart	Cong Quynh St., D.5, HCMc	Gao Thong Dung (No Xop)	Mecofood	Ordinary						No sticky	Swelling			
22/11/05	CoopMart	Cong Quynh St., D.5, HCMc	Gao Thom	Coopmart	Aromatic	х									
22/11/05	CoopMart	Cong Quynh St., D.5, HCMc	Thom Deo	Minh Cat	Aromatic	х					Soft				
22/11/05	Hanoimart	Cong Quynh St., D.5, HCMc	Gao Tam Thom	CongNhan	Aromatic	×									
22/11/05	Hanoimart	Cong Quynh St., D.5, HCMc	Na Siam	Phalang Thai Inter Rice Co	Aromatic	x									
22/11/05	Hanoimart	Cong Quynh St., D.5, HCMc	Gao Thom Thai Lan	CongNhan	Aromatic	×									
22/11/05	Hanoimart	Cong Quynh St., D.5, HCMc	Gao Tai Nguyen Cho Dao	CongNhan	Ordinary										Tai Nguyen
22/11/05	Hanoimart	Cong Quynh St., D.5, HCMc	Gao Kimke	Minh Cat	Ordinary										
22/11/05	CityMart	Cong Quynh St., D.5, HCMc	Gao Sen Vang	Nong San	Ordinary										
22/11/05	CityMart	Cong Quynh St., D.5, HCMc	Gao Thom Huu Co	Vien Phu Trading Co	Organic rice	х								Riz bio	
22/11/05	CityMart	Cong Quynh St., D.5, HCMc	Gao Thom Thai	Nong San Thuc Pham Xuat Khau	Aromatic	х									
22/11/05	CityMart	Cong Quynh St., D.5, HCMc	Gao Thom	GENTRACO	Aromatic	х									
22/11/05	CityMart	Cong Quynh St., D.5, HCMc	Gao Huyet Rong	Phuc Nguyen	Colored				х	х					Huyet Rong?
22/11/05	CityMart	Cong Quynh St., D.5, HCMc	Nep Ngong	Phuc Nguyen	Glutinous		х								Ngong
22/11/05	CityMart	Cong Quynh St., D.5, HCMc	Nep Than	?	Colored glutinous		х		х	×					

Retailers

Netai	1015																
Date	Location	#Retailer	Name	Rice type	Aromatic	Glutinous	100% Broken	Whole rice (with bran)	Colored	Texture	Cooking	Taste	Other	Variety	Origine	Price (dong/ kg)	Comments
*****	Marché Ben Thanh, District 1, HCMc	2	Gao Nhat	Japonica											Japan	18000	
#####	Marché Ben Thanh, District 1, HCMc	1	Nep Thom Huong	Glutinous/ Aromatic	×	х										16000	
*****	Marché Ben Thanh, District 1, HCMc	1	Na Siam	Aromatic	х										Thailand	15000	From Thailand = necesseraly aromatic?
*****	Marché Ben Thanh, District 1, HCMc	1	Nep Than	Glutinous/ Colored	х	×										14000	
#####	marché Ba Chieu, District Binh Thanh, HCMc	3	Nep Than Soc Trang	Glutinous/ Colored	x	×									Soc Trang province	13000	
*****	Marché Ben Thanh, District 1, HCMc	4	Nep Lao	Glutinous	x										Laos	12000	Product of Laos or Variety from Laos cultivated in VN
*****	Marché Ben Thanh, District 1, HCMc	4	Nep Bac	Glutinous	х										North VN	12000	
*****	marché Ba Chieu, District Binh Thanh, HCMc	3	Nep Bac Thom Hoa Vang	Glutinous/ Aromatic	х	х								Nep Cai Hoa Vang	North VN	12000	
*****	Marché Ben Thanh, District 1, HCMc	4	Nep Luc	Glutinous/ Whole Rice	х			х								11000	
#####	Marché Ben Thanh, District 1, HCMc	4	Gao Nang Huong Cho Dao moi	Aromatic	х								New	Nang Huong	Cho Dao (province de Long An)	10000	
######	Marché Ben Thanh, District 1, HCMc	4	Gao Nang Huong Cho Dao cu	Aromatic	х								Old	Nang Huong	Cho Dao (province de Long An)	10000	
#####	Marché Ben Thanh, District 1, HCMc	4	Nep Ngong	Glutinous		х								Ngong		10000	
*****	marché Ba Chieu, District Binh Thanh, HCMc	3	Nep Ngong Thom Dac Biet	Glutinous		х							Special lot	Ngong		10000	
#####	marché Ba Chieu, District Binh Thanh, HCMc	3	Nang Huong Cho Dao Dac Biet	Aromatic	х								Special lot	Nang Huong	Cho Dao (province de Long An)	10000	

Date	Location	#Retailer	Name	Rice type	Aromatic	Glutinous	100% Broken	Whole rice (with bran)	Colored	Texture	Cooking	Taste	Other	Variety	Origine	Price (dong/ kg)	Comments
*****	Marché Ben Thanh, District 1, HCMc	5	Gao My	Aromatic	х										USA	9500	Probably variety from USA cultivated in VN. Necesseraly Aromatic?
#####	Marché Ben Thanh, District 1, HCMc	5	Gao Huong Lai	Aromatic	х								Jasmin fragran ce			9500	
*****	Marché Ben Thanh, District 1, HCMc	5	Gao Tam Thom Hanoi	Aromatic	х									Tam Xoan	North VN	9000	
######	Marché Ben Thanh, District 1, HCMc	5	Gao Luc Trang	Colored whole rice				×	х							9000	
*****	Marché Ben Thanh, District 1, HCMc	5	Gao Luc Do	Colored whole rice				×	х							9000	
*****	marché Ba Chieu, District Binh Thanh, HCMc	4	Nep Bac Hoa Vang	Glutinous		х								Nep Cai Hoa Vang	North VN	9000	
*****	Marché Ben Thanh, District 1, HCMc	5	Gao Dai Loan	Aromatic	x										Taiwan	8500	Probably variety from Taiwan cultivated in VN. Necesseraly aromatic?
*****	marché Ba Chieu, District Binh Thanh, HCMc	3	Huong Lai Sua Xuat Khau	Aromatic	×								Export quality			8500	
*****	marché Ba Chieu, District Binh Thanh, HCMc	3	Thom Dai Loan	Aromatic	х										Taiwan	8000	Probably variety from Taiwan cultivated in VN
######	marché Ba Chieu, District Binh Thanh, HCMc	3	Nep Ngong Thom	Glutinous/ Aromatic	х	×								Ngong		8000	

Date	Location	#Retailer	Name	Rice type	Aromatic	Glutinous	100% Broken	Whole rice (with bran)	Colored	Texture	Cooking	Taste	Other	Variety	Origine	Price (dong/ kg)	Comments
#####	marché Ba Chieu, District Binh Thanh, HCMc	3	Thom Thai Lan	Aromatic	х										Thailand	6000	Probably variety from Thailand cultivated in VN
#####	marché Ba Chieu, District Binh Thanh, HCMc	3	Tam Thom	Broken rice/Aroma tic	х		х									6000	
#####	Thanh, HCMc	3	Nep Ngong Thom	Glutinous/ Aromatic	х	х								Ngong		6000	
*****	marché Ba Chieu, District Binh Thanh, HCMc	4	Ngoc nu thom (xop mem)	Aromatic	х					Soft/No n sticky						6000	
######	Thanh, HCMc	4	Thom cu (thom xop)	Aromatic	х					No Sticky			old			6000	
*****	marché Ba Chieu, District Binh Thanh, HCMc	4	Tam thom	Broken rice/Aroma tic	х		×									6000	
*****	Thoh Not, Province de Can Tho	5	Nep	Glutinous		х										6000	
#####	Thoh Not, Province de Can Tho	6	VD20	Aromatic	x									VD20		6000	
*****	Marché Ben Thanh, District 1, HCMc	7	Gao Bui Xop	Ordinary						No Sticky						5500	
######	Marché Ben Thanh, District 1, HCMc	7	Gao 64 Deo	Ordinary						Soft				IR64		5500	
######	marché Ba Chieu, District Binh Thanh, HCMc	3	Tau Huong Cho Dao	Aromatic	х										Cho Dao (province de Long An)	5500	
#####	marché Ba Chieu, District Binh Thanh, HCMc	3	Tam Tai Nguyen	Broken rice			x							Tai Nguyen		5500	

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Date	Location	#Retailer	Name	Rice type	Aromatic	Glutinous	100% Broken	Whole rice (with bran)	Colored	Texture	Cooking	Taste	Other	Variety	Origine	Price (dong/ kg)	Comments
*****	Marché Ben Thanh, District 1, HCMc	8	Gao no	Ordinary							x					4500	
*****	marché Ba Chieu, District Binh Thanh, HCMc	3	Gao Tau Huong Long An	Aromatic	х									Nang Huong	Long An Province	4500	
*****	marché Ba Chieu, District Binh Thanh, HCMc	4	Bui no	Ordinary							x					4500	
######	Province de Can	5	Thuong	Ordinary												4500	
######	Thoh Not, Province de Can Tho	6	Jasmine	Aromatic	х									Jasmine 85		4500	
######	Marché Cai Khe, Can Tho	7	Bui Soc Trang	Ordinary											Soc Trang province	4500	
#####	Thoh Not, Province de Can Tho	6	CS2000	Ordinary										CS2000		4400	
######	Marché Cai Khe, Can Tho	7	Bong cu	Ordinary												4300	
*****	Thoh Not, Province de Can Tho	5	Thuong	Ordinary												4200	
*****	Marché Cai Khe, Can Tho	7	Gay Thom	Broken rice/Aroma tic	х		х									4200	
#####	Marché Cai Khe, Can Tho	7	Tam M. Bui	Broken rice			×							Mot Bui		4200	~-
*****	Marché Cai Khe, Can Tho	7	Tam Thom	Broken rice/Aroma tic	х		х									4200	
*****	Thoh Not, Province de Can Tho	5	Tam	Broken rice			х									4000	
#####	Thoh Not, Province de Can Tho	6	504	Ordinary										IR504		4000	
######	Marché Cai Khe, Can Tho	7	Gao Dai	Ordinary									Long			4000	
*****	Thoh Not, Province de Can Tho	6	1490	Ordinary										OM1490		3800	