

ICTSD Project on Tropical Products



Composite Index of Market Access for the Export of Rice from Uruguay



By Carlos Pérez del Castillo, Former Vice-Minister of Foreign Affairs of Uruguay
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International Centre for Trade and Sustainable Development

Issue Paper No. 26

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Published by

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Acknowledgments

This paper has been produced under the ICTSD Programme on Agricultural Trade and Sustainable Development. The activities of this programme have benefited from support from the UK Department for International Development (DFID), the Dutch Ministry of Foreign Affairs (DGIS).

ICTSD acknowledges all comments provided by developed and developing country negotiators and policy-makers, academic experts, staff of intergovernmental and non-governmental organisations and other participants in a series of ICTSD multi-stakeholder dialogues which contributed to this research.

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Citation: *Carlos Perez del Castillo and Daniela Alfaro (2010)*. Composite Index of Market Access for the export of rice from Uruguay, ICTSD Programme on Agricultural Trade and Sustainable Development, International Centre for Trade and Sustainable Development, Geneva, Switzerland.

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ISSN 1994-6856

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ABBREVIATIONS AND ACRONYMS

ACA	Asociación de Cultivadores de Arroz (Rice Growers Association)
BMA	Barriers to market access
CIF	Cost, insurance and freight
CIMA	Composite index of market access
DIEA	Dirección de Estadísticas Agropecuarias (Directorate of Agricultural Statistics - Ministry of Livestock and Agriculture - Uruguay)
EU	European Union
FAO	Food and Agriculture Organization
FOB	Free on board
GMA	Gremial de Molinos de Arroz (Rice Millers Association)
INIA	Institute of Agricultural Research
HS	Harmonized System
NCM	Nomenclatura Común del Mercosur (Common External Tariff classification of Mercosur)
MFN	Most-favoured nation
OECD	Organization for Economic and Co-operation and Development
SPS	Sanitary and Phytosanitary
TBT	Technical barriers to trade
USDA	United States Department of Agriculture
WTO	World Trade Organization

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FOREWORD

Trade barriers are often opaque and difficult to compare. All too often, an exporter faces costs well in excess of a simple tariff when seeking entry to a market. The principles underlying the WTO's July 2004 Framework Agreement, the 2001 Doha Declaration and the Agreement on Agriculture commit Members to reducing barriers to their markets and lowering their tariffs. However, to date, there exist few tools to measure the changes in market access that will take place at the conclusion of the Doha Round, or those that may result from any other trade agreement. The Composite Index of Market Access (CIMA) has been conceived as a tool to help trade policy-makers and other stakeholders to address this challenge.

As part of a work programme that resulted from a dialogue organized with the Institute for International Trade Negotiations in Salvador de Bahia, Brazil, ICTSD commissioned a methodology paper by Prof. Timothy Josling as well as pilot country studies by other experts. The methodology and country studies have been reviewed by government officials, academics, and civil society at meetings in two meetings Washington DC. An Advisory Panel has helped refine the CIMA methodology and recommended a list of products and markets to study as part of a set of pilot studies. This study is the first in the series of pilot studies.

The World Bank and IMF have developed a number of indices aimed at measuring trade restrictiveness, as a result of work they conducted to understand the impact of structural adjustment programmes on recipient countries' policies. Additionally, the OECD's Producer Support Estimate (PSE) provides a methodologically consistent means of comparing the level of domestic support on agriculture amongst its members. These tools, though useful for their intended purpose, fail to address the needs of developing country exporters trying to assess the costs they face in entering a given market. CIMA is intended to provide a clear and concise tool for this purpose.

The CIMA project is not intended to provide a comparison of the barriers faced by different tropical products. Rather, the project is meant to illustrate the actual costs faced by exporters of selected tropical products when trying to penetrate markets. While liberalisation through tariff reduction may partially achieve the aim of facilitating access for tropical products, the CIMA project highlights the fact that tariff reductions are only a part of the puzzle that trade policy has to solve.

The findings of the CIMA project can be used in many ways, including ensuring a more rational management of actual barriers to access, and hence, enhancing developing country opportunities to trade. It can also be useful in negotiations for further liberalization. Using the CIMA approach would help shift the focus from the number and complexity of support measures, as well as standards, to a uniform and comparable index so that negotiators may conclude more transparent and equitable trade agreements in the future. We hope this study, and the CIMA initiative, is of import to the reader and of help to the policy-maker.



Ricardo Meléndez-Ortiz
Chief Executive, ICTSD

EXECUTIVE SUMMARY

The composite index of market access (CIMA) is an indicator used to assess the costs of entering a given market. It is based on the notion of a price ladder that takes into account production costs all the way to final selling prices and reflects the prices received at various levels of the marketing chain as well as the full range of costs incurred in the process of exporting rice from Uruguay to the three selected import markets: Brazil, the EU and Peru. The focus of the study is on the barriers to market access faced by rice exports.

Chapter 2 reviews the methodology in this report, indicating the main sources of data used, the time period covered and the unit of measurement (milled rice equivalent) in which calculations are made (as well as conversion factors).

Chapter 3 describes distinctive features of the Uruguay rice industry, which is characterized by a high degree of integration; high dependence on exports (more than 80 percent of production); efficient production of high-quality grain from locally developed varieties; good technological and research status and a high level of competitiveness in international markets.

Chapter 4 describes the price of rice at different levels of the marketing chain: farming; processing; border prices—both free on board (FOB) and cost, insurance and freight (CIF)—and in the import market.

Chapter 5 illustrates the full range of costs incurred in the process of exporting rice from Uruguay. This includes the cost of production, processing, transport to port, overseas shipping and compliance costs with SPS/TBT or other measures.

Chapter 6 deals with tariffs, subsidies and taxes in the domestic as well as import markets. It highlights that there are no rice production and processing subsidies in Uruguay. It also describes the different market access barriers (tariffs, subsidies and taxes) in the three selected import markets. The analysis shows different market access barriers, particularly at the borders in the three selected countries. Some of these barriers have a variable component (price bands), which increases the uncertainty of access for exporting countries. When there are no tariff barriers at the border (as in the case of Brazil), the study shows that excise taxes can be applied with equivalent effects. The evidence shows that the impact of these barriers can be equivalent to a quarter of the import price.

Chapters 7 and 8 relate to the construction of the price ladder and the calculations of CIMA in the three selected markets. It concludes that for the three markets selected the CIMA ranges from 77 to 96 percent. This corresponds to barriers to market access (BMA) of the order of 4 to 23 percent.

Finally, Chapter 9 outlines some recommendations that emerge from the study concerning possible policy changes as well as areas for further research.

1. INTRODUCTION

This study of the rice industry of Uruguay is part of the International Centre for Trade and Sustainable Development (ICTSD) pilot project on market access for three selected rice exporting countries: Uruguay, the United States and Vietnam. The objective of the project is to build an indicator of market access of the main rice importing countries that would include not only tariffs, but also other barriers that affect market access for agricultural products. Such barriers include sanitary and phytosanitary (SPS) measures, technical barriers to trade (TBT), private standards, excise taxes in importing countries and other non-tariff trade barriers. This tool should be of assistance in trade negotiations, giving a clear indication of whether any particular negotiated outcome results in real liberalization.

In the case of Uruguay the three import markets selected are Brazil, the European Union (EU) and Peru. The choice reflects the importance of these markets as well as the different types of barriers to market access faced by exporters.

This study received wide support from the private and public sector of Uruguay. The private sector, mainly the Rice Growers Association (ACA), representing the farmers, and the Rice Millers Association (GMA), representing the rice industry, were the primary sources for data collected with respect to prices and costs incurred at various levels of the marketing chain, including processing and transport. This was complemented by official public data on third country markets' regulations, barriers and distortions.

2. METHODOLOGY

Considering that the global objectives of the CIMA are aimed at “better appreciating and visualizing the real magnitude of trade liberalization achieved during the Doha Development Round” and providing “a powerful tool in pursuing further liberalization and effective reform” (Bahia dialogue, 2007 cited in Josling, 2008), the elaborated index should be easy to follow, based on readily available data and open to replication. These characteristics would make it possible to accurately compare the costs of exporting among countries that produce the same commodities, and where appropriate to compare export costs across commodities (Josling, 2008).

The CIMA as an indicator of market access will be higher if tariffs or excise taxes are reduced during negotiations or if there is a reduction in the costs of meeting standards. The closer the CIMA is to 100 percent, the better the conditions of market access. Alternatively, the

CIMA will be lower as restrictions and distortions to market access increase and in some circumstances may even impede trade.

The method of calculating the CIMA is based on the notion of a price ladder that takes into account costs from production all the way to the final selling price in the import market. The steps in the ladder are the defined costs, taxes and subsidies that make up the difference between production costs and final revenue. There are also some elements of profit or loss in the price ladder, such as processing costs that are taken as residual.

2.1 Measurement Units Used

Rice volumes in this document are mainly expressed in milled rice equivalents, using the conversion rates provided by the GMA in Uruguay, which are in line with internationally recognized standards.

Table 1 - Conversion Rate

Type of rice	Conversion rate into milled equivalent
Paddy	0.625
Husked (brown)	0.800

The degree of processing constitutes the criteria for the international classification of rice traded, either in the form of paddy, husked, milled

or broken rice. This classification is followed in the Harmonized System (HS) at the 6-digits level used in international trade negotiations.

Table 2 - HS 6-Digit Classifications for Rice

Code	Description
100610	Rice in the husk (paddy/rough)
100620	Husked (brown) rice
100630	Semi-milled/wholly milled rice, whether/not polished/glazed
100640	Broken rice

Within this broad international classification, the Rice Sectoral Commission of Uruguay has added a local denomination of one specific type of processed rice, known as parboiled, which represents significant exports for the country.

This type of rice is also incorporated in the common external tariff classification used by Mercosur (Nomenclatura Común del Mercosur (NCM)), of which Uruguay is a member, at the 8-digit level.

Table 3 - NCM of Rice at 8 Digits

Type	HS 6 Digits	NCM 8 Digits	Description
Paddy	1006.10	1006.10.10	Seed (to cultivate)
		1006.10.91	Parboiled
		1006.10.92	Others
Husked	1006.20	1006.20.10	Parboiled
		1006.20.20	Others
Milled	1006.30	1006.30.11	Parboiled (polished or glazed)
		1006.30.19	Parboiled (Others)
		1006.30.21	No Parboiled (polished or glazed)
		1006.30.29	No Parboiled (Others)
Broken	1006.40	1006.40.00	Broken

2.2 Selected Period

Calendar years 2006, 2007 and 2008 have been selected for the purposes of this study. Economic literature considers that a period of three years is adequate for a viable analysis of an agricultural sector.

In the countries of the southern hemisphere, such as Brazil, Uruguay and Peru, the rice crop season is from March to February, and this period is considered the agricultural year. Therefore, to compare exports to the production of the harvest of one agricultural year, exports should refer to the shipment between March and February of the following year, e.g., exports for the period 2007-08 refer to the production of the agricultural year 2006/07.

Nevertheless, since the bulk of rice exports in Uruguay occur in the same year as the harvest of the crop (March-April), an analysis of trade flows in terms of volumes and values will not differ substantially whether you look at them in terms of calendar or agricultural years. This is

why we have relied on information provided by calendar years for the calculation of the CIMA.

On the other hand, the EU considers a marketing year of September to August to establish tariffs according to import quantities. When the tariff varies in a marketing year, the highest value in the calendar year is used in the calculations to avoid averaging.

2.3 Data Sources

All data sources concerning production and trade used in this document are primary and official sources.

Data concerning the primary production phase of the rice chain were derived from the Dirección de Estadísticas Agropecuarias (DIEA) of the Ministry of Agriculture of Uruguay.

With regards to trade data (volumes and values), the principal source for the analysis is COMTRADE. However, the data were checked with respective official national sources: the Customs of Uruguay, Eurostat in the case of the EU, and Aliceweb in the case of Brazil.

3. URUGUAY RICE SECTOR

3.1 Structure of the Industry

Over the past 30 years, the rice industry has been a leading agricultural export-oriented sector in Uruguay. Exports represented more than 80

percent of average production in the last three harvests. This export share is unique among world rice producers and exporters, and significantly greater than the average world export/production ratio of 7 percent reported by the FAO.

Table 4 - Total Supply and Distribution of Rice (Thousand Tons - Milled Equivalent)

Attribute	2005/06	2006/07	2007/08
Beginning stock	93*	174	22
Milled production	806	714	830
Total supply	899	888	852
Exports	665	808	741
Consumption	60	58	61
Ending stock	174	22	50
Total distribution	899	888	852
Export/supply rate	74%	91%	87%

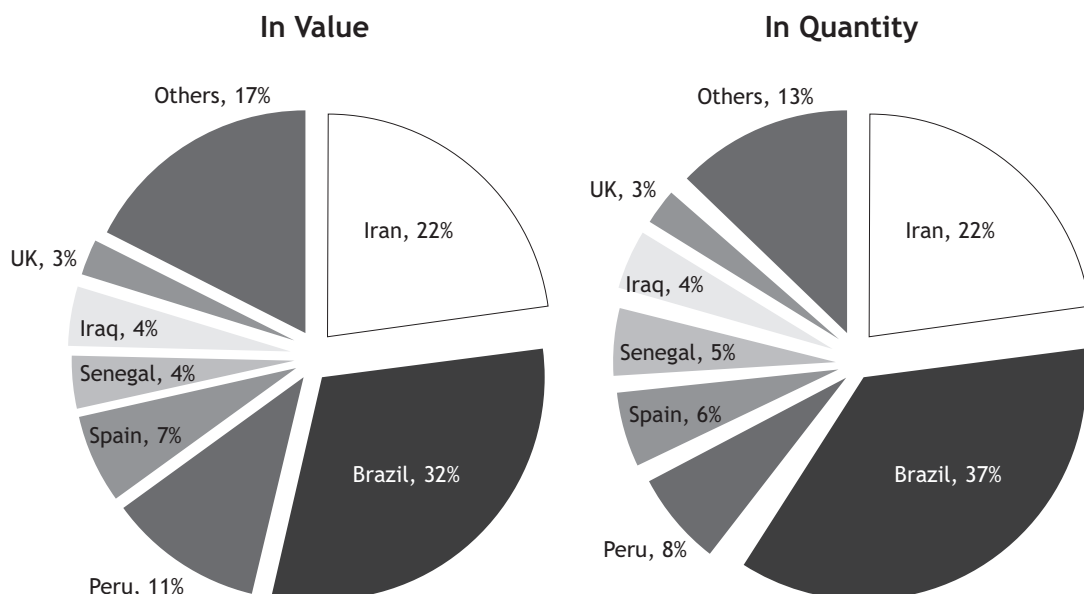
Source: Own elaboration in base of DIEA for production and Rice Sectoral Commission for Exports.

Note: * This beginning stock is taken from the PSD US Department of Agriculture - Database.

In the period 2006-2008, Uruguay exported rice to 41 markets on average. Brazil was the main destination, with a share of 32 percent in terms of total value and 37 percent in terms of total volume exported in this period. Iran, Iraq, Peru,

Senegal, Spain and the United Kingdom were the other main destinations, representing along with Brazil, 80 percent of the total market share of Uruguay's exports. Iran's share has been declining over the years, and it disappeared in 2009.

Graph 1 - Export Share by Market in Value and Quantity (Average 2006-2008)



Source: COMTRADE.

The second main characteristic of the Uruguayan rice sector is the high level of integration from producers to exporters, including public institutions. This is quite a unique feature of this industry, which differs from other strong agribusiness sectors in the country, such as, for example, beef and dairy.

To facilitate the process between planting and harvesting, the mills provide credit to producers as needed to ensure they have adequate access to raw materials and agricultural supplies (e.g. irrigation water) as well as capital goods.

The production cycle also benefits from a contract system based on a price agreement between the mills and the farmers represented by the ACA. This contract includes the definition of two prices: a provisional price for each agricultural year fixed by 30 June of each year, to be paid to the growers on delivery of the crop, and a definitive price after exports are concluded, fixed by 31 December of each year, which if superior to the provisional price

is credited to the growers. This has been the case for most years, except 2008/09.

This contract system has been the distinctive characteristic of the rice sector in Uruguay and probably the main reason for its steady growth and technological development over recent decades.

The primary phase of the rice industry is also characterized by the intensive use of irrigation, which is not a usual production technique in Uruguay's agricultural sector (e.g. soybeans, wheat and corn). Irrigation is used to counter the high variability of Uruguay's climate in terms of temperature and rainfalls. Actually, rice is the most capital-intensive crop in Uruguay, considering the investment made in water reservoirs and agricultural machinery, which tends to significantly reduce the use of labor as a production factor.

In Uruguay, rice production is concentrated in three zones mainly associated with water availability. These zones are situated in the East, Centre and Northwestern parts of the country.

Map 1- Geographical Location of Rice Production in Uruguay



Source: GMA.

Table 5 - Main Characteristics of Rice Producer Regions

Item	East	Centre	Northwest
Topography	Plain	Varied; with undulated zones, moderate slopes	Varied; with undulated zones, moderate and strong slopes
Soils	Planosols, [solods ?] and Gleysols	Varied	Vertisols and [Brunosoles?]
Water Sources	Mainly Merim Lake and Cebollatí, Olimar and Tacuarí rivers; unlimited water availability	Mainly dams; irrigated area depends on annual rains before planting	Cuareim and Uruguay rivers. Irrigated area from dams depends on annual rainfalls before planting
Rice Areas	Continuous, of important area; plantings in plains.	Discontinuous and relatively small; plantings in non-flooding plains contiguous to rivers and hillsides	Discontinuous and disperse, relatively small; plantings in non-flooding plains contiguous to rivers and hillsides
Temperature (September-April average)	19°C	21°C	23°C
Solar Radiation (sun hours from January to March)	718	Not available.	742

Source: DIEA, 2003.

The eastern zone, adjacent to the Lake Merin basin, accounts for more than 70 percent of

the rice area planted as well as the country's total rice production.

Table 6 - Production by Region (2008/2009)

Production Zone	Area (thousand ha.)		Production (thousand tons)	Yield (thousand kg. per ha.)
	Planted	Harvested		
Northwest	29,7	29,3	241,8	8,16
Centre	17	17	138,5	8,15
East	114	114	906,9	7,95
Total	160,7	160,3	1287,2	8,01

Source: DIEA, 2008/09 Rice Survey.

The average area planted with rice over the past three years has been 160,000 hectares.

The number of growers has remained relatively stable at about 500.

Table 7 - Number of Farms and Average Size Farm

Production Zone	Farms		Planted area		
	Number	%	Total (thousand ha.)	Average Size (ha.)	%
Northwest	103	20.6%	29,7	288	21.8%
Centre	64	12.8%	17	265	11.2%
East	333	66.6%	114	342	67%
Total	500	100%	160,7	321	100%

Source: DIEA, 2008/09 Rice Survey.

The majority of farms grow rice following a well-defined rotation system. Fields are normally planted with rice for two consecutive years. The land is then planted with pastures (grasses and legumes) and used for grazing cattle for the next three to four years.

Leasing is the main instrument of land tenure, which represents 75 percent of the total land used for rice production. A large number of producers that lease land specialize only in the production of rice.

There are 40 rice mills in Uruguay. Five of them (SAMAN, CASARONE, COOPAR, GLENCORE and ARROZAL 33) represent 90 percent of total rice exports. On the other hand, five mills (COOPAR, SAMAN, CASARONE, LEDRISUR and PIVETTA) are the main suppliers of the domestic market.

The state plays a role through its participation in the Rice Sectoral Commission created by the Decree N° 1094/73 and regulated by Decree N° 96/85, dated 1 March, 1985.

The Commission includes representatives of the public sector from the Ministries of Agriculture, Industry, Transport, Economy, Foreign Affairs and Housing and Environment, along with a delegate of the Banco de la República Oriental del Uruguay (Bank of the Eastern Republic of Uruguay - BROU) and a delegate of the Planning and Budget Office, who serves as Chair of the Commission. Two private representatives are also on the Commission: one from the ACA, representing the interest of the growers, and the other from the GMA, representing industry.

The main task of the Commission is to advise the Government on matters related to production, stocks, internal marketing, industrialization and exports of rice as well as on issues related to irrigation and land, among others. Another important task of the Commission is to provide information on exports as reported by the Statistical Sub-commission. This Sub-commission receives information from the mills on each export transaction, including the type of rice, volume, price and destination of each shipment.

3.2 Nature of the Commodity Traded

Another distinctive characteristic of Uruguay's rice industry is the high importance of seed innovation coming from public sector institutions. In the 1970s, the Eastern Experimental Station (EEE) of the National Institute of Agricultural Research (INIA) developed a strong and long-lasting cooperation with the rice industry. The INIA is a government entity with public and private funding, and it manages the National Rice Programme. The objective of this programme is to provide the market with quality products that favour sustainable national resource development.

The priority of the programme has been the generation of new varieties aimed at increasing productivity through higher yields, the development of disease-resistant varieties, the development of tropical-type agronomic characteristics and the satisfaction of consumer needs.

Since the 1990s, almost the totality of the rice area in Uruguay has been cultivated with locally

developed varieties. Three of them, Paso 144, INIA Tacuarí and INIA Olimar all correspond to the Indica type, which represented 95 percent of the rice planted in the past five harvests. The remaining 5 percent is composed of 12 varieties, including the Japonica type (a medium grain that is sticky and humid when cooked), aromatic (a long-grain, scented variety) and glutinous rice. None of these have been preeminent.

The industry has set a goal to develop new varieties of Japonica-type rice in order to achieve greater flexibility in finding new markets.

Uruguay exports high-quality rice. According to an arbitrary FAO benchmark, exports con-

taining less than 20 percent of broken rice are classified as “higher quality,” and rice containing 20 percent or more of broken rice are classified as “lower quality.” The percentage of broken rice in Uruguayan exports is between 5 and 10 percent.

In accordance with the HS international classification, three-quarters of Uruguayan rice exports, in the average of the last three agricultural years, have been milled rice.

While the producers seem open in general to the idea of using biotechnology, including GMO, they are unlikely to adopt new technologies in rice production that could jeopardize export markets.

Table 8 - Uruguay Rice Export by HS 6 digits (In Milled Equivalent, Tons)

HS Code	2006	2007	2008	Average	
				Tons	Percentage
100610	2.139	3.257	5.330	3.576	0.5%
100620	120.746	159.243	131.214	137.068	18.8%
100630	528.431	551.767	501.526	527.241	72.5%
100640	63.259	44.496	70.971	59.575	8.2%
Total	714.575	758.763	709.042	727.460	100.0%

Source: COMTRADE.

In order to compare the export volumes between calendar and agricultural years, we

present the export data in accordance with the local classification.

Table 9 - Uruguay Rice Exports by Local Classification (In Milled Equivalent, Tons)

Type/ Agricultural year	2005/2006 (Mar/06 - Feb/07)	2006/2007 (Mar/07 - Feb/08)	2007/2008 (Mar/08 - Feb/09)	Average	
				Tons	Percentage
Paddy	2.571	3.865	6.582	4.339	0.6%
Husked	117.872	120.837	94.969	111.226	15.2%
Milled	427.201	577.064	508.052	504.106	69.1%
Parboiled	47.870	53.064	57.988	52.974	7.3%
Broken	59.998	43.901	66.393	56.764	7.8%
Total	655.512	798.731	733.984	729.409	100.0%

Source: Rice Sectoral Commission.

A price differential is applied to each type of rice given the percentage of broken rice it contains, according to Rice Sectoral Commission data.

A comparison between Tables 8 and 9 shows that export volumes are similar for calendar

and agricultural years and for international and local classifications. On average, rice exports from Uruguay totaled approximately 725,000 tons over the past three years. The majority of parboiled rice is grouped with milled rice. Uruguay is currently the eighth largest rice exporter in the world according to FAO data.

3.3 The Process of Exporting

Planting, growing, harvesting, storing, milling and trading rice are the main steps identified in the process of exporting rice in Uruguay.

3.3.1 Planting

Rice is planted directly into dry soil during the months of October and November. Fertilization usually occurs before planting and consists mainly of nitrogen and phosphates. Urea may also be used. About 30 to 45 days after planting, the fields are flooded with water from reservoirs or rivers. Approximately 12,000 cubic meters of water per hectare is needed for rice cultivation.

3.3.2 Growing

From September until February/March, the rice plant grows a main stem and a number of tillers. Each rice plant will produce four or five tillers. Every tiller grows a flowering head or panicle. The panicle produces the rice grains. Rice crops are grown in 5- 25 cm of water, depending on growing conditions.

3.3.3 Harvesting

As the grain begins to mature, the farmers “lock up” the water on the bays. This ensures that no water leaves the paddock; it is fully utilized by the rice plants. The soil then dries out in time for the harvest to commence. Farmers use large, conventional grain harvesters to mechanically harvest rice in the autumn. Once it is harvested, the rice is commonly named paddy rice. This is the name given to unmilled rice with its protective husk in place.

3.3.4 Storing rice

Once it is harvested, rice is immediately transported to dryers located in farms or mills. Most producers sell their produce straight from the field to the mill. The drying process reduces the moisture of paddy rice, avoiding the risk of spoilage in storage. Once dried, paddy rice is stored in warehouses in sacks, in grain bins or in warehouses adapted to work with rice in

bulk. When storing rice in bulk, special care is needed to maintain temperature and humidity; advanced technology is used for this purpose.

3.3.5 Milling rice

The rice milling process is carried out in several stages. First, the rice is cleaned after harvest. This entails separating straw and foreign materials from the rice. Second, the rice husk is removed using a paddy husker machine. Once removed, the resulting product is commercially known as brown rice. The brown color is due to the outer bran layer. Third, the rice bran is removed using rice whiteners and polished by friction. The resulting product is commercially known as white rice. Finally, the parboiling takes place. This is when white rice is soaked in warm water under pressure, steamed and dried before milling.

The growing and processing of rice creates many valuable new products. These include:

- Husk: This represents 20 percent of the paddy rice received from harvest. Husk is used mainly for power generation and to a lesser extent for animal bedding, gardening and building.
- Rice Bran: The rice bran removed during the milling process is used mainly for animal feeding and human health products. Another important use is oil extraction. Rice oil is widely known for its excellent quality and use in fried foods.
- Broken Rice Grains: Some broken rice grains are mixed with whole grains and other materials and used for animal feeding.
- Brewers: The smallest broken grains mixed with barley are used mainly for beer production. They are also used to produce rice flour.

3.3.6 Trading rice

The millers engage in all the transactions related to the operation until the point of delivery (port or terrestrial border). They sign

the contracts with importers and arrange the corresponding financial transactions.

The importer takes over from the point of delivery, assuming shipping, insurance and others costs and benefiting from all profit margins resulting from the transaction.

3.3.7 Domestic consumption

Uruguay is a small country with a population of 3.4 million people. The annual domestic demand of rice estimated at 11 kilos per capita can be considered relatively low. This leaves the country's rice sector very dependent on export markets and also highly vulnerable to changes in external demand as well as currency fluctuations. As mentioned previously, more than 80 percent of Uruguay's rice production is exported; 8 percent is consumed domestically. Domestic use is comprised of roughly 3 percent as seed and 5 percent as human consumption. The difference between the total supply and the external demand and domestic consumption is carried over as stocks.

3.4 The Main Barriers as Seen by the Industry

The Uruguayan rice industry considers that the main barriers to trade are the protectionist measures adopted by the major producers and exporters of rice. This includes, in particular the United States, but also some other competing developing countries, like Thailand, Vietnam and India. These measures include domestic support policies for rice production, government intervention with respect to prices and stocks, export subsidies and state trading. All these measures distort international agricultural trade, displace efficient rice exporters from their traditional markets, depress international prices and generate uncertainties and disincentives for long-term planning and investment.

Rice is one of the world's most important food commodities. Yet, it is also the most protected and subsidized according to the Organization for Economic and Co-operation

and Development (OECD) producer and consumer support estimates (PSE-SCT/CSE) indexes. Border protection, domestic subsidies and other forms of government support accounted for 75 percent of gross receipts for rice farmers in OECD countries in 2002-04, a poor improvement from the 80 percent provided in 1986-88. Given the increase in rice prices over the past three years (2006-2008), PSE for rice in the OECD has fallen to 60 percent of producers' gross receipts (52 percent in 2008). It is worth mentioning that these OECD estimates include only the support directly linked to rice (the Single Commodity Transfers -SCT- estimate). This means that this percentage underestimates the actual total support received by rice producers by excluding "disconnected" subsidies, such as those used under US and EU support schemes.

US agricultural support schemes represent one of the most trade-distorting factors throughout the developed countries. Under different laws, most of these schemes are included in the so called "Farm Bills." The US Government supports domestic rice production by using tariffs on imported rice and direct taxpayer subsidies to producers based on production, prices and historical acreage. These subsidies result in welfare losses for both US consumers and taxpayers, but especially to countries that produce and export rice.

According to the US Harmonized Tariff Schedule, the most-favoured nation (MFN) tariffs range from 0.44 cents per kilogram on lower-quality, broken rice to 2.1 cents per kilogram on husked brown rice. Imported white and parboiled rice face an ad valorem rate of 11.2 percent. Those specific tariffs translate into ad valorem rates of 3 to 24 percent, depending on the type of rice and fluctuations in global prices. Because tariffs are specific, fixed at per kilogram rates, higher global prices per kilogram will mean lower effective ad valorem rates, while lower prices will mean higher rates.

On the other hand, the support programmes to rice farmers also established in the different

Farm Bills adopted by the US Congress, consist in direct payments, countercyclical payments and marketing assistance loans. These federal programs have delivered between USD 473 million and USD 1.774 million in taxpayer subsidies to the rice sector each year since 1998 through the Commodity Credit Corporation according to International Food Policy Research Institute (IFPRI) estimates (Griswold, 2006).

Rice was included by the United States as an exception to Uruguay Round commitments to eliminate export subsidies. According to US notifications to the WTO, subsidized US exports of rice over the past years have been directed toward food assistance to other countries in the context of food aid directives. The most recent US notification on export subsidies reports 97.070 tons of rice as food aid in 2006, while the total WTO commitment of subsidized exports (which does not include food aid, although it is reported in the export subsidies notification) is 38.544 tons. In 2002, total rice exports under the food aid scheme amounted to 414.638 tons, but no other rice exports subsidies were reported by the US Government.

One of the main US export subsidy programmes—until it was repealed by the 2008 Farm Bill—was the Export Enhancement Program (EEP), which was aimed at helping US producers of different products (including rice) remain competitive when facing other countries' subsidized competition in targeted markets. Another program, the Export Credit Guarantee Program (GSM-102), is actually

providing financial support to rice exports, according to USDA information. The 2008 Farm Bill removed the 1 percent limitation in origination fees applied by the EGP, making this scheme more similar to open-market conditions credits.

The Uruguayan rice industry considers that these protectionist practices, including the extensive use of The Food for Peace Act (FPA)—formerly known as PL 480—have deprived Uruguay access to Caribbean country markets, in particular Haiti and Mexico.

A second major barrier perceived by the industry is border protection in the main importing countries. These measures include tariffs in the case of the EU (including tariff escalation) and excise taxes in countries like Brazil. These domestic taxes operate as barriers with effects equivalent to tariffs. In this respect, it is important to note that Mercosur is a custom union where there are no tariffs among member countries.

While SPS and TBT measures are certainly relevant in international rice trade, there have not been any significant market access barriers in the case of Uruguay's rice exports. The industry considers that SPS requirements have been incorporated in the production process, implying that growers and mills do not consider it an incremental cost.

Similarly, private standards are not considered a barrier to exports. Uruguay exports rice in bags of 50 kilograms as a commodity without specific requirements.

4. PRICE LEVELS

4.1 Price to the Farmer

As mentioned earlier, the price system to farmers is based on annual contracts agreed between producers and mills. These contracts include a provisional price guaranteed to

the producer on delivery to the mill and a definitive price that takes into account the sale price at which rice was actually exported. This is a transparent system that has worked well for both parties.

Table 10 - Farmer Price

Agricultural Year	Provisional Price (USD per bag of 50 kgs)	Definitive Price (USD per bag of 50 kgs)	Tax refund (USD per bag of 50 kgs)	Total received by farmer	
				(USD per bag of 50 kgs)	USD per ton
2005/06	7.20	7.36	0.40	7.76	155.20
2006/07	8.25	8.67	0.35	9.02	180.40
2007/08	16.85	16.00	0.41	16.41	328.20

Source: GMA.

There are price differentials received by farmers according to quality. To a large extent, these price differentials are fixed at the time of the delivery of rice to the mill and take into account the degree of humidity (i.e., whether or not the rice is delivered dry).

while 1006.30 (milled rice) is used for Brazil and Peru, because these constitute the most important categories sold to these markets. Quality differences in export prices are not observable in the FOB price quoted.

4.2 Price at the Processor Level

In Uruguay, there are no retailers between farmer and mill, so the price to the farmer is the same to the price at the processor level. According to GMA data, mills charge, on average, 5 percent for rice after it is processed.

4.4 Price in the Importer Market

There are domestic prices in the analyzed markets that are used for policy interventions in the case of the EU and Peru. Therefore, CIF prices are used in this analysis as the average unit value calculated from volume and value import statistics.

4.3 Price at the Shipping Point

Uruguay has neither commodity exchange nor spot prices for rice. The best approximation to an FOB price is the average unit value of the 6 digit HS code for the selected markets, calculated from volume and value export statistics.

4.5 Exchange Rates Used in Converting Prices

The exchange rate, from the euro to U.S. dollars, is used only in the case of the EU for converting CIF prices, tariff or internal taxes. European Central Bank data is used for this purpose. For the analyzed period, the euro-dollar exchange rate was 1.26, 1.37 and 1.47 for 2006, 2007 and 2008 respectively.

In the case of the EU, tariff heading 1006.20 (husked rice) is selected for the analysis,

5. COSTS

5.1 Cost of Production

For this paper, the farmer price is used as a good proxy of the farmer cost. The farmer price is the result of the contract system between the mills and farmers, which is based, among other factors, on an appraisal of the world rice situation and the current local production conditions, including cost of production.

Evidence suggests that, as a result of consumer demand, rice growers are starting to engage in new activities, such as agricultural best practices and production of organic rice that will lead to additional costs in terms of production. This may have implications in future CIMA calculations.

5.2 Cost of Transport to Port or Border

In the case of Brazil, the cost of transport to take the rice to the border has been evaluated at between USD 6 and USD 7 per metric ton. This corresponds to freight charged by the Brazil Custom. In the cases of the EU and Peru, the domestic cost of transport to port is estimated at approximately 40 USD per ton

5.3 Cost of Processing

In the construction of the price ladder where FOB and CIF prices as well as other costs, such as tariffs and excise taxes, were previously determined, the processing cost estimate is calculated as a residual value.

This cost is difficult to obtain, because there is no clear correspondence between the price of the product exported and the price paid to the farmer, especially in view of the fact that more than one product is obtained from each ton of paddy rice. In addition, the export price is an annual average value of a product sold at different times of the year and, therefore, may be the object of great volatility.

5.4 Cost of Overseas Shipping

The cost of transport is calculated as the difference between the CIF and FOB price, which represents approximately 8 percent of the CIF price in the case of the EU and 20 percent of the CIF price in the case of Peru. This value was confirmed as the real cost of transport in consultations with industry.

In the case of Brazil, as a border country, there is no cost of shipment from border to border. In addition, for Mercosur countries, a CIF price does not exist. Prices are generally agreed as free carrier (FCA), which implies delivery at plant or delivery at frontier (DAF). Only CFR (Cost and Freight) is used in Ports of Northeast.

5.5 Cost of Compliance

It is important to highlight the likely impact of preferential trade agreements on international trade of subsidized agricultural products. As a result of the multiple postponements in the conclusion of the Doha Round, there has been an acceleration of preferential trade agreements between developed and developing countries. In most of these agreements, the developing countries accede to the granting of better market access conditions than those envisaged under the multilateral trading system or previous preferential agreements they have signed with other developing countries.

To illustrate this point, under the US-Peru Trade Promotion Agreement (PTPA) signed in 2006, the United States obtained a 74,000 ton Tariff Rate Quota (TRQ) on a milled rice-equivalent basis with an annual compound growth rate of 6 percent. Milled, husked and paddy rice can be imported under the TRQ. The out-of-quota tariff is capped at 52 percent and will begin to be phased out after a grace period

of 8 years and will be completely eliminated in 17 years. The agreement also includes volume-based agricultural safeguards for a limited number of products covered by TRQs including rice, if there are import surges. The safeguard triggers are set as a percentage of the growing TRQ quantities. Increased tariffs resulting from the triggering of the safeguard can be maintained only for the remainder of the current calendar or marketing year. Safeguards expire when the tariff has been phased out. With respect to standards, Peru agreed to withdraw proposed rice standards and to provide no less favourable treatment than that applied to like-Peruvian product.

The agreement eliminates Peru's use of Andean Price Bands (variable tariffs) for rice imported from the United States, thereby ensuring that Peru stops applying high duties to imports from this source.

This concession was not given in the agreement signed by Uruguay with Peru through Mercosur (Economic Complementarity Agreement -ECA N° 58). Therefore, when international prices are low and below the reference prices of the price band, US rice enters the Peruvian market under much better conditions than Uruguay, because the United States does not face the variable tariffs.

6. SUBSIDIES AND TAXES

6.1 Subsidies to Domestic Producers and to Domestic Processors

There are no subsidies to domestic producers and processors in Uruguay.

6.2 Subsidies to Firms Conditional on Exports

Uruguay has a general scheme for export promotion permitted by the WTO. It consists in a refund of excise taxes and levies on exports in order to neutralize their incidence on the cost of production and to avoid exporting taxes. Before 2007, the refund was 4.25 percent of the FOB price for rice exports. It has since been reduced to 2 percent. This refund is paid to rice farmers in the definitive price paid by mills after the exports are fulfilled.

6.3 Taxes in Exporting Country

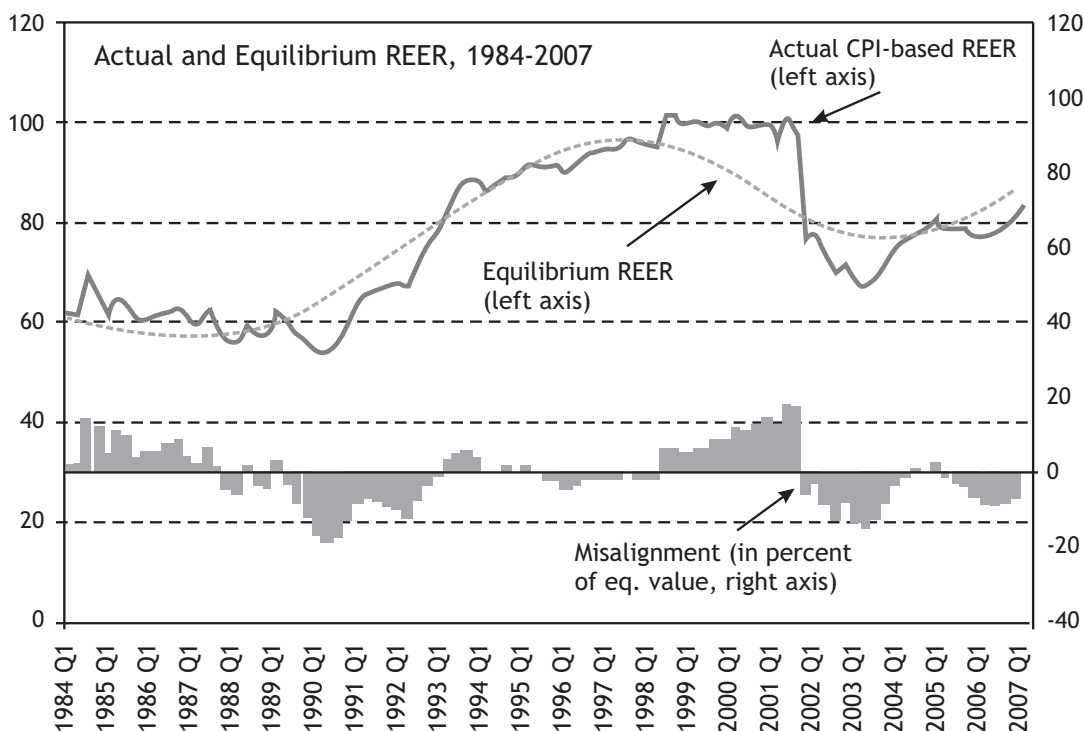
There are no direct taxes on exports in Uruguay. However, following the Krueger, A., Schiff, M. and Valdes, A. (KSV, 1991) approach,

indirect taxation can be related to government adjustments in the exchange rates. In the case of Uruguay this has led to long periods of overvaluation of the local currency in reference to the US dollar, reducing international trade competitiveness.

The KSV (1991) long-term studies analyzed the incidence of direct and indirect taxation over the agricultural sector from 1960 to 1985 in a wide variety of developing countries. The main conclusion regarding exchange rate regimes is that more important than the negative effect of direct measures on agriculture during that period was the incidence of indirect measures, such as exchange rate adjustments.

An International Monetary Fund (IMF, 2009) study that compared the equilibrium real effective rate of exchange (REER) with the actual REER for Uruguay shows that, with the exception of the 1993 to 1998 period, there has been a constant imbalance of the real exchange rate with respect to its equilibrium level over the past 25 years.

Graph 2 – Exchange Rate Assessment



Source: IMF, Country Report No. 09/104, 2009.

6.4 Taxes in Importing Country

The tariffs and excise or other taxes of the three selected markets maintained at the border, as well as domestic taxes or charges are analyzed in this section.

6.4.1 Brazil

As a member of the Mercosur Custom Union, Uruguay has zero tariff in its bilateral trade with Brazil. Nevertheless, internal taxes are levied on imports. The tax on the circulation of merchandise and on the supply of interstate transportation and communication services (ICMS) is the tax levied on rice imports, among the four internal taxes applied in Brazil.¹ The ICMS is a value-added tax levied by Brazil's federal states on all merchandise transactions that take place domestically (both intrastate and interstate) as well as imports. For domestic products, this tax is levied on the market price of the product. For imports, the ICMS is paid by the importer. The tax is calculated on the CIF value, plus duties and any "other customs costs." According to the WTO Trade Policy Review of Brazil (2009), the law grants states the right to define what is included under "other customs charges." Until now, the states have not agreed on a common definition and thus, the tax varies by state. In addition, these charges may or may not include specific taxes on transport, SISCOMEX's fees, eventual anti-dumping duties, and fees for port handling services.

In general, ICMS rates are in the range of 7 to 12 percent of the price after crossing the border. However, effective ICMS rates are higher than the rates published because the ICMS is itself part of the base value for

calculating the tax.² According to qualified information, the state of Rio Grande do Sul levies the higher tax of 12 percent, São Paulo a rate of 7 percent and Minas Gerais imposes the lower rate of 3 percent.

In 2006, the state of Rio Grande do Sul approved a levy (Cooperación y Defensa de la Orizicultura - CDO) of R\$ 0.32 (equivalent to USD 3 per ton of paddy rice) to finance the Rice Institute of Rio Grande (IRGA) to be imposed to husked (brown) rice imported by this state. This levy has not been applied as of this date. Nevertheless, it demonstrates the independence of the states of Brazil from the Federal Government in the application of domestic taxes on imports. This, understandably, generates a great deal of uncertainty in exporting countries.

6.4.2 European Union

Despite the more than ten year negotiations between the EU and Mercosur, it has not been possible to establish a preferential trade agreement between the blocs. Thus, Uruguay's rice access continues to be determined by the MFN Tariffs applied by the EU.

Most-favoured nation (MFN) applied duties for rice imports in the EU range from € 65 per ton to € 211 per ton, depending on the type of rice concerned. Except for paddy rice, the applied MFN duties may be below the bound duties, depending of quantities imported during the previous half-year. This information is provided from the import licenses issued. All rice imports into the EU were subject to import licenses between the EU marketing years 2004/05 and 2007/08. Since 1 September, 2008, licenses are no longer requested for paddy rice imports.

Table 11- Bound and Applied MFN Rice Import Duties

Type of rice	Bound Duty (€/ton)	Applied Duty (€/ton)
Paddy	211	211
Husked	65	30 - 42.5 - 65
Milled	175	145 - 175
Broken	128	65

Source: Commission of the European Communities - Report of the Directorate General for Agriculture and Rural Development, 2009.

For husked and milled rice, the applied tariff may be modified twice a year, at the beginning and mid-way through each marketing year. For husked rice a reference level is established, which provides the basis for an upper and a lower threshold for imports, fixed respectively at 15 percent above and below the reference level. If the quantities imported are below the lower threshold, a duty of €30 per ton is applied during the subsequent half-year. If the imported quantities are above the higher

threshold, the duty is fixed at € 65 per ton. If the quantities imported are between both thresholds, the duty is fixed at € 42.5 per ton.

For milled rice, there is only one fixed threshold (387.743 tons), equal to the reference level (337.168 tons) increased by 15 percent, and two possible duty levels: € 145 per ton and € 175 per ton. The first half-year threshold (182.239 tons) corresponds to 47 percent of the marketing year threshold.

Table 12- Import Thresholds for Calculation of Husked Rice Applied Tariff

Marketing Year	Reference level (tons)	First half year thresholds (tons)		Marketing year thresholds (tons)	
		Lower	Higher	Lower	Higher
2005/06	437.678	186.013	251.665	372.026	503.330
2006/07	443.678	188.563	255.115	377.126	510.230
2007/08	449.678	191.113	258.565	382.226	517.130

Source: Commission of the European Communities - Report of the Directorate General for Agriculture and Rural Development, 2009.

Uruguay rice access to the EU does not benefit from a specific TRQ like other countries. Instead, Uruguay has the possibility to enter within a MFN quota, which has zero percent

duty for milled and broken rice and 15 percent for paddy and husked rice, but the allowed volumes are low compared with specific TRQ assigned to other countries.

Table 13 - Tariff Rate Quotas for Rice (2004/2005 to 2007/2008 Period According to EU Legislation)³

Origin	Type of rice	Quantity (t)	Duty	Remarks
Egypt*	All types	32.000	-25% MFN	
	All types	5.605	0 €/t	
	Husked	57.600	11 €/t	First opened in 12/2007
	Milled	19.600	33 €/t	First opened in 12/2007
	Broken	5.000	13 €/t	First opened in 12/2007
Bangladesh	Paddy, husked, milled	4.000	-50% MFN minus fixed amount depending on type of rice	
Least Developed Countries (EBA)	All types	2.517 t in 2001/02	0 €/t	Quota increased by 15% annually until 2008/2009 Free market access as from 9/2009
Erga omnes	Paddy	7	15% ad val	First opened in 7/2006
Erga omnes	Husked	1.634	15% ad val	First opened in 7/2006

Table 13. *Continued*

Origin	Type of rice	Quantity (t)	Duty	Remarks
Various**	Milled	63.000	0 €/t	
Various***	Milled	40.216	0 €/t	A 13.500 t quota was first opened in 9/2005. In 7/2006 it was increased to 40.216 t
Various****	Broken	100.000	-30,77% MFN	Total quota was 80.000 t until 8/2005 when it was increased to 100.000 t
Erga omnes	Broken	31.788	0 €/t	First opened in 7/2006
Erga omnes	Broken	1.000	0 €/t	For food preparations

Source: Commission of the European Communities - Report of the Directorate General for Agriculture and Rural Development, 2009.

Notes: (*) A new agreement with Egypt is currently under discussion at the Council. The new agreement establishes that the two existing quotas of 32.000 t and 5.605 t of all types of rice shall be suppressed and that the existing quotas for husked, milled and broken rice shall be fixed at 20.000 t, 70.000 t and 80.000 t, respectively. The import duty for these quotas shall be 0 and the quota quantities shall be annually increased by 3 percent over a 5-year period.

(**) Sub-quota allocation: US 38.721 t, Thailand 21.455 t, Australia 1.019 t, other origins 1.805 t.

(***) Sub-quota allocation: Thailand 5.513 t, US 2.388 t, India 1.769 t, Pakistan 1.595 t, other origins 3.435 t, Erga Omnes 25.516 t.

(****) Sub quota allocation: Thailand 52.000 t, Australia 16.000 t, Guyana 11.000 t, US 9.000 t, other origins 12.000 t.

Therefore, the majority of Uruguayan exports enter with out-quota tariffs, and the type of rice exported is husked (90 percent of the total exports to the EU in the period of study) because it has the lowest tariff. Considering the average unit value of imports of each type of rice from Uruguay during the period 2006-2008, the ad valorem equivalent of the applied tariff levies in Euros are 46 percent for paddy rice, 19 percent for husked rice, 38 percent for milled rice and 24 percent for broken rice

The EU has other rice import regimes with reduced import tariffs that compete favorably with rice imports from Uruguay. Since September 2004, nine varieties of husked Basmati rice from India or Pakistan can be imported at zero duty without any quantitative limit.

The Everything But Arms (EBA) agreement established that duties on rice imports from the least developed countries (LDC) would be progressively reduced to zero in 2009. And the Cotonou agreement provided for a quota of 125,000 tons of all types of rice (expressed in husked equivalent) for the ACP countries as well

as a quota of 20,000 tons of broken rice until December 2007. More recently, the European Partnership Agreements (EPA) have replaced the Cotonou agreement and established that, as of January 2010, ACP rice will benefit from free market access to the EU. As a transitional measure, they also provide for a two-year quota for all types of rice at zero duty limited to CARIFORUM countries (187,000 ton in 2008 and 250,000 ton in 2009). The Overseas Countries and Territories (OCT) benefit from an annual quota of 35,000 tons at zero duty for all types of rice.

According to the data of DG Taxation and Customs Union of EU, a value-added tax (VAT) rate of 4 percent applies to cereals. VAT is usually charged when customs clearance procedures take place in order to be released for circulation. However, when goods are imported into an EU Member State, but are intended for use or consumption in another Member, they can be placed under a VAT suspensive arrangement. Under this arrangement, VAT is charged in the Member State of destination and not in the Member State where they entered the EU.

The taxable value for VAT shall be the value for customs purposes, plus some other supplementary expenses, where the first ones include taxes, duties, levies and other charges due by reason of importation, excluding the VAT to be levied. Supplementary costs can be commission, packing, wrapping, transport, insurance arising after entry into the EU territory up to the place of destination.

6.4.3 Peru

In the framework of the Economic Complementarity Agreement (ECA) N° 58 of Latin American Integration Association (LAIA) celebrated among Mercosur countries and Peru in 2005, Uruguay obtained preferential tariffs on rice. Until 2008, the margin of preference was 10 percent of the CET (Common External Tariff) established at 25 percent, i.e. the tariff applied to Uruguay was 22.5 percent during the analyzed period. The tariff will be phased out in 2017.

In addition, Peru applies variable tariffs based on a price band scheme implemented since mid-2001. Under this scheme, the tariffs on rice products vary with world prices and therefore can range from zero percent (in times of high international prices) up to Peru's WTO bound rate of 68 percent (in times of low international prices). The minimum tariff that can be applied is zero, even if the calculation of the tariff duty results in a negative figure, such as if there is a steep increase in the reference price, as was the case in 2008.

Pursuant to Supreme Decree No. 115-2001-EF of 22 June, 2001, this scheme is "a stabilization and protection mechanism that enables the

fluctuations in international prices to be offset and limits the negative impact of a fall in these prices [and which] constitutes an effective instrument for raising domestic producers' productivity levels by giving the market clear signals regarding price trends ...".

Specifically, tariffs are determined according to the price level of Thailand milled rice, 100 percent Grade B FOB Bangkok. A price band is established to consist of "floor" and "ceiling" prices,⁴ determined on the basis of this reference market. When the price on the international reference market is below the floor price, a tariff surcharge is imposed. When the price on the international reference market rises above the ceiling price, a tariff reduction is applied. If the reference price is between the ceiling and floor prices, the corresponding tariff rate applies.

Every fortnight the Ministry of Economy and Finance publishes this reference price, derived from the average prices for the previous fortnight of this international market, converted into a CIF price.

With respect to domestic taxes, according to import information from the National Tax Administration Supervisory Authority (SUNAT), the first sale of pounded rice is subject to the Tax on the Sale of Pounded Rice⁵ (IPAV), established in the Law N° 28211 of 22 April, 2004.⁶ IPAV is levied at the rate of 4 percent of the price of the first sale made in Peru (domestic rice) or the customs value plus the duties and taxes affecting imports (imported rice), therefore, complying with the WTO principle of national treatment.

7. BUILDING PRICE LADDERS

Beginning with the farmer price and finishing at importer price (see Annex I), there are two prices that are given in the building of the rice price ladder. These are FOB and CIF prices. Similarly, import duties and excise taxes of the importing countries (domestic taxes) are fixed, because they are obtained directly from the official sources of data. In view of the established annual contract system between mills and producers in Uruguay, the rice price received by the farmer is readily available as well as reliable. Therefore, other variables, such as the processing and transport costs, are treated as residuals in the calculation of the price ladder. Due to its importance, the cost of meeting health and safety standards was estimated from direct information provided by the mills.

This reasoning can be supported in the case of Uruguay, which is a price taker in the international market. It follows that CIF or FOB prices are given in the case of the three countries for which price ladders are established. The millers and producers of

the exporting countries must adjust their costs and prices to international conditions, including the import duties and excise taxes of the importing countries.

In our analysis, on the basis of the bulk of exports to these markets, milled rice was chosen for Brazil and Peru, and husked rice for the EU. This differentiation of categories of rice, as well as the different barriers affecting market access in the selected markets should contribute to the enrichment of the results of this exercise.

Some further explanations are needed with regards to the methodology. In the case of Brazil, the ICMS of 12 percent is used in our calculations, because the majority of the rice exported to this country goes to the state of Rio Grande do Sul, which applies this rate.

The applied tariff for husked rice in the EU varies according to the imports of the bloc in reference to the threshold (reference level) established.

Table 14 - Import and Tariff of Husked Rice in Base of Licenses Issued

Marketing Year	First half year		Second half year	
	Imports (tons)	Tariff (€/t)	Imports (tons)	Tariff (€/t)
2005/06	288.203	42.5*	128.679	65
2006/07	352.615	42.5	171.533	65
2007/08	307.448	65	243.293	65

Source: Commission of the European Communities - Report of the Directorate General for Agriculture and Rural Development, 2009.

Note: (*) This applied tariff was calculated in base of the imports in the second half year of 2004/05 (185.787 tons) which was between of the lower and higher thresholds.

Considering that the highest tariff of €65 per ton was applied in the majority of the years in the data set and to avoid resorting to average figures, this tariff was used in the three years analyzed.

Finally, the two components of Peru protection at the border are: a) the ad-valorem tariff of the CIF price established in 22.5 percent for Uruguay

and b) the additional charge resulting from the application of the band price scheme. For this purpose, we have used the table of the Supreme Decree N° 001-2002 for the 2006 and 2007 and the table of the Supreme Decree N° 084-2008 for 2008. In both cases, the basis is the annual average price of the category of Thailand rice described above.

Table 15 - Components for the Calculation of Variable Tariff of Band Price Scheme Dollars per Ton

	2006	2007	2008
Thailand Price (FAO, data)	311	335	695
Band (Surcharge or reduction)	9	0	-194

Source: Own Elaboration.

In 2008, the tariff is zero, because the reduction that resulted from the application of the band (USD -194 per ton) offsets the effect of the ad-valorem tariff of 22.5 percent. In

the other years, the surcharge of the band price is low or nil, because the international price of rice is close to the range of the band in which there is no charge.

8. CALCULATION OF THE CIMA

The BMA identified by Uruguay to export rice for the three markets analyzed are:

$$\text{BMA} = \text{EDT} + \text{MTD} + \text{SPC}$$

Where:

EDT: Exercise tax importing countries

MTD: Import duties and other charges

SPC: Cost of meeting health and safety standards

The BMA obtained has to be related to a final price of the rice chain in order to evaluate its weight. In this study, the price used is that of the importing country after import duties and excise duties are paid, or the so-called importer price (PRM).⁷ The wholesale price was not considered in this study in view of the difficulties of assessing the profit margin in

an international market subject to great price fluctuations

The BMA as a percentage is calculated as:

$$\text{BMAP} = \text{BMA} / \text{PRM} * 100$$

This allows the CIMA to be calculated as the degree of market access:

$$\text{CIMA} = 1 - \text{BMA percentage}$$

The CIMA would reach 100 when the BMA was zero and would approach zero when the market access costs were sufficient to absorb all the revenue, leaving nothing for the cost of production.

The CIMA obtained for the three markets ranged between 77 and 96 percent. In other words, the BMA weight was between 4 and 23 percent of the importer price.

Table 16 - BMA and CIMA in Percentage

	Brazil			EU			Peru		
	2006	2007	2008	2006	2007	2008	2006	2007	2008
BMAP	11	11	11	23	21	17	23	22	4
CIMA	89	89	89	77	79	83	77	78	96

Source: Own elaboration in base of data of Annex I.

The CIMA of Brazil is stable, because the main barriers of market access depend on excise taxes, which are a percentage of the price quoted at the border. In contrast, the CIMA of the EU and Peru depends on variable barriers

set by the regimes based on bands, such as import quantities in the EU and price bands in Peru. In the latter case, the variety is greater, owing to the fluctuation of international rice prices.

9. SUMMARY

This study has shown the feasibility of calculating a CIMA for rice, as well as its relevance for measuring market access in different countries.

The study has also demonstrated the importance of preferential agreements in determining market access conditions among producers of the same commodity. Calculations of CIMAs in the Peruvian market for rice originating in Uruguay and the United States will certainly reflect market access conditions more favorable for US exports.

The nonexistence of tariffs at the border does not imply necessarily more open market conditions, since other barriers could have similar effects.

The study has exposed that the variable elements of protection, such as band prices, imposed by countries have negative effects similar to tariffs in terms of market access, as reflected in yearly wide fluctuations of CIMA. This generates a great deal of uncertainty

among exporting countries. It also suggests that policy changes should be envisaged toward transforming this variable element of protection to more fixed and predictable levels of protection.

Future CIMA calculations may need to take into account the additional costs involved, mainly in the primary phase of rice production, such as in the production of organic rice or the adoption of internationally recognized best production and management practices. This may require the disaggregation of cost in the primary phase, which was not envisaged in this study, because Uruguay does not produce organic rice and has not yet adopted internationally certified best production and management practices.

Another area for further research will be to identify subsequent prices of the rice chain in the importing country, such as wholesale and retail prices. Once identified, attention should be given to which prices should be selected for the calculation of CIMA.

ENDNOTES

- 1 The other excise taxes are the industrial products tax (IPI), the levies to the contributions to the social integration programme (PIS) and to finance social security (COFINS).
- 2 $ICMS \text{ effective rate} = (\text{published ICMS rates}) \times (\text{nominal value of the good} + \text{nominal value of the tax}) \div (\text{nominal value of the good})$.
- 3 COMMISSION REGULATION (EC) No 965/2006 of 29 June, 2006, amending Regulation (EC) No 327/98 opening and providing for the administration of certain tariff quotas for imports of rice and broken rice.
- 4 Article 6 of Supreme Decree No. 115-2001-EF of 22 June, 2001 stipulates that the floor and ceiling prices must be updated every six months. However, there have been only two updates: Supreme Decree N° 001-2002 and Supreme Decree N° 084-2008 which are currently in force because the Supreme decree N° 183-2008 maintained the same bands.
- 5 The pounded rice is Peruvian version of milled rice.
- 6 The levied HS subheadings are 10.06.20.00.00, 10.06.30.00.00, 10.06.40.00.00 and 23.02.20.00.00.
- 7 Importer price (PRM) is equivalent to the exporter price (PRX) indicated in the terms of reference of this study.

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ANNEX I – PRICE LADDER FOR RICE

	100630 - Milled Rice			100620 - Husked Rice			100630 - Milled Rice		
	Brazil			EU			Peru		
	2006	2007	2008	2006	2007	2008	2006	2007	2008
COP	147	173	320	147	173	320	147	173	320
TAX	8	7	8	8	7	8	8	7	8
	155	180	328	155	180	328	155	180	328
PLC	0	0	0	0	0	0	0	0	0
SPC	0,5	0,8	1,1	0,5	0,8	1,1	0,5	0,8	1,1
PRC	35	49	74	47	62	59	38	48	65
	190	229	403	202	243	388	193	229	394
	304	367	645	279	335	536	309	366	630
OMC	6	6	7	34	39	44	34	39	44
	310	373	652	313	374	580	343	405	674
TRC	0	0	0	28	27	21	88	103	80
	310	373	652	341	401	601	431	508	754
MTD	0	0	0	82	89	96	106	114	0
	310	373	652	423	490	697	537	622	754
ETD	37	45	78	17	20	28	21	25	30
PRF									
PRM	347	418	730	440	510	724	558	647	784
BMA	38	46	79	99	109	125	128	140	31
BMAP	11%	11%	11%	23%	21%	17%	23%	22%	4%
CIMA	89%	89%	89%	77%	79%	83%	77%	78%	96%

Source: Own elaboration.

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