



...: **emergency** needs assessment branch

Honduras:

Market Profile for Emergency Food Security Assessments

**Strengthening Emergency Needs
Assessment Capacity (SENAC)**

December 2005

Honduras: Market Profile for Emergency Food Security Assessments

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Executive Summary

Despite some economic recovery from the devastation of Hurricane Mitch in October 1998, Honduras is still the third poorest country in the western hemisphere, after Haiti and Guatemala. Nearly half of the population depends on agriculture, which accounts for about a quarter of national Gross Domestic Product, but only one third of country's land is suitable for agriculture, while two thirds is covered by forests. About 50 percent of the agricultural land consists of permanent pastures; farming activities frequently take place in very hilly areas, with slopes of up to 25-30 percent. The principal Honduran agricultural products are coffee, maize, banana, sugar cane, oil palm, livestock and fish.

White maize is the traditional base of the Honduran diet. Other important basic grains are wheat and rice, both largely imported, as well as red beans, which is the most affordable source of protein. Yellow maize is almost entirely imported by private industries for the production of feed concentrates.

Most food insecure and vulnerable communities are located in the western departments of Lempira, La Paz, Copán, Santa Barbara, Intibucá and Ocotepeque as well as in the southern departments of Valle and Choluteca plus the southern portion of Francisco Morazán and El Paraíso. In general, these areas are characterized by high poverty levels, limited access to land, low agricultural productivity and high deforestation rates.

Food markets are present in all departments and their importance is directly related to the size of the local population and to the quality of road access. From production to final consumption, food markets have a complex structure that involves several stakeholders such as assemblers, transporters, intermediaries, traders, wholesalers, retailers and the food processing industry.

The main food markets are concentrated along the "logistic corridor" that goes from Puerto Cortés and San Pedro Sula in the north-west, through the central highlands of Comayagua, Siguatepeque and La Paz, to the capital city of Tegucigalpa, to the southern town of Choluteca on the Pacific coast in the south. Branches of this corridor start from Tegucigalpa and go toward the east, reaching the markets of Juticalpa and Catacamas in the department of Olancho, toward the south-east, connecting the market of Danlí in the department of El Paraíso and the border with Nicaragua, and toward the coffee producing areas of La Esperanza and Gracias in the western departments of Intibucá and Lempira. Outside these main branches, food markets are quite fragmented, serving essentially the local population with local production and having very limited links to the principal regional market, due to a poor local transport system and an insufficient road infrastructure.

Wholesaler average monthly prices of maize and beans show a pronounced seasonality because farmers tend to sell production surpluses in the few months immediately following the harvest. On the contrary, price seasonality seems to be less pronounced in the case of rice, where national markets are directly influenced by world prices as a consequence of the high volume of imports. By comparing prices in principal food markets, it is evident that there is a high degree of integration and that prices show high levels of transmission, with differences mainly due to transport (fuel) costs.

In Honduras, market information flows quite smoothly among the main stakeholders participating in the food chain. Intermediaries and transporters play a crucial role in the

continuous process of information transfer between farmers in food producing areas and wholesalers and retailers that operate in urban areas. Market information becomes more scarce and difficult to obtain in the case of farmers and markets in remote areas with limited road access.

The key information sources for monitoring and analysing the functioning of food markets in Honduras are the Infoagro service of the Secretary of Agriculture and Livestock (SAG), the Honduran Institute of Agricultural Marketing (IHMA), the Honduran Market Information System for Agricultural Products (SIMPAH) and the National Institute of Statistics (INE).

Introduction

The purpose of this study is to develop a pre-crisis market profile for Honduras with an aim to strengthening food security assessment capacity in the country. The study is part of an ongoing programme of work under the markets-related theme of the Strengthening Emergency Needs Assessment Capacity (SENAC) project conducted by the World Food Programme.

The profile describes the structure and functioning of domestic food markets, with emphasis on principal components of national diet, namely maize, beans and rice. The profile is based on both a desk review of relevant literature and data, and on the main findings of the country visit. During the country visit (from October 9 to 19, 2005), the following food markets have been visited: Tegucigalpa, Comayagua, Siguatepeque, Choluteca, El Amatillo (on the border with El Salvador), Juticalpa, San Pedro Sula, El Progreso and Puerto Cortez. Interviews with market agents, such as producers, traders, processors, wholesalers, retailers and transporters, as well as national and international institutions involved in food marketing and food aid delivery have been crucial for collecting important first-hand information.

After an overview of the Honduran economic situation and agricultural sector, the study analyzes national food consumption, the location of the most food insecure groups, the local production of basic grains, and the flows of trade and food aid. Drawing essentially on the information collected during the field work, the following sections provide a detailed description of structure of maize, beans and rice markets, the role of national marketing institutions and the analysis of price seasonality and integration. The analysis of food market functioning is completed by providing information on transport infrastructures, the local information and communication system and trade regulations. Finally, a list is provided of the main indicators (along with the analytical approach and principal sources of information) that should be monitored in order to analyse the impact of a food emergency on Honduran markets.

The economic situation

Despite some recovery from the devastation of Hurricane Mitch in October 1998, Honduras is still the third poorest country in the western hemisphere, after Haiti and Guatemala, with low per capita income and education indicators. According to the 2005 Human Development Report of the United Nations Development Programme, Honduras is ranked 116th out of 177 countries in the human development index, with an estimated 64 percent of the population currently living below the poverty line, while 45 percent live in extreme poverty. Roughly one-half of the population resides in rural areas, where the incidence of poverty reaches almost 75 percent, versus 57 percent in urban areas. Honduras' social indicators are among the worst in Latin America. Likewise, social discrepancies remain extremely high in Honduras (Gini coefficient of 0.55), particularly in rural areas.

Nearly 50 percent of the population directly or indirectly depends on the agricultural sector, which in 2004 accounted for 23 percent of national Gross Domestic Product (GDP). The performance of the agricultural sector in 2004 was favourable for the second consecutive year with an increase of the real GDP of 7.1 percent compared to 2.6 percent in the previous year. This result is essentially due to last two years' good harvest of main commercial crops, such as sugar cane, banana and plantain as well as the recovery of coffee's international price. Services and manufacturing (mainly offshore assembly for re-export "*maquila*" sector) represent about 55 percent and 21 percent of GDP, respectively. In 2004, real GDP growth was 5.0 percent, well above the growth during the previous three years, and was essentially boosted by the recovery of coffee and banana prices and by the continued growth in inward remittances.

Following a review of the economic performance under the Poverty Reduction and Growth Facility programme in February 2005, the International Monetary Fund announced that the country had reached the completion point, qualifying for debt relief under the HIPC initiative. It means that Honduras' foreign public debt will be cut by around 24 percent, or US\$1.2 billion, over ten years, making financial resources available for the government's poverty-reduction strategy. Following the debt relief achieved under the HIPC, in mid-May 2005, the Paris Club has also agreed to grant Honduras debt forgiveness totalling US\$1.1 billion (nearly 72 percent of the bilateral debt owed).

The Honduran balance of payment is traditionally negative, with a deficit of almost US\$1.8 billion in 2004. International aid, reinsurance payments and increased family remittances have helped the country to reduce the widening balance of payments deficit, initially worsened by the Hurricane Mitch-induced recession, which decreased exports and increased imports for reconstruction. The main trading partners are the United States (with about 35-40 percent of trade flows) and the neighbouring countries of El Salvador, Guatemala, Costa Rica and Mexico. The main exports are coffee and bananas, which accounted for US\$460 million in 2004, about 30 percent of total exports.

In mid-2001, the Central bank introduced dollar-denominated monetary absorption certificates as a way to stabilize inflation and the exchange rate. In fact, the annual inflation rate has steadily decreased from 11.1 percent in financial year 1999-2000 to 7.7 percent in 2002-2003 and 8.2 percent in 2003-2004. However, as a consequence of continuing high fuel prices, the 2004-2005 inflation rate is expected to reach 9.6 percent.

The agricultural sector

Honduras' geography is characterized by a vast plateau, with some fertile valleys along the main rivers and coastal areas. Only one third of Honduran land is suitable for agriculture, while two thirds is covered by forests. About 50 percent of agricultural land consists of permanent pastures; many agricultural activities take place in mountain areas, with slopes up to 25-30 percent. The main agricultural products are coffee, maize, banana, sugar cane, oil palm, livestock and fish.

Honduran agriculture is mainly rain-fed, with two growing seasons which follow the precipitation pattern: planting of the first '*de primera*' season goes from April to July with harvesting from September to November, while planting of the second '*de postrera*' season goes from August to November with harvesting from November to March. Irrigated land is estimated at only about 80 000 hectares and is mainly used by commercial farmers for the cultivation of cash crops such as melons, watermelons, tropical fruits and vegetables. More than 80 percent of farmers, about 400 000 households, own less than 5 hectares each (for a total of about 560 000 hectares, only 15 percent of total agricultural land) and use very basic production technologies, e.g. relying on family labour, recycled seeds and minimal quantities of fertilizer. Less than 6 000 farmers, with more than 50 hectares each, own more than 30 percent of the total agricultural land and are mainly located in Northern and North-eastern Departments.

Commercial banana production along the north coast occupies some 20,000 hectares of land. Throughout the country, but especially in the northern region, some 8,000 hectares of land are devoted to plantain production, divided among four to five thousand small producers. This crop provides an important source of carbohydrates especially for the indigenous *garifuna* population that lives on the Atlantic coast. In the south, the Choluteca area is suitable for melons because it has a six month season of hot, dry weather, unlike the humid tropical areas of the north coast of Honduras. Approximately 80 percent of Honduras' substantial production of cantaloupe, honeydew and watermelons meets export standards, while the remaining 20 percent is sold on the local market

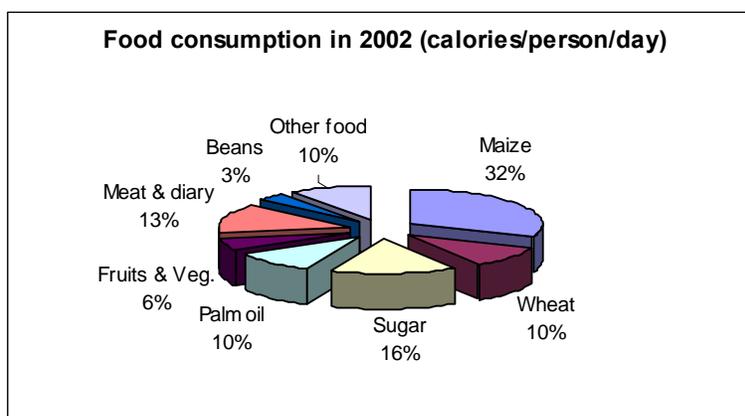
The principal producing area for vegetables is the Comayagua valley. The vegetable crop mix includes tomatoes, bell peppers, jalapeño peppers, pickling cucumbers, slicing cucumbers, onions, hard squash, sweet corn, oriental vegetables and watermelons. This zone is also a major source for mangos and papaya. Honduras plays a major role in the United States market with exports of "oriental" or Asian fresh vegetables such as bittermelon, oriental squash and Japanese eggplant. Total plantings in the Comayagua region of Asian vegetables are now estimated to be well over 200 hectares.

Food consumption and principal vulnerable groups

The Honduran diet is traditionally based on white maize which is processed into flour and consumed in the form of tortillas. Maize is widely consumed in all departments and social groups. Average per-capita consumption is about 80 kg per year and represents more than 30 percent of the total caloric intake. During the last decades, consumption of white maize has been characterized by two principal trends: 1) reduced per-capita consumption in favour of wheat and wheat bread and 2) increased purchasing of maize flour (prepared by the food industry) against the purchase of grains. These trends are a direct consequence of cultural

changes in food consumption patterns as well as of the continued migration from rural to urban areas.

Relying heavily on imports, wheat and wheat flour consumption has steadily increased in the last three decades. Currently, every year the Honduran population consumes on average about 30 kg of wheat per capita. The third most important cereal is rice, the consumption of which is slowly increasing and has reached about 8 kg per capita per year. Pulses (especially red beans) are crucial in the Honduran diet, being the cheapest source of proteins.



Most food insecure and vulnerable groups are concentrated in the west (departments of Lempira, La Paz, Copán, Santa Barbara, Intibucá and Ocotepeque) and in the South (departments of Valle and Choluteca plus the southern portion of Francisco Morazán and El Paraíso). These areas are characterized by high poverty, limited access to land, low agricultural productivity and high deforestation rates. Seasonal migration from these areas to work in coffee plantations is an important source of income, but, following the international coffee price crisis, employment has been reduced of about 30 percent due to the abandonment of several farms. Infant chronic malnutrition, as measured by stunting, is very pronounced, especially in the communities located in mountainous and hilly areas where local food production is very limited and access to local markets is severely constrained by the poor conditions of roads.

Another food insecure area is north-west Olancho. Despite the generally good resource base of this department, the north-west portion has very poor connections with nearby centres and off-farm employment options are very limited. Special mention is needed for the eastern department of Gracias a Dios (called also the Mosquitia), where the local population is considered chronically food insecure, being isolated from the rest of the country due to lack of roads and frequently hit by adverse weather conditions.

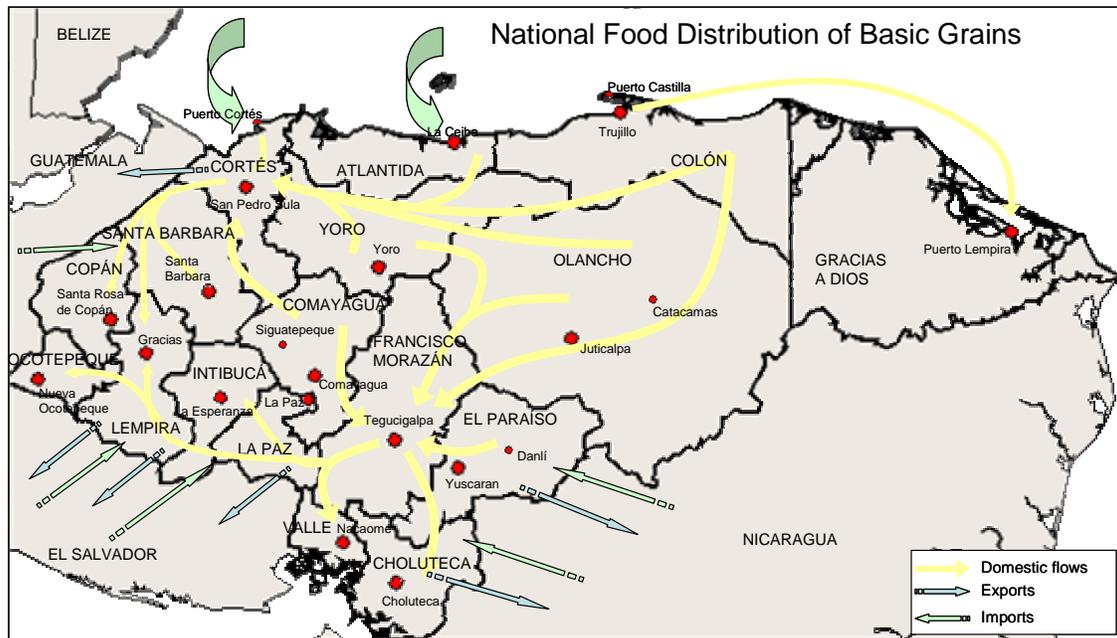
National production of basic grains: total amount, main seasons and geographic location

White maize is the major staple crop and is mainly grown in pure stands, with a limited amount (only during the first season crop) grown in association with beans or sorghum. During the last three years, production and planted area were on average about 500 000 metric tonnes (mt) and 360 000 hectares, respectively. About 75-80 percent of annual production takes place during the first season, with the bulk of the harvest in October and November.

Between 25 and 30 percent of maize is produced in farms with less than 2.5 hectares (called “*minifundios*”). At national level, about 40 percent of maize production is devoted to self-consumption and this share gradually increases as farm size decreases, reaching about 65 percent in the case of *minifundios*. Marketable production of maize is concentrated in four departments located in the north and north-east regions of the country: Olancho (52 percent), Colón (16 percent), Yoro (16 percent) and El Paraiso (13 percent). In key producing departments of Olancho and Colón, average planted area with maize ranges between 12 and 14 hectares per farm, with an average yield of about 400 kg per hectare.

Paddy production is estimated at only 12 000 mt per year. It rapidly dropped from the level of 50-60 000 mt that was produced at the end of the 1980s as a consequence of a drastic reduction in the import tariff in 1991 to deal with a drought-induced shortage. Rice imports from the United States flooded domestic markets, with highly negative impact on national price and planted areas. This situation has subsequently been aggravated by the effects of Hurricane Mitch in October 1998, including the high level of indebtedness of the domestic sector. Although some recovery in rice production is evident since 2003, the country heavily relies on imports to satisfy domestic needs (more than 80 percent of consumption is imported). About 80 percent of national production is harvested during the first season from August to December, while a second season crop is harvested only in irrigated areas of Colón and Cortés departments from February to March. Marketable production of rice is concentrated in lowlands in the departments of Colón and Atlántida (both departments count for almost 50 percent of the total) on the Atlantic coast and in the departments of Comayagua (16 percent), Yoro (12 percent) and Cortés (10 percent) in the centre-west and north.

Annual production of beans averages 70 000 mt, which basically covers domestic needs and leaves some surplus for exports to neighbouring countries (red beans to El Salvador and Nicaragua; black beans to Costa Rica and Guatemala). Between 65 and 75 percent of annual production is obtained during the second season crop, planted from August to November and harvested from November to mid-March. Marketable production of beans is concentrated in the departments of Olancho (38 percent), El Paraiso (30 percent), Comayagua (13 percent) and Yoro (10 percent).



Trade and food aid

In the last 20 years, Honduras has gradually diversified its export basket. Currently, agricultural exports represent less than 50 percent of total exports, down from more than 80 percent at the end of the 1980s. The main agricultural export products are: coffee, bananas, shrimp and lobsters, palm oil, melons and pineapples. Agricultural imports are also diversified, but their share in total imports has increased substantially. Whereas, in 1988-1990, their share was around 10 percent, now it is up to more than 15 percent. The main food imports are: wheat, dairy products, rice, breakfast cereals, maize and poultry.

In 2004, Honduras imported 251 000 mt of yellow maize, 146 000 mt of rice and 3 200 mt of beans. Imported basic grains mainly originate from the United States, and the remainder come from Central American neighbouring countries such as El Salvador, Nicaragua and Guatemala. Yellow maize and rice are directly imported by the private sector, namely poultry and feed concentrate industries and rice millers.

Un-registered cross-border food trade takes place with all neighbouring countries. Depending on the season and on local food availability, a certain amount of basic grain is informally exported to El Salvador, Nicaragua and Guatemala. A common situation is that transporters from these countries, especially from El Salvador where food markets have a structural deficit due to high demographic pressure, buy Honduran agricultural products such as maize, beans, watermelons, pineapples and cattle, and then cross the border through some “blind spots” where there is no formal custom control. An official estimate of un-registered trade flows is not available, but it is widely believed to be quite substantial. The establishment of an ad-hoc observatory (following the experience of the WFP/FEWS NET project in southern Africa) will definitely help to monitor and estimate informal cross-border trade with neighbouring countries.

Since 1994, food aid donations have significantly decreased from the levels of the early 1990’s, with the only peak in 1998 and 1999 due principally to the passage of Hurricane

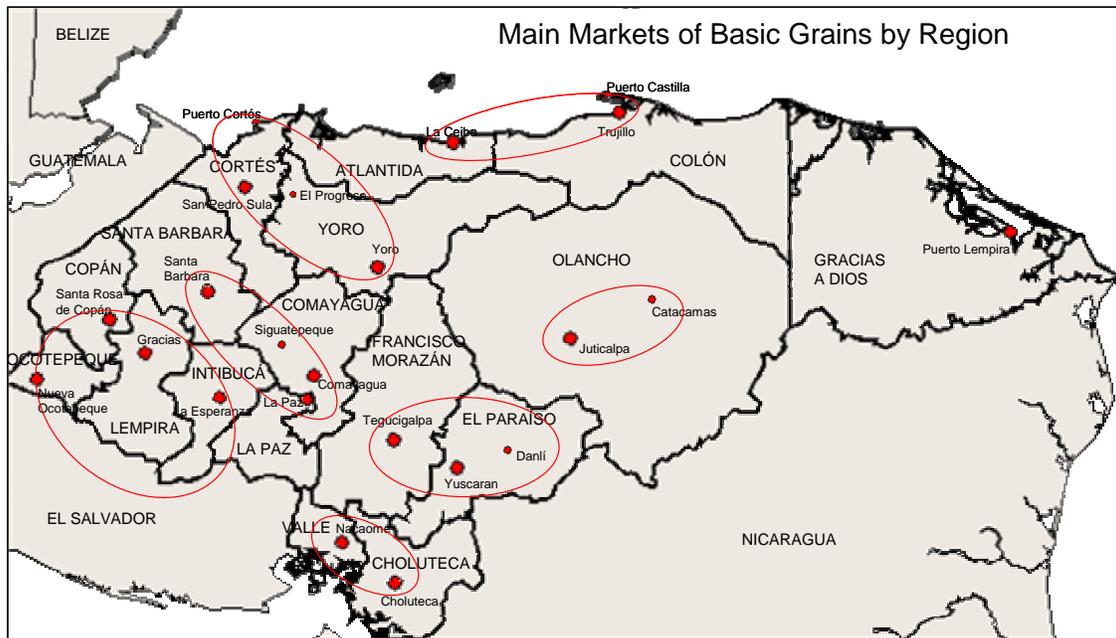
Mitch and a subsequent drought. The bulk of food aid is composed of wheat and wheat flour (average of 30 000 mt per year), maize (about 8 000 mt), rice (about 4 500 mt) and beans (about 3 000 mt). Average donations of total cereals and beans in the last five years have been about 45 000 mt per year, representing approximately 7 percent of the national production and 8 percent of imports. The United States government is largely the main supplier through Public Law 480 Title I and Title II programs, followed by the European Union. A large part of food aid, especially yellow maize and wheat, is monetized and the resulting financial resources are used to fund the national strategy against poverty.

Market structure for main staple food: maize, beans and rice

Food markets are present in all regions and their importance is directly correlated to the size of the local population and to the quality of road access. The main markets are concentrated along the “logistic corridor” that interlinks major economic centres from Puerto Cortés, San Pedro Sula and El Progreso in the north-west, through the central highlands of Comayagua, Siguatepeque, La Paz and then to the capital city of Tegucigalpa, up to the southern town of Choluteca on the Pacific coast. Branches of this corridor start from Tegucigalpa and go toward the east, reaching the markets of Juticalpa and Catacamas in the department of Olancho, toward the south-east, connecting the market of Danlí in the department of El Paraiso and the border with Nicaragua, and toward the coffee producing areas of La Esperanza and Gracias in the Western departments of Intibucá and Lempira.

Regions	Main markets
North-west	San Pedro Sula, Puerto Cortés, El Progreso, Yoro
North	La Ceiba, Puerto Castilla
North-east	Catacamas, Juticalpa
Centre-east	Tegucigalpa, Danlí
South	Choluteca, Nacaome
Centre-west	Comayagua, Siguatepeque, La Paz, Santa Barbara
West	La Esperanza, Gracias, Santa Rosa de Copán, Nueva Ocotepeque

Outside these main branches, at local level, food markets are quite fragmented, serving essentially the local population with local production. These local markets have very limited links with the principal regional market, due to a poor local transportation system and an insufficient road infrastructure.



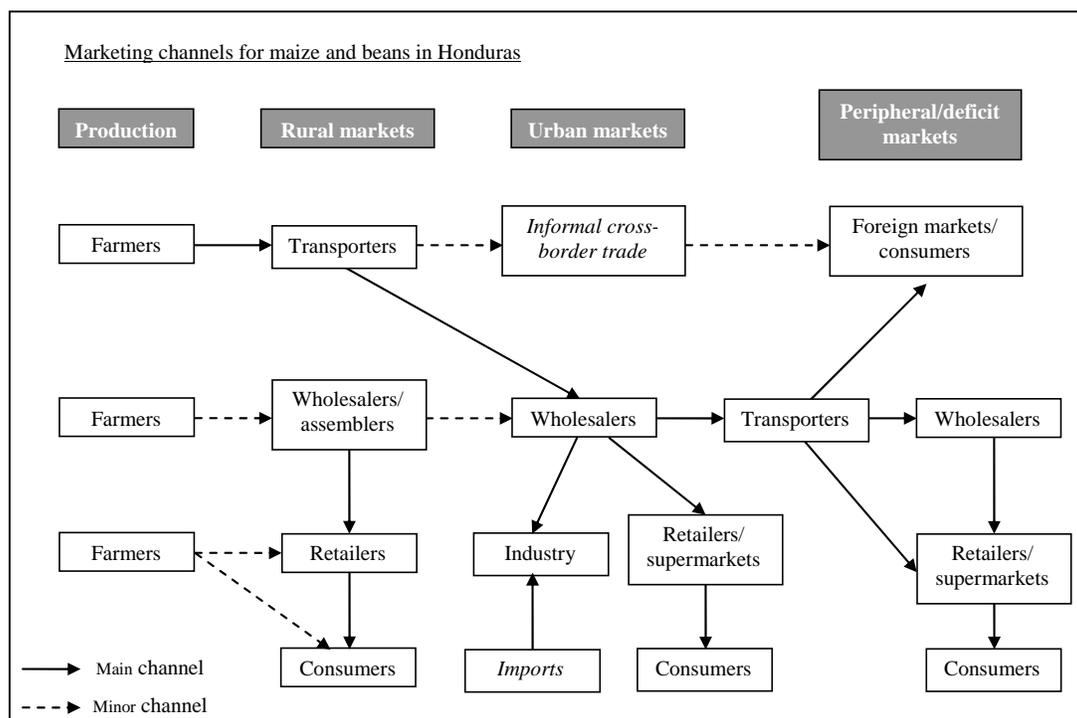
From the key producing northern and north-eastern departments of Olancho, El Paraiso, Yoro plus Colón especially for maize and Comayagua especially for beans, basic grain production is mainly sold to the principal markets of Tegucigalpa and San Pedro Sula. Then, some of the grains that reach these points supply deficit markets in departments such as Francisco Morazán, Cortés, Choluteca, and Intibucá in the center, southern and western regions.

In general, farmers sell their maize and bean production to local village stores (rural retailers), to rural wholesalers (assemblers) and to regional traders (intermediaries and independent transporters) or, to a lesser extent, directly to urban wholesalers. The majority of sales are made to regional traders that buy production at farm-gate (especially in more remote areas with difficult access to markets) or in a nearby village. Regional traders frequently provide informal credit to farmers before the harvest, with no need for collateral and guaranteed purchase of the production at a fixed price. This price is usually below the market price as a consequence of transportation and risk-related costs that the traders assume (risk meant as price instability and security during the transport) as well as the generation of some profit for the transaction. In general, especially in remote areas with limited access to markets and market information and with only a few traders willing to buy local production, farmers may receive a very low average price.

The main rural wholesalers can be found in small towns such as El Progreso in the north and Juticalpa and Catacamas in the north-east, which are very close to the production areas. They buy the bulk of local production and then sell it to rural retailers and urban wholesalers. In general, rural wholesalers are more specialized than urban wholesalers (which usually trade different types of basic grains as well as other food and non-food items) and often play the role of local assemblers. They often have strong up-stream integration with farmers and transporters.

Regional traders are responsible for the transfer (by trucks) of maize and bean production from the farm-gate and rural wholesalers to urban wholesalers in large town markets, the agro-food processing industry and abroad. Although urban wholesalers are transporters' most

numerous clients, about two thirds of transporters' sales (in volume) are directed to the agro-industry and abroad (in particular to El Salvador).



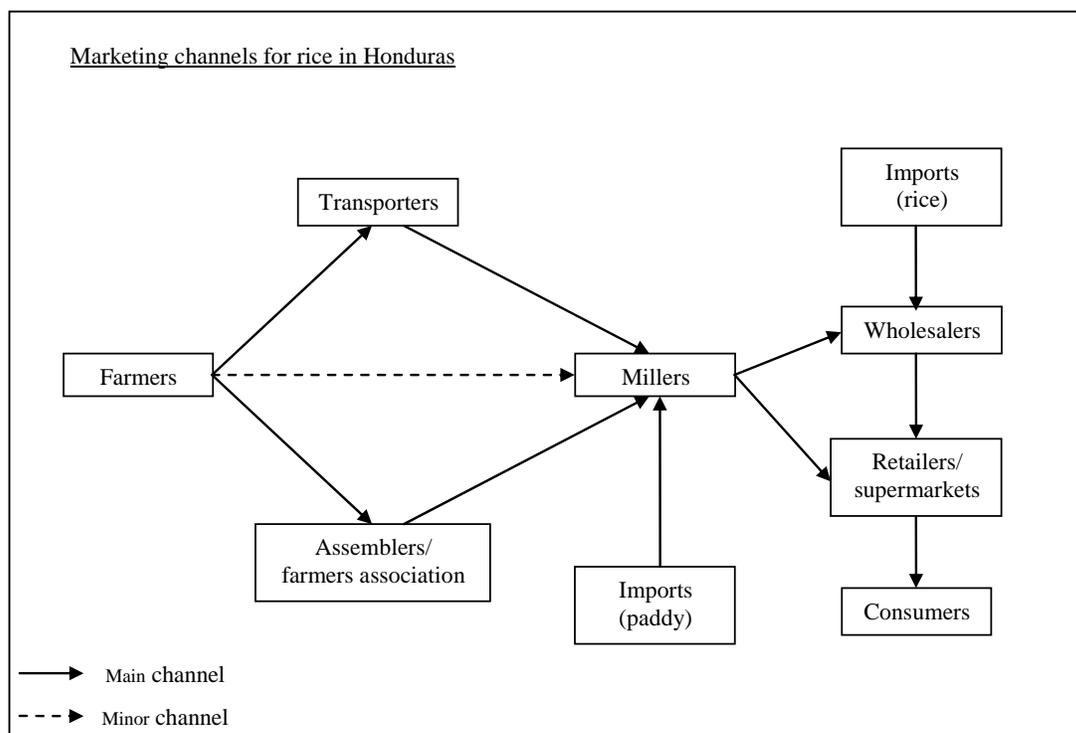
Urban wholesalers are located in the main cities of Tegucigalpa, San Pedro Sula and La Ceiba. In general, they have a larger size (in terms of storage capacity) and a higher turnover ratio than rural wholesalers, and sell their stocks very quickly as a consequence of the high storage costs and the diminishing quality of the product, especially in the case of beans. About half of their demand is covered by regional traders and only one third of it comes directly from farmers that either have the possibility to transport their production to the markets or sell their production to storage/assembling facilities established by urban wholesalers near the production site.

The main clients of urban wholesalers are the agro-food industry, urban retailers and supermarkets. Part of their product is sold to other intermediaries and transporters that transfer it to other markets where, depending on the level of local supply, attractive price differentials may arise.

The agro-food industry buys between 45 to 50 percent of national white maize production, both directly from farmers and from middlemen/transporters. White maize is used for the production of concentrated feed (mixed with imported yellow maize and other cereals such as sorghum) and for the preparation of maize flour (to be used to make tortillas) and snacks. Every year, on average, the white maize flour industry buys about 50 000 mt of national production and imports about 35 000 mt from the United States.

In the case of rice, a total of less than 20 millers buy local production directly from farmers, through farmers associations that work as assemblers in rural areas or via intermediaries and

transporters. The majority of mills are located in the industrial areas in the surroundings of Tegucigalpa and San Pedro Sula (in particular close to the towns of Villanueva and Choloma in the department of Cortés and in El Progreso in the department of Yoro). Millers have drying, milling and packaging facilities as well as laboratories to analyse paddy characteristics (humidity, purity, percentage of broken kernels, whiteness of polish, milling yields and presence of contaminants such as weed seeds). Because local production represents less than 15 percent of national demand, millers need to import an average of 120 000 mt of paddy per year. White rice is then sold to wholesalers, supermarkets and retailers in urban areas.



National marketing institutions and grains strategic reserve

In 1978, the Government of Honduras established the Honduran Institute of Agricultural Marketing (IHMA) with the aim to improve the performance of the marketing system for basic grains. The initial role of the IHMA was to stabilize domestic prices through buying and selling national production and importing from abroad when needed. In 1992, during the structural adjustment process, the Law of Agricultural Modernization and Development completely reformed the role of the IHMA. About half of its grain storage and drying infrastructure has been privatized and its current main function is to manage a “strategic grain reserve” for maize and beans, in the form of physical stocks or of a financial fund to be used to buy grains in case of scarcity, equivalent to 3 percent of the annual demand for those grains (about 20 000 mt of maize and 2 000 mt of beans). Even when the IHMA buys and sells in the domestic grain market to maintain the quality of the reserve, given the relatively small volumes that it manages, this function does not seem to affect market prices significantly. The IHMA is also responsible for co-ordinating public and private institutions that provide basic grains as food aid, organizing donations’ distribution and commercialization.

Another important function of the IHMA is the management of the administered price band system for maize, rice and sorghum. The system is based on variable import levies, so as to keep local prices within a pre-defined band along long-term international price trends and to smooth the impact of wide international price fluctuations on the domestic market. Nowadays, the system applied for the import of maize and rice is a blend of price bands, tariff quotas and “buy national” incentives. In fact, prior to the harvest season, maize and rice producers reach an agreement with a consortium of grain processors on the purchase of the national white maize and rice production and define prices and quantities. The government grants tariff exemptions (only a one percent tariff is applied) on the imports of yellow maize and rice to processors in proportion to the acquired quantities of local production. The rest of the required maize and rice imports are made with the payment of the current tariff derived from the price bands.

National storage capacity

Storage capacity for basic grains is estimated at about 250 000 mt. Public deposits and silos managed by the IHMA account for about 55 000 mt and part of them are periodically rented to private agro-food companies. Some farmers own metal silos and their overall storage capacity is estimated at 120 000 mt, while the agro-industry has a capacity of about 65 000 mt.

Food price developments: price seasonality and markets integration

Wholesaler average monthly prices of maize and beans have a very pronounced seasonality (see graphs). Every year, maize prices reach their highest level in July/August, during the lean period just before the start of the main harvest, and reach their lower level in November/December, when the bulk of annual production is available in the main markets. In the case of beans, prices show their minimum level in December/January, during the harvest of the important second season crop, and increase almost steadily until November. During the years when the production of the first season crop is very good, with a certain amount of marketable surplus, beans prices may invert their upward trend and show a rapid reduction from July to September, before resuming their growth until November.

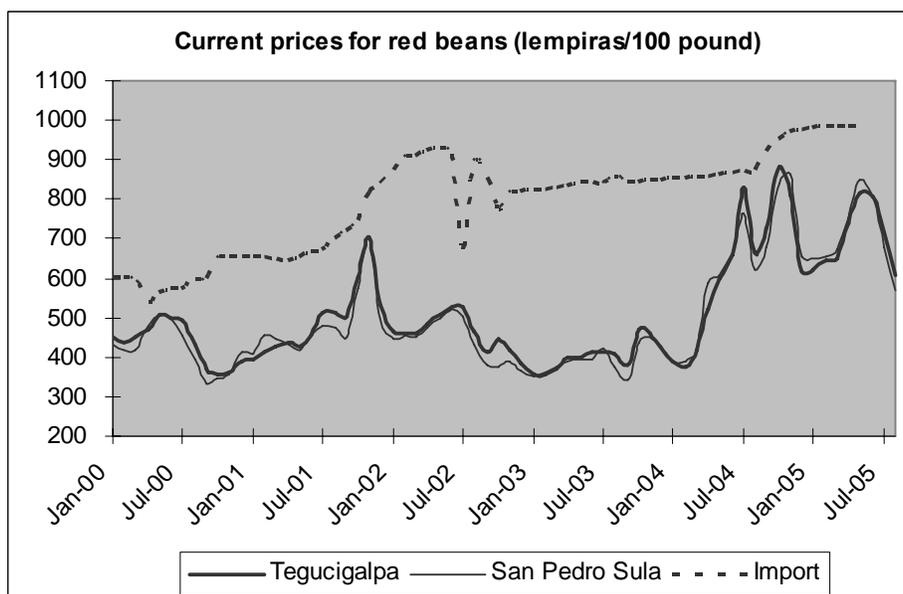
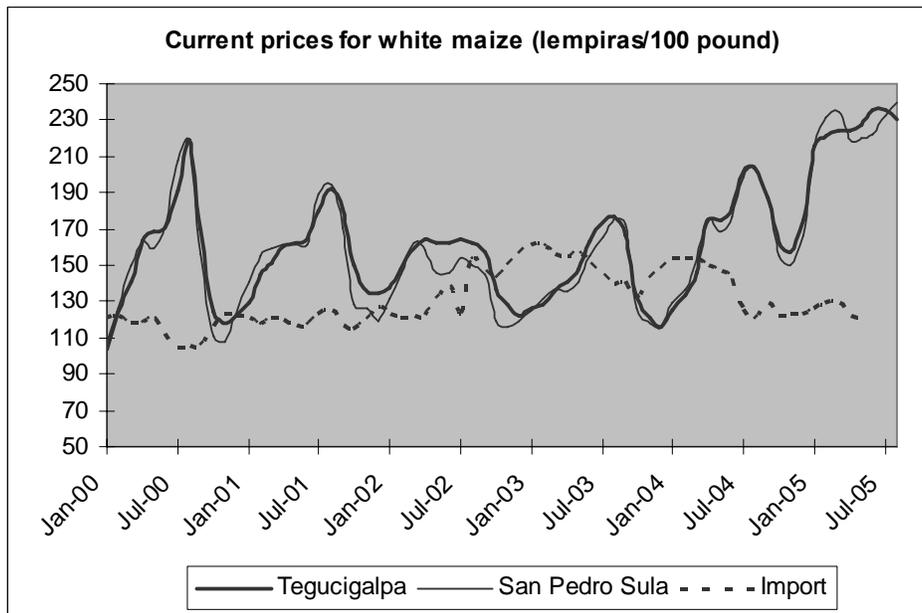
The explanation of these trends relies on the fact that the majority of farmers tend to sell their production surplus during the few months following the harvest. This strategy is due to the immediate need to repay debts with banks and informal creditors and to face other expenses, as well as to the limited storage capacity of small farmers which does not allow them to retain the product and sell it when the price is higher.

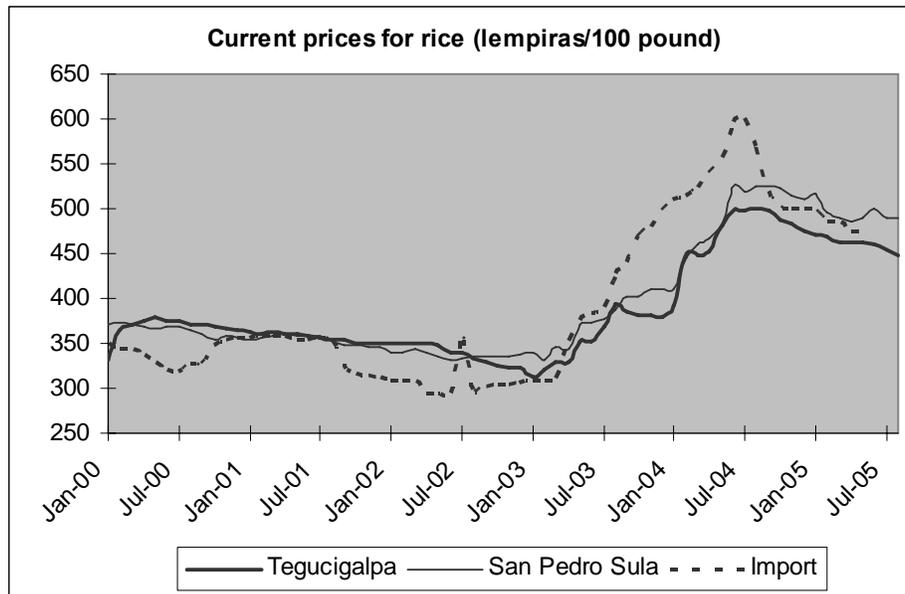
Wholesaler average monthly prices of rice follow more directly the trend of world prices and national price seasonality is less pronounced than in the case of white maize and red beans. This situation is essentially due to the fact that the vast majority of the processed paddy originates from abroad and the national production represents only a minimal amount.

Comparing trends in wholesaler monthly average prices for white maize, red beans and rice in the two main markets of Tegucigalpa and San Pedro Sula, it is evident that these markets are fully integrated and prices do not behave independently. Prices show high transmission between Tegucigalpa and San Pedro Sula, which suggests the existence of a well-functioning process of spatial arbitrage. In the case of rice prices, it is also clear that they closely reflect

the trend of import prices, essentially due to the high importance of rice imports on national demand.

The relationship between import and domestic prices for white maize and red beans would need a more in-depth investigation. However, it seems reasonable to state that, in the case of white maize, domestic and import prices are quite independent. This is because white maize imports are very limited and are entirely channelled into the agro-food industry for maize flour production without affecting local markets for direct human consumption. For beans, import prices are constantly higher than domestic prices due to the application of variable import levies in order to keep domestic prices within the established price band.

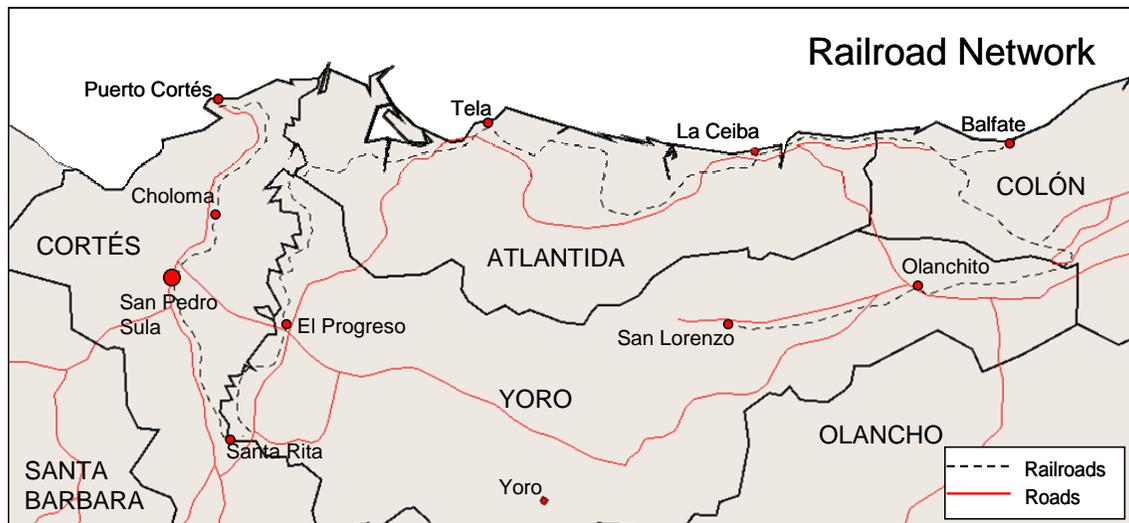




Transport infrastructure

Almost all Honduran territory is well served by the national road system that consists of 14 000 kilometres of roads, of which about 3 000 kilometres are paved. Most paved roads connect ports and industrial areas in the north to the capital city. A branch of the Pan American Highway connects the Caribbean and Pacific coasts, from Puerto Cortés through San Pedro Sula and Tegucigalpa to the main east-west section at Nacaome, close to the border with El Salvador. Three other main paved roads link San Pedro Sula to the Guatemalan and Salvadoran borders in the north-west, the capital city with Dulce Nombre de Culmí in the department of Olancho and the capital city with Danlí and the border with Nicaragua in the Department of El Paraiso. Other areas are in general served only by gravel or sand roads, where access may become difficult especially during the rainy season (from May to November). The north-eastern department of Gracias a Dios has no road connections with the rest of the country and access is guaranteed only by air, rivers and sea. The domestic distribution system of basic grains is entirely based on trucks.

Regarding the railway system, there are about 800 kilometres of railroad that were originally built by the banana companies and consist of two separate systems with differing gauges. The larger system, with almost 600 kilometres of track was built in the early 1900s by the Standard Fruit Company and was nationalized in 1983 with the name of Honduras National Railroad. The other system, still owned by the Tela Railroad Company, a subsidiary of Chiquita Brands International, encompasses 190 kilometres of lines. Both systems are located in the north-central (serving the “industrial corridor” among Puerto Cortes, Choloma, San Pedro Sula, Santa Rita and El Progreso) and north-western coastal areas (from Tela to La Ceiba, Balfate, Olanchito and San Lorenzo) and provide freight services, especially for banana and palm oil products.



Three ports handle the vast majority of Honduras's seaborne trade. In the north-west, Puerto Cortés at the mouth of the Río Sula is by far the country's largest port. Most of the country's agricultural exports and imports of petroleum and finished products pass through its docks. The port in Puerto Castilla in north-central Honduras was expanded in the mid-1980s and is now another important agricultural trading centre, especially with the United States. San Lorenzo is a small port on the Golfo de Fonseca on the Pacific Ocean handling mostly sugar and shrimp exports.

Market information and communication system

Since 1998, the Honduran Foundation for Agricultural Research (FHIA) has been in charge of managing the Honduran Market Information System for Agricultural Products (SIMPAH). The SIMPAH is a member of the Market Information Organization of the Americas (MIOA) and its principal functions are the collection, processing, analysis and dissemination of information related to markets and agricultural commodities. On its Internet site, the SIMPAH publishes average weekly wholesale and retail prices of several commodities for the main Honduran markets as well as for the capital cities of Nicaragua and El Salvador. The same information is also broadcast by local radios and TV networks and published in the major newspapers. For a fee, SIMPAH sells some products such as the time series of prices, the estimates of CIF import prices and the list of the main traders in Tegucigalpa, San Pedro Sula, Managua and San Salvador.

As a result of the visit to the main markets, it seems that market information flows quite smoothly among the major stakeholders that participate in the food chain from production to consumption. Intermediaries and transporters play a crucial role in the continuous process of information transfer between farmers in food producing areas and wholesalers and retailers that operate in urban areas. Market information becomes more scarce and difficult to obtain in the case of farmers and markets in remote areas with limited road access, such as in some mountain areas of the department of Intibucá, close to the frontier with El Salvador or in the northern part of Olancho.

In the last few years, the fast and widespread diffusion of mobile phone technology is having a great impact on the integration of food markets, at national and regional level. By using

mobile phones, traders, wholesalers and retailers are able to obtain, quickly and with limited costs, information that is critical to their decisionmaking process. Information such as prevalent food prices in national and Central American markets, the status of harvesting operations or possible shortages or surpluses in certain areas are informally transmitted among main market stakeholders on an almost daily basis.

Trade regulations

The import price band system is one of the main mechanisms used for contingent protection of basic staples in Honduras since 1992. It was created within the structural reform programmes as a way to allow reduction of tariffs on sensitive products, while maintaining the possibility of increasing them in case of abnormal low international prices. The products included were maize, rice and sorghum, in their different qualities and presentations, excluding seeds.

The main purpose of the price band system is to smooth the impact of wide fluctuations in international prices on the domestic market. The mechanism is designed to avoid short-lived international price movements being transmitted completely to the domestic market. Medium- and long-term international price trends were reflected gradually in the corresponding domestic markets. The floor and ceiling prices of the band are established for maize, rice and sorghum each year before the first main sowing season. These levels result from the consideration of the world prices of the commodity during the previous 60 months, discarding the 15 lowest and 15 highest average monthly prices of the series as “abnormal”, and choosing the remaining lowest value as the “floor” and the remaining highest value as the “ceiling” of the price band for the next agricultural commercial year.

In March 2005, the Honduran Congress ratified the Dominican Republic-Central American Free-Trade Agreement (DR-CAFTA). The agreement will be in effect from January 1, 2006 and will consolidate free trade between Honduras and the United States. As a result of DR-CAFTA, virtually all Honduran agricultural goods will enter the United States market duty-free. Import tariffs on some sensitive Honduran agricultural products, including maize and rice, after a period of grace when current tariffs will still be applied, will be gradually reduced over a period of 15-18 years. However, white corn, being essentially used for human consumption, has been permanently exempted from having a zero tariff. Considerable free trade quotas have been granted especially in the cases of yellow maize and paddy rice which are imported by local agro-industries and not directly used for human consumption.

Products	US quota	Quota annual growth	Tariff (above the quota)	Phasing out period	Period of grace
White maize	23 460 mt	2%	45%	-	-
Yellow maize	190 509 mt	5%	45%	15 years	6 years
Rice (paddy)	91 800 mt	5%	45%	18 years	10 years
Rice (white)	8 925 mt	2%	45%	18 years	10 years

The DR-CAFTA will also abolish the current administrative price band as well as the agreement between maize and rice producers and a consortium of grain processors which regulate the purchase of the national white maize and rice production and the definition of prices.

The main effect of DR-CAFTA on basic grains production is expected to take place in the case of paddy. Local production is likely to fall as a consequence of increasing imports and decreasing domestic prices. Different scenarios are envisaged for maize and beans. Yellow maize is practically not cultivated in Honduras and increased and cheaper yellow maize imports will probably have a positive effect on prices of poultry and swine products. Red beans seem not to be affected by a freer trade regime due to the preference given by the Honduran population to local varieties. In the last few years, it has been reported that exports of red beans have been growing in order to meet the demand of Central American communities in the United States.

As a non-tariff barrier, the Honduras government periodically imposes a ban on the export of some sensitive products based on the production calendar. From October 1 to November 30, for example, just before the main harvest of the second season crop, exports of beans have been restricted to only black bean varieties, whose consumption is marginal in Honduras, while exports of red bean varieties have temporarily been banned in order to prevent any shortage on domestic markets.

Main indicators and information sources

The following table provides a list of the main indicators that warrant being monitored and collected to analyse the impact of a food emergency on Honduran markets. The proposed indicators are grouped into four categories: Food Availability and Access; Market Functioning; Macro Environment; and Reaction Mechanisms to a Food Emergency. The analytical approach and the principal sources of information are provided for each indicator.

Indicators	Analytical approach	Sources of information
Food Availability and Access		
Changes in production prospects for main food commodities	Comparison of current production estimates with production obtained in previous year and 5-years average	SAG, Infoagro service; FAO/WFP CFSAM; ad-hoc surveys and interviews
Changes in domestic food stocks	Comparison of current food stocks with previous year and 5-years average; estimate of stocks destroyed	IHMA; ad-hoc surveys and interviews
Food production in neighbouring countries	Analysis of food surpluses or shortages in neighbouring countries to estimate potential additional supply or demand of food in the region	ESCG/GIEWS; national ministries of agriculture; MFEWS; ad-hoc surveys and interviews
International trade flows	Estimate of imported and exported quantities of main food commodities (specifying the countries of origin or destination)	Secretary of Industry and Trade; interviews with traders/agro-food industry
Un-registered cross border trade	Qualitative estimate of amount and direction of trade and their changes before and after the food emergency	Visit to border checkpoints and interviews with local stakeholders (e.g. retailers, wholesalers, transporters)
Changes in main sources of income	Analysis of changes in employment opportunities, migration flows and coping strategies before and during the food emergency	FAO/WFP CFSAM; household surveys; MFEWS Livelihood Analysis; interviews with NGOs
Market Functioning		
Wholesale and retail food prices in main regional markets	Comparison of current weekly prices (during the crisis) with prices before the food emergency and their normal trend (5-years average)	SIMPHA; visits to main markets
Regional food prices	Comparison of current (during the crisis) weekly prices in neighbouring countries with national prices	SIMPHA; National Institute of Statistics
International food prices	Comparison of current (during the crisis) national weekly prices with international (import) prices	Secretary of Industry and Trade; National Institute of Statistics
Trade flows among surplus and deficit areas	Estimate of flows of main food items moving out/in the area in crisis and the country; comparison with normal flows	SAG, Unit of Basic Grains; ad-hoc surveys; visits to main markets
Road and transport systems	Qualitative estimate of the status of main roads and bridges during the crisis; identification of isolated markets; changes in transport costs	Secretary of Public Works, Transports and Housing; ad-hoc surveys and interviews

Macro Environment		
Trade regulations	Analysis of main trade policies and their likely short, medium and long-term effects on domestic food markets	Secretary of Industry and Trade
Exchange rate	Analysis of weekly data (comparison with last 3-years trend)	Central Bank of Honduras
Foreign exchange reserves	Analysis of monthly data (comparison with last 3-years trend)	Central Bank of Honduras
Inflation	Analysis of monthly data (comparison with last 3-years trend)	Central Bank of Honduras
Reaction Mechanisms to a Food Emergency		
Government's strategies	Analysis of how the main stakeholders are planning to react to the food emergency	Interviews with SAG officers
International agencies' strategies		Interviews with main international agencies and NGOs
Traders' strategies		Interviews with traders in main food markets

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