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Haiti's U.S. Rice Imports

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Abstract

Haiti is among the largest markets for U.S. Southern long-grain milled rice. It is also the poorest nation in the Western Hemisphere and is subject to chronic food insecurity. Haiti first opened its market to rice imports in 1986 and again in 1995, reducing tariffs on rice imports to 3 percent. Haiti's rice imports now account for 80 percent of consumption. Imports also allowed per capita food availability to rise by 11 percent between 1985 and 2011. Efforts are underway to improve agricultural performance, but even with significant productivity gains, Haiti is likely to continue to rely on imports of U.S. rice.

Keywords: Haiti, rice, U.S. long grain rice, food security, food consumption, food availability, rice imports, U.S. rice exports, productivity gains, international assistance.

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Introduction

Haiti is a major market for U.S. rice, accounting for about 10 percent of U.S. rice exports and generating around \$200 million in revenue for the U.S. rice industry. Nearly all of this rice is from the South, which typically accounts for 75-80 percent of annual U.S. rice production. Haiti is also a country with significant food insecurity. Rice imports improved food availability, increasing per capita calorie availability by about 11 percent between 1985 and 2011, according to the Global Food Security Database compiled by the Economic Research Service. Large rice imports also changed the character of the Haitian diet, with rice now accounting for almost one-quarter of total calorie consumption. Imports essentially compensated for low growth and low productivity in Haiti's agricultural sector. The Haitian Government, as well as international development organizations, is currently working to improve agricultural performance. However, even with significant productivity gains, Haiti is unlikely to achieve self-sufficiency in rice production and will continue to rely on imports of U.S. rice for a significant share of its food supply.

Haiti is one of the poorest countries in the world. The World Bank reports Haiti's annual per capita GDP as just \$824 in 2014, compared with \$6,147 in the Dominican Republic, which shares the island of Hispaniola with Haiti, occupying the eastern two-thirds of the area (World Bank, 2015). ERS's *International Food Security Assessment, 2014-24* reported that roughly 70 percent of Haiti's population was food insecure in 2014 (Rosen et al., 2014). The unemployment rate currently exceeds 40 percent, with just one-third of the labor force having a formal job. A lack of skilled labor also limits economic growth. Compounding these chronic economic problems was the January 12, 2010, magnitude 7 earthquake, which devastated the capital city of Port-au-Prince, killing between 100,000 and 200,000 people and causing substantial economic losses and infrastructure damage.

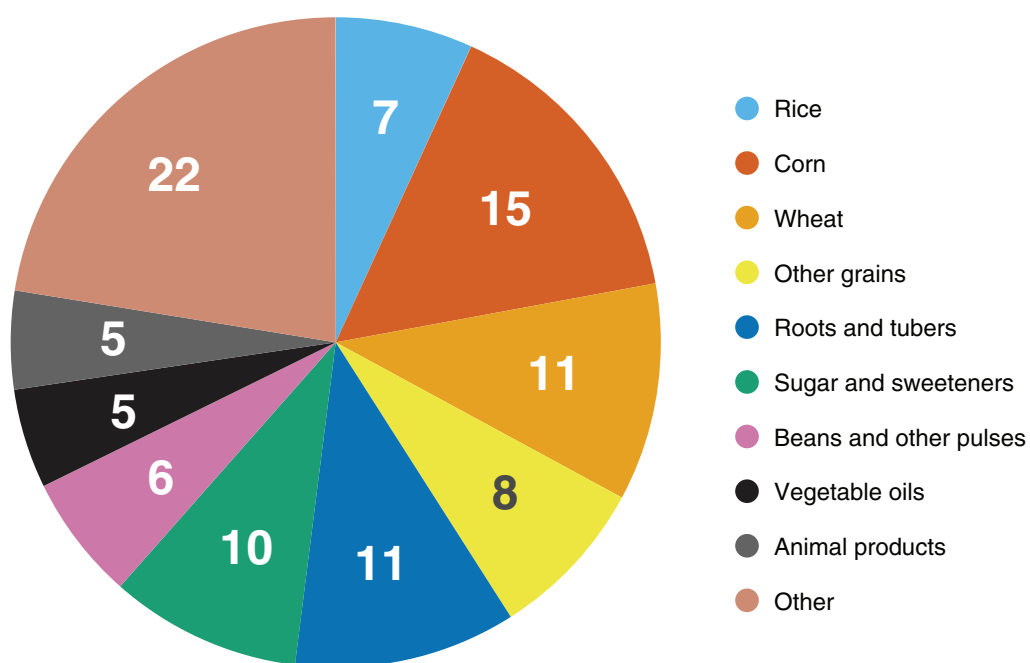
Rice Is the Most Important Food Item Consumed in Haiti

Rice is a critical component of the Haitian diet. According to the UN's Food and Agricultural Organization (FAO), in 2011 rice supply per person exceeded 48 kilograms (excluding seed and waste) and accounted for 23 percent of the average total calories consumed each day.¹ The share of calories supplied by rice exceeds that of corn by 50 percent and is more than twice the share of roots and tubers such as cassava, sweet potatoes, and yams (figures 1 and 2). Thus, access to adequate supplies of rice is a vital food security objective of the Government of Haiti (GOH).

Haiti's rice intake has increased since 1986, when Haiti began to open its market to imported rice. Before that time, the country consumed only small amounts of rice and was self-sufficient. Significant rice imports have altered the structure of Haiti's diet. In 1985, FAO reported Haiti's per capita rice supply at a mere 13.1 kilograms per person, well below 31 kilograms for corn and 94 kilograms for starchy roots, historically the largest component of Haiti's food supply. By 2011, per capita rice availability had risen to 48 kilograms. Since 1985, per capita food availability of all foods, in calories, increased by about 11 percent, mirroring the increase in rice (figure 3).

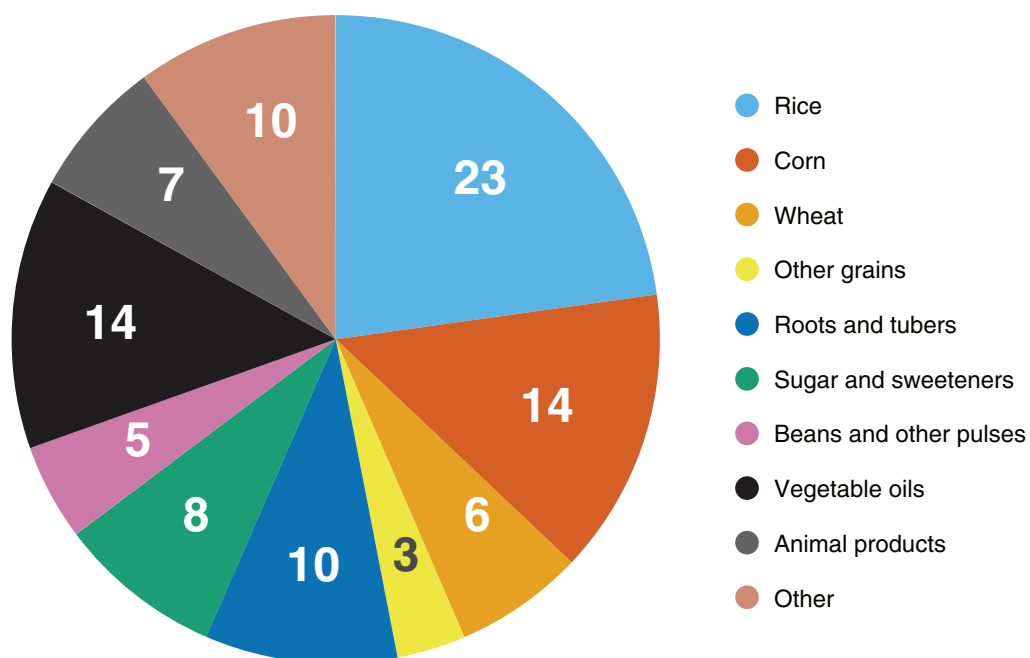
¹This amount represents the total amount of rice available for food, as calculated by FAO. It excludes feed use, seed use, waste, and industrial use.

Figure 1
Share (percent) of daily caloric intake from Haiti's food staples, 1985



Source: USDA, Economic Research Service using data from the United Nations Food and Agricultural Organization.

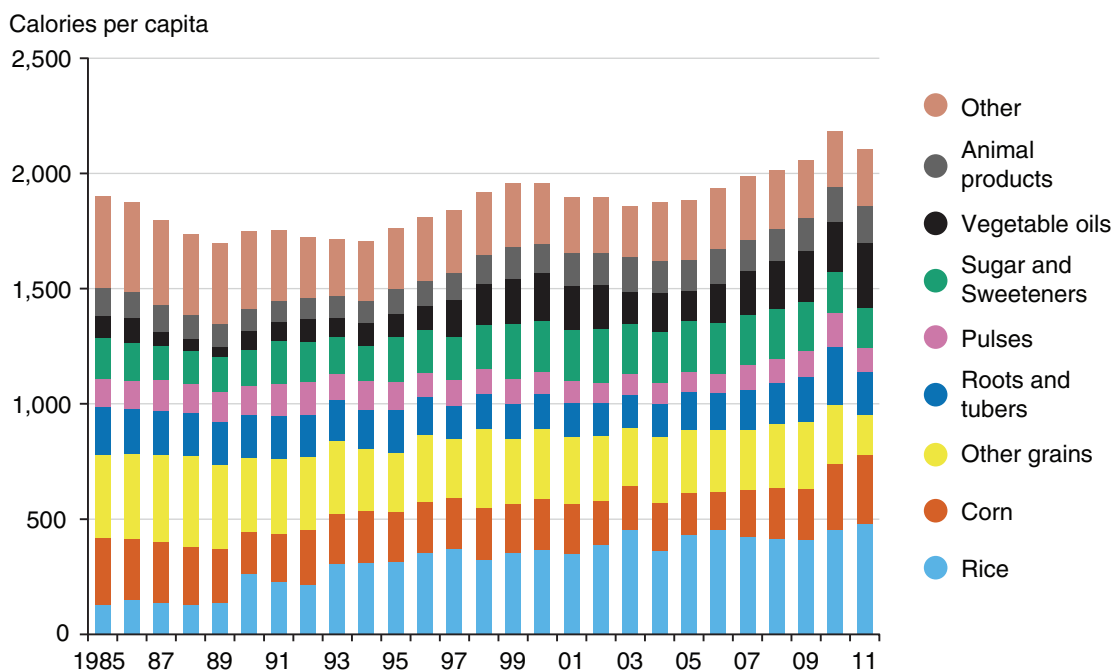
Figure 2
Share (percent) of daily caloric intake from Haiti's food staples, 2011



Source: USDA, Economic Research Service using data from the United Nations Food and Agricultural Organization.

Figure 3

Calorie availability rises by 11 percent from 1985 to 2011, with rice accounting for a growing share



Note: Figures are on a calendar-year basis.

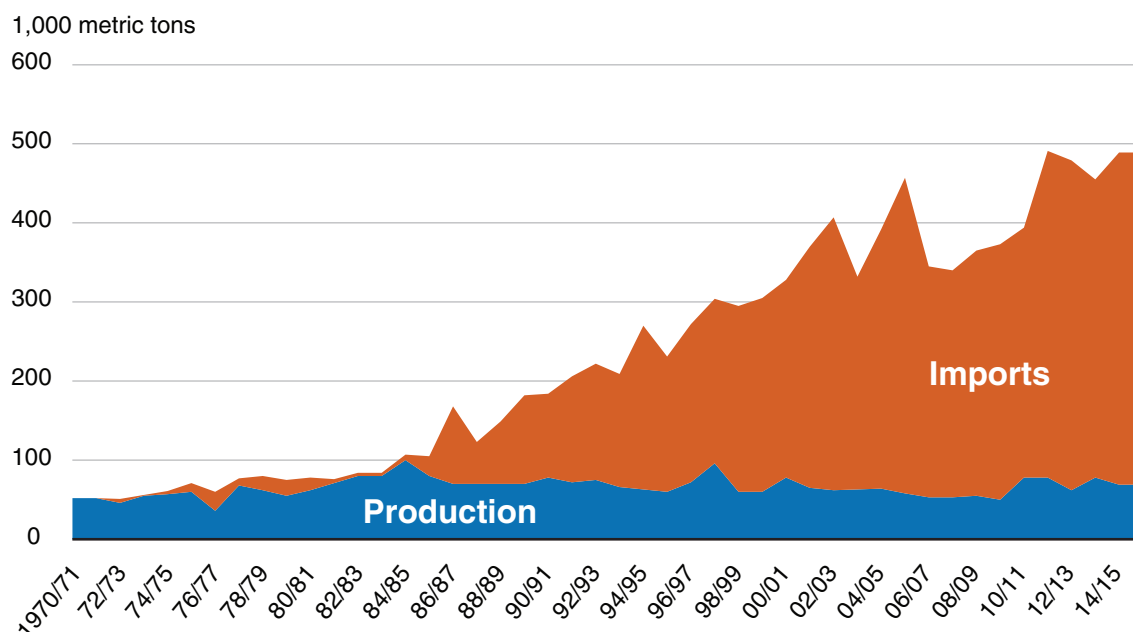
Source: USDA, Economic Research Service using data from the UN Food and Agriculture Organization.

Haiti first eliminated quantity restrictions on rice imports in 1986, but replaced a specific import tariff of \$70 per ton with a 50-percent ad valorem tariff (Phillips and Watson, 2011). Imports increased from just 7,000 metric tons in 1985 to 25,000 metric tons in 1986, with the United States the sole supplier (USDA, PSD database). By 1994, imports exceeded 140,000 metric tons, with the United States a major supplier. Then, in 1995, Haiti lowered its tariff rate to just 3 percent, and rice imports immediately increased by more than 60,000 metric tons to 207,000 metric tons, with the United States remaining the largest supplier. Domestic production stagnated during the same period, and Haitian officials estimate that imports now account for 80 to 90 percent of rice consumption (figure 4). In contrast, almost all consumption of corn and starchy roots is supplied by domestic production. Rice imported from the United States is significantly cheaper than local Haitian varieties; the greater availability of lower priced rice is most likely the key factor behind the shift in consumption, although changing tastes and preferences could also play a role.

ERS analysis found that imports played a significant role in improving food security in many other countries in the Latin American and Caribbean (LAC) region as well (Rosen et al., 2014). However, most of the LAC countries analyzed showed higher income growth, expanding exports, and/or more robust domestic agricultural production than Haiti. Haiti, in contrast, continues to suffer from slow growth in domestic production and low productivity, factors that negatively affect Haiti's food security.

Figure 4

Rice consumption has nearly quintupled since 1985, while production trended slightly downward



Note: Figures are on a marketing year basis. Since 2007/08, Haiti's marketing year has been July-June. Prior to 2007, it was January-December.

Source: USDA Economic Research Service using data from USDA's Foreign Agricultural Service.

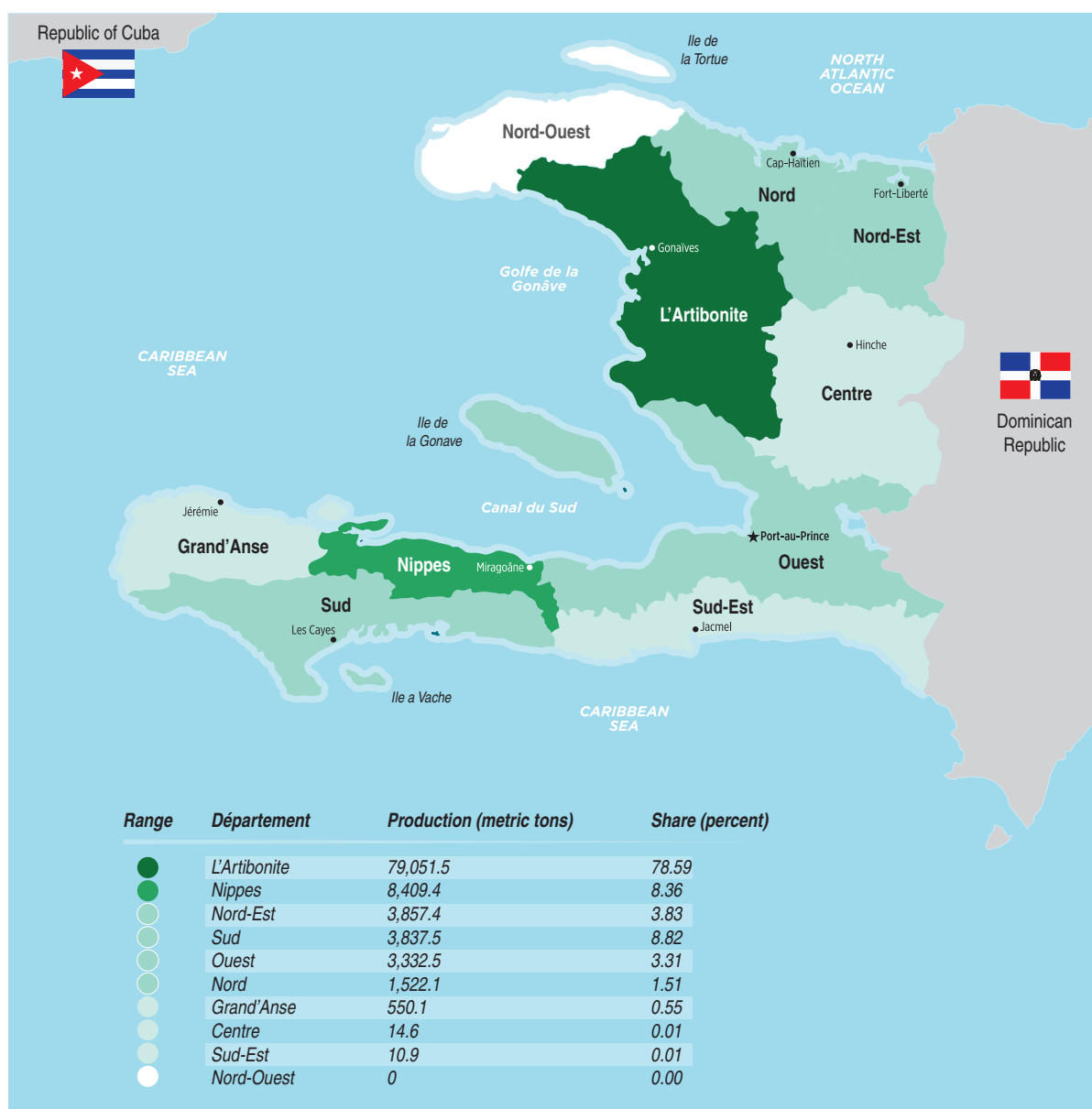
Haiti's Rice Sector Is Characterized by Low Yields, Slow Growth

Haiti grows long-grain rice, producing two crops a year, a spring crop harvested in April-May and a fall crop harvested mainly in October-November, with the fall crop accounting for 60-70 percent of total production.² Haiti consists of ten subnational administrative units, known as *départements* (figure 5). About 70 percent of Haiti's crop is produced in the Artibonite Valley, which is roughly in the center-west; about 16 percent is in the Nord Département; and the remainder is grown mostly in the Sud Département. Most of the rice produced in Haiti is grown under irrigation. There is also some upland rice cultivated in the valley floors in the humid mountains of the Nord and Nord-Est Départements. Farm size averages 1-3 hectares.

Rice production in Haiti has shown no long-term growth over the past 30 years, after expanding slightly from the early 1960s to the mid-1980s. Initial growth in the 1960s and early 1970s was due to expanded area. This was followed by higher yields in the mid-1970s. Haiti's rice area has been quite variable, ranging between 40,000 and 76,000 hectares since 1960/61, but typically below 70,000 hectares and averaging 57,400 hectares per year. From 1998/99 to 2009/10, rice area averaged 50,500 hectares, with less year-to-year variation. However, USDA data indicate that area rose 20,000 hectares to a near-record 75,000 in 2010/11 and has remained at this level since. The increase was mainly due to support from GOH and international donors.

²The timing of planting and harvest varies considerably, depending on the location and weather conditions. In the Sud and Nippes Départements, the dominant crop tends to be planted in February and harvested in June or July, although planting can extend into April if there are delays in either Government support or the arrival of the rains. But these Départements account for a relatively small share of total production.

Figure 5
Artibonite Valley accounts for 70 percent of Haiti's rice crop



Note: These numbers represent production from the crop planted in the spring of 2013 and harvested in August and September. They do not represent the entire 2013/14 crop.
Source: USDA, Economic Research Service using data from the Haitian Ministry of Agriculture, Rural Development and Natural Resources.

Rice yields (rough) in Haiti more than doubled from 1960/61 to the mid-1980s, but have shown no upward trend since. In fact, since 2005/06, Haiti's yields have averaged just 1.83 tons per hectare, down from an average of 2.20 tons the previous decade. According to USDA's Foreign Agricultural Service (FAS), rice yields in the Dominican Republic—the largest rice-producing country in the Caribbean—have averaged 4.85 tons per hectare since 2005/06 (USDA, PSD database). Cuba's yields averaged 2.94 tons per hectare from 2005/06 to 2014/15 and increased 12 percent over the decade, but are still below the 2002/03 and 2003/04 record high for Cuba of 3.49 tons per hectare. Cuba is the second-largest rice-producing country in the Caribbean. Key factors behind Haiti's

declining yields are a failure to maintain the irrigation infrastructure, deteriorating land quality and producers' lack of access to inputs.

Since 2005/06, rice production (rough-basis) in Haiti has ranged from 91,000 tons to 142,000 tons, with an average of 114,400 tons, nearly unchanged from the previous decade's average. These average levels are about 10,000 tons below the 1980/81-1989/90 average (USDA, PSD database).

Rice Growers in Haiti Face Severe Constraints

Any expansion of rice production in Haiti faces severe constraints. A major limitation is a lack of access to working capital: private financing is available only at extremely high interest rates, and there is very little investment from sources outside Haiti. Seed quality is poor; some foreign aid projects provide high-quality seed at low cost to participating farmers, but most farmers cannot afford quality seeds. Farm sizes are too small to operate efficiently, and many farms consist of two or more noncontiguous plots. Continuing conflicts over land ownership block any expansion or consolidation of farms into more efficient units. Water rights are also unclear, generating conflicts over use.

Irrigation canals—critical for flooding fields—are of poor quality and in need of repair and cleaning. This service is the responsibility of the Organization for Development of the Artibonite Valley (ODVA), an autonomous unit of the Ministry of Agriculture, Rural Development, and Natural Resources (MARNDR), but funds are lacking. Haiti's Coordination Nationale de la Sécurité Alimentaire (CNSA), another autonomous unit of MARNDR, reported that repairs were planned for 40 kilometers of canals. However, of the 100 million gourdes needed for this project, only 1.2 million gourdes were available from the Haitian budget (CNSA and FEWSNET, 2015).

Haiti's rice sector also suffers from a lack of skilled labor, mechanization, and storage facilities that would allow farmers to hold rice until prices are higher. Haiti's rice production is also subject to large losses: experts at ODVA estimate total losses at around 20 percent; experts in the Sud Département estimated losses to be 10-15 percent in the field, with further losses during storage and marketing. Much is lost in the field, with pests destroying about 10 percent of the crop annually. Losses also occur during harvest due to improper harvesting techniques, highlighting the need for better technical support. Hurricane damage and severe flooding, common in the region, also contribute to losses.

The milling industry faces severe challenges as well. According to Haitian sources, the mills—of which there are hundreds—are old, extremely small, and use outdated technology, resulting in excessive levels of foreign matter in the milled rice and large numbers of broken kernels, which sell at a substantial discount compared to unbroken kernels.

A major goal of the GOH is to boost domestic rice output and reduce dependence on imports. The Government program announced for 2014 included as a key objective the improvement in irrigation and canal facilities. Other objectives included bringing uncultivated land into production, providing subsidized seed and fertilizers to producers, improving access to machinery, and strengthening agricultural advisory services. The GOH has committed its own funds to provide input subsidies and upgrade irrigation facilities. The GOH announces annual fertilizer subsidy rates each January, and the level of the subsidy impacts planting decisions.

A number of U.S. and foreign donors are also supporting this effort. The USAID-funded Feed the Future West/WINNER project has assisted farmers in implementing a System of Rice Intensification (SRI) designed to boost yields while using fewer seeds and significantly less water and fertilizer (USAID Haiti, 2012). In addition, Cuba and Venezuela are helping Haiti build new mills, and the Taiwan International Cooperation and Development Fund has supported the formation of cooperatives in the Artibonite Valley and southwestern Haiti. The project provides access to improved inputs, gives technical assistance to farmers, and funds research aimed at boosting yields and improving quality. The 4,000 participating farmers have seen their yields rise to 3.5 tons per hectare.

These projects demonstrate that it is possible to raise productivity among Haitian producers. However, recent experience also shows that these gains are vulnerable to natural, financial, and organizational setbacks. The Taiwanese project supports much of the rice production in the Sud Département, but suffered a funding lapse in 2014, and production in that Département declined from the previous year. At the beginning of every season, producers wait to find out what support they can expect before deciding how much to plant. Planting was late in the fall of 2014 because of delays in delivering assistance to farmers; neither the GOH nor the donors had distributed the seed and fertilizer that had been promised, and producers were forced to rely on their own funds to acquire the needed supplies.

There were further delays in providing funds in 2015, compounded by dry weather. Due to lack of rain, water levels in the main rivers were below normal. Farmers close to water sources had access to water, while those farther away were unable to irrigate their land. Failure to clean the irrigation canals also prevented some farmers from receiving the water they needed. Thus, Haitian officials at ODVA and Département offices of the MARNDR expected that the spring 2015 crop would be down considerably from the previous year.³ In its July bulletin, CNSA also predicted a decline in production for 2015 because of a lack of rain and inadequate investment (CNSA and FEWSNET, 2015).

³USDA's PSD database shows a production decline from 2013 to 2014, but no change in 2015. While Haitian officials expect a decline in 2015, that expectation is based on anecdotal reports from various stakeholders rather than hard data. There is a dearth of reliable data on Haitian rice area or production. MARNDR, with assistance from USDA's National Agricultural Statistics Service (NASS), began a semi-annual sample survey of area and production of major crops beginning in the spring of 2013. The 2013 survey provided reliable production estimates, but area estimates were not statistically reliable. Further surveys were carried out for the two 2014 seasons, but results are not yet final.

Productivity Increases Might Reduce Import Needs

The experience of producers benefiting from development projects such as the Taiwanese project demonstrates that under the right conditions, Haitian producers can achieve yields of 3 tons per hectare or more. Local Ministry officials interviewed by the authors also believe that overcoming the obstacles noted above could encourage producers to expand the area planted to rice. Expansion of rice output and improvement of processing and marketing channels might improve producer incomes, but it is not certain whether this would have a significant impact on food security.

The International Food Security Assessment (IFSA) model, developed by ERS, is used to simulate the impact of a 15-percent increase in rice yields.⁴ Since production is a function of area and yields, the yield increase results in higher production and, in turn, a 5-percent increase in total grain availability. The boost in grain availability leads to a 22-percent reduction in the distribution gap, defined as “the amount of food needed to raise consumption in each food-deficit income decile to the nutritional target of roughly 2,100 calories per person per day” (Rosen et al., 2014).⁵ The estimated decline in the distribution gap indicates a lessening in the intensity of food insecurity as per capita consumption increases and moves closer to the nutritional target.

Despite the improvement in this one aspect of food security, it is important to note that the increase in food availability has only a small impact on the number of food-insecure people. After allocating availability across the 10 income deciles, we find that consumption in the bottom 7 deciles is so far below the nutritional target that a 15-percent increase in rice yield does not increase availability enough to make these deciles food secure.

Imports under this scenario decline only negligibly. While the yield increase boosts rice output, domestically produced rice makes up a small share of the total grain supply (rice, corn and sorghum combined), and the country remains dependent on imports for over half its total grain supply.

Domestic Rice Is Higher Priced Than Imported Rice

The highest priced rice varieties in Haiti are the domestically grown Shella and Shelda (figure 6).⁶ These varieties are both parboiled before milling; Haitians greatly prefer these varieties over imported rice, but the parboiling raises the production costs and thus the retail price (Wilcock and Jean-Pierre, 2012). Another local variety is TCS-10, originally developed in Taiwan. This variety is said to be higher yielding and is widely grown in the Artibonite Valley (Wilcock and Jean-Pierre, 2012). The price of TCS-10 was very close to the retail price of varieties imported from the United States, but has been rising since early 2013. Even so, this variety could potentially compete with U.S. rice on the basis of price, but it tends to be stickier than U.S. varieties and is less preferred by Haitian consumers.

⁴The IFSA model projects food availability and food access. The model analyzes the gap between projected food availability (production plus commercial and food aid imports minus nonfood use) and a nutritional target of roughly 2,100 calories per capita per day, depending on the region. Based on total population data and the population share that consumes less than the nutritional target, the projected number of people who cannot meet the target consumption level is calculated.

⁵For this analysis, the population is divided into 10 income groups, ranging from the poorest 10 percent to the 10 percent of the population with the highest income.

⁶The prices of Shella and Shelda are very close to one another; for this reason, only Shella is shown in the chart.

Prices for local varieties tend to rise and fall based on available supplies, as farmers have little storage capacity and typically can hold rice off the market for only 1 to 2 months after harvest (U.S. Department of Agriculture, 2013). Prices for domestic rice typically fall during October and November, after the fall harvest, rise for several months as supplies tighten, then fall with the next harvest (figure 6). The April harvest, being a smaller harvest, appears to have less of an impact on prices.

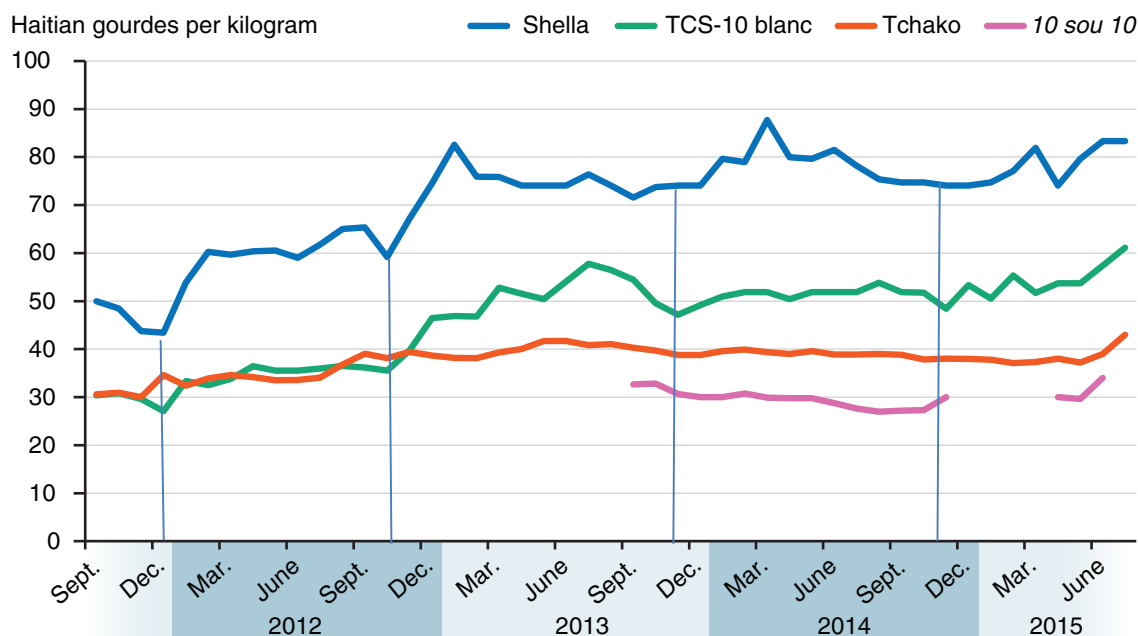
The most popular varieties of U.S. rice are Tchako and Mega, which sell at about 60 percent of the price of Shella. Almost all U.S. sales of rice to Haiti are commercial sales that are typically 4 percent or less broken, a standard grade of U.S. Southern long-grain milled rice. In contrast to domestic rice, there tends to be much less price variation for imported varieties, which typically follow U.S. export prices (figure 7).

However, the price of rice in local markets is vulnerable to changes in the exchange rate. For example, the U.S. dollar value of imported rice had been trending lower for several years (figure 7), but due to the long-term devaluation of the gourde, the prices of rice in local currency have been trending higher or remaining stable over much of the same period (figure 6). The Haitian gourde underwent a sharp devaluation beginning in June 2015—pushing the dollar value of the gourde from 47 in May to 57 by early August—which was reflected in a sharp rise in the local price of all rice varieties in June and July (figure 6) even as the price in U.S. dollars was nearly stable (figure 7). Continued currency devaluation, particularly if it is combined with rising prices for U.S. rice, could have adverse effects on Haiti’s food security.

During the most recent price surge in March 2013, Haiti began to import rice from Vietnam after a contract was signed with the Vietnamese Government in late 2012 to buy 300,000 tons of rice. The goal was to stabilize prices shortly after the country was hit by natural disasters—Hurricanes Sandy and Isaac—heightening concerns about Haiti’s ability to meet its food needs. The first shipment of 15,000 tons under the government contract arrived in Haiti in March 2013; total imports from Vietnam reached 87,000 tons by December 2013, making Vietnam the second-largest supplier in 2013 (U.S. Department of Agriculture, 2014). Although Vietnam’s rice is much lower priced than U.S. rice, selling at 60-80 percent the price of U.S. rice in 2014, Haitian consumers have resisted buying the variety, called *10 sou 10*, since they don’t like its cooking properties. Vietnam’s shipments dropped to just 20,000 tons in 2014, likely due to cooking and quality concerns. It appears that while prices play a critical role in Haitians’ purchasing decisions, tastes and preferences are also important—Haitian consumers clearly prefer long-grain varieties that cook dry and fluffy. However, if the gap between U.S. and Vietnamese rice prices widens, purchases from Vietnam could resume, displacing some U.S. sales.

Figure 6

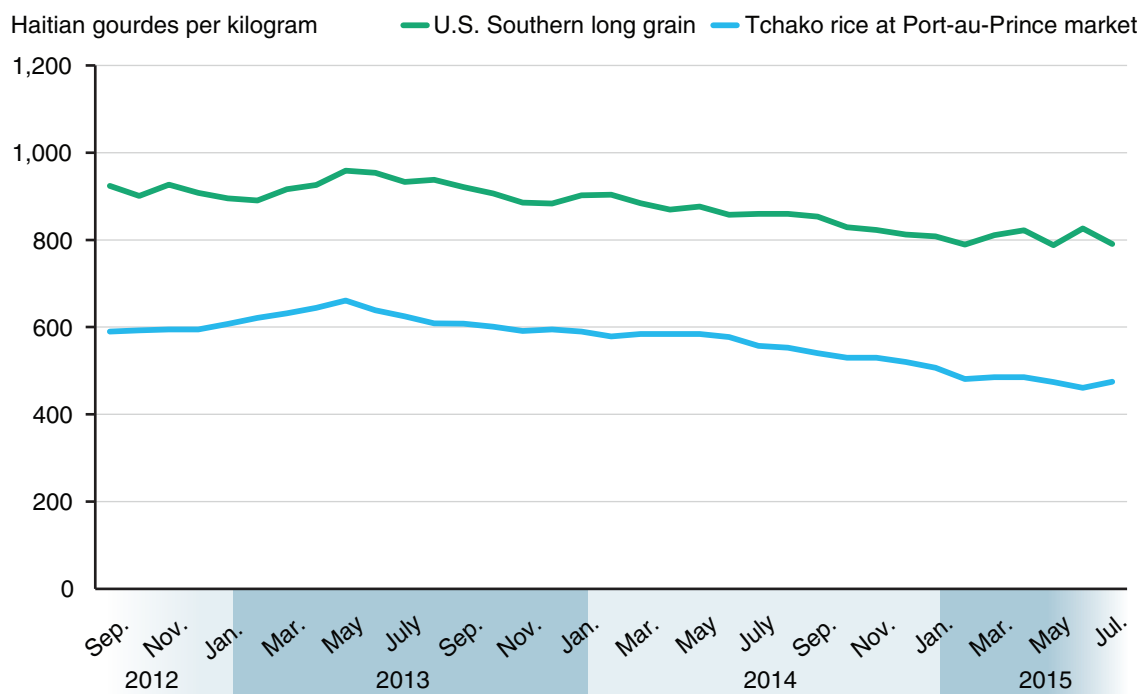
**Prices of local rice varieties rise and fall with the production season;
prices of imported varieties are more stable**



Note: The value of 1 U.S. dollar was 41 Haitian gourdes in September 2011, 47 in May 2015, and 55 in July 2015.
Source: USDA, Economic Research Service, using data from the Haitian Ministry of Agriculture, Natural Resources and Rural Development.

Figure 7

Haitian market prices for imported varieties roughly follow the U.S. market



Source: USDA, Economic Research Service, using data from USDA and the Haitian Ministry of Agriculture, Natural Resources and Rural Development.

Conclusion

Haiti has been the second to third largest market for U.S. rice exports—measured by quantity—and the largest market for U.S. long-grain milled rice for more than a decade. Haiti is likely to remain an important destination for U.S. rice in the foreseeable future, despite ongoing efforts to boost domestic rice output. Rice is steadily gaining importance in the Haitian diet, and imports will continue to play an important role in meeting Haiti’s food requirements. Haitians have demonstrated a clear preference for U.S. long-grain varieties, greatly preferring them over cheaper Asian varieties.

However, market forces can introduce significant uncertainty to the outlook for Haiti’s rice purchases from the United States, reflecting the market price for rice as well as currency volatility. The long-term decline in the value of the gourde against the U.S. dollar tends to make rice more expensive in local currency. While the impact of the currency devaluation in the summer of 2015 was tempered by declining U.S. rice prices, a depreciating currency coupled with rising U.S. rice prices could lead to a deterioration in Haiti’s food security situation.

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