



# Cutting

CUBA DOWNSIZES ITS SUGAR INDUSTRY

# *Losses:*



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## INTRODUCTION

**T**he May 2002 announcement that Cuba would dramatically downsize its sugar industry made definitive a change that had been coming for years, and was forced by international market conditions. With sugar prices falling steadily, and having lost the Soviet bloc subsidies that for decades made sugar exports artificially lucrative, Cuba faced a choice: to attempt to revive the industry with subsidies and large investments, or to cut its losses and try to restructure it to make it profitable.

Cuba chose the latter course, to the immediate benefit of the national balance sheet. But a large set of challenges remains: completing the closure of half the nation's sugar mills and the conversion of massive amounts of land from sugar to other uses; caring for the people involved; raising productivity in the downsized sugar sector; and producing derivatives that will pull profits from cane and its waste products.

Sugar has an indelible place in Cuba's history and culture, but as an economic proposition it has lost its starring role. The downsized sector is no longer a proxy for the health of the Cuban economy. More time must pass before the sugar industry's retooling can be fully assessed, but even as the plan gets under way one can examine the plan's design, how it is proceeding, how Cubans view it, how it affects them, and the long-term implications.



## SUGAR THEN AND NOW

The cultivation of sugar in Cuba dates from the 17<sup>th</sup> century. It forms, as Cubans readily and fondly say, part of the national identity. Sugar determined patterns of land use and ownership across the island. It caused the importation of slaves. Its production cycle set a rhythm of rural life that lasted for centuries. Sugar produced surges of wealth that made Havana and smaller urban centers such as Matanzas flourish, financing waves of architectural riches. The sugar industry brought railroads to Cuba, and new technology year by year. At different times, and for better or worse, sugar trade figured prominently in Cubans' relations with Americans and Russians. At the turn of the 21<sup>st</sup> century, sugar was still being produced in nearly every municipality – everywhere but Cuba's western tip and the Isle of Youth – and by sustaining nearly half a million jobs, sugar was putting food on the table of one in five Cubans.

So when Pedro Alvarez, the chief executive of Cuba's food importing company, stated matter-of-factly at a Havana trade show this year that Cuba had bought "tens of thousands" of tons of sugar *from* the United States and was looking to sign contracts to *import* 5,000-15,000 tons more, his words symbolized a change in centuries-old patterns of economic activity. Cuba remains a net exporter of sugar, but the fact that it imports any sugar at all, and has decided to downsize its sugar production, is due to the movement of international markets that can buffet any commodity-based economy.

Cuba's socialist government profited handsomely from the sugar-for-oil trade that it conducted with the Soviet bloc. Especially since the 1970's, Cuban sugar purchased Soviet oil at prices that were far above market levels; in some years Cuban sugar traded at the equivalent of 40 cents per pound, well more than double market prices, yielding an effective subsidy of \$3 billion per year. In some years, Cuba could afford to re-export some of the oil that its sugar earned. "Nothing was more favorable than sugar production," a Cuban economist says, "it was reality, but it was virtual reality."



*Nearly all cane is harvested mechanically, but a small and declining number of macheteros work seasonally to cut the crop and bring it in.*

What did the emphasis on sugar production buy? It mechanized the preparation of sugar lands and 75 percent of cane cutting. It motorized 100 percent of cane transportation. It led to the construction of seven new mills and new investment in research, development, and production of products derived from sugar or cane waste material. Between 1976 and 1990, sugar represented three fourths of the value of Cuba's merchandise exports and 20 percent of the economy's total investments. By the early 1990's, the sugar industry held 30 percent of the nation's industrial machinery and bought 20 percent of the production of the steel and machinery sector, 13 percent of the production of the ministry of basic industries, and eight percent of light industry output.

The demise of the Soviet bloc robbed Cuba of more than a subsidy. It left Cuba with a large, mechanized sugar industry designed to fit a customer that no longer existed, and dependent on sources of tractors, fuel, fertilizers, and other supplies that also ceased to exist. Repeated in many sectors, this experience plunged Cuba into a severe economic crisis.

Cuban sugar production dropped nearly three million tons, plummeting 39 percent between 1992 and 1993. Lower revenues caused investment and maintenance to falter, leading to a de-capitalization of the industry and further drops in output.

Faced with these new difficulties, Cuba could not afford to maintain the large-scale, heavily mechanized farm techniques that produced the bulk of Cuba's sugar on large state farms.



Outside the Eduardo Garcia Lavandero mill in Artemisa, dismantled equipment awaits shipment to a mill that will continue in operation.

In response, Cuba restructured its agricultural production – sugar and non-sugar – by breaking up state farms and creating smaller cooperatives. In the sugar sector, great emphasis was placed on relatively large cooperatives called UBPC's for their Spanish name meaning Basic Units of Cooperative Production. Unlike smaller varieties of cooperatives that still had the participation of private farmers working lands they owned or once owned, UBPC's derived from state farms. Workers and managers were given production incentives, but they had no original connection to the land.

By 2000, fully 72 percent of sugar cane was grown in UBPC's, and the results were not promising: Cuba's average yield per hectare had dropped 38 percent in one decade, and according to the U.S. Department of Agriculture, per-pound production costs in the mid-1990's were 50-70 percent above world market prices. As a Cuban expert described it, "the organizational changes in production have not adjusted sufficiently to meet the high costs and low market prices of the sector."

Meanwhile, conditions in the international marketplace virtually dictated that Cuba downsize its sugar industry.

Cuban sugar production had fallen 56 percent between 1989 and 2002, and Cuba's world rank as a cane producer fell from third to tenth. World sugar production grew 22 percent during those years, and consumption grew at an equal rate, but world stockpiles of surplus sugar nonetheless increased by 12 million tons.

These trends combined to exert downward pressure on prices; a pound of sugar sold for nearly 13 cents in 1989 and barely six cents in 2002.

As Cuba considered its possibilities in the world market, it saw new, efficient competitors with surging production. Brazil was foremost among these, with more than twice the production in 2002 than it had in 1989. And Brazil's "exports of raw sugar continue remorselessly," according to a London commodity newsletter. Brazil's 2002 exports of 11.6 million tons were greater than three times Cuba's entire production. And other sweeteners, such as high fructose corn syrup, were increasingly cutting into the market for sugar.

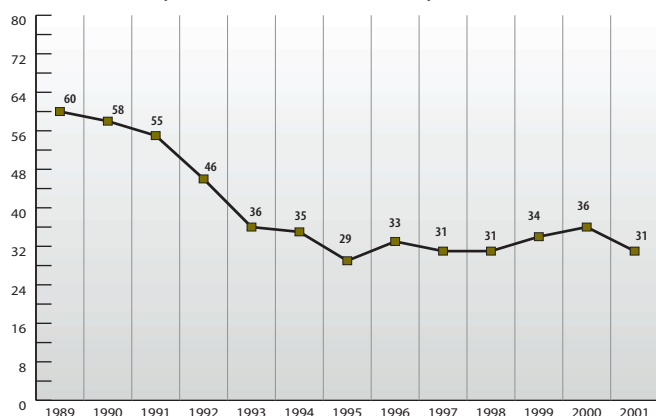
Cuba's productivity, meanwhile, lagged far behind that of most competitors. Crop yields in Brazil, China, Thailand, India, and Australia, for example, were more than double that of Cuba.

What if Cuba were to export again to the United States? Even under the most optimistic scenario where U.S.-Cuba relations would improve and trade relations would be restored, there is no prospect that large-scale United States imports could revive Cuba's sugar sector.

The U.S. sugar market is highly controlled and distorted by government intervention. The domestic price is artificially maintained, currently at a level more than three times the world price, and quotas determine how much the United States imports from individual countries.

Before Cuba's revolution, United States purchased the lion's share of Cuba's sugar crop. In 1959, the U.S. sugar quota for Cuba was 2.9 million tons – an amount roughly equal to today's total production in Cuba. If the United States were to restore only one fourth of Cuba's 1959 quota, it would displace all U.S. sugar imports from Latin America and the Caribbean. The 2004 U.S. sugar quota for the entire world is 1.12 million tons.

Cuban cane production, metric tons per hectare



Source: Anuario Estadístico de Cuba 2001, Oficina Nacional de Estadísticas.



*Surrounding each sugar mill is a batey, a small town where workers live and social services are provided.*

With that hypothetical avenue cut off, Cuba's sugar industry was bound by a stark fact: to regain profitability in an environment of high oil prices and low sugar prices, it would need to increase its efficiency quickly and dramatically – and that result could not come about without large amounts of capital invested to modernize every stage of the sugar production process.

However, Cuba opted to invest elsewhere. Throughout the 1990's, with sugar prices declining year by year, tourism and other sectors had a higher claim on Cuba's scarce investment capital. The sugar industry would receive not new money, but a new direction.

## 2002: THE BITTER DECISION

"The question was posed," a Cuban economist said in 2001, "Does it make sense for Cuba to continue as a major sugar producer given the world price of sugar and the cost of capital?"

The question was answered on April 10, 2002, when an executive order directed the sugar ministry to cut cane production and milling capacity approximately in half, to increase production of derivatives, and to achieve greater efficiency, from the ministry itself to every unit of production.

At its root, the decision was simple: "We had to act or face ruin," Fidel Castro told a gathering of sugar workers in May 2002, pointing out that \$200 million would be saved in the first year of downsizing. In February 2003 he told a group of visiting Americans that the decision is in keeping with Cuba's policy of not protecting industries from foreign competition. "It's crazy to make an effort to produce something that costs more to make than to import," he said. He called Cuba's action a "rationalization" of the industry.

In fact, the 2002 "rationalization" culminated a process that was already under way. The appointment in 1998 of a new sugar minister, Ulises Rosales del Toro, led to a 73 percent reduction in the ministry's staff from 1300 to fewer than 400. Regional offices of the ministry cut half their personnel. The structure of 289 enterprises belonging to the ministry was streamlined, leaving 192 in operation. Enterprises were encouraged to enter a reform process that was being conducted in many sectors, forcing the enterprises to forgo subsidies, adopt standard accounting procedures, pay workers according to results, and achieve profitability.

The new minister also idled inefficient sugar mills; more than 40 were taken out of production between 1998 and 2002. The 2002 decision led to the definitive closure of 70 mills, which are now being dismantled. Seventy-one continue to produce sugar and 14 are producing honey.

In addition to closing inefficient mills, a massive amount of land is being taken out of sugar production. Cane fields were ranked according to their soil quality and productive potential, and only the most productive will remain planted with cane. Ministry officials hope this process will help Cuba to raise its current average yield of 32 tons of cane per hectare to 54 tons per hectare.

In terms of land area, 827,000 hectares will remain planted with sugar cane, and 1,378,000 hectares will be converted from sugar cane to produce other crops – more than the 967,000 hectares that are now used for all other crops combined.



The sugar ministry estimates that the restructured sector will produce enough sugar to cover Cuba's annual domestic consumption of 700,000 tons and have a maximum productive capacity of 4 million tons of sugar per year.

These momentous changes were explained exhaustively to sugar industry workers nationwide. The process began with a three-hour speech by President Castro to 10,000 workers on October 23, 2002. It continued with a series of assemblies across the country where officials discussed the changes and their impact with workers throughout the industry – a total of 7,850 assemblies were reported to have been held, often on several occasions in the same workplace, with a total of 942,000 participants.

A “programmatic document” prepared by the sugar ministry served as the basis of presentations at these workers’ assemblies.



*Organopónicos, the large organic garden microenterprises that are seen in cities and towns across Cuba, can also be seen in the small towns around sugar mills. Here, an organopónico in the shadow of the Eduardo García Lavandero sugar mill employs a dozen workers that worked in that mill before its dismantling began. In the background is the house of the former owner, Julio Lobo, a man who owned 13 sugar mills in Cuba.*

#### This document:

- begins by tracing the history of sugar production in Cuba from the colonial era through the 20<sup>th</sup> century.
- explains the trading arrangement with the Soviet bloc that allowed Cuba to sell its sugar at preferential prices, and the shock Cuba suffered when it was forced onto the international market – because of fluctuating oil and sugar prices, a 100,000-ton increase in exports in 2002 brought \$120 million less revenue than in 2001.
- explains that at six cents per pound, “the current world market’s trash bin prices for sugar have reached the point where sugar production brings no real profit, no real income for the country; rather, it implies losses.”
- states that in the first half of the 20<sup>th</sup> century, sugar demand grew an average of five percent per year; in the second half it grew at one percent, “however until 1991 Cuba did not suffer the consequences of this because of its relations with the socialist camp.”
- describes how other developing countries have reduced sugar production, noting that in other countries the workers “have personally suffered the consequences of this dramatic situation, left completely to their own devices, as is usual in capitalist countries.” (This theme is repeated frequently in state media; in an October 2003 article, the labor newspaper *Trabajadores* said that in other countries when there are plant closures and layoffs, “some receive severance pay, and after that they have to solve their own problems – that’s all.”)
- says that while the Cuban government subsidizes electricity and other basic needs, “We cannot allow ourselves the luxury that rich countries have, of subsidizing their producers so they can be competitive in world markets.”
- says that the goal of the restructured sector will be to “accelerate net income through a process of deep cost reduction” – a process in which no worker will be abandoned, all will have their salaries guaranteed, all have the option to return to school for new degrees and training at full salary, and all services in the *bateyes*, the communities that surround sugar mills, will continue.

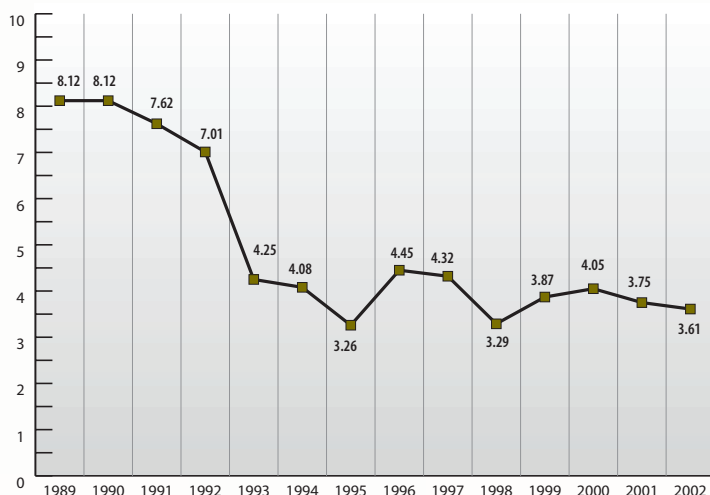
In late 2002, when sugar minister Rosales del Toro discussed these worker assemblies in the National Assembly, Cuba’s legislature, he said that the worker’s highest concern was for the continuity of services in their communities. The minister guaranteed that the services would not be reduced, although over time these services – from clinics and food service to funeral parlors – might be administered by an organization other than the sugar ministry.

## WHY DOWNSIZE CUBA'S SUGAR SECTOR?

“We are tailoring the shirt to the body we have,” said sugar minister Ulises R. The decision was long in coming, and it was clinched by international market conditions.

Cuba's production fell dramatically in the 1990's – absolutely, and relative to other producers.

Cuban sugar production (millions of metric tons)



Source: Cuban official data published by the National Statistical Office.

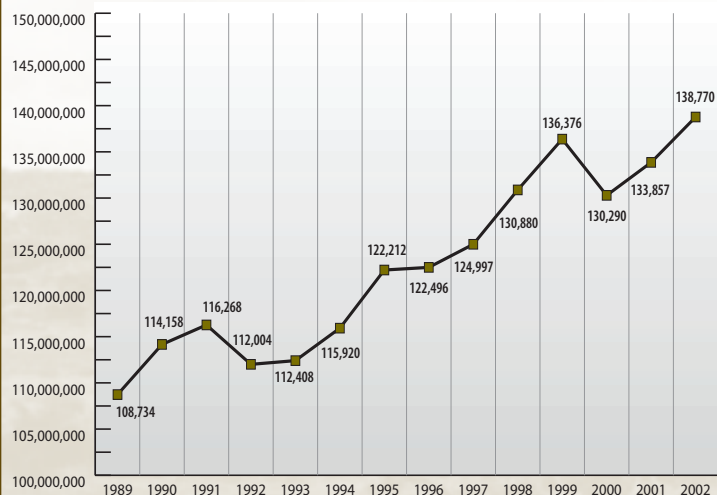
Top ten world sugar cane producers (metric tons)

1989		2002	
Brazil	252,290,000	Brazil	360,556,000
India	203,036,800	India	279,000,000
<b>Cuba</b>	<b>81,002,896</b>	China	80,278,000
China	48,794,704	Thailand	62,350,000
Mexico	43,910,480	Pakistan	48,041,600
Pakistan	36,975,696	Mexico	46,000,000
Thailand	36,668,000	Colombia	38,200,000
Australia	26,940,336	USA	32,596,960
Indonesia	26,812,320	Australia	32,260,000
USA	26,695,008	<b>Cuba</b>	<b>32,100,000</b>

Source: Major Food and Agricultural Commodities and Producers, UN Food and Agricultural Organization.

As world production increased...

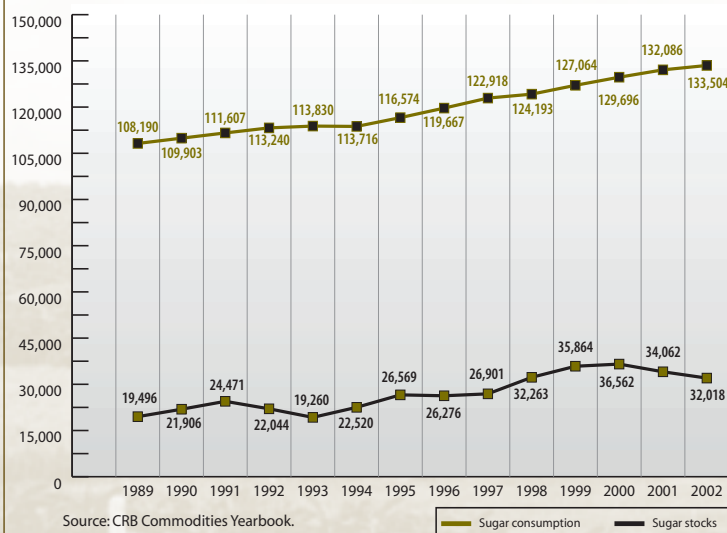
World Sugar Production (thousands of metric tons)



Source: CRB Commodities Yearbook, John Wiley & Sons, Inc.

...it found a saturated market.

World consumption and stocks of sugar



Source: CRB Commodities Yearbook.

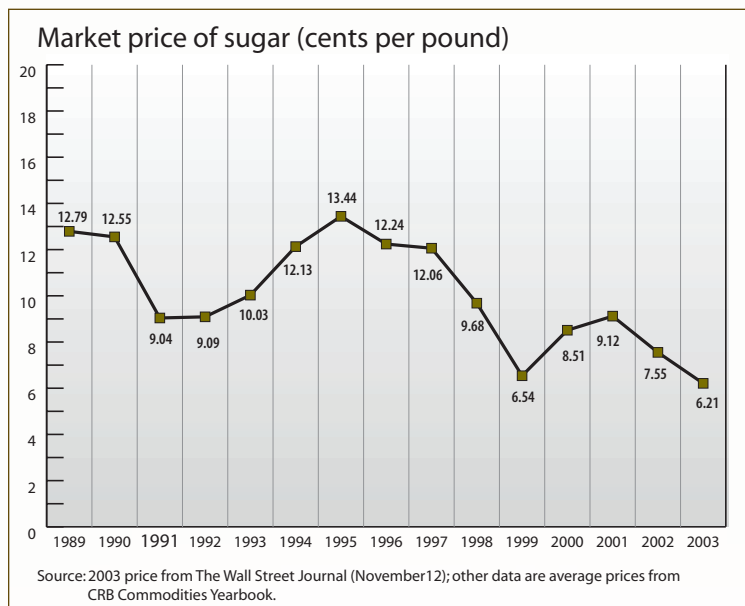
During the 1990's sugar consumption grew, but stocks of surplus sugar grew faster. The stocks data represent each year's excess of world production over world consumption.



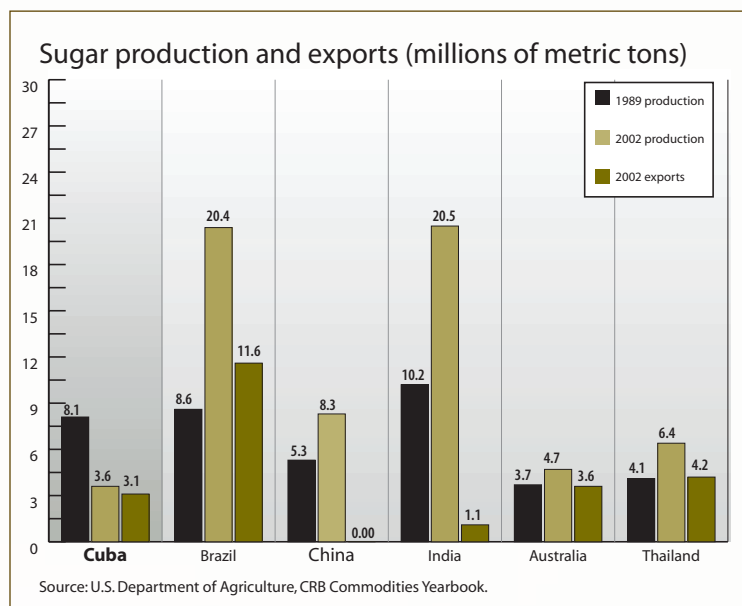
## WORLD MARKETS PROVIDE THE ANSWER.

osales del Toro in August 2002 of Cuba's decision to downsize its sugar sector.  
ons that were working decisively to Cuba's disadvantage, as the following data explain.

And there were other challenges: falling prices...

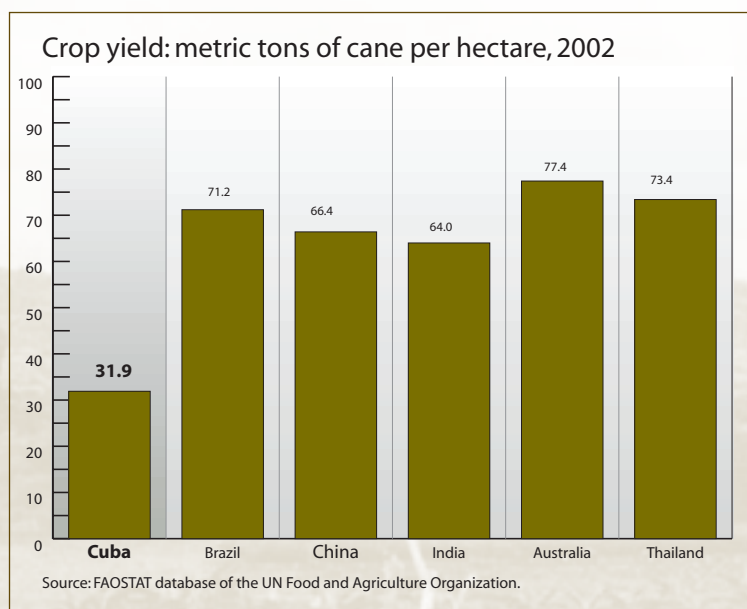


...competition from strong new producers...



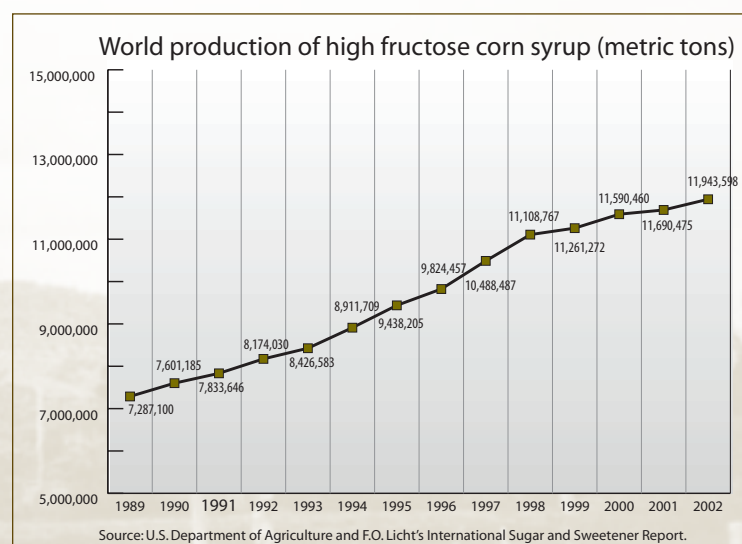
New producers were coming on line with surging production, using modern milling technology that refines cane into sugar more efficiently than Cuba's older equipment. Some, such as China and India, produce mainly for the domestic market, while Brazil is a new export powerhouse.

...Cuba's relatively low productivity...



Cuba produced more than 50 tons of cane per hectare in the 1980's, but a return to that level would still not match its competitors' productivity today.

...and new sweeteners displacing sugar.



Production of high fructose corn syrup, a major sugar competitor, continued to grow in the 1990's at more than twice the pace of sugar production. In the U.S. food and beverage market in 2002, deliveries of sugar and corn syrup were roughly equal at about nine million tons – but corn syrup deliveries were 36 percent higher than a decade earlier, sugar's only 11 percent. From the point of view of exporters like Cuba, corn-based sweeteners pose special competitive difficulties because in industrialized countries, the grain that is their raw material is heavily subsidized.

## SUGAR TOURISM

In a small part of the sugar sector, Cuba is looking to build a stream of future revenues by living off the industry's past. Old sugar mills and the antique railroads that served them are being converted into museums and tourist attractions.

A sugar industry museum is being developed outside Havana, where 18<sup>th</sup> century artifacts and technology will be on display along with restored slave quarters, sugar fields, and equipment that will show visitors how sugar was extracted from cane and refined in past centuries. Six provinces have mills that have been restored for tourism purposes, including the old Hershey mill east of Havana (renamed the Camilo Cienfuegos mill after the revolutionary figure), where visitors see the mill, the company town – Sugar Town – where workers lived, and the restored Hershey Gardens. Hotels offer their visitors excursions to these historic sites.

Railroad enthusiasts are also attracted to Cuba to see the oldest rail network in Latin America, and to see locomotives that date from the 19<sup>th</sup> century, including some that were brought to Cuba after they were used in the construction of the Panama Canal. An annual steam engine festival attracts thousands of visitors from Europe, Canada, and even the United States, who visit museums, ride trains pulled by antique steam locomotives, and attend conferences.

Taken together, the changes in the sugar industry represent “the most far-reaching economic transformation in the last 100 years,” according to one Cuban scholar. The decision was taken for liquidity and foreign exchange reasons, and a restructured industry could lead to profitability. Greater capacity to produce derivatives, one economist noted, would allow Cuba to calibrate its production to world market trends, increasing sugar output when prices are high, and producing more alcohol for use as a fuel additive when sugar prices are low. “But you cannot confuse this strategy with the idea of putting sugar back as the cornerstone of the Cuban economy,” he said. “It’s not like oil in Venezuela.”

## DISMANTLING SUGAR MILLS

Throughout the Cuban countryside, sugar mills can be noticed from a distance by their tall smokestacks that stand out high above the seas of sugar cane fields. Closer, the mill itself looms on the horizon, a large industrial building. Approaching the mill, one sees that it is enveloped by a settlement, the *batey*, a collection of housing, administrative buildings, clinics and other installations that are the home to a community of a few thousand workers and their families.

The mills and *bateyes* have been modernized over time, but many are centuries old, especially in western Cuba where sugar production prospered most due to the introduction of railroads in 1837.

Asked when a mill in Artemisa was built – a building whose construction materials and equipment were clearly from the 20<sup>th</sup> century – its director responded, “Around 1700.” His reference to the original settlement rather than the mill now standing reveals the deep ties between the industry, its people, and Cuba’s distant past.

The *bateyes*, the Cuban sugar industry’s version of the rural company town, are the places that are bearing the brunt of the sugar industry’s restructuring.

Some mills remain in operation, undergoing modernization and adjusting to the new land use patterns.

Where the mills are closing, the workers are making a difficult transition as they watch the mill at the center of their community slowly be dismantled, until only the smoke-stack will remain.

The Julio Reyes mill near the town of Jovellanos in Matanzas province is one such mill; it was built a century ago, was idled in 1995, and is now being taken apart, its useable parts being sold to mills still in operation. One worker, a former boiler operator at the mill, now spends half his time working on the dismantlement, the other half studying to be an agronomist. He retains his full salary of 398 pesos per month.

“People took it very hard” when the mill’s closure was announced, he said. “They told us that with the situation in the world and in the country, we couldn’t make money anymore, but if sugar prices rise maybe we can build a new one.”

Some of the workers in the *batey* have always been engaged in food production, he said. “It used to be just food for our own consumption, but now we sell to the farmers markets,” he explained. The workers are producing cattle, fruits, lettuce, beets, tomatoes, root vegetables, and other crops. He is studying math, science, history, and computers, raising his educational level from 10<sup>th</sup> grade to 12<sup>th</sup> grade. He is not sure how or where he will work as an agronomist, he said, but “that’s what surrounds me – I can’t do aviation.”

A second worker at the mill is studying full time, at full salary, and expects to have an accounting degree in three years. But he too is uncertain where he will be placed once he

has his degree. "It's sad to see all this go," he said, looking at the half-dismantled mill. "People had love for their work here, and they are industrial workers, not farmers."

Nearby, the Jaime Lopez mill, built in 1823, is also being dismantled. At its entrance is a sign announcing "Five Basic Tasks: Organize the workforce, Budget expenses, Pay according to results, Training, and Learn new food production. A worker who operated the machine that condensed the raw sugar cane juice has opted not to enter retraining programs. "I'm not going to go back to study," he said, "I'm 43 years old, so I went to work with a farmer nearby and I work for him. I'm not paid as well, but I survive."



*Roaming behind any dismantled sugar mill in the Cuban countryside, one comes across antique steam locomotives that transported cane to the mills and sugar to port.*

Southeast of Havana near the town of Artemisa, the Eduardo Garcia Lavandero mill is also being dismantled. Raul Suarez Garcia, its director, says that five cycles of meetings were held with the workers to explain the changes in the industry and in their community of 3,000. "Here, people worried about services continuing – ambulances, water, electricity, transportation...we explained that all those services would continue as before."

Garcia explains that 35 of the railroad workers now work at a nearby mill; 455 technicians also migrated to other mills; 12 work in the *organoponico*, the community's large organic garden. The school has more than 400 workers enrolled full-time or part-time.

Garcia now runs a new agricultural and livestock enterprise, created in January 2003, that is attempting to re-employ mill workers and farm cooperative members who are no longer growing sugar cane. "We started with the mentality of cane growers," he said. "We didn't know other crops, but every day we are getting better, we are studying, and we can learn the new techniques because we have no illiterates here." He said he and his colleagues are discovering that "we have to dedicate more time to other crops than to sugar cane."

However, the enterprise is off to a good start. Its various units produce fruits, vegetables, poultry, and pork, and some of these products are being sold in hard currency to state enterprises that supply the tourism industry. "We are going as fast as possible" in the development of all their enterprises, Garcia explained, "so people don't have to suffer too much."

In a building in the shadow of the partially dismantled sugar mill, a new school was established in October 2002 for the more than 400 workers who opted to improve their education. Some are taking general courses that provide the foundation later to study accounting, agronomy, information technology, mechanics, and other specialties. A teacher at the school says that while all are entitled to stay in school until they earn a university degree, most want to be certified as a "mid-level technician" in their field – a degree that implies about four years of study after ninth grade.

This education program, officials say, reaches every sugar industry worker affected adversely by the restructuring – and every official discussion of the program reiterates that the workers retain their full salary while in school. "As an economist, I see it as an investment," a sugar ministry official says. "They were being paid for doing something that was losing money, and now they are doing something more useful." According to sugar ministry surveys of more than 213,000 workers whose mills or farms are being idled by the industry's restructuring, 58 percent of the workers are remaining in the ministry's enterprises, 20 percent are studying full-time, ten percent are moving into non-sugar agricultural production, eight percent are retiring or leaving for other fields, and four percent are working full-time dismantling sugar mills.





## THE RESTRUCTURED INDUSTRY: A WORK IN PROGRESS

How is the restructured industry progressing? After one season, the changes are only beginning to bear fruit, and in critical areas the industry is still taking one step back before it takes two steps forward.

**Sugar production.** Sugar output is down in 2003; estimates of the first year's sugar production after restructuring are about 2.1 million tons, compared to 3.6 million tons in 2002.

Cuban officials attribute this result to three factors: lack of financing that delayed the purchase and delivery of herbicide and fertilizer, organizational difficulties related to the new patterns of land use and mill operation, and excessive rain.

Independent observers fault the centralized, state-directed nature of the sugar industry and a lack of sufficient monetary incentives for sugar workers.

However, officials also point to signs of increased productivity. In 2003, the number of UBPC cooperatives that attained the goal of producing 54 tons of cane per hectare nearly quadrupled from the year before; 250 of the 708 UBPC's reached that goal, as compared to 64 in 2002.

However one explains 2003 harvest, it is clear that the 2004 harvest, which officials are naming "the harvest of restructuring," will be a major benchmark for the reshaped industry. If the ministry has correctly chosen the least productive lands and mills for withdrawal from production, and if organizational difficulties are overcome, one can expect improvements in output, especially if incentive payments and other management improvements become more widespread. Reduced production is yielding cash savings – but if Cuba's foreign exchange crunch prevents timely spending on critical inputs, production levels may not recover.

**New agricultural production.** The success of agricultural production managed by the sugar ministry also remains to be seen. "We are a second ministry of agriculture," a sugar ministry official says, referring to the challenge of managing new production on more than 1.3 million hectares of land that once grew sugar cane. Nearly half this land will be devoted to forestry, the rest to crops and a small portion to aquaculture. The sugar ministry will manage this production, officials say, because they want to carry their workforce through to new livelihoods rather than abandon sugar workers and turn them over to a new organization.

**Derivatives.** Cuba has used sugar cane to make products other than sugar for decades, but production fell dramatically in the 1990's as fuel costs increased and the general effects of the economic crisis hit this sector. Production of honey, fiberboard, and pulp for paper fell more than 60 percent in the decade, while alcohol production increased modestly.

In the industry's new strategy, with Cuba paying world market prices for energy, a selective approach is being taken. The industry is emphasizing the products where energy and other production costs are affordable; where it is profitable to substitute domestic products for imports; where there is a hard currency market for the product; or where foreign investment might be attracted to modernize production facilities and to link Cuba to new export markets.

Energy production is an important part of this strategy. Sugar production generates massive amounts of bagasse, the waste product from crushed sugar cane that can be burned to produce energy. The goal is to turn each year's sugar cane processing from a



Alongside a research center in Quivicán where Cuban scientists develop products derived from sugar cane material, a Cuban-Italian joint venture produces adhesive tapes and paper products for sale in Cuba and abroad.

net drain on the country's electricity supply to a net contributor. Improvements are being achieved as modern turbine generators are installed in sugar mills. Eighty of these generators are on line now, and more are being installed for the 2004 harvest. In 2003, seven mills reportedly achieved self-sufficiency in energy.

The sugar ministry is actively seeking foreign investors to boost production of derivatives, and officials use Cuban workers' educational level and the nation's scientific infrastructure, low production costs, location, and the markets' growth potential as selling points. They say they see substantial interest among potential partners. "There are more foreign capitalists that come to make offers than those we seek out," claims one official.

Targets for new investment include fruit and vegetable production for export, alcohol distilling, forestry, and energy generation.

Ten joint ventures have been formed with foreign investors (where the foreign investor owns part of the business and shares profits), and 15 cooperative production agreements have been reached (where the foreign partner contracts to assist production and earns a share of revenues, without ownership). The joint ventures include alcohol production (Spain), chemicals (Mexico), and specialty papers (Italy).



*At the Eduardo García Lavandero sugar mill, a former mill technician is taking courses in computing.*

An example of a joint venture can be found at Quivicán in Havana province, where a Cuban-Italian joint venture's production facility is located alongside one of four of the ministry's research institutes.

The joint venture was formed in 1997. Now in its first phase, it has \$2 million in new equipment for cutting and packaging adhesive tapes and specialized papers for sale in Cuba and for export, and expects to reach \$3 million in sales in 2003. The research center has used material derived from sugar cane waste to develop specialty papers, water filters, animal feeds, and ingredients for veterinary medicines that are produced and sold by sugar ministry enterprises. One product about to go to market is a water filter unit that can be fitted onto home plumbing and will sell for about five dollars. The institute also performs contract research on a consulting basis for the food, pharmaceutical, and other industries.

## THE REVAMPED SUGAR SECTOR IN CUBA'S FUTURE

While the restructuring of the Cuban sugar sector is at an early stage, some implications of the restructuring are clear, and some large issues remain to be resolved.

First, it is clear that sugar's pre-eminent position in Cuba's economy has been broken. Sugar will be an important factor, but no longer a determining factor in Cuba's economy, and can no longer be used as a barometer for the island's economic health.

There is a historical irony in this development. During the revolutionary conflict, Fidel Castro criticized the "monoculture" that sugar represented for Cuba – an industry that dominated the Cuban economy and made it vulnerable to international market swings, was itself dominated by foreign investors and owners, and caused workers to labor under allegedly unjust conditions.

Sugar production was thus de-emphasized during the early years of the revolutionary government, but with the Soviet bloc's preferential trade available to Cuba, policy shifted in 1969 to return sugar to its central position in the economy. Ironically, in the ensuing two decades the sector remained as dominant as





*In Havana province, workers from a dismantled sugar mill are raising chickens, rabbits, and pigs for their own consumption, and for sale in farmers markets and to state enterprises that supply hotels.*



ever. The Cuban saying, “Without sugar, there is no country,” was never as true as during the 1970’s and 1980’s under the socialist government.

Sugar’s reduced profile thus accomplishes an economic restructuring that was part of the revolution’s original political program. It was delayed by unusual international economic circumstances, and it was finally forced upon Cuba by the economic conditions of today.

Second, it seems clear that a reduced emphasis on sugar is healthy for Cuba’s economy. During the 1990’s, investments that could have gone to sugar were directed to tourism, nickel, energy production, biotechnology, pharmaceuticals, and infrastructure needs such as telecommunications. These investments have created a more diversified economy that capitalizes on Cuba’s natural resources and comparative advantages. With sugar prices remaining near six cents per pound, these were clearly sound investment decisions. In 2003, in spite of the lowest sugar harvest in seven decades, Cuba’s economy is registering modest positive growth led by a recovering tourist sector and very high nickel prices.

The outcome of other issues related to sugar’s restructuring are less clear.

Productivity is a major question mark. Cuba’s sugar production remains concentrated in the more collectivized units of Cuban agricultural production, the UBPC cooperatives. Savings have been realized by taking the least productive lands out of sugar, and the “industrial” part of the sector – the mills – will benefit from the fact that fewer mills will be competing for scarce resources. But state management of this sector of the economy will be challenged to develop management and incentive schemes that will bring production levels up to the industry’s new targets.

Employment is another major challenge. The employment effects of sugar’s downsizing have been cushioned by the fact that so many idled workers have returned to school. At least for a few years, this cushion will continue to function. But workers will need jobs upon graduation, and scores of communities need to be sustained after losing the industry and organization that has been at their center for centuries. The economy will also feel a slowdown in the industries that provide goods and services to the sugar sector.

Finally, the impact on Cuban agriculture remains to be seen. The sugar ministry will now manage non-sugar agricultural lands that are larger than the lands devoted to all non-sugar agriculture today. In time, this could result in vastly increased food production for domestic consumption and export, and it could lead to development of a large forestry sector and the positive ecological change that large-scale reforestation implies. In theory, it could lead to models of ownership, organization, and production that differ from those of the agriculture ministry today.

The jury is still out on these questions, but it is clear that Cuba has moved decisively to restructure a formerly protected industry, it has done so without causing social unrest to date, and Cuba’s economy will feel the effects of this decision for years to come.



## FURTHER READING

*Cuba's Sugar Industry*, by José Alvarez and Lázaro Peña Castellanos, University Press of Florida, 2001.

*The Cuban Way: Capitalism, Communism and Confrontation*, by Ana Julia Jatar-Hausmann, Kumarian Press, 1999.

An ample listing of Cuban websites with Cuban media, speeches, announcements, decrees, other official information, and news on Cuba's economy, is found at [www.cubaweb.cu](http://www.cubaweb.cu).

Papers on sugar and many other Cuba issues presented at each year's meeting of the Association for the Study of the Cuban Economy are found at the University of Texas website: <http://lanic.utexas.edu/la/cb/cuba/asce/>

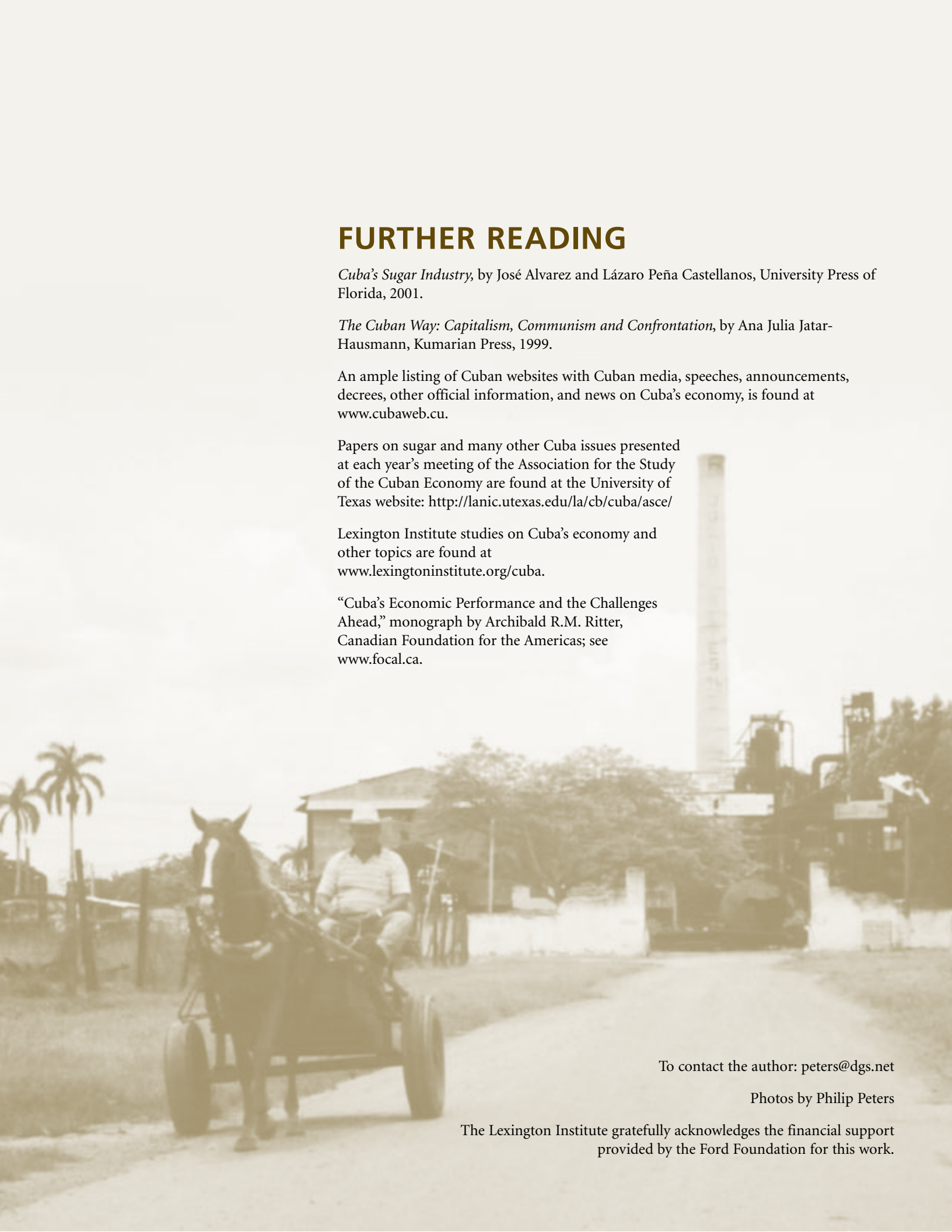
Lexington Institute studies on Cuba's economy and other topics are found at [www.lexingtoninstitute.org/cuba](http://www.lexingtoninstitute.org/cuba).

"Cuba's Economic Performance and the Challenges Ahead," monograph by Archibald R.M. Ritter, Canadian Foundation for the Americas; see [www.focal.ca](http://www.focal.ca).

To contact the author: [peters@dgs.net](mailto:peters@dgs.net)

Photos by Philip Peters

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1600 Wilson Boulevard, Suite 900  
Arlington, Virginia 22209  
703-522-5828 tel  
703-522-5837 fax  
[www.lexingtoninstitute.org](http://www.lexingtoninstitute.org)  
[mail@lexingtoninstitute.org](mailto:mail@lexingtoninstitute.org)