CUBA'S NON-SUGAR AGRICULTURE: CURRENT SITUATION AND PROSPECTS[1]

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OVERVIEW[2]

The International Agricultural Trade and Development Center at the University of Florida has been conducting research on Cuba's agricultural sector since 1992 with the financial support of the John D. and Catherine T. MacArthur Foundation. I would like to point out that our research has never been intended to suggest any change in U.S. policy. Rather, it has been designed to provide objective and current data and information on Cuban agriculture for Federal and State legislators, government agencies, private sector agribusiness firms, consumer groups and others to incorporate into the discussion and debate regarding the embargo.

The question then may arise, why should we be interested in Cuban agriculture? There is a tremendous similarity between Cuba's traditional agricultural production patterns and those of Florida and there was a great deal of agricultural trade between the U.S. and Cuba prior to the embargo. On the basis of this information, it becomes very clear that a resumption of trade between the U.S. and Cuba, whenever it occurs, will have important implications for Florida and for U.S. agriculture.

As most of you know, the most recent year for which the Cuban government released its official, detailed statistical yearbook was 1989. To obtain more current information we have been collaborating with the Centro de Investigaciones de la Economía Internacional (CIEI) at the University of Havana. For this Roundtable Session, we have brought together a group of commodity specialists from our faculty at the University of Florida who have been working with our collaborators at CIEI on the project and have traveled to Cuba on a number of occasions studying the citrus, vegetable, tropical fruit, rice and fisheries sub-sectors.

Prior to these commodity presentations, I want to take a few moments to present a bit of background information on Cuba's agricultural sector. The agricultural sector has historically been a fundamentally important segment of the Cuban economy. For the past 40 years, agriculture has consistently represented over two-thirds of Cuba's export earnings. During the 1980s, that figure actually averaged over 80 percent. Despite the dramatic decline in Cuba's export earnings since 1989, agriculture continues to represent over 75 percent of the country's net export earnings.

These statistics may appear to contradict what you might hear about foreign currency earnings from the tourist sector. However, the problem with tourism for Cuba is that, for every dollar that tourism brings in, an estimated 75 to 80 cents go out of the country

1. Summary of a roundtable session organized and chaired by William A. Messina, Jr., with participation by José Alvarez, Thomas H. Spreen, Anne E. Moseley, and Charles M. Adams. Contributions by individual participants are identified in the paper.

2. Remarks by William A. Messina, Jr.

again to purchase imported supplies and products. My purpose here is not to trivialize the importance of the tourist sector, because I believe it will continue to grow in importance to Cuba. Rather, the point I am trying to make is that agriculture has been, and will continue to be, an important sector of the Cuban economy for the foreseeable future.

I also believe that agriculture holds a unique position in Cuba's economy today because policy changes in this sector are leading the way in terms of movement toward a market economy. Here I am speaking of the breaking up of state farms into Basic Units of Cooperative Production (UBPCs) and the opening of farmers markets. Another important policy change that is not unique to agriculture is the allowance of foreign investment into the Cuban economy.

We do not have time to present information on these subjects in this session. However, for those of you who might be interested in more detail on these topics I will unabashedly recommend a paper being presented in this conference on foreign investment in Cuba's agricultural sector by Jim Ross of our faculty,[3] and a paper on the UBPCs and the agricultural markets that José Alvarez and I will also be presenting here.[4] With this introduction, I would like to turn like to the commodity presentations.

THE CITRUS INDUSTRY IN CUBA[5]

After the Castro regime took power in 1959, citrus was designated as an agricultural crop with export potential. The production area expanded rapidly, reaching 300,000 acres by the 1974-75 season. Since the dissolution of the Soviet Bloc in 1989, however, the production area has contracted. The production area devoted to citrus in the 1994-95 season (called the "net tree acres") is estimated at approximately 238,000 acres.

Oranges are the most important citrus crop produced in Cuba. In the 1992-93 season, approximately 350,000 metric tons (MT) of oranges were produced. Over 64 percent of the orange crop was utilized in the fresh domestic market, with nearly 13 percent sent to the fresh export market, and the remaining 23 percent processed into orange juice. Nearly all orange juice production is exported. At this level of production, Cuba is a small supplier of both fresh and processed orange products as total world production of oranges is approximately 50 million MT.

The second most important citrus crop in Cuba is grapefruit. In the 1992-93 season, total production was 250,000 MT; 34 percent of the grapefruit crop was utilized in the fresh domestic market, 21 percent was sent to the fresh export market, and 44 percent was processed. Unlike oranges, Cuba has been a significant force in the world grapefruit market. Before the decline in production area, Cuba and Israel followed the United States as the leading grapefruit production areas.

Cuba is a small producer of other citrus fruits such as limes, sour oranges, and tangerines. These varieties are mostly utilized in the domestic market.

In an attempt to stem the decline in citrus production, which fell from 1 million MT in 1989 to 620,000 MT in 1993, the Cuban government has instituted several changes. The first major change was to encourage foreign companies to enter into marketing agreements with Cuban state farms. Four companies entered the citrus business in Cuba over the 1991-93 period.

- BM Corporation, an Israeli company, entered into a foreign economic association with Cuba's largest citrus state farm at Jagüey Grande, in the province of Matanzas.
- Pole, S.A., a Chilean company, established an economic association at the Isle of Youth, the major grapefruit production area.

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3. See James E. Ross, "Agribusiness Investment in Cuba in the Post-Embargo Period" in this volume.

4. José Alvarez and William A. Messina, Jr., "Cuba's New Agricultural Markets: Antecedents, Organization, Early Performance, and Prospects" in this volume.

5. Remarks by Thomas H. Spreen.

- Lola Fruit, S.A., a Greek company, formed a joint venture with the state farm located near Ciego de Avila.
- I.N.G., another Chilean company, is involved in an economic association dealing in juice products produced by the processing plant located at Jagüey Grande.

The fresh fruit companies are marketing Cuban citrus in Europe and Latin America. The juice company is marketing juice products in the Caribbean region.

The other recent development is the formation of UBPCs. In selected areas, the state farms have been divided into several smaller farms or UBPCs. In the case of citrus, some equipment has been sold to the UBPCs financed by loans from the government. Each UBPC is managed autonomously with regard to grove care-taking. The UBPC is obligated to purchase its inputs from the state and sell a portion of its output to the state. The basic idea behind the UBPC is to decentralize decision-making and create smaller, more manageable units. To export fruit, the UBPC must deal with a state company or one of the joint ventures.

At this time, the Cuban government has not released information on the 1994-95 or 1995-96 seasons. Unofficial reports are that the decline in citrus production has stopped, but a dramatic turn-around in output has not occurred. Given the recent expansion of citrus production in Florida—which competes with Cuba and Israel in the European market—it will be difficult for Cuba to successfully gain market share.

THE CUBAN VEGETABLE AND TROPICAL FRUIT INDUSTRIES[6]

Vegetables

Cuba produces the following vegetable crops: calabaza, tomato, cucumber, onion, garlic, sweet pepper, melon, cabbage, and a wide variety of other vegetables grown in smaller quantities. Approximately 25 percent of Cuban vegetables are produced in La Havana province and Pinar del Río province supplies approximately 14 percent. About 382,000 acres of vegetables were planted in Cuba in 1992, with the largest crop acreage devoted to calabaza (110,000 acres), tomato (90,000 acres), cucumber (58,000 acres), and melon (21,000 acres). Average annual vegetable production in the late 1980s was 572,000 tons. During the 1990s, annual vegetable production declined, with 392,000 tons produced in 1993—approximately 30 percent less than average annual production in the late 1980s.

In 1989, Cuba had almost twice as much tomato and cucumber acreage as Florida. Cuba had 105,000 acres while Florida had only 62,500 acres of tomatoes and Cuban cucumber acreage was approximately 34,000 acres compared to less than 18,000 acres in Florida. With respect to crop yields, Cuban tomato yields decreased approximately 20 percent between 1975 and 1989, but Florida's tomato yields increased approximately 15 percent over the same time period.

Tuber and Root Crops

The tuber and root crops produced in Cuba include cassava, boniato, potato, malanga, and tropical yam. Approximately 490,000 acres of tuber and root crops were planted in 1992. This acreage was primarily devoted to cassava (260,000 acres), boniato (161,000 acres), potato (37,000 acres), and malanga (24,000 acres). Production of these crops steadily increased, more than doubling between 1975 and 1981, but production from 1982 through 1992 was relatively stable.

For purposes of comparison, boniato acreage in Cuba was approximately 131,000 acres in 1989 while boniato acreage in Florida totaled approximately 6,000 acres. Cuban malanga acreage in 1989 was 31,000 acres compared to approximately 5,100 acres in Florida. Although Cuba had significantly more boniato and malanga acreage, Cuban crop yields were generally much lower than Florida's yields. Boniato yields during the 1980s in Cuba were from two to four times less than Florida's yields. Cuban malanga yields during the 1980s were at times as

6. Remarks by Anne E. Moseley.

high as Florida's, but generally were about half as large.

Since the late 1980s, usage of fertilizers and other agricultural inputs has been changing. While certain crop yields have historically been lower in Cuba than in South Florida, Cuban producers now appear to be making efforts to increase productivity and yields, despite limited quantities of agricultural inputs.

Tropical Fruit

Cuban tropical fruit crops include mango, guava, papaya, pineapple, and coconut. For statistical purposes, bananas are a separate category and include both sweet bananas and plantains. Tropical fruit acreage in 1989 totaled approximately 220,000 acres, including 118,000 acres of papaya and 32,000 acres of pineapple. By 1992, however, the tropical fruit industry had virtually disappeared. Only 14,000 acres of tropical fruit crops, of which 9,800 acres were papayas, existed in 1992.

Tropical fruit production in 1975 totaled 138,000 tons and production peaked in 1985 at 240,000 tons. By 1992, however, tropical fruit production had fallen to only 68,000 tons. Tropical fruit yields also declined over time. Mango yields decreased by more than 20 percent between 1975 and 1992. During the same period, guava yields fell about 35 percent, and papaya yields were decreased by half.

Unlike other tropical fruit crops, banana acreage increased between 1989 and 1992. Total banana acreage—for both sweet bananas and plantains—increased from 106,000 acres in 1989 to 140,000 acres in 1992. Banana acreage consisted primarily of plantain plantings (73,000 acres in 1989 and 117,000 acres in 1992). Although acreage increased between 1989 and 1992, banana yields declined. Sweet banana yields decreased by about 9 percent while plantain yields decreased by about 20 percent.

Investment

The 1989 Food Program focused on banana, tuber, and root and vegetable crops but did not address tropical fruit, which has not been targeted by any specific development programs. As part of the Program, investments were made in irrigation equipment to be used in vegetable and tuber and root crops. These investments primarily included center pivot and semi-stationary irrigation machinery. Since the Program, investments have also been made in micro-jet irrigation equipment for banana production.

With the exception of reduced fertilizer deliveries between 1991 and 1993, the last three decades in Cuban agriculture have been characterized by intensive input use, that is, high availability and usage of tractors and high fertilizer usage. While certain crop yields have historically been lower in Cuba than in South Florida, Cuban producers now appear to be making efforts to increase productivity and yield despite limited quantities of agricultural inputs. The formation of agricultural markets has created a favorable environment for increased productivity, and changes in the structure of agriculture appear to be affecting farmers' incentives in a positive way.

THE CUBAN COMMERCIAL FISHING INDUSTRY[7]

Prior to the Revolution, the commercial fishing industry in Cuba was characterized by a fleet of small boats and vessels that plied the nearshore waters. These craft, which were typically low capacity and technically unsophisticated, primarily targeted a complement of reeffish, spiny lobster, sponge, and a few pelagic finfish species. The landings were handled by small-scale processing facilities and were then primarily directed into the local tourist and domestic markets. Following the Revolution, much attention was given to further development of the commercial fishing fleet. A viable, modern Cuban fishing fleet would not only provide a badly needed source of domestic protein and export revenue, but would also enhance coastal surveillance capabilities, provide training opportunities for naval recruits, and re-establish relations with neighboring Latin American nations via fishery access agreements. Modernization of the Cuban commercial fishing industry would, however, require considerable investment funds,

7. Remarks by Charles M. Adams.

which unfortunately were in short supply as a result of the then-recently imposed U.S. trade embargo.

The Soviet Union sought deepwater port access in the Westem Hemisphere. In an attempt to establish an alliance, the Cuban government agreed to provide such strategic access in return for Soviet financing of the much needed modernization of existing port facilities, the commercial fishing fleet, and the seafood processing sector, as well as access to relatively cheap fuel oil. During the next two decades, the modernization program entailed the construction of port facilities which not only satisfied the strategic needs of the Soviet Navy but also provided for expansion of the Cuban fishing fleet, the seafood processing sector, and various service-related industries. The Cuban fleet that emerged from this program was characterized by a level of technical sophistication and capacity unrivaled in Caribbean and Central American regions. Annual commercial fishery landings had averaged about 20,000 metric tons before the Revolution; by 1970, landings exceeded 100,000 metric tons per annum and by 1976 surpassed 200,000 metric tons.

While the pre-revolutionary fleet had primarily operated in near shore waters, the new Cuban fleet had four distinct components, each operating in a different region.

- The Flota Cubana de Pesca (FCP) was a distant-water fleet composed of purse seiners and mid-water trawlers that engaged in a different form of fishing activity than the Cuban fleet had traditionally done. The FCP developed into the largest distant-water fleet in all of Latin America and targeted low-valued species such as mackerels, herring, and hake. These fish, harvested from southern Atlantic and Pacific regions, were destined primarily for the domestic market

- The Flota Atunera de Cuba (FAC) was composed of tuna and swordfish longliners that operated in the Gulf of Mexico and Mid-Atlantic regions.

- The Flota del Golfo (FG) was composed of bottom-longliners and other hook and line vessels that targeted bottom fish and reeffish in the nearshore waters

- The Flota de Plataforma (FP) was comprised of nearshore vessels that possessed a wide variety of gear types, such as traps, hooks and lines, trawls, grappling hooks, and others. The FP targeted a complement of high-value, nearshore species, such as shrimp, spiny lobster, sponge, reeffish and crab.

The catch of the FCP (the fleet most highly subsidized by the Soviets) was primarily intended for domestic consumption, whereas the high-value catches of the FAC, FG, and FP were destined for lucrative export markets and represented an important source of revenue.

The development of the modern Cuban commercial fishing fleet was fraught with bad timing. This was particularly true for the FCP, FAC, and FG. Virtually all coastal nations in the Americas imposed 200-mile limits for their territorial waters in the late 1970s. The exclusive rights claimed by these coastal nations excluded all other countries from accessing the fisheries resources in their territorial seas. Cuba's fleets, especially the distant-water fleet, were designed to access these coastal resources throughout Latin America. Unfortunately, with only few exceptions, this access was soon denied throughout the region; thus, Cuba was left with a fleet of large, operationally expensive vessels that were only able to operate in the open-ocean regions where operating was even more costly. The FCP's operation was almost totally dependent on inexpensive Soviet fuel oil and additional subsidization. Soviet subsidization allowed the FCP to continue operations for a number of years, even as the aging and costly fleet continued, by necessity, to target low-value species for domestic markets, instead of concentrating on export revenue generation.

The breakup of the Soviet Union in 1992 and the subsequent end of subsidization has caused the virtual shutdown of the FCP and reduced operations of the FAC and FG. Cuban landings decreased from 230,000 metric tons in 1988 to 90,000 metric tons in 1993. The FP continues to operate in the nearshore waters and produces a wide variety of high-val-

ued species, the most important of which is spiny lobster. The distant-water trawlers of the FCP are currently tied up in Havana harbor because the Cubans have been unable to generate the revenue required for fuel oil and badly needed repairs. The Cuban government is attempting to develop joint-venture agreements or to find buyers for the aging vessels, many of which are now about 30 years old. A few FCP trawlers are currently targeting hake in Canadian waters under a longstanding fisheries agreement with Canada that provides access to the Cuban fleet; however, the much publicized state of overexploitation that exists in Canadian groundfish fisheries may jeopardize that agreement.

The state of flux in Cuba's commercial fishing fleet is reflected in the Cuban fisheries management infrastructure. The Fishing Industry Ministry (MIP) is currently undergoing substantial changes in its structure and its goals. Most strikingly, it is trying to dramatically reduce governmental oversight in the day-to-day management of fishing operations. The MIP formerly managed 42 companies or enterprises. Within the FP, all nearshore landings had to be sold through one of 18 enterprises. Two enterprises administered seafood processing, and one enterprise administered the FCP, FG, and FAC fleets. Other enterprises oversaw vessel construction, export operations (CARIBEX), training, research, and other activities. The MIP exercised tight controls over virtually all aspects of fishing operations.

The restructured MIP will contain only 21 associations (formerly enterprises) and FP will be administered through 15 provincial production associations. In many ways these associations resemble cooperatives. Each association will contain a number of vessels, with each vessel operating within a prescribed budget. Production over the predetermined vessel quota will generate a profit percentage in the form of monthly bonuses paid in dollars; thus, cost control is a new incentive. Captains, crew members, and mechanics are paid a salary which can now be augmented by bonuses awarded from profit-maximizing behavior. Conversely, poor production history can result in expulsion from the association. Six additional specialized associations will administer the following functions: export activities (ACEPEX); domestic sales (Pesca Caribe); inputs, supplies, and imports (APROPES); processing (INIPES); vessel construction (ARGUS); and offshore fleet operations (FCP, FAC, and FG combined).

The likely consequences of renewed trade between the United States and Cuba have sparked much interest. Those consequences could be substantial for Florida.

- The primary species that Cuba would probably export to Florida would be spiny lobster, pink shrimp, reeffish, and fresh tuna. Currently, most Cuban spiny lobster is exported to Japan and the European Union (EU). Cuba has received preferential duty treatment when accessing the EU market with spiny lobster (for example, lobster from the United States is assessed a 25 percent duty while lobster from Cuba is assessed a 5 percent duty). Given the close proximity of the U.S. market and the existing price structure, Cuba would likely attempt to divert significant quantities of lobster into Florida and the United States in general. Because of the existing U. S. dependence on imported spiny lobster, only a slight downward pressure on ex-vessel prices in Florida would result. Interestingly, 40 percent of Cuban spiny lobster landings occur during the Florida closed season. This may provide a window of opportunity for Cuban lobster.

- Imports from Cuba of reeffish, such as snapper and grouper, would likely generate downward pressure on ex-vessel prices for these species in Florida.

- The same would likely be true for imports of pink shrimp from Cuba. However, Cuban trawlers would be required to utilize turtle excluder devices (as mandated by the U.S. Endangered Species Act) to avoid a U.S. ban on imported shrimp.

- Cuba could likely find markets for fresh tuna, which has been characterized by a growing market in the United States for several years. The impact on ex-vessel tuna price is less clear.

It should be noted that Cuban seafood exporters will be required to meet the quality and safety standards established by the new FDA Hazardous Awareness at Critical Control Points (HACCP) program. This program is designed to improve the quality and safety of seafoods processed by the U.S. seafood industry. U.S. importers will be required to ensure that foreign exporters meet these new standards.