Brazil Agriculture: Winning the Great Farms Race

by John Freivalds

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Visitors to Brazil rarely get out to Brazil’s campo - the scene of many a “farms race.” Brazil has played a huge role in the farms race for world supremacy in rubber, cacao, sugar, coffee, and now corn, soybeans and oranges not to mention beef and poultry. It won some of the races, tied others, and on occasion has been routed.

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Global agribusiness features enough intrigue, spying, outright theft, adultery, natural disasters, plagues, geopolitical maneuvering and stupidity, and high stakes wheeling and dealing to rival nuclear espionage or the manhunt for Osama Bin Laden for thrills. In agribusiness - as in everything in life – actions lead to unintended consequences. The cast of characters in Brazil’s agricultural development includes names like Nixon, Rockefeller and the fictional Colombian coffee farmer Juan Valdez.

The Race for Rubber

I guess rubber was one of the first great farms races in Brazil. The entire world was jealous with envy at Brazil in the late 1800’s when the rubber boom was in full swing. Brazil was endowed with rubber trees that grew naturally in the Amazon jungle, giving it a natural monopoly as the world’s sole supplier. Now sleepy Manaus became the sixth richest city in the world and boasted electric lights, cobblestone streets, resplendent mansions, a lighthouse shipped brick by brick from England, prostitutes with diamond fillings in their teeth, and an opera house (still standing) that rivaled La Scala. Tens of thousands of paving stones surrounding the opera were replaced by rubber “bricks” worth the equivalent of US$10 apiece each so that carriages would be silent as they approached. I am all for this type of road building to quiet today’s streets in Brazil.

The Brazilian rubber barons and government jealously guarded this monopoly, forbidding the export of rubber plants. But some got out and found their way to Sri Lanka, Malaysia and Liberia - all of which became centers of production. You got to love the Encyclopedia Britannica’s sense of diplomacy in writing that a Henry Wickham (who became Sir Henry Wickham for his efforts) displayed much “enterprise” (translation: he stole and then smuggled) 70,000 rubber seeds from Brazil to England. This is considered one of the first acts of “biopiracy” in history.
In the 1920's Henry Ford tried to save Brazil’s rubber heritage through an ill-fated venture called Fordlândia. Ford bought one million hectares on the east bank of the Tapajós River, a tributary of the Amazon to plant rubber trees to offset high prices. Ford built a factory town but the economic depression in the US reduced the demand for rubber. During the Second World War synthetic rubber came into play, but there wasn’t enough rubber coming from Brazil to supply the Ford plant for a day. So Ford sold his Fordlândia for just US$250,000—well below the US $20 million he’d invested in the operation. Brazil is now a minor player in the rubber game.

Who’s Afraid of Juan Valdez?

Smuggled trees and synthetics took the wind out of the Brazilian rubber industry, but Brazil benefited from another case of biopiracy. Believe it or not, coffee is not native to Brazil. Originally from Ethiopia, the plant had found its way to Europe by the early 1700s. A French ship’s captain named De Clieu snuck some coffee plants out of France to Martinique and from there to French Guinea. Then enter Lt. Colonel Francisco de Melo Palheta, the man who planted the first coffee tree in Brazil. Here’s how the book The World of Caffeine describes what happened next: “Palheta was a Spanish officer sent from Brazil to French Guinea to arbitrate an international controversy. While there, he engaged in an affair with the governor’s wife, who, in recognition of his erotic favors, gave him a bouquet at his departure in which was concealed a cutting of a coffee tree.” Remember that the next time you have a cafèzinho!

With its low costs, Brazil is the world’s largest producer. But alas it is not the best coffee marketer. It lost that title to the Colombians and Madison Avenue. In the 1950’s Brazil had about one-quarter of the world market compared to Colombia’s one-tenth. The Colombian Coffee Federation, an association of growers, saw that Brazil was setting the price through its massive production. They had to come up with a “unique selling proposition” for their coffee. So in 1959, they looked not to their government, the World Trade Organization, or the UN but to Madison Avenue, then the capital of US advertising. The rest is history: Juan Valdez became a marketing icon for Colombian coffee as part of an innovative marketing campaign. Now all kinds of retailers around the world boast that they serve Colombian coffee. I’m sorry but as a Peace Corps volunteer in Colombia that drank coffee all the time and a businessman in Brazil and a Starbucks citizen in the US, coffee to me is coffee. But the Colombians learned how to better market it. The rest of the world including Brazil is playing catch up.

Calling the Shots in Sugar

Brazil is probably number two in the world of sugar production, after India, but it is the leading exporter. The crop was introduced in the 1500s. Its harvesting practices helped determine Brazil’s ethnic composition. African slaves were brought in to work the large plantations. In 1550 there were just five sugar plantations in Brazil. By 1623, there were 350.

European demand exploded as supplies of Europe’s traditional sweetener, honey, declined. This was partly due to the Reformations campaign against monasteries whose need for beeswax candles had placed them among the foremost honey producers. Sugar became money. It was so important that the Dutch traded New York to England for the sugar territory of Suriname.

There were some qualms in Europe about consuming sugar from Brazilian plantations, which were based on slavery. In 1841 Viscount Palmerston stated that England wouldn’t consume
Brazilian sugar as “we are men of conscience and principle” but he would help them sell it to the Germans. Palmerston stated it was all right “to ship and refine your sugar. It is sinful to consume slave grown sugar, but there can be no harm in refining it which in fact is to cleans it from its original impurity…”

Today, Brazil is probably the world’s most efficient producer with 4.5 million hectares planted in sugar (a land mass equivalent to 20% of the UK or 8% of France). The government plays a key role in determining how much its exports and thus in setting world prices by determining how much will be used to produce ethanol. According to a couple of top agricultural economists: “Since Brazil can produce either sugar or ethanol from sugarcane, it is one of the few countries that can adjust sugar production rapidly to potential world sugar shortfalls and high international prices.” As a street-smart New York sugar trader might say, “it can bake and shake the market.”

The ethanol business is taking one strange twist. Brazil’s pioneering efforts deserve some credit for the fact that ethanol production consumes 10% of the US corn crop. Cargill, the American based agribusiness firm, wants to export Brazilian ethanol to the United States to take advantage of the subsidies for the fuel. But to avoid duties it will distill it in El Salvador, with its duty free quota.

**Rural Rockefeller**

Few people realize that Nelson Rockefeller, the American billionaire and late Governor of New York, played a key role in the farms race. In 1947, he started a company called International Basic Economy Corporation (IBEC), which would employee me for a stint after it acquired the company where I was working. IBEC’s goal was to show that private capital organized as a profit-making enterprise could upgrade the combines of developing countries.

IBEC invited Cargill, the US agribusiness giant, to work with it in Brazil. IBEC had lots of plans: hybrid corn production, hog production, crop dusting with helicopters, contract plowing and grain storage. One of IBEC’s companies was Sementes Agroceres which has played a keep role in upgrading plant and animal genetics in Brazil These are all taken for granted now, but 60 years ago it was cutting edge technology.

Both IBEC and Cargill began developing hybrid corn seed varieties – so successfully that Brazil is now the world’s third largest corn producer after the US and China. In Brazil most of the corn is mixed with soymeal for animal feed. As my boss in the grain business often said, “a chicken is nothing but corn and soybeans that clucks.”

**Suicide and Soybeans**

The agricultural economics of sugarcane also led to Brazil’s prominent role in the production of soybeans. Sugar can produce for about five years after which it has to be dug out and new cane planted (a procedure known as “ratooning”). The Brazilians pioneered the planting of soybeans between the digging out of the old and planting of the new. Soybeans enrich (“fix”) nitrogen in the soil. Since sugarcane needs nitrogen, this reduces the demand for fertilizer. Soybeans were introduced in Brazil primarily for that reason, though in the south farmers of Japanese ancestry planted it for its own sake.

Then the United States government committed economic suicide. Commodity prices go up
and down; any trader like myself will tell you “high prices cure high prices and low prices
cure low prices.” If prices are high people will stop buying and they will fall, and if they are
low people will stop producing until they rise. Enter the politicians - whose logic is different.

Richard Nixon was the US President in 1972. The country was awash in grain. That year the
Soviets suffered a huge grain shortfall and went to the world market to ensure supplies. In my
mind this also marked the beginning of the end for the Soviet Union, as the purchases meant
the Soviets couldn’t feed their own people.

Some pundits have called the Soviet purchases the “Great Grain Robbery.” The Soviets
bought grain cheap, causing US prices to rise. Contrary to popular wisdom, it wasn’t the big
grain companies who profited, but the Soviets.

What does all this have to do with Brazil? In 1973, grain and soybean prices skyrocketed
again and Richard Nixon, short of political capital due to the Watergate political scandal that
would eventually force him to resign, wasn’t about to get picked off by the Soviets again.
Thus in 1973 Nixon placed a moratorium on grain and soybean exports. This was a big deal
since the US was the world’s only real grain basket.

Soybean prices in February 1973 went to $5 dollars a bushel a new historic high; by June they
had leaped to US $12.00 On June 27,1973 the US imposed export controls on both soybeans
and cottonseed and the oil and meal produced from both. This day should probably be
declared a holiday in Brazil: it marked the beginning of the end for the US in the farms race.

The European Community Agricultural Commissioner flew to the US to complain. Hirohi
Higashimori, secretary general of the Japan oilseed processors association said, “We are
really angry at Nixon-san.” France’s President complained personally to Nixon. The New
York Times editorialized: “At the apex of the French power structure the lowly soybean is
regarded as more symbolic importance than the sordid Watergate mess.” Thus you could
make a case if Watergate didn’t happen and Nixon felt politically strong enough to counter
high grain prices and not create embargoes, Brazil would have stayed an agricultural
backwater!

Up to that point Brazilian soybean farmers didn’t view themselves as world soybean
suppliers. The varieties weren’t quite right, and frankly Brazil’s export infrastructure stunk.
Nonetheless the New York Times reported in a back section story on August 8 that “Brazilian
farmers are turning from their usual crops for the home market…cotton, wheat and even
coffee to the ‘magic soybean.”’ Soybean production went from 4.5 million tons in 1972 to
11.5 in 1997. Today the figure stands at about 60 million tons. Analysts estimate further
increases to 00 million tons in a couple of years.

Later export embargoes and a litany of license (like the US grain embargo against Russia for
invading Afghanistan or because some country failed to toe the US line), convinced trade
partners that the US was unreliable. Not too long ago Bill Frenzel, a former US Congressman
from Minnesota told me, “With these embargoes, we kept shooting ourselves in the foot until
all our toes were gone.” I wondered whether Brazil’s foreign ministry had authored the script
for misguided US politicians.

One congressman from Oregon who knew nothing about agriculture called for a “bushel for a
barrel” in grain sales to oil rich countries. What did those countries do? Saudi Arabia ordered


14,000 center irrigation pivots from the US and elsewhere, paid farmers three times the world price to plant wheat, and became self-sufficient. Saudi Arabia is now a wheat exporter; it used to import everything from the US.

Things got worse after Henry Kissinger entered the food scene in 1994 at the World Food Conference in Rome. The US State department entered the picture. One of Kissinger’s minions said: “Agriculture policy is too important to be left in the hands of the Agriculture Department.’

What happened? We all went to Brazil and invested in terminals, trucks, railroads; some people think that Cargill is a Brazilian firm. US seed companies showed up and started breeding for Brazilian conditions. As a result, Brazilian yields are higher than those in the US. Argentina and Paraguay jumped into the fray. The left leaning New Republic magazine said that US grain companies were using the embargo to expand production in Latin America in order to compete with the US export market and increase corporate independence form the US. Much of this “promoted expansion” has now been occurring in Mato Grosso, a state some once regarded as a wasteland. Everyone in global agribusiness is now watching what happens on the unpaved BR-163 highway. One transplanted US farmer calls it “two narrow lanes full of kamikaze drivers and gaping potholes.” The 1,000-mile road runs from Cuiabá (termed the “world’s last great agricultural frontier”), the capital of Mato Grosso, to Santarém on the Amazon. At the northern terminus stands a US $20 million grain terminal built by Cargill. The payoff will be incredible for Mato Grosso’s farmers as they can now ship their soybeans without dealing with the congested ports in Santos and Paranaguá. Paving BR-163 would half the transportation time and cost.

Japanese demand sparked the soybean boom, but the Chinese and their expanding economy are now propelling the market. By the end of this year China will import 20 million tons. The US Department of Agriculture Economic Research Service put it this way: “Exports from Brazil are expected to garner most of the expansion in global trade for soybeans and soybean products much of which will center on meeting a rapidly rising demand from China.”

All of this is not without debate in Brazil as critics of this northward thrust say it will increase deforestation of the Amazon and cause a multitude of other problems. Asked about all the negatives of soybean expansion, Mato Grosso Governor Blairo Maggi, part owner of the world’s largest soybean farm (190,000 hectares - twice the size of Hong Kong) told a reporter, “You don’t make an omelet with out breaking eggs.”

The Dangers of Disneyworld

Whenever I go to Brazil I think I am going to get run over in the countryside. The pace is frenetic. The pace is partly due to the citrus industry. Here actions in the United States are propelling Brazilian production. With Florida’s population up to 19 million and the expansion of Disneyworld, orange producers are hard pressed to keep farming as real estate values increase. A Florida grower was heard to say that “In Florida land pressure is so big that you can sell 20, 30, 40 acres at the stroke of a pen and make more money than you can in growing citrus for ten years and with no risk.” Green houseplants have replaced oranges as Florida main agricultural commodity. And that’s all before considering the frosts that occasionally decimate Florida orange groves.

One symbolic monument to this decline is the 22-story “Citrus Tower” in Clermont, Florida.
It was built in the 1960s so that tourists could take an elevator up to look out at the orange groves spread out 35 miles in any direction. Now frost and sprawl have eliminated the groves. All you can see is shopping centers and strip malls. The outlines of Disneyworld stand in the distance.

Brazil’s orange groves are far-removed from sprawl and, more importantly, frost. The Portuguese took the fruit with them everywhere, including Brazil. In Iran, orange juice is called *ab portughal* (Portuguese water). Oranges arrived in Brazil around 1530. The business has expanded ever since.

Oranges were initially grown for domestic consumption. Brazil shared its technology with the US, and in the 1870’s the navel orange seedlings were sent to California from Bahia. One source claims that large-scale production in Brazil only began with the translation of Harold Hume’s “The Cultivation of Citrus Fruits” into Portuguese in 1952. Hume is a member of the Florida Citrus Hall of Fame; his Portuguese translator is probably not.

In 1962 the citrus world turned upside down with a huge freeze in the US. The losses were gigantic and the lack of orange juice that followed the freeze transformed Brazil into a promising supplier.

Brazil now produces and processes more oranges than anyone. Two of the largest processors, Cutrale and Citrosuco Paulista, have bought a US processor. Much of the frozen concentrate sold in the US carries the label “contains US, Brazilian or Mexican concentrate.”

The US has a tariff on Brazilian imports of concentrate to “equalize costs” and to eliminate the threat of what one Florida grower said would “be like a bullet to the head.” In a December 2004 petition to increase tariffs even more, Florida Citrus Mutual, a Florida grower’s cooperative, charged Brazil with dumping.

The man known as the “Rei da Laranja “ (the Orange King), José Cutrale, died last December. He bought his first orchard in Araraquara, São Paulo state, in 1952 and built a business that would come to control 20% of the frozen concentrated orange juice (FCOJ) market with US$1 billion in sales. His son will carry on, pointing out a big difference between the US and Brazil: in Brazil, the second generation remains in the business; in the US, this is rare. What always amazed me about all my trips to Brazil when the agricultural boom, entrepreneurs like Cutrale would come with us to the airport to see us off. They wanted to get the last piece of information they could.

**Meatheads**

The year I was born, 1944, was also the year Sadia was founded. It is now one of the world’s biggest meatpackers with US $3 billion in sales. Its corporate motto is “A day begins and ends with Sadia.” Until he took a leave of absence to serve in President Lula cabinet, Luis Fernando Furlan was running the group. Furlan had also been serving on a World Bank private sector advisory group to promote better corporate governance. Sadia sells meat, pork and poultry around the globe and is listed on the New York Stock Exchange. Here again, Brazil ended up in the right place and the right time. The business daily Gazeta Mercantil wrote this in 2001 that ”The mad cow and hoof-and-mouth diseases affecting the beef trade worldwide, plus the higher dollar and good harvest of corn and soybean in Brazil, created the perfect situation for Brazilian meatpacking companies to expand their chicken business
abroad and their forecasts are far from humble.” Often skeptical about food stocks, the US public radio program Motley Fool says that ”Sadie provides net margins that American counterparts can only dream about.”

Moreover, in Brazil, beef is not produced in feedlots as in the United States. This has appealed to natural food carnivores worldwide.

**Abundance**

Not every agribusiness effort in Brazil has succeeded. Brazil used to be a big player in cacao, but that crop has been devastated by *crinipellis perinicosa*, the “witches broom” fungus. Once an exporter, Brazil is now a net importer of cocoa beans. I was once involved in a venture in Vinhático, Espírito Santo state, to cultivate and process *raspa da mandioca* (cassava chips) that flopped do to inept management, corruption, and an increase price of root “seedlings” and energy. Even huge farm projects worth billions like Danile K. Ludwig’s Jari have gone nowhere.

Yet I would still declare Brazil the winner of the great farms race. Apt is the following quote from Thomas Jefferson, the third US president. He was talking about the difference in agriculture in Europe and the United States at the turn of the 19th century, but the statement makes sense in the contemporary Brazil-US context: “In Europe the object is to make use of their land, labor being abundant; here it is to make the most of our labor, land being abundant.” If he knew about today’s Brazil then he might have added: “In Brazil the object is to make use of land and labor, both being abundant.”

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**More Brazilian Coffee and Grain**

Read excerpts from Mark Pendergrast’s history of coffee, Uncommon Grounds:

- [The Coffee Kingdoms](#)
- [Brazil's Coffee Renaissance](#)


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Sustainable Agriculture. Efficient and Responsible Use of Natural Resources. The global demand for responsible agricultural production is one of the greatest opportunities for environmental conservation today. But there are many challenges ahead.

With the expansion of farming in Brazil and the consumer market’s demand for responsible production, the agricultural sector has worked to improve its environmental performance and become more competitive in the commodity market. For the Conservancy, success in sustainable agriculture means changing from the historical model of geographically extensive production to more efficient intensive production, in accordance with the prevailing environmental legislation and without further loss of natural ecosystems.

Key agricultural research challenges and technologies that will be pursued by Brazil in the near future. Keywords: Food security, Perspectives, Agricultural development, Brazil, Technology.

Some future prospects for Brazilian agriculture. The development of Brazilian agriculture. The strategic importance of the agricultural sector to Brazilian economic growth has been clear since the first.

To a great extent, these huge changes in Brazilian agriculture occurred in response to a strong demand, prompted by the government-led industrialization process. Agriculture is an important industry in Brazil, as this country has immense agricultural resources available to it. Its most significant products in this sphere are coffee, soybeans, wheat, rice, corn, sugarcane, cocoa, citrus and beef (in order of importance). Its most significant exports are coffee, soybeans, beef, sugar cane, ethanol and frozen chickens.

Livestock farming began in the area and was thought to be the only viable type of agriculture, since the soils were poor in quality and unable to sustain crops. However, it was discovered that soybeans actually thrived in these conditions, particularly with the ever-developing means of cultivating these tough soils. Today, a number of crops are grown here. Former Cargill executive describing how Brazil became a global power-house in the field of agriculture.

Former Cargill executive describing how Brazil became a global power-house in the field of agriculture.