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September 2005

Brazil and Its Role in Global Agriculture

H. Douglas Jose

University of Nebraska-Lincoln, hjose1@unl.edu

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CORNHUSKER ECONOMICS

September 7, 2005

University of Nebraska–Lincoln Extension

Institute of Agriculture & Natural Resources
Department of Agricultural Economics
<http://agecon.unl.edu/pub/cornhusker.htm>

Brazil and Its Role in Global Agriculture

Market Report	Yr Ago	4 Wks Ago	9/2/05
<u>Livestock and Products,</u>			
<u>Weekly Average</u>			
Nebraska Slaughter Steers, 35-65% Choice, Live Weight	\$80.34	\$82.31	\$81.59
Nebraska Feeder Steers, Med. & Large Frame, 550-600 lb	134.40	133.09	134.80
Nebraska Feeder Steers, Med. & Large Frame 750-800 lb	116.99	116.30	117.60
Choice Boxed Beef, 600-750 lb. Carcass	134.20	128.30	134.80
Western Corn Belt Base Hog Price Carcass, Negotiated	71.01	68.44	65.69
Feeder Pigs, National Direct 45 lbs, FOB	43.45	48.21	43.78
Pork Carcass Cutout, 185 lb. Carcass, 51-52% Lean	72.24	72.66	73.99
Slaughter Lambs, Ch. & Pr., 90-160 lbs., Shorn, Midwest	*	90.00	95.00
National Carcass Lamb Cutout, FOB	216.23	251.27	242.12
<u>Crops,</u>			
<u>Daily Spot Prices</u>			
Wheat, No. 1, H.W. Omaha, bu	3.21	2.98	*
Corn, No. 2, Yellow Omaha, bu	2.23	1.74	1.65
Soybeans, No. 1, Yellow Omaha, bu	6.24	6.35	5.68
Grain Sorghum, No. 2, Yellow Columbus, cwt	3.13	2.96	2.64
Oats, No. 2, Heavy Minneapolis, MN, bu	1.65	1.82	1.68
<u>Hay</u>			
Alfalfa, Large Square Bales, Good to Premium, RFV 160-185 Northeast Nebraska, ton	115.00	117.50	117.50
Alfalfa, Large Rounds, Good Platte Valley, ton	62.50	37.50	37.50
Grass Hay, Large Rounds, Good Northeast Nebraska, ton	57.50	52.50	52.50
* No market.			

The themes which have been applied to Brazilian agriculture include “a growing agricultural giant,” and “the future of modern agriculture.” I had the opportunity to visit Brazil and observe some of their agriculture first hand in August. There is always a danger of making general observations based on limited time in a country and a limited area covered. But this two-week visit left me with some observations to consider as we think about the structure of global agriculture in the future.

Brazil is a large country. If Brazil is superimposed on the lower 48 U.S. states it would cover the U.S., with an area equivalent to the size of Texas hanging over the edge. Historically, crop production was concentrated in the southeastern states of Sao Paulo, Parana, Santa Catarina and Rio Grande du Sul, four states that are along the Atlantic coast. By the 1960s, most of the agricultural land in these states had been fully developed, farms were generally small and expansion was difficult. Expansion moved to the west where the land was flat and relatively inexpensive. This savannah area could easily be converted into cropland and had abundant and predictable rainfall. The major impediment was the soil. The Cerrado soil is acidic and not as fertile as in the eastern states.

Brazil's Agriculture

As an example of what has happened in Brazil in the last 20 years, soybean production which was minimal, is now approximately 15 million metric tones (MMT) per year. To put it in perspective, the 2005 U.S. soybean crop is expected to be about 2.8 billion bushels or 76 MMT. The Brazilian soybean production accounts for 38-40 percent of the world trade in soybeans.

Soybean production is typically the “summer” crop, grown during the rainy season. Corn is grown in the winter during the dry season. We saw some corn fields which had

already been harvested and others which would soon be harvested. We visited a farm of about 1,000 hectares in the state of Mato Grosso do Sul, near the Paraguay border. In the summer it was about one-half soybeans, one-fourth cotton and one-fourth pasture. In the winter it was about half corn and half pasture. The corn was inter-seeded at corn planting time with two tropical grasses. The second week of August, the corn had just been harvested and yearling cattle were grazing on the tropical grasses. Soybeans will be planted in October. It was a well managed operation proving what can be done. The farm across the fence didn't look nearly as productive.

But soybeans are not the only agricultural export from Brazil. The list below shows Brazil's share of world trade:

Export	Percent
Orange	82
Sugar	29
Coffee	29
Chicken	29
Beef	20
Pork	16

USDA expects Brazil's soybean exports to increase about 4 percent per year and chicken and pork exports to increase about 3 percent per year over the next 5 years.

We hear more about soybeans in Brazil than other commodities, but sugarcane is another interesting crop. The non-subsidized production of alcohol from sugar cane in Brazil is equivalent to about 685 gallons per acre of sugar cane, plus some residual sugar. Corn produces 2.8 gallons per bushel or 500 gallons per acre for a 178 bushel yield. Vehicles in Brazil run on varied concentrations of alcohol from 100 percent down to a 25 percent gasohol mix. At the gas pump, 100 percent alcohol is slightly less than half the cost of gasoline. Brazil wants to increase its sugar cane production and to have more countries as players in the alcohol production arena. Japan is a potential major market. However, the Japanese are reluctant to make a commitment to purchase Brazilian alcohol unless there are alternative sources they can turn to if economic or political instability in Brazil would reduce the available supplies.

The Facilitators

Most people involved in Brazilian agriculture point to research and education as major factors driving the development of agriculture in the past 20 to 30 years. From its beginning in 1973, the mission of Embrapa, the Brazilian Agricultural Research Corporation has been to "provide feasible solutions for the sustainable development of Brazilian agribusiness through knowledge and

technology generation and transfer." Embrapa coordinates the National Agricultural Research System, which includes most public and private entities involved in agricultural research in the country. There are 8,619 employees in Embrapa, of which 2,221 are researchers, 45 percent with master's degrees and 53 percent with doctoral degrees. Embrapa began sending students to the U.S. for these advanced degrees shortly after it was formed. Embrapa continues to maintain projects in International Cooperation in order to perfect knowledge of technical and scientific activities, or to share knowledge and technology with other countries.

The Challenges and the Future

The country has the potential to **increase** its crop production area by another 30 to 60 million hectares, roughly equivalent to 75 to 150 million acres. This is in the savannah area. It doesn't include clearing any rain forest area in the Amazon Basin. By comparison, the U.S. has about 430 million acres in crop production.

Ecology and preserving the environment have been a concern, but attention to these issues appears to be increasing rapidly. According to government policy for every 10 hectares of new land brought into cultivation in the Cerrado, 3 hectares must be set aside as natural vegetation. In the pre-Amazon region in Northern Mato Grosso this set aside increases to 80 percent.

Roads and other infrastructure are another issue for Brazilian agriculture, but this is being addressed. Plans are being made to develop transportation routes to Pacific ports. The distance is shorter than to the Atlantic, but the Andes mountains are an obstacle. These routes would include a combination of water, rail and truck transportation.

Summary

Brazilian agriculture certainly has a lot going for it. They have "done their homework" over the past 20 years in terms of agricultural research. As a result productivity has increased dramatically. Crop yields have tended to level off in the last five years. Nonetheless, they are still aggressively following the research and development path that got them where they are today. We need to follow further developments and factor them into our model of global agriculture.

Doug Jose, (402) 472-1749
 Extension Farm Management Specialist
hjose1@unl.edu