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Global Agricultural Information Network

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## **Brazil**

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### **Developments in Brazil's Northern Ports Move Forward with Favorable Long-Term Implications for Brazilian Agricultural Competitiveness**

**Report Categories:**

Agricultural Situation

Competitor

Grain and Feed

Oilseeds and Products

**Approved By:**

Robert Hoff

**Prepared By:**

Robert Hoff

**Report Highlights:**

Improvement of the infrastructure of Brazil's northern ports will heighten its long-term competitiveness in the exportation of soybeans and other agricultural products. While progress is being made to complete these improvements, significant challenges remain.

### **Executive Summary:**

In the first week and a half of May, the Agricultural Counselor traveled to the northern Brazilian states of Para, Amapa, and Maranhao to learn more about infrastructural improvements which will facilitate the exportation of soybeans grown in areas which are relatively new to Brazilian commercial agricultural production. He met with farmers and non-governmental organizations (NGO) to acquaint himself with local growing conditions and the regulatory environment. He extracted information from state government officials and private sector representatives about investments in infrastructure which when completed, will heighten Brazilian competitiveness in the exportation of soybeans, grains and other agricultural commodities.

For Marketing Year (MY) 2012, while about 65 percent of Brazilian soybeans (around 43 million metric tons) were grown in areas which are relatively new to commercial agricultural production (e.g., states located in the Center-West, North, and Northeast), only about fifteen percent of total production (total production was 65-66 million tons) was exported from ports of northern Brazil. These northern ports, some already operational and others which are undergoing modification so they can accommodate grain exports, are located much closer to the foregoing production areas than the southern ports of Santos (Sao Paulo state) and Paranagua (Parana state). Most of the soybeans grown in the Center –West, North, and Northeast are currently trucked to Santos and Paranagua for exportation, inflating transportation costs and reducing profitability of growers whose farms located in the distant Center-West, North, and Northeast regions.

Principal observations from this visit follow:

1. Local growers in the Amazon biome are working harder to come into compliance with Brazilian environmental regulations as reflected in the growing number whose properties are included and mapped out in the Rural Environmental Register (CAR).
2. International traders who are sourcing soybeans grown in the Amazon biome are taking steps to ensure that they are buying product from growers who are registered in the CAR system;
3. Investments in northern ports are moving forward and when these ports have been refitted to allow for the exportation of grains and oilseeds, transportation costs of growers in the Center-West, Northeast, and North will be significantly reduced.
4. The construction of the federal highway, BR-163, which connects Cuiaba, the capital of Brazil's biggest soybean producing state, Mato Grosso, to the strategically located city of Santarem in Para state, is currently scheduled for completion at the end of 2014, which together with port improvements, will also contribute significantly to lower transportation costs.
5. Factors which have historically worked against completion of these critically important infrastructural works such as lengthy bidding/contracting processes, slow issuance of environmental licenses, lawsuits, cost overruns, and insufficient administrative capacity continue to be major challenges to the resolution of logistical obstacles, undercutting the advances achieved in agricultural production areas.

## **General Information:**

In the first week and a half of May, the Agricultural Counselor visited the states of Para, Amapa, and Maranhao, located in northern Brazil, to learn about developments in the expansion of the agricultural frontier and the infrastructure necessary to export product grown in Brazil's relatively new commercial agricultural production areas located in the regions of the Center-West, Northeast, and North. He met with farmers and NGOs to learn about local growing conditions and the regulatory environment. He extracted information from state government officials and private sector representatives about investments in infrastructure which when completed, will heighten Brazilian competitiveness in the exportation of soybeans, grains, and other agricultural commodities.

For MY 2012, while about 65 percent of Brazilian soybeans (around 43 million metric tons) were grown areas relatively new to commercial agricultural production, (i.e., the regions of the Center-West, North, and Northeast), only about fifteen percent of total production of 65-66 million tons was exported from ports of northern Brazil. These northern ports, some already operational and others which are undergoing modification so they can accommodate grain exports, are located much closer to relatively new commercial production areas than the southern ports of Santos (state of Sao Paulo) and Paranagua (state of Parana). Most of the soybeans grown in the Center-West, North, and Northeast are currently trucked to Santos and Paranagua for exportation, inflating transportation costs and reducing profitability of growers with land in the non-traditional regions.

**Visit to Growing Areas Close to Santarem, Para:** The Agricultural Counselor began his visit in Santarem, a port city on the Tapajos River located in the state of Para. Para is Brazil's second biggest state in terms of area (1.253 square kilometers – a little smaller than the area of France), is located entirely in the Amazon biome and whose northern reaches border on Suriname and Guyana. With 7.5 million inhabitants, Para has the largest population of all states which constitute the North of Brazil.

Until the construction of the Belem-Brasilia Highway (BR-010, inaugurated in 1960 with paving completed in the 1970s), Para and the rest of the Amazon region was only accessible by air and water. Settlement of Para and the rest of the Amazon region was a high priority for the military governments which ruled Brazil from 1964-1985. Military governments, which invoked national security reasons for expediting the settlement of the Amazon region, invested heavily in infrastructure and provided tax benefits to private sector investors to achieve this end. Via the Amazon Development Authority (SUDAM), the Brazilian government (GOB) extended subsidized credit lines to spur private sector investment, which typically originated from Sao Paulo and other more developed areas. One of the results of this policy was the proliferation of large cattle ranches whose establishment led to the elimination of large swathes of the primary rain forest. According to the Secretariat of Agriculture of Para, until 1996, recipients of subsidized federal credit designed to hasten the development of Para were obligated to clear 50 percent of their land of rain forest in order to be in compliance with loan terms. These policies were later modified as the extent of deforestation became more apparent. Presently, as with all Brazilian territory encompassed by the Amazon biome, 80 percent of land is protected and goes into a legal reserve with the remaining 20 percent eligible for cultivation.

Soybean cultivation began in Para in the 1980s and as in many of Brazil's relatively new commercial production areas, was spearheaded by Southerners, especially from the states of Rio Grande do Sul and Parana. One of the areas which was first cultivated, Belterra, 40 kilometers to the south of Santarem,

had originally been developed as a rubber plantation with financing from Henry Ford. Growers with whom the Agricultural Counselor met recounted their difficult beginnings in Belterra in the early 2000s, when their enterprise sparked protests led by local and international environmental groups.

Tensions began to subside when they and other local farmers worked with an international NGO to have their properties mapped and enrolled in the Rural Environmental Register (CAR) so they could come into compliance with Brazilian environmental regulations. To ensure that they remain in compliance, local farmers assert that they police themselves and address swiftly any potential violations. CAR information is housed within the state Secretariat of Environment (SEMA) and can be used to determine the composition of a property (i.e., percentage of land dedicated to farming, percentage that is part of the legal reserve, that that which is idle.) Government officials can use CAR data to formulate better focused and sound public policy regarding agricultural development. Growers underline that the CAR system has earned the trust of the local growers themselves, the state governmental authorities, and environmental groups and has enabled federal regulators to more accurately focus their efforts to detect and arrest deforestation. Satellite imagery and monitoring to track deforestation go hand-in-glove with the CAR system. According to the NGO, every sixteen days there is a new satellite image of the region which is scrutinized by government regulators.

The summer crop soybeans are typically planted in December with the first rains beginning in mid November and lasting until the end of July. According to Belterra growers, only non-GM soybean varieties are planted and local yields are on a par with the average Brazilian yield of 3 tons (mt) per hectare (ha). Double cropping is prevalent and soybeans are typically rotated with corn or beans. Due to the variety of plant diseases that thrive in the Amazon, growers scrupulously adhere to good agricultural practices. Local soybean production is exported from the nearby port of Santarem. Traders take pains to source only product which is grown by farmers who are registered in the CAR, reinforcing further the CAR system. As far as local growers are concerned, soybean cultivation has played a major role in stabilizing their finances, has enabled them to reinvest in their land and acquire and adopt the latest technology, and has contributed to the area's economic development.

For the state of Para as a whole, according to GOB (Ministry of Agriculture) data, total soybean production for the 2012 crop totaled close to 349,000 mt planted to close to 117,000 ha. The average yield per ha was close to 3 mt. Local sources indicate that the average farm sizes vary considerably but many are in the range of 380-400 ha. Potential area for expansion is hard to pinpoint with estimates ranging from 600,000 to 1 million ha. What will most likely trigger expansion will be the completion of infrastructural projects which will establish export capacity for key ports located on the Tapajos and Amazon Rivers, and the paving of BR-163, which connects Brazil's soybean heartland in the state of Mato Grosso to the area around Santarem.

**The Ports of Santarem and Miritituba/Itaituba, and the Completion of BR-163:** The port of Santarem is located on the east bank of the Tapajos River close to its confluence with the Amazon River. It was inaugurated in 1974 and is administered by the Port Authority of Para ("Companhia das Docas do Para" - CDP). The access channel to the port is 11.5 mt deep. It has a private grain terminal leased by a major international grain trader with an export capacity of 1.8 million metric tons (mmt) per year. Currently, soybeans and corn are exported from Santarem with the bulk of them grown in Mato Grosso state, trucked to Porto Velho, Rondonia, and barged to Santarem via the Madeira and Amazon

Rivers. Once in Santarem, product is reloaded onto ocean-going vessels and exported. According data from the GOB, about 690,000 tons of soybeans were exported from Santarem in 2011.

When the federal highway BR-163 which links Cuiaba, the capital of Mato Grosso, to Santarem is completed, there will clearly be much more activity in Santarem and to that end, the lessee of the private grain terminal has requested authorization from GOB and Para state regulatory officials to expand the terminal so that its capacity reaches 3.4 million tons. Currently, the vast majority of soybeans and corn which are grown in Mato Grosso are exported out of the southern ports of Santos and Paranagua, a journey of over 2,000 kilometers. BR-163, whose construction began in 1970s and was a major component of the military governments' National Integration Plan, has been riddled with engineering and legal challenges, and cost overruns which have resulted in frequent extensions of its completion date. At present, it is slated to be completed by the end of 2014. Post grower contacts in Mato Grosso, however, state that they will begin to transport soybeans to Para in 2013 since in its current state, BR-163 can be transited. With prospects for a major expansion in area planted to soybeans for 2013 in Mato Grosso, coupled with high transportation costs to and demurrage charges associated with the ports of Santos and Paranagua, the conditions will be ripe for Mato Grosso growers to test this route next year. Miritituba is located on the eastern bank of the Tapajos River about 300 kilometers to the south of Santarem and close to the intersection of BR-163 and the Trans-Amazon Highway BR-230. Situated on the western side of the river is the city of Itaituba. According to post contacts, seven firms, both Brazilian and foreign-owned, are currently investing in port and terminal infrastructure. The concept is to truck soybeans from growing areas in Mato Grosso to Miritituba. From there, the soybeans would be loaded onto barges and proceed north to ports such as Santarem which is already operational, or to others which should come on line over the next few years. From there, product would be loaded onto ocean-going vessels and exported. According to one contact, if all goes well, Miritituba should be operational in two years. Although the Agricultural Counselor was unable to visit developments in Miritituba, FAS Brasilia intends to travel there next year to assess progress on port and loading infrastructure.

**Port of Outeiro, Belem, Para:** Outeiro is part of the port complex which is centered in Belem, the capital of Para, a city of over 2 million inhabitants. Belem is located on the Para River, which is part of the Amazon River system, about 140 kilometers upriver from the Atlantic Ocean. The Tocantins River, which passes through a major expansion area of the agricultural frontier further south, also flows into this estuary. Strategically located, this port complex is relatively close to the United States, the Panama Canal, West Africa, and Europe.

The port of Outeiro is located about 38 kilometers to the east of Belem on Caratateua Island. Administered by CDP, Outeiro was built in 1970. It is currently used for the exportation of wood chips and dry bulk. However, CDP has been working hard in the promotion of investment plans which would transform Outeiro into a major grains/soybeans shipment port, which would be a model for other ports in Para.

The port of Outeiro occupies 200 hectares. Its draft is currently 10.5-12.5 meters but with dredging, this will increase to 12.5-14 mt. It has two piers, one of which is operational for barge traffic. The concept is for Outeiro is to create a grain terminal complex from which soybeans and grains which have been transported by barge from Miritituba, Santarem, and other ports in northern Brazil would be loaded onto Panamax ocean-going vessels (60,000 mt) and exported. Outeiro will not be supplied by soybeans

and grains which are transported via road, given the problems which could be generated as trucks transit through the Greater Belem metropolitan area.

The overall project will be divided into four lots upon which will be built four grain terminals. Lessees, who will have 50 year concessions, will include both Brazilian and foreign-owned companies. Two phases of expansion are contemplated. Phase 1, which would span 14 years, would lead to the creation of grain export capacity of 9.9 mmt with a total storage capacity of 440,000 mt. At the completion of phase 2, eleven years later, total export capacity would reach 18.9 mmt, with storage capacity of 840,000 mt. According to CDP, the project has built-in flexibility and can be modified at its margins. Potential investors have been following developments closely and have met with CDP officials to offer recommendations on how the project should be designed so that it can move forward with the fewest number of problems possible. CDP indicated that the next steps will be for the receipt of approval from the National Agency of Water Transport (ANTAQ), which is part of the Ministry of Transportation. CDP officials expect that concessions will be awarded and contracts will be signed by the end of the year. According to one post contact, Outeiro could be ready to export soybeans and grains by 2014.

**The Port of Santana, Amapa State:** The port of Santana is located about 25 kilometers to the west of Macapa, the capital of Amapa state. Macapa is strategically located on the equator close to the mouth of the Amazon River. Amapa has a population of around 670,000 inhabitants. In its northern reaches, it borders French Guiana and part of Suriname and to the west, it is contiguous with Para. Prior to its achieving statehood in 1988, Amapa was a Brazilian territory and was administered from Brasilia. It is one of Brazil's most isolated states with the bulk of it covered with rain forest and tropical savanna. The economy has historically been based on mining, fishing, and agriculture.

The port of Santana was inaugurated in 1982 and administered by CDP until Amapa achieved statehood. It is currently overseen by the Santana Port Authority ("Docas de Santana" – DS). As testimony to the continental size of Brazil, the port of Santana is closer to Miami (2,494 nautical miles) than it is to Santos (2,564 nautical miles). Its draft is 11.5-12 mt. The maximum size vessel which calls on Santana has a load capacity of 50,000 mt. With two piers and a container patio, Santana currently exports iron, chromite and cellulose. DS, however, is promoting an investment plan which would enable Santana to be a major exporter of soybeans and grains, and other agricultural products.

DS expects to receive approval from ANTAQ to move forward with the project with Investments to construct a grain terminal, on the part of both Brazilian and foreign-owned companies, to take place later this year. Three silos with a capacity of 18,000 mt each are contemplated and by 2016, export capacity should reach 2 mmt. DS considers Miritituba to be a key player in this export expansion. In Miritituba, soybeans trucked up from Mato Grosso on BR-163 would be loaded onto barges, each with a capacity of 2,000 mt, which would travel in a convoy of nine until they arrive at the port of Santana. In Santana, the soybeans would be loaded onto Panamax ocean-going vessels and exported to Europe and Asia (via the Panama Canal). According to DS, transport costs for soybeans which originate in Sorriso, Mato Grosso and are exported to Asia via Santana would be lowered by US\$30-40 per mt.

The operationalization of the port of Santana could generate significant interest in the cultivation of soybeans in the tropical savanna of Amapa, which begins about 25 minutes outside the city limits of Macapa. According to post sources, there are an estimated million ha of tropical savanna in Amapa, some of which are cultivated with eucalyptus. Over the last several years, some Brazilian growers have

reportedly purchased land and planted soybeans on the savanna in areas which are relatively close to the port of Santana. These growers have reportedly been satisfied with the results of their endeavors.

**The Port of Itaqui, Sao Luis, Maranhao:** The port of Itaqui is located on the Atlantic Ocean just outside of Sao Luis, the capital of the state of Maranhao, in the northern most state of the Brazilian Northeast. Maranhao, with a population of around 6.6 million inhabitants, encompasses a major production area in its south which is already supplying product for exportation. 2.5 mmt of soybeans were exported from Itaqui in 2011, a total which included soybeans grown in southern Maranhao.

The port of Itaqui, which is administered by the Maranhao State Port Authority (“Empresa Maranhense de Administracao Portuaria” -EMAP) began operations in 1974. Plans to expand port operations are already underway via the construction of a grains terminal (TEGRAM), which will have four operational areas and four storage facilities. Both Brazilian and foreign-owned companies are investing in TEGRAM. The total investment is placed at around the equivalent of US\$161 million (R\$322 million).

Three phases of port expansion are envisioned by EMAP. The first phase is scheduled to be completed at the end of 2013 which at that time, Itaqui should have an export capacity of 5 mmt of soybeans. The second phase of expansion, which is slated for completion in 2017, will increase export capacity by another 5 mmt. The third phase will ramp up export capacity by 5 mmt tons so when all three phases are completed, according to EMAP, Itaqui will have a total export capacity of 15 mmt. Other investments are envisioned in Itaqui (e.g., construction of a passenger terminal and expansion of container port operations). According to EMAP, when investments have been realized, Itaqui will be one of the ten most modern ports in the world.

Vale, a Brazilian company, is a key player in Itaqui operations. It owns the Carajas Railway, which links Itaqui with the Carajas mining operations in eastern Para. This is the longest privately owned railway in the world with thirty-two cars each with the capacity of 106 metric tons. The Carajas Railway is linked to the North-South Railway in Acailandia, Maranhao, which extends south into the soybean growing area of Tocantins, reaching down to Porto Nacional. According to post sources at Vale, the North-South Railway has eighty cars, each with a 92 ton capacity, which are completely dedicated to transporting soybeans. The North-South Railway also has plans to double the number of cars which it will use to export soybeans.

Vale officials point to the strategic location of Itaqui in exporting soybeans which are grown in areas which are relatively close to this port. For example, southern Maranhao includes an important expansion area of the agricultural frontier in which MY2012 soybean production reached 1.676 mmt planted to 559,700 ha, according to GOB data. According to Maranhao Secretariat of Agriculture (SAGRIMA) officials, there is significant room for expansion of soybean production including in areas which are much closer to Itaqui than the southern part of the state. Tocantins, which is located to the east of Maranhao and strategically positioned to take advantage of Itaqui (i.e., connected to Itaqui via the North-South and Carajas Railways) is another state in which soybean production is increasing rapidly. For MY2012, soybean production, according to GOB data, totaled 1.36 mmt planted to 442,000 ha. Other soybean producing states that Vale envisions as future users of the port include Piau and Goias, whose production in 2011 1.27 mmt and 9.25 mmt, respectively.

**Final Observations:** When the Agricultural Counselor queried local government officials, growers, and private sector representatives about their vision of the future once infrastructural works are completed, they all waxed optimistic but acknowledged the major challenges which still needed to be addressed. They noted that investments in ports, waterways, and highways were essential to accommodate the expansion of the agricultural frontier, that the southern ports of Santos and Paranagua, were “saturated” and that with regard to the logistics of transporting the soybean and corn harvest from the Center-West, North, and Northeast to market, Brazil was at a “tipping point”: either the infrastructural works are completed or growers will be facing an increasingly untenable transport scenario which would have serious implications for Brazilian commercial agriculture in the relatively new production areas.

The following factors should be kept in mind when assessing the current state of play with regard to the foregoing logistical issues:

\*Local growers in the Amazon biome are much more aware of the importance of complying with Brazilian environmental regulations. This awareness is being generated by pressures from both within and outside of Brazil. As a reflection of this awareness, growers are enrolling their properties in the CAR system, data from which are enabling GOB authorities to home in on those who are engaged in activities which contribute to deforestation.

\*Traders who are sourcing soybeans grown in the Amazon biome are taking extra steps to ensure that they are procuring product from growers who are registered in the CAR system, thus reinforcing grower adherence to Brazilian environmental regulations.

\*It is clear that plans to implement projects which will upgrade export capacity in northern ports, located much closer to the relatively new commercial growing areas and strategically close to major European and Asian markets (via the Panama Canal), are attracting significant attention from major Brazilian and foreign-owned companies. Some investments (e.g., grain terminal construction in the port of Itaquí) are moving forward while others will be forthcoming once the requisite GOB approvals are finalized.

\*As more northern ports become operational, growers in the relatively new commercial production areas will be able to achieve significant reductions in transportation costs, which will make Brazilian soybeans more competitive in international markets.

\*The completion of BR-163, which connects Cuiabá, the capital of Brazil’s biggest soybean producing state, Mato Grosso, to the northern ports of Miritituba and Santarém, will play a key role in enabling product to be exported with lower transportation costs. The completion date of BR-163, however, has been extended on numerous occasions due to a variety of reasons. Completion is now pushed back to the end of 2014.

\*Factors which have historically worked against the completion of these critically important infrastructural works continue to pose major challenges to the achievement of greater Brazilian agricultural competitiveness. Among these factors are:

1. Lengthy bidding/contracting processes;
2. Cost overruns;
3. Slowness in the issuing of environmental licenses;
4. Lawsuits and other legal challenges to the infrastructural projects;
5. Shortage of skilled labor to manage infrastructural improvements;
6. Insufficient administrative capacity on the part of federal and local authorities. For example, one of Brazil’s most authoritative newspapers recently reported that the equivalent of almost US\$30 billion which the GOB had earmarked for investment in infrastructural works was not being tapped due to constraints on administrative capacity



and the complexity inherent in getting all necessary approvals. Please see O Estado de Sao Paulo, “Governo tem R\$59 bilhoes para investir, mas nao consegue gastar”, p. B-1, July 8, 2012.

**Additional Information:** For additional information on the ports mentioned in this report, please refer to the following web sites:

[www.cdp.com.br](http://www.cdp.com.br) (Ports in the state of Para)

[www.docasdesantana.com.br](http://www.docasdesantana.com.br) (Port of Santana)

[www.portodoitaqui.com.br](http://www.portodoitaqui.com.br) (Port of Itaquí)

[www.vli-logistica.com](http://www.vli-logistica.com) (Information about Vale)

### **Appendix I: Map of the Ports of Northern Brazil**



**Source:** SECEX and FAS

**Appendix II: Routes to Principal International Markets from Brazil**



Source: FAS analysis of data from NETPAS