CLASS VII TOUR TO BRAZIL (2005)

March 12, 2005, Day One – Glennis Zimmerman, Scribe

At 8:00 AM, the members of KARL Class VII gathered at Kansas City International Airport to embark on our tour of Brazil. With us were KARL President Jack Lindquist, and KARL Board members Warren Weibert, Jay Armstrong, Phil Gjerstad, and Gary Cotterill and his wife Marie. Those of us who had been accompanied by our families bid a goodbye to them before getting in line with our tickets to begin the process of checking in for the first of thirteen takeoffs and landings on the trip. (Andrea Stuber, who will be married April 16, had a difficult time leaving her fianc é Brian Bauck, even knowing she would see him again in twelve days.) After checking in and going through security, we spent the remainder of the time till our flight catching up on each other's news and worrying about what we might have forgotten for the trip.

Our flight to Detroit took off right on time. We landed in Detroit to a much colder day than we left in KC. Luckily we did not have to get out in it. Since we didn't have much time between flights, lunch was pretty hurried and wherever we could find it. Most of us chose McDonalds. Our next flight took us to JFK airport in New York. Here we had about three hours before our flight to Sao Paulo. This gave us time to look over the duty-free items in the shops, get something to eat, and spend some time relaxing before the flight.

Our flight was to take off at 6:45 PM. But we were not so lucky. The flight was delayed for almost an hour taking off. This was a little worrisome, because we had only about 1 ¾ hours at Sao Paulo before our next flight the next day. But as we climbed on the Varig Brazil plane, we were all excited at the adventure that we were beginning. And as midnight came, we were watching a movie, reading a book, or trying to sleep somewhere over the Carribean on our way to Brazil.

March 13, 2005, Day Two, Nancy Wilkens, Scribe

The Class VII International Study Tour to Brazil began yesterday at 8:00 a.m. with check in at KCI Airport. We were in "travel mode" all day yesterday and today.

We landed in Campo Grande on our way to Cuiab á . We arrived in Cuiab á , capital of Mato Grosso State, around 11:10 a.m. Sunday morning. Several people including Jim Michael, Jeanne Traskowsky, Chris Trumble, John Brewer and Fred Diver did not have their luggage. Plus we were missing two boxes of Kansas wine that were intended to be used for speaker and tour host gifts.

We boarded a motor coach and decided to eat lunch before our three hour drive to Rodonopolis. We went to a nice restaurant, Boi Boa in Cuiab á for Sunday dinner. Dinner and drinks were on our own. The meal cost $20 Reais. It was a Brazilian BBQ buffet, known as a churrascarias. We definitely looked like weary tourists after 24 hours of traveling and the Brazilians were all in their Sunday dress. We did get quite a few looks. The food was some of the best we ate. They came around to our tables with large skewers of cooked meat. They had beef, pork, chicken, sausages, and pineapple grilled on these swords and they serve you at your plate. They keep coming around with all sorts of selections to choose from until you are finished. We also got our first ice cold Brazilian beer. It was very hot compared to Kansas and the beer was very cold.

At 1:30 p.m., after a filling meal, we were ready for a perfect road trip to Rondonopolis via bus. Rodonopolis is in the heart of the agriculturally booming Cerrado region. Robison gave us a tour orientation en route. We stopped at a truck stop on the way for a bathroom break and refreshments. This truck stop later on was named the "Road Kill Cafe" on our return to Cuiab á .

We arrived at our hotel at 5:30 p.m. after a long and hot bus trip. We went to the local mall for dinner. After dinner it was back to the hotel for most of us for a good night's sleep.

The remaining six group members that were delayed were in route during this time period. They ended up making a connecting flight to Cuiab á through Brasilia, the Nations Capitol. Once in Cuiab á they collected their luggage and the lost luggage from the earlier group. By prearrangement via Robison, our guide, they loaded up in an older model van taxi and headed to Rondonopolis at a cost of 600 Reais or about $40 per person. They arrived at the hotel around 1:15 a.m. Monday March 14, 2005.

Monday, March 14, 2005, Day Three, Scribe - John Wempe

After two days of traveling and getting settled into their quarters at the Vila Verde Hotel in Rondonopolis, Mato Grosso, the KARL Class began their day in the hotel meeting room with a geography lesson and orientation provided by our guide and translator for our tour, Roselyne Lesur and Robison Scorsolini. They provided an overview of the Mato Grosso region describing in detail the frontier region for Brazilian agriculture.

Ms. Lesur introduced Edeon Vaz Ferreira, Executive Director of Polato Seeds, a leader in Brazil in the production of certified soybean, cotton, and rice seed. Mr. Ferreira also serves as a director for the Mato Grosso Foundation, an association of seed producers that performs research and development for its members. Polato Seeds was founded by its current owners, Orlando and Caetano Polato in 1981. Polato Seeds is the largest producer of soybean (12% market share) and cotton seed (20% market share) and the second-largest producer of rice seed in Mato Grosso.

Mr. Ferreira related some of the problems facing Brazilian agriculture: 1) Distance to port facilities from agricultural production regions. 2) High taxes on producers. 3) Lack of infrastructure to move inputs into agricultural regions and difficulties transporting production for processing or export. These problems would become a familiar refrain throughout the tour.

All transportation of agricultural production out of Mato Grosso state is currently by trucks over a highway system that is woefully inadequate to handle the ever-increasing number of trucks on the road. The development of the Mato Grasso region has been so rapid that the infrastructure may take years to catch up.

The Mato Grasso Foundation was started in 1989 by the seed producers to provide research on seed production for its member-producers. The Foundation's laboratory has tested over five million bags of seed for its members.

Polato Farms currently operates 43,000 hectares (107,500 acres) owned and rented land. They use 121 tractors, 51 combines, 62 planters and 3 spray planes in their farming operation. They utilize engine oil analysis as a maintenance tool for their equipment and typically perform engine overhauls on their equipment at 11,000 hours of operation.

The average tractor operator for Polato Farms earns $400 per month plus food and housing. This would compare to a bus driver in Brazil that makes $300 per month.

Mr. Ferreira discussed some of the costs associated with soybean and corn production. He related that soybean inputs amounted to $500 per hectare ($200 per acre). This represents an increase of about $120 per hectare due to having to spray multiple times to combat Asian Rust. Corn inputs are running $450 per hectare ($180 per acre). Soybean seed is costing $11 per bag.

Genetic Modified varieties of soybeans have not been legal in Brazil until recently approved by the Brazilian Congress. Some GMO beans have been grown in Mato Grosso from seed smuggled into the country from Argentina. Testing is performed at the soybean crushing plants and the ports to detect GMOs.

Asian Rust has been a problem in the region for three years. It is being controlled in most areas, but in some areas has shown resistance to five applications of fungicide. Mr. Ferreira estimates that they are five years away from developing Asian Rust resistant varieties of soybeans.

Mr. Robison provided some general statistics about Brazilian agriculture to the class as a means of outlining the importance of agriculture to the Brazilian economy and the potential as a major player on the international stage. Brazil currently has 288 million hectares (720 million acres) of land involved in agricultural production. It is estimated that there is another 106 million hectares (265 million acres) available for expansion. Agribusiness represents 1/3 of the gross domestic product of Brazil and is its number one export. Transportation costs in Brazil run $8/tonne/1,000 km for shipment by river barge; $16 by rail; and $32 by truck. Due to the lack of infrastructure in Mato Grosso state, transportation amounts to about 27% of the cost of producing soybeans and delivering them to market.

A highway construction plan has been put in place that creates a partnership between the government and private entities for the construction of roads. The partnership involves the purchase of materials by the private sector with the government providing the machinery and manpower to build roads. The new roads would be toll roads that the contributors to the project would be able to use for a specified length of time without having to pay tolls. Mr. Robison expects this program to produce significant improvements to the infrastructure of Mato Grosso.

After the briefing by Mr. Robison, Ms. Lesur, and Mr. Ferreira, the KARL Class traveled via bus to the ADM soybean processing plant in Rondonopolis. Mr. Luiz Antonio Bavaresco Cristovao presented a briefing on the operation of the processing plant and Brazilian agriculture in general. Mr. Cristavao is the Commercial Grain Area Manager for ADM in Mato Grosso. The processing plant crushes 6,000 tonnes of soybeans per day in the production of oil and soybean meal. ADM has fifteen branches in Mato Grosso that warehouses soybeans. The meal and oil is shipped to the Santos port by truck and rail. Currently there is no rail extending into Mato Grosso state. Mr. Cristavao states: " If the structure of the roads does not improve, it will strangle the whole system." ADM provides operating loans to the soybean producers for crop inputs at 13-14% annual interest. The crop loans are typically made in June and paid when the crop is harvested and sold in March and April. ADM's main competitors in Mato Grosso are Bunge, Amaggi, and Cargill. The price paid by ADM to the producer for soybeans is typically $1.20 to $1.30 under that of the Chicago Board of Trade. Nearly all of the soybeans and soy products produced in Mato Grosso are exported.

After the briefing, Mr. Cristavao led the class on a bus tour of the ADM facility that was constructed in 1986 and employs 230. One of the interesting facts about the plant is the use of wood as an energy source in the crushing process. A large quantity of firewood is stockpiled for this use.

The afternoon agenda for the KARL Class included a visit to the offices of the Andre Maggi Group in Rondonopolis. The Group was founded by Andre Maggi and is currently headed by Blairo Maggi, the current governor of Mato Grosso. The class was welcomed by Altair Fabris, Finance Director for the Agro Division of the Maggi Group. Mr. Fabris showed a video that provided an overview of the Maggi Group operations.

The Maggi Group has four business units: Agriculture, Import / Export, Shipping , and Energy.

The Agricultural Division is responsible for operating about 475,000 acres of soybean, corn, and cotton production, primarily in Mato Grosso state. The division also operates soybean processing facilities.

The Import / Export Division trades agricultural commodities, and the commodity derivatives, and agricultural inputs on the world market.

The Shipping Division operates a grain terminal on the Amazon and barges on the Amazon and in the coastal regions of Brazil.

The Energy Division is responsible for a hydroelectric generation facility and a thermoelectric generation facility that provides electric power in central Brazil.

In 1997 the Andre Maggi Group founded the Andre Maggi Foundation as a philanthropic entity that is responsible for such varied activities as providing milk and bread to children, schools, anti-drug partnerships, reforestation projects and other community development initiatives.

Christopher Barry Ward, a large cotton grower in the Mato Grosso region, briefed the KARL Class on his recent testimony before the WTO that dealt with the cotton subsidies currently in

place with the farm program in the United States. He was very knowledgeable and persuasive in his description of the unfairness of the cotton subsidies and their effect on the world market. According to Mr. Ward, the current subsidy programs make it difficult for the Brazilian cotton producers to be profitable at the current world market price.

After a question and answer session with representatives of the Maggi Group and Mr. Ward, the KARL Class returned to the Vila Verde where they were free for the evening to sample the local cuisine, tour the city, and otherwise relax and enjoy Rondonopolis.

March 15, 2005, Day Four, Chris Trumble, Scribe

Departed Vila Verde Hotel, Rondonopolis, Mato Grosso, at about 8:15 a.m.

Traveled South West out of Rondonopolis through the Cerrado and began climbing into highlands. The roads were packed with semi-trucks carrying soybeans. The highway was narrow and at times comparable to some of our county roads.

While we were traveling through the beautiful valley, we often were able to identify cattle that looked like they came from Hobbs Ranch. Tall, lanky cattle that are of the Nelore breed were grazing in the tall grass (unless in overgrazed areas). For more information on this breed, visit this web site: www.ansi.okstate.edu/breeds/cattle/nelore/

At about 9:15 a.m., we were close to the plateau, so we stopped and took pictures.

As we ascended the plateau, the terrain flattened and various crops including soybeans and cotton were identified. I had trouble taking notes, as the road was pretty rough.

At 9:40 a.m., we stopped for a break at an extremely nice facility! This was definitely a newer village that was on the edge of the frontier. The facility where we took our break included a bathroom, showers, convenience store, deli, restaurant, a shady looking hotel, and a better than average bookstore (According to Terri Hobbs). Later, we ate lunch at this restaurant.

We arrived at the Polato farm at about 10:15 a.m. We were attended to by two Agri-managers: Bento Mandel Ferreira and Orlando Polato Filho, son of the owner and created quite a bit of interest from some in our group.

The group discussed the crops that were being grown on this farm. Believe this farm grew the following: 80% soybeans, 10% cotton, and rest made up by other crops. Wheat would not grow well at the current altitude at 700 to 750 meters above sea level.

The Polato family immigrated to Matto Grasso area from Parana in 1981. They started with roughly 800 hectares and built to roughly 20,000 hectares.

Northern Matto Grosso farm is planted for commercial production; Southern Matto Grosso farm is mainly for seed. Rainfall usually approaches about 80" per year. Received almost 20" in January. Employees: 750 at peak season; 300+ during normal season.

Below is a typical crop year at this location:
January – Fertilize Cotton and apply herbicide.
February – Continue work began in January. Also Sow harvest Corn.
March – Harvest Soybeans. Apply insecticide on cotton.
April – Between harvest seasons.
June to Aug – Harvest Cotton and plant millet.
September – Add lime to soil; continue with millet planting.
End of Sept./Oct. – Complete Millet
Oct/Nov – Soybean Planting
Dec. – Plant Cotton
Partial Crop rotation with SB and Cotton.

Micheal Bahr, from Albert, KS, asked, "What pests do you worry about"? The answer was: Rust, SDS, aphids/beatles, etc. They control with chemicals by applying 1 to 4 times per year. As areas expand, they tend to have bigger cultures in fields, which increase the lifespan, population sizes, and the need for more control.

Fertilization: 90kg/hectare of K_2O_2 and 95 kg/hectare of P_2O_5. When first opening soil, they try to strike a balance of 15 ppm of P and 18 ppm K. Original pH will be about 4.5 and they elevate it to 5.5. Organic matter is about 2.5%; they add millet to increase.

From what I understand, when first breaking soil, the profile is such that they grow crops like rice. They use dry fertilizer and it takes the nutrients about 5 to 6 years to move deep enough in order to grow soybeans effectively.

Soybean rust was introduced through air currents from Africa. It followed this pattern: Asia -> Africa -> Southern Brazil -> Paraguay. And, of course, now we know the hurricane introduced it to the USA.

In 2002, Matto Grosso had some Soybean rust. Subsequently, each year it has damaged the productivity. The agronomists proactively survey the crops. They believe the intensity has a lot to do with climatic conditions.

After our lecture, we viewed a large shed/machine shop that held a lot of machinery. The interesting part of our farm tours is the fact that the farms had a lot of labor, but relatively smaller equipment compared to their USA counterparts.

We toured the Polato soybean seed facility, which has the capacity to dry 600 ton per day and store 6,000 ton. They use natural petroleum to dry the seed. The product flow is as follows: Soybean is cleaned and waste removed => 4 sizes of seeds separated (The precision enhances planting effectiveness) => Symmetric table is used to separate seed one more time based on Specific Gravity. The smaller seed is used as grain. The bigger seeds used for planting. Daily production = 20,000 bags per day @ 20 kg each.

GMO will be planted this year on their northern farm.

The Paloto farm produces about 60,000 bails of cotton on 7,000 hectares. The yield is about 4 bails per acre versus 1 bail per acre in Kansas. It will be interesting how the Kansas industry is affected once the subsidies are removed.

At 2:00 p.m. we arrived at the Girassol farm to meet a genuinely friendly farm manager by the name of Marcello. This was another large farm with workers living on sight. As with the Polato farm, the families lived on sight and were educated in the local town. Most amenities for the production workers were supplied directly by the farm owners. Examples include education for children, housing, food, recreation, etc.

We had the opportunity to watch the two airplane crop dusters applying insecticide to the cotton crop. Interestingly, while standing near the runway, it appeared we were going to witness a mid-air collision. Luckily, the hot shot pilots made an adjustment; or they were just showing off for their audience!

Girassol farms has their own cotton gin which contained 12 gins that process 60,000 bails per year during the five months that it runs 22 hours per day x 3 shifts x 7 days/week.

In order to get the cotton to the gin, Girassol farms has 11 cotton pickers, about 15 planters, and no GPS.

As we were headed to the cotton field, we were introduced to the 150 workers walking back from the fields carrying the largest hoes I had ever seen.

We also found out what a good agronomist makes in Brazil – about $400/month. It was suggested that we import the agronomists, much to Michael Bahr's chagrin.

When we arrived back at the hotel, we celebrated the birthday of Mr. John Wempe.

Wednesday, March 16, 2005, Day Five, Kimy Nash, Scribe

A long day of traveling was in store for us on Wednesday.

The group was able to get a little extra needed sleep in the morning as the bus left Rondonopolis at 10 am to head back to the airport in Cuiaba. After arriving in Cuiaba our tour guides led us to a gift shop that had Native American handmade articles available for purchase. It was a very neat shop and the class enjoyed seeing the culture of Brazil.

At the hot open-air airport, the class stood in line to get checked into our flight to Sao Paulo. During our wait we were entertained by a theatrical skit by some local Brazilians. We didn't know what they were saying, but it was fun to listen and watch their performance.

Back in Sao Paulo, we boarded another plane on our way to Curitiba, the Capital city of the State of Paraná i n the southeastern part of Brazil. We arrived in Curitiba very late Wednesday night and checked into our 5 star hotel. This was a drastic change from what we had experienced in the new frontier town of Rondonopolis. We enjoyed our short stay in a very nice city.

All in all it was a good day for the class to bond together.

St. Patrick's Day, March 17, 2005, Day Six, Jeannie Traskowsky, Scribe

KARL Class VII stayed in a wonderful motel in Curitiba, the Capital City of the State of Paran á .

All woke well rested and ready to go. The breakfasts in Brazil are a nice selection of fresh fruits, cold cuts and cheese, breads, and even chocolate cake. The coffee is tasty.

Rod Jones and Matt Johnson left our group at this time to return to Kansas for a family emergency. Rod's comment upon returning to the States is that he and Matt were very impressed with the friendly people in Brazil and how helpful they in making arrangements for their return.

Soon after they left the KARL group on 3/17, they had a trip scheduled to Sao Paulo. In Sao Paulo, they had a night flight scheduled into Dallas, TX on another airline. They were fortunate that a relative was traveling in from Houston,Tx and picked them up at the Dallas airport one hour after they landed so they were able to get back to their families quickly. Rod and Matt both plan to return to Brazil at a later date.

The KARL Class drove through the country side and we immediately noticed the roads were much improved, farms better groomed and Ponta Grosso more like home. This area had more years of development (130 years) and there was an effective infrastructure in place.

Ponta Grossa was the site of our meeting with IMPAR, crop consulting service providers for the area. Rodrigo de Arau'jo Rodrigues and Germano Bratz, are consultants with IMPAR and they joined our group for information and discussions.

Rodrigo is a crop consultant and farmer and the son of Brazil's Agricultural Minister. He was a good speaker, and provided our group with good information on Brazilian agriculture. Rodrigo is very optimistic about agriculture in Brazil -" the indicators are for substantial growth". Ohio II Power Point Presentation

Cargill, Bunge and ADM are the primary lenders for the soybean producers. Currently the truck is the storage facility for crops. Rodrigo related an incident in the past years, where there was a 70 mile backlog of trucks waiting to unload - so there is a goal to increase storage facilities. The "frontiers" in Brazil are expensive to develop. The owner must first build a road before the land can be cleared of trees and other growth.

After lunch, the KARL Class took a trip to the Santa Marie farm, where the discussions continued. "No-till" is used to protect the soil from strong rains and helps to maintain the soil moisture. Our first stop was a visit to an edible bean field. It was unusual for our group to stand in a acres and acres of green snap beans.

Across the drive was a harvested field of corn and to the north, a soybean field ready for harvest. In addition to visiting the fields, we were also able to tour the farm buildings and facilities. We observed farm equipment typical of what one would see on a Kansas farm.

Interestingly, there were cattle in a lot being fed silage. They were crossbred 3/8 Charloise with the Brazilian breed. A special treat was coffee and cakes served by the kitchen staff of the Santa Marie farm. We were able to see the kitchen and laundry facilities. The children of the farm workers greeted us as well and we exchanged a few English phrases along with trinkets, toys and coins from the US.

The KARL group returned to Ponta Grossa to the Philadelphia Hotel to freshen up, check emails and to spend the evening at a local mall for dinner, consumer studies (shopping) and entertainment.

March 18, 2005, Day Seven, Lea Stueve, Scribe

The day started off with a 45 minute bus ride. Warren Weibert led the discussion based upon the two different regions of Brasil that we had visited. Some differences that were noticed included that "the cattle in the south have more muscling", "the roads are much better", the "weather/climate" is more agreeable, "the farming in the South has more intense management and there is "less room for error". It was noted that there was "not as much cotton" and that one could "hardly see the terraces in the fields".

Our first farm visit of the day was the cooperative farm of FAZENDA FRANK'ANNNA. Richard Franke Dijkstra, his brother-in-law, and his father all work on and own the farm. Richard hosted us for the morning. His grandfather came to Brasil in 1948 from Holland and brought machinery and cows along with him. Richard's father was just five years old at the time. Richard is primarily in charge of the Grain/Crops while his brother-in-law manages the livestock operation.

It was stressed that for an Integrative farm such as theirs, communication is very necessary. They have to determine what field goes to their cash crops and what fields go to produce feed for their livestock. There farm is 1,400 Hectares in the south and they have bought 800 Hectares in the North that is not currently developed. The farm land in the south would sell for $3,000 an acre.

They have 430 milk cows and 380 sows in their livestock operation. They started their modern day hog operation in 1976 and their modern day dairy in 1989. Richard produces all the forage for the dairy cattle. They feed the cows silage 3 times a day and each cow produces 30-32 Liters of milk a day.

They have had a ‘no-till' system in place since 1976. Their organic matter is increasing. Their average corn production is 180 bushels and they produce 55 bushels of beans per acre. 50% of their soybeans and corn is used on the farm with the rest being sold to the market. They also produce Black Oats and Barley as cash crops. Their soil PH levels are 5.2-5.8 and the soil is composed of sand and clay. Top soil erosion is a problem as it can rain 3-4 inches in one hour. They use either millet or edible beans as a cover crop.

Richard informed us with that many cattle and pigs, waste management is a big issue for their farm. Therefore, they have created a Bio-Digestary system to handle this problem and save them money. It took them more than 10 years to figure out how to use their bio-gas to make it effective and very environmentally friendly. They mix the dairy and swine waste together in one area. It then is moved through pipes down to a big holding area that is covered with a rubber, balloon like top. They move the gas from the bottom to the top to produce more gas which is used to help with farm energy needs. They dry 60% of their corn with bio-gas and that has saved them over 30,000 Reais a year. They can store up to 7,000 cubic meters of gas and they have a filter that takes off 80% of Sulfur from gas. This system cost $30,000 to build and was designed by a consultant with experience in environmental waste management. They hope to expand the capacity of their farm to utilize the bio-gas and hope to be able to take advantage of future carbon credits.

Richard also talked about the farm in the North that they have invested in with other farmers. This land is on the high plateau. They have bought the land and built the road, but that is as far as it goes right now. The land up North went for $35 a Hectare when it is not developed and not in production. However, it costs about $2,000 Reais per Hectare to clear the land and get it ready for use.

Our class was very impressed by this farm and the ingenuity that is used to make it successful. We also noticed that the family was already planning for how to bring their children into the farm with them....a spirit of optimism was very prevalent.

After the farm visit, we got on the bus and went to Carambei. We visited the museum, Casada Memoria, which showcased the Dutch heritage in the region. This community was established in 1911. They also established the Batavo Agriculture Cooperative in 1941. The replicated Dutch village and historic farm machinery were the favorite exhibits of this experience.

When we completed the Dutch village museum visit, we ate lunch at a truck stop outside of town. The buffet and ‘gift shop' proved to be popular attractions for us road weary travelers! After our extended lunch break, we hopped back on the bus and headed to the current Batavo Cooperative Offices.

Luis Henrique spoke to the KARL group about the benefits and mission of the Batavo Cooperative. The Cooperative was established in 1941. It has 536 members and associates and 350 employees. Over 50% of the farms in the area belong to this Coop. The main activity is Agriculture, Dairy, and Hogs. They are capable of storing over 240,000 tons of grain and they produce 250,000 bags of seed a year.

The Coop also has dairy and swine operations. They deliver the milk to a facility that is not part of the Coop. They also deliver their pork to a company that is not part of the Cooperative Batavo also has stores with parts and accessories, vet pharmacy, fertilizer stores, and gas stations to attend all kinds of customers. Batavo Corporation made $8 million dollars in profit last year.

Batavo has combined with other local Cooperatives to sponsor and fund the ABC Foundation. The ABC Foundation does the research for these Cooperatives and provides Technicians and technical support to members. This private institute for agricultural research covers the areas of soil fertility; weeds, insects, and disease; Pasture maintenance; and Milk production. This

Foundation was started due to a ‘lack of response' from the Universities and their Extension programs. It costs farmers 10.5 Reals per Hectare a year to maintain this Foundation.

Rodrigo Rodrigues finished the presentation by explaining that one of the biggest barriers facing farmers in Brasil is transportation issues and also that they are not yet able to utilize the markets. An example of this was given. Most of the soybeans are harvested in March and April (68%). Brazilian farmers are not able to ‘hedge' right now, rather, they produce it and sell it! He also told us that Port Expenses are $6 per ton and that large back-ups can occur at the Port. He said that at one point, trucks were backed up 71 miles trying to deliver their crops to the Southern Port of Paranagua.

After the formal presentation, we were able to tour the ABC Foundation's developmental and test plots. The general consensus among KARL members in the know was that this was very ‘impressive'.

After the tour, we headed back to Ponta Grossa to do some shopping at a western store. Upon our arrival, we were disappointed to see that it was already closed. However, Germano Bratz jumped out and talked to the owner of the store. The store owner decided to make an exception for us and opened the store back up!! That proved to be a wise business decision for the store owner as he did quite a business with the KARL program.

After shopping, we headed to the motel, where those that wanted to went to a nice restaurant for dinner. Rodrigo, his wife Rachel, and Germano were our invited guests for the evening. After supper, the KARL group had free time to enjoy local nightlife, shopping, or to just get to bed early!

March 19, 2005, Day Eight, Andrea Stuber, Scribe

This was our third morning in the city of Ponta Grossa.

Our first stop this morning was the Bunge wheat mill. As we arrived, we saw firsthand the long line of trucks waiting to unload beans – the drivers sitting around casually in the shade of trees or trucks.

Upon entering the plant, we were greeted by three Bunge employees who would stay with us for the duration of our visit. Our introduction to Bunge was a video in Portuguese. Our translator gave a briefing at the end telling us the video talked about Bunge world-wide as it related to fertilizer, food processing, and grains.

The wheat plant currently crushes 800 metric tons per day. Construction is underway that will allow 1700 tons of wheat to be crushed in a single day. The plant employs 114 workers.

The majority of the wheat brought to the Bunge facility comes from Argentina. It is a hard wheat. Brazil grows soft wheat and production is not enough to keep up with the country's consumption. We were also told that Brazilian wheat is not as good as that from Argentina.

Once the wheat is unloaded, it is precleaned and separated by quality. There is a quality grade with a total of 18 silos and a holding capacity of 14,000 tons (two months of production).

We were able to see the process of making flour from crushing to sieving to bagging. The end product was bagged flour brand-named SOL.

Our final stop on the tour was quality control. Bread and cakes were being baked to ensure desired quality was being achieved. We were allowed to sample the fruits of their labor. Both the bread and the cake were delicious!

Bunge is a very environmentally conscious company. They take great pains not to pollute the environment. The water used in the plant is treated before being discharged into the river. Every 30-40 days the river water is collected to test for contamination. Recycle bins are also placed at various convenient locations to minimize waste.

The Bunge wheat facility employees were very friendly and generous. Each of us was given a small bag of flour, a pen, and keychain to remember our tour.

Next, we visited the Bunge soy processing plant. A facility guide provided information as we took a driving tour. The soy plant employs 150 workers and crushes 3250 metric tons per day –

nearly twice as much as the wheat plant. The plant is open 24/7 and unloads 450 trucks per day. The soybeans come only from the state of Parana ´ . The holding capacity is 340,000 tons. The plant produces bran and oil with 99% being exported.

This plant, like the wheat plant, is very environmentally friendly, with recycle bins placed at convenient locations.

That concluded our agriculture tours for the Brazilian experience. Up next: the bus trek west toward Iguassu Falls.

March 20, 2005, Day Nine, Jess Schwieterman, Scribe

At 8:30 we left for Iguassu Falls from Guarapuava. Guarapuava is an agriculture area in the western part of Paran á State of Brazil. This is rolling landscape with areas for grazing, soybeans and corn. Corn harvest was active in the area west of Guarapuava.

We summarized what we thought of Brazilian Agriculture on this portion of the trip since it was the last part of the technical agriculture part of the tour. Each one of the classmates presented their views of the Agriculture tours in a short 1-2 minute speech on the bus microphone. Chair of the Day Gary Harshberger started the summarization of Brazilian expanding agriculture by comparing to the United States 100 years ago but with technology. Fred Diver pointed out they do not have the incentive to build infrastructure and that is why we need to make upgrades to the Mississippi to compete with them globally. Andrea Stuber was not impressed with the size of the equipment as it was small and inefficient. Jeannie Traskowsky reminded us we had seen the best of the best in Brazil. Derek Schrader was impressed with their ability to produce forage for beef and they have a passion for agriculture. John Wempe was impressed with the No-till farming practices.

We stopped in Laranjeiras at a truck stop for a morning break. We were able to try a special local herbal tea drink (Maté) for relaxation. It tasted like alfalfa haylage.

Warren Weibert spoke about the cattle in Brazil. They use Delore cattle which are short haired white animals which only yield around 50% carcass weight. Most of the cattle in Brazil are grass fed.

Dana Hoffman gave a very fitting vespers service by referring to our ability to teach the world about Christ.

At noon we stopped at Cascavel at a BBQ for dinner. It was very good with the skewers of beef and buffet of pork and other tasty items. We also found a farm equipment dealer open on Sunday as it was harvest in this region.

We then relaxed on the rest of the trip to Iguassu Falls. This was a very hot afternoon; it was over 100 ° F when we arrived to our destination so we cooled off by the pool at the hotel in Iguassu Falls. We were within a few miles of the countries of Paraguay and Argentina.

A quick, "Hey, let's go to Argentina" call came out at 5:00 and we all changed for a trip across the nearby border to visit a trade zone Duty Free Mall for items to take home. The transportation was provided free by the mall. Few things found were unique to the region, more like what we could get at home, only at a discount. We simply went so we could say we also went to Argentina.

March 21, 2005, Day Ten, Derek Schrader, Scribe

After eight days of Ag tourism and travel, we were simply "tourist" on Monday, the 21 st . We boarded the bus with Wilson, our guide, and set off for Itaipu Dam. This five mile-long structure is a joint venture between Brazil and its neighbor, Paraguay. It is the largest hydroelectric power plant in the world, consisting of 18 turbines and two more in installation.

This plant is responsible for the generation of 25% of Brazil's electricity needs.

More than 90% of Paraguay's electrical needs are met by Itaipu. Paraguay only utilizes energy from one and a half turbines; the rest of the electricity produced from its half of the turbines is sold to Brazil. Construction on the dam began in 1974 and was completed in 1985. Thirty-eight thousand workers worked 24 hours/day to complete the 15 billion dollar project. This creation hosts 1,500 visitors and replaces 430,000 barrels of oil per day.

Our next stop was the Iguassu National Park. This 460,000 acre national park is the largest remaining rainforest in southern Brazil. It is home to hundreds of animal species and 3,000 guests/day. The most impressive feature of this park has to be Iguassu Falls.

This natural wonder is provided by a series of 275 waterfalls. The shear beauty, force, and volume of water can only be appreciated up close and personal (which is exactly what we did). Our entire group rode to the water's edge below the falls in jeeps and boarded two large rafts. We then traveled up the river through the violent current to the base of the falls thanks to twin 150 horsepower outboards mounted to each raft.

The wet and wild ride was capped by a trip or shall we say, a dip (or several) under the falls courtesy of our river guides. For most of us it was the only water we drank that didn't come from a bottle. Following the ride we were rinsed again by the first rain storm they had had in forty-five days. Once again, we got our money's worth of water. When the rain stopped we walked along the river on a trail to a drier vantage point where we were able to take pictures of the marvelous creation.

The only way to the top an outstanding day is an outstanding evening. We were treated to a wonderful dinner theater, the Rafain Show. The evening was co-sponsored by KARL alum Brian Dunn and his wife Carolynn. Brian was a member of Class IV and remembered the fabulous Tango show his class got to see on their tour completion- celebration day. The food was without question, the best of the entire trip. The highlight was native dancing and music that was performed through the meal. It was an experience we won't forget. I hope Jack is practicing his bolo routine for graduation.

March 22, 2005, The Return Home, Jason Ryan, Scribe

During the morning hours about half of the group went to a bird sanctuary to capture photographs of the exotic bird species of the Brazilian rainforests. The abundance of flora and fauna was more than expected in the microclimate provided in the mini rainforest at the center. Even while under the canopy the group could not escape the high humidity and heat of this southern part of Brazil.

Others of the group did their final packing or shopped in downtown Foz do Igua ç u.

Following lunch on our own we left the hotel and boarded the bus one final time. The class was tired and anxious to begin the journey back home. The bus made one stop at a souvenir shop where everyone picked up those last minute gifts to keep them in good graces when they arrived home.

After the souvenir shop we headed to the airport and began the grueling process of getting home. There was nothing exciting to report other than the heat at the airport as we spent the rest of the day in airports and airplanes. My shift ended at midnight as we traveled over the Atlantic ocean on our way to Miami, Kansas City and our own homes in the Great State of Kansas.