

Memo

Subject: Trip Summary – US Delegation – Brazil Farmer to Farmer Exchange
Date: 5 August 2009
From: Brazil Exchange Participants

Purpose of Trip

- (1) Expose US producers and industry support professionals to on-the ground challenges and opportunities related to climate change issues in the Amazon/Mato Grosso region;
- (2) Learn about alliances and initiatives to protect land ownership rights, reduce emissions and deforestation, and rehabilitate riparian zones;
- (3) Observe impact of climate changes on indigenous tribes and producer operations;
- (4) Facilitate discussion amongst agricultural producers regarding challenges and opportunities for agriculture in the US and Brazil;
- (5) Observe the factors that influence indirect land use change in Brazil.

Participants

Mark Gaede, DC -Director of Government Affairs for Environmental Policy for the National Association of Wheat Growers

Jessica Johnson Bennett, DC -Director of Public Policy for issues including biofuels, energy and climate for the National Association of Corn Growers

Fred Yoder, Ohio - Former President of the National Corn Growers Association and also a member of the Farm Bureau

Dwayne Siekman, Ohio - Executive Director of the Ohio Corn Growers

Bill Horan, Iowa -Steering committee member of 25 x 25 and NCGA's Taking Ownership of Grain Belt Agriculture and a leader in numerous biodiesel, ethanol and other renewable energy initiatives



Kristin Duncanson, Minnesota - Farmer and former member of the board of the American Soybean Association, Vice-Chair of the Minnesota Agri-Growth Council, and Chair of the Governor's Biodiesel Task Force

Dick Wittman, Idaho - Farmer, rancher and timber holder and founder/former President of the Pacific Northwest Direct Seed Association

Justin Knopf, Kansas - Diversified producer and a member of the National Association of Wheat Growers and the Farm Bureau

Steve Irsik, Kansas - Farmer, rancher, and businessman, named Top Producer of the Year in 2005

Sponsors

Bryan Weigle - Project Manager with the International Program of Environmental Defense Fund

Laura Sands - Partner at The Clark Group, LLC and Coordinator of the Ag Carbon Market Working Group

Sara Brodnax - Director of Analysis at The Clark Group, LLC, covers issues including the role of land-based greenhouse gas offsets

Executive Summary & Conclusions

Trip was an eye-opening experience to see both on the ground and in the air what is happening in Brazil land management, deforestation, and economic development.

Conclusions that can be drawn from this trip:

- Major changes have already occurred in regional climates effecting rainfall, humidity, and forest health. Rains are more volatile; forests are now at severe fire risk to lower humidity; deteriorated water levels are negatively impacting fish populations.
- Indigenous tribes are struggling to retain cultures and maintain a sustainable lifestyle. Growth rates in tribal populations are not sustainable without expanding access to resources and adopting more modern economic and cultural practices. Significant outside support from government entities and local alliances is being directed to preserve cultures and supplement lifestyle with “measured transition” to cultural changes.
- Foreign “takeover” of Brazilian production regions is overstated. U. S. ownership of farmland in Mato Grosso is reportedly only about 1%.
- Regional and local alliances such as the Aliança da Terra are showing progress in balancing environmental preservation with economic development and access to markets. Alliances and



networks are bringing a diverse mix of environmental NGOs, government entities and producers together to achieve climate change and environmental goals.

- Government and social organization efforts to relocate Brazilian families to small farms have met with limited success due to economic realities of efficiency of scale. Even with significant government subsidy and on-the-ground implementation support, small farms find it difficult to be sustainable.
- The REDD (Reducing Emissions from Deforestation and Forest Degradation) initiative is building steam but is still in the very early stages of achieving changes in land management practices. It is exploring use of carbon trading as an incentive system to achieve its goals.
- U.S. policy makers don't have a valid basis for injecting the ILUC (Indirect Land Use Charge) into Cap and Trade initiatives. Feedback from Brazilian producers and policymakers make it clear local deforestation is driven by sheer economics, not use of corn and beans for ethanol. Land in the Amazon is much more valuable after clearing and developing for ag production than it is for growing a rain forest, particularly in the transition regions stretching from the southern edge of the Amazon south to more populated regions.
- Brazil is already a competitive force, but it will be an even more fierce competitor once it improves transportation systems. Roads and market access are the biggest factor now holding back profitability and cost of production advantages.

Trip Details

Days 1&2 - Flew from U. S. to Sao Paulo and then to Cuiaba in southwestern part of Mato Grosso for overnight stay; had dinner with Secretary of Rural Development for Mato Grosso. Population in Cuiaba has expanded from 70,000 to over 500,000 in a small number of years. Everyone in the delegation started working on Portuguese phrases, practicing with many local youth who were very excited on the airplanes to practice their English skills.

Day 3 – (AM) Flew in three small chartered planes from Cuiaba to Xingu National Park and Kamayura Indian Tribe headquarters. Were greeted by John Cain Carter, a rancher and close friend of the tribe, who would become our tour guide for the next three days. Tribe exists like it has for centuries, passing down cultural customs intact as possible. Tribal members were mentally sharp and in excellent physical health. Alcohol is strictly forbidden (a tribe member who violated the rules was beaten to death in the courtyard). Diet revolves around fish, wildlife, and manioc; clothing is next to non-existent. Members live in grass roofed huts. Population is growing beyond capacity of current resource base to support. Outside alliances, neighbors (i.e. Carter Ranch), and



philanthropists such as Dell Corp are working to help preserve culture but supplement economy with computer and satellite technology. Tourism and sale of tribal made artifacts is major source of income. Dell is helping with computers, documentation of tribal history, etc. Of particular interest were the chief's comments on the tribe's concerns about climate change and interest in carbon trading as a potential source of revenue. Before departing, the tribal members invited us to an "exchange" where they offered their handmade wares for sale. Our delegation "invested" heavily in the local economy.

In late afternoon, flew from tribal reserve to John Carter 20,000 acre cattle ranch, Fazenda Esperanca, located along the denuded Xingu river basin. John met and married Kika while attending college in Texas. Kika is a daughter of a renowned Brazilian rancher whose family was instrumental in bringing the Nelore breed of cattle into the country from India. The Carter Ranch is not large for the area, but it is on the fringe area where ranchers are fighting for dear life to hold onto their property in fights with squatters. We flew over massive farms/ranches sprinkled throughout the forest landscape. John told us we flew over 7 big ranch/farms that comprised over 400,000 acres. Cattle ranches are perceived as even more of a threat to the Amazon than soya farming. John is a key driver in the Aliança da Terra, a network involving producers and environmentalists promoting good practices and also working to protect their ability to own and control their lands. Squatters are a significant challenge; drier climates have made the forests more flammable and John's entire forestland was burned in recent years due to fires started by squatters. This resulted in cattle herd being significantly liquidated. On our arrival, John was working with armed forces who were preparing another expedition to purge squatters of both his lands and a neighboring Indian reservation. Much of the Carter Ranch and adjoining ranches are voluntarily re-foresting portions of their holdings to meet the 50 or 80% minimum requirements set forth by law.

Day 4 – (AM) Drove over jungle roads and a new "freeway" (slightly rocked new road that will be paved in near future) to visit Marawatsed Xavantes Reservation. This tribe was rounded up and relocated by government planes to another region in the 1966 (they were promised a better place). The tribe was allowed to return to its native land here just two years ago. Tribe has fought starvation, squatters, and disarray as it has attempted to re-establish its residency within the tribal reservation area. Catholic Church and government have built schools and church on newly rebuilt tribal headquarters. On our arrival, an armed force of BIA (Bureau of Indian Affairs) staff working with Indians armed in war paint, bows and arrows, and clubs was preparing to purge another group of squatters from their domicile. They had confiscated a tractor and water truck the previous day from squatters; these sat like prizes in the middle of the reservation grounds. Members of our delegation were prepared to take up the fight and one member was actually adorned in war paint by one of the warriors! Fortunately, we were allowed to leave before any bloodshed occurred!



(PM) Our delegation had the choice of flying and driving to a remote fishing village or staying at the Carter Ranch and going on a primitive float trip through the ranch. Tired of airplanes and bumpy roads we opted for a “team building exercise” to improve our abilities to confront future challenges in climate change discussions! Little did we know what a team exercise this would be. All survived in spite of punctured tubes, 3 canoe capsizings, stingrays, anaconda snakes, alligators, killer bees and other unknown predators who witnessed our passage.

Day 5 – (AM) Flew to Tanguro Ranch, one of four properties owned by Blairo Maggi, Governor of Mato Grosso, the largest soya producer in the world. Met first with research managers - Oswaldo Corva, Wildlife Manager, and a woman who headed up the riparian zone rehabilitation, from the non-governmental organization IPAM (Instituto de Pesca Ambiental de Amazonia) and Grupo Maggi. Toured forest land research projects related to riparian zone restoration, reforestation and burn management; and looked at greenhouse programs (32 different tree species being managed). Both researchers were very professional and are doing leading edge work in their research disciplines. Met with the Assistant Manager of the Tanguro Ranch and watched a film on the activities of Grupo Maggi. Toured the service shop (that took up several acres!); glad we don’t have to oversee that bunch of mechanics and iron of every color.

Grupo Maggi is not well liked by producers and many citizens at large; biggest challenges to them are media misrepresentation and small farmer sabotage and treating them like villains. Those who know the operation well told us it is one of the best managed farms in the world. The company mission, vision, and values are prominently displayed; employees all wear the company uniform and the farm is immaculate. It is ISO14000 compliant in three of its four operating groups and is working on compliance at the site we toured. It has gone from massive growth in farming to worldwide growth and diversification into grain storage, transportation, and energy production (currently looking at growth options in Africa and Europe). Onsite storage capacity at the headquarters we toured is 72,000 tonnes which handles about 65% of the 110-120,000 tonnes of annual production on this farm. Massive decks of wood are piled up that are used to fuel the grain dryer; imagine the poor bugger that has to pitch these into the burner when harvest is underway! They get 600 hours/year on a combine between soya and corn. The moral of this visit is we may not want to farm 200,000 acres, but we have to compete with the efficiencies of scale that operations like this can achieve on a global scale.

(PM) At end of day, flew to Agua Boa for final Brazilian overnight stay (in a real hotel). Toured Agua Boa Cattle Auction and feedyard owned by mayor of Agua Boa who also hosted our evening dinner (see details under Cattle comments). The mayor and his feedlot manager, Caesar, were great hosts and very interested in our involvement in carbon trading.

Day 6 – Bid farewell to John Carter (now a good friend and proven tour guide who was returning home to family) and flew in three small planes back to Cuiaba to start the two day journey home. Boarded commercial flight to Sao Paulo then after 5 hours of standing in lines, headed home to Chicago and Washington DC tired and wiser for the experience.

Observations on selected economic and climatic topics:

Deforestation/Timber cutting/Sawmills – We had extensive discussions about deforestation at every stop. In the areas we flew over, Carter indicated there used to be over 100 sawmills—now there is one left. Virtually all the good hardwoods were logged decades ago and the forests were burned over. Most of the forests remaining today are naturally regenerated junk wood with no commercial value other than climate considerations.

Typical process for de-foresting involves: clearing trees and brush with dozers and big chains; burn and seed to pasture grasses; graze land for 3-5 years to build up organic matter (starts at 1% and builds to 3-4% after several years of soya); disk and level ground and start growing soybeans, maize, etc. After several years in crop, some lands are re-planted to pasture where their carrying capacity is almost triple the initial stocking rates.

Land regulations used to require 50% of properties to remain in forests. Recent laws have increased the foresting requirement to 80%. Economics driving de-forestation are as follows: Land can be bought for 300-400R/ha (\$180/ac). Costs 450R/ha to clear and improve for pasture. Cleared land growing crops and cattle can generally earn 5-6% returns on cost with appreciation potential of 10-15%. Cattle can generate profits of \$120/ha; crop margins can exceed \$300/ha. Good producing land can be sold for \$1,000R and more once developed.

Cattle/Range – Predominant cattle breed is Nelore (from India) with some Black Angus crossbreeding. Grass fat cattle are the predominant product, but finishing in feedlots is starting to gain momentum. Carrying capacity is 1 animal unit per hectare—extremely productive forage.

In Agua Boa, we toured the largest cattle auction in the world and a 12,000 head feedlot. Ration is green chop grass, millet, corn, and cottonseed. Cattle are fed typically a maximum of 90 days to a maximum weight of 1,300#—not nearly to the finish level we do in the U. S., but enough to increase tenderness over grass fed. ADG pushes 3.3 pounds; cost of gain in feedlot is \$1.75/kg (\$.80US) and the feedlot charges \$2.25 for custom fed cattle—good margins for a feedlot owner! Big challenge is cattle must be hauled over 100 miles to packing plants—much bruising and meat damage.



Soya – This is excellent country for soya. Major limitation is limestone. Three hills known in the area; and one of these is nearly played out already. As much has been documented about Brazilian soybeans, won't cover this in much detail here.

Rubber plantations – Rubber industry is on the rebound pushed by increasing demand for real rubber (latex); government is promoting rubber as a key crop to help sustainability of small farms. Trees produce year around and can gross over \$4,000/yr/ha. Cost of production is \$3-400/ha. Problem is it takes 7 years to get production. Saw immense rubber plantations on the Blairo Maggi farm. Sap is collected in gallon buckets hung off trees. Biscuit sized rubber globs (very stinky!) are gathered in milk crates then collected for processing—extremely hand labor intensive.

Marketing channels – Bunge, Cargill, and ADM are the primary marketing outlets for producers. Each of these outlets has huge facilities located strategically throughout the region. In one region, we saw a Cargill facility from our airplane adjacent to a series of nicely laid out plots that looked like research plots. Our pilot told us it was actually the layout for a whole new town! As these areas are developed, the farmers and grain merchandisers become the catalyst for creating new communities, churches, schools and bring in roads and electricity.

Transportation Systems – The area where we spent the most time (in Carter Ranch area) is 1,000 miles from a port to the north and 1,500 miles to Sao Paulo all by road. Major roads are being prepared to pave in the next few years. For now, these roads have hit and miss base rock on top of the red dirt base (they look like our mountain logging roads after we have surfaced them with pit rock!!). Locals drive 60 mph and it's a miracle how tires and suspensions hold up. Economic studies have shown that these roads will have huge impact on lowering Brazilian cost of production.

Language Experiences – The group became proficient in asking basic questions and doing greetings in Portuguese. We noticed several interesting twists in translations, such as: they say chicken chest, not chicken breast; “mama” does not refer to your mother...it is a part of the female anatomy. Words look like Spanish but are not pronounced the same. The native tribes speak varying languages similar to Guarani-Tumi—a language completely different from Portuguese. Consequently, we all learned to appreciate the value of a good interpreter (John Carter was the best!!).

All in all, a fantastic educational experience!!