

19. Brazilian Agriculture (MAB Trip)

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Will Feldkamp is an Agricultural Economist for Kansas Farm Management, North Central in Beloit, Kansas. Will grew up on a ranch south of Vesper in Lincoln County and stays involved when he can. He earned a B.S. in Agribusiness from Kansas State University in 2003. Will previously worked for five years as an Ag Lender with a bank in Sylvan Grove and has been employed by Kansas Farm Management Association in Beloit, KS for the past six years, working with farm families to make educated management decisions. He recently traveled to Brazil with the MAB program to learn about Brazilian agriculture from one of our major competitors.

Abstract/Summary

The MAB program recently visited Brazil and toured multiple agricultural operations. This will be an overview of the trip from the United States' largest competitor highlighting some of the problems Brazil faces and differences from U.S. agriculture.

MAB Trip - Brazil

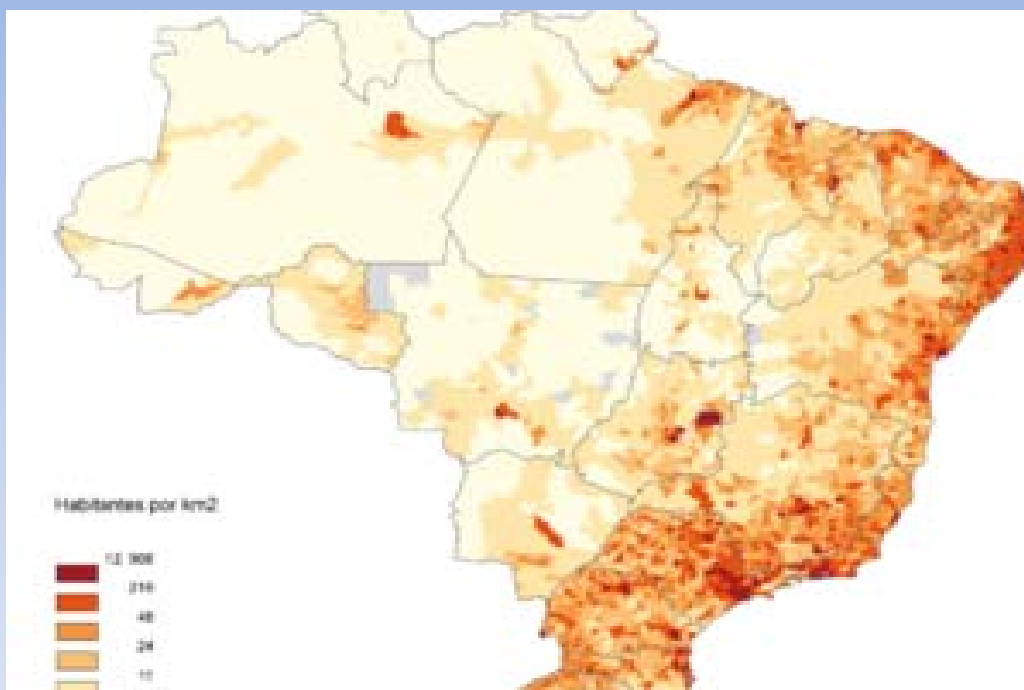


Land Area by Country

- Russia – 17 mil sq km
- Canada – 10 mil sq km
- China – 9.5 mil sq km
- U.S. – 9.5 mil sq km
- Brazil – 8.5 mil sq km
- Australia – 7.7 mil sq km
- India – 3.3 mil sq km

Population

- China – 1.38 bil
- India – 1.3 bil
- U.S. – 324 mil
- Indonesia – 259 mil
- Brazil – 207 mil
 - Melting pot



Where Brazilians live

Brazil



Sao Paulo



- 21 million people
- Largest city in Southern Hemisphere, 12th largest in world
- 50% Italian, 25% Portuguese

Electric Pole



Santos





Largest natural port in Brazil

450,000 population
Birthplace of Pele
Weekend destination of many Sao Paulo residents



Santos

Largest Container port in Latin America







Alfa Citrus

Brazil is the 3rd largest producer of fruit in the world
Sao Paulo State produces half of global orange juice
80% of orange exports come from Brazil



AlfaCitrus

100% picked by hand
4,000 acres, 600-800 plants/hectare
20-25 year life, 3 years until production



AlfaCitrus

SB or corn planted rotated for 1 year after, then back to a different variety of citrus



AlfaCitrus



Coffee

Brazil produces about 1/3 of the world's coffee, and has been the #1 exporter the last 150 years

Boa Esperanca Farm

400 acres

- 200 coffee – 20 yr life
- Pasture and eucalyptus also
- 4000 ft above sea level

All handpicked

- Harvested May-July
- 50 workers
- Workers paid \$4/bucket, 5-18 buckets/day
- Earn about \$300/mo
- N applied by hand





Harvest

Sao Paulo had a frost the night we arrived, coldest night in 20 years
Crop was severely damaged, the black beans are very poor quality



Coffee Plantation



After harvest

Coffee beans in Brazil are sun dried 10 days to 4 weeks
The hulls are then removed and the beans are graded and sorted



Beans drying

Coffee

Coffee in Brazil is extremely strong,
almost like espresso

Often served extremely sweet



Usina Santa Maria – Pilon Group Ethanol Plant

16,000 hectares

50% owned, 50% contracted from other farmers



Ethanol Plant

1.6 mill ton of cane produces 90,000 ton sugar and 70,000 ton ethanol

Also produces this





And this



Bagasse

Fibrous bi-product used to fuel the plant
Excess energy is sold to utility companies
Plant is entirely self-sufficient

Planting

Plant Jan-May

Growing season is 18 months

Perennial – 5 or 6 harvests



Harvest

15% of fields are still harvested by hand due to terrain
By 2021, this will no longer be allowed



Harvest

Fields are burned before harvest to remove sharp leaves and fertilize fields



Harvest

85% harvested by machine, avg yield 30 ton/acre
Harvest 9 mo/yr, 24 hrs/day
Farthest field 60 km from plant



Unloading machine cut cane

Each truck carries 60 ton

No weight regulations



Truck picked by hand



No OSHA

Termite mound



ESALQ University

Top agronomy school

Overview of Brazilian Ag

- Low elevation, low fertility
- US more similar to Argentina
- Tropical climate, year round growing season
- Limited mechanization
 - Cane harvested by hand until 15 years ago
 - 1960
 - US had 4 million tractors
 - Brazil had 1000

Overview of Brazilian Ag

- Organic matter < 2.5%
- Soil
 - Clay and sand, no salinity
 - Dark red
 - Requires a lot of lime and phosphorous
- Needs rain every couple weeks
 - Avg 3-5 ft rainfall in Mato Grosso
- Mostly No-Till

Overview of Brazilian Ag

- Major Crops
 - Soybeans
 - Sept-Feb, 60 bu avg, spray 5-8 times
 - Corn
 - Feb-Aug, 100 bu avg, spray 5 times
 - Eucalyptus - 3 million hectares
 - Cotton – 2 million hectares
 - Double crop after SB
 - Fruit and coffee

Overview of Brazilian Ag

- Issues
 - Transportation
 - Storage
 - Theft / Land Rights
 - Financing
 - Political corruption
 - Former governor had 20 staff members whose full time job was to bribe people
 - Very little government support

Overview of Brazilian Ag

Issues

– Environmental concerns

- 80% percent of Amazon Rainforest on a person's land must be left in preserve

– Soy Moratorium

- Many companies have refused to buy soybeans grown on cleared forestland in the Amazon



Grains & Fibers Center



John Deere plant



Cattle Ranch – Tres Barras Farm

Avg Farm Size – 7500 acres
70% Cattle, 30% Grain



Grass

Short grass, year round grazing
Cattle rotated every 30 days
1 animal per acre??



Fence

Smooth wire used on paddocks, some hot
Barbed wire only used on the outside borders



Mineral Feeder

Land in the area is about \$1400 for cropland, \$700 for pasture



Production

Avg carcass weight 500 pounds, slaughter age 24-36 mo
Grass fed, feed cost \$10/hd/mo, calves gain 1.5 lbs/day
Most exports go to Israel



Breeds

Nelore – more resistant to humidity and ticks
Do not gain or grade well – no marbling
Many operations are crossbreeding with Angus bulls

Manager/Nutritionist

Starting to feed soy oil and meal for 90 days before slaughter

Issues

- Cattle theft, Land rights
 - Indians
- Predators
- Lack of competition
 - JBS is the only buyer
 - 1 pair is worth \$570
- Conception rate
- 56% yield avg

Farther north in Mato Grosso near the wetlands, cattle have to be moved before flooding – access only by plane after that

- Piranha cow??





Take these buses everywhere!

World Beef Numbers

Number of Head

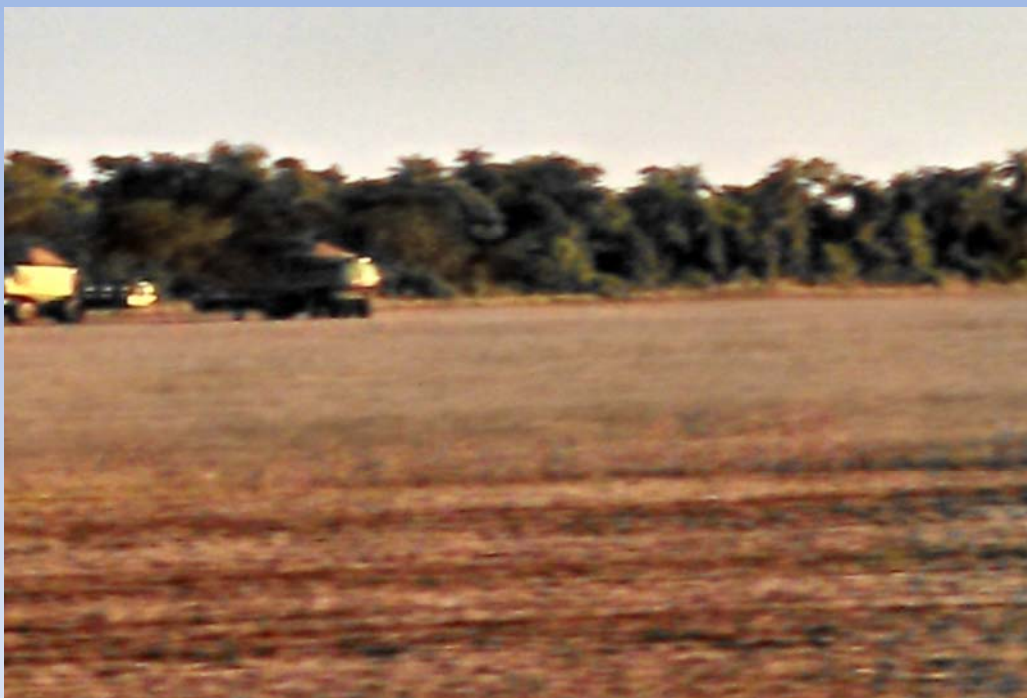
- 301 mil India
- 219 mil Brazil
- 100 mil China
- 92 mil U.S.
- 89 mil E.U.
- 52 mil Argentina
- 26 mil Australia

World Beef Production

- 11.3 mil ton U.S.
- 9.6 mil ton Brazil
- 7.7 mil ton E.U.
- 6.7 mil ton China
- 4.3 mil ton India
- 2.7 mil ton Argentina
- 2.2 mil ton Australia



Cutting Soybeans



Waiting on Trucks!



Grain Storage

Lime piled on the ground



Grain Storage

Brazil can only store about 75% of corn and soybean production, well short of the recommended 120%



Grain Storage



Grain storage

Only 11% of available storage is farmer owned



More Storage

2012 Arable land by country

- India – 1.56 mil sq km
- U.S. – 1.55 mil sq km
- Russia – 1.2 mil sq km
- E.U. – 1.08 mil sq km
- China – 1.06 mil sq km
- Brazil – 726 mil sq km
- Australia – 471 mil sq km



Comid JD dealership



Wide tires!





Sugarcane harvester



Office

Farmer and Tour Guide

More lime piled on the ground



Agronomist



Corn

Farmed around 4500 acres

Avg farm size in Mato Grosso 7500 acres, farming began there in the 1980's

20-30% foreign owned

- U.S., China, Argentina

Some farms are as large as 1 million acres

Farms like his in Mato Grosso do Sul and Sao Paulo states are much older



Most farms aren't this size



Combine

Farmer had 4 combines this size

Financing is very difficult to obtain for grain storage and land, but JD has very good financing available



Grain Truck

He owned 7 trucks that each have a capacity of 1500 bushels

Most grain is transported by truck to port, rail system inadequate

Poor road conditions in Mato Grosso



Grain Truck

During peak harvest, he had to hire an additional 13 trucks
That would be a capacity of 30,000 bushels



Waiting to unload

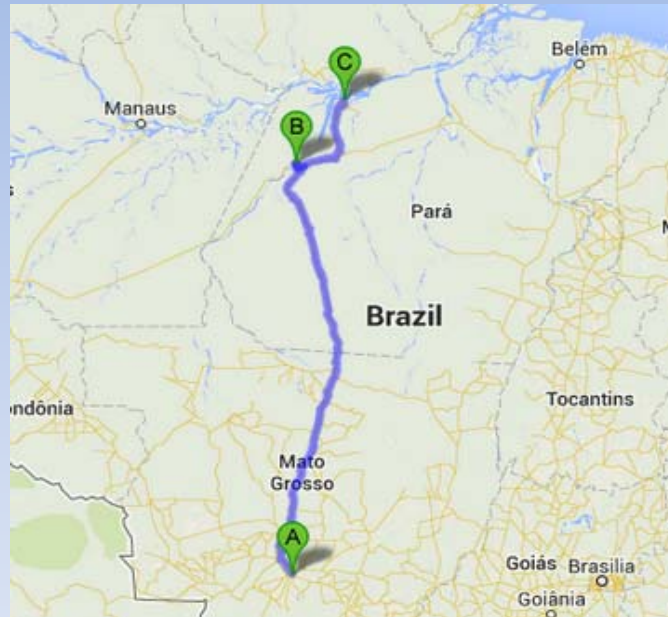
It can take days to unload at the grain terminals in Mato Grosso
The other option is to truck the crops 1500 km to ports in the Southeast
Work is being done to build roads and railways to the Amazon River

Proposed Railroad Route

In 2015, only 20% of grain exported from Brazil was shipped through the northern ports

It is estimated that shipping grain to the north would cut transportation costs by 30%

This railroad would parallel BR-163 highway, which is currently not all paved









Chicken house



Corn for days



Indians!



Agropecuaria Missoes Dairy Farm



Jerseys



Tour guide and Dairy Owner

Milk

All the milk is bagged

Skim or 3%

Not hauled by tankers

This farm was 15-20 miles from the nearest highway

Claimed he made more money with the land than corn and soybean farmers

Remarkably, shared all his financial information



That's a lotta bull!



Iguassu Falls



Iguassu Falls – Brazil Side

15% of the Falls are located on the Brazil side



Belmond Hotel das Cataratas



Iguassu Falls

The Falls are on the Iguazu River, which is the border between Brazil and Argentina

Coati

Cousin to the raccoon, these animals are everywhere looking for a handout



Macuco Safari



Macuco Safari



Iguassu Falls

Consist of 270 Falls to make them the largest waterfall system in the world, 3 X the size of Niagara Falls









Birds of the rainforest

Toucan





Macaw





Gator



Coati



Monkey



Iguazu Falls

Argentina Side



Iguassu Falls

85% of the Falls are on the Argentina side



Devils Throat

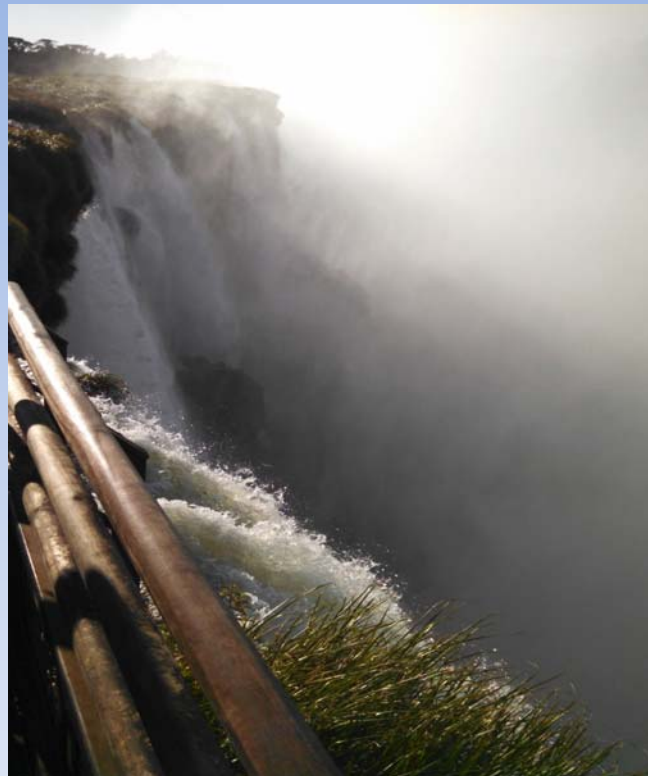


Devils Throat



Devils Throat

Don't look down!





Argentina Steakhouse

Argentinian beef is waaaaay better than Brazil!



Three Borders

Where the Iguazu River meets the Parana River



Itaipu Dam

2nd largest Hydroelectric dam in world by capacity behind 3 Gorges Dam in China, however annual energy produced is about the same



Itaipu Dam

Joint venture between Brazil and Paraguay with each country receiving half of the energy produced, though Paraguay sells most of theirs back to Brazil

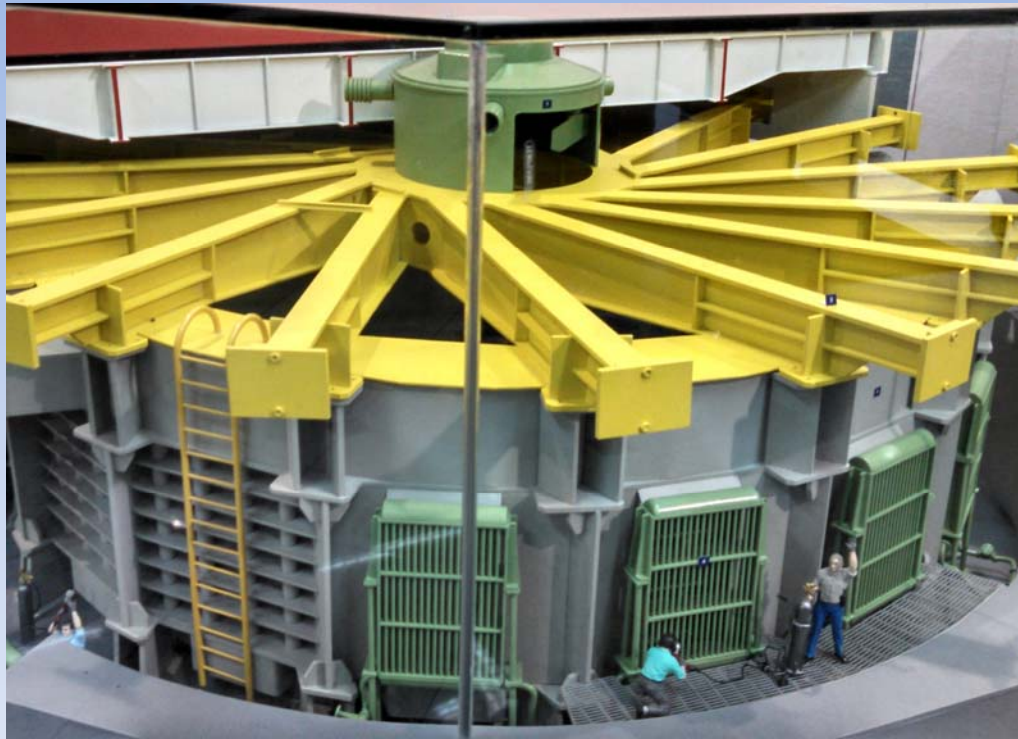


Itaipu Dam

Produces about 17% of Brazil's energy demand, and 75% of Paraguay's











Rio De Janeiro

Christ the Redeemer



Pantanal

World's largest tropical wetland area

MAB Program

- Visit <http://mab.k-state.edu/index.html> for more information

Questions?

