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Changing Incentives for Agricultural Expansion in Brazil  
What Will be the Key Factors Influencing Brazil's Expanding  
Agriculture?

Michael Cordonnier  
Soybean & Corn Advisor, Inc.

# **Changing Incentives for Agricultural Expansion in Brazil**

**What Will be the Key Factors Influencing  
Brazil's Expanding Agriculture?**

By

**Dr. Michael Cordonnier  
Soybean & Corn Advisor, Inc.**

**[www.soybeansandcorn.com](http://www.soybeansandcorn.com)**

**[soycorn@comcast.net](mailto:soycorn@comcast.net)**

**630-325-0192 (Chicago)**

# Overview

- **Brazil's position in the world of agriculture**
- **Land use in Brazil, potential for expansion**
- **Current state of crop production**
- **Incentives for agricultural expansion**
- **Obstacles to expansion**
- **Key factors**
- **Brazil's future**

# **Brazil's Current Position**

- **Number one producer of: sugar, orange juice, coffee**
- **One of the top producers of: soybeans, corn, ethanol, tobacco, beef, pork, poultry, fruits, forestry products**
- **Agriculture responsible for 25% of GDP and one third of the jobs in Brazil**
- **Commodities account for 42% of Brazil's exports in 2010**

# Size Comparison Brazil vs. United States



# Mato Grosso – Leading Soybean Producing State

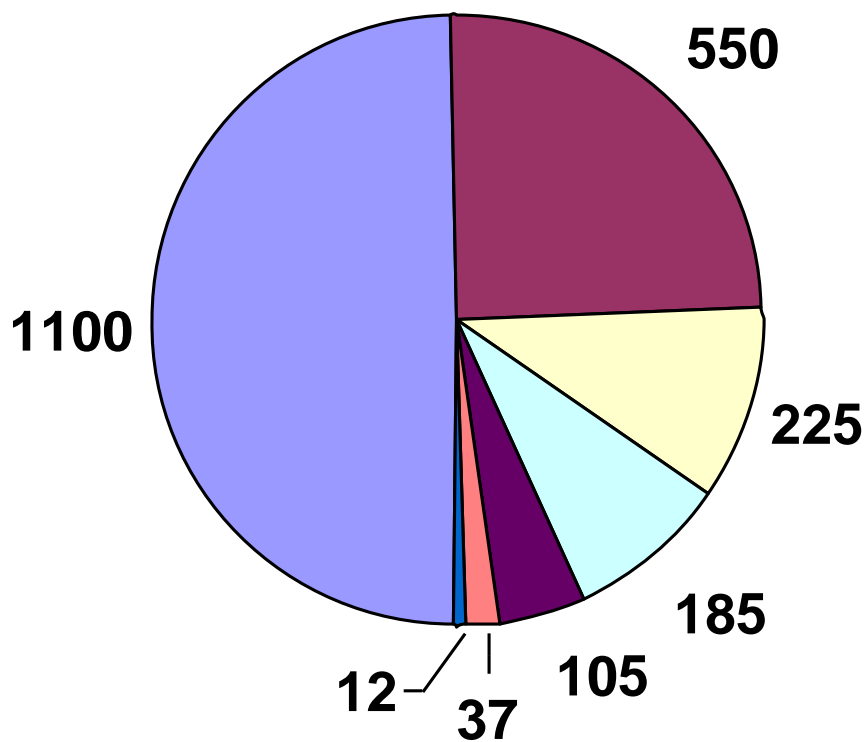


# Size Comparison Mato Grosso - Midwest



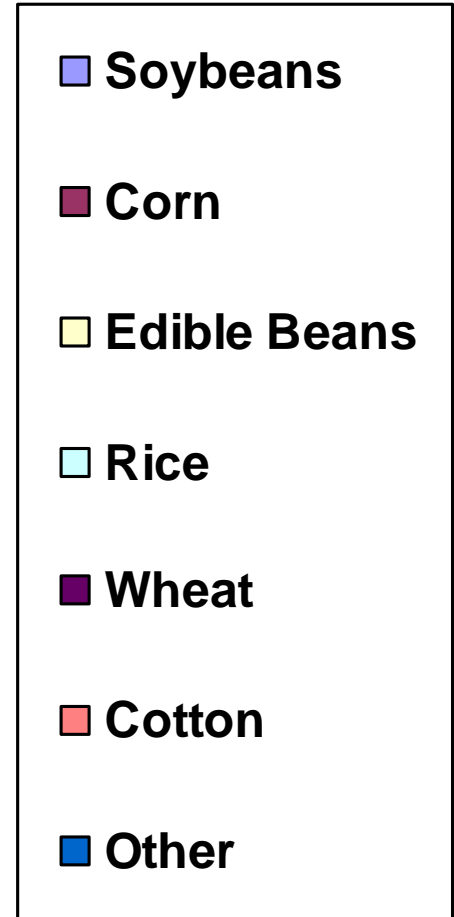
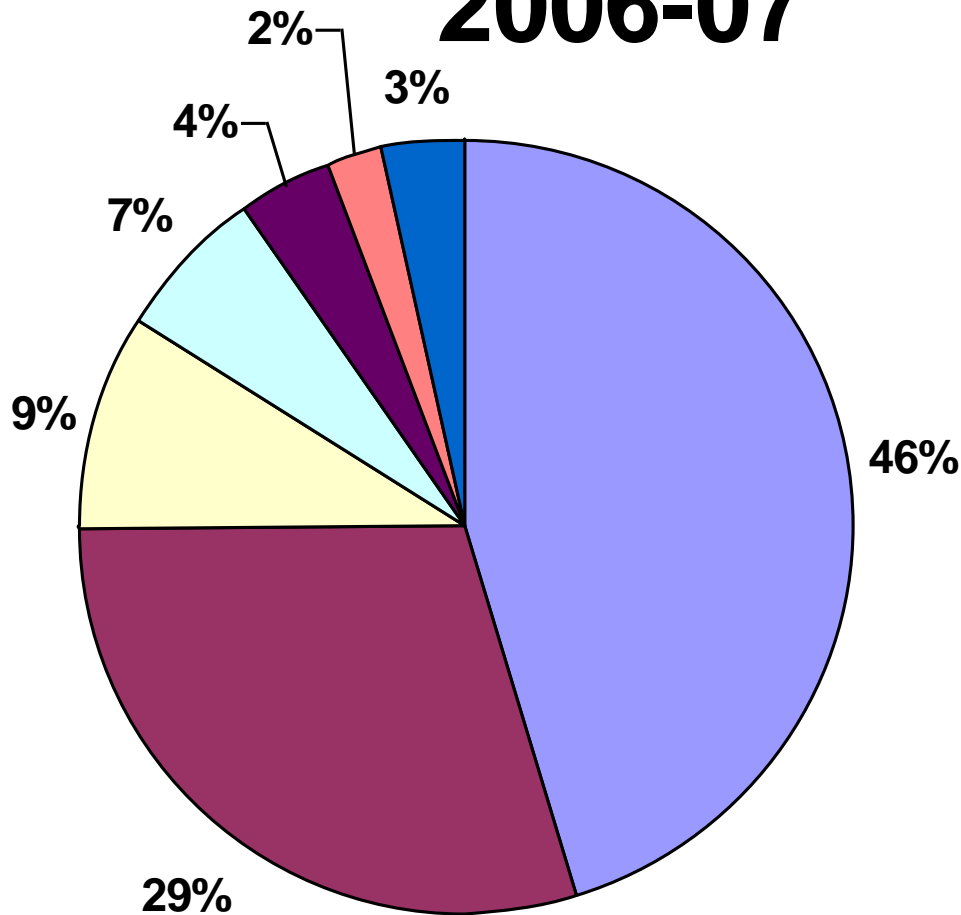
# Brazil Land Utilization

millions of acres



- Amazon Forest and Natural Forest Reserves
- Pasture Land (cattle)
- Cerrado (savannah)
- Other (urban centers, lakes, etc)
- Cropland (soybeans etc)
- Permanent Crops (coffee, oranges, sugarcane etc)
- Reforestation (eucalyptus and pine)

# Brazil's Row Crop Acreage- 2006-07



# Cerrado Areas of Brazil



# Native *Cerrado* Vegetation in Brazil



# Native *Cerrado* Vegetation in Brazil



# Clearing Land in Mato Grosso



# New Soybean Production in Mato Grosso



# Brazil Soybeans

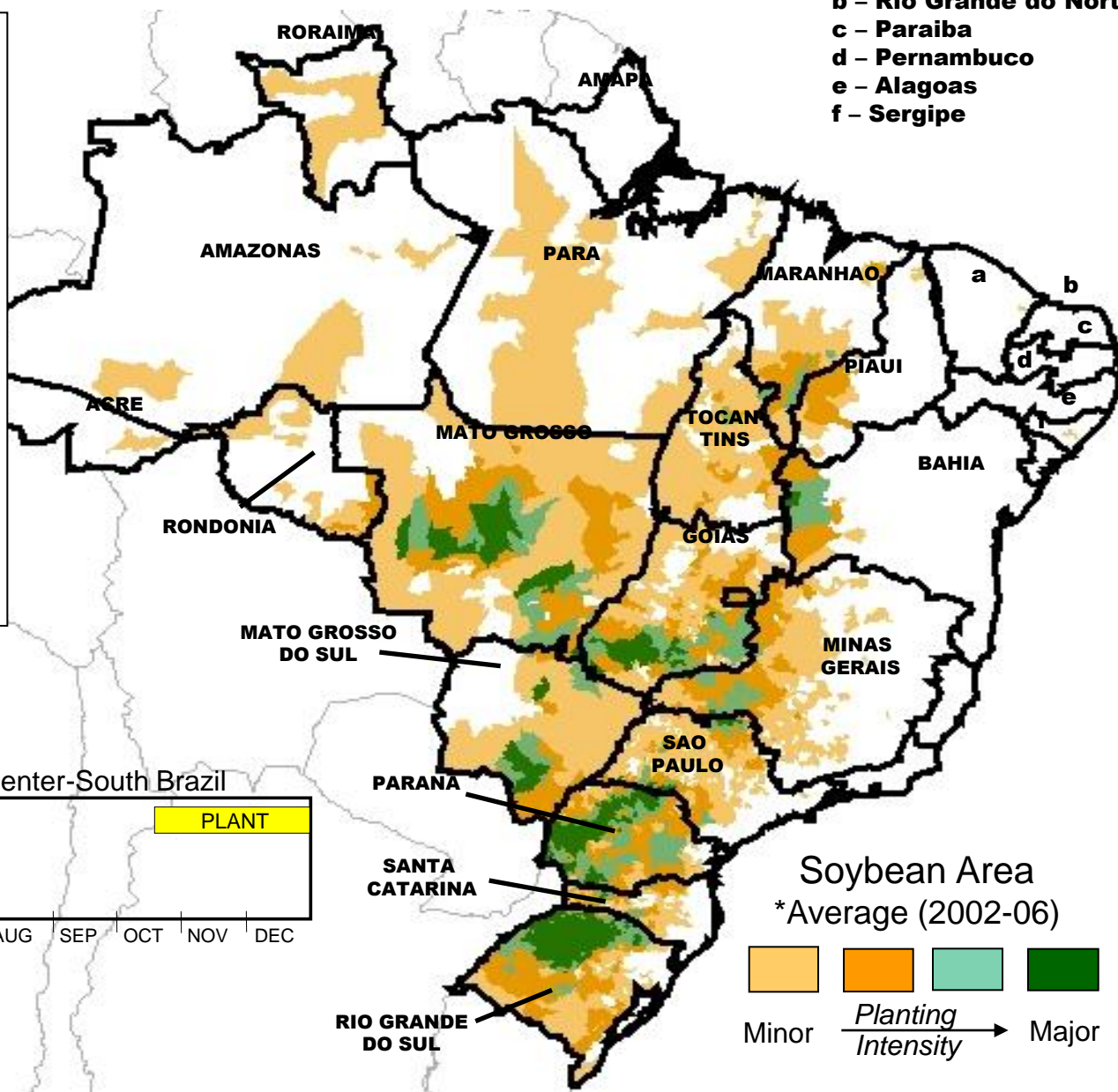
- a - Ceara
- b - Rio Grande do Norte
- c - Paraiba
- d - Pernambuco
- e - Alagoas
- f - Sergipe

\* State-Level Production  
(as % of total)

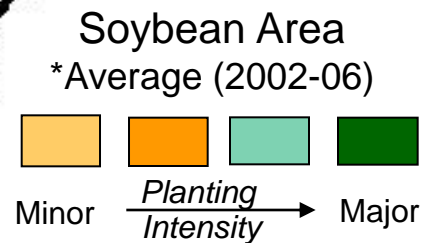
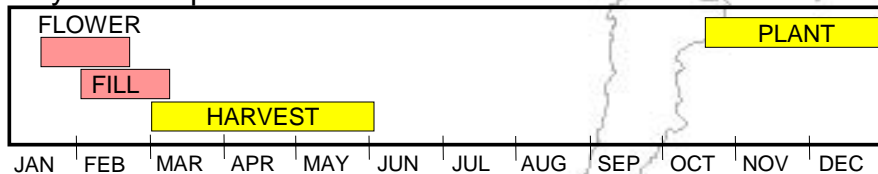
Mato Grosso	29
Parana	20
Goias	12
Rio Grande do Sul	12
Mato Grosso do Sul	8
Minas Gerais	5
Bahia	4
Sao Paulo	3
Tocantins	2
Other	~5

\* 2001/02 to 2005/06 Average

Source: IBGE Brazil

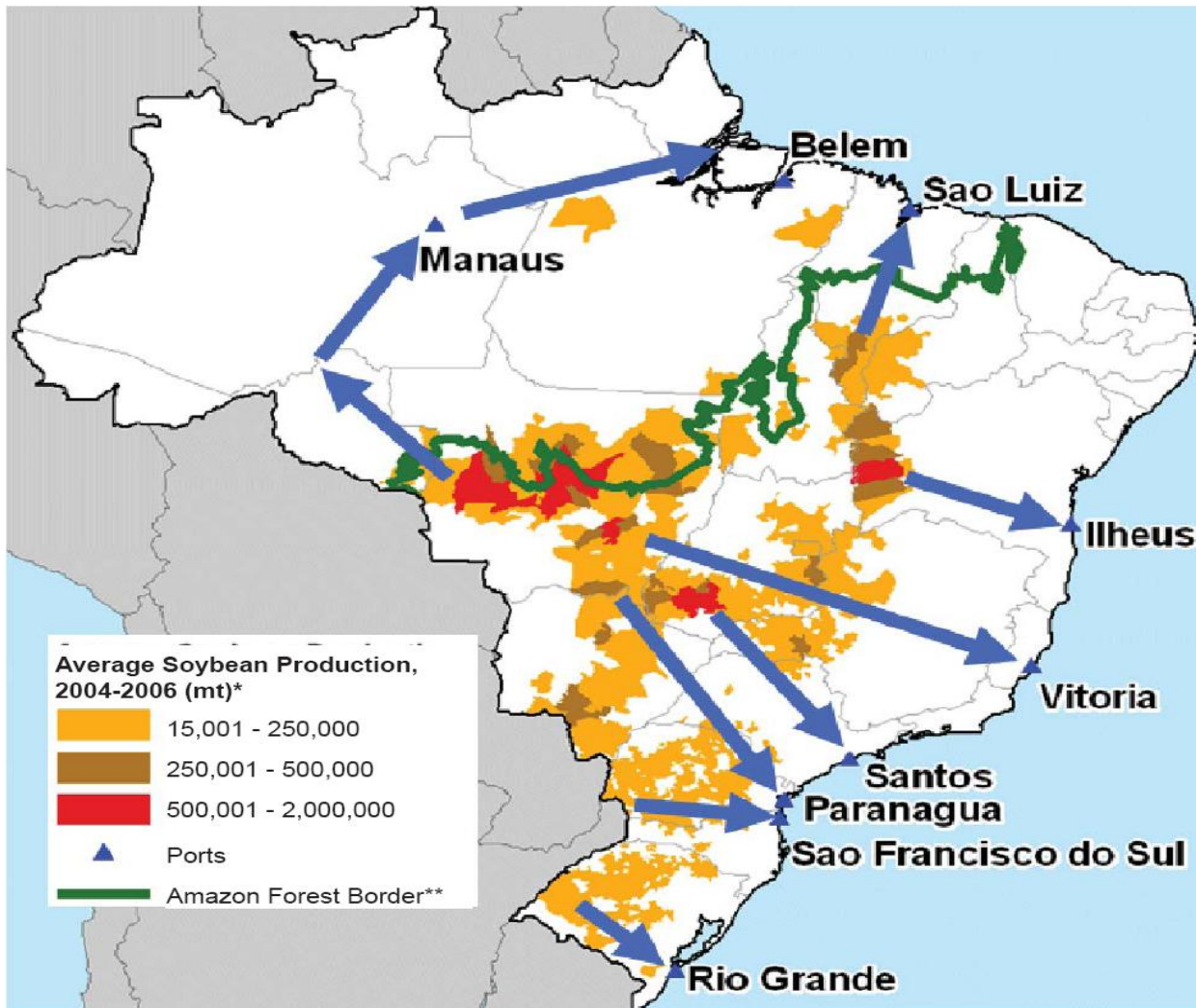


Soybean crop calendar for most of Center-South Brazil



\*Source: IBGE

# Major Export Routes of Brazil



\*Companhia Nacional de Abastecimento (CONAB)

\*\*World Wildlife Fund (WWF)

Source: USDA /Agricultural Marketing Service & Foreign Agricultural Service

# Maturing Soybeans in Mato Grosso



# Maturing Soybeans in Mato Grosso



# Soybean Production in Mato Grosso



# Soybean Production in Mato Grosso



# Soybean Production in Mato Grosso



# Harvesting Soybeans in Mato Grosso



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# *Safrinha* Corn Following Soybeans



# Planting *Safrinha* Corn in Mato Grosso



# Planting *Safrinha* Corn in Mato Grosso



# *Safrinha* Corn Production in Mato Grosso



# Custom Combining In Brazil



# Waiting to Transport Soybeans in Mato Grosso



# ADM Facility in Mato Grosso



# Cargill Crushing Plant in Mato Grosso



# Picking Up Soybeans at Lucas do Rio Verde, Mato Grosso



# BR-163 in Mato Grosso



# Traffic on BR-163 in Mato Grosso



# Traffic on BR-364 in Mato Grosso



# Mato Grosso Plateau



# Mato Grosso Road Sign in Kilometers



# Unimproved Road During Rainy Season



# Unimproved Road During Rainy Season



# First Rail Terminal in Mato Grosso



# *Ferronorte* Rail Terminal in Mato Grosso



# *Ferronorte* Rail Terminal in Mato Grosso



# *Ferronorte* Rail Terminal in Mato Grosso



# Constructing *Ferronorte* Railroad in Mato Grosso



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# Constructing *Ferronorte* Railroad in Mato Grosso



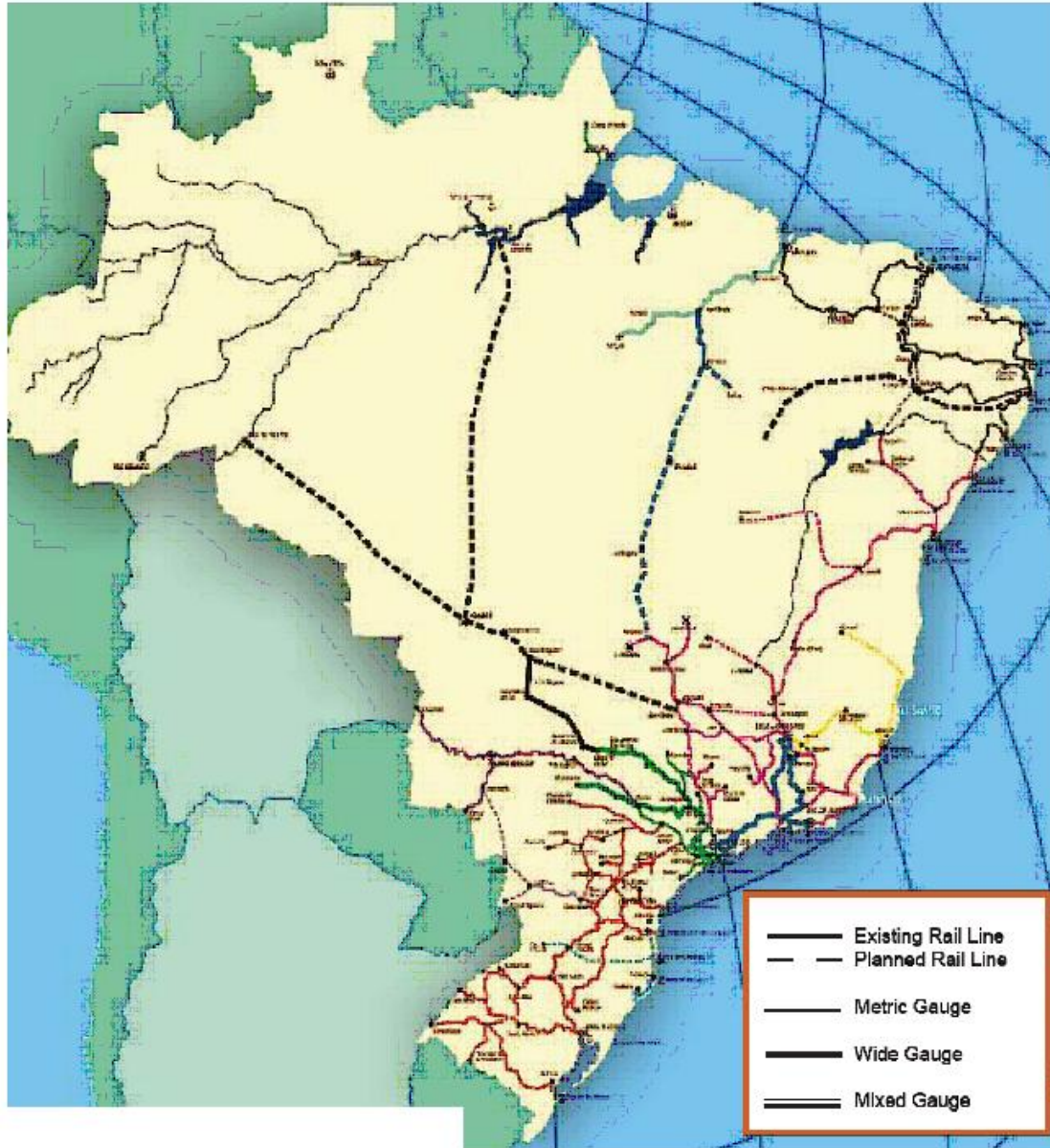
# Constructing *Ferronorte* Railroad in Mato Grosso



# Crushing Plant Along Ferronorte Railroad



# Brazilian Rail System: Gauge Sizes



# City of Sorriso in Central Mato Grosso



# Parana River Between Sao Paulo and Mato Grosso do Sul



# Port of Paranagua - Brazil





# Barging Operations on the Madeira River



# Barging Operations on the Madeira River



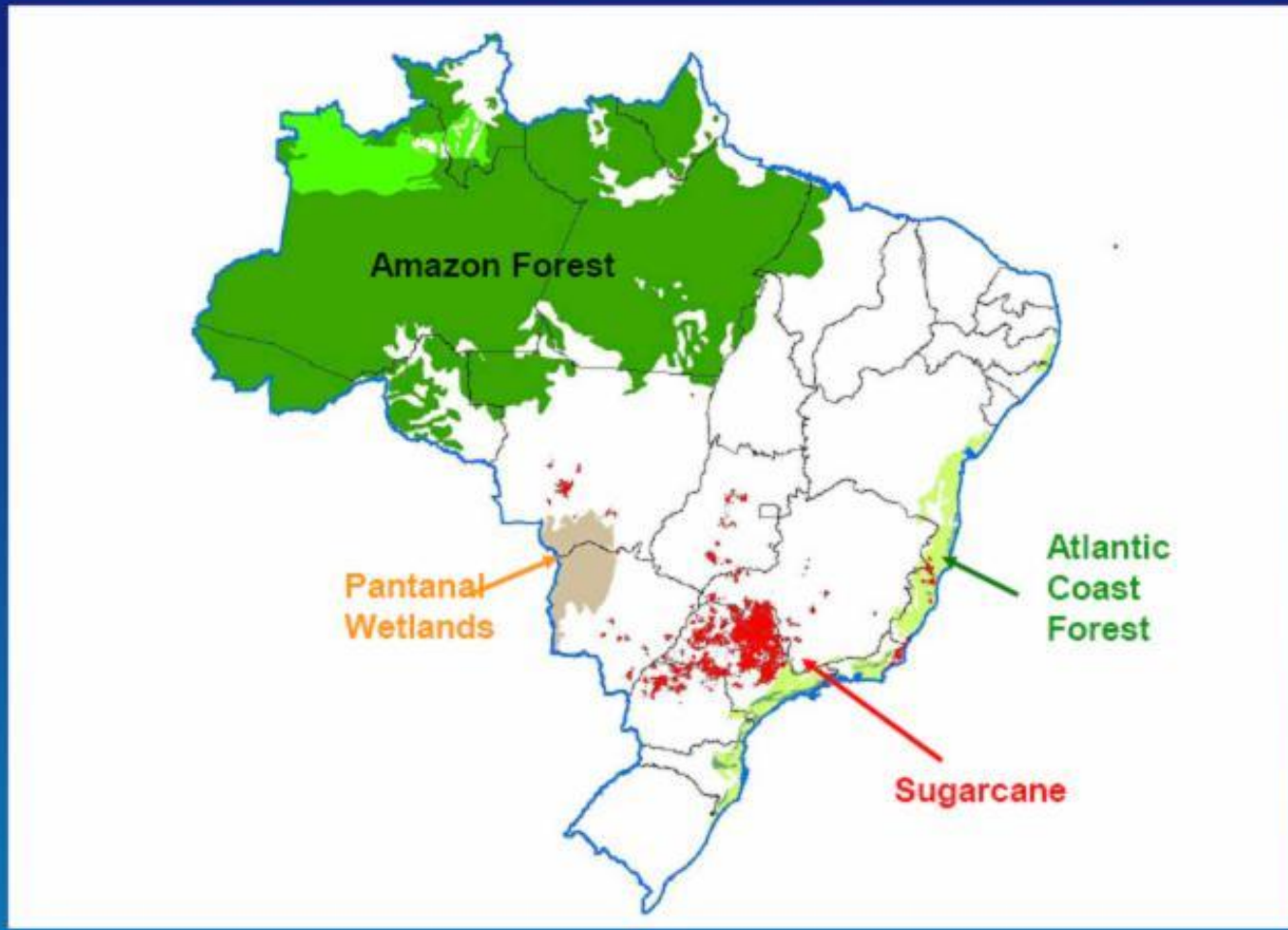
# Brazilian Cotton Production



# Brazilian Sugarcane Production



# SUGARCANE AREA IN THE CENTER-SOUTH



**The state of  
Sao Paulo  
accounts  
for nearly  
57% of  
Brazil's  
sugarcane  
production**



# Sugarcane Production Becoming More Mechanized



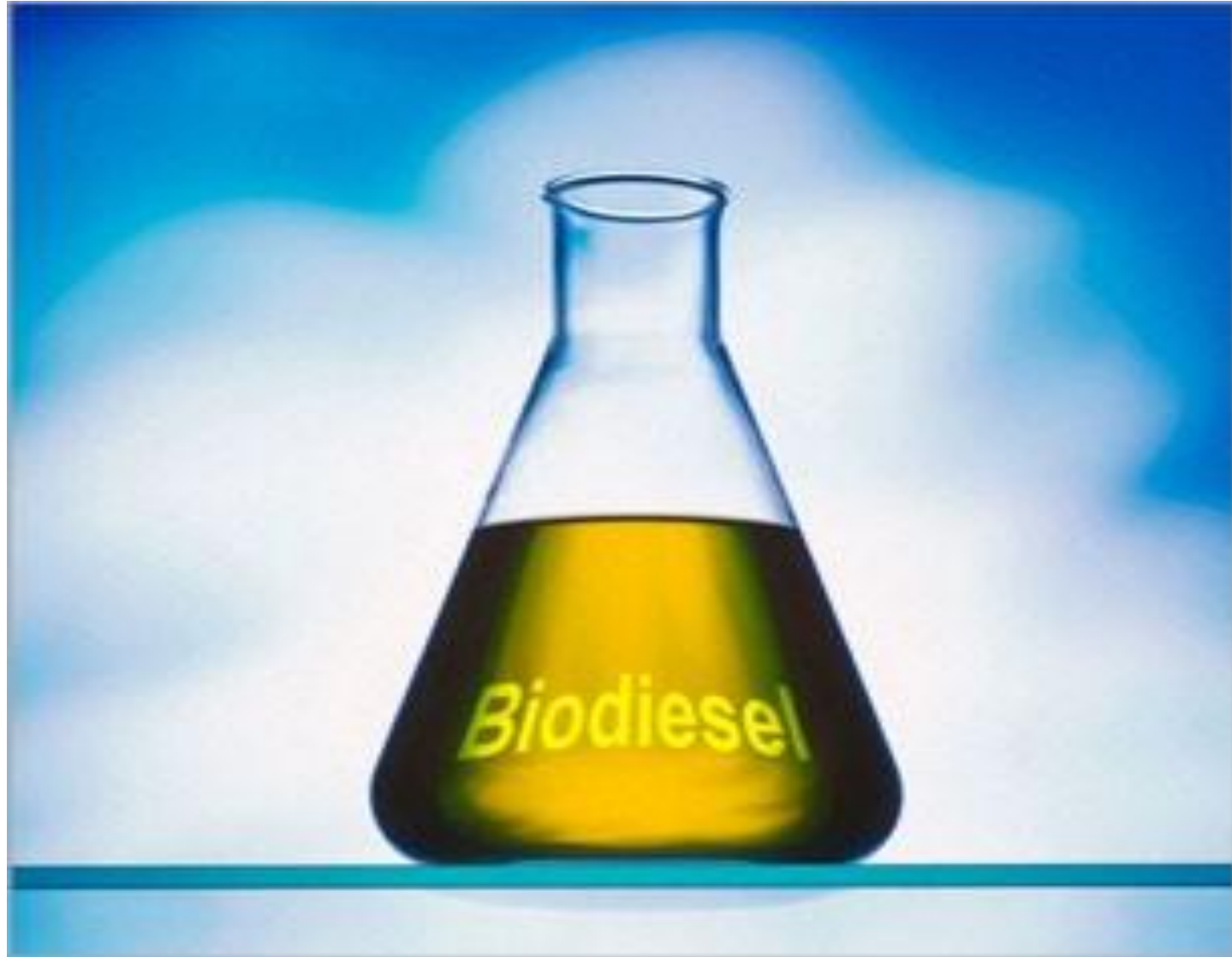
# Brazilian Sugarcane Processing



# **Biodiesel Growth in Brazil**

- **B5 biodiesel nationwide January 1, 2010.**
- **B10 nationwide and B20 in urban areas by 2015?**
- **Reduce urban pollution.**
- **Soy oil 80% of feedstock for biodiesel.**
- **New sources of vegetable oils being developed.**

# Brazilian Biodiesel Made From Soy Oil



# Palm Oil Production



# Cattle Ranching in the Amazon Region



# Cattle Ranching in the Amazon Region



# Cattle Ranching in the Amazon Region



# Cattle Ranching in the Amazon Region



# Deforestation for Cattle Ranching



# Brazil Working to Reduce Deforestation



**Squatters  
and  
farmers  
battle for  
the same  
land**



# Prior Incentives For Ag Expansion

- **Very cheap and abundant land**
- **Government incentives**
- **Low interest loans, sometimes below rate of inflation**
- **Mass migration north to expand operations**
- **Similar to “manifest destiny”**

# **New Incentives for Ag Expansion**

- **Demand driven expansion**
- **Globalization of food supply and markets**
- **Foreign investments in agribusiness**
- **Interest in renewable energy**
- **Sourcing of raw materials by foreign governments - China, Middle East, Asia**

# **Key Factors Favoring Expansion**

- **Strong sustained commodity prices**
  - **US\$ 11.50 to 13.00 soybean prices encourages expansion**
  - **Corn, cotton, sugar, meats**
- **Government programs – minimum price guarantees, low interest loans**
- **International investments in agriculture, renewable energy**

# Key Factors Limiting Expansion

- **Inadequate infrastructure – lack of investments**
- **High transportation costs**
- **Strong Brazilian currency**
- **Stricter environmental regulations**
- **Restrictions on foreign ownership of farmland**
- **Desire for sustainable development**
- **Social considerations – agrarian reform**

# Brazil's Potential

- **Brazil has: available land, climate, experience, research, knowhow, and production capability to become number one commodity exporter in the world.**
- **Potential to become number one food exporter as well**

# BR-163 Before Asphalt



# BR-163 Fifteen Years After Asphalt



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