MODERN AGRICULTURE AND SUSTAINABILITY IN BRAZIL

KEY TRENDS AND THE ROLE OF POLICIES

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OUTLINE OF THE TALK

AGRICULTURAL MODERNIZATION AND SUSTAINABILITY IN BRAZIL

• Narrowed focus: deforestation as a key aspect of sustainability

• Key Questions:

  1. Is our ability to increase production at a global scale associated with deforestation?

  2. What is the role/potential for Brazil to address food security and climate change?

  3. Does modernization of agriculture increase deforestation in Brazil?

  4. What are key pathways for public policies?
GLOBAL AGRICULTURAL TRENDS (1961-2016)

Source: FAOSTAT
LAND USE IN BRAZIL

Forest (60%)
509 million ha
- Rainforests 431 million ha
- Savanna 72 million ha
- Mangrove 1 million ha
- Forest plantations 5 million ha

Pasture and natural grassland (27%)
234 million ha
- Pasture 151 million ha
- Natural grassland 43 million ha
- Imputed 40 million ha

Agricultural land (9%)
79 million ha
- Cropland 39 million ha
- Imputed 40 million ha

Other (4%)
30 million ha

Note: “Imputed” refers to those areas that were classified as “agriculture or pasture” in the MapBiomas data. CPI divided this category evenly between “Pasture and natural grassland” and “Agricultural land.”

Source: Climate Policy Initiative with data from MapBiomas (v.2.3), 2016
BRAZILIAN AGRICULTURAL TRENDS: 1970-2017

Cattle

Soybean
AGRICULTURAL POTENTIAL

Source: Climate Policy Initiative
DOES AGRICULTURAL MODERNIZATION INCREASE DEFORESTATION?

• Three cases of major changes:

  1. **Technology**: Soybean revolution

  2. **Infrastructure**: Electrification of rural areas

  3. **Private investment**: Sugarcane expansion in Mato Grosso do Sul

• **Common message**: yield gains have reduced deforestation

  → results are compatible with a framework where farmers face market frictions
The forest code not only protects native vegetation in private properties but also catalyzes yield gains and the adoption of modern practices.

Implementation is still a challenge. The forest code is quite demanding in terms of information from each property and parameters for addressing environmental liabilities.
The rural credit is a comprehensive policy, operated primarily by state-owned banks.
POSSIBLE PATHWAYS FOR PUBLIC POLICIES

• FOREST CODE IMPLEMENTATION:
  • **CAR validation** – big data analysis of property-level information;
  • **PRA** – state-level effort to define parameters for addressing environmental liabilities;
  • **Green list** – identification of farmers in conformity with the forest code.

• RURAL CREDIT:
  • **An interesting next step** – better integration with the forest code.
THANK YOU

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