



AGROINDUSTRIAL INTELLIGENCE CENTER

Technical Report: Socioeconomic Impact of Soybean Production in Maranhão

Case Study of the Municipality of Balsas

Ref.: Analysis based on the master's dissertation by Emerson Daniel da Conceição Ferreira (PPGSPPA/FURG, 2025).

Link to the dissertation: <https://argo.furg.br/?BDTD14452>

Link to English/Portuguese version of the report

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1. Executive Summary

This report summarizes the results of an analysis of the evolution of soybean production in the state of Maranhão, focusing on the municipality of Balsas, and its consequent socioeconomic impacts. The expansion of soybean production in the region, located within the agricultural frontier of MATOPIBA (Maranhão, Tocantins, Piauí, and Bahia), has proven to be a driver of significant economic growth, boosting Gross Domestic Product (GDP), the creation of formal jobs, and agricultural modernization. However, this development is accompanied by significant socio-environmental challenges, such as deforestation in the Cerrado, land concentration, and logistical bottlenecks that limit competitiveness. Local stakeholders are largely positive about the economic benefits, but they acknowledge the associated costs and negative impacts.

Socioeconomic Impact of Soybean Production in Maranhão

Case Study of the Municipality of Balsas

From the 1990s onwards, Maranhão consolidated itself as a pole of attraction for soybean farming, driven by accessible land in the Cerrado biome and the development of technologies adapted by Embrapa.

The municipality of Balsas has emerged as the state's main production hub, catalyzing economic and social transformations throughout the region. This analysis aimed to quantify and qualify these impacts, comparing economic and social indicators with the evolution of soybean production and assessing the perceptions of local stakeholders.

01

The Soybean Miracle in Maranhão: Production boosts the GDP of the municipality of Balsas by more than 570% and creates a wave of jobs.

02

The Two Faces of "Green Gold": Study reveals how the expansion of soybeans in Maranhão, while generating wealth, accelerates deforestation of the Cerrado and land concentration.

03

87% of Balsas residents believe that soy brings more benefits than problems, research shows.

Methodology

The analysis was conducted using a mixed approach, combining quantitative and qualitative data:

1. Secondary Data Analysis: Collection and analysis of historical series (1974-2022) of agricultural production, GDP, employment, HDI and other socioeconomic indicators from sources such as IBGE (SIDRA, PAM) and IMESC.
2. Primary Data Analysis: Application of a structured questionnaire to 55 stakeholders in the soybean production chain in Balsas, including rural producers, input suppliers, service providers, and community members, to capture their perceptions of the impacts of the activity.
3. Integrated Analysis: Cross-referencing quantitative data with qualitative results to provide a complete overview, validating observed trends with the practical experience of local agents.

Local Stakeholder Perception

Field research in Balsas confirmed the positive perception of economic impacts:

- **Economy and Quality of Life:** 78.2% of respondents rated the impact of soy on the local economy as "very positive". 76.4% said that the activity "significantly improved" the quality of life of residents.
- **Job Creation:** Most participants perceive that soybean production has reduced the unemployment rate in the region.
- **Growth Factors:** Technological improvements (65.5%) and the use of more efficient inputs (fertilizers and pesticides, 40%) were identified as the main factors in increasing productivity. Sales prices and climate conditions were the main influencers in the expansion of planted area.
- **General Balance:** 87.3% of respondents consider that soybean production brought more benefits than problems to the community.

Socio-environmental and Logistical Challenges

Despite economic optimism, analysis and literature point to critical challenges:

- **Environmental Impact:** Agricultural expansion is associated with **deforestation** of the Cerrado and loss of biodiversity. The model Intensive monoculture increases the use of pesticides, with potential environmental and health risks.
- **Social Issues:** The advance of soybeans has promoted **land concentration** and the displacement of small producers and traditional populations, intensifying rural-urban migration.
- **Logistics Bottlenecks:** Maranhão has the strategic Port of Itaqui, but transportation infrastructure (highways BR-230/BR-010 and railways) is considered limited. **High transportation costs** have been identified as one of the main obstacles to competitiveness, compared to other producing regions in the South and Central-West.

Conclusion:

Soybean production has transformed the socioeconomic structure of Maranhão, notably in Balsas, generating a virtuous cycle of economic growth. However, the long-term sustainability of this model depends on the ability to mitigate its impacts. environmental and social issues, in addition to overcoming logistical bottlenecks.