

THE RELATIONSHIP BETWEEN THE TRANSPORT INFRASTRUCTURE AND  
THE DEGREE OF ACCESSIBILITY TO MARKETS: THE CASE OF CORN IN  
BRAZIL

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In Brazil, the maize supply chain have regional particularities, which evidence the relationship between logistics infrastructure and the degree of accessibility to domestic and foreign markets. This study aimed to (a) characterize the corn logistics chains in two Brazilian states with different features of flow: Tocantins, with flows mainly destined for the exports; and Bahia, with corn mainly transported into Brazilian market; (b) Identify risks and limitations related to those maize chains studied which imply logistics costs for the producer. It was conducted a field research to application of questionnaire to 16 representatives of different corn chain stakeholders in Bahia and Tocantins. The results allowed the characterization and identification of logistics risks and limitations most evidenced by the agents.

## Results

Tocantins exports about 70% of its production (the national average is about 34%). The areas of greatest production are close to major transport infrastructure, enabling higher logistics competitiveness for these producers. In general, the transport infrastructure in Tocantins has:

- a railway and three recently opened rail-road terminals, enabling a significant reduction in freight for export through the port of São Luís (MA);
- a road network that allows transport of grain from the production areas and warehouses directly to the São Luis port or to rail transshipment terminals

For the other hand, about 94% of corn produced in Bahia are distributed in the domestic consumer market. The poor level of logistics infrastructure connecting the production areas to the ports and the dependence on road transport explain the predominance of flows directed to the domestic consumption.

The main logistical risks and limitations identified in both states were:

- Poor quality of the secondary roads (that connect producing regions to the main roads) increases the freight paid in the producing regions up to R\$ 30.00/ton. In some cases, producers directly invest in new transport routes or in the maintenance of existing ones;
- Lack of storages in the farm exposes the producer to logistical and marketing risks (such as higher freight and lower price paid for the grain, respectively);
- Abundant rainfall in the region hamper or even suspend harvesting and transport operations of corn in secondary roads
- Large lines and high waiting times at rail-road transshipment terminals increase the freight up to R\$ 10/ton.
- Transport fleet displacement to other relevant producing areas of corn (such as Mato Grosso) also increase the freight paid by the states of Tocantins and Bahia.