

UNEM (Brazilian Corn Ethanol Association) is a national non-profit organization dedicated to advocating for the interests of the corn and cereal ethanol industry nationally and internationally.

Our industry is constantly expanding:

Innovation from the field to the city



Sustainability



Technology



Energy: "From Green to Gold"

- **Corn production has increased by over 45% in the last decade and already exceeds 110 million tons per harvest.**

Source: IMEA / CONAB

- **For the harvest season of 2031/2032, it is expected that the yield will reach 150 million tons.**

Source: IMEA / CONAB

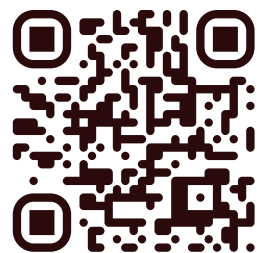


All this wealth transformed into food and energy

Brazil's dedication to advancing and adopting innovative energy production methods could position it as a leader in **renewable energy generation and utilization, thereby reducing greenhouse gas emissions significantly on a global scale.**



Corn ethanol and other biofuels **play a key role in the energy transition**



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Discover UNEM

and become part of the transformation that encourages sustainability, technology and innovation from the field to the city. "From Green to Gold".



BRAZIL UNITED FOR A SUSTAINABLE, VIABLE, AND SAFE ENERGY TRANSITION





Biorrefineries in operation

- Mato Grosso 11 units
- Mato Grosso do Sul 2 units
- Goiás 6 units
- Paraná 1 unit
- Alagoas..... 1 unit
- São Paulo 1 unit

Biorefineries with authorization for construction

- Mato Grosso 5 units
- Mato Grosso do Sul 1 unit
- Goiás 2 units
- Bahia 1 unit

Biorrefineries designed/planned for construction

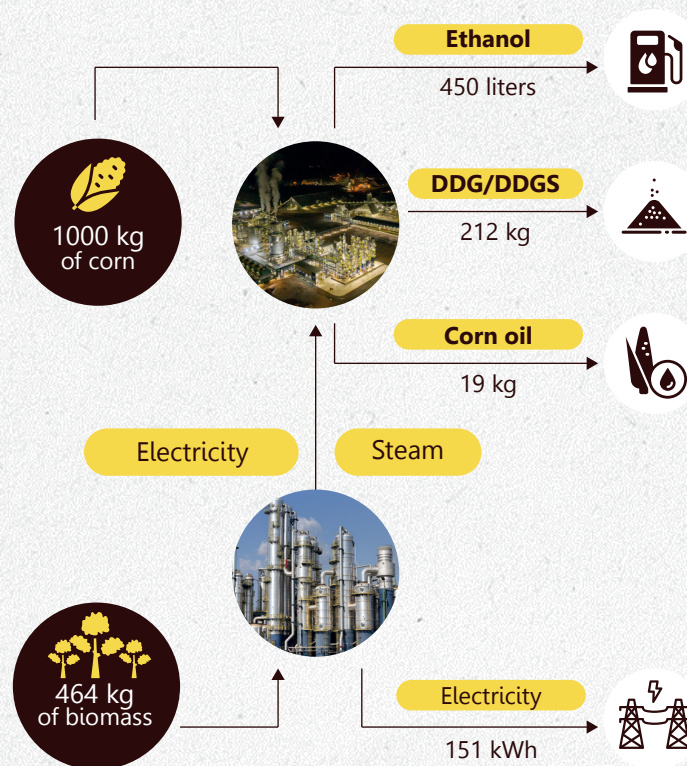
- Mato Grosso 3 units
- Tocantins 1 unit
- Bahia 1 unit
- São Paulo 1 unit
- Paraná 1 unit
- Rio Grande do Sul 2 units
- Maranhão 1 unit
- Piauí 1 unit

Corn ethanol: A Revolution in agriculture and quality of life.

The implementation of vertical integration in production has enhanced predictability for farmers, boosted meat production, streamlined supply chains, and fostered urban development by creating job opportunities and generating income.

This entails the conversion of exportable surpluses into ethanol, distillers grains, corn oil, and electricity.

A diverse production chain: from ethanol to electricity



Fueling the future, today!

The corn and cereal ethanol sector has solidified its production and distribution capabilities, positioning it as a crucial component of the energy transition process.

Providing clean energy from rural areas to urban centers, **it boasts an impressive 85% reduction in greenhouse gas emissions compared to gasoline.** Powered by biomass, biorefineries are at the forefront of this eco-friendly revolution.

Moreover, the utilization of double cropping corn enables efficient grain crop rotation, while corn cultivation aids in the capture of carbon dioxide during the photosynthesis process.

Emissions Ranking

Greenhouse Gas Emissions per Kilometer Driven*

Type	Greenhouse Gas Emissions per km Total energy and vehicle	Source of Energy
Hybrid	74 gCO _{2e} /km	Ethanol (E100)
Flex	80 gCO _{2e} /km	Ethanol (E100)
Electric	96 gCO _{2e} /km	Electricity
Flex	196 gCO _{2e} /km	Gasoline C (E27)
Flex	226 gCO _{2e} /km	Gasoline A

*Includes emissions from vehicle assembly and maintenance (data from 20), considering a lifespan of 288,394 km for internal combustion vehicles, 216,296 km for electric vehicles, and 100,000 km for batteries 21.
Source: Eletrificação de veículos e o futuro de etanol combustível no Brasil - CNPEM