BRASIL

BRAZIL'S CONTRIBUTION TO THE CHALLENGE OF SUSTAINABLE GLOBAL SUPPLY

SUSTAINABLE PRODUCTIVITY GROWTH

BRAZIL IMPLEMENTS LOW-CARBON TROPICAL AGRICULTURE

THREE FACTORS ENSURE THE VIABILITY AND SUSTAINABILITY OF AGRICULTURE AND LIVESTOCK RAISING IN BRAZIL

1. CONTINUED PRODUCTIVITY GROWTH

A SCIENCE-BASED TROPICAL AGRICULTURE

- Since the creation of Embrapa (the Brazilian Agricultural Research Corporation), innovative techniques and scientific advancements have been developed specifically for tropical agriculture.
- Political and institutional incentives were made over the last decades, including agricultural loans and infrastructure investments (structure for storage and transport of grains and pulses).
- Investment in research optimizes tropical semiarid soils, making better use of the advantages the *cerrado* savanna region offers, while overcoming its disadvantages (especially regarding the soil's acidity and fertility).

THE "TROPICALIZATION" OF THE ANIMAL PRODUCTION SYSTEMS

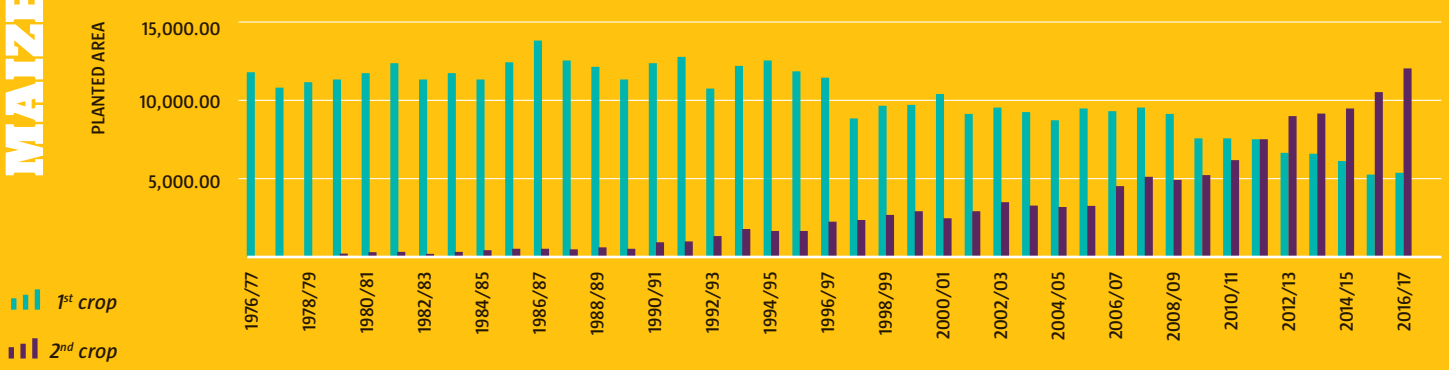
- Investment in research optimizes reproductive techniques, improved genetics to obtain more productive pastures and improved animal genetics.
- Pork and poultry production chains, using integrated or cooperative systems, support the development of nutritional research, and also provide better temperature and sanitary conditions for the animals.
- The productivity of cattle raising in terms of weight per hectare per year is increasing, helping reduce pasture area, which is being progressively switched to agricultural production.
- Integrated crop, livestock and forestry production model (ICLF): the carbon-neutral Brazilian beef revolution. Brazil is a pioneer in implementing a system that integrates farming, cattle ranching and forestry.

2. SECOND AND THIRD CROP HARVESTS

26% of the area planted with grains and pulses in Brazil is used for a second harvest each year

In Brazil, the first crop to be planted is usually soy since it is the most profitable. But crops such as maize, wheat, beans and peanuts are planted after the soy harvest. "Second crop" maize particularly stands out. It is an especially common second crop in the states of Mato Grosso, Paraná, Mato Grosso do Sul and Goiás, which together account for over 80% of second-crop maize. **Over 65% of the total maize available during the 2016/17 harvest year was second-crop maize.**

Source: Conab, 2018



3. POLICIES TO MAINTAIN NATIVE VEGETATION

A GUARANTEE OF CONSERVATION IN PUBLIC AND PRIVATE AREAS: CONSERVATION AREAS AND THE NEW FOREST CODE

Brazil has built a regulatory framework for environmental protection that reconciles income-producing agricultural production with environmental protection. Most countries use 20%-30% of their territory for agriculture (European Union countries use between 45% and 65%, the United States uses 18.3%, China uses 17.7% and India uses 60.5%). **A recent study by the United States Geological Survey (USGS), in partnership with NASA, revealed that Brazilian planted crop areas cover only about 7.6% of its territory.**

PROTECTING NATIVE BRAZILIAN VEGETATION

FOREST CODE
PROTECTION ON PRIVATE LAND

Ensures that permanent protection units are mandatory in Brazil. These are areas of specific interest to conserve natural resources (around waterways, lakes, ponds and springs, as well as restinga and mangrove coastlines). At least 80% of the area on all rural properties located in the Amazon biome must be reserved for native vegetation – only 20% of the area can be used for economic activities and infrastructure. In other regions of Brazil, the required legal reserve area is from 20%-35%. Legal reserve areas cannot be used for traditional economic activities, such as agriculture, livestock or forestry. Sustainable forestry management is the only economic activity allowed.

RURAL ENVIRONMENTAL REGISTRY: A NATIONWIDE, DIGITAL PUBLIC REGISTRY THAT ALL RURAL PROPERTIES MUST REGISTER WITH, ENSURING COMPLIANCE WITH THE FOREST CODE

The Rural Environmental Register (Cadastro Ambiental Rural, CAR) is the main instrument for agricultural and environmental monitoring and transparency. Permanent conservation areas and legal reserve areas are reported by rural landowners through the Rural Environmental Register, a digital database that stores and processes georeferenced information, supporting Brazil's environmental management.

CONSERVATION UNITS AND INDIGENOUS LAND
PROTECTION ON PUBLIC LAND

The National Conservation Unit System was created in 2000. It provides for two major categories of protected public land: Full Protection Conservation Units (which are publicly owned and where people are not allowed to live), and Sustainable Use Conservation Units (which allow the sustainable direct use of natural resources under a management plan for the unit).

The National Conservation Unit System also includes a Natural Heritage Private Reserve category, which allows for the creation of a protected area managed by private parties interested in environmental conservation.

19% OF BRAZIL'S TOTAL AREA IS IN CONSERVATION UNITS, DISTRIBUTED AMONG 950 CONSERVATION UNITS IN ALL OF BRAZIL'S BIOMES

Between 2000 and 2017, conservation units grew in number from 500 (90 million hectares) to 950 (159 million hectares), distributed across all regions in the country.

INDIGENOUS LANDS COVER 12.2% OF BRAZIL'S TERRITORY, WITH 462 REGISTERED AREAS

BIOSAFETY LAW

BRAZIL IS A SIGNATORY OF THE CARTAGENA PROTOCOL, IN EFFECT SINCE 2003

The Cartagena Protocol in Biosafety establishes safety standards and mechanisms to monitor activities involving genetically modified organisms (GMO) and their derivatives. CTNBio, a multidisciplinary collegial body, provides technical consulting and advising to the Brazilian government in the formulation, updating and implementation of the National Biosafety Policy for activities involving the development, experimentation, cultivation, handling, transportation, sale, consumption, storage, release and disposal of GMOs and their derivatives.