

**INSTITUTE OF APPLIED RESEARCH IN SUSTAINABLE ECONOMIC
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AGRIBUSINESS WITH SUSTAINABILITY

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World Environment Week is celebrated in the month of June. Was established in 1972, the United Nations Conference on the Human Environment, held in Stockholm, Sweden. In Brazil, this celebration date of 1981, through Decree No. 86,028, and its purpose is to support the participation of the Brazilian community in preserving the natural heritage of the country.

From the decade of 1960 the Brazilian agriculture was productive addition to the forefront in a few decades, putting the country on its important player in world food production, raw materials and bioenergy, so atypical, because it is the only tropical country that figure in this select group of countries.

Among other factors this position has a lot to do with the advancement of agricultural research in line with the different Brazilian ecosystems. The production model, then, had as the paradigm called green revolution, based on the use of inputs (seeds, fertilizers, pesticides etc.), machinery and implements for mechanization.

Following the Green Revolution the Brazil created the revolution in Tropical Agriculture Production systems in addition to increased productivity, integrate them to environmental preservation (crop-livestock-forest integration, no-tillage and nitrogen biological fixation). Data from the Brazilian Institute of Geography and Statistics (IBGE) show that between 1960 and 2015 were spared 209,000,000 hectares in area of grain production, and 239,000,000 hectares in pasture area, a total of 448,000,000 hectares.

PERFORMANCE OF GRAIN PRODUCTION

Year	Area	Variation: %	Production: millions/ha	Variation: %	Productivity: tons/ha	Variation: %
1960	22	163	17.2	1,118	793	361
2015	58		209.5		3,612	

Source: IBGE.

THE LIVESTOCK PERFORMANCE

Year	Pasture: millions/ha	Variation: %	Cattle; millions/units	Variation: %	Stocking rate/ha	Variation: %
1960	122	39	50	318	0.47	161
2015	170		209		1.23	

Source: IBGE

This beautiful Brazilian agricultural performance, occurred in a few decades, took the country's dependency on food supply, especially in animal protein, placing it at the forefront, which in addition to food production is part of bioenergy, and pulp and paper production. Brazil, in 2015, led exports of orange juice (77.4%), sugar (44.2%), soybeans (44.2%), poultry meat (36.6%), coffee (29.4%), and beef (21%); held the second place in exports of corn (21.0%), soybean oil (12.2%); and stayed in third place in exports of cotton (11.6%). Several factors influenced this change.

In the decade of 1960, with the opening of the Belém-Brasília highway, ranching in grazing land he settled on Amazon through the pioneering occurred in the municipality of Paragominas Pará. Today the region registers a 36,000,000 beef herd of heads, with good breeding pattern. Also the ranchers, during this period, the opening of new areas for grazing, planting rice before launch pasture seeds, as a way of settling costs in training. Idea precursor of what would become the crop-livestock integration.

In the years 1970, pioneer farmers made attempts of tillage. In the second half of that decade the research with pastures has an important start in the Amazon through the PROPASTO-Cultivated Pasture Improvement Program of the Legal Amazon-a research program in agrostology, responsible for the herd of cattle 36,000,000 today in the region. With this knowledge it is possible today to 1,000,000 recovery hectares of pastures, and at the same time avoids the advance of cattle industry about the woods for the opening of new areas.

The corn crop has undergone a major revolution with the planting of the second harvest, known as the small harvest corn crops, taking advantage of the residual effect of the first crop fertilizer. With the help of biotechnology applied in seed genetics, the small harvest was consolidated, and today represents 60% of corn production in 2015/16. With this producer has expanded its ability to generate revenue.

The integration of the Cerrado biome to Brazilian agribusiness with flagship soy cultivation has taken place since the early 1980. In 2016 soy is produced in parallel zero State of Amapá in Brazil, being scheduled for the month of September this year the first export from the port of Santana, soybeans there produced for Europe.

These achievements have become classic examples of competence and recognition of agricultural research Brazilian, and the entrepreneurship of the national farmer, equaling tropical agriculture production with that of temperate countries, occupying the leadership in food production.

This has been achieved with the insertion of technologies to minimize the use of natural resources and maximizing the reuse of waste and sub products. Is a set of strategies and actions for the production plans and costs of productive chains. Is on livestock, whether in agriculture, increasing the application of space wins good sustainable practices in the management of productive resources such as soil and water, and also on forest preservation.

The recent change of the Forest Code – Law n° 4,771, September 1965 – with many changes over the years through Provisional Measures was very beneficial for the country. As a result of these discussions, the environmental theme went definitely on the agenda of the agricultural production. After 12 years of exhaustive and radicals discussions the new Forest Code – Law n° 12,561, approved in May 2012 – brought advances to the productive sector, despite leaving unhappy segments of producers and environmentalists. But on the other hand, the clashes will continue now with more technical content.

The new Forest Code created the Environmental Rural Records (CAR, in Portuguese) for all rural properties. The term of this requirement should have won in May 2015. With only a quarter of the properties comply with this obligation, the deadline has been postponed for another year. However, in May 2016, there was 81.69% of indexed properties, and more once the deadline has been extended until 31 December 2017. But, financial institutions can no longer grant rural financing for properties not registered.

Successful initiative is the Campo Limpo. Started in 2002, takes each link in the production chain to do their part to properly allocate the packaging of agrochemicals used in the plantations, looking to keep clean the Brazilian fields. Is promoted by the Instituto Nacional de Processamento de Embalagens Vazias (inpEV), contributing to raise awareness and engage farmers, distribution channels, manufacturing facility and public authorities for this purpose. Is the most successful program in the world in this type of packaging disposal. In 2002 managed to absorb 3,768 tons of packages, and in 2015 45,536 tons, according to the reached inpEV. The program relies on the national day of Campo Limpo, celebrated on August 18, official date on the calendar, set up by Brazilian Federal Law n° 11,657/2008.

For the future, the association between agribusiness and sustainability represents a trend that should add value to the products to generate greater profitability to its activities. This interest is gaining ground in the proportion in which the company feels the finitude of non-renewable resources, with the need for new production possibilities.