

# NO POVERTY

## CONTRIBUTIONS OF EMBRAPA

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Technical Editors





**Brazilian Agricultural Research Corporation  
Ministry of Agriculture, Livestock and Food Supply**



**Sustainable Development Goal 1**

**NO POVERTY**

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## Chapter 5

# Advances and future challenges

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## Introduction

Although the main indicators of poverty and extreme poverty are associated with daily per capita income (Brasil, 2017, 2018; Monitoring..., 2017), poverty in its expanded concept is not limited to income but also the extension human capacities (Sen, 2000). The increase in human capacities can promote the expansion of productivity and the power to earn income, making hardships rarer and less chronic. Hence, reducing poverty means raising income, but also providing the means to defend human rights, access to different basic services, and the enhancement of human capacities.

In Brazil, it is estimated that 50 million people, about 25% of the population, live on poverty line (Síntese..., 2015). With continental dimensions, the country has a structure marked by regional and social inequalities. Northeastern states have the largest population living on poverty line (Síntese..., 2015), which can also be associated with vulnerable groups according to gender, color, race, and others (Subsídios..., 2011; IBGE, 2017).

These regions and social groups are especially subject to food insecurity and malnutrition, which can be aggravated by global climate change. Climate change can lead to material and housing losses and the reduction of the means of production and sources of income, further aggravating the poverty and extreme poverty situation of vulnerable populations.

Understanding this scenario is essential so that priority lines can be established for the feasibility of research, development, and innovative solutions for agriculture sustainability, to benefit Brazilian society, focusing on regions or social groups in situations of poverty and extreme poverty, and when facing global climate change.

## Embrapa highlights

Embrapa is recognized as a provider of new technologies and processes, as well as qualified information to support decisions in agriculture and expand human capabilities.

Rada and Valdes (2012), in the Policy, Technology, and Efficiency of Brazilian Agriculture study (United States Department of Agriculture), reinforced that, between 1985 and 2006, Brazilian agricultural production increased by 77% and the country emerged as a major international agricultural exporter. Brazilian agricultural productivity was driven by sustained public investments in science and technology, leading to a flow of new technologies. In that study, they emphasized that Embrapa was crucial in increasing the country's agricultural productivity.

Embrapa has made it possible for family farmers, *quilombola* communities, and rural youth to access technological solutions and innovations that are inexpensive, easy to apply, and can be adapted locally.

The knowledge produced by Embrapa consists in seed technologies, soil preparation techniques, planting and harvesting, phytosanitary treatments, climatic risk zoning, improved genetic materials, agricultural practices resilient to climate change, sustainable practices for critical regions, the construction of several systems to support management decisions, among other solutions, in all Brazilian biomes.

Besides, Embrapa has contributed to the discussion and development of social interest policies. Contributions of Embrapa related to the poverty reduction theme include its participation in the Programa Brasil Sem Miséria (Brazil Without Misery Program), the National Policy on Agroecology and Organic Production (Política Nacional de Agroecologia e Produção Orgânica), the National Policy on Technical Assistance and Rural Extension (Política Nacional de Assistência Técnica e Extensão Rural), as well as on the policies for the development of peoples and traditional communities, and in the National Plan for the Promotion of Socio-Biodiversity Chains (Plano Nacional de Promoção das Cadeias da Sociobiodiversidade). In this sense, Brazil has benefited in a sustainable way from improved products and processes and innovative technologies made available to all, but especially to those responsible for strategic decisions aimed at improving Brazilian life.

## Future challenges

Sustainable development and poverty are divergent concepts since poverty is a condition of social inequality. According to Marcel Bursztyin, a professor at the Center for Sustainable Development of the University of Brasília (UnB), in an

interview with UNDP, in order to promote a sustainable level of development, both concepts must be integrated to try to end poverty (Nações Unidas, 2016).

The mission of Embrapa is to enable research, development, and innovative solutions for agricultural sustainability to benefit Brazilian society. Its focus is the sustainable development of the rural environment, contributing to raise income and promote food security. Among the various future challenges to poverty reduction in Brazil and the promotion of food security in a scenario of global climate change, Embrapa has made efforts to:

- Amplify regionalized analyses on the new technological, social, economic, and demographic trends to diminish the process of “social differentiation” in the Brazilian rural environment.
- Expand research on technological solutions for agricultural production in regions with rising agricultural risk associated with production chains, with emphasis on the Northeastern semiarid region, especially in the face of global climate change.
- Carry out further studies and analyzes about agricultural production and the different technological levels of Brazilian rural settlements with potential optimization of the use of lands converted anthropically.
- Integrate new forms of institutional articulation, such as the Núcleos Territoriais de Inovação e Referência Tecnológica (Territorial Nuclei of Innovation and Technological Reference – Nutir/Embrapa), Reference Units and Multiuser Laboratories, etc., for the characterization and regionalization of rural producers, more sustainable production systems and new technological standards.
- Support the restructuring of the Technical Assistance and Rural and Social Extended Education (Aters) for regionalized technology transfer actions to provide qualified and sufficient information to rural producers to ensure “broad access” and integration into markets, thereby developing their entrepreneurship.
- Develop new production systems that consider aspects of rural multifunctionality, integrating food, fiber, and energy production into non-agricultural economic activities (e.g., rural tourism and ecosystem services).
- Develop studies on the diversity of national livestock systems and their territorial occupation, identifying more efficient, sustainable systems and with the minimum application of external inputs.

This way, Embrapa hopes to amplify its operation, generating impressive results capable of contributing to the farmer's role, fighting poverty, and tackling social inequalities in Brazil.

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