

Biomes, food production, big data, AI and social inclusion

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There is a consensus on the necessity to intensify food production and reduce iniquity in synergy with biodiversity conservation.

It is recognized the importance of political initiatives and efforts to increment and sustain food producers included in the low-income class segment over the last decades.

However, the current policies implementation lacks the wider capacity to reach most of the vulnerable sectors in the rural areas.

Agriculture structure in Brazil.

Income classes relating number of farms, area, and gross value product.

Class year/income (USD)	Number of farms	Farms (%)	Area (ha)	Area (%)	Gross value product (%)
A/B (>24,950)	300,963	5.8	128,420,746	38.5	78.8
C (5,650 to 24,950)	798,173	15.4	60,332,019	18.1	13.6
D/E (< 5,650)	3,645,344	70.4	109,940,992	32.9	7.6
ND	433,156	8.4	34,986,270	10.5	
Total	5,175,6363	100	333,680,037	100	100

Gross value product = gross liquid + production cost. Data source: Agricultural Census, 2006 (https://biblioteca.ibge.gov.br/visualizacao/periodicos/51/agro_2006.pdf); Rech & Lopes. Food and Energy Security 2012; 1(2): 77–80. <https://doi.org/10.1002/fes3.12>

Food producers included in the low-income class segment are discriminated by the social and economic environment. Low-income farmers commercialize their output at lower prices. However, purchase inputs at higher prices.

This iniquity proportion generates an unprofitable result and technology is low adopted. In contrast, without the use of technology, there is no way to increase income per hectare alleviating poverty of the low-income food producers.

Technology alone will not be sufficient to reduce iniquity, poverty and hunger. Unless, is equated with interdependent components such as human health, high-quality education, food security, environmental and ecological focus, as imperative factors for social and economic inclusion of the agricultural sector.

Establish a consortium to design and construct a framework based on Big Data and AI aiming to generate a fully interactive map of different the biomes worldwide.

The framework will include a public available system as a tool for food production, through a unique system of digital technologies for social and economic inclusion.

