

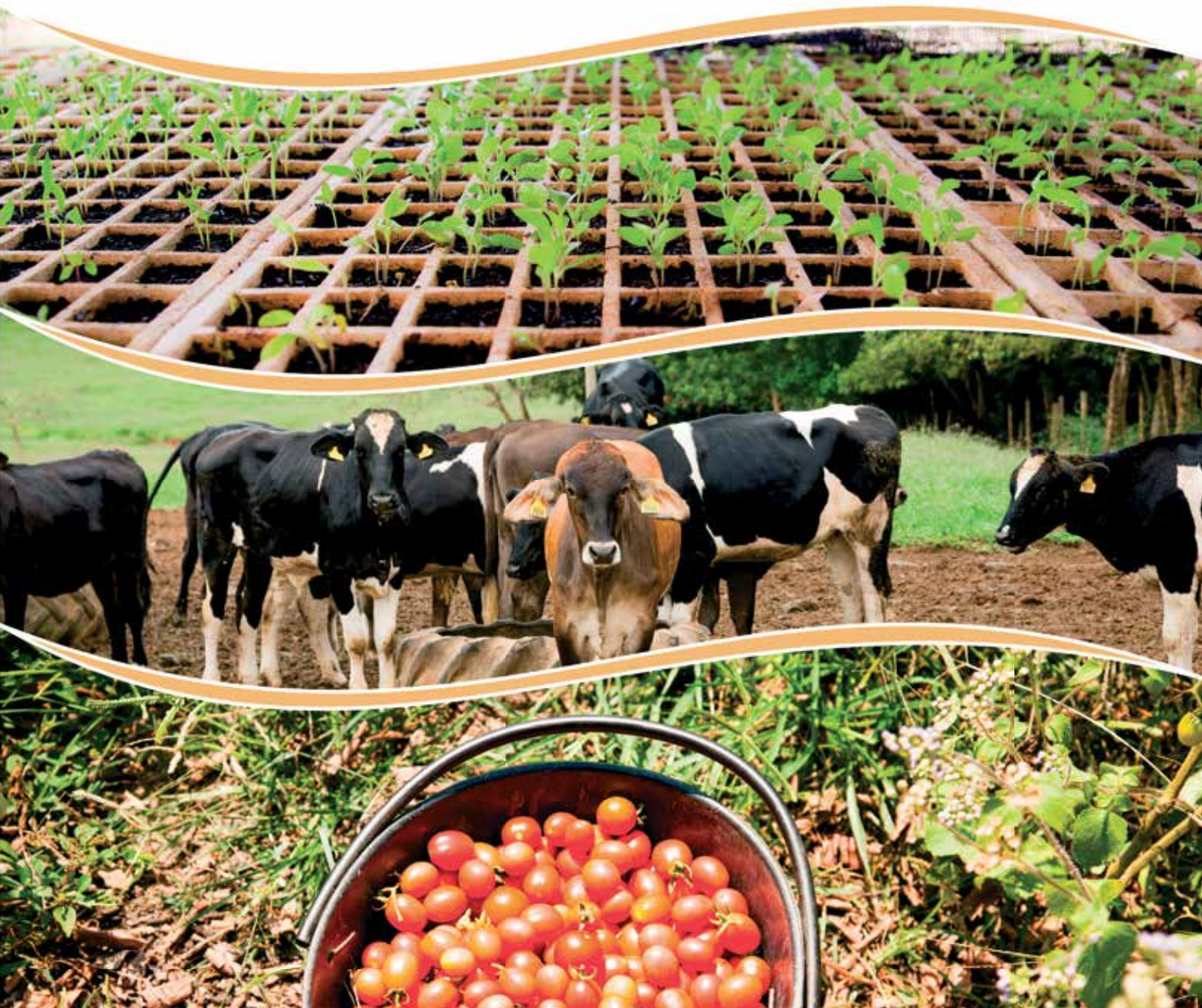
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Linking statistics with decision making.

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Notwithstanding the definitional differentiation of rural over the territories, rural is structurally distinct from urban in terms of the resource endowments, factors of production and opportunities and options in economic activities. The synonymous entity of rural and agriculture, particularly in developing agrarian economies, the structural constraints associated with the farm sector and its overriding influence over the rural economy has bearings on the livelihood and well-being of the rural people.

In this background, use of diverse data for coherent inference of agriculture in particular and rural in general is a corollary to the Strategy. Along with the explicit reference of core set of indicators, the Strategy also has implicit reference to structural attributes of entrepreneurs and entrepreneurship. The aggregated response to various institutionalised interventions in agriculture depends upon the entrepreneurial endeavors of farmers, spread over diverse social, economic, geographic and agro-climatic domains with varying endowments and their differentiated capacity and opportunity to adopt technology, access to farm services and integrate with the market. In large number of developing economies, the rural enterprises and employment is informal in nature. This enhances care and concern for the data, dovetailed with the three interwoven social, economic and environmental dimensions in the conceptual framework of the Strategy.

These attributes, both in respect of farm and nonfarm activities are expected to have complimentary and supplementary role in growth and development of agriculture, income generation and overall well-being. The paper explores data aspects of multifaceted farm and nonfarm rural characteristics, and attempting empirical analysis based on available data for understanding rural and agricultural structures. This is in consonance with the third pillar of the Strategy, to develop statistical capabilities in the national system for data generation, standardisation of concepts and definitions and analytical inferences for assisting policy analysis.

Keywords: agriculture statistics; rural development; rural structures.

* Views expressed are of the Author.

Typology of sugarcane production in Brazil: the use of multivariate statistics on municipal data

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Abstract

Given the large territorial extension and the high social and economic diversity, Brazil has a remarkable variability in agricultural cropping systems. The description and the understanding of this variability is fundamental for proposing research gaps, technology transfer and appropriate public policies for the sector. Sugarcane is used for several purposes on farms, such as household consumption, energy and sugar production, and forage production. Data collected during the 2006 agricultural census, accomplished by the Brazilian Institute of Geography and Statistics (IBGE), shows that 192,931 farms (3.7% of Brazilian farms) reported having grown sugarcane in 2006. This paper addresses the classification and characterization of the sugarcane producing municipalities in Brazil, using techniques of multivariate statistical analysis (factor and cluster analysis). The 41 variables used were created from the data collected by the 2006 agricultural census, covering 3,576 municipalities. Data went through a sugarcane filter, and was then regrouped by municipality. Those variables gather socioeconomic and technological information on the farms, such as land usage, harvested area, production goal, productivity, input usage, use of industrial wastes, irrigation, source of producer's income, percentage of the income that comes from sugarcane, family or conventional farming, size of herds, distance from the farms to sugar mills, among the most important. Analyses identified 9 different groups of

sugarcane production in the municipalities, remarking large variability of sugarcane sector in Brazil, and the clear spatial differences of production and technology use in the territory. The results of the statistical analysis and the characteristics of the groups were discussed among scholars specialized in sugarcane research and were considered coherent with Brazilian reality.

Keywords: sugarcane production; typology of municipalities; factor analysis; cluster analysis.

Comparison of estimates of area in production of sugarcane in São Paulo state

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Abstract

Sugarcane (*Saccharum officinarum* L.) is originally from New Guinea, it was introduced in Brazil by Martin Afonso de Souza in the year 1532, and is one of the main products of Brazilian agriculture. Brazil's role in world stage is the largest producer of sugarcane, the amount of the Brazilian, 55% is used to produce ethanol and 45% for sugar production. The state of São Paulo has the largest area under cultivation of this plant with the equivalent of 40% of the total. Given the magnitude of the numbers involved in the production of sugarcane in Brazil and especially in state of São Paulo and its relevance as food and fuel has two relevant surveys production area in state São Paulo. A survey is conducted through remote sensing techniques using satellite images and the subjective method uses survey uses non-probability sampling techniques. This study aims at comparing through descriptive statistics results obtained by these two surveys among the crop years from 2003/04 to 2012/13, checking the

differences and the tendency of each survey, as well as their strengths and limitations. According to the results, only the crop year 2007/08 the estimated area by remote sensing was higher compared to estimated area by non-probability sampling. On the evolution of the area estimated by two surveys, it appears that from the crop year 2010/11 survey conducted by the remote sensing area indicates reduction in production, but the opposite is observed in the survey conducted by non-probability sampling techniques. Although the surveys have different methodologies, the results of the estimates are similar, but the last two crop years tend expansion area is different in each of them, possibly, the difference is in the focus of each survey.

Keywords: sugarcane; sampling; area; estimates.

Forecasting Municipal Crops in Brazil – a comparison of alternatives data sources for better accuracy of results

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Abstract

Results from agricultural research are one of the most accessed pages from Brazilian Institute of Geography and Statistics (IBGE) website. However, part of the published results receives criticism for using subjective methods and do not use data based on probability sampling. In municipalities with lower expression in the rural sector, the crop estimative depends on the perception of local