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**ANALYSIS OF THE EFFECT OF COMMODITIZATION OF AGRICULTURAL SPACE IN PRESIDENTE PRUDENTE BETWEEN 2013 AND 2020**

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**ABSTRACT:** Land use within the agricultural scope is especially characterized by the productive scenario and global markets. however, in a continental country like Brazil, such characterization becomes complex to the point of covering several and necessary variables for such analysis. within this, the commoditization movement of rural space can be evaluated to understand how production has been carried out and how land use is being used. commoditization can be understood as the allocation of the agricultural production area to products of a restricted range, on a global scale, and that meet the economic issues of profit on a plot of land. thus, this work seeks to understand how the behavior of the producers of Presidente Prudente was, between the years 2013 and 2020, regarding the use of agricultural space and whether such a movement is still observed. the results show that sugarcane and soybeans obtained high percentages of planted area to the detriment of crops such as tomato and pineapple.

**Keywords:** Commoditization; Use land; Diversity production.

**ANÁLISE DO EFEITO DA COMODITIZAÇÃO DO ESPAÇO AGRÍCOLA EM PRESIDENTE PRUDENTE ENTRE 2013 E 2020**

**Resumo:** O uso da terra dentro do âmbito agrícola atualmente é especialmente caracterizado pelo cenário produtivo e mercados globais. No entanto em um país continental como o Brasil, tal caracterização se torna complexa ao ponto de abranger diversas e necessárias variáveis para tal análise. Dentro disso, o movimento de comoditização do espaço rural pode ser avaliado para entender como a produção vem sendo realizada e o uso da terra sendo utilizado. A comoditização pode ser entendida como a destinação da área de produção agrícola à produtos de um leque restrito, de escala global, e que atendem a questões econômicas de lucro sobre parcela de terra. Assim, este trabalho busca entender como foi o comportamento dos produtores de Presidente Prudente, entre os anos de 2013 e 2020, sobre a utilização do espaço agrícola e se tal movimento é ainda observado. Os resultados mostram que a cana-de-açúcar e a soja obtiveram altas em percentual de área plantada causada pela expansão da área agrícola e em detrimento de culturas como tomate e abacaxi.

**Palavras-chave:** Comoditização; Uso da terra; Diversificação de produção.

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## 1. INTRODUCTION

Analyzing rural space in a regional way becomes complex when we evaluate a movement in world agriculture. Such a movement limits the local focus and internal supply, with almost an interim focus being on the external market (ALVES, 2021; DIAS, 2009; SANTOS, 2006; RUA, 2005). Thus, from a national point of view, the analyzes of these commercialization networks end up revealing specialization, concentration and competitive inequalities at the regional level (ALVES, 2021).

Brazil is a country that is increasingly characterized as an agricultural producer, or a country with its economic pillar centered on the agribusiness sector. In this sense, the development of crops that favor global raw materials gains greater relevance in the productive scenario, with greater intensification, technology and subsidies. Thus, it is possible to notice that the productive area is concentrated in crops such as soybeans, rice, corn and beans, however, crops such as sugarcane that do not have a characterization of global production, also have a representative area due to favorable conditions for the culture (ALVES, 2021).

Focusing on the state of São Paulo, despite being the most technological in Brazil, it is also very much represented by agribusiness, especially sugarcane and soybeans. Historically, the agricultural occupation of São Paulo was mainly destined to crops such as oranges, coffee, sugar cane, however, with a high production of diversified foods mainly from farmers characterized as family members. However, the increase in inputs, technologies and subsidies for large productions, together with the associated premium, has made it easier for large producers to increase their production áreas (LAPOLA, 2014; DERANIL & SCHOLZ; 2017).

The Presidente Prudente region, an important region in the state of São Paulo, located in the extreme west of the state, has also experienced and is currently taking place. The region is marked by the strong presence of livestock, however, agriculture is also seen on a high scale, and sugarcane mills have grown in area in recent decades. Such presence led to a greater concentration of sugarcane production and the so-called rotating crops, such as soybeans, corn and peanuts (PEREIRA, 2021).

It is possible to notice that in recent years, the region of Presidente Prudente is marked, in terms of the agricultural regime, on the cultivation of sugarcane (IBGE, 2020). However, the socio-institutional movement causes a movement towards the continuous growth of these great products and the apparent stagnation and even fall of family farming. Such stagnation can lead to a movement



of growth in the areas of commodity production and the rupture of the increase in the degree of diversification of production (ALVES, 2021; DIAS, 2009).

## 2. OBJECTIVES

This work then seeks to evaluate in this time frame from 2013 to 2020 how was the process of land use in relation to the planted area for the municipality of Presidente Prudente. Thus, the objective of this research is to analyze the planted area on an effect of concentration of production in commodities to the detriment of the expansion of land destined to other cultures. To this end, data from the survey of municipal agricultural production by the IBGE will be considered (PAM).

## 3. METHODOLOGICAL PROCEDURES

The various facets and actors that mediate current agriculture lead to a complex analysis. However, factors evaluated exclusively can portray points of attention that effect a robust analysis. Thus, it is sought to achieve a first analysis through a key point to question more deeply the effect of commoditization.

In this way, we will try to evaluate the producers' plan through secondary data and the descriptive evaluation through secondary data. The reading of indicators should give us paths and for this reason the planted area factor will be evaluated to understand how the dynamics of land use by the producers of Presidente Prudente was. Through such data and the subsequent analysis, the evaluation and results arising from the convergence between materials and research on the production carried out will then be carried out.

Two groups will be analyzed, called G1 and G2, both classified by a view of the analysis region. The group with global production demand will be represented by G1, namely: Cotton, Peanuts, Sugarcane, Beans, Corn, Soybean and Sorghum. Already by G2 that production that is understood as for internal supply, being the production of Pineapple, Rice, Sweet Potato, Onion, Castor, Cassava, Watermelon, Melon, Tomato.

Finally, we will evaluate how was the dynamics of occupation of these groups for the municipality. Thus, it is sought to understand how the degree of commoditization is still present, and becomes a risk for the extinction of the cultivation of different cultures and may end up excluding small producers from the business. Follow the results of the work.

#### 4. RESULTS AND DISCUSSIONS

First, Table 1 presents data on planted area in hectares of land destined for agriculture in Presidente Prudente. Through a treatment, the organization shows, year by year, the amount in hectares and how was the real growth in area of the last 8 years. All data were extracted from the SIDRA platform of the IBGE municipal agricultural production survey.

**Table 1.** Area planted or intended for harvest in hectares.

| Cultura              | 2013    | 2014    | 2015    | 2016    | 2017    | 2018    | 2019    | 2020    | Cresc. 13-20 |
|----------------------|---------|---------|---------|---------|---------|---------|---------|---------|--------------|
| <b>Total</b>         | 629.117 | 674.263 | 665.344 | 627.052 | 603.604 | 647.667 | 653.564 | 668.336 | 6.23%        |
| <b>Pineapple</b>     | 134     | 89      | 88      | 70      | 37      | 119     | 120     | 94      | -29.85%      |
| <b>Herbal cotton</b> | 1.281   | 1.718   | 1.642   | 1.781   | 862     | 1.202   | 1.352   | 1.322   | 3.20%        |
| <b>Peanuts</b>       | 16.786  | 17.698  | 26.974  | 24.636  | 20.364  | 21.364  | 19.885  | 17.608  | 4.90%        |
| <b>Rice</b>          | 71      | 72      | 0       | 2       | 2       | 3       | 32      | 32      | -54.93%      |
| <b>Sweet potato</b>  | 2.071   | 1.990   | 4.963   | 3.544   | 3.366   | 2.126   | 2.471   | 2.029   | -2.03%       |
| <b>Sugarcane</b>     | 525.294 | 561.856 | 490.072 | 478.714 | 472.651 | 518.799 | 535.059 | 553.848 | 5.44%        |
| <b>Orion</b>         | 0       | 0       | 0       | 0       | 0       | 1       | 1       | 0       | 0.00%        |
| <b>Beans</b>         | 2.854   | 3.294   | 724     | 1.174   | 1.387   | 1.006   | 1.811   | 2.721   | -4.66%       |
| <b>Castor</b>        | 36      | 0       | 30      | 0       | 0       | 0       | 0       | 0       | -100.00%     |
| <b>Manioc</b>        | 7.358   | 8.178   | 17.338  | 13.391  | 10.453  | 7.475   | 6.724   | 7.274   | -1.14%       |
| <b>Watermelon</b>    | 1.658   | 1.406   | 762     | 1.451   | 1.636   | 1.761   | 1.737   | 1.652   | -0.36%       |
| <b>Melon</b>         | 11      | 13      | 5       | 10      | 18      | 14      | 12      | 12      | 9.09%        |
| <b>Corn</b>          | 39.311  | 40.230  | 56.608  | 47.730  | 44.055  | 46.312  | 43.592  | 37.613  | -4.32%       |
| <b>Soy beans</b>     | 31.506  | 37.029  | 65.691  | 54.188  | 47.084  | 46.849  | 39.970  | 43.412  | 37.79%       |
| <b>Sorghum</b>       | 0       | 0       | 150     | 150     | 1.365   | 120     | 150     | 150     | 100.00%      |
| <b>Tomato</b>        | 746     | 690     | 297     | 211     | 324     | 516     | 648     | 569     | -23.73%      |

Source: IBGE – PAM Municipal Agriculture Production – SIDRA.

Between the years we see that the evolution in planted area from 2013 to 2020 was around 6.23%, representing something around 39,200 hectares. We see 2014 as the year with the largest planted area, surpassing 674,000 hectares planted and in 2017 the year with the lowest volume in the range, with around 603,000 hectares. It is possible to understand that between the years, a lot of turmoil, mainly political-institutional and the economic crisis, generated noise and questions that may have restrained producers and farmers.

However, it is observed that G1 in 2013 represents an amount of 617,032 hectares (98.07%), compared to only 12,085 hectares (1.93%) of G2. In 2020, this difference increases, in percentage, to 98.25% for G1 and 1.75% for G2. Although the difference is small in percentage, these values in

hectares represent an increase of more than 40,000 hectares, all destined for the exploitation of specialized and global crops.

In other words, it is possible to perceive that, although the exploration of the land continues to advance even in years of crisis and low investments, these are only destined to specific cultures. In 2013 the main representation of G2 is on sweet potato, cassava, watermelon and tomato crops. In 2020, we see that all these crops saw drops in planted area values, meaning increased commoditization in exchange for diversification.

There is also the possibility that this substitution of land use will be through the purchase or lease of areas from small producers by large producers. Such a factor should be of attention given the concern to maintain a regime of diversification of production for the sustenance and internal regional and municipal supply. As this percentage increases, the risks inherent to society and local communities increase, both in economic and social terms.

## 5. FINAL CONSIDERATIONS

Although there are economic and socio-institutional increases in the cultivation of specialized crops, this almost total participation carries concerns inherent to the regional space. Such factors must be analyzed, given the need for public policies to maintain the competitiveness of production, whether from small producers or large landowners, under equal conditions of credit and incentives. In the end, this work shows evidence that commoditization is still in motion for the Presidente Prudente region, so there should be more studies on the possibility and possible effects on the population.

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