THE SOCIAL INCLUSION OF FARMING IN THE PRODUCTION OF BIODIESEL IN BRAZIL BETWEEN 2005 TO 2012

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Overview

The aim of this work is to analyze the participation of family farmers in the supply of raw materials to the National Program for the Production and Use of Biodiesel (PNPB) between 2005 and 2012. With Decree No. 5,297, dated December 6, 2004 , the government instituted the Social Fuel Seal as an instrument for social inclusion of biodiesel production, especially in the North and Northeast regions, and through Law 11,097 of January 13, 2005, it ordered the introduction of biodiesel into the Brazilian energy matrix, which has as one of its objectives, to promote the inclusion of family agriculture and reduce regional inequalities. State statistical data were used and the Factorial Analysis technique was applied in order to elaborate the so-called economic, technological, socio-political and socio-environmental factors. It was found that the greatest obstacle to the social inclusion of PNPB is the high level of illiteracy. Of the 1,167,542 million family establishment leaders who do not know how to read or write, more than 60% are in these two regions, which are precisely the ones with the lowest shares of index values that express economic, technological and socio-political aspects . With these disparities persisting in the production and total purchases of oilseeds from family agriculture, between regions, the result is a tendency towards income concentration and consequently widening regional inequalities.

Methodology

In order to analyze the characteristics of the family farming establishments and the oilseeds cultivated by this segment, the Agricultural Census data of 2006 were used, and the Factorial Analysis technique was applied in order to elaborate the factors denominated: economic, technological, socio-political and socio-environmental. In order to identify the performance of biodiesel production in each state, a Gross Index of Oilseeds Production of Family Agriculture was calculated, which was constructed based on average factorial scores plus oilseed production in each state of the establishments studied. Analysis of the relationships was achieved by correlating the indices created by the Gini indices of land concentration and income, GDP at current prices and by the FIRMAN Index of Municipal Development (IFDM) - by area of employment, income and education development.

Results

Considering an average weighted by the number of agricultural establishments in each municipality of the state, the estimated factors (economic, technological, socio-political and socio-environmental) in each state were estimated for the analysis of the production of oilseeds (cotton, peanuts, cashew, sesame, rapeseed, sesame, soybean, palm and babassu), the main highlight was the productivity of rape that is related to all factors, being positively with socio-political and socio-environmental factors and negatively with economic and technological factors.

It was calculated a Gross Production Index, constructed from the average factorial scores and the oilseed production in each state. The states that present the best results in relation to the economic factors were the three states of the South region, with Rio Grande do Sul being the only state that has a positive relation with the factors. Regarding the technological factors, 13 federative units presented positive relation, the Federal District has the best relation following of São Paulo. Of the sociopolitical factors, 10 presented a positive relation, being the state of Rondônia the highest, the states of the Northeast region did not present a positive relation with these factors. Regarding the socio-environmental factor, 15 positive values were observed. This was the only factor that had the most participation of the Northeastern states, of the nine states, 7 had positive relations. The states that were not related to any of the four factors were: Amazon, Roraima and Piauí.

The results of the FIRJAN Municipal Development Index allow for a detailed analysis of Brazilian development in the last decade, showing a significant reduction of areas of low development (0 to 0, 4), and the advance of the indicative areas of moderate development (0.6 to 0.8), which became predominant in 2010. During this period there were changes in the development patterns of the Northeast region, as well as the rise of the Center- West to patterns similar to those observed in the Southeast and South and the consolidation of high development areas (0.8 to 1.0), especially in the interior of SP. However, intra and interregional differences remain, and it is clear that one of the main challenges for the second decade of the millennium is to bring development to the interior of the Northeast and to the extremes of the North, since there is still a large number of municipalities with regular development (0.4 to 0.6) and low, in the areas of employment and income, education and health.

However, when the income disparity arises from structural problems in the Brazilian regions, one of the issues commonly referred to is human capital, with income differentials reflecting the different levels of training and schooling of individuals, so that this vicious circle feeds the concentration of income. Although in recent years the level of concentration of income has been regressing, it is still considered high when compared to levels of other countries. At the national level, it can be noted that between the years of 1992 and 2009, the South was always below the Brazilian level, which was not the case with the Northeast. In the case of the Midwest, the coefficient is high because of the Federal District, which has high incomes in public administration and the large number of poor migrants from other regions to Brasília. And, among the basic components, education is considered the most relevant to generate regional inequalities, particularly with regard to the number of years of study and the quality of education received.

Although it is not possible to assess the impacts of the PNPB, however, if the problem of inequality in income distribution is a structural component, which is intrinsic to the dynamics of an economic system geared to production, this problem will also oilseeds when it is concentrated, which has already been presented in previous data, showed that the state of Rio Grande do Sul presents the best indices considering the economic factors, in relation to oilseeds. With regard to technological factors, the best indexes are from the state of São Paulo and the Federal District. According to the MDA, little more than 50% of the participating institutions of the PNPB are in the South region, although the Northeast region owns half of the total family agriculture establishments in the country.

In the Northeast region, the value of acquisitions in 2008 increased from R $ 4.67 million to R $ 46.62 million in 2010. While in the South region it was approximately R $ 150.00 million in 2008, passing the R $ 700, 00 million in 2010. It can be noted that this dichotomy between regions persists in the total purchases of oilseeds from family agriculture. The problem is not in the more productive region but in the poorer regions. With these disparities persisting in the production and total purchases of oilseeds from family agriculture, between regions, the result is a tendency towards income concentration and consequently widening regional inequalities.

Conclusions

With the conclusion of the analysis of the 2006 Agricultural Census data on the characteristics of the family agriculture establishments and the oilseeds cultivated by this segment, it was noticed that the greatest obstacle to social inclusion of the PNPB is the high level of illiteracy. There are 1,167,542 leaders of family establishments who can not read or write. While the Northeast region has the highest level, 42.55%, the South region had the lowest level, with 5.05% of the total illiterate leaders, which is probably not a coincidence, since the first region had low levels of technical guidance, productivity, financing, etc. In turn, the second region had the best performance in practically all the questions.

It is no use for the government to include in the program key words such as "social inclusion" and "reduction of regional inequalities", just to comply with the laws and have such a high number of illiterates. In the PNPB's own institutional organization, the Ministry of Education was not linked to the Management Group. That is, if there are no consistent changes in the structures of these poorer Brazilian regions, any government program that proposes the inclusion of family agriculture will reinforce these disparities due to this educational deficit.

In this sense, it is recommended that the MEC is part of the PNPB Management Group and the MDA should disaggregate the data from the establishments of the family agriculture producing oilseeds of the Agricultural Census of the IBGE, in order to have a closer knowledge of the profile of these raw material producers, biodiesel, as well as to monitor the evolution of these establishments in shorter periods in the intervals of the Censuses.

With regard to technical assistance, the Government may establish a Public-Private Partnership (PPP) with EMATER's through the model of design, construction, financing, exploration and operation, ie concessions. A way to value rural extension and to encourage and teach rural cooperatives.

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