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A competitiveness analysis of alternative oilseeds for Biodiesel production in Brazil

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The quest to develop energy matrices with higher content of renewable energy has encouraged efforts in different countries to produce and use liquid biofuels as substitutes for petrol and diesel. Biodiesel is a fuel produced from renewable sources such as vegetable oils and animal fats. In Brazil, the production and use of biodiesel is regulated by the institutional framework proposed by the national program for the production and use of biodiesel (Programa Nacional Produção e Uso de Biodiesel Produção - PNPB). The diversification of raw materials to produce biodiesel is among the main PNPB objectives. However, in Brazil, this biofuel is predominantly produced using soybeans (83%). In order to understand the reasons for the predominance of this oilseed, this research evaluated the competitiveness, economic efficiency and political effects of biodiesel production using three alternative oilseeds in Rio Grande do Sul state (the largest biodiesel producer in Brazil): Soybean, canola and sunflower. The research was conducted using the Policy Analysis Matrix (PAM) approach, which assists in analyzing and defining public policies and identifying possible market failures that might influence the economic outcomes of agribusiness chains, while assessing the competitiveness and efficiency of those systems. The results indicate that the three oilseed chains are competitive. Nevertheless, the superiority of biodiesel production from soybean chain is notable, as this chain is well organized, more competitive and more economically efficient. On the other hand, policy distortions were observed which disadvantage the private and social profitability of the three studied chains, such as the farmer's payment system based on the seed weight, although the percentage of oil and prices differ substantially among the different raw materials, besides the significant differences in technological standards adopted in the different crops production. The results indicate the need to review the tax incentive policies, subsidies and payments to farmers of the different crops used for the production of biodiesel.

Biography

Antonio Domingos Padula is Professor at the School of Management of the Federal University of Rio Grande do Sul (UFRGS), holds a degree in Mechanical Engineering from the School of Engineering of São José dos Campos (1980), Diplôme D'Etudes Approfondies in Business Administration - Université de Sciences Sociales de Grenoble (1988) and doctorate in Business Administration - University of Social Sciences of Grenoble (1991). It operates in the following areas: production chains, agribusiness, bioenergy, industrial competitiveness, production strategy and operations. Participation in national and international projects: Coordinator CAPES-FIPSE-USA Project; Cooperation UFRGS-Nanjing Agricultural University (China); Cooperation UFRGS-Beijing Technology and Business University; UFRGS-UC-Berkeley Cooperation; Researcher in the Structuring Project of agroenergy in RS (FINEP and FAPERGS) and in the Pathways to Innovation Project in RS (CNPq-Pronex). This researcher participates with ad hoc consultant for CNPq, CAPES, FINEP, ... and in national and international journals.

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