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CHALLENGES AND PROSPECTS

**MECHANIZATION OF FAMILY FARMING UNDER THE BRAZIL-CHINA
PARTNERSHIP**

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Brazil has adopted various policies to address the challenges of family farming development, exemplified by the National Program for Strengthening Family Farming (Pronaf), implemented since the 1990s. More recently, the country has established a series of cooperation mechanisms with China to modernize Brazilian family farming. These agreements, such as the Memorandum of Understanding (MOU) signed by the Northeast Consortium and two other memoranda signed by President Lula during visits to China, aim to test Chinese machinery adapted for small-scale rural producers, tailor it to the demands of Brazilian family farming, and foster its domestic production. Furthermore, they seek to enhance this sector's capacity to contribute to strategic objectives such as the energy transition and to address historical challenges of the Brazilian

agricultural sector, notably regional inequality in project financing. Based on this context, the article departs from two fundamental hypotheses. The first is that projects created under these partnerships confront historical bottlenecks related to issues such as technological dependence and other practical problems evidenced by preliminary tests in the Northeast region, for instance, the need for agricultural equipment with more practical starting systems, as seen with electric starters. Conversely, based on these same tests, a reduction of 90% in physical effort for agricultural tasks and the emergence of a National Innovation System (SNI) within the family farming sector have been observed. Therefore, a second hypothesis is posited: such partnerships hold broad potential for improving this industry. Consequently, this article investigates the limits and possibilities of these initiatives through a bibliographic review, audiovisual content analysis, and descriptive analysis of consolidated data. The ultimate aim is to identify the bottlenecks that could jeopardize the project and to suggest pathways and opportunities to overcome them.

Palavras-chave: family farming; brazil-china cooperation; agricultural mechanization; technology transfer; rural development.