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“Bridging the gap between increasing knowledge and decreasing resources”

Socio-Economic Determinants Affecting the Farm Income of Small Fruit Producers in NE-Brazil

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Abstract

Since the 1960s, Brazil's government promoted irrigated agriculture in the country's semi-arid Northeast to decrease poverty and reduce rural exodus. Especially in the last two decades, irrigated agriculture within big irrigation schemes along the lower-middle São Francisco river basin increased rapidly. Irrigated fruit production using modern irrigation techniques played an important role in the economic growth of this region. Although favourable climate conditions, constant water availability, and efficient production techniques provide the fundamentals required for prosperity and economic independence of smallholders, many smallholders are facing poverty, despite similar initial situations to prosperous farmers. An analysis of socio-economic key factors was conducted to assess their impact on farm income. Sixteen experts were interviewed to gain an overview on irrigated fruit production in the regions Petrolina and Itaparica at the lower-middle São Francisco. Additionally a random sample of 132 farmers within the main irrigation schemes in those regions was interviewed to identify driving forces of economically successful crop production. Qualitative data were analysed using content analysis and quantitative data by multiple regression analyses. Inhibiting forces affecting farm income were insufficient infrastructure and therewith bad access to markets, low market power, and low availability of credits for means of production. Lack of knowledge about the new production methods increased these negative effects. Smallholders with less available capital had fewer chances to invest in perennial fruit plantations and modern irrigation infrastructure. However, these measures are crucial to generate higher and more secure income in the long term, thereby providing an escape from the poverty gap. Prospective water shortages, due to expansion of irrigated areas and climate change will increase the importance of water efficient production methods and consequently the requirement for capital and knowledge for their implementation.

Keywords: Irrigated agriculture, Northeast Brazil, regression analysis