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## Efficiency in Rice Production: Evidence from Gogounou District in the North of Benin

AFOUDA JACOB YABI

*University of Parakou, Department of Agricultural Economics, Benin*

### Abstract

Despite its high potentiality for rice production, Benin is still importing rice. So, it is important to explore the possibility of improving rice growing for food security improvement. Therefore, the technical, allocative and economic efficiencies of rice growing in the District of Gogounou in Northern Benin have been analysed with the help of a survey carried out among 150 rice producers randomly sampled during the agricultural year 2005–2006. Likewise, factors determining the economic efficiency were identified and their impact on economic efficiency of rice producers was estimated. The data analysis is essentially based on stochastic frontier of production and costs functions as followed various authors. The results show that inefficiency effects existed and were significant. From these, the indexes of technical, allocative and economic efficiency are in average 0.820, 0.859 and 0.701 respectively. Regarding the frequency distributions of the producers according to their indexes of technical, allocative and economic efficiencies, the modal class is (0.8 ; 0.9). Moreover, it is brought out that the level of education, the affiliation to a functional association, the contact with a project agent, the number of years' experience in rice production and access to credit have positive and significant effects on the economic efficiency of rice producers. These different results suggest that the role that must be played project agents to improve management skills of rice producers throughout their visit and training is important. Finally, it's necessary to promote a wideness of rice growing areas for a real rice production development and a sustainable food security in Benin.

**Keywords:** Benin, economic efficiency, rice