**Economic efficiency of tomato production systems in the dry season in North-Eastern Benin**

**Abstract**

The objective of the present studyis to analyze the economic efficiency of market gardeners under different production systems in the dry season, specifically tomato producers in the communes of Malanville, Bembéréké and Parakou in north eastern Benin. To do this, a survey was conducted among two hundred and fifty three (253) tomato growers in 9 districts of the three municipalities in the study. The survey sample consists of both men and women. The indices of technical and allocative then economic efficiency were estimated by the statistical analysis software "R".

According to the studies of BIAOU P. ​​et al (2018), there are two systems (S1 and S2) of tomato production in the dry season in the study area.

Market gardeners in the S2 system are economically efficient compared to those in the S1 system.

The regression carried out in order to find the factors likely to determine the effectiveness revealed that the religion variables of the respondent, belonging to an association or group, level of education, followed by a diploma training and system of culture positively determine the the economic efficiency of system 1 gardeners while the variable number of years of high schooling determine sit negatively. For vegetable gardeners in system 2, the female sex and education variables negatively determine economic efficiency, while those followed by a diploma training and number of years of schooling positively determine it.

**Key words:** **Allocative efficiency, technical efficiency, economic efficiency**