



Tropentag, September 17-19, 2018, Ghent

“Global food security and food safety:
The role of universities”

A Stochastic Frontier Analysis of Technical Efficiency of Poultry Eggs Production in Benin

GERAUD FABRICE CRINOT¹, PATRICE YGUÉ ADEGBLA², SERGE E. MENSAH³

¹*International Center for Research and Training in Social Science (CIRFOSS), Benin*

²*National Institute of Agricultural Research of Benin (INRAB),*

³*National Institute of Agricultural Research of Benin (INRAB), Veterinary and Halieutic Zootechnical Research Laboratory (LRZVH),*

Abstract

Demand for poultry eggs is increasing over the years. The study focuses on the technical efficiency of eggs production in Benin. The data is collected at the level of the Agricultural Development Poles where poultry production is important. A total of 167 poultry breeders were interviewed for the purpose of the study. Descriptive and inference statistics were used to describe the sample of study. Stochastic frontier model was used to determine the level of efficiency of the farmers and the determinants of inefficiency. The results showed that 92 percent of poultry farmers compared to 8 percent for women. The average age is 44 years old with an average of 8 years of experience in breeding. The results of the maximum likelihood estimates of the stochastic frontier analysis show that the cost of labour was positively significant at 1% which means that production will be decreased by 0.11 percent if the cost of labour increased by unit. Also, the cost of vaccination was negatively significant at 1%, and implied that the cost of vaccination increased by 0.06 percent. The average technical efficiency for poultry farmers was 22 percent which showed that the poultry farmers have a low level of efficiency. Then the number of years of experience and breeding was significant at 10%. The number of years of experience is a determining factor on technical efficiency, which means that poultry farmers with proven breeding experience are more efficient. This study proves the needs for training and capacity building in the field of monitoring and good practice of poultry farming in Benin.

Keywords: Eggs, poultry, stochastic frontier, technical efficiency