

ESTIMATE THE COST OF PRODUCTION OF POTATO CULTIVATION IN JAFFNA DISTRICT

A dissertation submitted to the
Faculty of Animal Science and Export Agriculture
Uva Wellassa University
In partial fulfillment of the requirements for the award of
Bachelor of Science in Export Agriculture

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2014

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ABSTRACT

The principal aim of this paper is to estimate a stochastic frontier cost function and an inefficiency effects model in the analysis of potato cultivation in Jaffna district. The study was carried out in four major potato cultivating areas in Jaffna district. A random sampling was used to select 86 potato cultivating farmers in the study. The survey instrument was a structured questionnaire. Information was collected on their socioeconomic characteristics and inputs used in potato production and their prices. The data were analyzed with the use of stochastic frontier Cobb- Douglas cost function. The parameters of the function were estimated by the maximum likelihood method using the computer program frontier version 4.1. Results indicated that all the cost elements included in the cost function positively influenced the total cost of potato production and except cost of family labours and cost own machineries all the other variables have significance relationship with the cost of production. Average cost for the production of one kg of potato was nearly Rs 74 in Jaffna district and it has ranged between Rs 43 and Rs 107. Except farming experience, coefficients of all the other variables were insignificant at all levels of probability. Farming experience has significant and negative relationship with the cost inefficiency and the average cost efficiency of farmers given by the Cobb-Douglas model is 10 percent. Recommendations made to enhance cost efficient potato production to include provision of farm inputs to the farmers at cheap prices, provision of marketing facilities for farmers to obtain reasonable price for their products.

Keywords: Stochastic Frontier Cobb- Douglas Cost Function, Reasonable price

Multistage random sampling, Maximum likelihood, Cost efficiency,