Nawaphol Prachayanukul 2008: An Economic Analysis of Atlantic Variety Potato Production Amphoe Phop Phra in Changwat Tak 2005/06 Crop Year. Master of Science (Agricultural Economics), Major Field: Agricultural Economics, Department of Agricultural and Resource Economics. Thesis Advisor: Associate Professor Somkit Tugsinavisuitti, M.A.B. 199 pages.

The objective of this study were learn about the process of production, cost and return and efficiency of input used in Atlantic variety potato. There are 35 Atlantic variety potato production farmer in 2005/06 were selected from Phop Phra Distric, Tak Province to interview in order to generate data needed for analysis.

The study result indicated that the average cost is 16,835.41 bath per rai in winter season and 13,640.67 bath per rai in rain season . The highest cost were seed expense and chemical fertilizer . The average net revenue were 6,023.33 bath per rai and net profit 5,152.45 baht per rai in winter season and the average net revenue 7,836.68 bath per rai and net profit 6,792.57 baht per rai in rain season . However the estimate cost and return have shown farmers can be continue their production in both season .

The analytical result by Cobb – Douglas production function form, was significantly explained by the following factor : labor , amount of Nitrogen fertilizer and value of pesticide in winter season production and factor : amount of Nitrogen fertilizer and value of pesticide in rain season production. When considered the technical efficiency of input used , the result indicated that marginal physical product (MPP) of amount of labor could increase yield was higher than marginal physical product of nitrogen fertilizer and value of pesticide in winter season , and also , marginal physical product (MPP) of nitrogen fertilizer could increase yield was higher than marginal physical product of pesticide in rain season. The economic efficiency of the input use, the farmer should reduce the pesticide but should be increase amount of nitrogen fertilizer and labor in winter season and should reduce the pesticide but should be increase amount of nitrogen fertilizer in rain season to gain maximum profit.

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