Patcharee Jaroenroop 2006: An Analysis of Chemical Safe Vegetable Production Efficiency Using Pelleted Bio-fertilizer and Chemical Fertilizer in Changwat Phatthalung. Master of Science (Agricultural Economics), Major Field: Agricultural Economic, Department of Agricultural and Resource Economic. Thesis Advisor: Assistant Professor Boonjit Titapiwatanakun, Ph.D.
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The objectives of this study were to study the production function, technical and economic efficiency of factor use, and return to scale of chemical safe vegetable using pelleted bio-fertilizer and chemical fertilizer. In addition, the study also compared cost and return from the chemical safe vegetable production between the farms that applied pelleted bio-fertilizer and chemical- fertilizer in Tambon Pgauyakhan, Amphoe Muang, Phathalung province.

According to the estimation Cobb-Douglas function, it was found that factors significantly affecting the farms using pelleted bio-fertilizer were labor, amount seed, value of pelleted bio-fertilizer and value of herbal insecticide. And the factors significantly affecting the farms using chemical-fertilizer were labor, amount of seed, value of chemical fertilizer and value of chemical insecticide. Considering economic efficiency, it was found that the farms using pelleted bio-fertilizer in producing Pad choy and Chinese cabbage should increase all production factors, while those producing in Chinese kale should decrease utilization of labor. As for the farms using chemical-fertilizer in producing Pak choy and Chinese cabbage, they should increase the amount of seed, value of chemical-fertilizer, value of chemical insecticide and decrease amount of labor, however, Chinese kale farms should increase all of production factors so as to obtain maximum returns.

From the analysis of cost and returns, the farms using pelleted bio-fertilizer showed comparatively higher cost of production due to higher land rent rate. However, when considered the net returns from the production it was found that the farmers using pelleted bio-fertilizer received higher net returns due to higher yield per rai. As a result, it is recommenced that the government should promote utilization of pelleted bio-fertilizer to replace chemical-fertilizer application for supporting career and increasing farmers' revenue.

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