



ข้อเสนอแนะให้ส่วนราชการจัดโครงการฝึกอบรมในลักษณะที่จะเป็นการเพิ่มประสบการณ์การทำงานและการจัดให้มีบริการแก้ปัญหาการผลิตให้แก่เกษตรกรในทันทีที่เกษตรกรประสบปัญหา



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<b>Thesis Title</b>	Technical Efficiency Analysis of Glutinous Rice Production in Hang Dong and San Pa Tong Districts, Chiang Mai Province Using Stochastic Nonparametric Envelopment of Data	
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## ABSTRACT

This study examined technical efficiency of glutinous rice production, as well as factors contributing to technical efficiency of glutinous rice farmers in Chiang Mai Province's areas. The primary data on glutinous rice production in crop year 2010/2011 were collected by interviewing 100 glutinous rice farmers in Hang Dong and San Pa Tong districts. In this study, we used a new model, referred to as Stochastic Nonparametric Envelopment of Data (StoNED) for the estimation of technical efficiency. This model combines the nonparametric-Data Envelopment Analysis (nonparametric-DEA) model which satisfies monotonicity and concavity, with the parametric-Stochastic Frontier Analysis (parametric-SFA) model.

The estimated technical efficiency using a computer program called General Algebraic Modeling System (GAMS) revealed that the average level of technical efficiency in glutinous rice production farmers was 0.71. About 60 percent of glutinous rice farmers appeared to have high level of technical efficiency (0.7001-0.8000). Meanwhile 20, 13 and 7 percent of them had moderate (0.5001-0.7000), very high (0.8001-1.000), low (0.3001-0.5000) level of technical efficiency respectively. Only number years of experience in glutinous rice farming and farming with production problem were statistically affecting technical efficiency in glutinous rice

production. Increasing number of years experienced in glutinous rice farming was positively and significantly ( $p \leq 0.01$ ) associating with technical efficiency of glutinous rice production in the study area. On the other hand, farmers having production problem in glutinous rice production would have statistically ( $p \leq 0.05$ ) lower level of technical efficiency as compared to those did not have production problem.

Results for this study suggested that technical efficiency of glutinous rice production could be improved when farmers had more experience in rice farming and no production problem. Therefore, we suggest training programs to accelerate farmer experience and immediate farmer's problem-solving program as measures to increase technical efficiency in glutinous rice production.