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| <b>Paper Title</b> | <b>TECHNICAL INEFFICIENCY OF CHILI FARMS IN THAILAND</b> |
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**Contributed Paper abstract prepared for presentation at the 91<sup>st</sup> Annual Conference of the Agricultural Economics Society, Royal Dublin Society in Dublin, Ireland**

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| <b>Abstract</b>  | <b>200 words max</b>   |
| <p>The main purpose of this study is to measure and investigate factors affecting technical inefficiency of chili farms in Thailand. A stochastic frontier production function approach and farm-level cross-sectional survey data of chili farms in the Northeastern Region in Thailand are used to estimate technical efficiency scores. The empirical results suggest two important findings. First, the overall technical, pure technical and scale efficiency scores of some farms were considerably low. Second, there is confirmation that farm size, cultivate in rainy season and good agricultural practice (GAP) have influenced technical inefficiency of chili farms in Thailand.</p>   |  |
| <b>Keywords</b>  | technical inefficiency; stochastic frontier production function; chili farms; Thailand; Good Agricultural Practice |
| <b>JEL Code</b>  | Micro Analysis of Farm Firms, Farm Households and Farm Input Markets Q12   |
| <b>Introduction</b>  | <b>100 – 250 words</b>   |
| <p>Chili is a signature of Thai cuisine. The Ministry of Public Health reported Thai's chili consumption of approximately 5 grams per day or 1 teaspoon. In addition, chili is a high value crop and also a major source of income for small scale farmers in Thailand. In 2013, 55,766 hectares were planted to chili. However, chili farmers have overused pesticides both pre and post-harvest to control pests, protect the crops from disease, and meet high production targets. To reduce the use of pesticides, Good Agricultural Practice (GAP) has been promoted in the fruit and vegetables production system (including chili) in Thailand since 2003 by the Ministry of Agriculture and Cooperatives. Therefore, production improvement is the main concern of this sector.</p> <p>The main purpose of this study is to measure and investigate factors affecting technical inefficiency of chili farms in Thailand. Previous studies have investigated technical efficiency and its components at both the farm and aggregate levels in Thai agriculture, yet no study has measured and explained technical efficiency of chili production at the farm level in Thai agriculture by using a parametric approach. Valuable information on the technical efficiency is necessary for policy makers to enable them to choose the appropriate direction of development planning to increase productivity and food security.</p> |  |

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| <b>Methodology</b>   | <b>100 – 250 words</b> |
| <p>To fulfil the above objective, this study applies a stochastic frontier production function approach to measure farm-specific technical inefficiency using the 2013 farm-level cross-sectional survey data of chili farms in the Northeastern region of Thailand in a single estimation technique applying the maximum likelihood estimation method. The non-negative technical inefficiency effects are modeled as a function of farm-specific socio-economic and management factors. Through this, the likelihood of changes in technical inefficiencies is explained by the above variables.</p> |                        |
| <b>Results</b>   | <b>100 – 250 words</b> |
| <p>These empirical results suggest two important findings. First, the technical efficiency scores of some farms were considerably low. This implies that there is significant scope to increase efficiency levels in Thai chili production. Second, there is evidence that increasing farmsize, cultivating in rainy season and applying GAP system can have different impacts on the technical inefficiency in Thai chili production in different farms.</p>  |                        |
| <b>Discussion and Conclusion</b>   | <b>100 – 250 words</b> |
| <p>The results indicate advantages in increasing farmsize, cultivating in rainy season and applying GAP system in Thai chili farms. The policies on encouraging farmers to suggesting the farmers to increase their farm size, cultivate in rainy season and use GAP system are recommended to increase technical efficiency in chili production in Thailand.</p>  |                        |

