

## **Adoption of Stone Jatropha (*Vernicia montana*) Cultivation in Upland Area North Lao PDR: Case Study of Xiengnguen District, Luangprabang Province**

**Author** Khambai Phunthavongsa  
**Country** Lao PDR  
**University** Khon Kaen University  
**Degree** MS  
**Course** Agriculture  
**Study** Thesis  
**Year** 2015

### **Abstract**

The promotion of adoption of the stone jatropha (*Vernicia montana*) plantation for biofuel production was done in Lao PDR. However, it appears that no massive adoption has been done by smallholder farmers. Therefore, the objective of this study was to identify the socio-economic characteristics of smallholder farmers in Xiengnguen district, Luangprabang province, Lao PDR; to establish how these characteristics influence its adoption by employing the logistic regression model. A structured questionnaire was used to collect data from September to November 2014. The study, made up of a sample size of 156 consist of 67 adopters and 89 non-adopters, was carried out in two villages of Xiengnguen District. The results indicated that amongst adopter groups, the size of land utilization for stone jatropha (*Vernicia montana*) cultivation was 0.54, 0.46 and 0.42ha in the majority adopter, late adopter and early adopter respectively. Non-adopter group, most of land utilization was used for cash crop, main crop, livestock and orchard production. All adopter groups; age, gender, number of household members was higher than non-adopters. Approximately 34.80-50.80% of all adopters and non-adopters had studied at least primary school education. Land holding was found higher in early adopters than majority adopters, late adopters and non-adopters. Also, early adopters had higher average household income (8,213.40 \$USD) than non-adopters (3,477.70 \$USD), majority adopters (2,917.80 \$USD), and late adopters (2,834.50 \$USD). Moreover, 83.10% of non-adopters did not trust in buyers, while 50% of early adopters completely trusted in buyers. In addition to among other socio-economic factors, education level, key decision makers (husband), and trust in buyers were only significant ( $p < 0.05$ ) factors determining stone jatropha (*Vernicia montana*) adoption. It led to conclude that level of education, the role of the head of the family as key decision maker, and the trust in buyer ease influence the farmer's ability to early adopt stone jatropha (*Vernicia montana*) cultivation.