

Sirilak Sirising 2013: Development of Learning Process in Applying Biochar for Soil Improvement for Agriculture. Master of Science (Development Planning Geography), Major Field: Development Planning Geography, Department of Geography. Thesis Advisor: Associate Professor Orasa Suksawang, Ph.D. 135 pages.

This research aimed 1) to investigate and assess farmers' participations in experimenting on biochar applications to soils; 2) to assess the expansion of biochar network; and 3) to assess the adoption of farmers and municipality's staffs in applying biochars to soil. Research methods applied experiments with farmers' participations. Major equipment comprised six experiment plots (one by two meters for each plot) per one experiment, Chinese kales, biochars, organic composts. Data used for analyses consisted of changes of weight and height of the Chinese kales during the experiments, properties of biochars and soils before and after the experiments. The experiment method comprised planting the Chinese kales in soils mixed with various ratios of organic compost to biochar in six plots as 0:0 (controlled plot), 100:0, 75:25, 50:50, 25:75 and 0:100 respectively. The findings showed that the Chinese kales in 25:75 plot had highest weight than those in other plots with statistical significance at 0.05 levels. This resulted in the success of seminar organized for expanding the biochar network to the local authorities. It was found that thirty participants of both farmers and local staffs had conceptually adopted the benefits of biochar applications to soil and seventeen of them had adopted in practices with confidence.

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Student's signature

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Thesis Advisor's signature