Thesis Title ENERGY DEMAND IN POST HARVEST ACTIVITIES :A CASE STUDY OF MAIZE

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Abstract

The technique of energy analysis was employed to gain insights into the process of maize post-harvest activities in Thailand.

Data collection of households was carried out in 3 regions namely; the North, Northeast and Central. Four hundred households who had been growing maize for three consecutive cropping seasons were visited and interviewed.

Study results revealed that the major parts of energy inputs for maize post-harvest activities was shelling and the major parts of human labour use for maize post-harvest activities was harvesting. The pesticide was used in farm storage in order to protect maize from insect. It was found that the animal labour was used in farm transportation in the North and Central regions.

On the basis of this study, the highest of total energy use was 305.7 MJ per rai in the North and the lowest of total energy use was 246.2 MJ per rai in the Northeast. The highest human labour use was 37.8 man-hour per rai in the Northeast and the lowest human labour use was 19.6 man-hour per rai in the Central. The highest energy intensity of maize post-harvest activities was 625.8 MJ per ton output in the Northeast whereas the lowest energy intensity of maize post-harvest activities was 695.7 MJ per ton output in the North.

It was found that there were differences between the averages of total energy use in 3 regions at the significant level 0.05 and the real cost was also different. The sheller which has power greater than 65 horse power consumed the energy more than the sheller which has lower than or equal to 65 horse power. In addition, after harvesting the farmers should keep their maize for drying between 40 - 50 days before shelling.