

Abstract

This research program aims to explore technology improving food security, alternative crops and ecosystem management in Karen Kun TuenNoi communities in Mae Tuen Sub-district, Omkoi District, Chiang Mai, who has encountered food insecurity and limited choices of crop. Pure rice seed selection of 25% less seed contamination of *Bue Mae* local rice cultivar increases yield of 320-360 kg. Also, *BueKaso 4* cultivar generates highest yield of 454 kg/rai. Arabica coffee grown in environmentally-friendly system reveals its quality cupping of highest score 82.25, average of 78.31 compared to 73.87 score of general coffee. White kidney bean produces highest yield of 133.8 kg/rai. Seven native plants and herb were tested in propagation. Community forest increases by 17.58 rai from former shifting rice cultivation area.

Keywords: area-based research, household economy, alternative development, forest ecosystem

