

**Project Title:** Research and Development of Instant Tiger Herbal Tea

**Source of Research Funding:** 2012 annual fiscal budget of King Mongkut's Institute of Technology Ladkrabang with

**Duration:** October 1, 2011- September 30, 2012

**Amount:** 398,700 baht

**Investigators:** Suvarin Bumroongsook, Ph.D.

Faculty of Agricultural Technology, King Mongkut's Institute of  
Technology Ladkrabang

Duangtip Hongsamoot, Ph.D.

National Health Security Office

Kingkaew Chareanpornsook, Ph.D.

Faculty of Science, Thammasat University

### **Abstract**

Asiatic pennywort growers are females more than males, mostly aged 41-50 years. Most of them had Grade 4 background education, with more than 10 years experience in *Centella asiatica* cultivation. Their plots are small, about 1-3 rais.

Pest problems and the use of chemical pesticides showed that asiatic pennywort cutworms caused damage most to the production. The insecticides that they used most were organophosphate groups, followed by pyrethroid, macrocyclic lactone (abamectin), carbamate and organochlorine, respectively, which are mainly used to spray every 7 days. The sprayer that are most commonly used are knapsack power engines.

Nutrient analysis indicated that *Centella asiatica* had 0.12% of calcium, 0.03% of phosphorus, 0.38% of fat, 1.96% of protein, and 1.72% of fiber.

The quality of asiatic pennywort from fresh markets in Bangkok may be contaminated with insect eggs, appendage, feces and moulting. Monitoring microbe contaminant from 9 fresh markets in Bangkok was found to have been contaminated over the standard. Amount of fungal and yeast contamination is relatively high. The coliform detection on samples were exceed the standard. No contamination of lead detection in the samples of fresh pennywort. The amount of arsenic was less than 0.075 mg / kg. The contamination of three insecticides: dicofol, chlorpyrifos and methidathion 0.98, 2.84 and 0.46 mg / kg, respectively.

Gotu kola tea possesses high antioxidation activity. Most consumers showed the medium-liking and overall liking of the instant tea. They liked color of the tea most following by smell and taste. Some observers do not like the smell and taste. Therefore, to improve the taste and odor of the tea can lead to more consumer acceptance and opportunity in herbal tea trade.