Abstract

Garlic (Allium sativum) is the herbal plant and usually used for the ingredients of Thai foods, especially healthy food to reduced the cholesterol in blood. The properties of garlic in pharmacology was differed which depend on cultivar, soil types, climates and harvesting times. The farmer's requirement for garlic growing were needed the tightly garlic bulbs, long shelf life and free of diseases or insects. This research aims to study and selected the quality of garlic cultivars which high quantity of pharmacology for growing in highland areas and the hill tribe farmers can be produced them for household consumption.

The results showed that there were collected 24 garlic cultivars and 5 samples of single bulb, there were differed of bulb sizes, wrapper bulb and clove colors (white or pink or purple). The pharmacology properties of garlic indicated that the content of Phenolic compounds from Muang-Na village, Chiang Dao was highest as 243.09 mg. Flavonoids was highest as 20.44 mg of garlic bulb from Ban-Hong which was the bulb garlic of Mae Hong Son to grow on the Ban Hong. The content of diallyl-disulfide and diallyl trisulfide which as allicin group of bulb garlic from Muang-Na village, Chiang Dao was highest as 2465.6 and 1879.7 µg per 100 g of fresh weight respectively. Moreover this garlic cultivar also founds vitamin C and vitamin B2 up to 19.62 and 0.09 mmg respectively. The fatty acids content in extracted garlic was most of plamitic acid as 386.3 g and Linoleic acid as 308.6 g. All of garlic cultivars were differed the content of fatty acid types. In addition, the 19 hill tribe farmers of three communities in the Omkoi district (900-100 MSL) can be grown garlic for household consumption and sold them within the community and the surrounding communities.

Keywords: Garlic, Highland, Hill tribe farmer, Pharmacology