The evaluate of estrogenic substance on 3 cartrivars *Pueraria mirifica* tuberous roots at 6, 9 and 12 months after grown for utilize in livestock production

**ABSTRACT**

A study on phytoestrogen content in *Pueraria mirifica* (sources) was done in the plant derived from 3 provinces Chiangmai, Lumphoon and Saraburi. Twenty-four (24) plants each source were grown and harvested at age 6, 9 and 12 months at 8 plants each. The results of analysis have shown that the plants from Chiangmai, Lumphoon and Saraburi contained estrogenic substance 20.56, 1.404 and 19.12 microgram per 100 mg dry root powder, respectively at age 6 months, 28.12, 15.25 and 20.37 microgram tongkwa root dry weight at age 100, 96.61 and 61.76 microgram tongkwa root dry weight at age 12, respectively. The results of the analysis showed that the plants from Chiangmai, Lumphoon and Saraburi contained estrogenic substance 20.56, 1.404 and 19.12 microgram per 100 mg dry root powder, respectively at age 6 months, 28.12, 15.25 and 20.37 microgram tongkwa root dry weight at age 100, 96.61 and 61.76 microgram tongkwa root dry weight at age 12, respectively. The results of the analysis showed that the plants from Chiangmai, Lumphoon and Saraburi contained estrogenic substance 20.56, 1.404 and 19.12 microgram per 100 mg dry root powder, respectively at age 6 months, 28.12, 15.25 and 20.37 microgram tongkwa root dry weight at age 100, 96.61 and 61.76 microgram tongkwa root dry weight at age 12, respectively.
and 20.37 microgram per 100 mg dry root powder, respectively at age 9 months and, 30.62, 69.61 and 61.76 microgram per 100 mg dry root powder, respectively at age 12 months. The results have also indicated that *Pauraria mirifica* of Lumpoon source have significantly (*P*<0.01) larger plant size and higher yield of tuber than those from Chiangmai and Saraburi. *Pauraria mirifica* of Lumpoon and Saraburi sources have estrogenic substances content very close to those of Phrae source (63.86 microgram per 100 mg dry root). *Pauraria mirifica* of Chiangmai source have the least content of estrogenic substances due to the vegetative growth of the plant before harvesting. It is concluded that the appropriate harvesting time of *Pauraria mirifica* is 12 months after planting.

**Keyword:** Pueraria mirifica, Khaw Kuer, planting

S. Tubcharoen: swkspt@ku.ac.th