

Patiporn Temiyakul 2007: Effects of Seasonal Planting and Locations on Yield Capability of 3 Accessions of *Andrographis paniculata* (Burm.) Wall. ex Nees. Master of Science (Agriculture), Major Field: Horticulture, Department of Horticulture. Thesis Advisor: Assistant Professor Pramote Saridnirun, Dr.Ing. 97 pages.

The pollination study showed that *Andrographis paniculata* is the selfing plant, about 89.5% and study about yield and active constituents stability of 3 accessions of *Andrographis paniculata* were evaluated at 2 locations in 3 seasons during January 2006 to April 2007. In each environment, the cultivars were planted in a Randomize Complete Block Design. Combine analysis of variance revealed the statistical significance of genotypic x environment interaction. Results from combined analysis of variance showed statistical significance of genotypic x environment interactions were found on plant high, branch weight of plant, number of branches, fresh weight, plant width and total lactone content. Analysis of stability was conducted using the method of Frencis and Kannenberg (1978) in which mean and coefficient of variance (cv).

The result showed that accessions with the highest leaf area (2,368 cm²), leaf weight (69.98 g.), plant high (45.33 cm.), plant width (40.93 cm.), total lactone content (11.60 %) and dry weight (34.14 g.) had relatively low coefficient of variance (cv) (23.48 14.76 8.32 9.22 17.38 and 39.90 respectively) was accession RY/2. When analyzed using Frencis and Kannenberg (1978) method, accession RY/2 was in group 1. Accession SSK had the highest branch weight (90.27 g.) and high cv (47.76) was in group 2. Accession KPS/7 had the highest fresh weight (124.50 g.) and high cv (40.80) was in group 2.

Student's signature

Thesis Advisor's signature