

Thesis Title A Study on Yield of Signal grass (*Brachiaria decumbens*) and Verano stylo (*Stylosanthes hamata* cv. Verano) in Mixed Pastures.

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ABSTRACT

Two experiments were carried out during March 29, 1989 to April, 25, 1990, on the Korat soil series, under the environment of Khon Kaen University, Khon Kaen, Northeast Thailand. The overall experiments aimed to study the effects of frequency of cutting at 15, 30 and 45 days (Experiment 1) and height of cutting at 2.5, 7.5 and 12.5 cm. (Experiment 2) on yields of Signal grass (*Brachiaria decumbens*) and Verano stylo (*Stylosanthes hamata* cv. Verano) in mixed pastures with row spacing of Signal grass at 25, 50, 75 and 100 cm. Factorial Experiments in Randomized Complete Block Design were used for both experiments.

Experiment 1 consisted of twelve treatments (3 cutting frequencies and 4 row spacings) with 4 replicates. Rootstocks

of Signal grass were planted in row spacing according to the treatment and treated Verano stylo seeds were surface sown on the planted grass at 4 kg per rai. Every harvesting in the wet season, mixed swards were cut at approximately 7.5 cm. from ground level. Results showed that infrequent cutting or cutting every 45 days gave dry matter pasture yields higher than frequent cutting treatments or cutting every 15 days. In addition row spacing of Signal grass at 75 cm also gave highest dry matter pasture yields.

Experiment 2 consisted of twelve treatments (3 height of cuttings and 4 row spacings) with 4 replications. Planting Signal grass and Verano stylo were made using the same procedure as in experiment 1. Mixed swards were cut every 45 days during the wet season. Results demonstrated that dry matter pasture yields were independent from the height of cuttings ranging from 2.5 to 12.5 cm. and row spacing of Signal grass ranging from 25 to 100 cm.

Data on yields of Signal grass and Verano stylo in mixed pasture during the wet season, dry season and annual yields and total added densities of swards were also presented.