Response to Defoliation and Irrigation Intervals of *Panicum maximum*. TD 58
Under Irrigation in the Dry Season.*

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Abstract

This study was conducted to investigate the effect of cutting and irrigation intervals on growth, dry matter yield and chemical composition of Purple Guinea grass (*Panicum maximum* TD. 58) on Roi-et soil series during the dry season. The field experiment was carried out at Huai Sithon Demonstration Farm Project, Kalasin province, from December, 1990 to March, 1991 and again from December, 1991 to March, 1992. Design of experiment was split plot in randomized complete block. The treatments consisted of 3 irrigation intervals; 7, 14 and 21 days as the main plot and 3 cutting intervals; 3, 5 and 7 weeks as sub-plot. A furrow system was used to irrigate every 7 days until 42 days after planting when the study of cutting and irrigation intervals effects commenced.

Results showed that the delay irrigated at 21 days treatment gave lower dry matter yield, protein yield and phosphorus yield than the 7 and 14 days treatments. However irrigation interval did not affect chemical composition of the forage. The effect of cutting intervals showed that average dry matter yield for the 3 weeks treatment was 530.9 kg/rai, lower than the 645.5 and 653.2 kg/rai for the 5 and 7 weeks respectively. Chemical compositions such as ADF, NDF, hemicellulose, lignin and cellulose contents and grass height increased with the longer cutting intervals. The content of protein, NDS and phosphorus, decreased with a longer cutting interval, as same as total protein yield and total phosphorus yield.

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