

ABSTRACT

EFFECT OF SLOW - RELEASE FERTILIZERS ON THE GROWTH OF
LEATHERLEAF FERN (*Rumohra adiantiformis* (G.forst) Ching)

BY

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A study on the effect of slow-release fertilizers on the growth of Leatherleaf fern (*Rumohra adiantiformis* (G. Forst) Ching) was conducted at the Tharntip Garden, T. Nonghan, A. Sansai, Chiangmai during August, 1997 to August, 1998. The experimental design used was a 3x5 Factorial in Complete Randomized Design with 4 replications. Factor A consisted of three slow - release fertilizers (16-8-27, 24-8-16 and 17-17-17) and Factor B comprised of five rates of fertilizers (0, 2, 4, 6, and 8 g /10 inches pot / 5 liters soil mixed media) applied three times at four- month interval.

The result of experiment indicated that growth, fresh weight and dry weight of fronds, fresh weight and dry weight of rhizomes and roots, vase life, color of fronds, levels of nitrogen and phosphorous content were not significantly different when applied with slow – release fertilizers. Increase in fertilizer levels did not show a significant effect on the growth rate of the ferns. The rate of 4 g /pot of slow - release fertilizer showed the longest vase life. As for 4, 6, and 8 g /pot applied rate of fertilizers, the result was not significant with the fresh and dry weight of fronds, fresh weight and dry weight of rhizomes and roots, color of fronds and concentration levels of nitrogen in the fronds.

The results also showed no interaction effect among each fertilizer and their rates but their increasing rate showed the trend for an increasing fresh weight, dry weight and vase life. In addition, the rates of each fertilizers at more than 6 g /pot did not increase dry weight and vase life at all. However, this experiment for both fertilizer ratio and rates has not fully satisfied the commercial production.