EFFECT OF LEVEL OF NITROGEN AND FREQUENCY OF DEFOLIATION ON HERBAGE DRY MATTER YIELDS OF TWO PASTURE GRASSES GROWN UNDER COCONUT

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Two independent experiments were carried out to determine the influence of frequency of defoliation on herbage dry matter production of two *Brachiaria* species grown under coconut. *B. dictyoneura* being a promising grass for the wet zone, was tested at Dodanduwa-Galle under four levels of nitrogen application (0, 25, 50, 100 kg N/ha) and two frequencies of cutting (30 and 45 days). In the second experiment conducted at Lunuwila (intermediate zone) with *B. ruziziensis* and the same levels of nitrogen application as in experiment I, three cutting intervals (3, 4 and 6 weeks), were used. Both experiments lasted for four years. *B. dictyoneura* trial was defoliated continuously whereas with *B. ruziziensis* trial the cycles were confined to the monsoons.

Over the four year period studied, increasing the nitrogen levels and cutting frequency progressively increased herbage dry matter production of *B. dictyoneura*. But when the individual defoliation cycles over the experimental period were analysed separately, 30 day cutting interval produced higher dry matter yields for the cycles which coincided with the monsoons. The 30 day cycle produced more digestible organic matter per year.

Although *B. ruziziensis* responded well to increasing nitrogen application, there was no significant and persistent trend in dry matter production due to frequencies of defoliation. On the contrary, when the same trial was duplicated in the glass house, progressively increased yields were obtained with the increase in cutting interval. It was concluded that during the monsoons a three week defoliation cycle seems to be appropriate with *B. ruziziensis*.