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Leaf chlorophyll index of *Brachiaria brizantha* cv. Piatã and *Panicum maximum* cv. Mombaça under different doses of nitrogen and potassium

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The development of the portable chlorophyll meter, that makes instantaneous readings of relative leaf chlorophyll content, seems to be a nondestructive and practical way to estimate nitrogen status in the leaf because of the relationship between chlorophyll level and nitrogen in leaf tissue. This work aimed to evaluate Leaf Chlorophyll Index (LCI) in two grasses (*Brachiaria brizantha* cv. Piatã and *Panicum maximum* cv. Mombaça) at three moments after application of three nitrogen (N) and potassium (K) doses. Trial was carried out on an experimental field of Embrapa Rondônia, located in Porto Velho, State of Rondônia, Brazil. The trial was in randomized complete block split-plot design (two grasses as parcels and three N-K doses as sub-parcels) with tree replications. Doses of N-K were: 1) 33-27, 2) 67-53 and 3) 100-80 kg.ha^{-1}, respectively. Leaf Chlorophyll Index (LCI) was taken at the first expanded leave by portable chlorophyll meter during a grass growth cycle of 28-day at three periods in relation to the moment of fertilizer application: T0 = before application; T1 and T2 = 10 and 20 days after application, respectively. After variance analysis, means were compared by Tukey test at 5% of probability. There was no effect of N-K doses on LCI of both grasses. Means of 33-27 N-K dose were 43.67±3.83, 49.07±5.54 and 47.22±2.99 at T0, T1 and T2, respectively. Means of 65-53 N-K dose were 42.65±3.83, 50.31±5.54 and 48.17±2.99 at T0, T1 and T2, respectively. Means of 100-80 N-K dose were 43.28±3.83, 50.99±5.54 and 49.35±2.99 at T0, T1 and T2, respectively. On the other hand, Piatã grass had higher ICF at T1 and T2 (52.11±3.55 and 53.38±28, respectively) than Mombaça grass (48.15±3.55 and 43.11±2.28, respectively). In relation to Leaf Chorophyll Index, Piatã and Mombaça grasses have different answers to nitrogen-potassium fertilization.

Keywords: chlorophyll level, tropical grasses, nitrogen fertilization