

Piatã and Paiaguás sward on integrated crop pasture system

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Grazing height is an important framework to reach maximum animal and grains production and has being used in many sustainable grazing systems. It's important to know about grazing management on integrated systems to maximize the system use. The objective of this work was to evaluate the animal production on BRS Piatã and BRS Paiaguás (*Brachiaria brizantha*) swards submitted at two grazing heights on integrated crop pasture system. The experimental design was randomized blocks with factorial arrangement. *Brachiaria brizantha* cvs. BRS Piatã and Paiaguás were established after soybean culture and managed at two grazing heights: 20 and 40 cm. After one year of grazing, soybean was established again and the production were considered as a result of integrated system. The experiment was developed from September 2014 to September 2015. Data were analyzed using the Mixed procedure (Proc Mixed; SAS Institute). Herbage production, animal performance and grains production were evaluated. Average daily gain (ADG) wasn't affected by sward height and grasses (500 g animal⁻¹ day⁻¹). Stocking rate (SR) was of 3.8 animal unities (AU) ha⁻¹ on grasses maintained at 20 cm and of 3.1 AU ha⁻¹ on grasses at 40 cm. Animal production per area was 1005 kg ha⁻¹ of live weight (LW). Herbage offer (HO) was of 8.5 kg dry matter (DM) 100 kg LW⁻¹ and of 13.5 kg DM 100 kg LW⁻¹, when swards were managed at 20 and 40 cm, respectively. The leaf accumulation rate (LAR) was similar between grasses, 19.3 kg ha⁻¹ day⁻¹, on average during one year. Grasses managed at 20 cm presented the smallest herbage mass (HM) that grasses managed at 40 cm, instead leaf and stem percentage were similar between grasses heights. When data were analyzed by seasons we observed that on summer had occurred the biggest ADG (610 g animal⁻¹ day⁻¹), SR (5.6 AU ha⁻¹) and LAR (38.1 kg ha⁻¹ day⁻¹) while the smallest values were obtained at the winter, 135 g animal⁻¹ day⁻¹ of ADG; 1.8 AU ha⁻¹ for SR and 8.1 kg ha⁻¹ day⁻¹ for LAR. Soybean production wasn't statistically analyzed but preliminary results indicated that grasses managed at 20 cm promoted more grains production (1.9 bags ha⁻¹). Piatã promoted more grains production that Paiaguás sward (5.4 bags ha⁻¹). These results express the potential use of Piatã and Paiaguás grasses on integrated crop pasture system.

Keywords: forage offer, per area gain, savanna, soybean, stocking rate, sward height.

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