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## Beef Cattle Performance in a Silvopastoral System in Brazilian Cerrado

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## Beef cattle performance in a silvopastoral system in Brazilian Cerrado

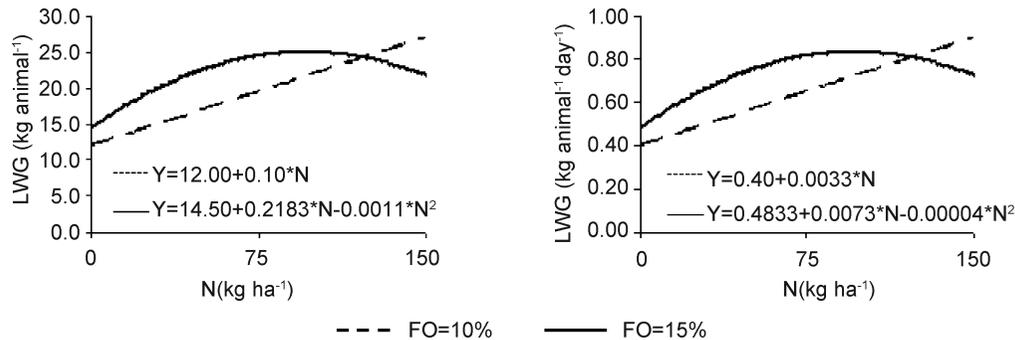
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**Key words :** Brachiaria brizantha, Eucalyptus forage offers, nitrogen fertilization

**Introduction** Silvopastoral systems, emergent technology of sustainability, is now a reality in Brazil. Degraded soils caused by continuous agricultural crops, extensive degraded pasture areas caused by poor management, and massive cutting of forest has been the major factors to increase the interest for silvopastoral systems (Garcia & Couto, 1997). There is in Brazil very few researches concerning to the establishment and management of those systems.

**Material and methods** The experiment was conducted in a Cerrado area in Brazil during the summer of 2006. A factorial 3x2, with three doses of nitrogen (0, 75 and 150 kg ha<sup>-1</sup>), and two forage offers (10 and 15% of LW) was evaluated in a silvopastoral system composed by Brachiaria brizantha and Eucalyptus. A completely random design with four replications and three periods of evaluation was utilized. Nelore beef steers, with initial weight of 185.5 kg were utilized in a put and take system.

**Results and discussion** Individual animal live weight gain (LWG) per period and LWG per day are showed in Figure 1. It was verified an increase ( $P < 0.01$ ) on LWG per animal only on the first period of grazing with increase of nitrogen doses. The increase of LWG only on the first period can be explained by the highest nutritional quality of the understory and also highest dry matter production. The variation on the offers (FO) of 10 and 15% did not affect the LWG showing that those offers did not limit the ingestive behaviour of animals. The LWG observed can be considered satisfactory since that other research have showed animals gains about 0.6 kg in exclusive pastures of Brachiaria brizantha under full sun. Due to highest dry matter production with nitrogen fertilization, highest meet production was obtained.



**Figure 1** Animal gains per period and per day under two forage offers fertilized with nitrogen in a silvopastoral system.

**Conclusion** Fertilization with nitrogen and stocking rate adjustments should be considered in order to improve LWG, mainly in late summer and spring season, to establish and manage the silvopastoral system in Brazilian Cerrado.

### References

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