



Raising Brangus steers on natural pasture developed after irrigated rice crop in the Pampa biome of Rio Grande do Sul state, Brazil

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## Introduction

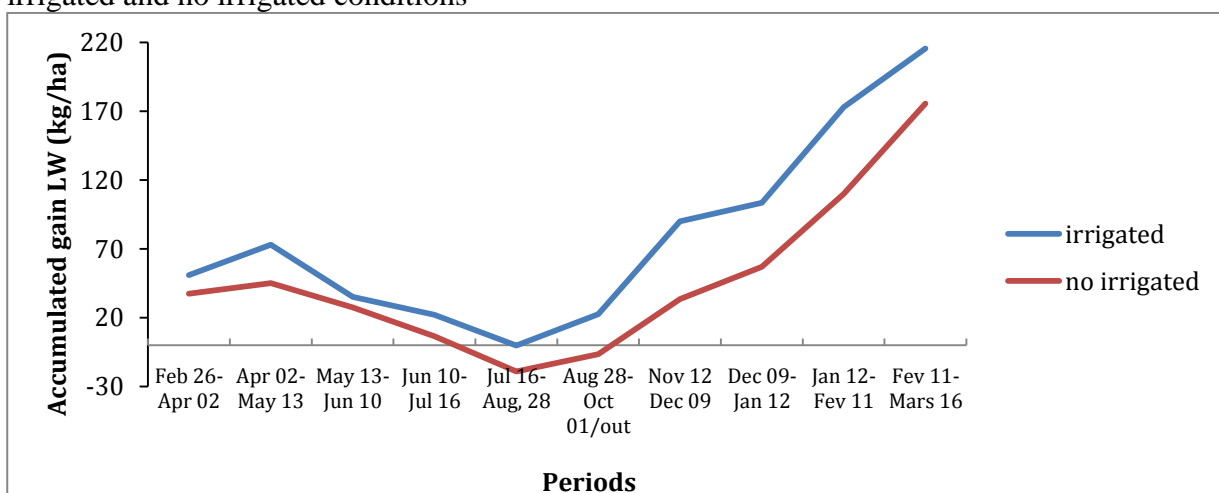
The traditional systems of exploitation with beef cattle in the Pampa biome of Rio Grande do Sul presents historically low rates of productivity and profitability due, mainly, to the inadequate management of natural pastures. In this way, these areas have been occupied by crops that offer more attractive economic income. However the soils and climate of this region favor the environmental degradation of lands exploited with annual cultivated plants. The present work compares the weight gain of Brangus steers in irrigated native pasture paralleled with non-irrigated area, in integrated crop-livestock systems.

## Material and Methods

The field experiment was conducted at the Embrapa Pecuária Sul Research Centre, Bagé (31°22'S, 53°59'W, 176 m asl). This land was exploited with rice crop eight years ago (grown season 2000/2001). Two experimental units of two ha each one were established on recovered native pasture. One of the units was irrigated by intermittent surface flood irrigation, using the same features as those used for irrigation of the rice crop. The need for irrigation was determined by the soil penetration resistance (over 2000 kPa measured by digital penetrometer) at a depth of 7.5 cm. The other unit was not submitted to irrigation. The two treatments were grazed by Brangus steers, with a forage allowance of 12 kg of dry matter (DM) per 100 kg of live weight (LW) (DM at 12% of LW), in the period between February 26, 2009 and March 16, 2010.

## Results and Conclusions

Fig.1 Accumulated Live Weight (LW) gain (kg/ha) of Brangus steers in native pasture under both irrigated and no irrigated conditions



At the end of the trial period, the gain of live weight (LW) on the unit with irrigation was 216 kg per ha, while in the unit without irrigation the gain was 175 kg per ha. The increase of LW per hectare differed ( $P > 0.01$ ) by T-test considering steers as experimental units. The irrigation of natural pasture allowed greater availability of forage, higher stocking rate and higher gain of LW per ha than natural pasture without irrigation.