



Animal production in different integrated crop-livestock systems in a lowland of Southern Brazil

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Introduction To achieve higher lowland use efficiency in Brazilian Southern, a region commonly used for rice production, the livestock activity during the winter period (in succession to summer crops) is a sustainable alternative (Anghinoni et al., 2013). Thus, this study aimed to evaluate the animal production in the second winter grazing period of a long-term experiment that approaches different integrated crop-livestock systems.

Material and Methods

The experiment was implemented in March 2013, in Corticeiras Farm (Cristal county, Rio Grande do Sul State, Brazil). It is a long-term experiment, and the evaluation period of this study was the winter season of 2014. The treatments were distributed in randomized blocks with three replicates, being: T1 - ryegrass / soybean / ryegrass; T2 - ryegrass + white clover / Sudan grass / ryegrass + white clover; T3 - ryegrass + white clover + birdsfoot trefoil / succession field (native pasture) / ryegrass + white clover + birdsfoot trefoil. The grazing method adopted was continuous with variable stocking, beginning when the pasture reached a sward height of 15 cm (on average) and ending according to the further summer crop. The animals were weighed fasted at the beginning and at the end of trial period. The data was submitted to analysis of variance and Tukey test at 5% significance.

Results and Conclusions

Fig.1 – Animal production in ICLS during the winter 2014 in southern Brazil.

Treatment	Average daily gain (kg animal ⁻¹)	Gain (kg ha ⁻¹)	Stocking rate (kg ha ⁻¹)	Grazing days	Next Crop
1	0.42 a	128 b	570 b	113	Rice
2	0.40 a	151 b	536 b	140	Soybean
3	0.54 a	283 a	798 a	140	Succession field

1 - ryegrass / soybean / ryegrass; 2 - ryegrass + white clover / grass Sudan / ryegrass + white clover; 3 - ryegrass + white clover + birdsfoot trefoil / succession of field / ryegrass + white clover + birdsfoot trefoil. Means followed by different letters in the column differ statistically by the Tukey test (5%).

It was concluded that there was no difference regarding average daily gain among the treatments. However, the T3 presented a higher stocking rate and gain per hectare as compared to the other treatments.

References cited

Anghinoni et al. (2013). Tópicos em ciência do solo. 8: 325-380.

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