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Presenter Information

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Impact of Italian ryegrass (*Lolium multiflorum* Lam.) management on the parasite burden in sheep

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Key words: helminthosis, *Haemonchus contortus*, ewe, stocking rate, grazing method

Introduction Gastrointestinal parasite is one of the main problems of sheep production in Brazil. It is still not clear how the pasture management affect the parasite burden in sheep. The objective of this work was to assess the risks of gastrointestinal nematode infections in sheep kept in different pasture allowances and grazing methods.

Material and methods The experiment was carried out at Experimental Station of UFRGS, Eldorado do Sul, Rio Grande do Sul State of Brazil (51°39' O, 30°05' S). The treatments were set out in a randomized block design with two factors and four replications. The two factors were: two stocking rates (the stocking rate varied according to the potential of animal intake. It was offered 2.5 and 5.0 times the potential of animal intake) and two grazing methods (SS-set stock and R-rotational) on an Italian ryegrass pasture. The pasture was assessed from August to October 2006. It was analyzed the number of parasite eggs in different strata of the canopy (height in relation to the soil): above 15 cm, 10-15 cm, 5-10 cm, 2.5-5 cm, 0-2.5 cm and litter. The animal contamination was assessed by the number of parasite eggs per gram of feces (epg) and faecal culture. It was also marked tillers to verify where the animals were grazing. The number of larvae in the pasture was quantified according methodology of TAYLOR (1939).

Results The largest number of parasite larvae identified in the pasture samples was of *Haemonchus contortus*. The grazing method did not have a significant effect on the number of parasite larvae in the pasture and in the animals. The animals submitted to lower stocking rate and higher pasture mass were significantly more infected. There was greater recovery of parasite larvae ($p < .0001$) in the lower pasture strata (0-2.5 cm, 2.5-5 cm and litter) than in the higher strata (10-15 cm and above 15 cm), though the animals grazed mainly the highest strata (figure 1). This experiment demonstrates the great importance of the environment conditions for *haemonchus* survival. *Haemonchus* has the benefit of greater humidity (TEMBELY *et al.*, 1997) in higher pasture mass, though the position of the larvae in the predominant strata do not coincide with the most selected strata. The use of low stocking rate do not show to be an important management tool to reduce sheep contamination.

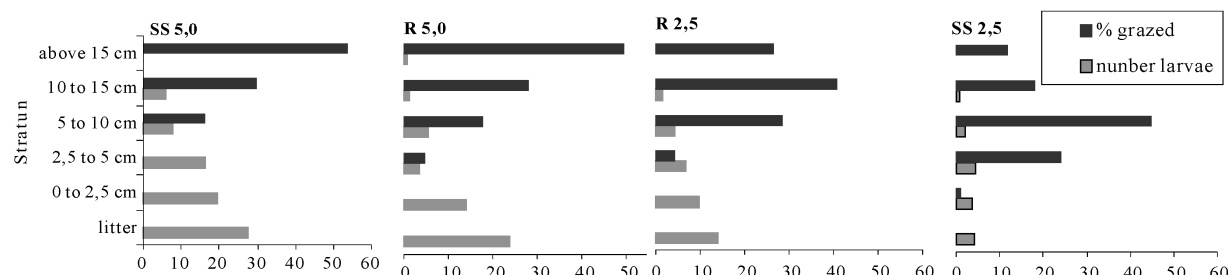


Figure 1 Means of number infective larvae in the pasture and percentage of marked tillers grazed in different strata of Italian ryegrass canopy (% grazed) for each treatment: grazing method (SS-set stock and R-rotational grazing) and stocking rate (2.5 and 5.0 times the potential of animal intake).

Conclusions Sheep select the highest strata of Italian ryegrass sward canopy in different grazing methods and stocking rates. The amount of pasture mass has an important effect on sheep parasite contamination in the winter-spring condition of the southern part of Brazil. Higher mass provided higher sheep contamination with *Haemonchus contortus*. The grazing methods, set stock or rotational grazing, does not affect the sheep gastrointestinal parasite contamination.

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