

On-Farm Evaluation of an Alfalfa with Lower Bloat Potential

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More than 90% of the alfalfa planted in Argentina is used under direct grazing for beef and dairy production. In this context, bloat is a very serious problem and it is one of the main causes of animal losses. In 2002, INTA (*National Institute for Agricultural Technology, Argentina*) released ProINTA Carmina (Carmina), a non-dormant alfalfa cultivar selected for lower initial rate of dry matter disappearance. In several trials conducted at INTA units, Carmina demonstrated its lower bloating potential (1). However, on-farm assessments, including large number of animals and actual commercial grazing management, were needed in order to fully evaluate Carmina's bloat reducing potential. The purpose of this paper is to summarize two on-farm experiments conducted in La Angelita, a ranch located in Bucharado, Córdoba, Argentina.

For Experiment I, two 25-ha strips were planted in March 2006: one with Carmina and the other one with a check variety. Pastures were a mixture of alfalfa (7,5 kg ha⁻¹), tall fescue (*Festuca arundinacea* Schreb.) (3 kg ha⁻¹), bromegrass (*Bromus catharticus* Vahl.) (3 kg ha⁻¹) and wheat (30 kg ha⁻¹) as a companion crop. Each strip was rotationally grazed for a 100-day period with 100 steers (initial weight: 280 kg). Bloat severity was measured on a visual 0 (no bloat) to 5 (death) scale for every individual animal. Results are presented in Figure 1.

For Experiment II, two 48-ha strips (Carmina and the check) were planted in April 2007, using the same mixture as before but this time not including wheat as a companion crop. Each strip was rotationally grazed for a 70-day period with 250 steers (initial weight: 230 kg). Bloat severity was measured using the same visual scale as before. Results are presented in Figure 2.

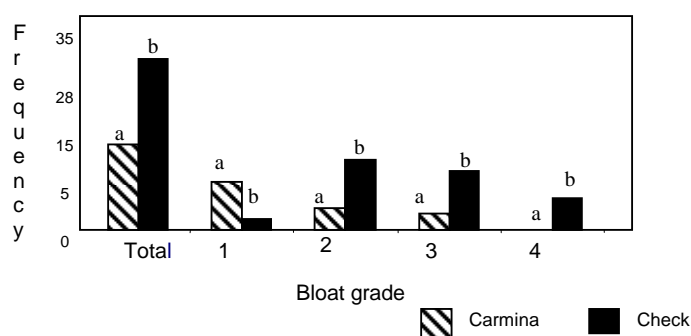


Figure 1. Frequency and severity of bloated animals in Experiment I*.

*a, b: statistically different (Kruskal-Wallis, $p < 0.05$).

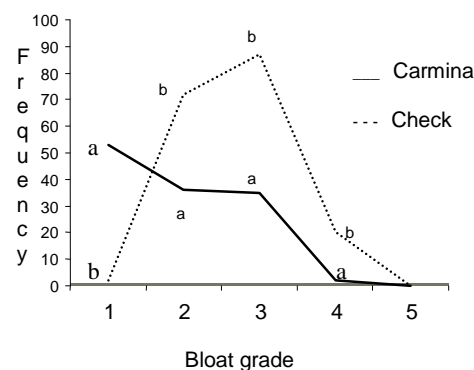


Figure 2. Frequency and severity of bloated animals in Experiment II*.

It was concluded that ProINTA Carmina significantly reduced not only the number of bloated animals but also the intensity of the problem, i.e. among bloated steers, the ones on Carmina were mostly classified as grade 1 (slight bloat).

Reference

1- Basigalup, D. *et al.* 2006. ProINTA Carmina: First Argentine Alfalfa Cultivar Tolerant to Bloat. Report of the 40th NAAIC, Bloomington, MN.

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