

# EFFECT OF CORN OR LUPIN SUPPLEMENTATION ON PERFORMANCE OF YEARLING STEERS GRAZING IMPROVED NATURAL GRASS DURING SUMMER-AUTUMN

Canozzi M.E.A.\*, Zarza R., Banchemo G., La Manna A., Clariget J.  
Instituto Nacional de Investigación Agropecuaria, INIA La Estanzuela. Ruta 50 Km 11, 70000, Colonia, Uruguay. \*mecanozzi@inia.org.uy

## Introduction and Objective

Warm season: natural grass quality and quantity may be insufficient to meet cattle requirement.



**Objective:** evaluate the effect of protein and energy supplementation, and compensatory growth, on the performance of steers grazing improved natural grass, during summer-autumn, in Uruguay.

## Methodology

Committee for the Ethical Use of Animals (INIA, UY; Protocol 2015.52)



Electronic self-feeder

- 60 Hereford steers (14 months; BW 348±33 kg);
- 3 treatments (supplementation phase, 78-d): no supplement (CON; n=20), corn (CS; 0.8% BW; n=20), or lupin (LS; 0.8% BW; n=20) supplementation;
- Post-supplementation phase (84-d): none of steers with access to supplementation.

- Steers grazed together on improved natural grass (tall fescue; CP: 10%, NDF: 61%);
- Supplement offered to steers was recorded individually (Super SmartFeed; C-Lock Inc., USA), and the steer was considered the experimental unit.

Data were evaluated as a completely block randomized design with three treatments using MIXED procedure of SAS.

## Results

**Mean intake of supplement, kg DM/d** : CS = 1.7 and LS = 2.1 (P<0.10)

**Average forage allowance, kg DM/kg BW** : 1.8 and 2.7 in the supplementation and post-supplementation phase, respectively.

- End of supplementation phase: **body weight** (P<0.05; kg; CON=344 c; CS=358 b; LS=371 a) and **ADG** (P<0.001; kg/d; CON=-0.05 c; CS=0.14 b; LS=0.37 a) were different between groups;
- Post-supplementation phase reduced the effect of the supplementary feeding on **ADG** (P<0.10; kg/d; CON=0.21 b; CS=0.28 a; LS=0.21 b);
- Final weight** (kg) of CON steers (364 b) was lower than LS (389 a, P<0.0001) and CS (381 a, P<0.01) groups.

Lupin rather than corn could be a strategy to obtain better performance in yearling steers grazing improved natural pasture; however, after the 162-d of experiment, supplemented steers achieved similar BW.