

Rumen protected calcium gluconate increases average daily gain of beef

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Hindgut acidosis



- Hindgut acidosis is more common than expected
 - Result: systemic inflammation
 - Abomasal infusion of starch caused a decrease in fecal pH and an increase in blood Dlactate (data not published)
 - Especially a problem in high starch diets







Gluconate is fermented by lactic acid bacteria and acid-utilizing bacteria, resulting in more butyrate.

Previous research was mainly done in dairy cows (2 examples):

- 1. Abomasal infusion with Ca gluconate (Doelman et al. J. Dairy Sci. 102:1274-1280)
- 2. Encapsulated Ca gluconate (Seymour et al. J. Dairy Sci. 104:7845-7855)

Both show less inflammations and an increased milk production.

 No data in beef yet – it is expected to be a problem in beef cattle, which are often fed a diet high in starch.







Exploratory study to test the impact of rumen protected calcium gluconate (RPCG) on growth performance, fecal starch levels, and fecal pH in beef cattle.



Materials & methods



- Commercial farm in Spain
- 120 Beef calves
- 20 calves/pen
- 6 pens:
 - 2 pens with females (1 control vs 1 RPCG (Selko LactiBute))
 - 4 pens with males (2 control vs 2 RPCG (Selko LactiBute))
- Fattening period of 111 days, first 43 days RPCG fed at 10 g/day
- Commercial diet
- Measurements:
 - Performance start and end
 - pH in faeces day 43
 - Starch in faeces day 43





RPCG increase average daily gain of beef calves.

	Start weight (kg)				End weight (kg)				ADG (kg/calf/day)			
	Females		Males		Females		Males		Females		Males	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Control	341	15.5	375	29.5	464	30.4	543	29	1.11	0.159	1.38	0.216
RPCG	333	17.8	366	30.8	467	21.1	546	31	1.21	0.107	1.47	0.183









Fecal pH







Fecal starch









- First indications show an improved average daily gain when feeding RPCG to beef calves.
- Fecal pH seems higher, while fecal starch seems lower in RPCG fed beef.
- More research needed to confirm the actions in beef cattle.



Thank y for listening

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