Comparison of bovine colostrum whey and defatted bovine colostrum supplementation on piglet post-weaning growth check

C. Boudry, V. Gauthier and A. Buldgen

Animal Science Unit, Gembloux Agricultural University, Passage des Déportés, 2
B-5030 Gembloux, Belgium (email : boudry.c@fsagx.ac.be)

Introduction

BOVINE COLOSTRUM (BC) = Alternative to in-feed antibiotics for the newly-weaned piglet

➔ High concentrations in: - Growth promoters
- Anti-microbial factors

➔ Availability in Belgium

PREVIOUS RESULTS

BC whey: ↗ADG, ↗ADFI and ↘FCR

Immuno-modulator

BUT : MECHANISM of ACTION ?
HIGH PROCESSING COSTS

➔ Comparison of Defatted BC and BC Whey

Material and Methods

Experimental design

96 newly-weaned piglets [1]

8 x 4 piglets "Control treatment"	8 x 4 piglets "Defatted BC treatment"	8 x 4 piglets "BC Whey treatment"
Commercial Diet [2] + 1% of bovine milk powder	Commercial Diet + 1% of Defatted BC [3] powder	Commercial Diet + 1% of BC Whey [3] powder

Measures

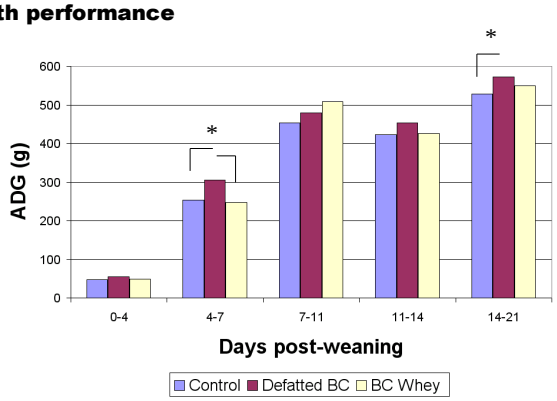
- Individual Weight (n = 32)
- Ingestion of each pen (n = 8)
- Faecal microflora (n = 8) b qPCR: *Escherichia coli*
  Lactobacillus spp.

Composition of the BC supplements

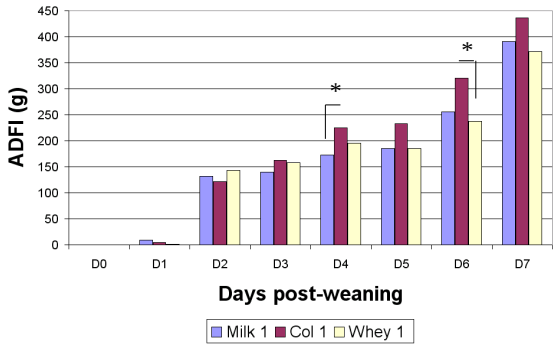
Composition (g/kg DM)	Defatted BC	BC Whey
Crude Protein	765	688
Ash	56.7	72
Lactose	43	0.1
IgG	324	496
Lactoferrin	14.3	10.6
IGF-I	2 750 ng/g	2 500 ng/g
IGF-II	23 ng/g	25 ng/g
Insulin	54 ng/g	< 1 ng/g

Results

Growth performance



Feed intake (Week 1 PW)



Faecal microflora

No differences between the treatments

Supplementation costs

	Defatted BC	BC Whey
Processing	50 €/kg	100 €/kg
Supplementation	1.6 €/piglet	3.2 €/piglet

Conclusion

The Defatted Bovine Colostrum is at least as good as Bovine Colostrum Whey to reduce the piglet post-weaning growth-check

➔ Reduction by 50% of the treatment costs

[1] CRA-W, Gembloux, Belgium [2] SCAR, Herve, Belgium [3] CER, Marloie, Belgium

This work was supported by the DGARNE of the Walloon Region (Belgium)

The authors thank the National Fund for Scientific Research, Brussels, Belgium for travel grant

gembloux faculté universitaire des sciences agronomiques

SPW Service public de Wallonie