

Effect of a butyrate-fortified milk replacer on gastrointestinal microbiota and products of fermentation in artificially reared dairy calves at weaning.

O'Hara, E.^{1,3}; Kelly, A.²; McCabe, M. S.¹; Kenny, D. A.,^{1,2}; Guan, L. L.³; Waters, S. M.^{1*}

¹ Teagasc Animal & Bioscience Research Department, Teagasc Grange, Dunsany, Co Meath, Ireland.

² UCD School of Agricultural and Food Science, University College Dublin, Belfield, Co. Dublin, Ireland.

³ Faculty of Agricultural, Food and Nutritional Sciences, University of Alberta, Edmonton, Alberta, Canada.

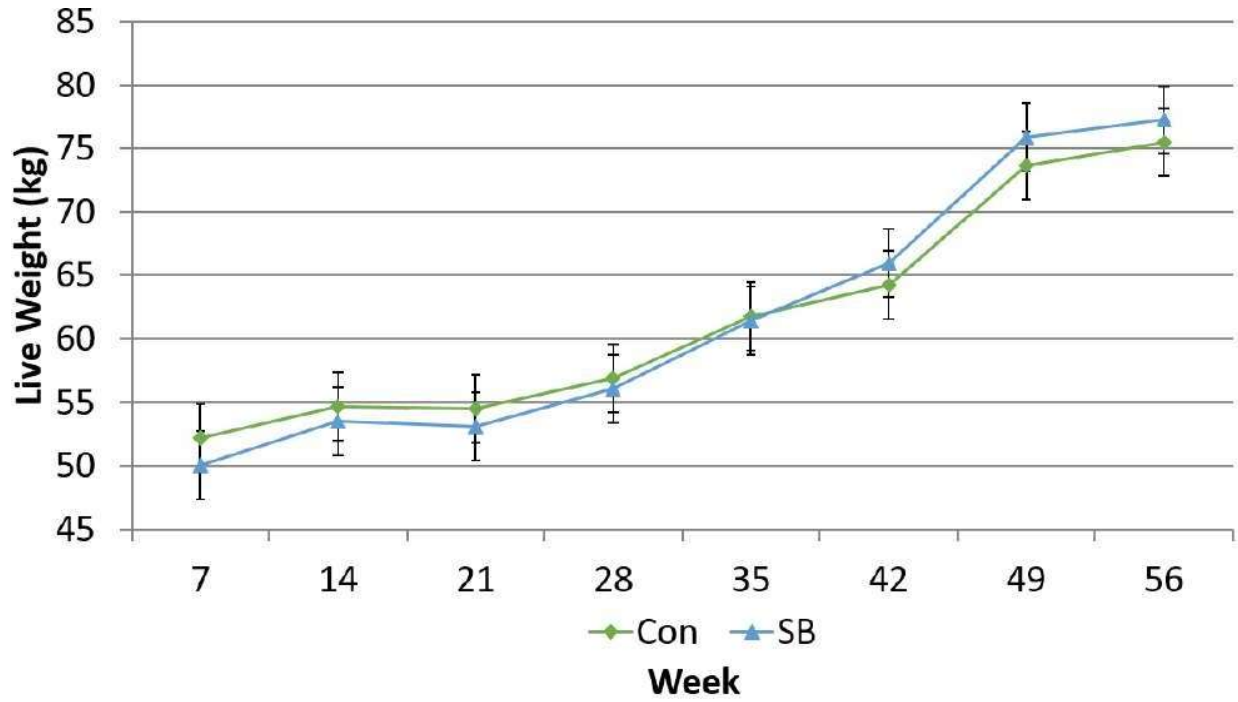
*Correspondence to sinead.waters@teagasc.ie

Supplementary Information

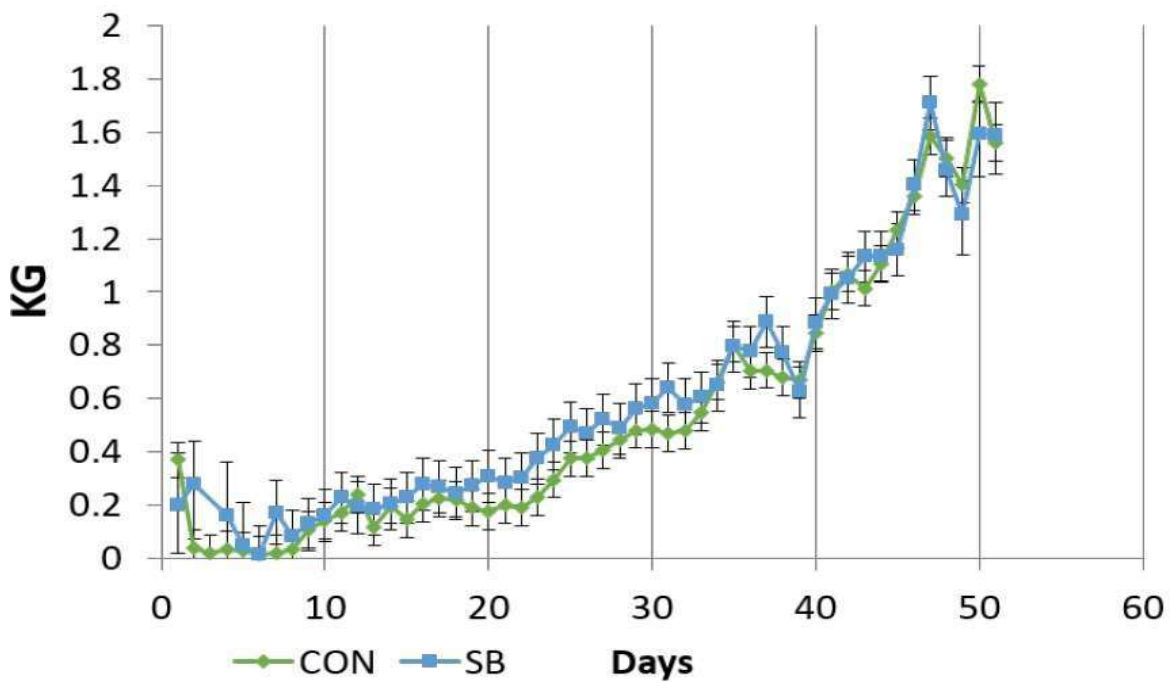
Supplementary Information S1: Nutritional composition and chemical analysis of solid feed offered.

Variable	Concentration
<u>Diet composition</u>	
Rolled Barley, %	26.5
Soya bean meal, %	25
Maize, %	15
Beet pulp, %	12.5
Soya hulls, %	12.5
Molasses, %	5
Mineral and vitamins, %	2.5 ¹
Vegetable oil, %	1
<u>Chemical composition</u>	
ADF, g/kg	103.1 (±6.76)
Crude ash, g/kg	68.8 (±0.91)
CP, g/kg	167.9 (±1.86)
DM, %	88.9 (±0.66)
NDF, g/kg	204.3 (±18.2)
Oil B ² , g/kg	30.8 (±0.72)

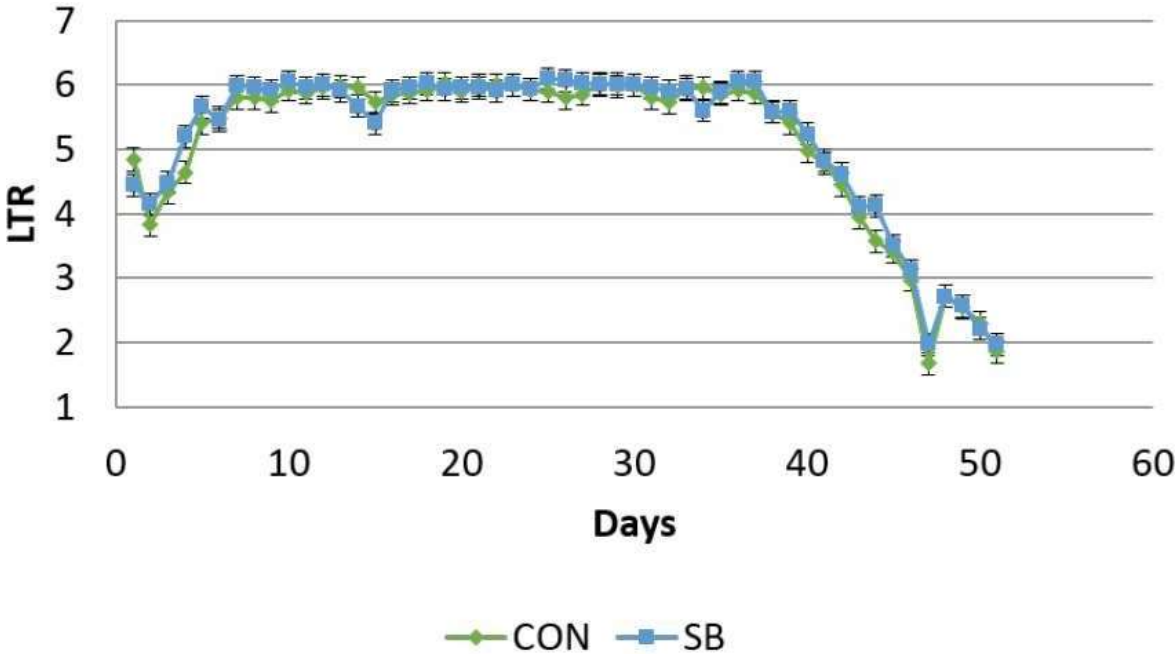
Supplementary Information S2: Growth rates of calves from birth to weaning



Supplementary Information S3: Solid feed consumption of calves fed MR +/- SB in the preweaning phase



Supplementary Information S4: Milk replacer consumption of calves fed MR +/- SB in the preweaning phase



Supplementary Information S5: Details of DNA quantities and quality measurements post-extraction.

Value	Rumen			Cecum			Colon		
	ng/ul	<u>260/280</u>	<u>260/230</u>	ng/ul	<u>260/280</u>	<u>260/230</u>	ng/ul	<u>260/280</u>	<u>260/230</u>
Mean	542.4	1.8	1.9	216.2	1.9	1.8	320.0	1.9	1.8
STDev.	273.0	0.0	0.2	42.9	0.0	0.1	99.4	0.0	0.2