

ProPhorce™ SR

Piglet performance trial
USA, University of Illinois



Piglet trial ProPhorce™ SR

OBJECTIVE

- ➔ To evaluate the effect on the performance of piglets of ProPhorce™ SR 130
- ➔ The study was performed at the Department of Animal Sciences of the University of Illinois, USA by prof. Hans Stein



Materials

Total number of piglets	120
Number of treatments	2
Replicates per treatment	12 pens per treatment
Piglets per replicate	5 pigs per pen
Starting weight	6,73 kg (average weaning weight)
Genetics	PIC 359 X Fertilium 46
Dose level ProPhorce SR	2,5 kg/ ton of feed

Additional info

Diet form: Meal	Phase 1 Starter – 0-14 days Phase 2 Grower – 14-35 days All diets were Antibiotic free Diets were corn and soybean meal based
Weighing days	Day 0 Day 14 Day 35
Diarrhea scoring	Every day by 2 experts (scoring 1-5 with 1 being good and 5 being watery diarrhea)
Parameters measured	Feed intake, body weight, FCR, and mortality.



Diet composition

1 st fase feed	Control	0.25% ProPhorce SR
Corn	43.62	43.37
Whey, dried	20.00	20.00
SBM, 48%	25.00	25.00
Fish meal	5.00	5.00
Blood plasma	2.00	2.00
Soybean oil	2.00	2.00
Limestone	1.00	1.00
DCP	0.20	0.20
Lysine HCl	0.35	0.35
DL-Met	0.14	0.14
Threonine	0.09	0.09
Salt	0.30	0.30
Butyrate	0.00	0.25
Vit-mineral premix ¹	0.30	0.30
Total	100.00	100.00
Calculated values		
ME, kcal/kg	3,412	3,404
CP, %	22.56	22.54
Ca, %	0.85	0.85
P, %	0.66	0.66
Amino acids,² %		
Arg	1.25	1.25
His	0.52	0.52
Ile	0.85	0.85
Leu	1.69	1.69
Lys	1.50	1.50
Met	0.47	0.47
Met + Cys	0.82	0.82
Phe	0.91	0.91
Thr	0.88	0.88
Trp	0.26	0.26
Val	0.95	0.95

➔¹Provide the following quantities of vitamins and micro-minerals per kilogram of complete diet: Vitamin A as retinyl acetate, 11,136 IU; vitamin D3 as cholecalciferol, 2,208 IU; vitamin E as DL-alpha tocopheryl acetate, 66 IU; vitamin K as menadione dimethylprimidinol bisulfite, 1.42 mg; thiamin as thiamine mononitrate, 0.24 mg; riboflavin, 6.59 mg; pyridoxine as pyridoxine hydrochloride, 0.24 mg; vitamin B12, 0.03 mg; D-pantothenic acid as D-calcium pantothenate, 23.5 mg; niacin, 44.1 mg; folic acid, 1.59 mg; biotin, 0.44 mg; Cu, 20 mg as copper sulfate and copper chloride; Fe, 126 mg as ferrous sulfate; I, 1.26 mg as ethylenediamine dihydriodide; Mn, 60.2 mg as manganese sulfate; Se, 0.3 mg as sodium selenite and selenium yeast; and Zn, 125.1 mg as zinc sulfate.

➔²Amino acids are indicated as standardized ileal digestible AA.



Diet composition

2th fase feed	Control	0.25% ProPhorce SR
Corn	51.77	51.52
Whey, dried	10.00	10.00
SBM, 48%	33.00	33.00
Soybean oil	2.00	2.00
Limestone	0.98	0.98
DCP	1.05	1.05
Lysine HCl	0.38	0.38
DL-Met	0.13	0.13
Threonine	0.09	0.09
Salt	0.30	0.30
Butyrate	0.00	0.25
Vit-mineral, Sow 6 ¹	0.30	0.30
Total	100.00	100.00
Calculated values		
ME, kcal/kg	3,354	3,346
CP, %	21.17	21.15
Ca, %	0.80	0.80
P, %	0.65	0.65
Amino acids,² %		
Arg	1.26	1.26
His	0.50	0.50
Ile	0.81	0.81
Leu	1.59	1.59
Lys	1.35	1.35
Met	0.42	0.42
Met + Cys	0.74	0.74
Phe	0.90	0.90
Thr	0.79	0.79
Trp	0.24	0.24
Val	0.86	0.86

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➔²Amino acids are indicated as standardized ileal digestible AA.



ADG results

	Dosage (kg/ton feed)	D0 – D14	D14 – D35	D0 – D35
Control	0	106	545	369
ProPhorce™ SR 130	2,5 kg	121	569	389
Difference %		+ 12%	+ 4,2%	+ 5%

➔ Results were not statistically significant, but the trend is a clear improvement of ADG

ADFI results

	Dosage (kg/ton feed)	D0 – D14	D14 – D35	D0 – D35
Control	0	183	784	544
ProPhorce™ SR 130	2,5 kg	194	835	579
Difference %		+ 5,7%	+ 6,1%	+ 6%

➔ Results were not statistically significant, but the trend is a clear Increase of ADFI

➔ No differences in FCR or Mortality in both groups

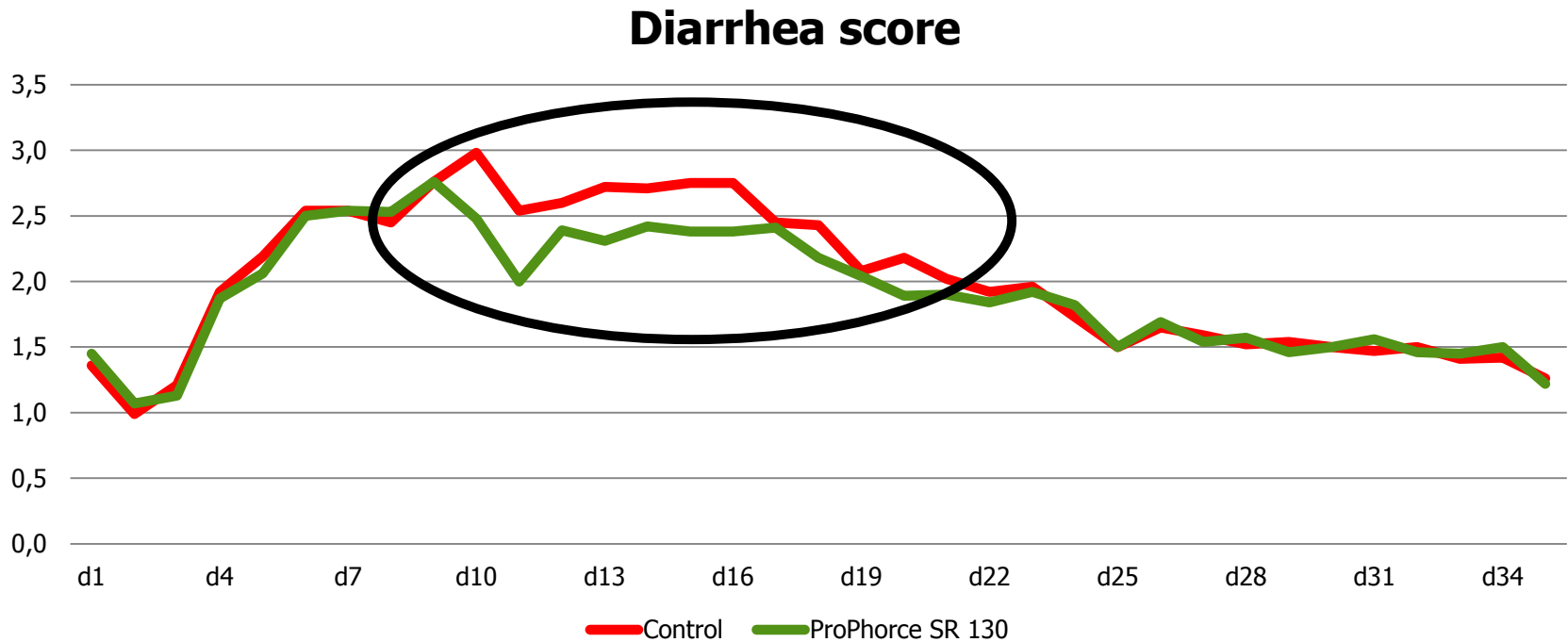
Pen days with diarrhea

	Total pen days	Scoring ≥3	Scoring ≥3,5
Control	420	20	3,81
ProPhorce™ SR 130	420	15,48	0,48*
Difference %		- 22,6%	- 87,4%

* significantly less ($p \leq 0,05$) pen days with diarrhea score over 3,5 (with 1 being good feces and 5 being severe diarrhea)



Diarrhea score



Conclusions

- ➔ ProPhorce™ SR 130 improved ADG with 5%
- ➔ ProPhorce™ SR 130 reduced diarrhoea problems in the second and third week after weaning.
- ➔ There was a significant reduction in severe diarrhoea cases in the ProPhorce™ SR 130 group compared to control.



ProPhorce™ SR



The butyric acid solution of the 21st century

- ➔ The odorless butyric acid
- ➔ Most effective in delivering butyric acid in the intestine
- ➔ More efficient than coated salts of butyric acid
- ➔ Cost effective way of enhancing gut health
- ➔ Improves performance in piglets

