

A BOVINE COLOSTRUM PRODUCT IN A WEANER DIET INCREASES GROWTH AND REDUCES DAYS TO SLAUGHTER

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Poor performance after weaning extends the number of days producers must feed and house their pigs until market weight. Much of this problem is associated with low voluntary food intake. The use of spray-dried plasma products, such as porcine and bovine plasma, in diets for weaner pigs generally increases food intake and growth rate after weaning (Hansen *et al.*, 1993). Some conjecture exists as to their mode(s) of action, although the IgG fraction of the plasma has been implicated (Weaver *et al.*, 1995). The aim of this study was to examine whether a bovine colostrum powder rich in IgG and added to a starter diet would increase post-weaning performance and reduce days to slaughter.

A total of 393 Large White x Landrace mixed-sex pigs (7.5 ± 0.02 kg live weight (LW)) weaned at 28 days of age on a 280-sow commercial piggery was used. Pigs received one of three experimental wheat-based diets: Diet Im0 (Control), and Diets Im50 and Im100 that contained 50 or 100 g/kg Immulac™, respectively. Immulac™ contained 150 g/kg IgG and 500 ng/g IGF-1. All diets were formulated to contain 14.8 MJ DE/kg and 12.6 g/kg available lysine. Pigs were housed in pens containing 20-24 pigs in environmentally-controlled weaner rooms, and were offered the diets *ad libitum* for 10 days after weaning. After this time, pigs on all treatments were offered the same series of diets through to slaughter at 83 kg LW. Data were analysed using the GLM procedures of SAS.

Table 1. Least-squares means for average daily gain (ADG, g), daily food intake (ADFI, g), feed conversion ratio (FCR) and number of days to slaughter of pigs fed three different diets for a period of 10 days immediately after weaning.

	Diet			Pooled SD	Statistics ¹
	Im0	Im50	Im100		
ADG 1-7	114 ^a	161 ^b	204 ^c	19.3	*
ADG 8-14	212 ^a	286 ^b	292 ^b	17.8	*
ADG 0-14	163 ^a	223 ^b	248 ^c	10.9	**
DFI, d 1-7	184	206	230	51.0	NS
FCR, d 1-7	1.66	1.40	1.14	0.445	NS
Days to slaughter	121.6 ^a	118.7 ^b	117.4 ^b	0.79	***

¹NS, not significant, *P < 0.05, **P < 0.01, ***P < 0.001. ^{a,b,c}Values in the same rows with different superscripts are significantly different (P < 0.05).

Pigs fed diets Im50 and Im100 grew faster (P < 0.01) than pigs fed a similar diet in the first 14 days after weaning, but which was devoid of the colostrum product. Fastest growth was achieved in piglets consuming diet Im100. Pigs eating diets Im50 and Im100 consumed 12% and 25% more food, respectively, than pigs eating Diet Im0, however no statistical difference (P = 0.472) in food intake was observed. Similarly, no significant difference (P = 0.304) in FCR was seen among dietary groups. Pigs fed diets Im50 and Im100 took 2.9 and 4.2 days less (P < 0.001), respectively, to reach a standardised slaughter live weight of 83 kg than pigs fed the Control diet. Inclusion of a bovine colostrum product in a starter diet improved post-weaning performance and reduced days to slaughter, and may be an alternative to spray-dried plasma products.

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References

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