

DOSE EFFECT ON PIGLETS' GROWTH PERFORMANCE

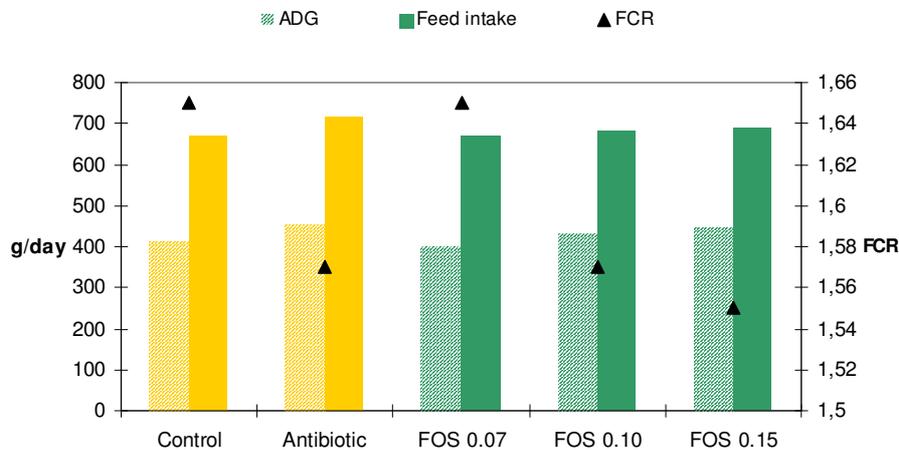
KEYWORDS

Piglets – growth – FCR – dose effect

EXPERIMENTAL DESIGN

240 piglets (Largewhite x Landrace) were weaned at 20 days and included in this study. The piglets received a pelleted weaner diet (wheat 43%, extruded wheat 12%, and barley 10%) from 21 to 42 days of age and a pelleted grower diet (wheat 38%, barley 22%) from 42 to 70 days of age. Piglets were allotted into 30 pens and randomly allocated to one of the five dietary treatments: Negative control; Avilamycine 40ppm; scFOS 0.07%; scFOS 0.1%; scFOS 0.15%. In order to have a model close to the field sanitary conditions, pens and watering systems were not cleaned nor disinfected after the previous group.

RESULTS



	Control	Antibiotic	FOS 0.07%	FOS 0.10%	FOS 0.15%
ADG (g/d)	411 ^{bc}	454 ^a	401 ^c	431 ^{ab}	447 ^a (+8.7%)
Feed intake (g/d)	670	716	669	681	690
FCR	1.65 ^b	1.57 ^a	1.65 ^b	1.57 ^a	1.55 ^a (-0.1 point)

^{abc} Values with different superscripts differ ($p < 0.05$)

Mortality was very low throughout the whole study (0.08% for all treatments).

During the first period (21-42d), the best improvement of FCR in comparison to the negative control was observed in the group fed the diet containing 0.15% scFOS (1.18 vs 1.27), no significant effect was observed with the two other scFOS levels. During the second period (42-70d), both the 0.10% and 0.15% scFOS diets significantly improved the FCR in comparison to the negative control. However during the same period, only the antibiotic and 0.15%scFOS-treated groups had an average daily gain significantly higher than the average daily gain of the control group (580^b; 597^b and 538^a g/d respectively).

The diets supplemented with antibiotic or scFOS 0.15% induced the highest improvement of the ADG and FCR over the whole period of breeding. This study confirmed a dose effect of scFOS on the growth performance, suggesting that the optimum level is around 1.2g/d/weaning piglet.

CONCLUSION

This study confirmed that there is a dose effect of scFOS on growth performance in weaning piglets. The best improvement (+ 8.7% ADG, - 0.1 point FCR) was observed with around 1.2g of scFOS per day per piglet.