

### **SYNBIOTICS AS FEED ADDITIVES FOR SWINE GROWTH PERFORMANCE**

Because nutrition is the single decisive factor that determines whether an animal shall grow to its potential, feed additives have been actively incorporated to make up where the major feed ingredients lack. So much so, feed additives have become synonymous with the growth performance of the animal. Synbiotics is one such category of additives which can provide both an economical and effective solution to improve growth performance. As a combination of probiotics and prebiotics, synbiotics do not directly increase the nutritional content of the feed, rather the synergistic effects to the gut has been shown to further improve the growth performance of the animal. Besides, synbiotics are a natural growth enhancer which does not have any residual effects.

In this technical paper, we evaluate the influence of PRIMOS 25, a synbiotic, on the growth performance of pigs in China.

### **PRIMOS 25 FOR GROWTH PERFORMANCE**

The PRIMOS 25 synbiotic was evaluated on the growth performance of the pigs in a trial conducted at the research station of a tier-one feed mill in Heyuan, China, from 25 December 2009 to 26 April 2010. 36 40-day-old piglets were randomly divided into 2 groups; 'Control' and 'PRIMOS 25', at 3 replications per group, and 6 pigs per replication. The PRIMOS 25 group was supplemented with 0.5% PRIMOS 25 per ton of feed throughout the pre-starter, starter, grower, and finisher stages. The pigs were fed on a basal diet of corn, soyabean meal, and wheat.

### **ENHANCEMENTS THROUGH PRIMOS 25**

The first evidence when PRIMOS 25 supplemented pigs put on weight faster was observed during the starter stage, while for the subsequent growth stages, not only were the PRIMOS 25 supplemented pigs heavier, but they were also growing faster than those in the Control (Figure 1).

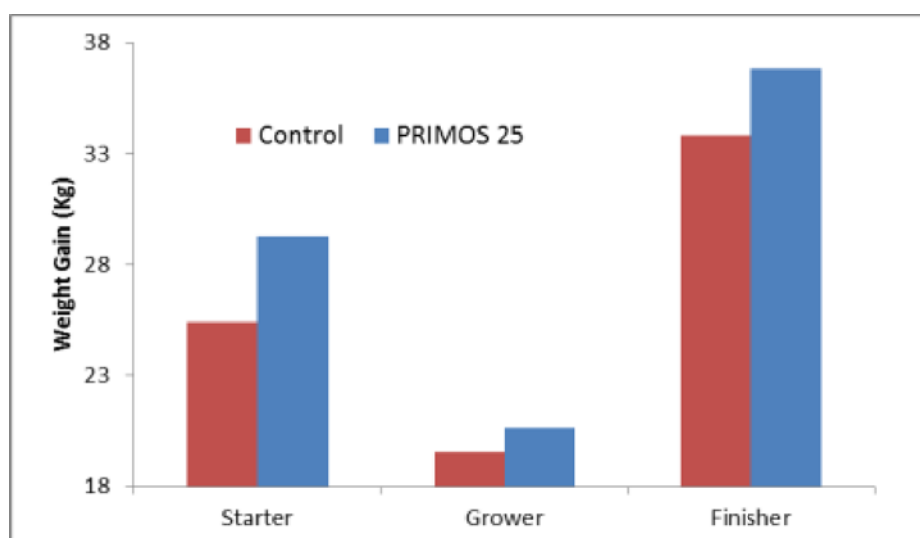


Figure 1: Comparison of weight gained during the individual growth stages between PRIMOS 25 and Control pigs

By the end of the trial, pigs supplemented with PRIMOS 25 were weighing 102.8kg, or 8% heavier than those in the Control. Furthermore, from the values of the standard distribution, PRIMOS 25 supplemented pigs were more uniform in terms of weight as compared to the Control pigs (Figure 2).

Treatments	Pre-starter Initial Weight (Kg)	Starter Weight (Kg)	Grower Weight (Kg)	Finisher Weight (Kg)	End Weight (Kg)
Control	10.05 ± 0.14	16.35 ± 0.43	41.75 ± 1.49	61.30 ± 1.87	95.15 ± 2.14
PRIMOS 25	10.02 ± 0.67	16.05 ± 0.78	45.33 ± 0.75	65.96 ± 1.22	102.80 ± 1.07

Figure 2: Weight of PRIMOS 25 and Control pigs throughout the different growth stages during the trial.

Correspondingly, the PRIMOS 25 supplemented pigs recorded an ADG of 0.77kg, which was 10% higher than that of the Control pigs, leading the feed mill to conclude that PRIMOS 25 supplemented pigs were able to be marketed 7 days earlier (Figure 3). On the other hand, improvement in the FCR for PRIMOS 25 supplemented pigs was insignificant as compared to the Control pigs (Figure 4). This may be attributed to the relatively cold weather during which the trial was conducted; the average monthly temperature at Heyuan then, varied from 13-19°C. And as such, PRIMOS 25 supplemented pigs will consume more feed accordingly to replenish energy expended as heat.

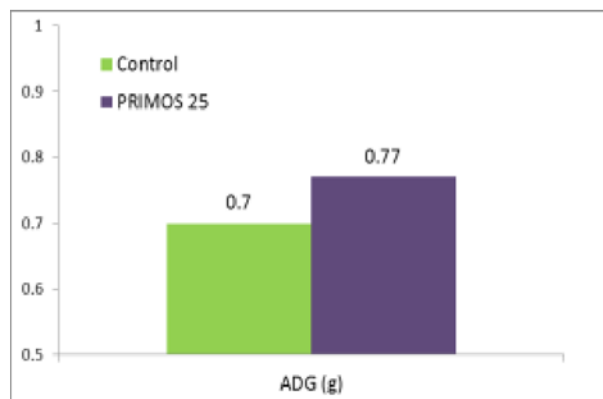


Figure 3: Comparison of ADG between PRIMOS 25 and Control pigs.

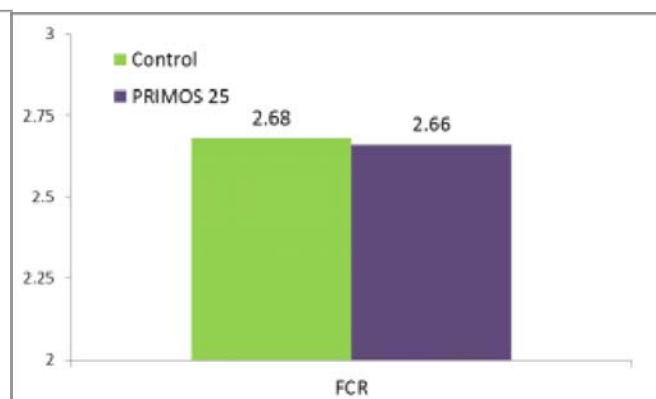


Figure 4: Comparison of FCR between PRIMOS 25 and Control pigs.

### CONCLUSION

PRIMOS 25 as a feed supplement is proven to improve the swine ADG substantially, and thus allowing an earlier market time. Although it may not significantly improve the FCR during colder months, PRIMOS 25 still ensures that the additional feed consumed then is as efficiently utilized.

### ACKNOWLEDGEMENT

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