

Creep Feed Provision in the Farrowing Room Provides Benefits to Piglets Showing Evidence of Intake

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SUMMARY

The consumption of creep feed improved growth rates and nursery exit weights. However, only about 40% of the piglets offered the creep feed consumed it.

INTRODUCTION

Offering supplemental feed in farrowing (creep feeding) is thought to benefit piglets by 1) providing supplemental nutrition 2) aiding the adaptation of the gastrointestinal tract to nutrients not found in milk, including proteins and 3) introducing solid feed to the piglets. However, a study published in last year's annual report (Beaulieu et al. 2010. Annual Research Reports. Weaning at 28 days. Is creep feeding beneficial?) provided data showing that the provision of creep feed in the farrowing room for 7 days prior to weaning had no effect on weaning weights, suggesting offering creep didn't increase overall nutrient intake. Surprisingly, this conclusion was the same for the light and heavy pigs within a litter. Moreover, this data showed that piglets from litters offered creep in farrowing were less inclined to visit the feeder in the nursery immediately post-weaning. This implies that there were no behavioural benefits from the early introduction of solid feed.

This experiment however, was only able to describe the effects of offering creep feed to a litter on performance. We measured creep feed disappearance, but were unable to determine if consumption was equal among litter-mates. The objective of the current experiment, was to determine effects of creep feed provision in the farrowing room, specifically among those piglets who show evidence of consumption.

MATERIALS AND METHODS

One hundred sows were randomly assigned to one of 2 treatments, creep or no creep. The creep treatment piglets received creep feed

(commercial) for one week prior to weaning. The creep feed was provided in multi-space creep feeders, added in 250 gram allotments as needed. The creep feed and the phase 1 nursery diets were marked with a non-toxic inert dye. Anal swabs taken from each piglet in the creep group 1 day prior to weaning and from all piglets on day 2 in the nursery allowed us to estimate performance responses to creep among those piglets who had actually consumed it and further if consuming creep in the nursery actually encourage intake of the phase 1 diet immediately post-weaning.

“Creep feeding improves weaning and nursery exit weights for those pigs that actually eat it”

RESULTS AND DISCUSSION

Creep feed disappearance was approximately 240 grams per day per farrowing crate. Although birth weight was similar between groups regardless of subsequent creep feeding, weight at 21 days of age (when creep feeding actually began) was higher (Table 1). All litters had been treated exactly the same up to this point, thus, we can't attribute this difference to treatment. There was no difference

Table 1. Weaning weights, and nursery growth rate in response to creep feed offered in the farrowing room for 7 days prior to weaning.

Variable	Creep	No Creep	SEM	P-Value
N (litters/piglets at d 21)	55/578	52/538		
Farrowing room				
Wean age	26.20	26.05	0.265	
BW, birth, kg	1.48	1.47	0.022	
21 days of age, kg	5.82	6.05	0.078	0.01
Weaning, kg	7.61	7.76	0.100	
ADG, 21 doa to weaning, g/d	0.25	0.24	0.005	0.02
Nursery				
BW, d 3 (post-weaning), kg	8.03	8.18	0.101	ns
Nurs Exit, kg	20.46	20.35	0.339	
ADG, wean to d 3, g/d	0.14	0.14	0.019	
wean to d28, g/d	0.44	0.43	0.010	

Table 2.: Growth of piglets offered creep in the nursery, separated by evidence of consumption of creep feed and the phase 1 nursery diet on day 1 post-weaning.

Farrowing Nursery	Eater		Non-Eater		Pooled SEM
	Eater	Non-Eater	Eater	Non-Eater	
Wean Age	26.63 ^a	26.00 ^{bc}	26.26 ^{ab}	25.93 ^c	0.318
BW, birth, kg	1.50	1.46	1.47	1.48	0.039
d 21, kg	5.53 ^a	5.70 ^{ac}	5.99 ^{bc}	6.03 ^b	0.164
Weaning, kg	7.30 ^a	7.51 ^{ab}	7.68 ^b	7.80 ^b	0.196
ADG, d 21 to wean, g/d	0.25 ^{ab}	0.26 ^a	0.24 ^b	0.25 ^a	0.008
Nursery					
BW, d 3, kg	7.94	7.91	8.14	8.15	0.196
Nurs Exit (d 28), kg	21.10 ^a	20.68 ^{ab}	20.64 ^{ab}	20.04 ^b	0.484
ADG, Wean to d3, g/d	0.21 ^a	0.13 ^{bc}	0.15 ^b	0.12 ^c	0.025
d 4 to 7, g/d	0.16 ^a	0.17 ^a	0.13 ^b	0.10 ^c	0.019
Wean to d 28, d/g	0.48 ^a	0.45 ^{ab}	0.45 ^b	0.42 ^c	0.013

a,b,c,d. Numbers within a row with different superscripts, P < 0.05

weaning, of piglets classified as “creep and nursery eaters” was improved relative to other groups (Table 2). Moreover, there is evidence that this improvement was maintained throughout the nursery period.

CONCLUSION

Creep feeding improves weaning and nursery exit weights, for those piglets who actually consume it. Further work is required to determine why not-all piglets consume the creep feed and if these piglets will show improvements in growth if they can be encouraged to consume the creep feed.

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in weaning weights and average daily gain (ADG) from day 21 (when creep was offered) to weaning was higher in those litters offered creep. Similar to what we had observed in previous experiments, providing creep in the farrowing room, had no impact on subsequent overall growth of those litters in the nursery (Table 1).

The data in Table 2 is only from those litters offered creep feed in the nursery. Approximately 37 % (175 out of 471) of piglets offered creep showed evidence of consumption after 5 days. Within the creep “eaters” 45 % had evidence of consuming the phase 1 diet when swabs were taken 48 hours after weaning. Within the creep “non-eaters” this figure was 55 %. This corroborates our previous experiment where video-tape observations showed that piglets from litters offered creep had fewer “feeder approaches” during the first 24 hours post-weaning. Growth rate during the first 3 days post-



Figure 1. Proportions of piglets classified as creep eaters (n=175) versus non-eaters (n=296) in the farrowing room and nursery (first 24 hours post-weaning) eaters (n=221) and non-eaters(n=243).

