

Weaning at 28 days. Is creep feeding beneficial?



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Each week, representing one creep treatment, the entire weaning group was weighed and pigs ranked according to body weight within gender. The 24 heaviest and 24 lightest pigs were assigned to pen, 4 pigs per pen. Pens were then randomly assigned to a treatment. Thus each week there were 6 pens of the heaviest and 6 pens of the lightest pigs. Care was taken to ensure

All piglets lost weight during the initial 24 hours following weaning. Contrary to what we expected, piglets which had not received creep feed tended to have improved growth post-weaning and feed intake was unaffected ($P > 0.10$). Overall feed efficiency therefore, was improved in non-creep fed piglets ($P > 0.01$).

The creep by body-weight interaction

Summary

Allowing piglets access to a Phase 1 diet (creep feed) in the farrowing room for the final 7 days prior to weaning on day 28 provided no sustained performance benefit, regardless of weaning weight.

Introduction

Providing supplemental feed to the piglets in the farrowing room, or creep feeding, is practised to ensure a smooth transition onto solid feed at weaning. It is assumed that even a limited intake of the creep feed will familiarize the piglet with solid feed and lessen a post-weaning growth lag by 1) increasing the body weight of piglets at weaning, 2) encouraging consumption of solid feed following weaning and, 3) adapting the gastro-intestinal tract to solid feed. This study was initiated when the Prairie Swine Centre moved to a later weaning age (28 days). We hypothesized that the benefits of creep feeding would be more evident with later weaning. Additionally, we examined if the response to creep feeding would differ between light and heavy birth-weight pigs.

Experimental Procedures

This experiment used data from 15 weeks of farrowing (12 sows per room) at PSCI. Piglets were provided access to a Phase 1 diet (commercial) in multi-space circular feeders in the farrowing room on days 21 to 28 for the first 8 farrowing rooms only. Piglets were weaned on day 28.

that the time between the removal of the piglets from the sow and access to feed in the nursery was the same for all piglets and all weeks.

Video cameras set up over the pens recorded individual feeder approach which was defined as a pig placing their head over and down into the feeder. Piglets were numbered on their backs for identification. To accommodate the video recording, lights were on continuously.

Results and Discussion

Piglets who had access to creep feed for the final week prior to weaning weighed 130 grams more at weaning (Table 1). This did not approach statistical significance however, indicating that factors other than the presence of creep feed may be responsible for this difference ($P > 0.10$).

described in Table 1 (day 0, 1, and 4; $P < 0.05$) is shown in more detail in Figure 1 for day 0 (weaning). The response to creep was greater in heavier (240 grams weaning weight improvement or 2.3 % of body weight) than lighter pigs (30 grams improvement or 0.5% of body weight).

“Providing creep feed in farrowing room had no sustained benefit on pig performance in nursery”

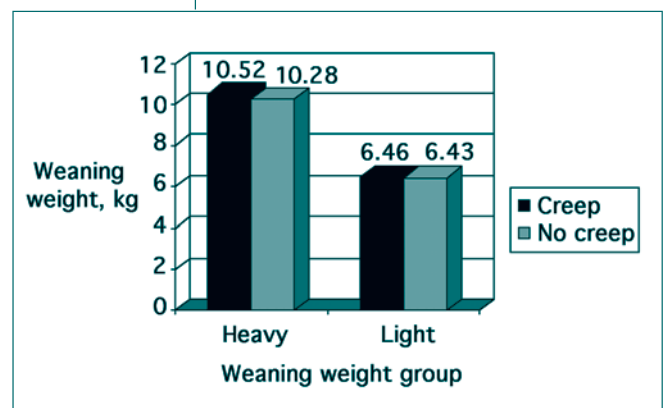


Figure 1. The interaction between weaning weight group and feeding creep in the nursery ($P < 0.05$). Numbers over the bars are the weaning weight for the sub-group.

Table 1. The effect of weaning weight and presence of creep feed in the farrowing room on growth and feed intake in the nursery.

	Creep Feed				Weaning Weight Group			Creep *BW	
	Day ^a	No	Yes	P value	Heavy	Light	P value	SEM ^b	P value
Wean. wt, kg	0	8.36	8.49	0.35	10.40	6.44	<0.001	0.10	0.01
	1	8.24	8.33	0.49	10.15	6.42	<0.001	0.10	0.02
	4	8.56	8.61	0.75	10.42	6.76	<0.001	0.11	0.05
	7	8.88	8.96	0.70	10.71	7.13	<0.001	0.14	0.23
	14	11.17	11.04	0.67	12.73	9.48	<0.001	0.21	0.85
ADG, kg/day	0-1	-0.12	-0.16	0.36	-0.26	-0.02	<0.001	0.02	0.79
	2-4	0.08	0.07	0.43	0.07	0.08	0.040	0.01	0.60
	5-7	0.16	0.12	0.11	0.12	0.15	0.001	0.02	0.84
	8-14	0.33	0.30	0.20	0.29	0.34	<0.001	0.02	0.57
	0-14	0.20	0.17	0.05	0.16	0.21	<0.001	0.01	0.63
ADFI, kg/day	0-1	0.12	0.10	0.10	0.09	0.13	<0.001	0.01	0.42
	2-4	0.13	0.13	0.77	0.13	0.13	0.14	0.01	0.68
	5-7	0.22	0.21	0.88	0.22	0.21	0.720	0.01	0.80
	8-14	0.37	0.34	0.16	0.35	0.35	0.770	0.01	0.45
	0-14	0.26	0.25	0.33	0.25	0.25	0.830	0.01	0.59
FCE, G/F	0-1	-2.51	-4.19	0.06	-5.36	-1.34	<0.001	0.59	0.33
	2-4	0.39	0.44	0.75	0.40	0.43	0.840	0.10	0.21
	5-7	0.70	0.25	<0.001	0.43	0.52	0.001	0.06	0.11
	8-14	0.89	0.88	0.92	0.81	0.96	<0.001	0.03	0.47
	0-14	0.77	0.61	0.05	0.59	0.79	<0.001	0.05	0.56

^aDay 0 is weaning.

^bBecause of the unbalanced design the SEM was slightly different for the effects of weaning and creep feeding. The larger SEM is shown.

Further work is underway to determine if this is because the heavier piglets consumed more creep while in the farrowing room.

Piglets who had access to creep feed in the farrowing room had fewer visits to the nursery feeder on day 0, 1 and 4 post-weaning. This pattern is most notable in the final 8 hours of each 24-hour period. Again, this is contrary to our hypothesis, that feeding creep would acclimate the piglets to solid food and thus encourage consumption in the nursery. Feed intake was comparable, thus it appears that those piglets who had received creep feed in the nursery consumed more feed after each visit to the nursery feeder. The increased visits by the pigs who hadn't received creep during the final 8 hours of each day could be because these piglets, unaccustomed to the solid feed, were consuming less feed with each visit, and are then motivated by hunger to visit the feeder during the latter part of each day. This awaits confirmation.

Table 2. The effect of creep feeding in the farrowing room on the number of feeder visits in the nursery.

	Creep	No creep	SEM	P value
Day 0	6.3	8.6	0.45	0.02*
Day 1	7.0	9.1	0.32	0.04*
Day 4	7.4	8.0	0.29	0.12*

*Hour by creep, $P < 0.001$

Conclusion

Allowing pigs access to a Phase 1 diet in the farrowing room for 7 days prior to weaning had no sustained beneficial effect on performance in the nursery, regardless of weaning weight.

The Bottom Line:

Research is currently under way to validate these results in a more commercial-like setting. Producers should not, however, assume that piglets would respond to creep feeding.

Acknowledgements

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(Weaning at 28 days ... continued on page 11)

Friends of the Centre

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Objective

To allow a broader group of pork industry individuals and corporations to lend their support to the Prairie Swine Centre.

Concept

"Friends of the Centre" is a way for pork producers, suppliers, packers, processors and others to show their support. Benefits from having a dedicated swine research facility flow to all parts of the value chain. As a friend of the Centre you will ensure the Prairie Swine Centre remains a viable part of the pork industry in the future.

Benefits to our Friends

- The opportunity to play a visible and meaningful role in the continuation of the unique industry-orientated research and technology transfer programs offered by Prairie Swine Centre.
- Friends receive advanced notice of seminars, publications and special events sponsored by the Centre.
- Friends will have their business recognized as "Friends of the Centre" on the PSC Website.
- Friends will also be provided with exclusive opportunities to provide advertorial materials for insertion in newsletters, Centred on Swine publications and the Annual Research Reports.
- Friends will also benefit by knowing that they made a difference when it really mattered.

Benefits to Prairie Swine Centre

- The Centre gains a voluntary source of funds to partially fill the gap in the business plan created by variable pig prices and the declining check-off funds available for pork associations to allocate to research.
- The Centre gains a group of motivated and interested champions that see value in maintaining a strong industry orientated research program.
- The sharing of costs incurred to generate knowledge is spread over a greater portion of the industry and better reflects the allocation of benefits to multiple members of the pork value chain. This way the number of champions that take ownership for the Centre as well as the knowledge it develops, increases.

To provide your support to the Centre please consider the following voluntary contributions to the "Friends of the Centre" Campaign

- \$200 individual farm membership
- \$1500 regional suppliers
- \$2500 national/international suppliers

Cheques can be made payable to:

Prairie Swine Centre
 Box 21057, 2105 8th Street East
 Saskatoon, Saskatchewan S7H 5N9 CANADA
 A receipt can be provided upon request.

(Weaning at 28 Days ... continued from page 9)

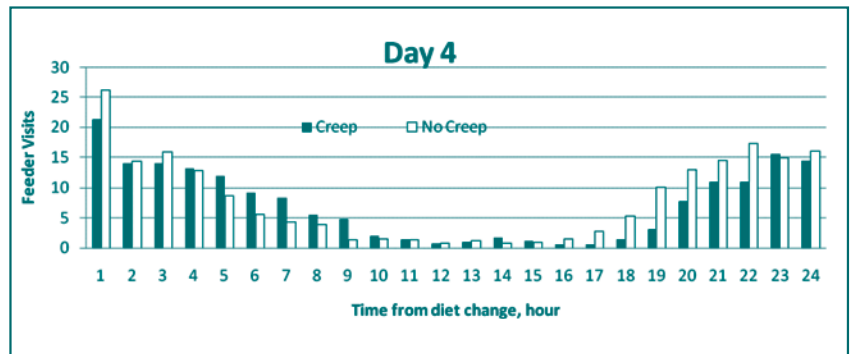
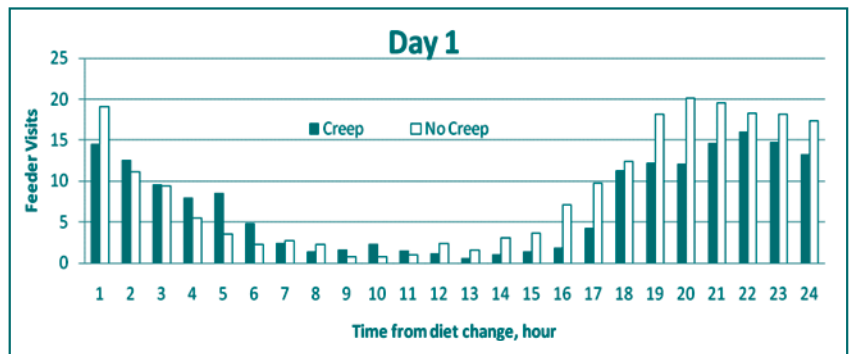
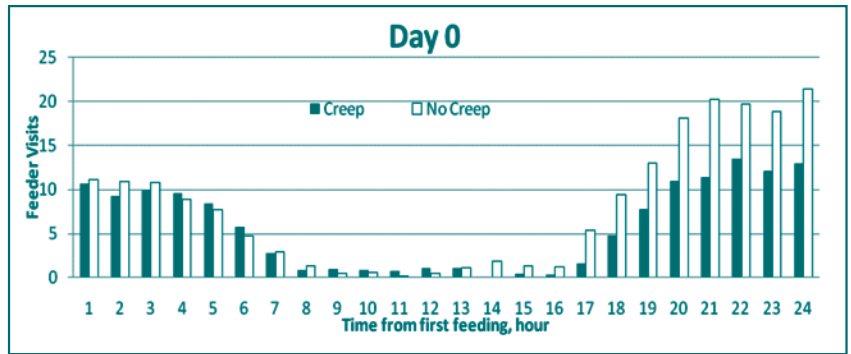


Figure 2. The effect of feeding creep in the farrowing room on feeder visits in the nursery, day 0, 1 and 4 post-weaning. Day 0 refers to the 24 hours following initiation of feeding in the nursery, while day 1 and day 4 are the 24 hours following the morning feeding.

