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EFFECT OF PUSH™ SOW FEED ON SOW AND LITTER PERFORMANCE

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Introduction

Maximizing litter size and pig weaning weight while minimizing sow weight loss in lactation can be a biological dichotomy. Generally, the greater milk production associated with heavier litter weights results in greater sow body weight in lactation. Excessive sow body weight loss in lactation contributes to delayed return-to-estrus intervals and smaller litters the subsequent parity. Maximizing lactation feed intake can diminish the negative effects of this dichotomy. Matzat (1990) found that lactating sows which were superalimentated via a gastric fistula and received 20% more feed than sows allowed ad-libitum access to feed were able to preserve a greater amount of body mass and synthesize greater quantities of milk. In practical swine production systems, feed ingredients which enhance sow milk quantity and/or milk nutrient density without exacerbating sow body weight loss would be welcomed.

Materials and Methods

Three controlled research experiments and 3 field demonstrations using a total of 1478 sows were conducted to evaluate a new lactation feed ingredient (PUSH™). In Experiment #1, sows were offered PUSH™ during the period from post-farrowing through weaning. In all other trials sows were offered PUSH™ beginning the day they entered the farrowing crate and throughout lactation. PUSH™ was supplied to sows at a targeted rate of .36 lb/sow/day either in the complete feed or as a top-dress. Litter weights and pig number were recorded after equalization (48 to 72 hrs post-farrow), and at weaning. Sow lactation feed disappearance was recorded daily.

Results and Discussion

In all 6 studies there was a numerical reduction in preweaning mortality (Average =1.7%) for pigs nursing sows fed PUSH™. In addition to improved piglet survivability, sows fed PUSH™ weaned heavier litters. In

the three controlled studies, sows fed PUSH™ had significantly heavier (8.5 lbs) litter weaning weights. Similarly, sows fed PUSH™ had significantly heavier (8.8 lbs) litter weaning weights in 2 of the 3 field trials. Individual piglet weaning weights were also larger for pigs nursing sows fed PUSH™. Combined results of all studies showed an improvement in individual pig weaning weight of 0.61 lb/pig.

The average daily feed intake of sows on each treatment was similar and there was no difference between treatments in sow lactation backfat loss or wean-to-estrus interval.

The addition of PUSH™ to sow lactation diets during lactation did not influence total tract digestibility of dry matter, crude protein, digestible energy, organic matter or ash when measured in Experiment #3

Analysis performed on sow milk samples collected at weaning from Experiment #3 showed that milk crude protein increased more than 10.0% and that milk crude fat increased more than 12.0% in sows consuming PUSH™.

PUSH™ may be acting at the level of the mammary gland to improve the efficiency of nutrient utilization.

Reference

Matzat, P.D. 1990. Factors affecting feed intake in lactating sows and the effect of feed intake in excess of ad libitum on lactation performance in multiparous sows. Ph.D. Dissertation. Michigan State University.