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Lactation management practices can improve lactational performance of sows in commercial swine herds

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Introduction and Objectives

Lactation management is important to improve herd productivity in commercial swine herds. Adequate management practices such as split nursing, antibiotics administration, and teeth resection can improve piglet survivals (Ribbens et al., 2008), but there has been little research on the relationship between lactation management practices and sow lactational performance. Therefore, the objectives of the present study were to survey current lactation management practices in commercial herds in Japan, and to examine the relationships between the management practices and sow performance.

Materials and Methods

Questionnaire forms regarding lactation practices for sows and piglets were sent in March 2009 to 115 commercial breeding herds in Japan that used a recording system (PigCHAMP® Inc., Ames, IA, U.S.A.). Data from 96 completed questionnaires (83.5%) were co-ordinated with the 2008 reproductive data of the respective herds. Modeling with backward elimination was performed for preweaning mortality risk, and pigs weaned per litter weaned.

Results and Discussion

Means (\pm SEM) of preweaning mortality risk (%) and pigs weaned per litter weaned were $11.2 \pm 0.33\%$ and 9.7 ± 0.06 , respectively. Table 1 shows a summary of lactational management practices for sows and piglets. Lower preweaning mortality risk was associated with a higher proportion of parity 1 sows in nurse sows ($P = 0.04$; Regression coefficient \pm SE, -0.01 ± 0.001). In addition, herds feeding lactating sows dietary fiber had 1.4% lower preweaning mortality risks than herds not fed dietary fiber ($P = 0.02$; Table 2). Pigs weaned per litter weaned were improved by 0.3 pigs in herds using teeth resection ($P =$

0.04).

These results indicate that feeding lactating sows dietary fiber is associated with the survival of their litters, and that teeth resection may improve the number of pigs weaned per litter weaned.

Table 1. Lactational management for sows and piglets practiced in 96 herds

Measurements	Mean \pm SEM
Management for lactating sows	
Herds feeding sows dietary fiber, %	32.3 ± 4.80
Herds feeding sows a diet with fat, %	26.0 ± 4.50
Proportion of parity 1 sows in nurse sows, %	7.3 ± 1.91
Management for piglets	
Transferring piglets to heating area, %	68.8 ± 4.76
Spilt nursing, %	41.7 ± 5.06
Antibiotics administration, %	33.3 ± 4.84
Providing electrolyte solution, %	20.8 ± 4.17
Piglet age of tail-docking, days	2.1 ± 0.18
Herd using teeth resection, %	64.6 ± 4.91
Piglet age of castration, days	5.8 ± 0.50

Table 2. Comparisons of lactational performance based on herd management practices

Measurements	n	Mean \pm SEM
Preweaning mortality risk, %		
Herds feeding lactating sows dietary fiber		
Yes	30	$10.3 \pm 0.54b$
No	63	$11.7 \pm 0.40a$
Pigs weaned per litter weaned		
Herds using teeth resection		
Yes	61	$9.8 \pm 0.07a$
No	32	$9.5 \pm 0.11b$

Values (within a column) followed by different letters (a-b) differ ($P < 0.05$).

Reference

Ribbens et al. 2008. Prev. Vet. Med. 83: 228–241.