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COMPARATIVE STUDY TO ANALYSE EFFECTS ON SOWS' AND PIGLETS' PERFORMANCE BY PROVIDING SUPPLEMENTAL MILK

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Introduction

Hyperprolific sow lines give birth to a large number of piglets. This can lead to negative consequences for the piglets, and nurses are used as management tools. Especially, providing supplemental milk in addition to sows' milk from the 2nd day of life onwards directly in the farrowing crate offers an interesting perspective and approach. The aim of this study was to analyse the effects of supplemental milk on the performance of sows and their litters.

Material and Methods

supplemented group (Fig.1)
- n=60 sows and their litters
- ad libitum access to supplemental milk from 2nd day of life
- prestarter from 7th day of life

control group
- n=60 sows and their litters
- closure of milk line with dummy plugs
- prestarter from 7th day of life

Due to animal welfare requirements, sows of the **supplemented group** retained as many piglets as they had functional teats, whereas sows of the **control group** retained one piglet less than they had functional teats.

statistical analyses
- SAS-software (SAS 9.2, Institute Inc., Cary, NC, USA)
- analyses of body weight (sows, piglets), backfat thickness (sows) and body-condition-score (BCS) (sows) using a generalized linear mixed model (Mixed-procedure)
- results are expressed as least squares means (LSM)
- milk- and prestarter consumption were tested for significance with U-Test (Npar1way-procedure)

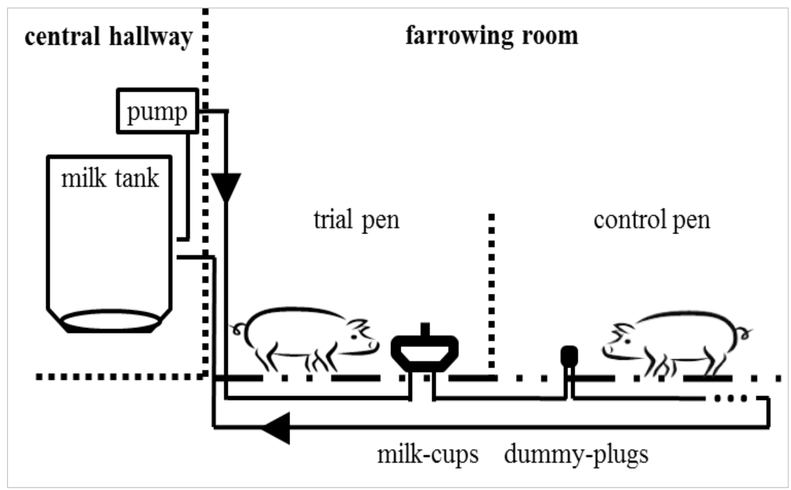

Fig.1: scheme of the milk system in the supplemented group

Results

In the supplemented group, 13.5 piglets, and in the control group, 12.4 piglets were weaned. Effects on the **piglets** were as follows:

weight development
- individual weaning weights: supplemented and control group 7.8 kg; p>0.05
- average daily weight gain: supplemented group: 0.245 kg; control group: 0.246 kg; p>0.05

milk consumption
- consumption of 1.1 (±1.2) kg of milk powder per day and batch (n = 53.7 piglets per batch)
- increase of consumption within lactation period
- significantly different consumption of supplemented milk between batches and season warm and cold (p<0.05)

prestarter consumption
- supplemented group: 7.3 g per day and piglet; control group: 5.9 g per day and piglet; p<0.05

Effects on the **sows** were as follows:

- higher **total weaning weight** in supplemented group (Fig.2)
- no significant differences between the losses of **body weight**, **backfat thickness** and **BCS** (p>0.05)

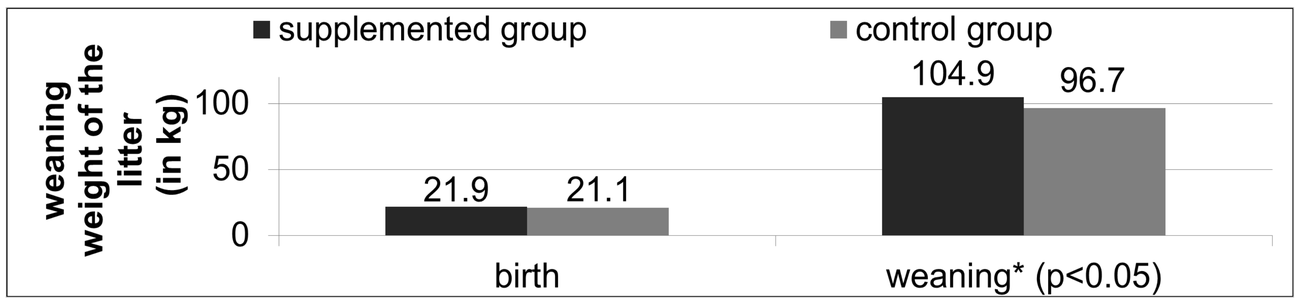

Fig.2: weaning weight of the litter at time of birth and weaning (in kg)

Take home message

- weight development of piglets did not differ significantly between the control and the supplemented group although one more piglet was raised in the supplemented group
- consumption of milk differed significantly between batch numbers and seasons
- in spite of raising one more piglet in the supplemented group, the conditions of sows (weight, backfat, BCS) did not differ significantly

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