Improving survival of low birth weight piglets – What is more important: farrowing care or drenching a milk replacer?

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P110

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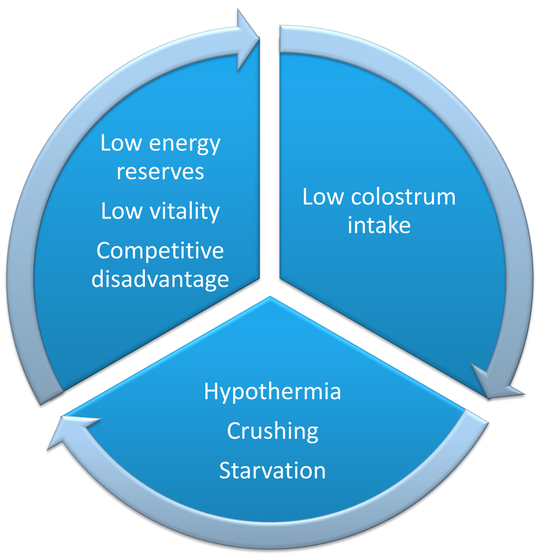
Introduction

Use of hyperprolific sows has led to increased litter sizes, but also to an increased proportion of **low birth weight (LBW) piglets**:



⇨ High pre-weaning morbidity & mortality

⇨ Potential intervention: drenching

↙ Limitations:
- Inconclusive results
- Labor-intensive
- Product costs

Objectives

Drenching (oral supplementation) LBW piglets with concentrated, **dense milk replacer to improve growth & reduce mortality**.

⇨ More energy & nutrients per dose
Higher viscosity
⇨ Less applications needed to **improve resilience** of LBW piglets

Test objectives at two farms to confirm reproducibility.

Methods

Piglet selection:

Birth weight litter

Birth weight category	Mean birth weight (kg) ± SD
LBW	0.86 ± 0.06
VLBW	0.64 ± 0.10

Farms:
- Farm A: low perinatal management, LBW (*n* = 80) and VLBW (*n* = 80) piglets
- Farm B: high perinatal management, only LBW (*n* = 150) piglets

Treatments:
- Dense milk replacer: 6 g in 4 mL water ⇨ 5 mL/dose (60 kJ) : 1 dose
- Dense milk replacer: 3 doses
- Sham: 20 s empty syringe in mouth: 1 dose
- Sham: 3 doses
- No treatment (non-handled) ⇨ Dosages: asap after birth – 12 h – 24 h

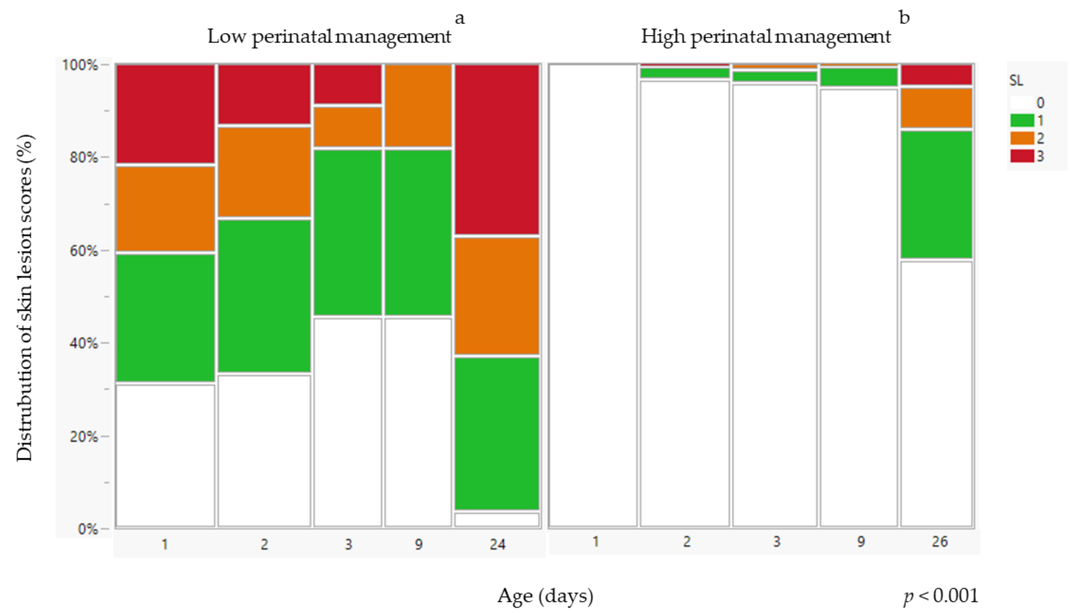
Day 1 → Day 2 → Day 3 → Day 9 → 2 days post-weaning

Parameters:
- Body weight
- Skin lesion score
- Mortality

Skin lesion score	Lesion count
0	no lesions
1	<5 superficial lesions
2	5-10 superficial lesions or <5 deep lesions
3	>10 superficial lesions or >5 deep lesions

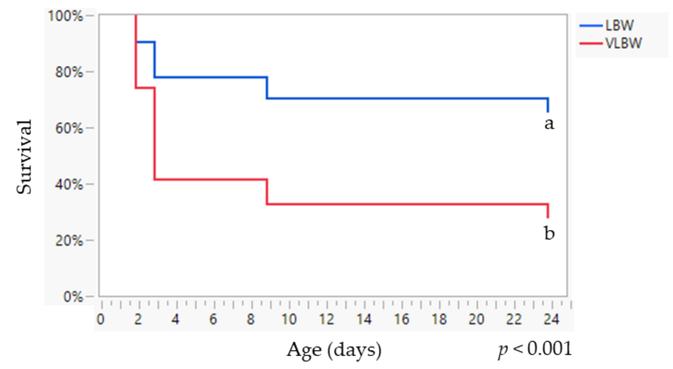
Results

- No effect of dense milk replacer on body weight, skin lesion score or mortality compared to sham drenched or non-handled LBW piglets
- No difference between 1 or 3 drenches
- Higher risk for skin lesions at farm with low perinatal care:



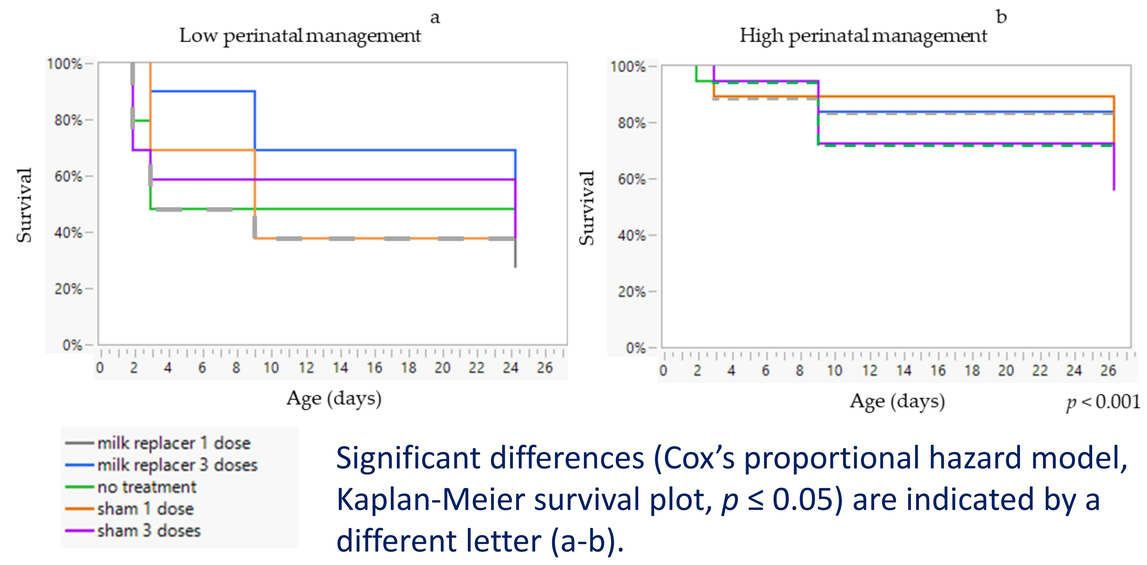
Significant differences (Ordinal logistic regression, $p \leq 0.05$) between farms are indicated by a different letter (a-b).

- Higher mortality in VLBW compared to LBW piglets:



Significant differences (Cox's proportional hazard model, Kaplan-Meier survival plot, $p \leq 0.05$) are indicated by a different letter (a-b).

- Higher cumulative mortality at farm with low perinatal care:



Significant differences (Cox's proportional hazard model, Kaplan-Meier survival plot, $p \leq 0.05$) are indicated by a different letter (a-b).

Conclusions

- VLBW piglets are not a target group for drenching due to high mortality rates.
- Drenching dense milk replacer once or three times did not affect the LBW piglets' mortality or body weight.
- High qualitative perinatal management seemed to improve the LBW piglets' survival and reduce the risk of skin lesions.

⇨ **Good farrowing care appears to have more effect on the survival of LBW piglets than drenching a milk replacer.**
Further research is required to determine the exact attribution of good farrowing management (vs. genetic background, health status…)

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