



REPRODUCTION

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LOW WATER INTAKE IN GESTATION MAY AFFECT PIGLET VIABILITY

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Introduction

Data from our research centre reflect large variation in individual water intake in gestating sows (2.2 to 20 L/d, 6.6 L/d average in 364 sows), and suggest that this may affect piglet survival. Sows with high intake (> 8 L/d) had similar litter size (15.3 vs 15.3 and 15.0 total born), but piglets with higher birth weights (1431 vs 1362 and 1353 g), compared to sows with average (4.5 to 8.0 L/d) and low intake (< 4.5 L/d), respectively. This paper presents preliminary data on the effect of Selko-pH, a blend of organic acids that improves gut health but also increases water intake, on reproductive performance.

Material and Methods

Mixed parity Hypor sows received normal, QA tested, mains water (n=33; pH=7.77), water with 0.1% (n=20; pH=3.87), or 0.2% (n=17; pH=3.63) Selko-pH, from day 80 of gestation until farrowing. Individual water intake was monitored daily. Feed allowance was equal across treatments. Born alive and birth weights are presented as LS-Means corrected for total born. Data for 0.1% and 0.2% Selko-pH were pooled.

Results

Average water intake was 6.8 L/d in control sows, and was clearly increased ($P<0.01$) at 0.1 % (16.1 L/d) and at 0.2 % (24.3 L/d). Born alive (14.1 ± 0.3 vs. 14.4 ± 0.3) and litter birth weight (19.4 ± 0.6 kg vs. 20.0 ± 0.5 kg) for controls and Selko-pH, respectively, were not significantly different. However, when sows were pooled based on their water intake (<6L/d vs 6-15 L/d vs >15 L/d), sows with lowest intake tended to have less born alive ($P<0.12$) compared to sows with high intake (13.8 ± 0.3 vs 14.4 ± 0.3 vs 14.5 ± 0.3 , for L, M, and H). Litter birth weight for sows with low intakes also tended to be lower ($P<0.08$) than for sows with high intakes (19.1 ± 0.7 vs 19.3 ± 0.7 vs 20.8 ± 0.7 kg, for L, M, and H). Proportion of piglets <1000g (12%) was not affected by treatment or water intake.

Discussion and Conclusions

Low birth weights are known to be related to increased mortality at birth and preweaning. Our data show that low maternal water intake in gestation may have impact on birth weight and survival. There were no differences between treatments, which may be due to the large variation in water intake, even within treatments.