Impact of an azaperone treatment of sows at parturition on sow condition and pre-weaning diarrhea

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Introduction
Recent studies show that the use of azaperone in sows at the end of parturition may improve piglet performances (1,2). The increase of litter weight at weaning suggests a better milk production throughout the lactation and/or a better turnover of the milk by the piglets. This raises questions on the impact of the treatment on sow condition loss during lactation and on the gut health of the piglet.

In this trial, the effect of azaperone treatment of the sow at parturition on sow condition and piglet diarrhea was investigated.

Materials and Method
In the experimental farm of IFIP, 67 sows of mixed parity were randomly allocated to treatment (T) and non treated control (C), respecting the parity distribution. T consisted of an intra muscular injection of 320 mg of azaperone (8 ml Stresnil®, Elanco Animal Health) at the moment of expulsion of the placenta. Sows were weighed and back fat thickness (P2) was measured on farrowing and weaning day (30 days). Daily feed intake of the sows was measured throughout the lactation period. The number of piglets born total (PBT), born alive (PBA) and weaned (W) per litter was recorded. Fostering was only allowed after 24 hours. The piglets were weighed and identified individually at birth and at weaning. When scouring occurred in a litter, kaolin was delivered in piglet troughs. The frequency of kaolin treatments was recorded to assess the diarrhea incidence. Statistical analysis was performed using the MIXED or GLIMMIX procedures in SAS® 9.2. For piglet parameters, mother was introduced as random effect.

Results
There was no difference in values and variations of sow weight and back fat thickness between T and C, nor was feed intake significantly different (Table 1). Litter size (T = 14.1 PBT, 13.3 PBA and C = 14.9 PBT, 13.9 PBA) and piglet birth weight (T = 1.50 kg and C = 1.42 kg) were similar. The number of piglets weaned however was different (p = 0.045), resulting in 11.4 W per litter for T and 12.2 W per litter for C. Weaning weight (WW) and growth rates (GR) were higher in T group (WW = 9.54 kg, GR = 0.274 kg/day) than C group (WW = 9.03 kg, GR = 0.261 kg/day) (WW, p = 0.008, GR, p = 0.017).

Piglets were less frequently treated with kaolin in T-group (32.9%) than in C-group (49.7%) (p = 0.11). Figure 1 shows the distribution over time of the occurrence of kaolin treatment.

Discussion and conclusion
Important condition loss during lactation can lead to reproductive problems in the next cycle (3). The azaperone treatment had no negative impact on condition loss during lactation. A lower trend of diarrhea frequency among azaperone treated sows is in accordance with previously reported better daily gain (1,2). Therefore a possible favorable effect of an azaperone treatment on pre-weaning diarrhea deserves further investigations.

Table 1. Impact treatment on sow parameters

<table>
<thead>
<tr>
<th></th>
<th>T</th>
<th>C</th>
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</thead>
<tbody>
<tr>
<td>Number of sows</td>
<td>33</td>
<td>34</td>
</tr>
<tr>
<td>Weight farrowing (kg)</td>
<td>272.9</td>
<td>272.1</td>
</tr>
<tr>
<td>Weight weaning (kg)</td>
<td>239.9</td>
<td>238.1</td>
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<tr>
<td>Back fat farrowing (mm)</td>
<td>18.84</td>
<td>18.93</td>
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<tr>
<td>Back fat weaning (mm)</td>
<td>15.29</td>
<td>15.06</td>
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<tr>
<td>Avg. daily feed intake (kg)</td>
<td>6.69</td>
<td>6.46</td>
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</tbody>
</table>

References