Effect of Backfat Loss during Lactation on Weaning-to-oestrus Interval in Sows

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Introduction
Backfat thickness (BF) is normally used to predict the fat and the lean content of pigs. The most common position used to measure for the BF of pig is the P2 position, which is about 6-8 cm from dorsal mid-line at the level of the last rib (1, 2). The present study aims to investigate the influence of BF loss during lactation on weaning-to-oestrus interval (WOI) in sows.

Materials and Methods
The present study was conducted in a swine commercial herd in the middle part of Thailand. A total of 99 crossbred Landrace x Yorkshire sows were included. The sows parity number consisted of 1-2 (n=23), 3-6 (n=32) and 7-14 (n=44). The females were housed in a conventional open-housing system equipped with water sprinklers and fans. A-mode ultrasonography (Renco lean meater®, USA) was used for the BF measurement. BF was measured at the level of the last rib at about 6-8 cm from the mid line, on both sides of the sows. The average between the left and the right was used. The BF was measured at farrowing and weaning. BF loss was defined as the different between BF at farrowing and weaning. After weaning the sows were detected for standing oestrus using back pressure test twice daily. WOI was recorded. Association among BF loss, parity number and WOI were analyzed by using Chi-square test and multiple ANOVA.

Results and Discussion
On average, BF of sows was 19.9±5.4 mm at farrowing and 19.3±4.8 mm at weaning. The number of piglets born alive/litter was 9.8±2.8 and number of piglets at weaning was 9.1±2.4. On average, the sows lose 0.6 mm BF during lactation. WOI was 5.0±2.7 days (range 2-20). The percentage of sow loss BF over 2 mm during lactation had a longer WOI than sows loss BF ≤2 mm (Figure 1). The present study indicated that the loss of BF >2 mm was observed in young sows most. Sows losing BF > 2 mm resulted in an increase of WOI.

Table 1 Number of sows that loss backfat thickness >2 mm during lactation by parity

<table>
<thead>
<tr>
<th>Parity</th>
<th>N</th>
<th>Sows loss BF &gt;2 mm</th>
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<tbody>
<tr>
<td>1-2</td>
<td>23</td>
<td>10 (43.5%)</td>
</tr>
<tr>
<td>3-6</td>
<td>32</td>
<td>6 (18.8%)</td>
</tr>
<tr>
<td>7-14</td>
<td>44</td>
<td>5 (11.3%)</td>
</tr>
</tbody>
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a,b Different superscript differ significantly (p<0.05)

References