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SBCrossfostering.pdf

Crossfostering and “Bump Weaning”
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Crossfostering in 14 N Carolina Sow Farms

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mean</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disrupted litters (%)</td>
<td>74.2</td>
<td>55 to 96</td>
</tr>
<tr>
<td>Multi-day foster litters (%)</td>
<td>31.8</td>
<td>3.7 to 61</td>
</tr>
<tr>
<td>Mortality intact litters (%)</td>
<td>2.2</td>
<td>0.6 to 4.8</td>
</tr>
<tr>
<td>Mortality disrupted litters (%)</td>
<td>18.6</td>
<td>11.0 to 29.6</td>
</tr>
</tbody>
</table>

Maturity at birth

Unequal or too much competition results
in failure of smaller pigs to acquire milk

Influence of litter size on preweaning performance

Weight at weaning goes down as litter size goes up
Survival to weaning goes down as litter size goes up

Moody et al 1966
Birth sows

**Pigs < 1.76 lb**

Preweaning mortality of < 1.76 lb pigs

Birth sow: 62%

Marcatti Neto 1986

---

Nurse sow

Preweaning mortality of < 1.76 lb pigs

Birth sow: 62%

Uniform nurse sow: 15.4%

Marcatti Neto 1986

---

Least variation w/in litter

Most variation

Variation of wt w/in litter

Preweaning mortality

32 Least: 17.7%

32 Most: 27.2%

English & Brampton 1982

---

Control litters

Crossfostered

Litter

Preweaning mortality

Control: 12.8%

Crossfostered: 7.1%

English & Brampton 1982

---

Optimum time to move a pig

Highest growth rate in piglets transferred 6-12 hrs after birth to a sow that just farrowed

and worst in piglets transferred immediately after birth to a sow that farrowed 2 days earlier (litter social order already established)

Gruiniewska 1983

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Cumulative number of pigs (out of 12) that successfully suckled within 6 hrs after being fostered

Price, Hutson, Price, and Borgwardh, 1994
Location during nursing recorded before and after foster

Crossfostering disease

LARGE OUT #205

<table>
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<tr>
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<th>1</th>
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<tbody>
<tr>
<td>Pre-transfer</td>
<td></td>
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<tr>
<td>Post-transfer</td>
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</tbody>
</table>

SMALL OUT #544

Pre-transfer

Post-transfer

Graph showing percentage of transfer complete over days of age.
Piglets are even at birth but at 3-5 days of age one has “fallen back”

Small, fall-back (pink) pigs made into

• Whole foster litters or
• Left in original litter

Piglets placed into a litter on a nurse sow

<p>| Piglets placed into a litter on a nurse sow | Piglets left in original litter |</p>
<table>
<thead>
<tr>
<th>No. pigs</th>
<th>Wt (kg)</th>
<th>No. pigs</th>
<th>Wt (kg)</th>
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</thead>
<tbody>
<tr>
<td>11</td>
<td>1.55</td>
<td>6</td>
<td>1.65</td>
</tr>
<tr>
<td>9</td>
<td>1.65</td>
<td>3</td>
<td>1.50</td>
</tr>
<tr>
<td>10</td>
<td>1.97</td>
<td>5</td>
<td>2.19</td>
</tr>
<tr>
<td>7</td>
<td>2.16</td>
<td>2</td>
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</tr>
<tr>
<td>37</td>
<td>1.78</td>
<td>16</td>
<td>1.84</td>
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</tbody>
</table>

Pre-weaning Mortality

<table>
<thead>
<tr>
<th>Nurse sow</th>
<th>Original</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/37 3 %</td>
<td>4/16 25%</td>
</tr>
</tbody>
</table>

Application to the Farm

Several rules are important in a crossfostering program:

- Transfer piglets within 6-24 hrs of birth to:
  - Even up numbers of piglets per litter – move the big pigs instead of the small ones
  - Even up piglet sizes within litters
- At 5 days after farrowing, look for fall backs
- Transfer them to a nurse sow or automatic milk replacer feeding station
- Don’t have an infatuation with consistency

Weight after Transfer to Nurse Sow

Days after transfer: 2, 4, 6, 8

Weight: 4, 6, 8 lb

Nurse sow: 0.8 lb

Original: 0.2 lb

P = 0.01