Calf Rearing Fact Sheet: Feeding

Milk feeding - low volume/restricted milk

**Key Points**

1. Milk energy is expensive whereas pasture energy is cheap. However pasture is an inadequate diet for young calves.

2. Pellets or meal (20% Protein) need to be available from day one to promote early rumen development and to transition calves from milk to pasture if early weaning is desired.

3. Feeding restricted volumes of milk to housed calves (i.e. not fed grass) encourages them to eat larger volumes of pellets or meal.

4. Using this system calves can be weaned off milk if they are healthy and have put on at least 20 kg live weight since arriving in the shed and are eating at least 1 kg of pellets per day. This is generally between 5 and 7 weeks.

5. Need to use a compartment milk feeder to ensure all calves are getting sufficient.

6. Pellet feeding continues after weaning and until the calves are at least 12 weeks old.

**General**

Milk feeding

- Sort and group the calves on weight and feed accordingly.
- Calf milk replacer concentrated at 200g milk replacer/litre from Day 1 (see table) or feed whole milk 2 litres morning and again late afternoon for 10 days and then switch to 3 litres of milk fed once a day for a further 5 weeks.
- Where restricted milk diets are fed it is essential that compartment feeders are used and calf feeding is supervised so that all calves get their ration.
- Twice a day feeding can be carried out for longer by spreading the amount over two feeds but it increases labour requirements.

**Table:**

<table>
<thead>
<tr>
<th>Day</th>
<th>Small &lt;37kg *</th>
<th>Medium 37kg – 43kg</th>
<th>Large &gt;43kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-2</td>
<td>2 x 1 litre</td>
<td>2 x 1 litre</td>
<td>2 x 1 litre</td>
</tr>
<tr>
<td>3-5</td>
<td>2 x 1 litre</td>
<td>1.50 l</td>
<td>2.00 l</td>
</tr>
<tr>
<td>6-9</td>
<td>2 x 1 litre</td>
<td>1.75 l</td>
<td>2.25 l</td>
</tr>
<tr>
<td>10-12</td>
<td>1.50 l</td>
<td>2.00 l</td>
<td>2.50 l</td>
</tr>
<tr>
<td>13-16</td>
<td>1.75 l</td>
<td>2.25 l</td>
<td>2.50 l</td>
</tr>
<tr>
<td>17-20</td>
<td>2.00 l</td>
<td>2.50 l</td>
<td>2.50 l</td>
</tr>
<tr>
<td>21-24</td>
<td>2.25 l</td>
<td>2.50 l</td>
<td>2.50 l</td>
</tr>
<tr>
<td>25-35</td>
<td>2.50 l</td>
<td>2.50 l</td>
<td>2.50 l</td>
</tr>
<tr>
<td>36-42</td>
<td>2.50 l</td>
<td>2.50 l</td>
<td>Weaned</td>
</tr>
<tr>
<td>43-49</td>
<td>2.50 l</td>
<td></td>
<td>Weaned</td>
</tr>
</tbody>
</table>

**Total milk replacer/calf (kg)**

- 21.8
- 19.1
- 16.0

* These are typically Jersey calves.

- From day 1 have fresh 20% protein calf pellets (or meal) available ad libitum (i.e. always have some left in the feeder).
- Have fresh straw or low quality hay available.
- Always have clean drinking water available. A good test of this is whether you would drink it!
Weaning off milk

- Calves are best kept in the shed until after weaning. If they are on pasture they will eat pasture rather than the pellets and this will slow down both the rumen development and their rate of growth.
- Calves can be weaned off milk if they are healthy, have gained at least 20 kg live weight since arriving at the shed and are eating at least 1 kg of pellets or meal per day.
- Calves should be kept inside for a couple of days after weaning off milk so that any calves not eating enough pellets are detected. These calves can then be placed back on milk.

Post weaning

- Pellets can be changed from 20% protein to 16% (protein) calf pellets if the calves have access to and are consuming reasonable amounts of high quality pasture (green, leafy, clover, growing well).
- If there is good quality pasture available the amount of pellets being fed/head can be slowly reduced as follows:
  
<table>
<thead>
<tr>
<th>Period</th>
<th>Pellets per Head per Day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to the end of week 8</td>
<td>1.5 kg</td>
</tr>
<tr>
<td>Up to the end of week 10</td>
<td>1 kg</td>
</tr>
<tr>
<td>Up to the end of week 12</td>
<td>0.5 kg</td>
</tr>
</tbody>
</table>
- After week 12—stop feeding pellets if calves are meeting growth targets.
- If there is not enough quality grass then more pellets will need to be fed for longer.
- Over summer an alternative feed source may be needed if pasture quality or quantity is limited.

Advantages

- Calves in small groups so easy to closely monitor health.
- Calves can be weaned early.
- Feed less milk in total.
- If done properly reduced likelihood of nutritional scours.

Disadvantages

- Calves need to be kept inside until weaning.
- Keeping calves inside for longer means higher risk of a disease outbreak if hygiene is poor.
- Requires the feeding of calf pellets or meal to encourage early rumen development.