LevyinAction 2015

Calf Rearing – birth to weaning

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€1545

Total cost of 1 replacement heifer

Herd size: 100 cows
Average replacement rate: 20%
Total cost: 20 heifers x €1545

€30,900
Mortality rates on Irish dairy farms

- 10% in first 6 months in milk recorded herds
  (Lorenz et al., unpublished)

- Calf mortality in Norway: 3.7%
  (Gulliksen et al., 2009)

- 50% of calf mortality within the first year occurs within the first 6 weeks
- Higher morbidity and mortality rates decrease farm profitability
1. Cow management around calving

- Dry bed with individual calving pens
- Proper safe handling facilities
- Clean, readily accessible equipment

Night feeding can reduce labour by decreasing the number of cows calving by night

Do not leave calf with cow!
- Unsure of calf colostrum intake
- Calf has no immunity & cow may be shedding disease
- Calf training
2. Calf husbandry

• Calves need a warm dry well ventilated house
• Ensure dry deep straw bed while housed
  • Calves spend 80% of their time lying down

From a disease perspective:
• Avoid calves sharing cow airspace if possible
• Try group calves before they are 2 weeks old
• Have no more than 2-week age difference in calf pens
• 10 – 15 calves per group – no overcrowding (28 ft²/calf)
3. Management of calf - hygiene

The knee test! Are the calf beds actually dry?

- Ensure calf pens are regularly and thoroughly cleaned and disinfected
- Thoroughly clean all feeding equipment with hot water and disinfectant regularly

- Have a separate area for sick calves
- Isolate from group early
- Do not return them to healthy group
- Wear easy clean waterproof clothes
4. Why is colostrum important?


**NOTE:** Required for optimal protection from pre-natal vaccination e.g. rotavirus, coronavirus
Importance of Colostrum

• No immunoglobulin (antibody) transfer in utero
How much colostrum does a calf need?

Colostrum 1, 2, 3

1st milk only
Within 2 hours of birth
3 litres
How much milk does a calf need?

Rate of growth in young calves is correlated with future milk production

Aim: To maximise growth rates by optimising nutrition, health, and welfare
How much milk does a calf need?

- Traditional milk feeding systems for dairy calves - 8 to 10% of BW (4 litres/day)
  - growth potential seriously limited
  - detrimental to calf health and welfare

- Intermediate volume of milk (~15% of BW – 6 litres/day for a 40kg calf) - allows calves to reach over 50% of their growth capacity

Feed good quality milk or milk replacer – crude protein 25%

- **Once a day** feeding from 4 weeks of age
  - Similar weight gains to twice a day feeding
  - Reduced labour
  - Need to check calves thoroughly twice a day

Milk Storage

- Acidified or yoghurt milk
- Amount and type of bacteria affect length of storage
- Dilute with whole milk if calves don’t like taste
## Weaning

- Ensure calves are eating 1 kg concentrate before weaning
- Wean gradually over a week

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<thead>
<tr>
<th></th>
<th>60kg</th>
<th>80kg</th>
<th>100kg</th>
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</thead>
<tbody>
<tr>
<td>Days to weaning</td>
<td>59</td>
<td>83</td>
<td>95</td>
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<tr>
<td>ADG birth to wean (kg/d)</td>
<td>0.55</td>
<td>0.56</td>
<td>0.70</td>
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<tr>
<td>Weight at 190 days</td>
<td>156</td>
<td>162</td>
<td>171</td>
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Conclusions

• Farm profitability can be increased by:
  • Reducing mortality and morbidity
  • Achieving target weights

• Colostrum feeding - most important job in calf rearing
  Colostrum 1, 2, 3

• Feed 13 – 15% birth bodyweight in milk

• Hygiene, hygiene, hygiene!!

• Wean gradually, based on weight