



Calf Practices & Reference List for Autumn Success

Several factors make the fall season a challenging time to continuously provide adequate conditions to calves that ensure their success during this time. This printable summarizes some of the most critical areas and the related best practices to help calves thrive this fall.

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Suggested Fall Calf Rearing Practices to Ensure:

1. Successful transfer of immunity and gut development

- ☐ Evaluate the colostrum quality using a Brix refractometer to classify it and proceed accordingly.
- ☐ Weigh calves at birth and calculate the amount of **good-quality colostrum ($\geq 22\%$ Brix)** to be fed in the first meal as 8.5% of their weight (e.g. $40\text{kg} \times 8.5\% = 3.4\text{L}$).
- ☐ Feed the first meal of colostrum within the first 2 hours after birth.
 - ❖ If there is not enough good-quality colostrum, plan an alternative. Some strategies to consider are:
 - Turn medium-quality colostrum (18 - 21% Brix) into good-quality colostrum by enriching it with dry/powder colostrum.
 - Throughout the year, store excess good-quality colostrum frozen in individual meal portions and thaw it when required in a water bath at $\leq 60^\circ\text{C}$.
 - Refrigerate any excess of medium- and good-quality colostrum for short-term feeding or enrichment (< 2 days).
 - Reconstitute colostrum replacer aiming to provide 0.5% of the birth weight as immunoglobulins G (e.g. $40\text{kg} \times 0.5\% = 0.2\text{kg} = 200\text{g IgG}$).
- ☐ Feed a second meal of colostrum at 5% of the birth weight within the 12 hours after birth.
- ☐ Measure transfer of passive immunity to evaluate the success of colostrum management and feeding; discuss this process with your veterinarian
- ☐ Feed transition milk (2nd to 6th milking) or poor-quality colostrum ($< 18\%$ Brix) to calves for at least the first 4 days of life.

2. Sustained good air quality

- ☐ Monitor temperature and humidity.
 - ❖ Optimal calf conditions are $15\text{-}25^\circ\text{C}$ with 65-75% humidity.
 - ❖ A digital logger placed at calf level can be instrumental to easily monitor changes.
- ☐ During fall, provide 15 air changes per hour (reduce to 4 air changes per hour in the winter). This might require mechanical ventilation to provide clean air at all times.
 - ❖ Consult a specialist in ventilation if needed.
- ☐ Manage space and calf inventories to provide minimum 35 ft^2 (3.3 m^2) of bedded space per calf.

3. Adequate comfort and nutrition

- ☐ Provide abundant bedding, preferably deep straw, to cover the calf's legs when laying down to reduce the amount of heat lost via conduction and allow for nesting.
- ☐ When necessary, set heat lamps for newborns and feeding areas.
- ☐ Put coats on calves, particularly if exposed to wind.
- ☐ Increase the nutrients offered by 100 g of solids or 1 litre per day for every 10°C below 15°C .
 - ❖ Do not exceed a 15% dilution rate of milk replacer unless indicated by the manufacturer.
 - ❖ When possible, offer an additional feeding instead of increasing meal size.
- ☐ Ensure a milk serving temperature of 40°C ($\sim 104^\circ\text{F}$) to calves.