Q2E - Space allowance for dairy cows

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Question raised by requestor

How to ensure that male dairy calves receive appropriate care?

Answer

Male calves of specialised dairy breeds are often considered as a by-product of low economic value. At present, they are either sent to veal farms – often requiring long transportation especially if the country of origin has no established veal sector –, sent to beef production units – with the problem of a low productive performance –, slaughtered at an early age, or euthanized on the farm.

The mortality of male dairy calves is higher than that of female ones and that of beef calves. Biological factors can explain only part of the overmortality of male calves. Management factors are assumed to play a determining role, with less care provided to male than to female dairy calves due to their low economic value.

Care of male dairy calves

Current situation

Major causes of poor health and death of male calves are diarrhoea, respiratory disease and navel infection. The prevalence of these disorders increases by poor care. Indeed, in dairy herds, compared to female calves, male calves often receive less colostrum – leading to poor colostral immunity –, are fed smaller amounts of milk thereafter, are housed in larger groups with a reduced lying surface and in a barn with poor ambiance (extreme temperatures, high humidity, poor ventilation), receive less care of their navels – which can result in local infection or more generalised infections –, and are less often vaccinated. Young calves may not be fed for long periods before being transported (e.g., last meal withheld).

Recommendations for the care of male dairy calves

Good practices for the management of calves are well-known:

- Provision of colostrum: Calves should receive 2 L of colostrum during the first 6 h after birth and 2 L during the next 6 h (figures should be adjusted so that total colostrum fed is about 10 % calf weight). The colostrum should be of good quality (> 50 g/L protein in case of fresh colostrum, > 100 g/L in case of preserved colostrum)
- Milk feeding: Calves are often fed an amount of milk equal to 10 % of their body weight, whereas 20 % in at least two meals is recommended to avoid hunger and improve welfare
- Solid feeding: From around 2 weeks of age, calves must be supplemented with solid feed, e.g., with concentrates and roughage
- Handling: Handling calves calmly and patiently reduces stress and promotes positive welfare
- Transport: If young calves are transported (according to EU legislation calves younger than 10 days must not be transported further than 100 km) they should be provided with meals (milk) at normal intervals. Assessment of fitness for transport should be based on age, navel conditions and rectal temperature

The CARE4DAIRY project, funded by DG-SANTE, is preparing best practice guidelines for dairy cattle. The guidelines will be available in 2023.

Increasing the value of male dairy calves

The low economic value of male dairy calves promotes cost and labour reduction rather than the provision of appropriate care. Decreasing the number of male dairy calves in combination with increasing their economic value could be achieved through different measures:

1. Extending the lactation period of dairy cows and consequently the calving-to-calving interval, e.g., calving every 1.5 years instead of every year. This practice seems to be cost-efficient for farmers
2. Making use of sexed (female) semen for restocking the dairy herd. At present, this practice is limited by lower conception rates, lower availability, and higher costs

3. Use semen from beef bulls for breeding beyond restocking needs to produce cross-bred calves with higher value for fattening. This solution will be limited by the number of calves the beef sector can use (for veal or beef meat)
4. Establishing contracts between dairy and beef or veal farmers so that the former guarantee the 'high quality' and improved care of the calves, supported by a higher premium value. As an example, the Austrian initiative 'Bruderwohl' ['Brother's welfare'] improves economic revenue of male dairy livestock [calves, lamb and goat kids] through cross-subsidisation (milk is sold at a premium price so that meat products of males can be sold at a lower price).
5. Fattening male dairy calves on the dairy farm to produce veal meat, combined with on-farm slaughter and short supply chain. The calves may be slaughtered from 3 months of age to avoid overproduction of bovine meat (note that the age at slaughter of veal calves increased from 3 months in the 1950s to 6–8 months nowadays)

Measures may be combined. Measures 3–5 have consequences on dairy and beef sectors. Producing many crossbred calves may put the beef production at risk. Solutions to provide better care to male dairy calves should therefore consider the broader context of dairy and beef production. They require political decisions at sector level and beyond.

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