

There are no “do-overs” in colostrum delivery

Heifers are important to a dairy's future, and most herds place a good deal of emphasis on their successful rearing. Attention to genetic selection, nutrition, housing and sanitation all play a role in raising healthy, productive replacements. But if there is a “missing piece” in this management puzzle, it is attention to their well-being on the most important day of their lives: the first day.

Delivery of 3 to 4 quarts of high-quality, clean colostrum in the first 4 hours of life is prescribed by many industry experts and the Dairy Calf and Heifer Association's Gold Standards. During this critical window, calves are best able to absorb the valuable maternal immunity supplied by colostrum, including highly important immunoglobulin G (IgG) – the benefits of which can affect the heifer's lifetime health and productivity.

But this is a task that is easier said than done on many dairies. Labor shortages, seasonal time demands and the general interruptions in the course of a typical day all can interfere with consistent, sanitary and timely delivery of high-quality colostrum to every calf.

Recently, California researcher Alfonso Lago performed a study to assess whether high-quality colostrum replacer could be a suitable substitute for maternal colostrum. In the largest study of its kind to date, Lago evaluated more than 1,200 calves, comparing the establishment of passive transfer of immunity in calves fed maternal colostrum versus colostrum replacer.

In the study, the maternally derived colostrum replacer contained 150 g IgG per 1.9-L dose, while the dairy's maternal colostrum supply averaged 63.6 g/L, or 178 g IgG per 2.8-L dose. All colostrum and replacer were administered via esophageal tube feeder within 1 hour \pm 5 minutes of birth.

Lago and his colleagues found:

- Both groups achieved nearly 100% passive transfer of immunity.
- Apparent efficiency of IgG absorption was statistically similar between both groups.
- Calves fed the colostrum replacer experienced fewer sickness episodes in the preweaning period compared to those fed maternal colostrum.

Based on these results, a high-quality colostrum replacer can be a consistent alternative to maternal colostrum without sacrificing immunity or calf health. Considering industry standards for excellent colostrum delivery, maternally derived colostrum replacer containing high levels of IgG (150 g/feeding) provides:

Quality – The same amount of IgG is fed every time to every calf.

Quantity – Correct volume can be fed to every calf, regardless of how much the dam produces.

Quickness – Replacer simply needs to be opened, mixed and fed, increasing the likelihood it will be delivered in the critical 4-hour window after birth.

Cleanliness – Sanitary packaging and immediate mixing and feeding reduce the potential for bacterial contamination.

Biosecurity – The likelihood of spreading vertically transmitted diseases like Johne's disease, BLV, mycoplasma, salmonella and cryptosporidium is greatly reduced.

Bypassing the complicated steps for harvesting, evaluating and delivering maternal colostrum can free up labor for other tasks, while delivering more assured passive transfer of immunity to every calf, every day.