



Off to a great start

Ensuring your new calves get adequate high-quality colostrum enhances health

Ensuring your calves receive enough high-quality colostrum soon after birth can have major positive effects on their health and well-being. Colostrum contains antibodies, the main protection against diseases, and essential nutrients.

Antibodies, known as immunoglobulins (Ig), are large molecules the calf absorbs into its blood through a process called passive transfer. Ig obtained this way protect the calf until its own immune system becomes fully functional at three to six weeks of age. Also, the essential nutrients in colostrum contain many growth factors that help the newborn calf develop.

While these benefits have been known for decades, surveys still report large numbers of dairy calves receive inadequate colostrum. Recent Ontario surveys, for example, suggest between 25 and 38 per cent of dairy calves suffer from failed passive transfer.

To help address this issue, the new *Code of Practice for the Care and Handling of Dairy Cattle* requires you to give calves at least four litres of good quality colostrum within 12 hours of birth. They should get their first meal as soon as possible—no more than six hours after birth. The first colostrum feeding is particularly important since a calf's ability to absorb colostrum is reduced six to eight hours after it is born.

The code also includes these best practices:

- *Feed colostrum supplements.* A calf can often nurse when kept with the



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cow, but timing and quantity of colostrum intake varies, with some calves ingesting no colostrum within 12 hours. Supplement calves with colostrum even when they suckle to ensure they get the four L within 12 hours as required;

- *Check quality with a colostrometer.* Although colostrum quality varies greatly among cows, a recent survey of Quebec dairy farmers found none routinely checked it. However, you can quickly and easily

check colostrum quality using a colostrometer;

- *Use good hygiene practices when collecting, storing and feeding colostrum.* As with other milk products, colostrum quality can decline rapidly when poor hygiene practices during collection and storage result in bacterial contamination. This greatly reduces the colostrum's value to the calf;

- *Routinely measure Ig status in calves, and feed colostrum to achieve a blood serum Ig concentration of 10 milligrams per millilitre.* Several factors can cause passive transfer failure. Directly measuring Ig concentrations in young calves effectively tells you whether you have a problem. Some producers now use bonuses or other incentives to motivate employees to monitor blood Ig concentrations and meet these targets.

We would like to hear your views on the *Code of Practice's* requirements for colostrum feeding, and hear about the practices you use to promote passive transfer of Ig. You can participate in the University of British Columbia's online discussion of this issue by visiting: www.yourviews.ubc.ca/colostrum.

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