



Shedding light on common calf procedures

Farms shared how they care for calves and keep them healthy in this UW-Extension survey.

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DAIRY veterinarians, nutritionists, extension agents, and consultants all strive to assist their farm clients in the creation of dairy farm protocols to maximize the success of their calf programs. However, protocol modifications and procedural drift occur regardless of the best intentions as farm circumstances change in relation to employees, seasons, and calves needing care.

The UW-Extension Prewaned Calf Health Management Survey sought to understand actual calf practices on Wisconsin farms. In particular, we wanted to document differences on individual calf feeding operations compared to automated calf feeding operations.

The very first meal

All surveyed farms used colostrum. It was administered 2.4 hours after birth for individual fed farms (range one to six hours) and 1.9 hours after birth on automated group calf feeding systems (range one to two hours). Two-thirds of all farms tested the quality of their colostrum with either a Brix refractometer or a Colostrometer, with an average result of 24 percent immunoglobulins or IgG (range of 22 to 31 percent).

Calves in either feeding system were given, on average, 3.8 quarts of colostrum at the first feeding. Seven farms used bottles and four farms utilized esophageal tube feeders.

Colostrum replacement products were given on five different farms. Exactly half of the farm respondents (three of seven individual calf feeding systems and three of five automated group feeding systems) pasteurized colostrum to an average temperature of 144°F.

Keeping calves healthy

Every farm had different calf health management practices due the differences of the disease prevalence on individual farms. Dip-

ping navels is an important calf health practice as it discourages the colonization of bacteria from the environment through the umbilical cord (umbilical vein and artery). Over 90 percent of the surveyed farms dipped calf navels, and 75 percent used an iodine-based product.

Just five of the 12 farms tested calves for passive transfer. Those farms defined their minimum standard as 5.5 mg/dL (milligrams per deciliter) of IgG. Calves on individual calf feeding systems were removed from the dam earlier, at 50 minutes (range of 10 to 120 minutes), compared to those on automated group feeding systems who were removed at 71 minutes (range of 10 to 240 minutes).

Newborn calf vaccinations were administered on 75 percent of the surveyed farms. Five farms exclusively used a vaccination product for respiratory disease, while the remaining four farms that vaccinated utilized a combination of vaccination products to protect against respiratory pathogens, intestinal viruses, and bacteria such as rotavirus, coronavirus, *Escherichia coli*, and *Clostridium perfringens* types C and D.

All surveyed farms dehorned. Six farms disbudded at 1 day of age, three farms disbudded at 2 to 3 days of age, one farm disbudded at 30 days of age, and one dehorned at 56 days of age. Of the farms that disbudded before 3 days of age, all utilized caustic paste, and three farms included pain medication during the procedure. The two respondents that dehorned later in the calf's life utilized pain mitigation, either through lidocaine or a combination of lidocaine and xylazine.

Overall, 10 of the 12 farms administered vaccinations before animals were weaned. The majority of the vaccinations administered were for respiratory diseases.

Veterinary and medication costs were determined to be \$18.81 per calf (\$0.26 per day) in an automated feeding system, and \$13.90 per calf (\$0.28 per day) in an individual feeding system. These were costs from birth until movement into group housing or movement out of the automated group feeding pen.

Allowing pens and hutches to remain idle for a period of time is important to break the cycle of disease. This is particularly vital for the health of naïve newborn animals that have not been exposed to disease-causing organisms. Over 90 percent of the surveyed farms allowed for pens or hutches to remain idle before adding new animals. On average, hutches were idle 14 days, while group pens were not used for five days.

Surveyed farms were asked to describe the care of milk feeding equipment. Six of the seven automated group calf feeding systems cleaned and disinfected equipment two to three times per day, while one cleaned and disinfected once a day.

On individual calf feeding systems, one farm cleaned and disinfected two to three times a day, and one farm cleaned and disinfected after the heifers were moved for weaning. Three individual calf feeding systems used a combination of cleaning methods, but all three rinsed the feeding equipment after each feeding and cleaned and disinfected two to three times a day.

Records are necessary

Record keeping is important for tracking health events and associated factors of performance. Records provide useful information, especially in regard to the effectiveness or response of treatment, level of disease incidence in certain ages, and overall health performance.

All the surveyed farms recorded individual treatments of sick calves, and eight of these farms tracked information through a computerized record-keeping system. The records were kept on eight farms for the lifetime of the animal and two and one-half years on average for the other four farms.

Across all surveyed farms, on average, four different individuals cared for calves (range one to 12) with one person making the calf management decisions (range one to three). On average, two and one-half individuals (range one to nine) made treatment decisions for calves across all farms. Eight farms trained employees in calf management when needed, three trained employees at hire, and one farm did not train their employees.

As you can see, there were some similarities and some differences between these surveyed farms. Regardless of the system, the key to successful calf rearing is a clear focus on attention to details. 🐄

Colostrum feeding practices		
	Individual	Automated
Use of pasteurized colostrum	3	3
Time given after birth (average)	1.9 hours	2.4 hours
Volume		
First feeding (average)	3.8 quarts	3.85 quarts
First 24 hours (average)	5.2 quarts	5.25 quarts
Number of feedings (first 24 hours)	1.6	1.8
Fed		
Bottle	3	4
Esophageal tube	2	2
Test for passive transfer	2	3
Cost (per calf, colostrum only)*	\$5.05	\$4.22
*Derived from ICPA economic data for preweaned calf health from surveyed farms.		

A survey of calf raising practices

- **October 10:** How real farms are raising calves
- **October 25:** Shedding light on common calf procedures

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