

NAHMS report provides additional findings

A PREVIOUS column of mine (*Feedstuffs*, March 10) summarized key findings of the 2007 National Animal Health Monitoring System (NAHMS) report and contrasted those findings to previous NAHMS reports.

However, the 2007 NAHMS report expanded information collected on calves and heifers beyond that of previous NAHMS reports.

So, let's look at what those additional findings tell us about the state of the U.S. dairy herd replacement business.

While contract rearing calves and heifers tripled from 1.6% in 1991 to 5.0% in 1996, 2002 data indicated a 30% decrease to 3.6% from 1996, but in 2007, contract rearing increased to 9.3%.

Of those heifers sent off site, an increasing percentage of larger operations retained ownership (Table), perhaps reflecting their cash flow situation and the hope of ensuring their future cow numbers and/or genetics.

Larger operations also got their heifers back earlier after weaning as opposed to after being bred. No further definition was given for time frames represented by "weaned" or "bred" heifers.

In addition to colostrum management data I previously summarized, smaller herds were more likely to store colostrum as refrigerated rather than frozen but were least likely to pasteurize in a more recently adopted colostrum management practice (*Feedstuffs*, Sept. 11, 2006) or to measure serum protein.

Data on liquid feeding to calves reveal a smorgasbord of practices (Table), such as:

- Medication still accounted for more than 50% of milk replacers fed, but this declined with herd size. Was this due to wanting to reduce additional costs, uncertainty of benefits, wanting to medicate calves individually or some other reason(s)?

- Waste milk feeding to calves has

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Bottom Line

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increased, especially for larger herds that can harvest and segregate it more easily. It was still surprising to see that, even among larger herds, feeding pasteurized waste milk was similar to feeding unpasteurized waste milk despite evidence of benefits to pasteurization. Even then, there are concerns about how effectively and consistently pasteurizers are operated on dairies.

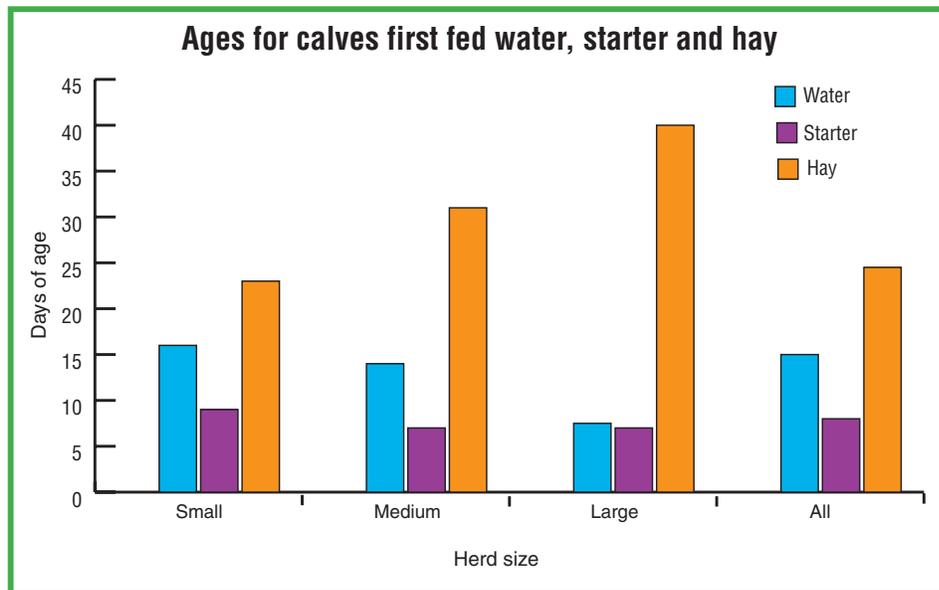
NAHMS 2007 addressed this issue as follows: "Properly pasteurizing and handling waste (non-saleable) milk or saleable milk reduces pathogen loads without affecting milk quality. However, managing a pasteurization system that consistently provides high-quality nutrition to the calf with decreased pathogens is an intensive process and requires daily monitoring of equipment and the feeding system."

- Another recent comment by Croney et al. (2008) bears consideration on the waste milk issue: "Transparency is also extremely important. If there are

regular animal care practices on your farm that you would not be willing to let somebody from the public see, that should tell you something. If a practice such as feeding pasteurized waste milk to calves is unacceptable to our consumers, we should probably investigate alternatives that might better meet public expectations of the level of care we give to our animals. In business, we often note that the consumer is always right, yet in farm animal production, we often seem inclined to disregard what our consumers say they want in terms of animal care."

- Saleable milk was fed surprisingly a lot, and nearly all of it unpasteurized. This survey was done during 2006, so it would have missed the record-high milk replacer and saleable milk prices experienced this past year. The economics of feeding saleable milk are usually not close to being favorable, so that leads to speculation as to what other factors would have been involved in this practice.

- If users of these practices are summed for each size of operation, totals in excess of 100% indicated that many operations likely used several of these practices concurrently in their calf-feeding programs. The sum for large operations indicated that they most likely used a variety of these practices at one time.



• A separate data table was constructed in the survey that showed these feeding practices for only heifer calves, but it did not vary much from what is shown in the Table. Whether bull calves were fed similarly is still uncertain as many operations may simply have disposed of bull calves by sale or other means rather than feed them.

The most common medication for those using a medicated milk replacer was oxytetracycline in combination with neomycin (49.5%), followed by oxytetracycline (21.9%), decoquinat (18.8%), chlortetracycline (12.1%), lasalocid (7.2%) and other (5.4%).

The percentage of operations that cleaned and disinfected milk feeding equipment was: 58.5% daily, 24.4% between calves, 6.4% weekly, 3.2% monthly and 7.5% for other. Larger operations followed the first two practices 91% of the time, followed by medium operations at 87% and smaller operations at 81%.

At least one preventive practice was commonly used for heifers on 94.6% of operations, with the most popular being:

- Vitamins A, D and E in feed, 74.4%, versus injected, 10.4%;
- Dewormers, 69.4%;
- Selenium in feed, 69.3%, versus injected, 13.2%;
- Coccidiostats in feed, 46.5%;
- Ionophores in feed, 45.2%;
- Anionic salts in feed, 20.9%;
- Probiotics, 20.0%, and
- Other, 4.6%.

Obviously, many operations used more than one of these preventive practices.

Disconcerting data

Perhaps the most disconcerting and disappointing data in the 2007 NAHMS report were the ages of calves when they were first fed water, starter and hay (Figure).

Research showing the detrimental effects of feeding hay to young calves goes back more than 60 years (Warner, 1973); research showing the close relationship of starter intake to weight gain and weaning is nearly 30 years old (Kertz et al., 1979), and research showing the close relationship of water intake

NAHMS 2007 data summary, % of operations

Heifers sent off site	Small (< 100 head)	Medium (100-499 head)	Large (500+ head)	All
Ownership retained	72.3	83.8	89.6	81.1
Sold/repurchased	11.1	10.0	6.0	9.4
Returned as weaned heifers	15.1	27.3	53.4	30.3
Returned as bred heifers	79.1	72.2	46.6	67.6
Colostrum management				
Stored w/o refrigeration	4.4	2.8	3.0	3.9
Stored in refrigerator	6.0	15.2	50.5	11.1
Stored in freezer	24.8	36.2	34.7	28.2
Not stored	64.8	45.8	11.8	56.8
Pasteurized	0.2	0.9	6.4	0.8
Serum protein	1.1	2.4	14.5	2.1
Liquid diet				
Non-medicated milk replacer	11.4	14.2	26.4	12.7
Medicated milk replacer	55.2	68.2	43.6	57.5
Unpasteurized waste milk	32.2	25.7	27.6	30.6
Pasteurized waste milk	1.0	3.0	28.7	2.8
Unpasteurized saleable milk	32.2	17.4	12.1	28.0
Pasteurized saleable milk	1.3	1.6	2.0	1.4
Other	2.6	3.5	4.9	2.9
Sum	136	134	145	136

to starter intake is nearly 25 years old (Kertz et al., 1984).

Yet, the picture is that water was delayed in being first fed by up to 16 days of age (with an average of 15 days), starter was delayed in being first fed by up to nine days of age (average of 8.5 days) and hay was fed before two months of age starting as soon as 22 days of age (average of 25 days).

Each of these facets is negative compared to what they should be. There is a trend that as herds get larger, they reduce the negative trend for each of these critical dietary component feeding practices. Perhaps this is due to being able to better manage the feeding practices. However, even the largest herd category delayed feeding water and starter to calves until they were more than a week old and then started feeding hay at 40 days of age.

The best approach is to feed some water and limited starter to calves right away and then not feed hay until after two months of age and after they enter into their first grouping. Daily gain and feed efficiencies (Kertz et al., 1991) are limited with the practices illustrated in the Figure. Dairies need to do a better job with preweaned calves in these feeding and management practices.

The Bottom Line

More extensive data in the 2007 NAHMS report provide a more complete picture of how calves and heifers have been fed and managed in the U.S.

Unfortunately, the data reveal that calves are not being fed water and starter soon enough but are fed hay too soon for proper growth and rumen development.

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