HOARD'S DAIRYMAN

Abby Bauer

MANY OF THE SURVEYED FARMS added bedding as needed. Farms with group housing spent slightly more on bedding.

How real farms are raising calves

This survey identified calf housing styles and feeding protocols on Wisconsin dairy farms.

by Sarah Mills-Lloyd and Tina Kohlman

WHEN UW-Extension agriculture agents collected data from 26 farms, they found it cost $6.35 per day to raise a calf on an automated group feeding system and $5.84 to raise a calf on an individual feeding system (see the article "Calves on autofeeders cost a little more" in the August 25, 2018, issue).

A preweaned calf health management survey was conducted simultaneously on 12 of the 26 Wisconsin farms. This survey defined a calf as an animal from birth until movement into group housing, or movement out of the automated group feeding pen.

Individual feeding was denoted as any form of bottle or bucket feeding. Seven of the farms participating in the survey utilized an automated group feeding system and five utilized an individual feeding system. Operations were grouped by feeding system utilized, and represented various dairy farm sizes.

The survey included 12,224 total cows. Farms with automated feeding had an average herd size of 1,321 cows (range 135 to 4,500 cows). Dairies that utilized an individual feeding system had an average herd size of 594 cows (range 140 to 1,100 cows).

Deviating from the norm

Housing preweaned calves in individual pens or hutches has been the industry gold standard for quite awhile. However, there is a growing trend for farmers to raise calves in a group setting.

Surveyed farms selecting to install an automated group feeding system were asked to identify reasons behind their decision. The top four reasons were:

1. Reduction of health issues
2. Improved information on calf feedings
3. Approximation to natural diet changes
4. Closer to natural feeding behavior

Of the five farms utilizing individual calf housing, three used outside individual hutches. Two farms used indoor individual pens with solid pen partitions on three of the four sides.

Of the seven farms using an automated group feeding system, there were on average 20 calves per group. Amount of space (resting and feed area) was 47 square feet per calf.

Bedding costs were slightly higher in automated group feeding systems as compared to the individual calf feeding systems, $0.19 versus $0.16 per head per day (or $14.45 versus $12.30 per calf). One-half of the surveyed farms used straw, while the remainder used a combination of straw and shavings.

Automated group feeding systems used, on average, 280 pounds of bedding per calf from birth to the time the calf was moved out of the pen. Individually managed calves took an average of 174 pounds of bedding.

Feed and nutrition

Four farms utilized milk replacer with a labeled protein range of 24 to 27 percent. Six farms used whole milk or waste milk, and two farms used a combination of both milk replacer and whole/waste milk. The farms who used whole/waste milk also pasteurized their milk.

All seven farms utilizing pasteurized milk evaluated bacteria counts. Bacteria counts were performed weekly on three farms; the rest tested every other week, every other month, every three months, or every six months.

Eight farms fed calves twice a day (individual system=4, automated system=4). One individual feeding system fed calves three times a day, and three automated group feeding systems fed calves four to six times per day.

Water and starter are important components for rumen development. On surveyed farms, water was provided on average by six days of age and ranged from one to 30 days.

Calves were offered calf starter on average by day six, ranging from one to 14 days of age. Sixty percent of the surveyed farms managed calf starter by removing old, uneaten starter and adding fresh starter, while three of the farms added fresh starter to the top of old, uneaten starter. The surveyed farms first offered hay to calves, on average, by 64 days of age (range 21 to 120 days of age).

All surveyed group housing farms allowed calves to transition slowly to the automated feeder by providing liquid feed individually for the first few days of life. On average, farms fed calves individually from a bottle or pail for the first seven days (range 4.5 to 14 days of age).

Five of the 12 surveyed farms weaned based on age. One weaned based on starter intake, one farm weaned calves based on starter intake and age, and the remainder weaned based on a combination of three or more different criteria: starter intake, size, lack of space, and age.

Weaning occurred on average by day 56 for individually managed calves compared to 59 days for automated group fed calves. Movement to the next management group occurred on days 74 and 75, respectively.

Groups saved labor

Labor and management for each calf in an automated group feeding system was 8.1 hours (7.4 hours labor and 0.67 hours management). This compared to 15.1 hours (13.57 hours labor and 1.55 hours management) per calf in an individual feeding system.

On average, one person could manage 10.47 calves per hour in an automated group feeding system as compared to 5.31 calves per hour in an individual feeding system. Paid and unpaid labor and management costs were determined to be $111 per calf ($1.48 per day) in an automated group feeding system, and $210 per calf ($2.81 per day) in an individual feeding system.

In this article, we shared results of housing, feeding and weaning, and labor and management. The next article will focus on colostrum, health, biosecurity, and record keeping.

A comparison of calf feeding, management, and costs

	Individual	Automated
Milk replacer	2	2*
Protein (percent)	24	26.5
Fat (percent)	18	14.5
Powder fed (ounces per calf)	14	9.7
Volume of water (quarts)	3	2
Cost (per calf)**	$102.69	$177.17
Whole/waste milk	3	3*
Pasteurized	3	4
Bacteria counts	3	4
Cost (per calf)**,***	$91.10	$94.3
Balancer	$11.76	$36.31
First offerings (average days)		
Water	1.6	5
Calf starter	4.2	7
Hay^	67.2	61.6
Automated calf feeding system	n/a	7.4
Cost (per calf preweaned)**		
Calf starter	$58.09	$77.27
Forage^	$0	$1.85^

*Two farms used a combination of milk replacer and whole/waste milk and are not reflected in these values
**Derived from ICPA economic data
***A price of $8 per cwt. for unsaleable milk and $17 per cwt. for saleable milk was used for whole/waste milk
^Two farms fed forages to preweaned calves

A survey of calf raising practices

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

The authors are the UW-Extension Oconto County agriculture agent and the UW-Extension Fond du Lac County dairy and livestock agent, respectively.