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Quality Calf Care Might Be Easier Than You Think!

By: Noah Litherland

Feeding and management of newborn calves is one of the most important and can be the most challenging jobs on a dairy. The newborn heifer calf on your farm is likely the most genetically advanced and at the same time the most susceptible to disease and environmental challenges.

Having a quality nutrition and management protocol in place will largely dictate the success of a calf program. The goal of any calf rearing program should be to produce a healthy weaned calf ready to move into the heifer growth phase with no disease damage to impair growth and productivity.

Here are seven nutrition and management keys to a successful

calf program.

1. Feed excellent quality colostrum from Johne's free cows.
2. Feed colostrum at a rate of 10% of the calf's body weight within 4 hours of birth.
3. Dip the navel with iodine
4. Provide clean dry housing in individual hutches or pens
5. Encourage starter intake early by keeping starter grain fresh
6. Provide clean adequate water at all times
7. Feed a high quality milk replacer at a rate of 10-12% of the calf's body weight.

Providing sufficient amounts of excellent quality colostrum is essential to calf health. Use of an esophageal feeder may be helpful to ensure calves consume a large enough volume of colostrum immediately after birth as some calves will not voluntarily consume enough colostrum on their own. (Continued pg. 3)



Figure 1. Newborn calves require optimal care for maximum health and performance.

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- *Low energy diets for dry cows; solving some of the transition cow challenges*

Minimizing variability in feeds can save you money and result in more milk

The nutrient composition of all feeds vary. Variability can be due to environmental conditions during plant growth and harvest, storage methods, and feeding strategies. Large variation in feed composition increases risk and cost. Forages, specifically,

must be sampled and their composition analyzed frequently to avoid errors in ration formulation and deliver.

Minimize inclusion of highly variable ingredients in your TMR, feed a variety of ingredients to minimize the impact of

any one ingredient, stick to a routine when mixing feed every day, and finally avoid incorporating ingredients such as silage or hay that contain mold or do not smell fresh. Your cows will respond and you will notice a difference in in your bottom line.

Dairy Field Days Callendar

Breed	Date	Location
Holstein	June 13	Million Dairy
Ayrshire/ Guernsey	June 14	Chupp Dairy
BrownSwiss/ Milking Shorthorn	June 18	Perkins Agri-Center
Jersey	June 19	Crescent Ag Farm

Are you ready for summer heat stress?

Heat stress can dramatically decrease the efficiency on your dairy. Three of the biggest factors that reduce efficiency include:

1. Reduced dry matter intake (DMI)
2. Increased energy expenditure to keep cool (maintenance requirements)
3. Sub-acute ruminal acidosis (SARA)

DMI is often reduced (up to 40%) because cows spend less time at the feed bunk. Use the 2 for 1 rule which says that you lose 2 pounds of milk for every 1 pound loss in DMI. Cows must expend energy to keep cool

25% increase in maintenance requirements. Heat stressed cows ruminate less, which can lead to (SARA). Offer free-choice buffer.

Here are **9 nutritional and management strategies** that can help reduce heat stress.

1. Feed earlier in the morning when day time temperature is lowest.
2. ↑ nutrient density of the diet (energy, protein, vitamin E, and potassium)
3. Feed high quality forages and incorporate ingredients that add energy in the form of sugar (bakery by-product) or bypass fat

4. Minimize sorting by pushing up the TMR more frequently
5. Properly maintain fans and misters
6. Add fans and misters to the holding pen and feed lanes
7. Minimize crowding and time spent in the holding pen
8. Avoid breeding cows to calve in the summer months.
9. Provide plenty of clean and fresh water.

OSU Dairy Science Extension to Launch Web-page

A new Dairy web-page will be ready for business by May 1st. Highlights of the web-site include:

- Links to OSU dairy fact sheets
- Answers to frequently asked questions
- Links to helpful web-based information
- Youth corner
- Links to the OSU Dairy Science Club and OSU Dairy Cattle Judging Team
- Contact information for dairy faculty at OSU
- Dairy Job Resource Center
- Current Dairy Cattle Research at OSU
- Oklahoma Dairy Statistics
- Hot topics in dairy cattle nutrition and management
- Achieved Dairy Days Reports

OSU Extension Hires New Administrative Assistant:
Lindsey Miller has recently started at OSU working in Dairy, Equine, and Beef Reproduction. Lindsey is from Stillwater and graduated from OSU in December of 2003.

OSU Dairy Science Club Officer Elections Held

The OSU dairy science club held officer elections for 2007-2008 on May 18th.

President: Jason Kinzey

Vice President: Cameron Price

Treasurer: Mandy Stricklin

Secretary: Dustin Skaggs

Reporter: Lacey Federal

Sgt. At Arms: Leslie German

Ag Council Representatives: Rachel Chillas and Courtney Maloney

Established in 1924, the OSU dairy science club was the first collegiate organization of its kind in the United State. The dairy science club serves to provide students with a dairy interest an opportunity to learn more about the dairy industry and serve to further the dairy industry through public events. The dairy science club sponsors a milk-a-cow booth at the Oklahoma Youth Expo, and Oklahoma

City and Tulsa State Fairs. Additionally, the dairy science club conducts tours of the OSU Dairy Cattle Unit and holds bi-monthly meetings and social events.

Quality Calf Care Might Be Easier Than You Think (cont. from page 1)

From the time of the calf's birth, the calf's ability to absorb antibodies from colostrum diminishes as does the nutrient content and antibody levels in colostrum (Table 1). When thawing colostrum, do so slowly in a warm water bath. Overheating may damage the immunoglobulins thus reducing the quality and effectiveness of the immunoglobulins. It may be helpful to freeze the colostrum in calf bottles to make colostrum preparation easier. Freezing colostrum in small amounts will allow it to freeze faster and thus maintain quality.

milkreplacer (Feeding Guide, M.F. Hutjens 2nd ed)

Table 1. *Composition of colostrum and*

	1st Milk- ing	2nd Milking	Second Day	Third Day	Whole Milk	Reconstituted Milk Replacer
Specific Gravity, g/mL	1.056	1.040	1.034	1.033	1.032	—
Total Solids, %	23.9	17.9	14.0	13.6	12.9	12.5
Fat, %	6.7	5.4	4.1	4.3	4.0	2.5
Protein, %	14.0	8.4	4.6	4.1	3.1	2.8
Lactose, %	2.7	3.9	4.5	4.7	2.0	Variable
Immunoglobulins, %	6.0	4.2	1.0	0	0	0

OSU Dairy Building Time Capsule Opened

On March 28th, 2007 a crowd of nearly one-hundred people witnessed the ceremonial opening of the time capsule which had been buried behind the cornerstone of the Dairy Science Building since 1928. The Dairy Building, constructed in 1927-1928 was dedicated in 1928 with the laying of a cornerstone. The Dairy Building was considered a massive structure in its time— three stories tall measuring 48 by 128 feet. Over the years, many students have taken courses in the building and many have worked part time in the creamery. Others have visited the sales room or



Figure 2. *Unveiling of time capsule contents.*

Photo Courtesy of Todd Johnson.

snack bar during their time at OSU. The building was demolished in December 2006 to make room for a new research laboratory building. The cornerstone was removed revealing a time capsule. The time capsule was a copper box that was sealed air tight to preserve its contents. Contents of the time capsule included; a key to the creamery, daily newspapers from the day the time capsule was sealed, an OSU time-table from 1928, a mason's coin and a list of the time capsule contents. The documents were well preserved.

Oklahoma Dairy Person of the Month Jason Kinzey (Dairy Science Club President)

Jason Kinzey, son of Don and Patty Kinzey grew up in Colcord Oklahoma on his family's dairy and beef cattle farm. He will graduate from OSU in December 2007 with a degree in Animal Science with a Production option and a minor in agricultural economics. Jason attended Fort Scott Community College in Kansas before coming to OSU. He graduated top of his class in the John Deere Ag Technician Program at FSCC. Jason is active in the Dairy Science Club and is also a member of Alpha

Zeta Honor's Fraternity. He has also been active in community projects such as Hunt for Hunger, harvest Carnival, and Toys for Tots. Jason's plans for the future include working in the AG Marketing Division of John Deere. Jason also continues to have interest in production agriculture and continues to have strong ties with the dairy industry.



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The Oklahoma Dairy Report is a monthly newsletter for dairy producers and those with a dairy interest throughout the great state of Oklahoma. The Dairy Report serves as a link between the OSU campus at Stillwater and the Oklahoma dairy industry. The objective of the Dairy Report is to provide practical research based information for on farm application and news impacting the Oklahoma dairy industry.

If you would like to contribute to the Oklahoma Dairy Report please call or send your information to Dr. Noah Litherland.



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