

Colorado Dairy News

Cooperative Extension, Colorado State University, Fort Collins, Colorado 80523 Volume 9, Number 4
a publication from Integrated Livestock Management (www.combs.colostate.edu/ilm/)

Impact of Dystocia on Health and Productivity

Jason Lombard, DVM
CSU, ILM and CEAH/USDA

Dairy Worker Training

Noa Roman-Muniz,
DVM, ILM, CSU

The birth of a heifer calf on a dairy operation represents the beginning of the next generation. Most of the time, these calves have the best genetics of all animals in an operation. Unfortunately, the time around birth is when the calves are at the greatest risk of dying. In addition, this period is the time dams will frequently experience health problems as well. Difficulty calving, commonly referred to as dystocia, usually increases the risk of problems, including death, for both the calf and dam.

National studies have shown that close to 40% of all heifers and 20% of all dairy cows experience some difficulty at the time of calving. A preliminary ILM trial conducted in 2000 by Dr. Kevin McSweeney on Colorado dairies along the Front Range also found that dystocia occurred frequently and impacted both the calves and the dams.

Although the high rate and negative impact of dystocia has been publicized, producers tend to underestimate the incidence on their own operations. According to the National Animal Health Monitoring System's (NAHMS) Dairy 2002 report, producers reported that only 3.7% of cows experienced "other reproductive problems" which included dystocia. More controlled studies have shown that the incidence of dysocia is closer to 30%.

The calving difficulty score is based on the amount of assistance at birth needed to deliver the calf. Although traditionally a 5 point system has been used, a 3 point system is simpler yet equally effective. Assign a 1 if no assistance is given, a 2 if one person can deliver the calf without a mechanical device, and a 3 for hard deliveries that require more than 1 person, a mechanical device, or surgical intervention.

Based on our earlier trial and other studies suggesting the negative impact of dystocia on cow and calf health, the ILM program initiated a larger study involving 3 dairies close to Fort Collins. The study started in the fall of 2001 and continued for 1 year. Dams were enrolled into the study as they calved, assigned dystocia scores based on assistance needed at delivery, and then the health of dams and calves was monitored for a period after calving. Our study showed that closer to 50% of first calf heifers and 30% of older animals required some assistance at calving as compared to the 40% and (Please continue on page 3, under Dystocia)

If we took a snapshot of the agricultural workforce of the United States today, this is what the picture would look like: several young Hispanic men and one or two women, also of Hispanic origin. A majority of them would be Spanish-speaking with limited English skills. Farm and animal handling experience would vary from person to person, as would also vary the degree of formal education. Many of these workers would see an entry level position at a farm as a temporary means of employment. A similar picture would be obtained when looking at the dairy workforce in this country.

With that picture in mind, it is not hard to understand why worker training has been identified as one of the issues of great concern among dairy producers, including Colorado producers. Language barriers and other cultural issues together with unknown level of farm and livestock experience, makes training this population a very challenging issue for English speaking dairy producers. Often producers lack educational tools and sufficient Spanish lan- (Please continue on page 4, under Worker Training)

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Important Dates:
Mark Your Calendar

August 21-24, 2003: Colorado State Fair Dairy Show. Contact the CSF, (970) 491-1442.

September 2-4, 2003: Hoof Trimming Workshop with Jan Shearer from U of Florida, at Busker's Dairy in Fort Lupton Contact Ray Sagehorn, 720-244-0238, for more information.

October 3-4, 2003: 100th Anniversary Celebration of CSU Animal Sciences Department. Contact Cheryl Miller at CSU Animal Science Dept (970) 491-1442, for more information..

October 1-4, 2003: World Dairy Expo, Madison WI.



**Integrated
Livestock
Management**

Colorado Dairy News
*is published
 bimonthly as a service to those
 people interested in the health and
 welfare of the Colorado dairy
 industry.*

*Past issues are available on the
 ILM website
 (www.cvmbs.colostate.edu/ilm)*

*For further information, contact
 Dr. Ragan Adams, Editor, ILM,
 CSU-VTH 300 West Drake Rd
 Ft Collins, CO 80523
 (970)491-0371;
radams@lamar.colostate.edu*

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A Message From Your Extension Dairy Specialist.....

NMPF and CWT Programs:

This month, July 2003, marks the date dairy producers had the opportunity to support a proposal that matched milk supply with milk demand in order to optimize milk price. Some dairy producers were willing to commit 70% of the nation's milk supply for the good of the dairy industry. Suprising and disappointing to me, was the number of dairy producers not willing to support a supply management system. I believe that Colorado dairy producers should be critical of the inability of the leadership to convince the many dairy producers who did not support this program, but at the same time, be thankful that we had local leadership that supported this initiative. Dairy producers and our agri-business partners need to break the silence, and become involved and excited about the current climate in which dairy producers find themselves. We cannot react soon enough to have a national movement to sustain the CWT program and find broad base support for this critical program. Dairy producers must use our strengths, work on and know our weaknesses, and take control of our opportunities as soon as possible. This program, as it now stands, lacks the financial support needed to make dairy farming profitable in the future. I only hope that the leadership of Co-ops and NMPF have a plan to keep the CWT program from sunset. We need to enhance the framework of this program to truly have a national supply management matching the demand for our nutritious products that will work for decades into the future. Folks, it is plain and simple, dairy producers need great leadership now!!!

William R. Wailes, Colorado Extension Dairy Specialist

Commodity Price Quotes

By-Product Feeds	Price/Ton Spot Loads	Price/Ton OND/Clock 2003
ADM High Fat Pellet	\$137.00	\$129.00/NQ
Bakery Waste	\$100.00	NQ
Corn Gluten Feed	\$90.00	NQ/\$90.00
Corn Hominy	\$92.00	NQ/\$92.00
Flaked Corn	\$112.00	NQ/\$108.00
Whole Corn	\$97.00	NQ/\$93.00
Whole Cottonseed	\$200.00	\$168.00/\$178.00
Distillers Grains	\$98.00	NQ/\$101.00
Pork - Meat & Bone Meal	\$230.00	NQ
Tallow	\$0.18 /lb.	NQ
SBM - 48%	\$202.00	NQ/\$180.00
Wheat Middlings	\$80.00	NQ/\$82.00
Soybean Hulls	\$89.00	NQ/\$87.00
Canola Meal	\$146.00	NQ/\$132.00

These price quotes are delivery at Greeley, Co

(Dystocia, continued from page 1)

20%, respectively, reported in previous studies. More than 40% of the calves that died prior to 120 days of age were stillborn (i.e. died at or within 24 hours of birth). We were not able to specifically track those calves born dead versus those that died within hours after birth, but we believe that a large proportion are born alive, but die shortly after birth. Many of these post delivery deaths could be avoided by instituting additional supportive care measures to calves immediately following dystocia. Simple strategies to decrease the rate of dystocia and the overall stillbirth rate could greatly impact dairy profitability.

The study followed the calves for 120 days after birth and cows for the entire lactation to monitor the impact of dystocia on health and productivity. The odds of calves dying within 120 days of age increased with the difficulty of calving as measured by the amount of assistance needed to pull the calf. The study found that approximately 5% of heifer calves and 10% of bull calves were stillborn and 14% of all heifer calves born, died within 120 days of age. Heifer calves were more likely to experience a respiratory or digestive illness if they required assistance at calving.

Cows were also affected by dystocia. They were more likely to experience uterine compromise (including retained fetal membranes, metritis and pyometra) and a respiratory ailment if they required assistance at calving. Cows with dystocia were more likely to be culled and were at significantly increased odds of dying within 14 days of calving. Although cumulative milk production at 30 days was significantly decreased in cows requiring assistance, the cumulative production at 90 days was not different. These results suggest that cows that survive dystocia suffer the effects for a couple months afterward.

The effects of dystocia can be minimized with worker education and management. Fortunately, relatively minor management changes can decrease the impact of dystocia dramatically. Based on national and local studies documenting the large percentage of animals needing assistance at calving, training in calving management would be beneficial to all dairy operations. Since many farm employees do not have extensive training in managing calving problems and traditional techniques used by managers may not be in the best interest of the cow or calf, on-farm education is an ideal place to begin producer and worker education. The Integrated Livestock Management Program has a calving management training session that is specifically tailored to the individual operation. Prior to the training the ILM personnel visit your farm to familiarize themselves with your facility and operative goals. The training session is then tailored to your individual facility. A training CD is also being developed and will be available soon. The CD will not only serve as a resource for those completing the training course, but can also be used to train new employees.

We believe that all dairies, based on our research, should be monitoring dystocia rates and stillbirth rates just like one would monitor milk production. The pertinent information includes the calving difficulty score; the birth status of the calf (dead/alive), and sex of the calf. The lactation of the dam should also be recorded so that dystocia rates can be monitored by lactation. With this small amount of information, one can easily determine the proportion of cows in each dystocia score by lactation and the stillbirth rate for bull and heifer calves. Although we believe the three farms included in our study are above average with regards to calving management, the rates of dystocia and stillbirth are higher than expected. If you find that dystocia is a problem on your dairy, we would be glad to help either with monitoring tips or education of your employees. In addition to hands on training, articles on dystocia management and calf care can be found in past issues of the Colorado Dairy News posted at <http://www.cvmb.colostate.edu/ilm/outreach/cdn/archives.htm>

Calving Difficulty Score: An Indicator of Dystocia Severity

- 1 No assistance
- 2 1 person assisting without mechanical device
- 3 >1 person assisting, mechanical device or surgical delivery

Estimates of Incidence of Dystocia in Dairy Operations (Listed as percentage of all calves born)

National estimate of stillbirths
(heifer and bull calves)
7%

ILM study estimate of stillbirths
(heifer and bull calves)
8%

Stillbirth rate – heifers 5%
Stillbirth rate – bulls 10%

Death loss in heifers to 120
days of age 13%
Dystocia rate in first calf
heifers 50%
Dystocia rate in older cows
30%

Archives of The Colorado Dairy News are posted on the web at <http://www.cvmb.colostate.edu/ilm/outreach/cdn/archives.htm>.

Articles available relating to dystocia include:

Periparturient Problems

Dystocia and Calf Survival

Managing to Decrease Newborn Calf Problems

Colostrum Management.

(Worker Training, continued from page 1)

guage skills to effectively train their employees on how to take care of cattle. Proper training on job tasks and animal handling is critical to improving herd health, production levels and human and animal safety and well being. Because addressing issues of concern to producers is one of the Integrated Livestock Management goals, we are in the process of developing several courses directed at dairy farm workers. We currently offer several training modules, one of which is Calving Management Training School.

The Calving Management Training School targets the dairy workers engaged in calving management. This bilingual course is divided into a 1.5-2 hour lecture and a 1.5 hour laboratory session. During the lecture, the student is presented with the different stages and progression of a normal calving, and is offered guidelines to decide whether the cow needs assistance. This learning session also includes the most frequently encountered calving problems and techniques to correct them and deliver the calf efficiently and safely. The last part of the presentation touches on proper care of the newborn and the cow immediately after calving. After the lecture, the instructor demonstrates different fetal presentations and techniques to correct the position of the fetus and deliver the calf. The students will also have the opportunity to practice these techniques themselves, working in groups or individually. Questions and comments are encouraged during lecture and the laboratory sessions.

Usually, interested producers contact ILM personnel at CSU and a farm visit is scheduled. During the farm visit, the owner or manager is interviewed and pictures are taken of the calving areas and facilities. It is important to understand the dairy's unique situation and capabilities and get a sense of what management's goals are in order to offer a customized training session in which real problems are addressed and achievable solutions are offered to workers and owners. During this visit, the training session is scheduled. The training takes place at the CSU Veterinary Teaching Hospital. Having workers away from the farm allows us to have their undivided attention and gives them an opportunity to manipulate dead fetuses and practice learned techniques before going back to the dairy to manage real calvings. It is our goal to integrate both workers and management to address managerial questions that may arise during the lecture and to make sure that everyone in the operation is aware of intervention guidelines and recommended procedures offered during class.

Because the content is presented in both English and Spanish, we can reach those individuals whose English skills are limited. The laboratory session reinforces concepts presented in the lecture and reaches those students that prefer practice over theory. A booklet with all the information presented is made for the dairy so students can review the material, and if desired, a CD with the power point presentation used during the lecture is sent to the dairy for training of future employees or a review for those workers that attended the training session.

Training dairy workers is challenging but very rewarding. Each training session is a learning opportunity for all involved (workers, owners and instructors). Step by step we are transforming our approach to worker education to reach a greater number of people and to impact animal handling and job performance, in such a way that it benefits both herd health and production, and human and animal well being.

For more information on training courses offered, scheduling and fees, contact Dr Frank Garry (970-297-0371 or fgarry@colostate.edu); Dr Dave Van Metre (970-297-1299 or dcvanm@colostate.edu); or Dr Noa Roman-Muniz at inromanm@colostate.edu.

Hoof Trimming Workshop September 2-4, 2003 Fort Lupton, CO

The second hoof trimming workshop with Dr. Jan Shearer from the University of Florida is scheduled for September 2-4. It will be held at Scott & Susan Busker's Dairy located just northwest of Fort Lupton about 5 miles.

Tuesday morning a lecture on Concepts and Techniques of Trimming will be presented.

Tuesday afternoon there will be practice trimming on cadaver feet.

All participants will attend the Tuesday sessions but only one of the Wednesday or Thursday sessions. The group will be divided in half to allow 6-7 participants each day to trim live cattle. Dr. Shearer will provide supervision over two trimming tables.

The cost for the workshop will be \$500 per participant and includes manuals, trimming gauges, knives, a video, the grinding wheel Dr. Shearer recommends and lunches. Participants will need to bring a 4 1/2" angle grinder. A chipping wheel is available for \$10. This helps speed the process on long toes yet is safe for the cows.

Tuesday evening September 2nd at 7 pm, an evening session will be held at the Branding Iron in Fort Lupton to discuss the basic technique, general lameness evaluation, and record keeping. This session will be open to anyone but will be directed toward herdsmen and management personnel. Dairies not participating in the trimming workshop are welcome to attend. Space is somewhat limited, so please call if you plan to attend.

To RSVP for the evening session call the Animal Clinic in Fort Lupton at 303 857-6671. To reserve a space in the workshop or for questions, please call Ray Sagehorn directly at the Animal Clinic in Fort Lupton. 720 244-0238.