

# CREAM NEWSLETTER



*February 2011*



## COW OF THE MONTH

### Jessamae, 496

Jessamae really has the sweetest heart, which is probably why she calved to her heifer, "Cupcake". She was born February 11th 2008 making this is her second lactation and Cupcake was born a few days before the new year. Jessamae is a high producing cow and right now she's giving about 68 lbs per milking. Her milk fat is 4.5, protein 3.3 and her somatic cell count was last recorded as 25,000 making her an overall wonderful cow. She is mostly white with some black markings. she also has some freckles on her nose, which she passed down giving Cupcake her sprinkles. Jessamae loves to give lots of kisses and is so easy to be around. One I went to the dry cow barn to visit with her and she let me just grab her giant collar and lead her away from the other cows. She then decided to rest her head on my shoulder and pose for a few pictures. I couldn't have been given a better cow.

- Lisa

#### Her Stats:

Sire: Toy Story

Location: Milking String

DOB: 2/11/2008

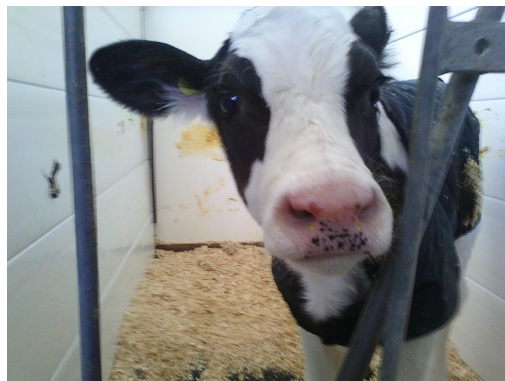
Age: 3years

Status: Fresh

Avg Milk Fat: 4.5

Avg Milk Protein: 3.3

SCC: 25,000



**CUPCAKE!!**



# HERD UPDATE

## *Births:*

*Jessamee (496) - Heifer "Cupcake" 12/27/10*

*Twinkle (539) - bull 12/31/2010*

*Crème (428) - bull 1/28/2011*

*Humble (536) - Heifer "Karma" 2/1/2011*

## *Illness*

*May (398) - DA last semester*

*Gloam (238) - Cystic*

## *Culled*

*Molokai (252) - 12/14/2010*

*Bum Bum (401) - 1/4/2011*



Learning about  
the Milk Parlor

# DHIA FACTS

## JANUARY

Avg Weekly Production: 93.8

Milk Fat: 4.2%

Milk Protein: 3.0%

SCC: 47,000





## Winter AI Class

This past winter break, a number of students decided to enroll in the January Artificial Insemination course here at the UNH Dairy Barn.

For the first day, there was a half-day lecture on the reproductive system of a cow and where to place the gun upon insertion of the cow. This lecture consisted of the anatomy of cows and how their anatomy is different than other animals such as the number of rings on the cervix (which is the toughest part to get through). The class then learned how to remove the semen straws from the nitrogen tank and properly thaw the straws without killing any of the sperm. The class then used empty guns with sheaths to practice the insemination technique on reproductive tracts removed from the cows. After a lot of practice, they moved on to practice on the "box cow", which is a model simulation of what the inside of a cow would really feel like. The box removed the ability to see where your hand is going, considering you wouldn't be able to see your hand if you were performing the procedure on a living cow.

The second day consisted of actual practice on the barns cull cows using empty guns with sheaths (no semen). Each student was able to practice on average two cows. The instructor came around to check that the students found the correct spot inside the cow to deposit the semen and suggest adjustments of position if needed.

After the two days, the students filed out special paperwork in order to receive their certificates!



Practicing how to Artificially Inseminate a Cow! Go Kim!

# UPCOMING EVENT DATES

**Thursday February 10** – Jared heat detection  
Graduate Student Panel

**Tuesday February 15** – CSDC Common Exam  
Time

**Thursday February 17** – Potluck  
Mini Lectures

**Thursday February 24** – Tubing?  
Stuart Farm?

**Thursday March 3** – Learn about Judging Dairy  
Cattle

**Thursday March 10** – Movie Night?

**Thursday March 24** – Mini Lectures



How well do you  
know OWLs??



## Feeding Cows and Making Changes in Difficult Financial Times

By Dr. Drew Conroy (CREAM Advisor) and Nicole Antaya (2009-2010 CREAM student)

As many of you know CREAM students spend a year managing a small herd of 25-30 cows for the academic year. The class has grown in size from 15 to 30 students over the last decade. This in part has been due to interest from Pre-Vet students interested in gaining large animal experience. It takes the first semester for students with no dairy background to simply gain the skills necessary to milk, feed and care for the cows. During the first semester, the dairy students are itching to make changes, but it takes at least a semester before the "non-dairy" students really have enough background to help make any group decisions that might affect the herd.

In December 2009, the class was trying to find ways to reduce costs and/or increase income, as most farmers were doing across the nation due to low milk prices. After much deliberation (imagine 30 owners trying to democratically come up with few significant changes) the class decided on two courses of action for the Spring 2010 semester.

The first change was to adopt the use of cloth instead of paper towels for milking. Cream students came up with the idea to use cotton cloths in an attempt to become a "greener" facility. The idea behind this was that instead of throwing away paper towels after use, a cloth is used, then after milking washed and re-used. While this cut down on the amount of paper towels being used and I guess the number of trees being cut down, it was more work and did not yield any significant cost savings if labor and laundry costs were factored in. While not done experimentally, the herd average SCC did drop from 71,000 to 41,000 after the adoption of cloth towels. However with such a small herd, this could more likely be attributed to a single cow with a change in her SCC, and was by no means significant.

The second major change was to the cow diet. At the beginning of the year all 26 cows received the same TMR composed of 9 feed ingredients, including corn silage, grass-legume silage, alfalfa hay (chopped), chopped straw, an energy mix composed of primarily corn meal with some beet pulp, a protein mix composed of primarily soybean meal, a small amount of blood meal (from non-ruminants), Bergafat (a rumen undegraded fat source) and a mineral mix. The other cows in the UNH research herd were also on a one TMR diet.

A single lactating cow diet had worked for years at UNH, but had its limitations. One diet meant some of the higher producing cows weren't getting all of the nutrients they needed. Low producers were getting more feed than they needed, and often became over conditioned. UNH cows have had their share of fresh cow problems due to being over conditioned. Feeding two diets was going to be done in hopes of lowering costs, by feeding the lower producers less expensive ingredients to hopefully maintain production and giving the high producing cows the push they needed to produce more milk.

Deliberations by students over making the change to two diets were pretty intense. In late January the CREAM class met with the feed representative for UNH from Poulin Grain. He explained to students why we had each of the ingredients in the diet and how we really could not reduce costs by limiting any of the purchased ingredients in a one TMR diet without losing production, due to the quality of our forages.

Over the next few weeks, deliberations in the weekly one-hour business meetings continued. Students sought numerous opinions, made many calculations and read a lot about cow diets. It was the epitome of active learning.

Students calculated that the average feed cost for the herd of 26 cows from December 8, 2009 to February 9, 2010 was \$1459 per week or about \$8.00/cow per day. The herd's milk production during the same period averaged 78 lbs/cow/day. The class noted that the price to feed each cow per day was quite high compared to other producers. However, CREAM pays market price for all locally grown silage, which many farmers may discount due to family labor and discounted land and machinery costs. CREAM also pays for the imported alfalfa hay, straw and all other purchased feeds. The blood meal and Bergafat were the two highest priced ingredients. A few students simply wanted to eliminate these expensive ingredients in the one group TMR in order to save on feed costs. The concern was that milk production and components would not be able to be maintained in the herd, if these were eliminated across the board for all production levels.

Students fully realized that two diets would mean more work and would be more complicated for the 30 different people feeding the diet each week. This change also meant having to move cows to different tie stalls. Tie stall cows, those first few days after a move do present some handling challenges for students, as CREAM has to untie the cows and take them to a milk parlor. Other reasons stated for not making the diet change, were that it might not save money, or cows on the low diet would not maintain body condition. However, with 30 students doing the labor for 26 cows, it was decided by the majority that the extra work and effort would be something we could provide easily. On February 22, 2009, the majority of the class voted to make the change to two diets for the CREAM herd.

Sometimes things move at a snail's pace when you have 30 student managers, so it was another week or two before cows were separated into two groups, high and low, by milk production. Cows that were producing under 80 pounds of milk a day were put in the low group, and cows above 80 pounds in the high group. Ten cows were put on the low diet and 16 cows on the high diet. As anticipated, it took a few days for the cows to readjust to their new stalls.

Students had calculated what the difference in feed costs would be for two diets, before the change was actually made. The difference (on paper) seemed to be fairly significant. Milk prices were starting to creep back up and some students worried about what would happen to milk production even if average feed costs were lower.

The high diet was going to be able to give the cows more of the expensive ingredients such as Bovamine and Bergafat to help them produce more, while the low diet cut down on these ingredients and some of the other purchased grains. After changing the diet, the individual cow milk production levels were monitored, and cows were moved into different groups as needed.

This was not ground breaking science. It is well known the more closely cows are fed based on their requirements, the less likely they will be limited or overfed certain nutrients. Cream students had made their first student initiated management change in the 2009-2010 year. The process had taken some weeks, with much negotiation and background research before a final vote to change was made. Waiting for the results was exciting and seemed to have everyone engaged in discussions about cow diets and nutrient requirements.

After 5 weeks on the two diets a few important lessons were learned. The average cost of feeding the herd dropped to \$1336/week or an average of \$7.34/cow/day. In addition, the low producers did not drop in milk production and the high producers benefitted from the high diet and produced more milk. The production average for the CREAM Herd increased to just over 90 lbs/cow/day. The milk production increase was certainly noteworthy. Yet, the financial benefit in feeding the lower producers a diet that better met their needs and maintained production was just as important. In only a few short weeks after the two diets were fed, the research herd also adopted this same diet change. After all, if CREAM could save \$0.66/cow/day, 7 days a week. The entire herd at the Fairchild Teaching and Research Center with 100+ cows could save about \$500/week just in feed costs, while at the same time increasing production.

The students finished the year happy with the change they had made. Milk prices certainly made it seem like they had made a huge difference with this small change. CREAM is not like the challenges faced by dairy farmers, but for students it was as close as they could get in any class at UNH. Maybe their results might inspire some dairy farmers to make small changes that can make a real difference in income.

