

the
Moo's Letter

CREAM 2017-2018

When 4-H Comes to Town

By Jessie Sexton

Note from the Editor

Hello everyone! As we approach the end of the semester, it is a great time to look back and reflect on everything we have learned so far. Shifts are faster, the cows are happy, and the CREAMers have gotten even closer as a group. We all look forward to break, but are eager to return and get back to working with the cows and learning more from Drew, Jon, Pete, and Eric. Have an amazing few weeks off everyone, and Happy Holidays!

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On Saturday December 2nd, 4-H extension organized an event for 4-H kids in NH. The kids came to UNH to tour the Burley-Demeritt Organic Dairy, Fairchild Dairy, and the Equine Facility. CREAM coordinated with Dairy Club to organize activities for the kids to teach them about ruminant anatomy and the dairy industry. The event started off with a talk about rumen microbiology by Dr. Nancy Whitehouse where the kids learned about the different microbes in the rumen that make fermentation happen. Then, we showed the kids a whole stomach from a beef steer and pointed out all 4 of the parts as well as explained what they did. We also painted the digestive tract on one of our favorite CREAM cows, Jenga, so the kids could visualize how the stomach would look in the cow. We ended the event with a tour of the dairy and a scavenger hunt to test to see how well the kids were listening during the tour! They all did very well and received some fun dairy themed prizes.



Alissa Scinto with Jenga demonstrating a cow's four stomachs

Pest Control Committee

By Annie Ciampaglia

Every CREAMer in the production committee knows the horror of doing a herdsman night check. Unsuspecting newbies will turn the aisle lights on with confidence before watching in horror as fat dachshund sized shapes start squealing and running towards them. More screaming usually follows this. That's where the pest control committee comes in! Our goal is to get the rat and pigeon populations under control by May while using a variety of creative tactics. We've only had one meeting so far, but we have hopes to meet every Friday night to continue fighting the ever-growing rat war. In the photo below, you'll see Bram (honorary pest control president) explaining his rat catching contraption. The barrel will have boards leading to the swinging lid held up by the pole. The lid (covered in peanut butter and oatmeal) will then swing open thus trapping the despicable creatures in the depths of the barrel. Unfortunately, these rats have an unusually high IQ and have yet to fall for the barrel trick. Despite this, members of the



Bram Robertson and his trap

committee have been able to confirm five kills by using other methods. Past CREAMers have also kindly shared pest control suggestions with us. It was mentioned that we should try using large fishing nets as well as perhaps a domesticated coyote/mountain lion. New methods will be discussed at our next meeting. To be continued...

Total Confirmed Kills: 6

The Carbon Footprint of our Dear Ag Animals

By Elise McDonough

What is the shape of the United States carbon footprint? Some people in the press would like to make everyone believe it is the shape of a hoof. Although 14.5% of greenhouse gas emission is from agriculture that still leaves about 85.5% of gas emission other human activities. Americans add to the carbon footprint through transportation, electricity, and industry in both commercial and residential aspects. These ideas were the backbone behind Dr. Bill Berndtson's lecture following a yummy Thanksgiving dinner.

The reason the news can point fingers at agriculture, and specifically cows, for contributing to the carbon footprint is because the digestion of cellulose produces methane. The methane is released as a byproduct of the cow's digestion, and among all agriculture animal's beef and dairy cows

are the most abundant in the US. Given their popularity, the cows contribute about 9% of the total 14.5% of greenhouse gases from agriculture. Although at this point some people would stop and say that that is reason enough to reduce the dairy and beef industry and become vegan, it is important to realize the amount of food that the cows produce and where they are producing it. Cows provide a tremendous amount of food worldwide. Also, frequently, the land used for pasture is not good enough to grow harvestable grains and veggies on. Thus, provided that the world population is still increasing, and more people need to be fed with the same amount of land, if the pastureland was not used for agriculture, then it would not be able to produce the additional food required to replenish the rising demand. In the words of Dr. Berndtson, "You might as well use that land for something." Followed soon by, and "I grew up loving agriculture."

High/Low Diet

By Corisa Quincey and Haley Osgood



After starting the committees at the beginning of the semester, the class began to learn about the finances and production of the herd. Understanding more about the herd, the class decided that something needed to be changed. The cost per cow and income over feed cost were not at the places they needed to be. The cost per cow was too high and the income over feed cost was too low. It was costing the class more than it should to feed each member of the string, with their production not making up for it. With this information, we decided to split the herd into two different diets, high and low. The high diet is for the cows producing the most milk, providing them with the appropriate components to keep their production up. The low diet contains less of the expensive

ingredients for cows who aren't producing as much milk in the beginning of their lactation or who are later in their lactation and drying off soon. After executing the different diets, cost per cow and income over feed cost values have improved greatly. Even though it was a bit of a hassle to get the cows to learn their new spots, I believe that it has improved the herd as a whole.

Calf Corner

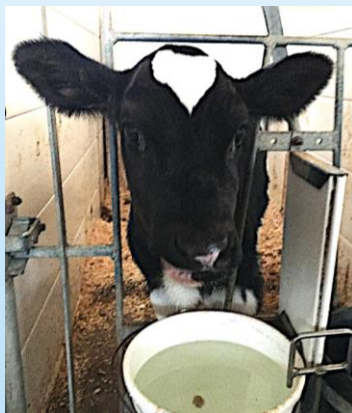
With Kira Kenny

Welcome to Calf Corner, where the new calves of CREAM are introduced! In this edition, we are featuring our newest calf, Rabbit! We also have two honorable mentions; calves that are not part of the CREAM herd, but are too cute not to share!



Rabbit

Born: November 28, 2017
 Dam: Robin
 CREAMer: Felicia Ingman



Born: November 1, 2017
 Dam: Dumbeldore

Gryffindor

Born: October 20, 2017
 Dam: Lavender



Neymar

It's Calving Time

By Alissa Scinto

The miracle of life happens weekly at Fairchild Dairy, and the Herd Health subcommittee presented the standard operating procedure (SOP) for neonatal calves to familiarize the class on something that is fundamental to the dairy industry. Dairy cows are pregnant for approximately 9 months, or 284 days.

- Signs of calving include: thick, clear/bloody discharge, edema and a bagged-up udder, straining to defecate, restlessness

Once you see the amniotic bubble or calf feet poking out of her vulva, let a farm worker know. Calving should take under two hours, but can be prolonged due to a large calf or dystocia.

- Signs of dystocia: only one leg/foot, legs but no head at the cannon bones, declaws on top

Once the calf is born, it is okay to let the cow lick and clean up the baby before moving the calf to the calf room. However, the calf must be moved before it nurses. Heifers are added to the next youngest heifer, and bull calves are put towards the front of the calf room; the stall must be completely bedded to provide maximum comfort, dryness, and warmth to the neonatal. To prevent infection, the navel is thoroughly dipped in an iodine solution, and a blanket is put on if the temperature is below 40°F. The most important part of neonatal calf care is **colostrum!** Heifers receive high quality colostrum

from our bovine leukosis-negative cows and bull calves receive colostrum replacer.

- Bovine Leukosis Virus: oncogenic retrovirus transmitted through blood, placenta and/or colostrum

The first two quarts are given within 6 hours of birth, and the second two quarts are given within the next 12 hours. When a calf is given colostrum, it is written in the book to make sure calves are receiving the appropriate amount of colostrum for healthy growth. Quality colostrum contains greater than 50 grams per liter of immunoglobulin G (IgG), as well as high amounts of protein, fat, and calories. This passive immunity fights off pathogen threats for the first few days of life while the calf is building its own white cell bank. Heifers also receive Calf Guard and Bar Guard vaccines that offer protection from rotavirus, coronavirus, and *E. coli*, which are all scouring diseases.

After the calf is moved away from the maternity pen, warm water in a blue water bucket is offered to the cow, as many buckets as she will drink. She is given a 5cc injection of oxytocin to help clean her placenta from her uterus and to aid in milk letdown. She is monitored for the next few days in case she develops milk fever, retained placenta, metritis, or other pregnancy complications.

Although CREAMers might not have the opportunity to see a calving, it is important for all of us to know calf and postpartum procedures. A neonatal calf SOP is important to the successful functioning of a dairy farm—a cow's success begins at birth!

Pesky Pests and How to Trap Them

By Bram Robertson

One of the biggest, and hardest to manage, problems on any farm is pests, and specifically rats. Rats are a fairly intelligent animal which can make them even more challenging to trap. They will quickly figure out what captures or kills them. So I decided to build a trap to combat the rat problem.

Utilizing items found on any dairy farm I created a barrel trap. Taking a fifty five gallon barrel I cut the top off the barrel and strapped a length of fiberglass fence post to it. I cut the piece small enough so it would be able to spin completely. I then drilled two holes in either side of the barrel and mounted the fiberglass fence post in the holes. Afterward, I cut a slot on one to fit a two by four in it; this acts as a ramp. I then smeared the top with peanut butter and poured oatmeal over it. The next step is to wait for the rats to fall in. So far we have had one "visitor".

CREAMer Biographies

Jessie Sexton



Hello! My name is Jessie Sexton. I am an animal science major and I am from Plaistow, New Hampshire. My CREAM cow is named Lentil! I became interested in cows in high school in my vet tech class that I took at Pinkerton Academy. This is where I learned to judge cows and got involved with FFA. The thing I love most about cows is how each of them has their own personality and it is really fun to get to know them all! After I graduate I hope to go to vet school and eventually become a vet in a mixed animal practice! Other than cows some of my interests include running, rock climbing, and hiking. I am very excited to be part of this years CREAM class, it is going to be legenDAIRY!

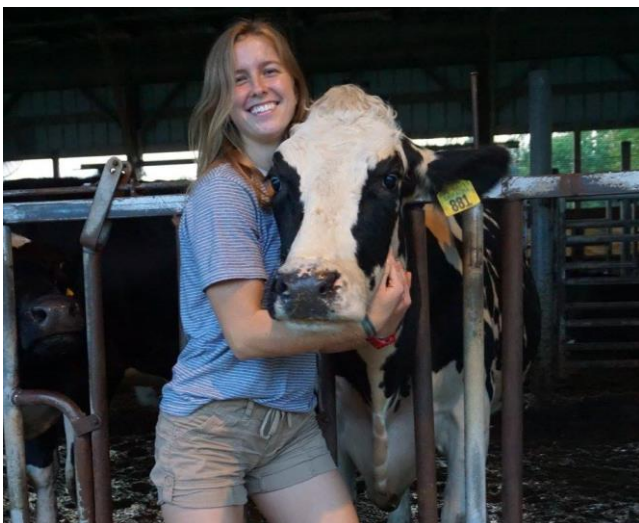
Matt Boudreau

I'm Matt Boudreau and I'm a Junior, Sustainable Agriculture and Food Systems major. My hometown is St. Albans, Vermont. Some of my hobbies include hanging out with friends and playing sports. Chipotle, number 660, is my CREAM cow. I became interested in CREAM because of my agricultural background. I think it is one of the best classes at UNH because it teaches you many valuable skills that will help you succeed after school. After graduation, I would like to work on my family's grain elevator. I also would like to start a small hobby farm.



Elise McDonough

My name is Elise McDonough and I am from nearby Greenland, NH. I am a senior this year and am a biomedical science pre-vet major, with aspirations to work in a mixed practice veterinary hospital professionally. My beautiful spotted, young, and attention-craving cow is Sriracha, 881. Overall, CREAM has been a great experience so far, and has offered me the chance to work with more cows than ever before. I have experience with horses and sheep, but since coming to UNH I have aspired to take CREAM to get the chance to have hands-on experience with the dairy cows. My interest in the cows has only increased since freshman year, after taking dairy selection and dairy cattle diseases, so CREAM is a great and memorable class to be a part of senior year. Other than CREAM I can be found playing almost all the intramural sports and am a co-captain of the UNH club softball team. After I graduate I plan to take a gap year and do a couple month internship with wildlife or exotics before vet school.



Herd Health Checks

By Bailey Veilleux

Corisa Quincey



Just about every two weeks, UNH's own campus veterinarian, Dr. Dean Elder, visits the Fairchild Dairy Farm for a herd health examination. I'm a junior biomedical science/MVS major, hopefully going on to veterinary school one day. I'm from Denville, New Jersey and had my first experience with cows coming to UNH. During these checks, he evaluates any cows that are having health problems. These problems could include going off of feed, dropping in milk production, or problems with movement caused by hoof injuries. He is able to examine each cow and treat them accordingly. A major portion of these health checks also includes checking if cows are pregnant. Outside of annoying Turtle, making her cuddle me 24/7, I like to hike, kayak and watch Netflix.

Dairy cows need to be bred on time in order for them to have a calf and produce milk. For our herd, cows are checked with an ultrasound



Elizabeth Clock

This is a pregnant cow!

Hello, my name is Elizabeth Clock and I am a second year Dairy Management major. I have been a part of the CREAM program since my first semester. I love cows because they are so unique and have their own personalities. I have learned a lot from the program and hope to stay involved as I can with cattle.

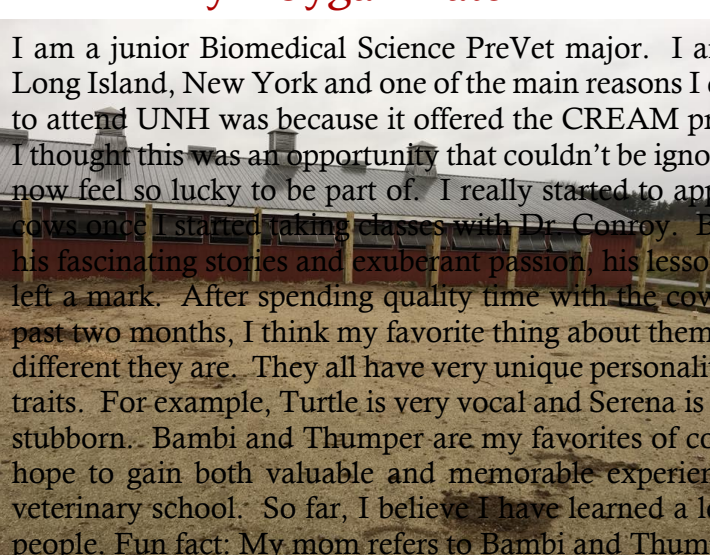
Every Tuesday, the Jon's Wishlist subcommittee meets to tackle the everyday tasks that need to be completed at the dairy. The tasks directed by Jon the barn manager, range from cleaning, to destruction, to building and so much more.

Labor

By Abygail Tat

Kate DeChirico

I am a junior Biomedical Science PreVet major. I am from Long Island, New York and one of the main reasons I decided to attend UNH was because it offered the CREAM program. I thought this was an opportunity that couldn't be ignored and now feel so lucky to be a part of. I really started to appreciate cows once I started taking classes with Dr. Conroy. Between his fascinating stories and exuberant passion, his lessons left a mark. After spending quality time with the cows in the past two months, I think my favorite thing about them is how different they are. They all have very unique personalities and traits. For example, Turtle is very vocal and Serena is beyond stubborn. Bambi and Thumper are my favorites of course. I hope to gain both valuable and memorable experiences from CREAM that will guide me on my path to veterinary school. So far, I believe I have learned a lot and am so happy to be working alongside such great people. Fun fact: My mom refers to Bambi and Thumper as her granddaughters.



CREAMers dug 2 foot holes were hand dug, and 10 brand new posts were put in. The next step to this project is mounting brackets and putting up fence panels. Once this is done, our cows will be able to enjoy their outside exercise time!

New fence posts to repair the exercise pen

Winter is Coming...

By Jessica Childs

As we CREAMers have learned, 4 am milking shifts can be tough. Waking up before the sun is never easy. So far, it hasn't been worsened by that lovely white stuff that makes its New England arrival around December or January. This white powder is fantastic on a mountain with skis and hot chocolate. Kids are typically big fans and love to play and make angels and round men with it. However, if you are working on a

farm, this white "joy" can be a huge annoyance. What could this possibly be? SNOW! Well I love the snow outside of the barn, inside it can make everything harder, take longer, and seem much colder. Some of the cows may love it and have fun romping around in the falling flakes, but the Jaylor is not a fan. Neither are the hoses that freeze, heated water buckets that mysteriously stop heating, and the metal door handles that turn into tools of freeze brands if touched with bare hands. Sadly fellow CREAMers, winter is coming, but the cows still need to be fed.



The Fairchild Dairy Teaching and Research Center

Home of CREAM and soon to be covered in snow.