

From Moo to Ewe

1

The Pre-Vet Club Newsletter

November/December 2016

Article	Page #
Editors' Letter	1
Barn Bulletin	2-3
OSU CVM/MPH	4-5
Hog Nosed Bat	6
I Love My Pet!	7
Blast from the Past	8
Pets & the Holidays	9
Crossword Puzzle	10
Word Search	11
Sudoku	12
Animal Comics	13-14
Answers	17-18



Contributors: Cassie Barber, Rebecca Berton, Autumn Brehm, Darian Gordon, Seth Hockaday, Emily Martinez

From the Editors' Desk

Hello! Can you believe next week is lab finals week already? The semester flew by so fast! We wish you the best of luck on all your lab and lecture finals this week and the next! We also hope all of you have a safe trip home and a wonderful Christmas and New Year with your family and friends.

As the semester is winding down, we hope that you will find time to read the last edition of the Pre-Vet newsletter of this semester. Students did a great job contributing articles and submissions to the newsletter! The next newsletter will be the January/February edition and if you are interested in submitting a piece, please let us know.

Merry Christmas and Happy New Year!

~Heather & Katelyn Reist

PVC'S UPCOMING EVENTS:

Dec. 5th (9am-12pm): "Deck the Trees" in AMU

Dec. 9th - Last Day of Classes

Dec. 12th-16th - Finals Week

Jan. 9th - First Day of Classes for Spring Semester

Mar. 4th - 9th - Spring Trip



Barn Bulletin

2

Heather Reist

The semester is coming to a close and the barn is just as active as ever! Although many of the baby animals have grown and there aren't as many at the barns, students are still hard at work in their animal handling and production classes.

Food Animal Handling classes have been busy dehorning and castrating dairy bull calves, practicing reefing cattle, trimming goat, sheep, and llama hooves, and leading the llamas and alpacas. Every year the University purchases several breeds of dairy bull calves so students have the opportunity to learn about the breed as well as learn the proper technique to dehorn and castrate them. This is a great experience for freshman students studying animal science. Because there are so many sheep and goats currently at the barn, there are lots of opportunities to trim their hooves in class. However, not only do students get to trim the hooves of sheep and goats, they also get to work with the alpacas and llamas!

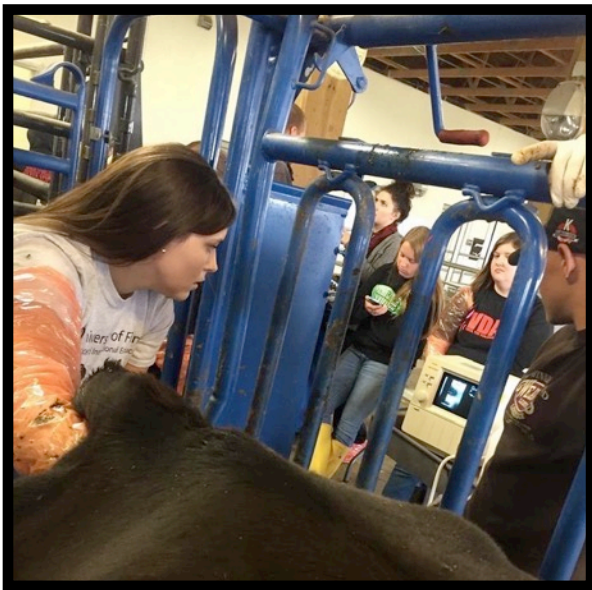


Although alpacas and llamas are not technically known as food animals, the animal handling students get to work with them since they are housed at the Animal Science barn. The University of Findlay currently owns two llamas and four alpacas. These animals, all named and registered, were donated to the University a few years ago by a very well known breeder. The two llamas are named Princess Lea and Henrietta. The alpacas are named Gisselle, Maura, Melissa, and Mandy. The alpacas and llamas get lots of attention from students and love being walked through the animal science barn!



(continued on page 3)

Not only do students get to work with llamas and alpacas, but they also get to work with beef cattle in the Beef Production class. Students in the Beef Production Lab have not only learned about the cow/calf operation industry, but have had the opportunity to work with the cows. In this class students are able to palpate and ultrasound cows, practice artificial insemination, put CIDRS in cows, and judge cattle based on confirmation, weight, and quality. This is a great class for students interested in the beef industry, as it contains lots of hands-on labs.



Students have also been able to work with the Lowline Angus beef cattle at the University throughout the semester by participating on the beef show cattle team. Throughout the semester students are able to teach the cattle to lead, as well as wash and rinse the heifers and bulls to prepare them for the Louisville show. A few weeks ago some students on the team had the opportunity to travel to Louisville, Kentucky to show the cattle at the North American International Livestock Exposition. The students worked very hard preparing the cattle for the show and showing them. However, all of their hard work paid off

when many of UF's heifers and bulls won grand champion, reserve grand champion, first and second places!



As the semester is coming to an end, many students are busy finishing up English papers, projects, and online homework. Not only are students involved in their classes on campus, but they are also working hard to finish their classes out at the barn. Many classes such as Equine Animal Handling, Food Animal Handling, and Beef Production, have a “practical” in addition to their written final. Students will need to use the skills and knowledge learned throughout the semester on their last exam. They are usually very well prepared for their exam, as well as their future in animal science, due to the great hands-on classes the University has to offer!

*more pictures at end of newsletter!

The Ohio State Univ. DVM & MPH Program

Darian Gordon

Many of the vet schools in the United States offer the opportunity to receive your Master's in Public Health (MPH) concurrently with your Doctorate of Veterinary Medicine (DVM). Every school has a unique program with distinguishing characteristics. One example of a veterinary school that offers this program is the Ohio State University. The dual degree program that they offer is titled Veterinary Public Health (VPH).



Students that choose to pursue the dual degree still learn the same information that their other veterinary colleagues are learning, but they also learn additional information to prepare them for a career in public health. The areas where public health students will develop a deeper understanding is in epidemiology and ecology of zoonotic and food-borne diseases in both animals and human. To develop this understanding, students study animal population systems, the roles of companion and food-producing animals in society, and food safety and security (The Ohio State College of Veterinary Medicine, *Explore Veterinary Public Health*).



To obtain the dual degree, there are five core public health courses that have to be taken. They are Epidemiology of zoonotic diseases, food-borne diseases and food safety, biosecurity and environmental health, veterinary epidemiology, and biostatistics (The Ohio State College of Veterinary Medicine, *VPH Curriculum*). These core classes are the bookwork portion of the degree but to receive a degree, a practicum and a culminating project also have to be completed.

The practicum is completed after the core courses are completed because it allows the student to apply the knowledge that they obtained from the courses in a professional setting. The practicum occurs in the form of an internship and the areas that the students usually intern under are zoonotic diseases, food safety, preparedness and emergency response, environmental health, epidemiology, biomedical research, and

(continued on page 5)

in the classroom (The Ohio State College of Veterinary Medicine, *VPH Curriculum*). Another requirement of the dual degree program is the completion of a culminating project.

The culminating project allows students to apply the knowledge obtained from both the curriculum and the practicum by completing their own research. Students have the option of either completing a thesis or a non-thesis project. The thesis project has the student complete research to generate new knowledge. The non-thesis project has the student evaluate a veterinary public health

issue and try to resolve the problem (The Ohio State College of Veterinary Medicine, *VPH Curriculum*). The Ohio State College of Veterinary Medicine has a very unique dual degree program that produces successful and experienced students. This program offers students both vast experience and several opportunities for their future career.

For more information of the Ohio State's VPH program visit: <https://vet.osu.edu/education/veterinary-public-health-program>

***Contact editors for references**



Kitti's Hog-Nosed Bat

Seth Hockaday

Found in Thailand and southeastern Burma, Kitti's Hog-Nosed bat, also known as the Bumblebee Bat, is the smallest bat and mammal in the world. Their size ranges from 2.9 cm to 3.3 cm tall, which is smaller than your thumb.

Having red or gray colored fur instead of the usual black, along with a flat nose, shaped like that of a pig, makes them an adorable and funny-looking animal. They are found in limestone caves along the Tenasserim Hills in the Kanchanaburi Province in Thailand and along the Dawna and Karen Hills in Burma.

The Bumblebee bat makes short flights in the evening and morning to

eat insects off nearby bamboo and teak trees. Unusual among most bats, Kitti's Hog-Nosed bat is calm around humans, allowing us to pick them up and observe them.

Because they are so friendly around humans, this unfortunately makes them easily captured by humans. As of now they are listed as "vulnerable" to the World Wildlife Foundation, as they are captured in large amounts to be made into taxidermy models for tourists. The Kitti's Hog-Nosed bat's primary home, caves, are also being mined for limestone, forcing them to find other areas to live.



I Love My Pets!

Katelyn Reist

My family and I have many animals on our farm in Lancaster, Pennsylvania. We have two Percheron draft horses (Cap & Tom), a Belgian draft horse (Francis), a goat named Lawnboy (L.B.), a Gypsy Vanner horse (Calypso), a heifer (Annabelle), and an Angus steer named Slim Jim. Although it is hard to decide which animal is my favorite, I would have to say that I really enjoy spending time with our two oxen, Frye and Burg, that we recently acquired. Frye and Burg are two Jersey steers that are six years old. They have been raised and taught how to drive and walk by using voice commands and hand gestures ever since they were born. Our family was fortunate to acquire Frye and Burg last year from Dr. Darwin Braund of State College, Pennsylvania.

Steers have been trained to work for more than nine thousand years and during that time oxen helped pull wagons, work in the field, and transport goods for trade. There is no special breed for oxen; any bovine bull calf (dairy or beef) can eventually become an ox. Once the bull calf is castrated and trained to work, he is called a “working steer.” Only at four years old is the steer able to be called an ox if he is trained to work. This is mainly because in history, steers were not considered to be old enough to to work until the steer was four years of age. Over time and as technology evolved, oxen faded from farm life. Today, only a few number of farmers use oxen to work.

Frye and Burg were named after the Fryeburg Fair in Maine, where hundreds of oxen are exhibited in pulling contests and demonstrations each year. The Fryeburg Fair is famous for its dedication to oxen and working steers. Frye and Burg were embryo transfer (ET) calves out of the same mother, but born ten hours apart in November of 2010. Frye was born first,



weighing 75 pounds and was carried in a Holstein cow, whereas Burg was born at 55 pounds and was carried by a Jersey cow. Both of them were born at Jemi Jerseys near Newburg, Pennsylvania. They had to be bottle fed and raised to acquire the trust and bonding with humans. Unlike horses, one has to start training the calves once they are born and allow them to get comfortable with a yoke.



(continued on page 8)

(continued from page 7)

Dr. Braund started training Frye and Burg at ten days of age in which they were both led individually and taught “whoa.” Once these two little calves were used to leading, the next step was to tie their heads together, and lead them both together, making them stop at the same time.



After a few months of learning how to lead, turn, and respond to commands, a small four inch training yoke, weighing nine pounds, was placed on them when they were three months old. A yoke is the most important piece of equipment when driving oxen. It is a wooden piece of equipment that allows both steers to pull the load together. Yokes are fitted to the steers and must be replaced to accommodate the steers' size as they grow. When Frye and Burg were over a year old, they were able to pull a tractor tire and later on, a dump cart. As a few years past and at age four, their last yoke (which is used today) was placed on them, measuring ten inches wide.

A lot of time and training was completed in order to allow Frye and Burg to work and drive together. Today, we are able to drive them by using our voices to say “haw” to make them go left or “gee” to make them go right. They are also able to follow hand motions in which the person uses a goad stick. When the handler raises the goad stick, the oxen learn to start walking; when one lowers the goad stick, the oxen stop.

Having oxen has allowed me to fully understand how much training and patience that one needs to work with oxen. Oxen are wonderful to have and certainly have their own personalities like many other animals. Frye and Burg enjoy spending time in their pasture together eating green grass or hay, and occasionally working with each other in the yoke. Over the past year that we have had them, it has been quite an experience working with them and is even more rewarding to drive them! Frye and Burg enjoy the visits from Dr. Braund, and his friend, Anna Mae, and always look forward to seeing them.



Dr. Darwin Braund with Frye & Burg

Pets and the Holidays

Heather Reist



With the temperatures getting colder and the semester coming to an end, Winter break is just around the corner. With this break comes a lot of holiday parties and family get-togethers. Since this is one of the busiest seasons for shopping, celebrating, and decorating, some people overlook the impacts of the holidays on their pets.

Here are a few things to keep in mind throughout the holiday season:

1) Provide warmth and shelter: Do not keep pets outside for long periods of time during the winter season. Although some people believe pets are more resistant to cold weather because of their fur, this is not necessarily true. Like humans, pets can get frostbite and hypothermia when left out in the cold.

2) Protect Paws: Dogs' paws should be wiped off after going for walks outside. Their paws easily pick up chemicals used in ice melt and salts that can irritate the pads of their feet. Cold weather and ice cause injuries (such as cracked paw pads and bleeding) to dog paws. This may even lead to lameness. Be sure to continually check your dog's paws for these signs.

3) Properly feed and water: Pets should continue to be watered and fed to help generate body heat to keep warm. If a pet is in a shelter outside,

continue to make sure it has fresh and unfrozen water. These animals also require a higher calorie diet to generate body heat and energy. Plastic bowls are recommended during the winter season instead of metal because your pet's tongue could stick and freeze to metal bowls.

4) Prevent Poisoning: During the holiday season, be careful of dangerous substances, such as harmful plants (Christmas trees and holly), food (chocolate, sugar substitute, onions, and grapes), and chemicals (anti-freeze and medication). These are very harmful to pets. If your pet digests a large amount of any of these, contact a veterinarian or the Pet Poison Helpline.

5) Protect Pets from Dangerous Situations: The winter is a great time to sit by the fire and relax. However, use caution when having pets around the fireplace because they could be burned if they get too close. Also, be careful when using space heaters. They can easily be knocked over by pets and potentially cause fire.

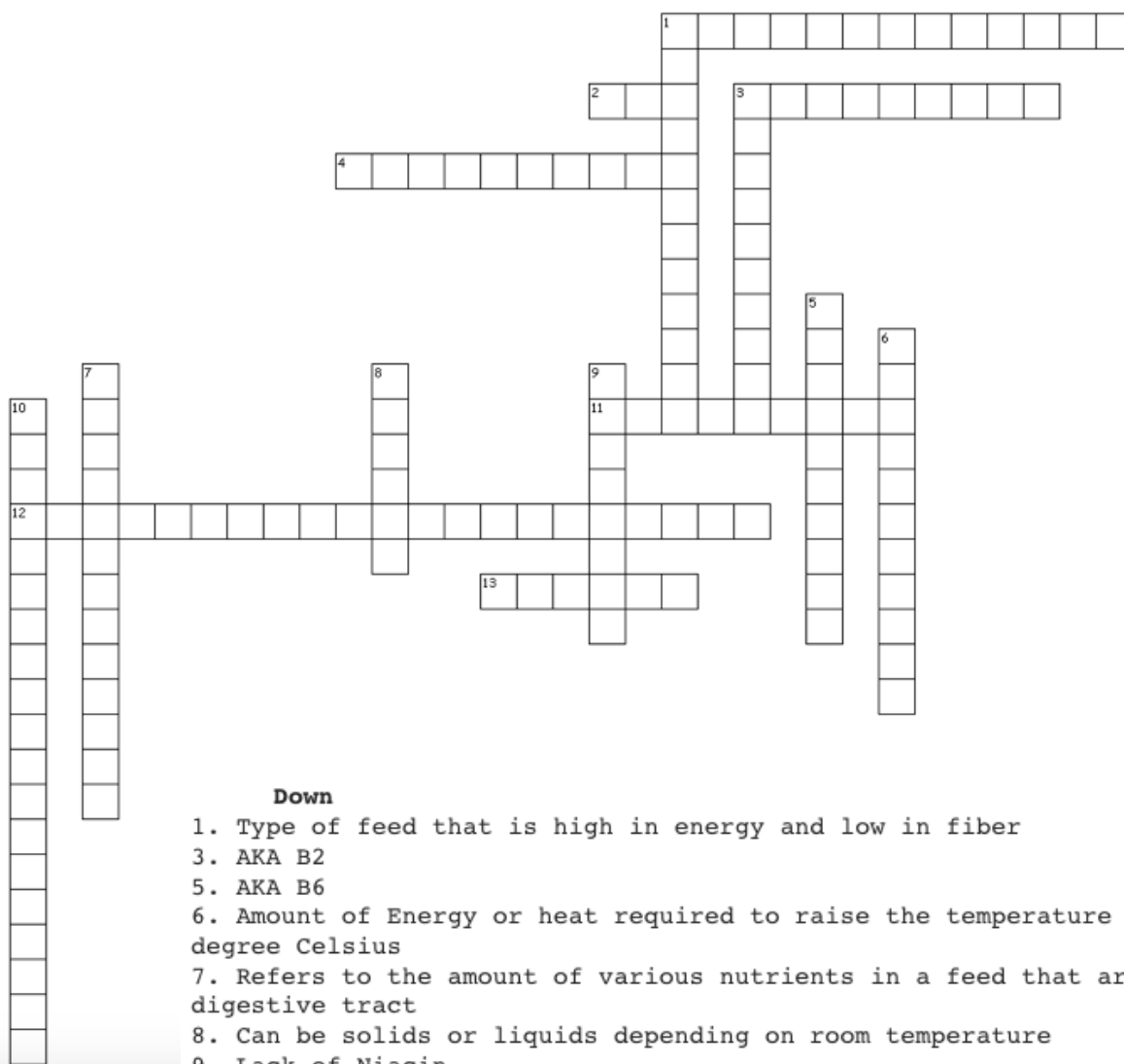
As you spend time with your pet this holiday season, it is especially important to keep in mind the health of your pet to prevent them from illness or injury.

***Contact editor for references**



Animal Nutrition Crossword Puzzle

Submitted by Emily Martinez



Down

1. Type of feed that is high in energy and low in fiber
3. AKA B2
5. AKA B6
6. Amount of Energy or heat required to raise the temperature of 1 Kg of water 1 degree Celsius
7. Refers to the amount of various nutrients in a feed that are absorbed from the digestive tract
8. Can be solids or liquids depending on room temperature
9. Lack of Niacin
10. Have single bonds

Across

1. Can be classified as simple or complex
2. Total Digestible Nutrients
3. Less digestible than concentrates
4. Vitamins include ADEK
11. Must be provided through the diet
12. Have one or more double bonds
13. A lack of Vitamin C

Animal Science Word Search

Submitted by Rebecca Berton

E O P H Y S I O L O G Y Y L Y A T E E L N S A
 L D K E S X B Z E P B E E F H A Z A F M M X K
 E U E N I V O B P O U L T R Y D H O N E Y O R
 R E P R O D U C T I O N O F S B E A W O O L Q
 U S J M V Q S N C H E E S E G L K A L M C U A
 T C E V J F U E Z A E S Y H T W O R G I C G L
 L I G Z D J W G L F N U T N E M P O L E V E D
 U T G Q O O S B Q E X N O I T A T C A L P V N
 C E S X L T O X L I C I U P L C U I Y F V X H
 I N U E Q U I N E R S T E N I W S F S I W G X
 R E M I L K D A I M M Z I S I D T Y R O M P F
 G G V O T Q I G W C Z S N O I T I R T U N U N
 A J Z F M P O R C I N E P N N A N A T O M Y I
 M H R O I V A H E B B R T A F D P E D E M B J
 C C R G N I D E E R B E D Y S H Q O P G W S Y
 I F M I C D Z S U R P O E D P O V I N E M K M

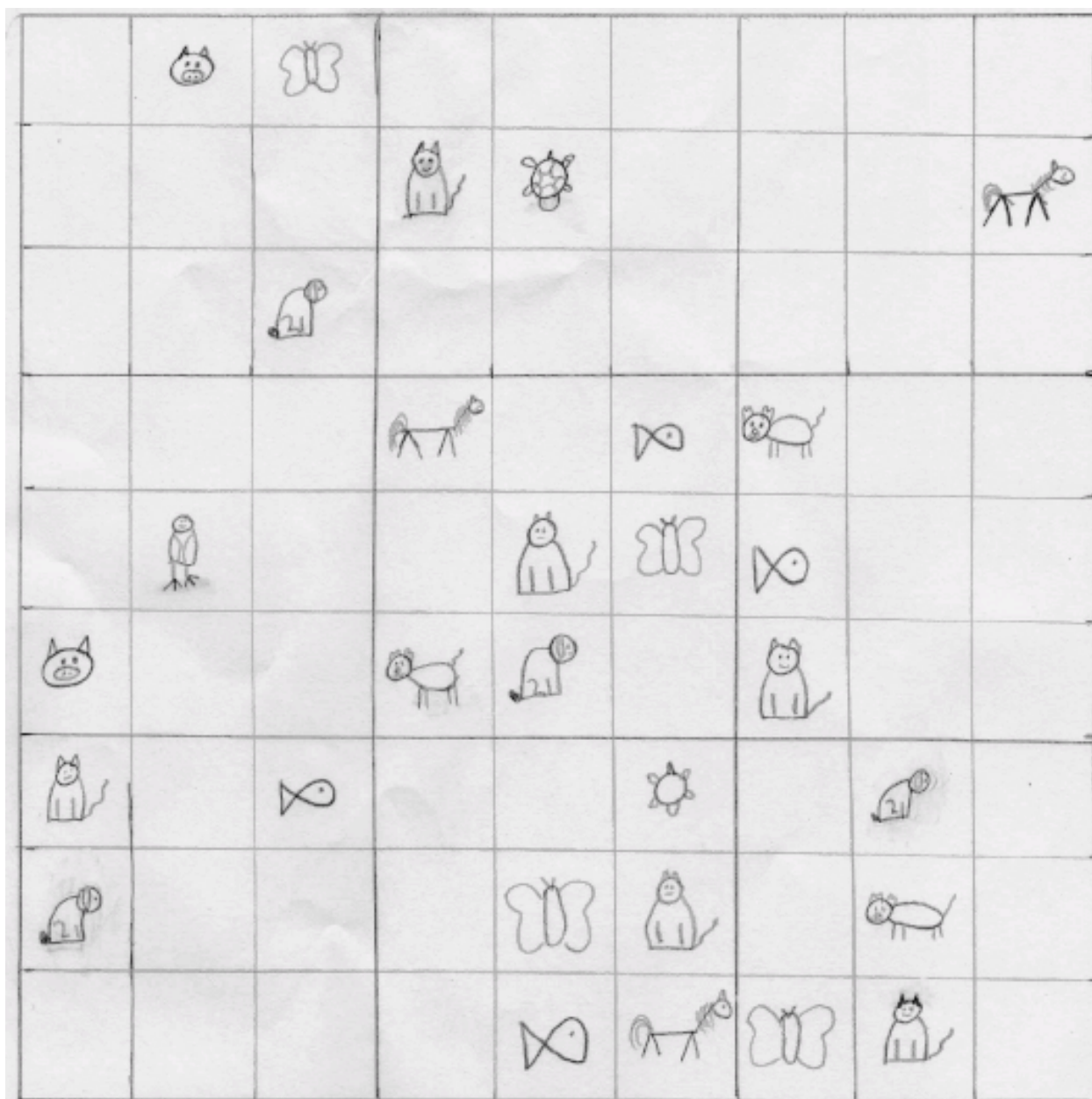
AGRICULTURE
 BEHAVIOR
 CHEESE
 EQUINE
 LACTATION
 OVINE
 POULTRY
 SWINE

ANATOMY
 BOVINE
 DEVELOPMENT
 GENETICS
 MILK
 PHYSIOLOGY
 REPRODUCTION
 WOOL

BEEF
 BREEDING
 EGGS
 GROWTH
 NUTRITION
 PORCINE
 SELECTION

Animal Sudoku

Cassie Barber



Cat



Dog



Bird



Fish



Horse



Pig



Rabbit



Turtle



Butterfly

Animal Comics

Submitted by Rebecca Berton & Heather Reist



**ALL FOOD MUST GO TO
THE LAB FOR TESTING**



of course I'm in shape!



round is a shape



Cornered...

gross! there are
ants all over
my lunch



ew, mine
too



**Because true friends hang out with you
when you're not feeling well.**



ooh,
my bad.



UF Students "At Work"!

15

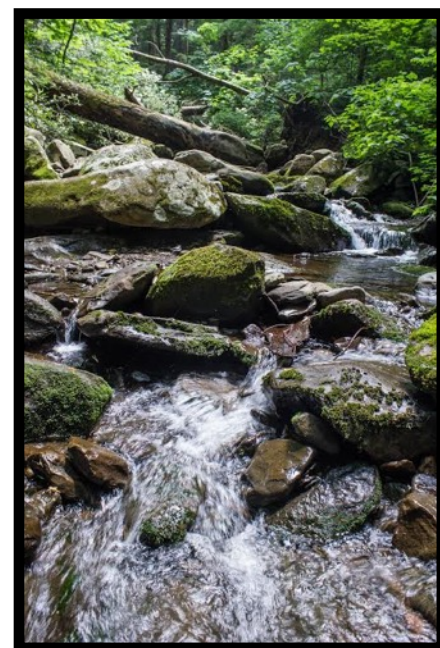
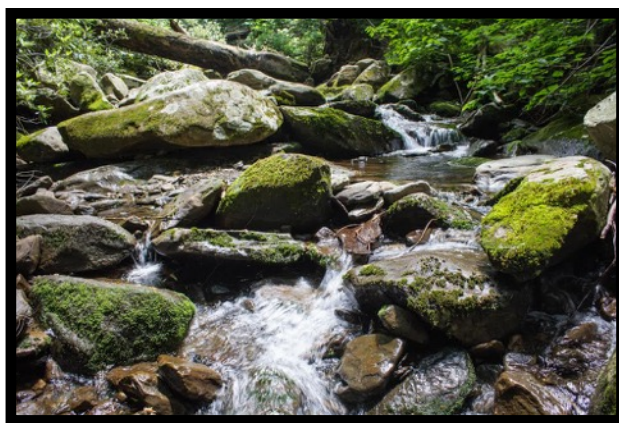
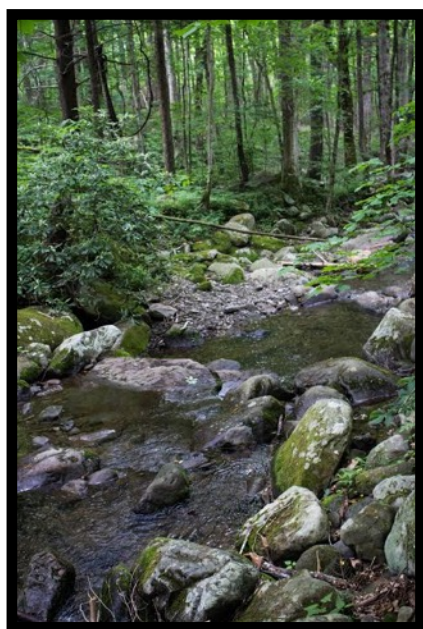
Here are some pictures of UF's students working with the animals in their animal handling classes and attending the NAILE (Louisville, KY) show.



Tribute to the People of Eastern Tennessee

The wild forest fires of eastern Tennessee have recently been in the news. Many people and their pets in Gatlinburg, Pigeon Forge, and surrounding areas have been affected by the fires. Some have injuries and have been displaced from their homes. The Pre-Vet Club is thinking of the families and the animals affected by the forest fires.

*Photos submitted by Autumn Brehm



Thank you for reading! See “ewe” next time!

Thank you for reading the November/December Edition of the Pre-Vet Newsletter! We hope that you enjoyed reading all of the articles and submissions that students have done. Good luck on finals and have a safe Christmas break! If you are interested in contributing to the January/February newsletter, please email either Heather or Katelyn Reist.

Answers to Animal Crossword, Word Search and Sudoku

Across

1. Can be classified as simple or complex (**Carbohydrates**)
2. Total Digestible Nutrients (**TDN**)
3. Less digestible than concentrates (**Roughages**)
4. Vitamins include ADEK (**Fat Soluble**)
11. Must be provided through the diet (**Essential**)
12. Have one or more double bonds (**Unsaturated Fatty Acids**)
13. A lack of Vitamin C (**Scurvy**)

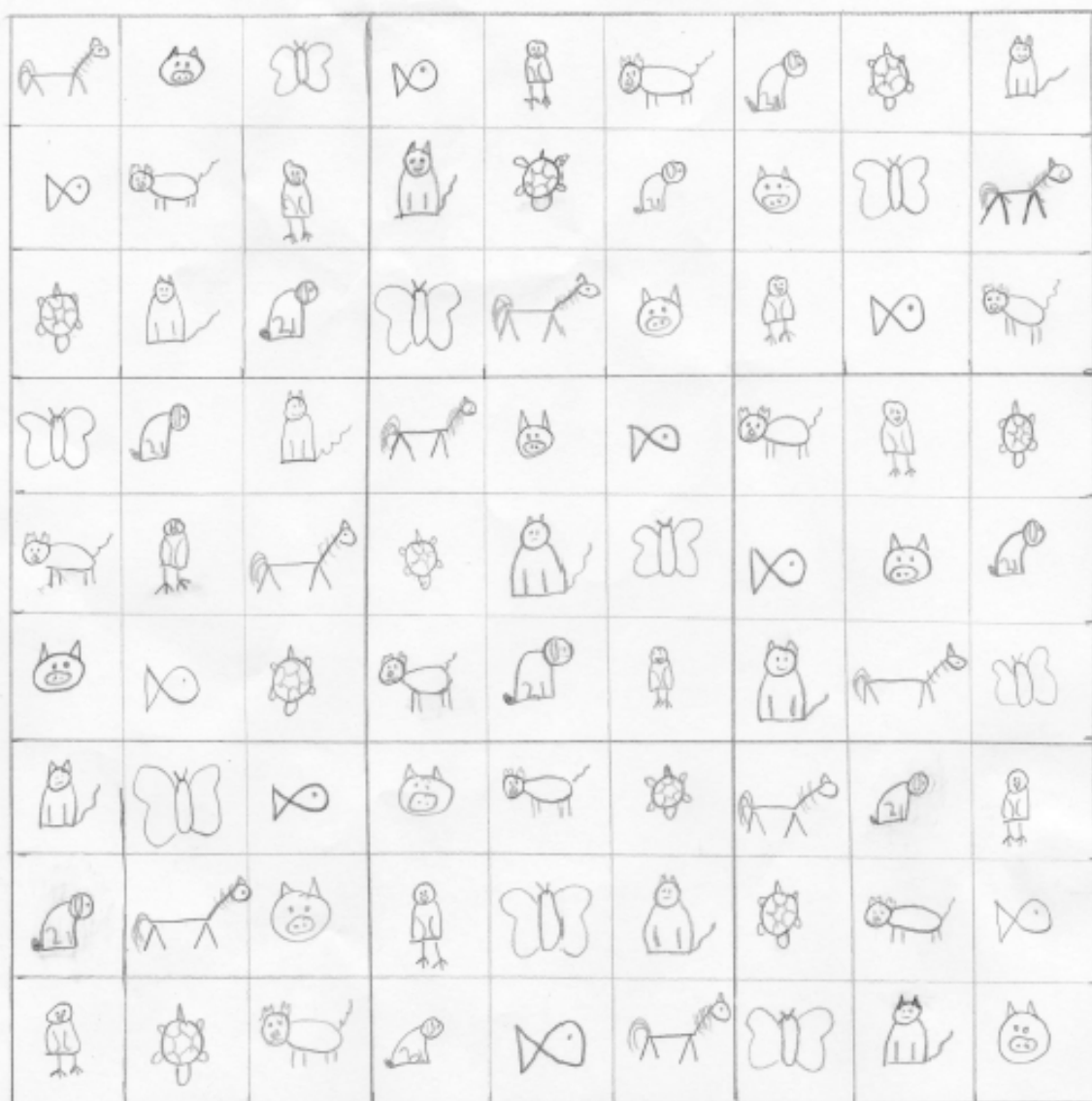
Down

1. Type of feed that is high in energy and low in fiber (**Concentrates**)
3. AKA B2 (**Riboflavin**)
5. AKA B6 (**Pyridoxine**)
6. Amount of Energy or heat required to raise the temperature of 1 Kg of water 1 degree Celsius (**Kilocalorie**)
7. Refers to the amount of various nutrients in a feed that are absorbed from the digestive tract (**Digestibility**)
8. Can be solids or liquids depending on room temperature (**Lipids**)
9. Lack of Niacin (**Pellagra**)
10. Have single bonds (**Saturated Fatty Acids**)

```

. . P H Y S I O L O G Y . . . . .
. . . . . . . . . B E E F . . . . .
E . E N I V O B P O U L T R Y . . . . .
R E P R O D U C T I O N . . . . . W O O L .
U S . . . . S . C H E E S E . . . . .
T C E . . . . E . . . . H T W O R G . . . .
L I G . . . . L . . . T N E M P O L E V E D
U T G . . . . . E . N O I T A T C A L . . .
C E S . . . . . C . . . . .
I N . E Q U I N E . . T E N I W S . . . . .
R E M I L K . . . . . I . . . . .
G G . . . . . . . N O I T I R T U N . .
A . . . . P O R C I N E . . N A N A T O M Y .
. . R O I V A H E B . . . . .
. . . G N I D E E R B . . . . .
. . . . . . . . . . O V I N E . . .

```



Cat



Dog



Bird



Fish



Horse



Pig



Rabbit



Turtle



Butterfly