



BEEF CATTLE INSTITUTE
KANSAS STATE UNIVERSITY

THE GRAZIER

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February 2017

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CALENDAR of EVENTS

Mar. 3: KSU Cattlemen's Day, Manhattan, Kansas

Mar. 30-Apr. 1: AVC Spring Conference, Irving, Texas

*Visit our booth at
Cattlemen's Day!
Friday, March 3rd*

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BCI Staff Member Awarded Federal Stipend to Support Field Experience

By Joe Montgomery

Alyssa Toillion, a Master of Public Health student at Kansas State University, is the recipient of a \$1,500 stipend through the Midwestern Public Health Training Center to support her field placement project for her degree.

The Midwestern Public Health Training Center, Iowa City, Iowa, is one of 10 regional public health training centers funded by the Health Resources and Services Administration, a part of the U.S. Department of Health and Human Services. The center annually selects five student recipients each in Kansas, Iowa, Missouri and Nebraska for the stipends.

"My field experience consists of creating species-specific brochures and PowerPoint slide sets for all those involved with treating and/or managing food producing animals, including veterinarians who need informative resources to educate their clients about best prevention practices," Toillion said.

"The stipend from the Midwestern Public Health Training Center is an excellent opportunity that will both help fund Alyssa's field experience and highlight public health projects conducted by Master of Public Health students at Kansas State University," said Elynn Mulcahy, director of the Master of Public Health program, which has four areas of emphasis: food safety and biosecurity; public health nutrition; public health physical activity; and infectious diseases/zoonoses, the latter of which is Toillion's chosen area of emphasis.

All Master of Public Health degree candidates are required to complete a field experience at an off-campus, non-academic, public health practice organization. The purposes of a field experience are to provide a bridge between professional academic preparation and public health practice; allow the student to apply the knowledge, attitudes, and skills learned in the core public health courses and the area of emphasis courses in an agency setting under the supervision and guidance of a mentor-preceptor who has significant public health training and/or experience.

Toillion's preceptor for the project is Tarric Crnic, a 2006 Kansas State University Doctor

of Veterinary Medicine and Master of Public Health alumna who now works for the Kansas Department of Agriculture.

"For my project, in addition to the brochures and PowerPoint slide sets, I will develop online training modules," Toillion said. "To do that, I'll be interviewing experts in different disciplines, including beef, dairy, swine, poultry, small ruminants and exhibitions animals. The first focus will be on-farm drug residue avoidance and cover strategies producers can use to prevent drug residues on their operation. The second focus will be the regulatory aspect of drug residues. This will entail contact with the FDA to learn the regulatory process on how drugs get approved, the testing process and how violative residue investigations are conducted."

To qualify for the stipend, students are expected to fulfill a specific set of requirements.

"I'll be asked to fill out a few evaluations, and write two to three blog posts for the Midwestern Public Health Training Center," Toillion said. "I will also have a final report to submit, outlining the extent of my project, and an abstract for the 2017 Kansas Public Health Association conference Oct. 10-11."

In addition to being a public health student, Toillion works in the College of Veterinary Medicine as an assistant project coordinator for the Beef Cattle Institute. Her responsibilities there have been involved in video editing and production for online training modules, which are skills she will apply to her Master of Public Health field experience project.

Toillion said she plans to present her master's report and finish her degree this summer. From there she would like to pursue a career in veterinary epidemiology.



Toillion will use a \$1,500 stipend from a public health training center funded by the federal government to support a field experience for her degree.

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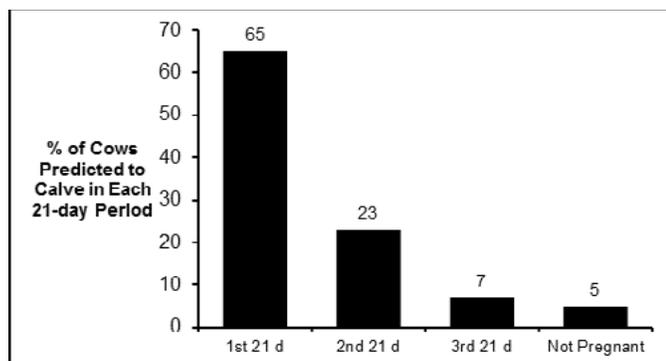
BCI Pregnancy Analytics App: How is the data used?

By Dr. Bob Larson

The BCI Pregnancy Analytics App was released in the fall of 2016 and is being used by veterinarians and beef producers to enhance monitoring and evaluating cowherd breeding season success. Veterinarians know that being able to visualize the percentage of a cowherd that becomes pregnant each 21-days of the breeding season can provide important information to identify the contributing causes for situations when a lower than desired percentage of the herd becomes pregnant, or to identify areas for improved reproductive efficiency. Until now, collecting and evaluating that information while at the chute during preg-checking has been difficult. Data entry for the BCI Pregnancy Analytics App is even easier than using a paper-and-pen method and has the benefit of data analysis that is as powerful as a chute-side computer.

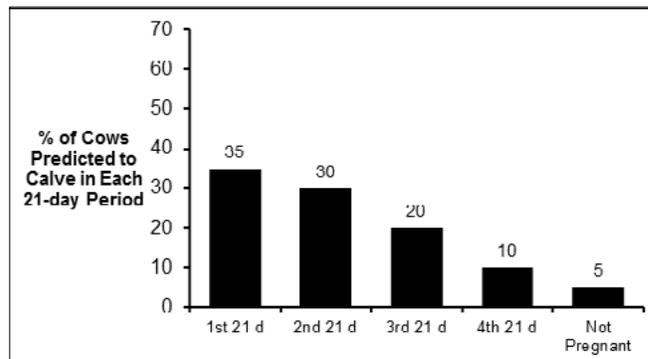
Beef cow reproduction is limited by two key factors, the first being a relatively long period of infertility following calving and the second being that only 60% to 70% of successful matings between a fertile bull and fertile cow will result in a viable pregnancy at the time pregnancy status is determined a mid-pregnancy. We know that approximately 30% to 40% of fertile matings result in either failure of fertilization or death of the early embryo, but in most situations, the cow will express heat and ovulate a fertile egg about 21 days after her last heat and have another 60 to 70% probability of conceiving and maintaining a pregnancy. Fertile cows that have three opportunities to be bred by a fertile bull in a breeding season (each with a 65% probability of a successful pregnancy) will have a 96% probability of being pregnant at the time of a preg-check about one-half way through pregnancy.

If nearly all the cows in a herd calved early enough so that they have resumed fertile cycles by the start of the next breeding season, and the bulls are fertile and able to successfully mate, then the ideal pregnancy pattern would have about 60% to 65% pregnant in the first 21 days of the breeding season, 85% to 90% pregnant by the 42nd day of breeding, and about 95% pregnant after 63 days of breeding.



Pregnancy distribution goal for a 63-day breeding season.

Herds that only have 50% of cows cycling by the end of the first 21-days of the breeding season are expected to have no more than 30 to 35% of the herd become pregnant in the first 21 days (60 to 70% pregnancy success from the mating of fertile cows to fertile bulls) and the pattern will be flatter and longer than the ideal pregnancy pattern. The magnitude of non-pregnant cows at the end of the breeding season will depend on

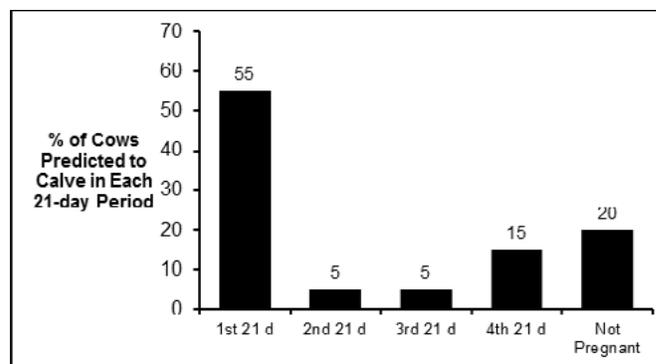


Typical pregnancy pattern for a herd with 50% of cows cycling by the end of the first 21 days of the breeding season

the length of the breeding season. Even if the breeding season is limited to 63 days, at least 80% of the cows are expected to be pregnant if the problem is confined to issues of cows resuming fertile estrous cycling during the breeding season. A magnitude of non-pregnant cows that exceeds 20% of the herd is not likely due to cow-problems alone and either bull problems or a combination of cow-problems and bull-problems should be investigated.

Poor pregnancy success due to bull problems can often be detected at the time of preg-check by using the pattern to identify a substantial decrease in the pregnancy success by 21-day periods. Because previously fertile cows rarely become infertile over a short period of time, but bulls can suddenly become less fertile due to testicular, penis, or leg problems, any time that reproductive efficiency suddenly decreases during a breeding season, bull problems should be considered likely.

The only data required by the Pregnancy Analytics App is the dates for the start and end of the breeding season and an estimate of the fetal age for each cow's pregnancy. Additional information such as cow id, cow age, body condition score, and



Pregnancy pattern of a herd that has good cow and bull fertility at the start of the breeding season but a sudden onset of bull infertility occurs toward the end of the first 21 days of the breeding season (such as injury, disease, etc.) that is then followed by a period of partial recovery.

breed (or other descriptor) can be added to enhance the value of the preg-check information.

The veterinarian and producer can decide whether to share the cow data with BCI or not. No herd identifiers are available to BCI - so even if you share the data we can't identify any person with the herd. If you agree to share the data, BCI will have access to the cow information (% pregnant, % with

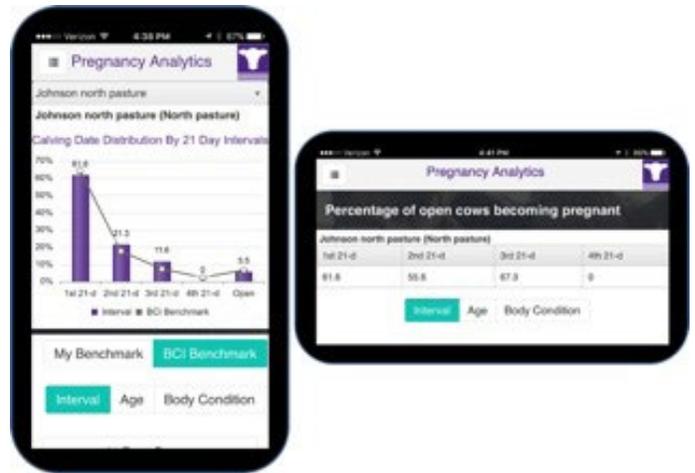
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Pregnancy Analytics App (continued from previous page)

each BCS, starting date for breeding season, etc.), but not the producer or veterinarian information. By submitting the data, the herd's data is compared to a benchmark created from all the submitted herds or a benchmark of the herds submitted by that veterinarian/clinic. If you choose not to submit the data to BCI, the app works the same, but there is no benchmark for comparison.

After preg-check data is entered, projected calving dates are generated and graphs are created to display the distribution of the upcoming calving season. These pregnancy patterns can help identify the most likely contributing factors when investigating herds with lower than desired percent pregnant.

The BCI Pregnancy Analytics App can serve as a valuable tool to assist veterinarians and producers improve reproductive efficiency of beef herds. By the start of 2017, the Pregnancy Analytics App has been downloaded nearly 800 times and over 250 herds with nearly 7,000 cows have already been entered and permission given to be uploaded into the BCI database. The BCI Benchmark is calculated to illustrate the level of reproductive success needed to be in the top one-third of the database. At this time, the Benchmark indicates that to be in the top third of herds, 63% of cows become pregnant during the



first 21 days of breeding, 19% become pregnant in the second 21 days, 9% become pregnant during the third 21 days, 3.5% become pregnant in the fourth or greater 21 day periods, and 5.5% of the cows in the herd are open.



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PRODUCER spotlight

Harry & Lisa Moser

MOSER RANCH

Wheaton, Kansas



The Moser family just after their 25th bull sale. Back row (l to r): Cameron Moser, Rex Michaelis, Tate & Tucker Michaelis, Lisa, Harry, and Ty Josefiak. Front row (l to r): Carrie Moser holding Thane, Kendra Michaelis holding Tenley, Kayla Josefiak holding Nora.

By Audrey Hambricht

Harry and Lisa Moser of Moser Ranch near Wheaton, Kansas, have made an excellent team. From performing all aspects of physical labor around the ranch, to making management and business decisions, their approach has helped create a thriving, family-run operation.

Harry, born and raised in North Dakota, was attending a Block & Bridle Conference in Fargo as an animal science student from North Dakota State University, where he met Lisa, an animal science student from Kansas State University. Both were raised on diversified agriculture operations engraining in each of them a love for beef cattle, leading them to pursue common educational endeavors and eventually getting married in 1982.

The Moser's started their journey together working on Harry's parents' operation before they were presented with an opportunity to manage a ranch in Kansas, four years later. The move allowed them to bring their own cow herd with them, giving them the chance to continue to build their genetic lines. Eight years later, they set out on their own and moved north of Wheaton to establish their own operation.

Since striking out on their own and continuing to pursue avenues in the purebred seedstock business, Moser Ranch has come to sit on a solid, 35-year foundation. The ranch herd is comprised of Simmental, Angus and SimAngus genetics. Last November, they held their 25th annual bull sale. The largest portion of their customer base, which numbers 375, is within 200 miles, but they have sold cattle across the U.S. and Canada. Their product is very commercially oriented, according to the Mosers, with 99 percent of their bulls sold to the commercial cow-calf man.

Their customer's success and loyalty is how Moser Ranch defines their own success. Each year, 85 percent of their bulls are sold to repeat buyers.

"By the customers coming back, we feel like we're raising the right product," Lisa said.

However, not only providing the right product has increased return buyers, but their level of customer service. Follow-up

visits, customer suppers and meetings as well as creating a market for their bull buyer's products, are just a few of the way they have built customer loyalty.

"If we can add value, they see a reason to buy breeding stock from us," Harry said.

The lifestyle can be challenging, but ultimately they find it to be the biggest reward for their family.

"It's a great way to raise kids," Lisa said. "It teaches them responsibility and a love for the land."

"It's a great way of life," Harry added.

Since their first year of marriage, they've set targets and have been detailed in their decision making, carefully considering new opportunities. Each major decision that has been made on the ranch included a list of pros and cons to evaluate whether that opportunity was in best interest of the future of the ranch.

Harry and Lisa regularly guest speak in classes in the K-State animal science department and host livestock judging team workouts at the ranch. One piece of crucial advice they share with their senior classes is applicable to anyone.

"In order to be really good at any job," Harry said. "You have to understand the industry from top to bottom and stay informed on all aspects of the business."

To help do this, they are involved in industry organizations that both represent their interests and keep them up to date; the National Cattlemen's Beef Association (NCBA), the Kansas Livestock Association (KLA) and the Beef Improvement Federation (BIF). Harry has served on the board of directors for both the KLA and the American Simmental Association (ASA) and served as chairman of the Board of Trustees of the ASA in 2007. Lisa is a member of the Livestock and Meat Industry Council and they continue to be active in their community.

Their teamwork and involvement in industry organizations has been rewarding for the operation in more ways than one. In 2003, they were awarded the BIF Seedstock Producer of the Year award and elected Stockman of the Year in 2012 by the K-State Block and Bridle Club.

Harry and Lisa are looking forward to a new endeavor they have recently taken on. They have been hired as consultants for a large herd in the area, advising the company on all beef production practices from genetics to nutrition to ranch management. According to Harry, it's very "outside the box," and they're excited to find a new way to make better beef.



The Moser outfit shoots their own bull video each year. They have done this for every one of their 25 sales. Pictured left to right is the 2016 video crew: Neighbor Tim Murray on "Diesel," son-in-law Rex Michaelis, friends Kelly Miller and his son Taegen, brother-in-law and part-time help Les Holthaus, Harry and grandsons Tate and Tucker on "Mav." Lisa is behind the camera lens.



The Moser Ranch hosted the 7th and 8th grade Science Classes from Mater Dei Junior High in Topeka, Kansas, on April 20, 2016, for a "Day on the Ranch/Farm." They saw first-hand where and how the beef they eat is produced, they viewed the cattle and facilities, heard the story of the ranch horses and cattle dogs, climbed inside of the semi-trucks, tractors, combines and swathers, and then enjoyed a hamburger lunch with the family. The Moser Family is always proud to tell the story of American Agriculture to consumers.

RURAL practitioner

Dr. Amy Bandel

MILL CREEK VETERINARY SERVICES

Alma, Kansas



Dr. Amy Bandel checking cattle.

by Audrey Hambricht

Dr. Amy Bandel is no stranger to adversity. Her journey has given her the strength and experience to be a successful rural practitioner.

An alumnus of the Kansas State University College of Veterinary Medicine, Bandel originally started her education with a focus on animal science and communications. Before starting at K-State, she managed the student radio station and competed on the livestock judging team at Cloud County Community College with plans to pursue a career in those fields. She always had the idea from a young age that she wanted to become a veterinarian, but it wasn't until she was a student in Dr. Dan Upson's A&P class that she realized how well she was doing in comparison to the pre-vet students. Her junior year, she met with her counselor to change her curriculum and cram all the required classes needed for pre-vet in her last two undergraduate semesters.

"I knew that if I didn't at least try, I would always wonder if I could do it," she said.

Bandel went forward fully expecting to have to apply for veterinary school a second time, but to her surprise, she was accepted on her first try.

After graduation in 1993, Bandel went to work for Sourk Veterinary Clinic in Scott City, Kansas. Her goal was to leave the familiarity of the Flint Hills and cow/calf production for somewhere she could see a lot of cattle and the abundance of feedlots gave her just that. From there, she went to Montana where a former colleague had started a practice. Bandel was only in Montana for six months, due to the untimely passing of her colleague, Dr. Bryan Rein. Because she was no longer



Dr. Bandel analyzes semen collected for testing.

covered by his license, she would need to wait and take the boards to be able to practice veterinary medicine in Montana.

Out of necessity, Bandel returned home to Wabaunsee County, Kansas, and started her mobile veterinary practice, Mill Creek Veterinary Services, now 20 years strong. Based south of Alma, her practice clientele is made up of 90 percent beef cattle operations. She's also performs relief work for surrounding local clinics.

Even though her clinic is on wheels, she feels she's at an advantage when it comes to creating a herd health program for her clients.

"My situation is really unique in that I'm out there first-hand and can see the environment the cattle are in," she said. "I can walk around, look at animal and pasture conditions. This gives an advantage to determine a disease process or suggest a management change by the owner."

Currently, she feels the recent changes to the Veterinary Feed Directive (VFD) have added a whole new challenge to the industry. According to Bandel, once producers and feed mill operators are following label directions and the right guidelines, it will be fine. Moreover, more producers will need to reach out to veterinarians.

Her advice for young professionals pursuing a degree or entering the workforce in veterinary medicine, is to get experience – both in extracurricular activities and in the field.

"In addition to working around animals, extracurricular activities are good reflections of work ethic and ability to get out into the public eye," she said.

She also hopes new graduates will take the incentive to gain more hands-on experience before going into practice.

"It would be of good benefit [for a student] to travel with a veterinarian to gain more experience in general practice and develop instinctive diagnostic skills," she said. "Especially in rural practices. You have to make judgements in the field and decide how to pursue treatment."

Not only does she cover a 45-mile radius visiting clients with her mobile practice, but she makes time for her community as a fair board member, volunteering with the local county fair and staying active at her church. She also enjoys what free time she has helping on the ranch west of Alma where she keeps her small herd of commercial cows.

Bandel's career in veterinary medicine may have not started how she pictured it, but her challenges created new strength to make it a success.

"When adversity strikes, there's always opportunity to overcome it," she said. "Not overnight, but you just have to have patience and things will turn around."



Dr. Bandel conducts a bull test.



NEWS BRIEFS

Strategically Growing Kansas Agriculture

By Heather Landsowne and Jason Walker, Kansas Department of Agriculture



In August 2015, the Kansas Department of Agriculture hosted a meeting of the Governor's Council of Economic Advisors. A direct result of that meeting was a call to action to develop growth strategies for Kansas agriculture — no small feat considering agriculture accounts for 43 percent of the state's economy. Through the first six months of 2016, the KDA ag growth team traveled the state to hold more than 250 one-on-one meetings with leaders from all sectors of Kansas agriculture, gathering information to identify challenges and opportunities for growth of the industry.

This material was used to guide discussion during the first-ever Kansas Governor's Summit on Agricultural Growth held in August 2016. Nearly 400 leaders representing a variety of agricultural interests from across the state attended the Summit, which featured a series of interactive workshops identifying the challenges and opportunities within individual sectors from traditional agriculture areas like beef, pork and wheat to cotton, specialty livestock, unmanned aerial systems and more. A panel discussion brought attention to the importance of talent and workforce in agriculture, which was also a topic in the afternoon workshops, along with several other issues affecting all sectors across the industry including barriers to entry, consumer awareness and community acceptance of agriculture, global opportunities, transportation and logistics, and water and natural resources. The input from those workshops has been compiled and shared with participants.

Kansas Beef Industry

As the single largest sector in the Kansas agriculture industry, there have been many discussions, during one-on-one meetings and during the Summit, focused on strategic opportunities to grow the Kansas beef industry. During the Summit, beef sector workshops focused on topics related to market volatility, consumer demand, regulatory challenges, consumer and influencer outreach, education and training for beef industry producers and professionals, and the need for a market-driven, voluntary, individual animal traceability system that not only provides critical tools to manage a disease outbreak, but also enhances consumer confidence and trust in Kansas livestock, protects food safety, and provides opportunities to access export markets.

Workforce Needs

From beef and pork to agricultural equipment and animal health, there is a need for individuals with education and training to work in agriculture. During the Summit, there was a strong focus on opportunities related to talent recruitment, training and skill development, federal laws and regulations related to workforce and talent, and affordable housing and quality of life.

Strategic Plans

The KDA ag growth team is now using feedback from the Summit and the one-on-one meetings to develop strategic growth plans which can lead Kansas agriculture into a future focused on growth. The work that has begun as an industry and the development of strategic growth plans for Kansas agriculture will result in an industry that grows stronger and grows smarter as it works to feed, power and clothe a growing global population.

2017 Ag Growth Summit

One recommendation received during this process was to make the Summit an annual event. Therefore, KDA will host the second annual Governor's Summit on Agricultural Growth on Aug. 24, 2017, from 8:30 a.m. to 3:00 p.m. in Manhattan. A social event will be held the evening prior to the Summit. Mark your calendar now.

For more information about the Summit and the strategic growth plan, visit agriculture.ks.gov/summit.

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