K-State graduate students push forward on pet food research

Conference highlights improvements in feeding, caring for domestic pets

By Pat Melgares, K-State Research and Extension news service

MANHATTAN, Kan. – Who’s looking out for your pets?

About a dozen Kansas State University students say they’re part of the answer to that question. They recently gave a lightning round overview of pet food research they’re conducting to help assure the health and safety of dogs and cats, in particular.

The students’ presentations capped a two-day conference on the K-State campus called KibbleCon, which brought together pet food industry leaders, mitigation specialists, market analysts, equipment and ingredient suppliers, and researchers.

“(Pet food research) is like a puzzle,” said first-year master’s student Kallee Dunn. “Once you put the pieces together, it’s amazing.”

Dunn is studying the impact of oxidation – a chemical reaction that occurs when a product comes into contact with oxygen – on the quality of fresh pet food.

“Most consumers want safe pet food, but they also want it to last longer,” Dunn said. “So they may buy a bigger bag. Little to no published research has characterized the stability of fresh pet food to oxidation.”

Dunn’s project is testing the possibility of adding antioxidants to fresh pet food to stem the effects of oxidation.

Another student, Samuel Kiprotich, is studying methods to prevent pathogens from growing in pet food – not only improving the quality of that food, but also preventing cross-contamination that could also make humans sick.
“As people, we are moving away from highly processed diets, and we often want our dogs to move away from them, as well,” Kiprotich said. “But if we’re not going to cook, pasteurize or can (a food), then there’s a risk of pathogens that can cross-contaminate areas where humans eat.”

Kiprotich’s work has found that adding 1% citric or lactic acid to pet food formulations can enhance the microbial safety of raw, meat-based diets.

Paris Johnson’s research is taking a look at whether dogs have the ability to differentiate between flavors, including sweet, sour, salty and savory (umami).

“If we create a product that we know is high in a (flavor) that a dog is not interested in, we may need to counter-balance that with something that may not be nutritionally additive but makes a digestible, nutritious food more palatable,” Johnson said.

While Johnson’s work has yet to determine specific flavors that dogs generally prefer, the researchers are developing an understanding that pets do have the ability to differentiate their tastes.

“As pet owners continue to humanize their pets, that’s something that we as researchers think about,” Johnson said. “If there are 20 options of food and they all say chicken, is there actually a difference in those, or can we alter the chicken flavor in a way that makes us confident that our dog is going to eat it?”

More information on KibbleCon, including presenters and the topics discussed this year, is available online.

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KibbleCon, https://www.kibblecon.com

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