

# USE YOUR INSIDE VOICE



PHOTO COURTESY OF AMERICAN ANGUS ASSOCIATION

Left: Jason Nickell talked about Whisper, the innovative tool for diagnosing BRD in cattle.

## Convention sponsor unveils the smartest stethoscope you didn't know you needed.

by Lindsay King, Angus Journal, assistant editor

**E**quipped with 50% less lung tissue than the average horse, cattle are hypersensitive to respiratory issues.

Jason Nickell, Merck veterinarian and associate director of the newly acquired precision technology cattle group, explained how Whisper® will help producers diagnose bovine respiratory disease (BRD) at the chute. Merck was the official sponsor for Angus University at Angus Convention hosted Nov. 3-5, 2018, in Columbus, Ohio.

### A complicated disease

“BRD is complex,” Nickell explained. “We can’t point to one variable or another that causes it. This multi-factorial cycle has to work together for BRD to manifest.”

The reduced volume of lung

tissue makes cattle easy targets for the disease. Add a compromised immune system from stress, add the easily contracted pathogen into the mix and noses will be spewing from the disease in no time.

“As prey animals, cattle’s main defense against a perceived threat is to appear healthy,” Nickell said. “This makes it difficult to diagnose a BRD case from the visual indicators.”

For such a complicated disease, the process for diagnosis is undeniably simple. After visually observing a possible BRD case, the animal is brought through the chute and its temperature is taken rectally.

“The problem with the clinical

signs of BRD is that they are not specific to the disease,” Nickell said. “We have created the perfect storm for costing ourselves a lot of money at the end of the day for treating BRD.”

### Diagnosing a different way

To get ahead of the problem, Nickell and his team had to think differently than anybody has in the

**“As prey animals, cattle’s main defense against a perceived threat is to appear healthy. If they appear healthy, they are at a lower risk of being preyed upon.”**

— Jason Nickell

last 60 years about diagnosing BRD.

In steps the smartest stethoscope you’ve ever seen: Whisper.

“It collects sounds coming from the chest of the animal, and those are converted to a digital file,” he explained of the technology diagnosing BRD on a scale of 1 to 5. “It gives us a snapshot of the health of animal’s lungs.”

One is a fairly normal score and five is a compromised respiratory system. As the Whisper score goes up, so does lung pathology. Nickell said an increasing score also correlates with an animal’s risk of getting pulled again or dying.

“The goal is to individualize the treatment to the animal based on their Whisper score and rectal temperature,” Nickell said. “Whisper classifies cases of BRD from mild to moderate to severe. Mild cases should, in theory, be treatable by the cheaper antibiotics.”

Nickell demonstrated how easy the technology is to use on a heifer in the chute. He simply placed the end of the stethoscope on the chest of the heifer on her right side. He pressed record on the device and had results in seconds on the adjacent computer.

“This technology is based on machine learning,” Nickell explained. “If you have a smartphone, you have been involved with this.” The device took an eight-second recording plotting 60,000 data points for analysis.

All these data are pushed into the cloud so Merck can monitor the accuracy and function of individual Whisper devices. This allows for remote quality control.

“There is a lot of pressure on this industry that was not there years ago,” Nickell said. “We see there is an opportunity to get in front of that and have the tools available for producers so consumers will continue to buy their products.”