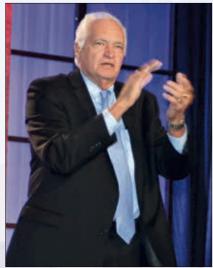
positive or not. Folks, pick what thing you want to measure, it does it," he said. "It doesn't have to be a drop of human blood, either. It changes the face of diagnostics, the likes of which you cannot imagine."

Catlett explained two emerging trends pertinent for agriculture: big data from many different farms and "n of 1" — each individual in the population is unique. "The trend is every cow is a little different. You do a blood sample with your smartphone. Now you have data on that cow, that bull," he added.

People with money like to tell you if your cattle are happy or not, said Catlett. He described a French car company that has a camera in the rearview mirror of every 2015 model. The camera senses the driver's mood, and then plays the appropriate music. Now, imagine a drone, he said, that flies through your cattle herd, looks at a cow's eye, and records whether she's happy or not.

"You put all that data together and you've got a heck of an argument," he emphasized. "You're going to have tools now, folks, that will help you manage [your herd] in ways you never dreamed possible."



► Catlett predicted that one day, through the use of 3D printing, ranchers will be able to print their own tools and parts.

Speaking of tools, Catlett predicted that one day, through the use of 3D printing, ranchers will be able to print their own tools and parts. "We now have the ability to manufacture things in people's garages," he said

Home Depot wants to sell you a device similar to a 3D printer, Catlett told his listeners. They will also sell you the raw materials and digitized blueprints to make parts. He explained, "You won't have to go to Home Depot anymore. If you need a No. 5 washer, you just make it."

How else does this apply to ranchers? Catlett answered that three years ago in Amsterdam, Netherlands, a 3D printer printed hamburger meat. Two years ago leather was printed and experts couldn't tell the difference between the printed version and the genuine.

How else? 3D printers can print vaccines, said Catlett. It's being done.

He concluded, "What a time to be in agriculture. It's going to be tied to everything that makes life better for everybody. And everybody wants what you in this room have, and it's called the highest quality of beef that's ever been produced on this planet."

**Editor's Note:** Paige Nelson is a freelance writer and cattlewoman from Rigby, Idaho.

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## Future of beef industry involves technology

Now is a great time to be in the cattle industry. Markets are high and demand is up. Technology has already played a large role in beef industry success, and it will continue to do so, agreed a panel of industry leaders addressing the role of technology at Angus University Nov. 5, during the Angus Means Business National Convention & Trade Show in Kansas City, Mo.

The panel consisting of John Butler, CEO of Beef Marketing Group; Dan Moser, president of Angus Genetics Inc. (AGI); Ron Rowan, director of customer development and grain procurement for Beef Northwest; and Rick Sibbel, director of U.S. Cattle Technical Service at Merck Animal Health, was moderated by Larry Corah, retired vice president of Certified Angus Beef LLC (CAB).

Technology has already played a large role in the beef industry, especially within recent years. Moser noted the immense advancements in genomic technology and access to data. Genomic evaluation applications and reports show up on his phone now. American Angus Association members can access genomic data online or through their smartphones.

Smartphones have been excellent in education and information dissemination, Butler noted. Rowan added that little things affect many big things. He cited electronic ID (eID) as an example. Those tags track everything about the calves in his feedyard, which lets him pay attention to factors affecting quality.

Sibbel mentioned that the sum total of change in medicine is high. Analysis of a virus, for example, now can tell its origin, how long the calf has had it and how best to treat it. There are huge opportunities with technology to know more about your herd.

Technology helps with communication on all levels, and the panel noted two major themes. Communication between beef industry segments is necessary, and so is communication with consumers.

Said Butler, "We must do a better job of sorting cattle with our available tools to make consumers satisfied. They will pay for quality. It takes an enormous amount of commitment to harmonize each segment. What happens is when a challenge comes in the market, and our commitment leaves, it becomes segmented again."

Sibbel emphasized that it is a great time to be in the animal ag industry. Cattlemen must continue to evolve, improve and differentiate their product, and technology can help with that.

Moser concluded that all cattlemen have the challenge to process new information and technology, but he urged everyone to be lifetime learners and ask questions.

"There is the opportunity to take advantage of technology around the corner to be very profitable. Just take the time to learn about it," Moser said.

The panel presented Wednesday, Nov. 5, during the Angus University program featuring "A Story of A Steak." This extension of the award-winning series of articles in *High Plains Journal* and segments on *The Angus Report* was sponsored with the support of Merck Animal Health. For more information about the Angus Means Business National Convention & Trade Show or to listen to presentations, visit www.angusconvention.com.

- by Kasey Brown, associate editor