

Cargill robot moves cattle herds with less stress, more safety

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Meet the world's first cowboy robot. It does not look like something from Hollywood or Silicon Valley.

Cargill Inc., one of the nation's largest producers of beef, has developed a robotic [cattle](#) driver used to herd the large mammals from the pen to processing plant.

The Minnetonka-based agribusiness unveiled the machine at the North American Meat Institute's conference on animal handling in Kansas City, Mo.

The [robot](#)'s purpose is twofold: to reduce the stress levels that cattle experience when being corralled, and to protect the workers who otherwise are in proximity to the 1,500-pound creatures.

"If a bull wants to hurt the robot, hurt the robot," said Brad Churchill, Cargill's plant operations manager at its High River, Alberta, facility. "I can repair the robot. I can't repair my employees."

With long, Gumby-like arms waving plastic bags, the three-wheeled robot mimics the effective movements of human cattle drivers while minimizing the more erratic motions people make that can startle them. A human's voice recording is broadcast from speakers embedded in the robot, prodding the cattle with familiar phrases like "Come on, let's move it" or "Hey, hey."

The company consulted famed animal behaviorist Temple Grandin during development. After visiting a beef plant and even operating the robot from an elevated catwalk using its remote-control joystick, Grandin gave the technology her approval, calling it "a major innovation in the handling and welfare of farm animals."

"This device will lead to huge strides in employee safety while moving large [animals](#) and reduce the stress on cattle across the country," Grandin said in a statement.

Churchill, who suggested the technology to company leadership after seeing it used in a different situation, said this is not a way to displace workers.

"The number of people doesn't change, but now we are able to move these cattle in such a way in that we are always able to keep a gate between our people and the cattle," he said.

It took Cargill a couple of tries, however, before finding the right size, materials and features for its robotic cattle driver. The first prototype had six wheels and was made of plastic. That one got beat up by a dairy bull.

A second version was closer, but Cargill made some tweaks, raising its wheel clearance and going to a tricycle-like setup for easier maneuvering. The final version is made of steel and weighs 450 pounds.

"We have yet to have an animal flip the robot, but they have moved it to the side," Churchill said.

Flock Free, a New Jersey-based company that makes machines—including robots—designed to keep birds away from storage containers of grains or other agricultural products, is manufacturing the

robotic cattle drivers for Cargill.

Cargill plans to order two robots for each of its eight U.S. and Canada beef plants. Each machine costs about \$40,000. The company hopes to use it in other animal handling situations, such as with large tom turkeys that can be aggressive toward humans.

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