

From tinkering to international trade



Staff photo by E.J. Harris

A robot makes spot welds on a wheel for a wheel rake at Circle C Equipment outside of Hermiston. The robotic welder and one operator can perform the work of three individual human welders.

Innovation spurs business at Circle C Equipment, which holds patent on hay equipment

By **GEORGE PLAVERN**
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What started as a few innovations on the family farm has translated into global business at Circle C Equipment in Hermiston.

The company, which manufactures specialized equipment for hay growers, has reached customers across the U.S., Canada and overseas. Products are made locally, including wheel rakes, hay conditioners and the massive big bale stacker, capable of lifting 1,300-pound bales with the touch of a button.

"We're still a small company, but our name is getting known," said Greg Cook, who manages the family-owned business. "We've grown in the market quite a bit."

Before there was Circle C Equipment, there was Circle C Farms, run by Cook's father, Ivan. For 35 years, the operation grew and exported 7,000 acres of alfalfa hay outside Hermiston.

Gradually, Ivan began tinkering with farm machinery to make harvest run smoother and easier. His ideas evolved into a trio of patents that drive the company today.

"My dad is a big thinker," Cook explained. "He understands what's needed, then he goes to work building something to accomplish what's needed."

The first thing they built was the American Eagle Big Bale Stacker — essentially a customized rig with a large mounted flatbed and computerized robotic arm that can be programmed to lift and stack bales automatically, with a single driver.

It would normally take three workers in conventional tractors and trailers



Staff photo by E.J. Harris

Raul Cortez takes notes while programing an automated lathe to cut a conditioner at Circle C Equipment outside of Hermiston.

to retrieve those heavy loads, Cook said.

"We built two of them and used them on our farm," he said. "My dad got the idea that we could probably build those for public use."

In addition, Ivan Cook came up with a new design for the wheel rake, used to collect hay into rows and turn it over to dry. His concept adds plastic bands, known as depth bands, around the metal teeth along each wheel, which keeps the rake from digging into dirt and rocks.

Finally, Circle C has created what it calls the Third Generation Super Conditioner. Conditioners are a component of swathers, which hay

farmers use to mow the fields.

Once the grass is cut, the swather feeds hay back to the conditioners, which resemble two large rolling pins. The conditioners work by crushing the stems, making hay softer and releasing moisture to dry faster.

The Circle C Super Conditioner uses a different surface pattern to crush the entire length of the stem, Greg Cook said, as opposed to every few inches.

Each one of their products is just a little different, Cook added, but can have a big impact for farmers. Quality is especially important in today's hay market, he said, as prices have dropped

from as high \$250 per ton a couple of years ago to \$125 per ton this spring.

"If you can make your quality better, it sells quicker and you have more demand," he said.

Circle C Equipment was founded in 1997, and has since outlasted the family farm, which closed in 2005. The company has three shop buildings where a team of 23 workers assemble products that are sent around the world.

The Super Conditioners start out as solid metal rolls before they are wrapped in rubber and left to roast overnight in a large pressure cooker known as an autoclave. The high temperatures essentially bind rubber to metal, and

a programmable lathe then carves out the hill-and-valley shape.

"It knows when to stop. It knows how many passes to make. It knows the length of the roll you put in," Cook said. "It's a fully automated system."

An automated robot welding arm is another pivotal tool for making each individual wheel on the Circle C rakes. The company produces about 36 wheels every week, and the robot — a relatively new addition to the operation — works swiftly and accurately to weld on metal spokes.

"You gotta get out of its way," Cook said, standing back from the shower of white hot sparks. "It moves

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— Greg Cook,
Circle C Equipment manager

pretty fast."

Final assembly of the wheel rakes is still done by hand in the shop next door. Workers also spend much of their time over spring performing routine maintenance on the bale stackers ahead of harvest season.

Circle C does have room to continue to grow, Cook said, and they are considering possible new products to manufacture. The company has dabbled in making metal wheels for center-pivot irrigation systems, but Cook said they are taking it slow and cautious for now.

Hay markets are also beginning to swing back upward, Cook said, and farmers are beginning to feel more optimistic about investing in new equipment.

"The optimism is out there among farmers," he said. "We're just trying to provide a better product."

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