

# Jeep Raking: The Only Way To Go For Idaho Farmer

After four seasons, neighbors are getting used to Luke Fuller raking hay with his 1990 Jeep Wrangler. The Twin Falls, Idaho, custom hay producer can be seen talking on his cell phone while raking hay at 14 mph or transporting the rake down the highway traveling up to 45 mph – all thanks to the Jeep.

With clients as far as 35 miles away in one direction and 15 in another, Fuller says he was spending a lot of nights hauling the rake to the next field with a tractor.

“It would be a 3-hr. trip in the middle of the night, and then I had to have someone come and get me,” Fuller says. Something had to change, so he bought a Jeep – a vehicle that was commonly used for farming after WWII.

He made two modifications.

In Idaho, some land is irrigated with 6-in. wide shallow trenches every 30 in., and turning around on the ends requires driving

over them. The Jeep went too fast, so Fuller replaced the rear end gears with a slower gear ratio.

The second modification was adding hydraulics. Because he uses a Darf rake, which is driven by contact with the hay, it doesn’t need hydraulics for raking. But hydraulics are needed to lift (and lower) the rake around the ends and for transporting.

Fuller removed the Jeep’s air conditioning compressor and replaced it with a pump that runs off the serpentine belt. It connects to hoses that run underneath the Jeep to the back. Fuller welded fittings to turn a metal 5-gal. Jerry can into a hydraulic reservoir with hoses that connect to the rake. He wired a switch located between the seats to operate it.

“The Jerry can is a good look for the Jeep,” Fuller says. “It rides like a Cadillac



With clients up to 35 miles away, custom hay grower Luke Fuller uses a Jeep Wrangler to pull his hay rake. He fitted the Jeep with hydraulics to lift the rake for transport.

out there,” he adds with a laugh. He doesn’t have air conditioning, but he often turns on the heat when he rakes in the early morning or at night. He drives in 2-WD when he rakes two swathed windrows together, and only shifts into 4-WD when needed.

“It sure made me more efficient,” Fuller says of the Jeep. Besides transporting the rake faster, he can unhook the Jeep to go home at

night, or to head to the gas station to fill up. It’s more economical to run and leaves his tractors free for ground work.

Over four years he’s raked about 12,000 acres with the Jeep, and off-season he uses it for personal and farm business.

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## “Belted” Bale Wagon Easy On Wrapped Bales

“The first year we made round bales my wife and I picked them up with a loader and a gooseneck trailer. It took us 4 hrs. to haul about 110 bales and I knew there had to be a better way,” says Jack Rennie, a cattle producer and metal fabrication shop owner in B.C., Canada. “I sketched out the idea for a bale wagon that night and we built it in our shop. After 3 years of testing, re-working and finally getting our patents, we’ve got a machine that really works well.”

Rennie’s automatic bale wagon loads, hauls, unloads and stacks plastic or twine-wrapped round bales in half the time it takes handling them individually. “I can pick up 12 wrapped bales in less than 10 min., and have them unloaded and stacked in 5 min.,” Rennie says.

Rennie’s machine can handle plastic-wrapped round bales without puncturing the bag. His machine design includes arms that

cradle and squeeze the bale, then lift them up and place them on a platform with a movable belt. The bales are never touched by sharp metal edges or a moving chain.

Rennie’s Round Bale Wagon carries 10, 5-ft. wide bales or 12, 4-ft. wide bales at a time. The machine has a sturdy high carbon frame to support heavy balage. Excellent flotation is provided by four 31-in. by 13.5-15 high-flotation tires mounted on walking beam axles. The overall machine width is 10 ft. 6 in. and length including the tongue is 32 ft.

Bales are lifted and loaded onto the wagon as it’s pulled through the field by a tractor. The bale cradle can be adjusted hydraulically from 38 in. to 62 in. and the length can be manually adjusted from 48 in. to 60 in.

“One person can easily load bales on the wagon, haul the load to a storage site, and unload them in a closely packed stack without leaving the tractor seat,” Rennie says. “This



Bale wagon’s arms cradle and squeeze the bale, then lift and place it on a platform with a movable belt. Bales are never touched by sharp metal edges or a moving chain.

automatic loading and unloading lets a farmer handle bales twice as fast as he would with a conventional loader, placing them on a trailer one by one. It’s a convenient, efficient and cost effective way to move a lot of plastic-wrapped bales quickly.”

Rennie said he worked with his machine three years before settling on his patented design. The Round Bale Wagon is priced at

\$50,000 Canadian and available from Rennie Equipment. The company hopes to establish a dealer network in the coming months.

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## Former Deere Engineer Specializes In “Niche” Forage Equipment

“I worked for Deere as an engineer and had a great job,” says Wisconsin native Randy Clark. “At the same time, I also learned there was demand for specialized equipment that the company was not able to fulfill.”

Clark left his Deere job and returned to his parent’s farm in 2005, where they leased him a pole barn where he could start his own business. “That was the start of RCI Engineering, and it’s really progressed from there,” Clark says.

His first equipment out the door was a mounting kit to install a 30-ft. wide 900D series Deere draper head on a Deere 6000 or 7000 series self-propelled forage harvester. “This was a very specialized application that allows the harvester to achieve more capacity, direct cutting a wider swath,” Clark says. “Our kit provides sufficient oil flow from the base machine to drive the reel and it also provides cab controls for the draper and reel speed.” The kit includes a flow divider and flow control valve and all other components needed to adapt the draper to the quick coupler, drives and frame connection on the harvester. The kit is sold primarily to forage producers in the Western U.S. and Alberta.

After the success of that equipment, Clark developed a swath merging device that mounts underneath a self-propelled windrower, a pickup attachment for a 3975 pull-type harvester, and a round baler tandem axle kit. Those products are sold through Deere dealers, but RCI develops and manufactures the equipment and provides technical support. Within a few years, the

company moved to a new manufacturing facility near Mayville, Wis. Clark has four full time engineers who help RCI fulfill its role as an allied supplier to Deere and also build custom equipment for other companies.

“We’ve found a real niche in the marketplace,” Clark says, “and the growth has been very steady.” He credits his success in part to being in the right place at the right time, meeting his wife Wendy (who also worked for Deere), and then developing a shared vision.

Another RCI design that’s gaining a foothold is the 35A Round Bale Accumulator. “We partnered with a farmer who had a working concept that he’d been developing for several years,” Clark says. “We made many improvements to the design, improved the function across varying crop conditions, then tested it locally and in Canada. Those who have run it are very enthused with how it works.”

The 35A Accumulator trails directly behind a round baler and holds three bales as they’re discharged from the baler. RCI has adaptor kits so the 35A can be used with any of the five major baler brands. The sturdy trailer has a fabricated laser cut frame and heavy-duty 31.5/13.5-15 tandem wheels. The floor is made of stainless steel so plastic-wrapped bales easily move to the back during operation. Bales move on a hydraulic floor chain controlled from the tractor. Rails on each side of the unit are adjustable to hold bales 4 or 5 ft. wide. A metal arm keeps them from rolling as the accumulator is filled.



Randy Clark’s 35A Round Bale Accumulator trails directly behind a round baler and holds 3 bales as they’re discharged from the baler.

“The Accumulator speeds up round baling because it lets the operator deposit a group of bales in one location, either in central locations on longer fields or on the headlands of shorter fields,” Clark says. “It shortens the time needed for collecting and transporting bales to a storage site and reduces trips across the field.”

The machine operates simply and efficiently. When a bale is completed, the baler door lifts and deposits it on the accumulator. As the bale clears the door, an indicator in the cab alerts the operator so the door can close and the operator can continue baling. When the accumulator is full, the rear gate opens and three bales plus the one in the baler are deposited on the ground tight together. The machine is easy to unhook so the baler can be used without it.

“We spent more than a year working on the

machine and introduced it in the summer of 2012,” Clark says. “We think it’s going to be a nice addition for large operations and for custom operators who are always looking for ways to be more productive,” Clark says. Manufacturing production of the 35A began in October 2012.

Clark is already looking at other equipment to build and improve. “There’s really no end to things that can be done easier or more efficiently on the farm,” he says. “We’re really enjoying this business and the best part is we’re building things that farmers can use to make their life easier and their farms more profitable.”

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