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Bale Trailer Mechanism Unloads One At A Time

A Saskatchewan farmer has designed a round bale trailer that he says "works better than anything on the market" because it lets him unload bales one at a time - without ever getting off his tractor.

"I use it in my pasture to feed hay to my buffalo herd. I had been using a front-end loader to feed the bales one at a time. My home-built trailer saves a lot of time and also wear and tear on the loader," says Kevin Mahussier, of Bjorkdale.

The 30-ft. long trailer is designed to hold five bales, each with its own individually-controlled dump cradle. Key to success of the trailer is the ingenious latching that uses a single hydraulic cylinder. It's attached to a length of sq. steel tubing that runs along one side of the trailer, starting at the front. The operator controls the release of each bale by how far he extends the cylinder. The steel tube is fitted with five rollers and five metal latches, one set for each bale cradle. They're staggered so as the cylinder is extended, the tube moves back, tripping each cradle.

Mahussier started with the wheels and

axles off a commercial bale trailer that he already owned. He removed a 4-in. dia. pole that connected the axles, then clamped on a 30-ft. length of 12-in. I-beam. The hydraulic cylinder, which has an 18-in. stroke, is attached permanently to one side of the beam. Each cradle is made from 2-in. sq. tubing and is hinged on two bolts. There's a spring-loaded locking mechanism at the bottom. The locking mechanism for the cradle is held in place by a 1-in. dia. stub shaft that's welded onto the side of the I-beam.

As the cylinder is extended for the first time, the latch releases the locking mechanism on the front cradle. Then the roller contacts the tapered bracket and lifts it up enough so that the cradle "overbalances" and dumps the bale off. Once the bale is off, the cradle automatically snaps back into place. Mahussier then drives ahead to the next feeding area and extends the cylinder another 3 in. to unlock and release the second bale. The process is repeated until all bales are off the trailer.

"I use it mainly during the winter to feed



Mahussier uses the trailer in his pasture to feed hay to his buffalo herd. "Buffalo can be dangerous, so I appreciate not having to get off the tractor," he notes.

bales in my pasture. It lets me dump anywhere from one to five bales anywhere I want with one touch of a hydraulic lever," says Mahussier. "I use a front-end loader to load bales onto the trailer in my yard. Then I hook the tractor up to the trailer and plug in hydraulic hoses and go out to the pasture. I dump the bales 50 to 100 ft. apart.

"There are commercial trailers equipped with individual cradles, but the operator has to walk up to each cradle and pull a pin so he can manually tip the cradle. As a result he has to get off the tractor every time he wants to dump a bale. Buffalo are potentially

dangerous animals so I appreciate not having to get off the tractor. I didn't want to use a trailer that dumps all the bales off at the same time because buffalo have horns and if they get too bunched up they can hurt each other.

"The cradles can be operated without hydraulics. If I want I can use a pickup or 4-wheeler to haul the trailer out to the pasture, then use one hand to release the locking mechanism and the other hand to tip the bale over."

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All-Terrain "Buggy" Made From Jeep Station Wagon

Mike Koontz, Clare, Mich., recently sent FARM SHOW photos of a one-of-a-kind 4-WD rig he owns that was built by his brother Tim.

It's a shortened up 1974 Jeep Wagoneer station wagon equipped with a yellow plastic body, two bench seats, a big steel rollover cage, 15-in. high lugged radial tires, and front and rear steel bumpers. A tractor exhaust muffler and a combine air breather extend out of the hood. There are steel brackets on front for mounting a snow blade, and a hitch on back for pulling implements.

Koontz has used the all-terrain vehicle to pull an old 2-bottom plow, an 8-ft. disk and culti-packer, a set of drags, a firewood trailer, and to push a 6-ft. snow blade.

"We call it 'The Buggy' and use it for both work and play. All our neighbors have stories about it," says Koontz. "It has parts from Ford, GM, International, Toyota, and Deere vehicles."

The rig is powered by an in-line 6-cyl. gas engine, which Mike and his father overhauled, and has a manual 3-speed transmission. The rollover cage is made from 2-in. dia. steel pipe and supports a pair of 50-watt Halogen headlights. The body,

including the fenders and hood, is made from heavy duty, 350-gauge extruded yellow plastic. The rig was shortened up about 4 ft. from its original length.

"I use it a lot on my small farm, where I have a lot of woods and also grow wheat," says Koontz. "The lugged radial tires really dig well, and because they're so big (they're 12.5 by 33's) they slow down the ground speed and give the rig surprising power. Also, the rig weighs 3,100 lbs. and is well balanced which helps a lot. One time I used it to move a 14 by 70-ft. mobile home off its pad so a new cement foundation could be built.

"I think of it as a poor man's sport utility vehicle. It looks somewhat like a military vehicle, but it cost far less to build. My brother bought the original Jeep for \$100.

"It doesn't have a pto or 3-pt. hitch, so anything I pull behind it in the field has to be on wheels so I can transport it," says Koontz. "The implement also has to be ground-engaged. The plow I use is a 1938 IH model. To lower it to the ground I yank on a rope from the driver's seat. When I'm done plowing I get off the rig and go back to adjust a lever on the plow so that it comes up all the way out of the ground. I plow with the



Mike Koontz uses his home-built, all-terrain "buggy" to pull an old 2-bottom plow, as well as a number of other implements.

transmission in first gear, low range. The plow really flings out the dirt. At first I tried using a one-bottom plow, but it didn't slow the Jeep down enough so the plow tended to sling dirt too far out of the furrow. If I'm plowing and I get into an area with hardpan, I just step on the gas pedal.

The exhaust muffler was designed for an International Harvester M tractor. "We replaced the original exhaust muffler because it would have tore off when going over tree stumps or mud holes," says Koontz.

The Buggy's two seats are from old Ford and Subaru cars. Koontz slipped seat covers

over them so they all match. The steering wheel is off a Subaru car. The Jeep's original driveshaft kept twisting, so it was replaced with one built out of 2-in. sq. tubing. The yoke that connects the transmission to the driveshaft is off an old Ford truck. The radio, alternator and a booster cooling fan are off an old GM car. The fender lights are off an old Chrysler. The fuel tank is made from 10-in. dia. pipeline casing.

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