

Low-Cost, Light-Draft Range Seeder

Robert Lebruska developed his low-tech, light-draft grass seeder to renovate coal bed methane fields. However, he says it will renovate range and pasture land just as well and for half the cost with twice the versatility of commercial units. This year he also will be trying it for spot renovation in alfalfa fields.

"It can be used to broadcast fertilizer as well as seed and should work as well with salt or sand in the winter," says Lebruska.

The 3-pt. mounted unit has 5-ft. wings on a 7-ft. base that floats over contours such as a road ditch or slope. With wings folded, a tractor and Lebruska Range Seeder can be trucked down the road and still meet DOT 8-ft., 6-in. width restrictions.

The design also eliminates the many moving parts and wear points on conventional drills. This cuts up-front and maintenance costs substantially.

"The biggest no-till drill you can get for renovation work is about 10 ft. wide and sells for upwards of \$30,000," says Lebruska. "My sons and I built this in our garage and have about \$16,000 in it, including labor."

For the past four years, the Lebruskas have been doing contract range renovation for mining companies. They have shown that their unit out-performs traditional drills. The broadcast distribution creates a more natural seedbed, and shallow tilling requires relatively little power.

"Our unit floats over a 17-ft. swath and incorporates the seed in the top 1/3 in., whether the ground is soft and easy to penetrate or hardened volcanic ash that's packed like clay," says Lebruska. "With a drill, it will leave the seed on the surface of the hard ground and go an inch deep when it hits softer dirt. Either way, you don't get germination, and I've seen guys go out of business because they couldn't get the germination required by

the contract."

He points out that even if a drill gets good germination, in arid areas the "drilled rows" remain visible for years. His unit leaves a more natural seed distribution.

The Lebruska Range Seeder consists of two rows of S-tines followed by a leveling bar and a bar roller. The adjustable roller acts as a depth control for tilling and also firms up the seedbed. The leveling bar also can be adjusted for depth and angle for more or less aggressive action. While the S-tines and broadcast seeder are "off the shelf", the father and sons designed their own 3-pt. frame, leveling bar and roller. They needed it heavy-duty to handle the variable soil and often rocky conditions.

"In most cases, we want the leveling bar at the surface to top off ridges, but we also wanted it to ride over or under rocks," says Lebruska. "We looked at lots of press wheels and decided to make our own heavy-duty press roller with bars. As it firms the soil, the bars help incorporate the seed and leave depressions which catch and hold moisture, reducing erosion and improving germination."

The seeding unit is a commercial unit designed to handle lightweight, "fuzzy", native grass seed. The agitator keeps the seed feeding evenly. Lebruska says it required only minor changes.

"We designed the upper link of the 3-pt. so our extended pto shaft goes through it to the base of the tub seeder," he says. "We did add a lid, which then required we add a site glass to check remaining seed levels."

Lebruska prefers to make three passes with the renovator. The first is tillage and weed removal with the tines set as deep as the soil type allows. The two rows of tines are on 8-in. spacings, but because the rows are staggered, effective spacing is 4-in. Weeds



"It can broadcast fertilizer as well as seed and works great for renovating pasture land," says Robert Lebruska about his light-draft grass seeder.

collect against the tines, allowing Lebruska to drag them to one side periodically.

"We prefer to remove weeds from the seedbed area rather than disk them in," explains Lebruska. "If there are grasses, the S-tines tend to vibrate around them."

The second pass is to broadcast the seed, followed by a final incorporation pass. This pass with shallow tillage mixes seed within the top 1/3 of an inch. Lebruska says this ensures germination regardless of weather conditions. If moisture is present or available soon after seeding, grass seed nearest the surface germinates. However, if those seedlings dry out and die before more moisture arrives, the deeper seed still has an opportunity to thrive.

"When seeding, we run at about half

throttle with the pto at about 200 rpm's," says Lebruska. "We use a 70 hp tractor, but you could easily get by with a 40 hp tractor on less severe slopes where you don't need the weight."

Lebruska and his sons Scot and Ryan are willing to custom build units to order. They are also open to licensing or selling the design.

"This isn't about money or recognition," says Lebruska. "It's about offering a better alternative for others to improve the environment."

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Barrier Keeps Cattle Out Of Tank

"I wanted to do my best to keep it a clean water source," says Joel Vaad of the tank he installed on the cattle ranch he manages for the Colorado State University Research Foundation.

The 300-cattle herd was used to drinking out of waterholes, but in one pasture, Vaad needed to set up a tank fed from a spring. To keep cattle from climbing into the tank, he built a triangular-shaped barrier.

He drove two treated round posts on the outside of the tank next to the inlet, which also helped protect the plumbing. He drove in two more posts to create a triangle and then set rough-cut 2 by 10's on edge on the tank

and spiked the boards to the posts.

The simple barrier works well, Vaad says. The water stays clean, and cattle have plenty of room to drink.

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Joel Vaad built this triangular-shaped wooden barrier to keep cattle from climbing into water tank.

Photo courtesy Drivers/CattleNetwork



ATV-Pulled "Calf Corral"

This ATV-pulled calf catcher lets you form a "corral" around a newborn calf and tag and vaccinate it safely and easily.

Cow-calf operator Wayne Lusk of Viking, Alta., built his first calf catcher 12 years ago. Since then, he has continued to improve it and says the "Quad Roper" is now ready for sale. The unit's 2-wheeled steel cage is made from light tubing and measures 8 ft. long by 4 ft. wide and 4 ft., 9 in. high. A metal gate on front swings and locks open with a spring latch.

To corral a newborn calf, the driver approaches it with the gate open. Once the calf is inside the corral he pulls a trip rope to shut the gate.

"It's a safe way to work on newborn calves because it keeps the mother out," says Lusk. "The cow can see the calf while you tag, weigh, and transport the calf in safety."

A small transport cage is used for transport. "You fold down one side of the cage to the

ground for the calf to stand on, then tip the side back up and latch it in place," says Lusk.

The unit comes with a mounted veterinarian's box and rides on ATV tires so it runs quiet, say Lusk. An optional weigh scale pole mounts on one side of the unit. "The paint on the Quad Roper is powder coated, making for easy cleanup," notes Lusk.

The Quad Roper sells for \$1,750 (Can.) plus S&H. The optional weigh scale pole sells for \$25 plus S&H.

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ATV-pulled calf catcher let you form a "corral" around a newborn calf.

