

Roller Fork Bale Lifter Easy On Plastic

Allen Pansegrau's big round bale lifter doesn't mess up the plastic on silage bales. Using rolling pipes instead of grabbers, it slides over the bale, rolls underneath, and lifts, holding it tightly.

"My nephew Tim Grauman built it in his shop, Avalanche Metal (www.avalanchemetal.com; ph 778 480-5679)," says Pansegrau. "He used heavy-duty bearings to mount the pipes to the frame. They roll free when I'm sliding them under the bale or sliding them back out after lifting it."

The double action on the rolling pipes is provided by a hydraulic cylinder mounted inside the frame that is designed to mount to a front-end loader. Fully extended, the rollers are about 5 ft. apart. Retracted, they are only about 2 ft. apart.

"I can drive up to a bale and lower the rollers around the outside of the bale without touching it," says Pansegrau. "Even if I do, the rollers won't tear the plastic. Once underneath, I can bring them together. As the rollers tighten on the bale, they will roll a bit so the bag doesn't tear."

Pansegrau gives all the credit to his nephew. "He looked at other bale grabbers, made some notes and sketches, and built it," says Pansegrau. "His unit cost a lot less than the commercial ones cost."

The 4-in. steel rollers mount to bearings on the bottom of 3 by 4-in. steel tubes. Pinned at the top of the frame, the legs would otherwise hang loose at the bottom. However, the hydraulic cylinder is mounted to one leg with



Equipped with rolling pipes instead of grabbers, Allen Pansegrau's big round bale lifter avoids messing up the plastic on silage bales.

the ram pinned to the second. As it extends or retracts, the legs move apart or together.

"He used heavy-duty flat steel and angle iron for the frame," says Pansegrau. "He is good on detail too. Where the legs hang loose at the bottom of the frame, he attached heavy rubber strips. When I'm driving with it empty, the rubber cushions it if the loader bounces."

Contact: FARM SHOW Followup, Allen Pansegrau, 425 Cornish Rd., Kelowna, B.C. Canada V1X 4R4 (ph 250 470-8612).

Wood Finish Products Have Secret Ingredient

Water-based finishes tend to appear milky when first applied. In the case of Vermont Natural Coatings, there's a perfect explanation. The "secret" ingredient in the company's formula is whey.

Andrew Meyer, owner of the company, says it's high protein whey that's left from making quality cheese. The resulting PolyWhey® is a renewable resource with 25 percent less VOCs (Volatile Organic Compounds).

"The advantage is that it has a very strong bond without the chemicals," Meyer says. "One of our missions is to eliminate solvent-based products on the market. With concerns about individual health and environmental issues, there's no need for those any more."

The owner of a Vermont dairy farm started the business after consulting on agriculture policy with a U.S. senator. With an emphasis on diversification and added value, his research led him to scientist Dr. Mingruo Guo and his team. They had figured out how to use the strong proteins in whey as a bonding agent in coatings.

Meyer incorporated Vermont Natural Coatings in Hardwick, Vt., and started manufacturing a furniture finish in 2008. The company now has several products including furniture and floor finishes, and exterior or interior stains in eight colors. Products come in satin, semi-gloss, gloss and matte.

"The immediate advantage is they don't have a strong solvent smell that gives headaches and irritates eyes," Meyer says. There is no lingering odor when it is applied, so homeowners don't have to move out for two weeks when they finish floors, for example.

"Another advantage is that when you put down the finish it flows nicely without brush marks or streaks. Finally, its durability is a long-term benefit," Meyer says.



The secret ingredient in Vermont Natural Coatings's wood finish products is whey, which is used as a bonding agent.

Costs run about \$77 for the furniture finish, which Meyer says is comparable to other quality products.

About 300 retailers sell Vermont Natural Coatings, mostly on the West and East coasts. More dealers are being added and the company also sells direct through its website.

"There's a lot of change in the industry, and quality and safety is important," Meyer says.

His company continues to work with dairy producers and cheese makers to keep a steady supply of protein-rich whey for all its products.

Contact: FARM SHOW Followup, Vermont Natural Coatings, Inc., 190 Junction Rd., P.O. Box 512, Hardwick, Vt. 05843 (ph 802 472-8700; www.vermontnaturalcoatings.com; info@vermontnaturalcoatings.com).



"When I decided to build a half-scale combine, my son Jeff suggested it should 'do something'," says Gary Luthman. "He figured we could make it mow grass."

Half-Scale Combine Mows Lawns

Gary Luthman's half-scale combine looks like a mini John Deere 45, but works like a lawn mower. The 5-ft. header is fitted with three 21-in. reel mowers mounted side-by-side.

"When I first decided to build a half-scale combine, my son Jeff suggested that it should 'do something', not just look nice," recalls Luthman. "He figured we could make it mow grass."

Jeff had been the driving force to get Luthman involved, first in garden tractor pulling and then in restoring a John Deere L, the smallest Deere farm tractor.

Initially Luthman planned to make a half-scale model of a Massey Harris 82 combine, which he recalled riding on in the 1950's. But it didn't match the components he had on hand. The John Deere 45 did. Plus a half-size 45 was big enough to ride, yet small enough to transport easily.

"We started with a Simplicity lawn mower," says Luthman. "Its 12 hp Briggs & Stratton motor had seized up, but the deck looked like the control platform of a 45. I replaced the motor with a 14 hp Briggs with overhead valves."

Luthman took some measurements of a 45 he saw at a show. However, his main guide for the project was an Ertl Precision Model of a 45.

The Luthmans were able to use the clutch, brakes and steering column from the Simplicity. They added a Deere 110 garden tractor 4-speed transmission.

"The 110 has a variable speed pulley on it, so we acquired one of those as well," says Luthman.

A major challenge was converting the vertical drive from the motor to separate horizontal drives for the transmission and the header. "I needed to be able to reverse the drive, so I rotated one pulley 90 degrees clockwise and the other 90 degrees counterclockwise with belt clutch idlers on each for starting and stopping mowing or movement."

Noting that the 45 was the first with unibody construction and no frame, Luthman's mini combine also has no frame. He used a heavy-duty computer cabinet, mounting engine, transmission, axles and platform to it.

"Once I had the sides with the platform mounted in place, I had to figure out how to mount the header," says Luthman. "I started with a feeder housing that uses steel plate for the sides. I fabricated the header from a steel shelf recycled from a local library and welded it to the steel sides."

He bent the shelf to follow the arch of the auger. The auger consists of 3 1/2-in. tubing with flighting made from scrap metal. Both



Combine's 5-ft. header is fitted with three 21-in. reel mowers mounted side-by-side.

it and the reel mowers were mounted on steel rods that sit in pillow block bearings on the sides.

Power for the auger and the reel motors is delivered to the header through the housing. Unlike the original header, Luthman enclosed drive components for safety concerns.

Power is transferred from the engine to belt pulleys mounted on the right side of the combine. Luthman designed them to look like the real 45 cylinder drive pulley. Instead of driving the cylinder, the shaft powers a belt conveyer adapted from an old side-delivery silage wagon. The conveyer belt runs through the feeder housing to drive the auger. A set of drive chain sprockets on the left side of the header transfers power to the reel mower. Sprockets are sized to allow the auger to travel slower than the reel mowers.

"I wanted to be able to see the auger move the grass clippings to the center," says Luthman. "Once in the center, the clippings are carried by the conveyer belt through the feeder housing to the rear of the combine where they drop to the ground."

Luthman designed the header/feeder housing for manual lift from the operator platform. Shafts with compression springs disguised as hydraulic cylinders are mounted under the feeder housing.

"The springs help the header float with the contour of the ground, as well as help lift the header," explains Luthman. "The lift lever is on the left side of the steering column."

Contact: FARM SHOW Followup, Gary Luthman, 3265 Dogwood Dr., Troy, Ohio 45373 (ph 937 339-2757 or 937 416-5467; gary.luthman@gmail.com).