



Will Bass started with an old 3-ft. long, 20-in. dia. air tank to build his boom-mounted "clamshell" grapple.

## "Clamshell" Grapple Made From Old Air Tank

"I couldn't find anything like it on the market," says Will Bass, Pawnee, Okla., who built a "clamshell" log grapple out of an old 3-ft. long, 20-in. dia. air tank. It mounts on a 3-pt. mounted boom pole on his tractor.

The hydraulic-operated grapple uses a pair of hydraulic cylinders that open and close the air tank jaws, which feature "zig zag" teeth that grab loads firmly.

"It lets me haul logs and brush without getting off the tractor. It's built strong and will stand up to a lot of tough use," says Bass. "I came up with the idea because I have a lot of overgrown trees that I needed to clear off. I can pick up whole trees up to 20 in. in diameter."

He used an acetylene torch to make a straight cut lengthwise along each side at the top of the tank, and a single "zig zag" style cut that runs lengthwise along the bottom. He also cut out a large "zig zag-style" opening in one end of the tank. A pair of hinges were welded on top of the tank where the 2 cuts were made. The hinges were made from 1-in. dia. steel rod inside lengths of 1 1/2-in. dia. tubing.



A pair of hydraulic cylinders open and close air tank jaws, which have "zig zag" teeth that grab loads firmly.

A welded-on, 1 1/2-ft. tall steel "tower" on top of the tank supports a pair of hydraulic cylinders that pin onto both sides of the tank. Retracting the cylinders causes the 2 halves of the tank to open.

The grapple is suspended from the boom pole by chains that attach to D-rings welded onto both ends of the tank.

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## Manure Content Sensed On-The-Go

Deere's Manure Constituent Sensing (MCS) system measures nutrient content in manure as it is being applied. It measures N, P and K, as well as dry matter.

"Our farmer customers know that manure nutrients are quite variable. With Manure Constituent Sensing you can measure in real time what is put down at every spot in the field," says John Mishler, Precision Ag Technology, John Deere.

The MCS uses infrared sensing 4,000 times per second to analyze manure moving through the applicator. Data is sent to the tractor's Operations Center, where it can be used by the operator to manually or automatically adjust application rates.

"The operator can increase the application rate to meet a pre-determined nutrient goal or reduce it to prevent over application," says Mishler. "They can choose to set a goal of 200 lbs. of N, but also set a limit of perhaps 90 lbs. of P. Tractor automation will adjust tractor speed."

The instant readout and reaction compares dramatically with the alternative of agitate, sample and send off for analysis.

On-the-go analysis has been available in Europe for many years. MCS from Deere has been commercially available there for 2 years.

Mishler is confident the system will help manure users make better use of manure. It may also help those with excess manure to get more value from it.



Sensor mounted on injector toolbar measures nutrient content in manure as it's applied.

"We've already had conversations with producers that manure sales by the ton or gallon may soon be priced by the pound of nutrient, as are commercial fertilizers," says Mishler. "MCS helps farmers understand the value of what has long been considered a waste product."

Contact: FARM SHOW Followup, local John Deere dealer or [www.deere.com](http://www.deere.com).



Trailer's retractable side rails eliminate the need for straps when hauling big bales. This 40-ft. model can carry up to 30, 4-ft. dia. round bales or up to 60 big squares.

## Swedish Bale Trailer Fitted With Retractable Side Rails

No straps are needed when hauling big bales with the MetaX bale trailers from Swedish firm Metsjö AB. Hydraulically activated arms mounted at deck level rise up to press into bales with up to 6 1/2 tons of pressure. The trailers come in 30 and 40-ft. lengths and have transit speed of just over 30 mph.

"We have not yet sold into the North American market, but we export our products to most European countries," says Loa Ivarsson, Metsjö AB. "FARM SHOW readers can order direct from us if interested."

The 30-ft. version has a payload weight of 14 tons with a 2-axle design and 22 tons with a 3-axle design. The 40-ft. model is available with 2 axles and has a payload of 15.8 tons. It can carry up to thirty, 4-ft. dia. bales or up to 60 big squares. The trailers are all equipped with hydraulic brakes on all drums.

The twin tube arms are fabricated from high tensile strength, steel tubes. The deck level mount means no ledge to lift bales over nor is there framework hanging below the deck.

A double-acting spool valve raises the



A 30-ft. model comes in either a 2 or 3-axle design.

upper of 2 tubes, pulling the lower tube along with a simple mechanical linkage. A manual valve on the drawbar allows hydraulic control of a single side. Arm positioning can be adjusted to the size of the bale.

Ivarsson reports the list price of the 40-ft. model is \$33,700.

Contact: FARM SHOW Followup, Ivarssons i Metsjö AB, Norrgård Metsjö, 585 92 Linköping, Sweden (ph +46 13 480 15 53; [www.metsjo.de/en](http://www.metsjo.de/en)).



Trash Basket attaches to fill port on liquid manure spreaders and filters out trash as tank fills.

## Trash Basket Filters Liquid Manure

The Trash Basket from Ironwood 53 captures trash in liquid manure before it can plug applicator injectors. It attaches to the fill port on major liquid manure spreaders, including Houle, Nuhn and Jamesway, and filters out trash as the tank fills.

"Anything bigger than an inch is trapped in the basket," says John Langeraa, Ironwood 53. "So much trash goes into manure pits, from medicine bottles to bones. The Trash Basket keeps it out of the tank."

The Trash Basket is easy to empty. A hydraulic cylinder dumps the basket for easy cleanup on the ground.

"We've refined the Trash Basket and made a second model for Houle that catches overflow and vents tanks," says Langeraa. "Venting allows the 9,500-gal. tanks to

carry an extra 300 to 400 gal. of manure. We worked with a local farmer who came up with the idea."

Trash Baskets are powder-coated, with the standard model available in Houle green or Nuhn Red. They can also be ordered in other colors. Trash Baskets with overflow reservoirs are available in black.

The suggested retail price for the standard Trash Basket is \$2,300 plus installation. "Our dealers handle installation, including hydraulic plumbing from the tractor to the cylinder on the Trash Basket," says Langeraa.

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