ATV-Mounted "Bale Buggy"

Homemade "bale buggies" mounted on his two Big Red Honda ATV 3-wheelers let Bob Roberts, Huntsville, Utah, pick up small rectangular bales on steep hillsides and move them to more level areas, in one continuous line, where an automatic bale wagon picks them up.

Each "bale buggy" is 3.5 ft. long and 18 in. wide. It rides on a 4 in. dia. wheel and is bolted to the left side of the ATV. The rear mounting frame (1 1/4 in. sq. tubing) is bolted to the ATV's trailer hitch, and the front frame to a bracket near the motor mount, just ahead of the foot pedals.

Fingers that pick up the bale are made of 1/2 by 1/2 in. solid rod. The axle is made of 1 1/4 in. dia. pipe. A 2 ft. long handle is used to raise and lower the bale pickup cradle.

To pick up a bale, the driver trips a foot release to lower the "bale buggy" to the ground. On-the-go, he picks up the bale in the cradle, then raises it by hand until the bale catches on the catch mechanism and rides about 4 in. off the ground. Bales are dumped off on the go.

"These handy bale movers operate anywhere the 3 wheeler can go," says Roberts. "They're more stable on steep hills than a regular 3 wheeler because of the buggy's stabilizing wheel. With modifications, the buggies would work on 4 wheelers but we prefer 3 wheelers because of their maneuverability."

Roberts estimates he spent about $300 to build both both "bale buggies," including tires, rims and bearings.

Contact: FARM SHOW Followup, Bob Roberts, 8391 E. 500 S., Huntsville, Utah 84317 (ph 801 745-3063).

USES CENTRIFUGAL FORCE, GRAVITY, AND AIR RESISTANCE

"Giant" Seed Separator Cleans 5,000 Bu./Hr.

"It's got more than 10 times the capacity of the largest gravity table separators and does a better job with less horsepower and no need for an operator," says Wisconsin farmer Clint Fay about his giant new 5,000 bu./hr. grain separator that uses centrifugal force and gravity to separate weed seeds, fines, and other trash from grain and to separate larger seed from smaller seed for planting.

Fay, who farms near Port Wing, started working on the idea 10 years ago and has used prototypes for the past two years. He first developed the machine for use on tiny birdsfoot trefoil (grass seed) but has since used it on wheat and other small grains. It should also work on soybeans and corn but he says more testing is needed.

"The largest gravity table separator processes just 450 bu./hr., using a high-horsepower motor, and requires an operator. My separator is fully automated and cleans 5,000 bu./hr. or more, with just a 5 hp. motor, and does a much better job," says Fay.

Key component of Fay's separator is a vertically-mounted cylinder fitted with 360 small dia. tubes that make it look like a space-age machine gun. This spinning grain-cleaning cylinder is positioned near the peak of a specially-built grain bin. An 18-ft. dia. inner wall is positioned 4 1/2 ft. inside the outer wall of the bin. Grain is augered into the spinning separator cylinder just like you would auger grain into any storage bin. It enters the spinning cylinder and is thrown out through the 360 tubes. The heaviest material is thrown into the space between the inner and outer walls while lighter material falls within the inner walls. Separate unloading augers empty both sections of the bin.

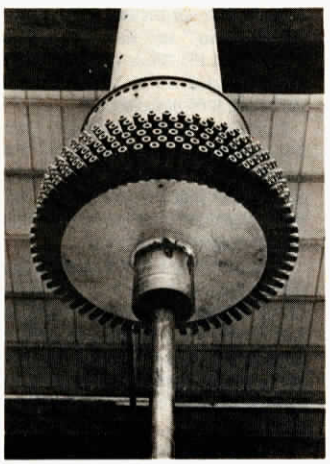
From the outside, Fay's giant separator looks like an ordinary grain bin.

The cleaning cylinder is 12 in. in dia. and 12 in. deep with 1-in. thick plastic sidewalls. The 360 plastic pipes, or "barrels", are sized according to the size of the crop and range from 1/4 in. dia. to 1/2 in. dia. The cylinder is set to spin at various rpm's depending on the crop. Each seed or fine is propelled from the rotating cleaning cylinder at the same speed. Gravity and air resistance, determined by both the weight and mass of the material, determines how far from the center of the bin it will fall.

"It does a nearly perfect job getting out fines which makes grain drying safer and cheaper. Because of the tremendous capacity of the separator, you can set the combine to harvest grains 'dirtier' so less grain is lost in the field and then clean out the fines in this separator. To select the largest seed from soybeans, wheat or any other crop for planting, you can set the unit to separate the largest from the smallest seed," says Fay.

He has so far used the system primarily in grass seed and small grains but he says he's confident it'll work as well in any crop. "I'm willing to run small tests lots for people who have special seed-cleaning problems. A lot of testing still needs to be done in certain crops," says Fay, noting that the separator, complete with bin, sells for $15,000.

For more information, contact: FARM SHOW Followup, Clint Fay, Cyclo-Clere, Box 88, Port Wing, Wis. 54865 (ph 715 774-3371).



The key component of Fay's separator is a vertically-mounted cylinder fitted with 360 small tubes that "shoot" grain towards the outer walls of the bin.

MODULAR DESIGN LETS YOU SPLIT APPLICATIONS TO MATCH CROP DEMANDS

"Air Bander" Applies Dry Fertilizer Like Liquid

"This rig lets us deep band dry fertilizer in ways that previously were possible only with liquid fertilizer," say Roger and Dan Montag, Rodman, Iowa, about their new "air-band" dry fertilizer system, now on the market.

To build the system, the Montags used the high-capacity fan from their innovative "air auger" (featured in FARM SHOW, Vol. 12, No. 1). The "air auger" uses air power to move grain, eliminating the need for auger flighting.

The "air auger" fan uses centrifugal force to move dry materials with far less horsepower. "Centrifugal motion gives it the capacity of a vacuum fan but with far greater efficiency," says Roger. "Other 'air band' dry fertilizer systems use fans which require much more horsepower to operate."

What's more, you can quickly convert the cart to blow dry fertilizer either forward or backward, depending on the implement you're using, which lets you split your fertilizer applications between different field operations.

"You can apply starter fertilizer at planting, sidedress as you cultivate, and deep band as you chisel plow in the fall, all with the same rig. Split applications are less susceptible to leaching and make more efficient use of fertilizer by matching crop demands. They also spread out your cash flow. For example, you can apply the majority of your fertilizer at cultivating and tie up your money for only 60 days," says Dan.

The blower fan, which can be driven by the tractor's hydraulics, by a pto-driven hydraulic pump, or by a separate gas engine, blows dry fertilizer through as many as 16 outlet tubes under the tank. The outlet tubes connect to hoses mounted on your implement. Fans in different sizes are available for different application rates, widths and blowing distances.

The cart is equipped with an 8 ft. long drawbar tongue as standard equipment, so you can pull toolbar implements such as a planter, cultivator, anhydrous ammonia applicator or chisel plow behind the cart. By removing 4 bolts, you can turn the tank and fan 180° and blow fertilizer forward. Or, by removing 6 bolts, you can replace the tongue with a gooseneck hitch and pull the cart behind your planter. Another option is to simply mount the tank and fan on top of your implement.

You can quickly convert cart to blow dry fertilizer either forward or backward, depending on the implement in use.

According to Roger, the dry fertilizer system offers several benefits. "Dry fertilizer is usually less expensive than liquid fertilizer, and is available in higher analysis products, allowing you to cover more acres with fewer refills. Also, ridge farmers will like this system because they can place dry fertilizer in the ridge and concentrate fertility where they need it."

Because of the low horsepower requirements, in many cases you can deep band at higher application rates, up to 800 lbs./acre, with a 2-WD conventional tractor, notes Roger, adding that horsepower requirement depends on application rate, fan size and blowing distance.

The cart is available with either a 110 cu. ft. fiberglass tank or a 120 cu. ft. stainless steel tank. (For greater capacity, the stainless steel tank can be equipped with additional sideboards).

A 9-row pto-driven "air bander" with a 5-7 hp fan sells for about $8,500.

For more information, contact: FARM SHOW Followup, Roger Montag, Rt. 1, Box 26, Rodman, Iowa, 50580 (ph 515 887-4752).