

Pooper Scooper “Super-Sizes” Loader Bucket

With 48 horse stalls to clean each day, Jim Evans needed a faster way to handle manure. His “pooper scooper” does the trick. The steel basket slides inside the loader bucket to super-size its carrying capacity. Evans and his wife operate a horse boarding and training facility and raise a herd of Boer goats. Time is at a premium.

“With the scoop in place, we can clean out the 48 stalls and 10 to 12 runs in our barns and sheds in less than two hours a day,” says Evans. “It handles the equivalent of 8 to 10 times the volume of the original bucket.”

Evans scoop is 6 ft. long and the height and width of his 74-in. bucket. He left just enough room for the scoop to easily slide into the bucket. The 1/8-in. steel was cut at a nearby metal shop. Evans welded the scoop together, adding two 12 by 3-in. strips of steel to the inside of the rear corners. The strips were welded in place to extend a couple of

inches above the sides of the scoop. Holes drilled in the top of the straps house a 1-in. steel rod welded in place and extending out several inches on each side of the scoop.

“I cut hooks out of 1-in. steel and welded them to the top sides of the loader bucket,” explains Evans. “To connect the scoop, I just hook the rod, lift the bucket and the scoop slips in place.”

When not in use, Evans parks the scoop on a couple of old tractor tires. In use, it does double duty, carrying manure away from the stalls, and spreading it on nearby fields and pastures.

“It spreads evenly, and I follow up with a drag or rake or use a rototiller to mix it in with the soil,” says Evans. “The hooks on the loader have come in handy for everything from picking up corral panels to pulling T-posts and stretching fencing. The whole thing cost me about \$700, and it works great.”



Steel basket hooks inside loader bucket to greatly increase its carrying capacity.

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U.S.-Built Pellet Mills “Built To Last”

“I enjoyed reading your article about cutting edge pellet-making machines (Vol. 33, No. 1) and agree with you about the future of pellet mills. But why would you feature Chinese-made pellet mills when you can get a better built, more reliable product that’s made in the U.S.,” says John Elliott, sales manager at Buskirk Engineering, Bluffton, Ind.

The company recently introduced two farm-sized pellet mills. Model 800 operates either on single or 3-phase electricity and has a capacity of up to 800 lbs. of pellets per hour. Model 1200 is pto-driven and has a capacity of up to 1,700 lbs. It comes with a 3-pt. mounting frame and requires a tractor with at least 20 hp.

“These mills are priced competitively with the small Chinese-made models but perform similar to the large industrial models that cost hundreds of thousands of dollars,” says John Buskirk.

According to Buskirk, both models have some features not found on other pellet mills on the market.

• **Low speed, high torque:** The mill’s main shaft spins a pair of rollers that push material through the die, rather than the die spinning like on other models. It results in higher quality, more durable pellets with fewer fines, says the company. It’s also more mechanically efficient.

• **Multi-directional keypad:** This feature is found only on model 800. At the touch of a button, the operator can vary the speed of the rollers as well as switch the rollers’ di-

rection between forward and reverse. “We call it variable frequency drive. It lets you run some materials through at a slower speed than others, to get the right amount of pressure for making the pellet. And if the rollers start to plow due to inconsistent moisture, you can reverse their direction to free them,” says Buskirk.

• **Process wood pellets:** Depending on the price, either shelled corn or commercial wood pellets can be used as a filler to reduce the cost of making pellets. “Most other mills can’t handle hard commercial pellets unless you grind them up first. Our mills have enough torque to eat right through them,” says Buskirk. “Some customers prefer to mix corn with pellets just because they think the addition of corn helps the pellets burn better.”

Buskirk says customers who’ve field-tested units used many different kinds of materials, including animal bedding, horse and poultry manure, and all sorts of wood products including waste wood and sawdust.

Whatever material is used, it should contain 10 to 20 percent moisture, he says.

Depending on the kind of material, there can be a big difference in the amount of natural lignin contained. Lignin is the material that holds pellets together. Pelleting as a whole is an art rather than a science, says Buskirk. “Wood is a very fibrous product, so sometimes you need to use lubricants so the die will do a better job of pushing materials through. Common lubricants include veg-



A wide variety of materials can be used in Buskirk Engineering’s pellet mills. Both pto-driven and electric-operated models are available.

etable oil, soybean oil, distiller’s grain, and glycerin, or you can use commercially available binders and lubricants.”

Model 800 sells for \$6,499 with the multi-directional VFD and keypad. A 3-phase only version of this model is available without the keypad but with a forward and reversing switch. It sells for \$5,999. Model 1200 sells for \$6,999.

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Bolt-On Turbo Boosts Power On Old Farmalls

Franklin Duddy says his Keystone Turbochargers increase power on some engines as much as 100 percent. The turbos are adjustable, so the higher you crank them, the more horsepower you get.

“We set the turbos we install at four to five pounds,” he says. “On a 4-cylinder Farmall Super M, that’ll give you 72 hp. If you increase the boost to 6, the horsepower goes to 80, and at 8 it goes to 90.”

Duddy and his son Mark built their first turbo charger for a tractor they were taking to tractor pulls. It’s been on for more than two years with no problems. People who saw their unit began to ask about it. The Duddys started building them and selling locally. Before long they were selling them across the country. Applications are mostly for use with 4-cylinder Farmalls, including the M, Super M, I6, W6, 06, 400 and 450 gasoline engines.

“People love our units because they don’t have to cut up their tractor to install them,” says Duddy. “You just unbolt the manifold and carburetor, bolt the carburetor on the turbocharger and put it on the block in place of the manifold.”

The only other change is to put an oil drain to the oil pan so the turbocharger can empty out. Removal is just as easy.

“If a fellow decides to sell the tractor, he can take off the turbo, put the manifold back on, and sell the tractor stock,” says Duddy.

Duddy does advise his customers to not turn up the charge too quickly. One customer put it on a stock engine, pulled out and throttled up. “He told us he just about fell off the tractor; it picked up so fast,” says Duddy. “He didn’t expect that kind of power. When the exhaust pressure comes on, it almost doubles the power.”

Keystone Turbos are available for use on



“People love our bolt-on turbochargers because they don’t have to cut up their tractors to install them,” says Franklin Duddy of Keystone Turbo.

engines up to 450 cu. in. Prices start at \$1,650 with prices increasing with size and compression ratio.

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