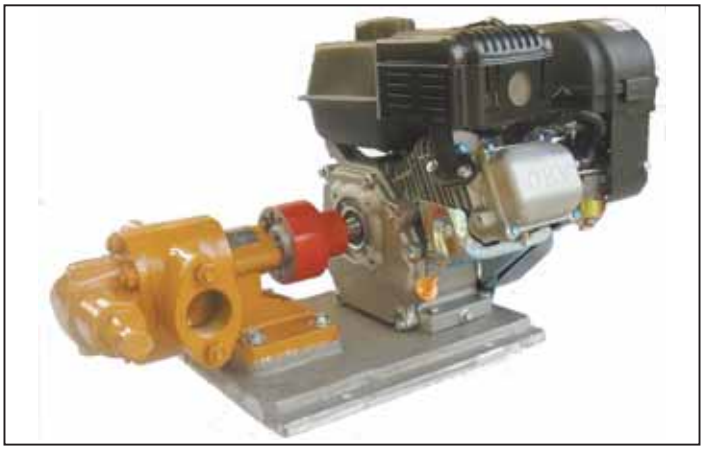
Steve Chastain makes his own portable transfer pumps using both off-the-shelf components and parts he casts himself. Photo above shows an electric-powered pump.



Chastain also makes engine-powered models. His pumps can be fitted with filtration systems.

Portable Transfer Pumps For Waste Oil, Diesel Fuel

If you're looking for a lower cost, easy way to transfer oil or diesel fuel, Steve Chastain might have what you need. Frustrated by the lack of good pumps on the market, Chastain started making his own gear pumps using both off-the-shelf components and parts he cast himself. He sells them through his company, U.S. Filtermaxx.

"We've dealt with waste oil for years, first using it as fuel for our foundry," says Chastain. "We used hand-crank pumps and vacuum pumps with compressors, which work well, but are not handy to carry around."

Chastain has been featured in FARM SHOW multiple times for his homemade iron smelting furnace, piston and parts casting, and most recently for his oil and fuel cleaning centrifuge (Vol. 38, No. 5).

"At first we came up with a small electric-powered transfer pump, but sometimes the used oil was in a remote place, so we went to gas motor-powered pumps," says Chastain. "As we got into supplying the filtration business, we got into bigger pumps. These are all for use with oil, diesel fuel, and other self-lubricating liquids, not with water or gas."

Chastain now offers his pumps with filtration systems. He says the pumps range from 10 gpm to 150 gpm. Prices range from $500 to $2,500. "Our most popular pump is a 24-gal. model that weighs 42 lbs. and comes with a 3 hp gas engine," says Chastain. "It's priced at about $500."

He says he will build to suit a customer's needs. As Chastain notes, "When you have a foundry and a machine shop, you can do a lot of things others can't."

If interested in one of his pumps, be sure to mention FARM SHOW. FARM SHOW readers receive a discount, as much as $50 on a $500 pump.

Contact: FARM SHOW Followup, U.S. Filtermaxx, 2925 Mandarin Meadows Dr., Jacksonville, Fla. 32223 (ph 904 334-2838; steve.chastain@usfiltermaxx.com; www.usfiltermaxx.com).

Hog Feeder Boosts Production With Less Protein

A Canadian hog feeding system fattens hogs at less cost with less waste, according to research scientist Candido Pomar at Agri-Food Canada. It tailors rations daily to match each animal's needs.

"We aren't changing feed intake or rate of gain or the amount of feed provided," says Pomar. "What we do change is the amount of protein and lysine they get. We get the same amount of meat with 25 percent less protein."

The key to the system is the use of transponders that communicate with the computerized feed control system. Pomar attaches them to test pigs, although he says they could also be implanted.

"We're using some transponders that have been used on hogs for the past 20 years in various studies," he says. "They're very dependable."

The transponders trigger the feeding system. However, they also aid the system as it collects body weight, feed intake and growth information. With this, the computer is able to adapt a ration specific to each pig. When the pig with its attached transponder approaches the feeding system, a tailored ration is released.

Less protein fed means lower costs. The customized rations also reduce the amount of phosphorus.

"Protein and phosphorous are two of the most expensive nutrients in a swine ration," says Pomar. "Reducing each by 25 percent has a big impact on feed costs."

Less nitrogen and phosphorous consumed means less excreted in the manure. Pomar describes reductions of as much as 50 percent in nitrogen and 25 to 30 percent in phosphorous.

Pomar has been working on the system for much of the past 10 years. He did not estimate what costs would be. The current system is custom built and much more expensive than a commercial system would be.

The challenge is not only developing the technology, but also gaining a better understanding of what a pig needs. "We are still refining the nutritional concepts to be used with the system," he says.

What has been learned will be moved to commercial-sized trials at the Prairie Swine Centre. If results continue to be positive, Pomar is hopeful a company will want to license the concept and make it available to producers.

Precision feeding system fattens hogs at less cost with less waste, by changing the amount of protein and lysine each animal gets.

"Hog producers who have seen our system are very positive about it and look forward to having this technology available to them," he says. "How soon that happens will depend on industry."

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Sow Crate Converted To Calf Chute

A working crate for sows was easy to convert for working with calves, says livestock producer Mark Burlage. Weaning about 10 calves at a time 3 or 4 times a year, Burlage couldn't justify the cost of an expensive working chute. However, he could see that an uncle's unused sow crate had potential.

"The sow head gate works fine for the calves," says Burlage. "I only made a couple of changes."

At one time the crate was used for putting rings in sows' noses. Burlage added 2 by 4-in. spacers to the inside of the crate and screwed plywood to them. That left just the right amount of space for newly weaned calves.

"I buy baby Holsteins at about 92 lbs. and feed them milk replacer to about 120 to 130 lbs.," says Burlage. "With the calf chute, it's easy to run them in, band them for castration, tag them, and burn the horns off."

Burlage places the calf chute with the head gate slightly up hill. When the head gate closes, the calf pulls back and sets its feet. That makes it easy to band.

"I can do all 3 operations in about 2 min. with the crate," he says. "The next day they are laying quietly in the feedlot, showing no signs of stress."

Since he only uses the crate a few times a year, Burlage didn't want to leave it sitting out. He attached the wheels to the head gate end of the crate and a couple of handles that slide through brackets mounted to either side of the chute.

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Mark Burlage couldn't justify the cost of an expensive working chute for his calves, so he converted a sow crate into this mini calf chute.