



FlexxiFloat "bean shields" hold bean plants down so combine header's knives don't damage them. Once the header has passed over, plants pop back up.

## "Bean Shields" Protect Intercrop Soybeans, Cover Crops

As intercropping grows in popularity, Flexxi-finger Industries says its new FlexxiFloat "bean shields" can help improve the odds for success.

One of the most popular combinations is soybeans planted between rows of winter wheat. The wheat is planted in spaced rows in the fall or early spring, while the beans

are planted between the developing wheat rows in late spring. The wheat is harvested in summer, leaving the beans with plenty of sunshine as they mature through to their harvest date.

The FlexxiFloat bean shield gently holds the bean plants down so the header's knives don't damage them. Once the combine header



Bean shields bolt to spring-loaded crop lifters that attach to header.

has passed over, the bean plants pop back up.

The bean shields bolt to the company's FlexxiSelect spring-loaded crop lifter. The FlexxiSelect, fitted with the bean shield, is then attached to the header.

The bean shields can be adjusted 6 in. up and down, 4 in. fore or aft, and also left or right.

Contact: FARM SHOW Followup, Flexxi-finger QD Industries, Inc., 501 1<sup>st</sup> Ave. East, P.O. Box 1599, Assiniboia, Sask. Canada S0H 0B0 (ph 800 925-1510 in Canada; ph 800 544-8512 in the U.S.; <https://flexxi-finger.com>).

## High Efficiency Hydro Ram Pump

A new ram pump from Water Powered Technologies is lighter, smaller and more efficient than traditional cast iron, hydro ram pumps. Made from glass/plastic composites, the Papa pump (Pump Activated Pressure Amplifier) won't rust, and the addition of the Venturi valve lets it pump with more power.

"The Papa pump has an estimated life span of 25 to 30 years with little to no maintenance and zero energy use," says Frank Howard, director, Water Powered Technologies. "It only weighs 9 lbs. and can be used anywhere there is flowing water."

Like any hydro ram pump, the greater the head (difference in elevation between the storage tank and pump) the greater the output. With a head of only 2 ft., the Papa pump can lift more than 3,400 gal. of water 20 ft. With a head of 10 ft., it can lift nearly 21,000 gal. per day up to 25 ft. above the pump.

"For even greater flow, multiple Papa pumps can be attached in parallel," says Howard. "We've had up to 10 combined at one site."

What makes the Papa pump so effective is the curve-shaped, elastomeric main valve. As water flows around it, the water's velocity increases, creating a high-pressure differential that causes it to close at high speed.

With the main valve closed, pressure builds in the supply port chamber, forcing open the non-return check valve on the delivery port. Water entering is pressurized for delivery. From there the water moves under pressure through the water line to storage or end use.

As the water flows through the non-return valve, pressure on the main valve is released and it opens. This allows the non-return valve on the delivery port to close and the cycle repeats.

Patented in 1996 by Phil Selwyn, a British engineer, the Papa pump has found extensive use in the U.K., as well as in lesser-developed countries where power and parts are often hard to find. Howard says its use is spreading across North America.

"The U.S. and several state governments are funding programs to fence livestock off from streams and rivers," says Howard. "The Papa pump can be used to bring water to them with no external power costs. It's easy to install, eco-friendly and economically beneficial to the farmer/rancher."



Inventor Phil Selwyn (above) and the Papa hydro ram pump. Water coming in from the right side goes through pump and exits at the left under pressure.



The Papa pump can also be used to pump and store water during wet periods for irrigation during dry periods. Other uses include any off-grid or emergency situation where the power has been interrupted or is otherwise not available.

Papa pumps are priced at \$1,800 each. FARM SHOW readers are eligible for a 10 percent discount if they mention reading about the pump in FARM SHOW. While the pumps can be ordered direct from the company, Howard suggests contacting the company first.

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Muffer-mounted bracket supports mirror by means of a 1 1/2-in. pipe hanger and a 6 1/2-in. bolt.

## Tractor Rear-View Mirror

"I needed a mirror on my Deere 2030 tractor when traveling down the highway. Couldn't justify spending a lot of money so I made a bracket to fit the muffer pipe on front of the tractor," says Robert Kusmitch, Niagara, Wis.

"I found an old mirror and bought a 1 1/2-in. pipe hanger and a 6 1/2-in. bolt with extra

nuts for jamming to hold it in place.

"Works great and I can see cars and trucks coming for miles."

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