

## LIGHT, PORTABLE AND EASILY INSTALLED

# Pump Water With Your Outboard Boat Motor

"I've gotten a lot of good do-it-yourself ideas out of FARM SHOW magazine. Here's one of my own I'm happy to share with anyone of your readers who can use it," writes Australian farmer Alan Black, of "Kimberley" Katamatite, in Northern Victoria.

Black has rigged his 10 hp. Honda marine outboard motor for high volume water pumping for gravity irrigation, quick removal of water from flooded fields, and other emergency uses.

Here, excerpted from Australia's Power Farming magazine, is how Black's "outboard motor pump" works:

The outboard motor is carried on a frame which clamps onto a 9 in. pipe arrangement. The unit is set right in the water (river channel or the edge of a lake or pond) for pumping.

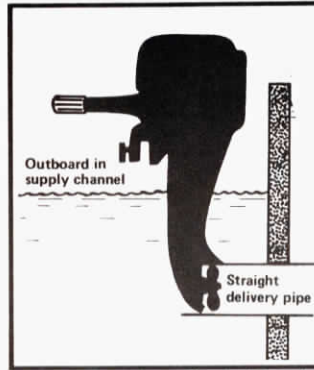
With this application, gravity irrigation can be speeded up as much as 100% by being able to raise the height

of the water in the channel, explains Black.

The outboard motor, when clamped to the delivery part, is equipped with a cavitation plate which is firmly held on rubber-lined fittings. Anti-spiralling vanes are inserted immediately after the propeller.

Although the motor used by Black is a 4-stroke unit, he notes that a 2-stroke outboard would also work satisfactorily since the small amount of extra fuel used for a 5 to 10 hp., 2-stroke engine would be trivial compared with the benefit of faster irrigation.

Black notes that an air-cooled engine would be an advantage in offering the greater safety of not being damaged in the event the water supply runs out. However, he notes that a float switch can be arranged so a water-cooled engine automatically shuts off if the water supply is exhausted.



Drawing courtesy Power Farming Magazine

The outboard motor sits in the water just ahead of the 9 in. pipe.

Although the exhaust on the Honda outboard Black uses has given no trouble, he notes that there would be extra pressure encountered in using it for pumping, compared with boat work, and that this would have to be watched. The outboard Black uses for pumping water for irrigation and other uses around his farm has been left absolutely standard so that he can put it back into his boat for weekend fishing trips.

Black believes the pump's efficiency could be increased by designing special turbine shaped



Black can easily remove the unmodified outboard motor anytime he wants to use it for fishing.

blades and fitting them into a neater shape than is offered by the straight pipe that he uses. However, he feels that he would rather trade some inefficiency for the ease of being able to interchange the motor for weekend boat use and special-duty pumping.



Tails drop off 5 to 7 days after the rubber docking rings are applied.

## RUBBER TAIL DOCKING RINGS

# Easy Way To "De-Tail" Pigs

"We've tested this idea for 2½ years. We know it works," says David Stone, designer-manufacturer of new rubber tail docking rings for small pigs.

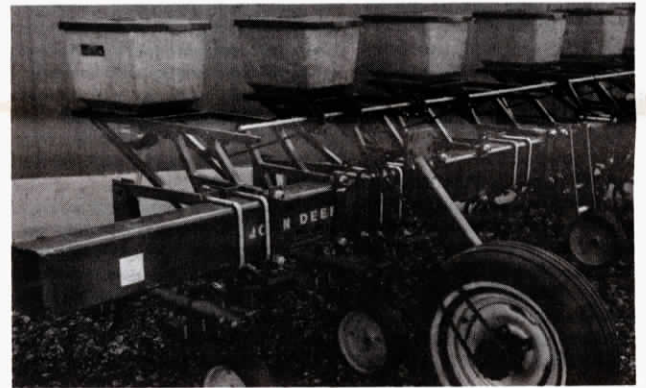
Tails drop off 5 to 7 days after the rubber rings are put on. "There is no bleeding and no pain or other stress to the pig," explains Stone. "The rubber rings are inserted with a special pliers which opens them up for easy installation on the first tail joint from the pig's body. The rubber ring closes down tight, applying uniform pressure all the way around."

Stone adds that, "ordinary rubber bands can be used for docking tails, but they're hard to put on and don't always work since the pressure they

apply isn't always uniform all the way around the tail. Docking tails with a knife or tooth-nipper pliers also works, but if you don't get the job done the first day, you can encounter severe bleeding and stress problems. Our new rubber docking rings virtually eliminate all of these problems."

The special pliers for opening up and installing the rings sell for \$10. Cost of the rubber rings is \$1.25 per 100.

For more details, contact: FARM SHOW Followup, Stone Manufacturing and Supply Co., David Stone, President, 1212 Kansas Avenue, Kansas City, Mo. 64127 (ph 816 231-4020).



Adapter kit lets you take aim at insects during the first cultivation.

## NEW PLANTER BOX ADAPTER KIT GIVES YOU SECOND SHOT AT INSECTS

# Apply Insecticides As You Cultivate?

A Nebraska firm has introduced a new kit that lets you mount planter insecticide boxes on your cultivator, giving you a "second shot" at corn insects during the first cultivation.

"Most corn growers cultivate at least once. This is a good time to take a second shot at rootworms, corn borers and other corn insects," says Bob Anderson, sales representative for Green Country, Geneva, Neb., manufacturer of a bracket that adapts Deere Max-Emerge planter insecticide boxes to most any type of cultivator. The adapter kit fits 7 by 7, 5 by 7, 4 by 7 and 4 by 4 toolbars. It includes brackets, drive shaft, sprocket

and gears. The insecticide boxes are actuated by a ground-driven gauge wheel. "Some farmers are using an auxiliary motor to drive them," notes Anderson. "Insecticide can be applied to the whorl or to the base of the plant."

The kit for a 6 row cultivator (7 by 7 toolbar) sells for \$1,180. An adapter kit runs about \$820 for a 4-row cultivator, \$1,535 for an 8 row, and right at \$2,230 for a 12 row cultivator.

For more details, contact: FARM SHOW Followup, Green Country Inc., Geneva, Neb. 68361 (ph 402 759-3139).