

New Zealand Fielddays

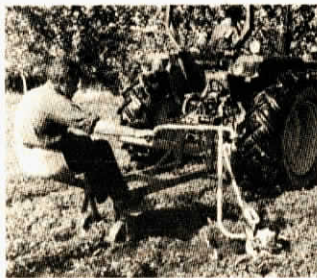
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Disc Weeder

Twin cutting discs powered by individual hydraulic motors and mounted on moveable, suspended arms are the key to the new "Speedweeder" invented by Spencer Jackson, Te Kauwhata, New Zealand.

Towed behind a small tractor, the Speedweeder rides on two small transport wheels. The operator sits facing forward directly behind the tractor and manipulates the two weeding arms back and forth and in and around row crops, eliminating the need for hand weeding around high value fruit and vegetable crops, or around shelterbelts.

Each disc, about 10 in. across, is fitted with teeth that dig out weeds, slicing them out below ground. The discs turn at variable speeds from 30 to 1,000 rpm's, depending on soil



types. A smaller disc is available for more delicate crops.

The Speedweeder sells for about \$1,700. A larger model with two seats and two pairs of discs is also available.

For more information, contact: FARM SHOW Followup, Pearson Engineering, Ltd., P.O. Box 212, Matamata, New Zealand (ph 8155).

Controlled Burning Torch

"It makes controlled burning a lot easier," says G. M. Drinnan, manufacturer of a new fire control torch that lets you literally pour flame onto the ground precisely where needed.

The torch consists of a half-gallon cannister fitted with a handle. The cannister is filled with diesel fuel. A 3-ft. wand, with a check loop part-way down its length and a wick at the end, runs out the top of the cannister. To use, the operator simply lights the wick and tilts the wand and cannister toward the ground. Fuel squirts out the top in flames and onto the ground in an even flow that lets you "write with fire" on the ground almost as though it were a giant liquid pen. "It's fitted with check valves so there's no chance of fire blow-back into the fuel cannister," says Drinnan.

The lightweight aluminum torch sells for \$75.



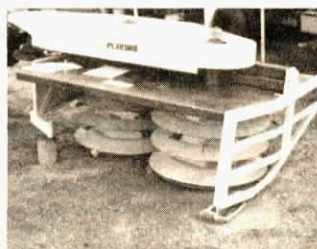
Contact: FARM SHOW Followup, G.M. Drinnan, Drinnan Engineering Ltd., 291 Blenheim Road, Christchurch 4, New Zealand (ph 485-093 or 485-322).

Multi-Cut Drum Mower

"It fine-cuts hay so it dries faster in the windrow," Pearson Engineering Ltd., representatives told FARM SHOW at the recent Fielddays in Hamilton, New Zealand. The new multi-cut, drum-type mower is unique in that it has three layers of cutting blades, stacked one above the other on the two-drum mower.

Wet weather continually threatens hay crops in most areas of New Zealand so drying time is critical. The cutting discs on the new Pearson mower are adjustable to adapt to conditions and can be moved up and down to cut the hay to varying lengths.

Pto-powered by an overhead belt drive, the new mower fine cuts hay as short as 3 to 4 in. in length, yet requires about the same power to drive as a similar size conventional drum mower. The two drums are splined into driving pulleys and can



float up and down independent of each other, allowing them to follow ground contour.

Available in a 5-ft., 6-in cutting width, the new mower sells for about \$3,500.

Contact: FARM SHOW Followup, Pearson Engineering Ltd., P.O. Box 212, Mangawhero Road, Matamata, New Zealand (ph 0818 8155).

FIRST-OF-ITS-KIND SYSTEM CONVERTS OILSEEDS INTO CLEAN-BURNING FUELS

"Fuelmaker" Turns Crops Into Diesel Fuel

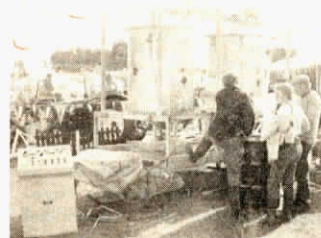
"It's the first time anyone's ever successfully converted soybeans and other oilseed crops into a clean-burning diesel fuel substitute," says Richard Noss, representative of Bio-Energy Ltd. The Australian firm has come up with a first-of-its-kind extraction and blending process that actually changes the chemical structure of crop oils so that they'll burn without modification or alteration in any diesel engine.

The fuel-making system attracted thousands of showgoers at the recent National Fielddays in Hamilton, New Zealand. It consists of two components. The first is a large screw-type oil extractor that produces a raw crude oil and a dry high-protein feed by-product. Working automatically, the new extractor processes about 3,000 lbs. of soybeans every 24 hrs.

Once extracted the oil is mixed with a catalyst in a tank on a separate oil processing unit. The oil and catalyst are heated to 140°, and the combination of the heat and catalyst causes the oil to break down into smaller particles. A glycerol by-product (which can be sold for industrial uses) is extracted from the oil into a second tank by "washing" the oil with water. The final result is a high-quality fuel that can be stored and used just like diesel fuel.

The fuel system can be used to make about 400 gal. of diesel fuel per day to power pickups, tractors, generators, and any other diesel engines without any modification whatsoever.

"It has the consistency of diesel fuel without the fouling and sludge build-up experienced by farmers who've tried to burn crop oils in the past. We've found that the only way to burn crop oil in diesel engines is to



Oil and catalyst are heated to 140° in these tanks.

put it through a process like ours that breaks it down into smaller particles that'll burn and handle cleanly," says Noss.

Processing costs for the fuel, which exceeds in quality the specifications for No. 2 diesel fuel, amount to about 16 cents per gal., including labor, electricity (to heat the oil) and catalyst. Total cost per gallon, depending on commodity prices and other variable costs, could be as low as \$1.10. That price looks very good to New Zealand farmers who pay as much as \$3.00 per gallon for diesel fuel. The company hopes U.S. farmers will be interested in the system as an alternative use for low-priced crops.

Noss says cooperative groups of farmers have begun buying processing units together to process a variety of crops such as soybeans, sunflowers, safflowers, rapeseed, linseed and peanuts. The oil extractor sells for about \$10,000 and the separate oil processor for \$20,000.

For more information, contact: FARM SHOW Followup, Bio-Energy Pty. Ltd., 155 Bath Road North, Kirrawee, N.S.W. 2232 Australia (ph 02 542-3444).

Mini Skid Steer Loaders

Robertson Machinery, Ltd.: Dual hydraulic motors through drive chains provide Robertson's new mini-loader with 4-WD. The operator stands on a small platform at rear and runs the unit with hand controls. Top speed is 4 mph with a lifting capacity of 660 lbs. The machine weighs 1,100 lbs. and has a 30-in. long wheelbase. Overall width is 34 in., and overall length 108 in. Power is provided by a 10 hp. Honda engine. It sells for \$4,775 equipped with a loader bucket.

Contact: FARM SHOW Followup, Robertson Machinery Ltd., P.O. Box 16, Hinds, New Zealand (ph 37-006).

