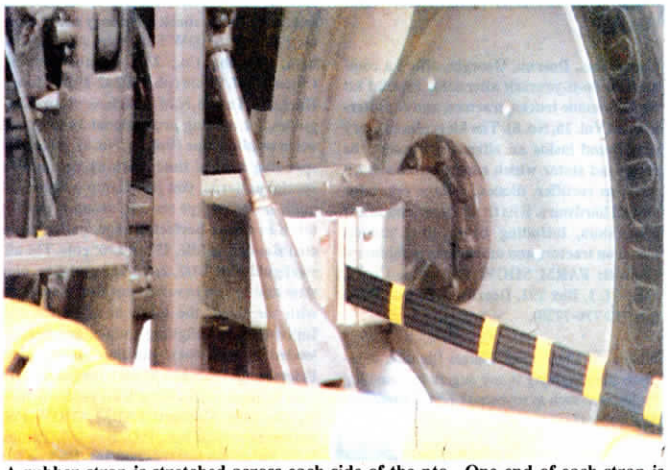

A rubber strap is stretched across each side of the pto. One end of each strap is connected to a switch. When the operator pushes or pulls either strap, the switch stops both the tractor engine and pto.

PUSHING OR PULLING SPRING-LOADED STRAPS SHUTS OFF TRACTOR ENGINE, PTO

PTO "Shut-Off" Device Helps Prevent Accidents

An English agricultural dealership and an electrician have teamed up to develop a shut-off device designed to help prevent power take-off shaft accidents.

The device, developed by Paul McUrich and electrical contractor Kevin Garrod, consists of two spring-loaded straps that are stretched between the rear of the tractor and the implement, one on either side of the pto shaft. One end of each strap is connected to a switch and protected within a metal box mounted on the tractor's axle. When the operator pushes or pulls either strap, the switch stops both tractor engine and pto shaft.

"The straps provide a barrier that stops the operator from entering the pto zone," says McUrich. "If someone does become entangled in the pto shaft, they can push or pull either strap to electrically activate a solenoid shut-off switch which disengages the pto by restricting fuel flow to the tractor engine or to trip the switch on an electronically controlled pto."

A metal rod in the center of the strap housing protrudes about 20 in. to keep the belt parallel whenever the implement turns and to prevent the straps from snagging the tires when turning. When the tractor is in motion, slight movement or jarring of the belts won't trigger the shut-off switch, says McUrich.

McUrich says price has yet to be finalized, but the shut-off device will probably retail for about $525.

For more information, contact: FARM SHOW Followup, Paul McUrich, Peacock & Binnington, Old Foundry, Brigg, England DN20 8NR (ph 0652 52913).

The 10-ft. wide weed "topper" is equipped with five 30-in. blades.

Bugs are sucked up through the air ducts and right into the fan blades which pulverize the bugs and blow them back onto the field.

REDUCES THE NEED FOR CHEMICALS

New "BugVac" Sucks Bugs Off Growing Crops

A front-mounted "vacuum cleaner" that sucks bugs out of fields and kills them is helping one of the country's leading strawberry producers control major insect pests without chemicals.

The "BugVac", developed by Driscoll Strawberry Associates, Inc. (DSA), an association of strawberry growers headquartered in Watsonville, Calif., has worked so well that it's already being used on other fruit and vegetable crops.

"Interest has been tremendous by everyone who's seen it work," says company entomologist Ed Show who came up with the idea for the machine. "It may not totally eliminate chemicals but it has a lot of potential when used with an integrated pest management approach. Most of the 52 machines that have been built are being used by strawberry growers. However, lettuce, celery, spinach, broccoli and grape growers have also shown an interest in it and, in some cases, have purchased machines."

The "BugVac" sucks bugs mainly from the top one third of the plant, where Lygus, the major insect pest in strawberries, does most of its damage. Beneficial insects that live on the lower parts of the plant are out of suction range. "Some beneficial insects are sucked up, but tests last year demonstrated levels of beneficial insects were 50 to 70% higher than those in a chemically controlled plot," notes Show.

The "BugVac" is available as a one, two, three, four or 8-row machine mounted on a framework that surrounds the tractor. It's equipped with one to four pto-driven fans which provide the sucking power, drawing air through ducts attached to suction hoods positioned over the plants and spanning the width of the strawberry bed. Bugs are sucked through the ducts and right into the fan blades which pulverize the bugs and then blow them back out onto the field. A four-row model requires a minimum 45 hp tractor. Traveling speed is only 2 1/2 to 3 mph.

Show got the idea for the "BugVac" three years ago after observing a hand-held backpack vacuum cleaner used as an insect sampling device. He tried it and could see how effectively it removed Lygus insects from strawberry plants. In October 1986 he asked McCluney Machinery Mfg., La Selva Beach, Calif., to build a tractor-mounted field machine. Since then McCluney has built and sold 51 other machines. "Each machine is customized, taking into consideration the configuration of plants and the particular insect species," says Michael McCluney, owner. "Spinach growers are considering using it as a pre-cleaning device prior to harvest."

The machines sell for $5,000 to $20,000 depending on size.

For more information, contact: FARM SHOW Followup, Michael McCluney Mfg., 28 Morehouse Dr., La Selva Beach, Calif. 95076 (ph 408 722-2194) or Driscoll Strawberry Associates, Inc., 1750 San Juan Road, P.O. Box 111, Watsonville, Calif. 95077 (ph 408 726-3531).

Soybean "Topper"

Vincent Kramper, Dakota City, Neb., built a 3-pt. mounted "corn and weed topper" equipped with rotating blades that clip off volunteer corn and tall weeds just above the tops of his soybeans.

"This mower works faster than spot sprayers and I don't have to depend on outside help," says Kramer, who built the unit three years ago. "It really works great for clipping velvetleaf and cocklebur."

The 10-ft. wide mower is equipped with five 30-in. knives which turn at about 700 rpm. The blades, made of 2-in. wide mild steel, are sharpened about 4 in. on each end and are mounted on shafts with 5/8-in. steel bolts. A pair of pillow block bearings on each shaft is bolted to a frame made from 4-in. channel iron, scrap pipe and 1/2-in. re-rod. A hydraulic motor and chain drives the center shaft. Rubber "V" belts off the center shaft drive the other shafts.

Kramper says the iron framework around the blades keeps anyone from walking into them. He used belts to drive the blades so that they'd slip if they hit any object.

Contact: FARM SHOW Followup, Vincent Kramper, RR 1, Dakota City, Neb. 68731 (ph 402 987-3560).