JOLT OF UP TO 70,000 VOLTS "EXPLODES" BUGS ON PLANTS

Electric Bug Zapper Kills Without Chemicals

A Kansas City, Kan., firm has developed an electric bug zapper that kills bugs with short bursts of high voltage electricity without harming crops in any way.

Erich Sarapuu, president of Electrofrac Corporation, is an innovator who supplies the mining industry with electric rock busting machinery. He began looking at possibilities for his equipment in agriculture when he was contacted by a California farmer who had heard about the way he busts rocks with electricity. The farmer wanted Sarapuu to build a machine to break up dirt clods in the field with electricity. In the process of that project Sarapuu discovered the idea also works to kill bugs.

"There's a tremendous difference in conductivity between plants and bugs so if you submit growing crops to the correct level of electrical current, the bug will absorb the current and die while the plant is unaffected," says Sarapuu who plans to continue tests this season with a prototype developed last year. It consists of parallel metal plates that run down either side of the row. Electrical current at rates of between 10,000 and 70,000 volts, depending on the crop, runs between the plates at low amperage. This "blanket" of current envelopes the plant, instantly killing any bugs. In field tests last summer Sarapuu says the machine had a 100% kill rate.

"It requires a 5 to 10 KW generator. We figure a production machine could kill bugs at a cost of about $1 per acre," says Sarapuu, noting that the company is also testing the idea as a way to treat soil before planting. "We run electrodes through the soil and the electricity passing through them sterilizes the soil, killing harmful insects and even weed seeds before planting. This requires much higher levels of electricity. The Russians have had a similar 'soil cooking' machine in use for many years and the USDA tillage labs in Alabama are looking at the idea."

Sarapuu's main business is building huge crane-mounted machines that fracture rocks for mining companies. Using tremendous amounts of electricity, the machines bust up huge boulders or rock faces in mine shafts. The machine grounds one side of the rock and runs electricity in through the other side. The current heats up the rock which causes it to expand and busts it up. He says you can demonstrate the technique on a smaller scale by inserting metal rods in either side of a rock and attaching welder electrodes. He notes that there may be potential for his rock-busting machine in a small version for breaking up rocks in farm fields.

For more information, contact: FARM SHOW Followup, Electrofrac Corporation, 1215 W. 12th, Kansas City, Missouri 64101 (ph 816 474-4895).

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New Power Carrier will climb stairs with loads up to 771 lbs.

RUBBER TRACKS REPLACE 'WHEEL' ON HONDA'S NEW POWER CARRIER

Look What They've Done With The Wheelbarrow!

Design engineers at Honda have put new muscle and maneuverability into the ordinary farm wheelbarrow. They've replaced "the wheel" with caterpillar-type tracks to create a first-of-its-kind Power Carrier.

"It moves right through mud or snow to handle dozens of chore jobs in and around farm buildings, and out in the field -- such as fencing," says Lucky Kirby, Gardena, Cal., a Honda district sales manager. "It'll climb stairs and you can mount a blade in front to move dirt or snow. Another possible use is to take it along on hunting trips to haul big game out of remote areas inaccessible to regular vehicle traffic."

The new Power Carrier is available with an 8 hp Honda engine (for $1,780 suggested retail) or a 5 hp engine ($1,380). Rated carrying capacity is 771 lbs for the large model and 536 lbs for the smaller one.

Steering is accomplished by hand-held levers which brake the tracks. In normal operation, the carrier stops the instant the operator lets go of the hand-held levers. The carrier can be set to move on its own in a straight line at a slow walking speed, allowing material to be loaded into the bed "on the go" without a driver. Forward speed is infinitely adjustable from 0 to about 3.5 mph. The machine also has a "crawl speed" reverse gear.

For more information, contact: FARM SHOW Followup, Honda Power Equipment, 100 W. Alondra Boulevard, Gardena, Cal. 90247 (ph 213 327-8280)

'VOICE COMMAND' DATA ENTRY

Get Ready To Talk To Your Computer

You don't have to lift a finger to keep detailed records with the new "voice command" data entry system introduced by Germania Dairy Automation, of Waunakee, Wis. Instead of pushing a pencil or punching a keyboard to make record-keeping entries, you simply talk them into a miniature microphone strapped around your neck.

"So far as we know, it's the first publically available system of its kind in the world," says Rolf Reisgies, president of Germania who, along with company engineer Russ Kohlstad, developed the new "voice command data entry program" that anyone can talk to in any language.

Germania has programmed the initial system for dairymen, and for use only in the milking parlor. "We're developing software which will allow dairy operators to take the wireless voice command system out into the barnyard and, as they walk along, note which cows are in heat, in need of medical attention and so forth," explains Reisgies.

The new "talking system" ties into all existing IBM, or IBM-compatible computers. It carries a $7500 price tag and consists of a miniature microphone that straps around your neck, a battery-powered transmitter that snaps to a belt around your waist, and a voice-command receiver which translates verbal com- mands and sends them to your computer.

Germania's first-of-its kind new system adapts to any milking parlor equipped with devices (manual or automatic) for weighing each cow's milk output.

"For many dairymen, a once-monthly DHIA weighing isn't often enough. And the other alternative --weighing each cow's milk output at each milking -- produces more records and information than most dairymen want or need, and its expensive," explains Reisgies. "Our new talking system gives you the best of both worlds. You can record individual cow milk weights once or twice a week -- or as often as you choose. And, you can do it without interfering with the milking operation, and for comparatively low cost since the system ties into your existing personal computer," explains Reisgies.

For more information, contact: FARM SHOW Followup, Germania Dairy Automation, 606 Cooper Road, Waunakee, Wis. 53597 (ph 608 849-5012).

Rolf Reisgies shown with neck-strap mike and transmitter (strapped to his belt).