

## “Aquacide” System Kills Weeds Without Chemicals

Imagine going to the field to spray weeds and getting almost complete control, with no worry about getting an applicator’s license, no drift, and nothing but water in the sprayer.

It’s already being done on a smaller scale and it’s only a matter of time before you’ll be able to do it on the farm.

E.C.O. Systems Inc., Burlington, Ontario, has developed a hot water weed-killing system that’s now being used by municipalities and private companies to clear away unwanted vegetation.

Called Aquacide™, the system heats water to 280 degrees F and then sprays it out under less than 40 psi of pressure through a typical sprayer nozzle.

“What we’ve developed is similar to flame-type weeders except that it’s much safer,” says Patrick Kehoe of E.C.O. Systems. “The extreme heat of the water immediately destroys the cellular structure in the vegetation, killing the plant on contact.”

Because of the heat, stainless steel or brass nozzles are used. “The weeds need to be within 6 in. of the nozzle in order for it to work, since heat dissipates quickly into the air,” Kehoe notes.

Aquacide is being used in a number of different ways. It’s used to mark lines on sports fields by killing narrow strips of turf. Cities are using it to control weeds on right-of-ways, around signs and buildings, and in sidewalks and parking lots. Kehoe says a number of organic growers are using it, since it does an excellent job of controlling weeds without chemicals. Most of the growers using it produce higher value crops on small acreages.

One advantage of the system is that it can



**System heats water to 280 degrees F and then sprays it out through a nozzle.**

be used around the house, shop, livestock buildings, or even wells without fear of environmental damage. “And woody plants aren’t generally affected by Aquacide, although it will burn their leaves off if they’re exposed to the hot water,” Kehoe says.

The Aquacide system heats the water on demand. A typical application requires about 2 gal. of water per foot of boom per minute of operation. The smaller the vegetation, the less water is required so the machine can be operated faster.

What that means is, if you went to the field with a 1,000 gal. tank of water and a 40-ft. boom, you’d need 80 gal. of water a minute and your tank would last roughly 12 1/2 minutes. Obviously, the amount of water required may prohibit use for large acreage commercial farmers.

Contact: FARM SHOW Followup, E.C.O. Systems Inc., 2349 Fairview Street, Suite 323, Burlington, Ontario, Canada L7R 2E3 (ph 905 639-6502; fax 905 681-8925; E-mail: mail@beaudrygroup.com; Website: www.beaudrygroup.com/eco)



**Extreme heat of water immediately destroys the cellular structure in vegetation, killing the plant.**



**Weeds need to be within 6 in. of nozzle in order to be killed, since heat dissipates quickly into the air.**

## He Built His Own Pickup “Shock Hitch”

The cost of a commercial pickup shock hitch prompted Marshall Litchfield, Macomb, Ill., to design and build one himself for his Chevy 3/4-ton pickup.

“I used mostly scrap metal which kept my total cost to under \$100. Commercial shock hitches sell for up to \$500,” says Litchfield.

He used 2- and 3-in. sq. tubing and 3-in. channel iron to build the main frame. A leaf spring off a pickup mounts on edge at the back of the frame. The back end of a commercial 2-in. receiver hitch bolts to the center of the leaf spring. It cushions the forward and backward movement of the hitch. To adjust the amount of cushion the spring provides, Litchfield designed a bracket connected to two steel rods that he can move to change the mechanical advantage of the spring.

A pair of latches can be released, allowing the receiver hitch to slide out and back and forth for hooking up.

“I built it last winter after I bought a pickup that was equipped with a utility body but not

with a hitch,” says Litchfield. “I used it last year to pull my anhydrous wagons and seed-hauling trailers, as well as a 20-ft. tandem axle utility trailer. It’ll support a lot of weight. My pickup isn’t very high so I cut a hole in the bumper and mounted the cushion hitch inside it, instead of mounting it below the bumper.

“Most commercial pickup shock hitches use a coil spring. The leaf spring makes the hitch more compact. The way I adjust the amount of cushion – by changing the mechanical advantage of a spring – is unique. On commercial models you adjust the amount of cushion by tightening or loosening the coil spring, which isn’t an easy job.”

Litchfield also rigged up a large rear view mirror that makes it easier to hook up implements to the hitch. The mirror is bolted to a pair of strap irons that are clamped to the pickup’s tailgate.

Contact: FARM SHOW Followup, Marshall Litchfield, 15340 N 700 Rd., Macomb, Ill. 61455 (ph 301 254-3481).



**Back end of a commercial 2-in. receiver hitch bolts to center of leaf spring, cushioning the forward and backward movement of hitch.**



**Hitch slides back and forth for easy hookups. Locks in place at center for towing.**



## Equipment “Rail” Makes Hookups Easy

“I have a 1960’s Ford 801 tractor and several 3-pt. implements for it. I got tired of the constant struggle to get them aligned and hooked up,” says Bob Hudspeth, Era, Texas.

“I came up with what I call an ‘equipment rail’. Each implement is suspended by chain from a metal frame, making it easy to back up close and hook up in seconds. When the implements are

swinging from chains, it’s easy to line them up with no lifting or prying.

“I laid a strip of carpet under the rail to keep weeds down, using 6-in. aluminum nails to secure it to the ground.

“I wish I had thought of this idea years ago when I first bought this tractor.”

Contact: FARM SHOW Followup, Bob Hudspeth, P.O. Box 51, Era, Texas 76238 (ph 940 665-5942).