He's Using Anhydrous To Kill Weeds

Can anhydrous ammonia be used as a herbicide to kill weeds?

Yes, and in the process it can also be used to supply the crop with foliar fertilizer, says Gary Martens with the Department of Plant Science, University of Manitoba. The last two years he has used a specially designed 3-pt. mounted sprayer to test the idea on small grains.

"This idea is in the early stages of testing and there are still a lot of things to work out, but I think it holds promise," says Martens.

Initial testing has been on an oat crop in the 3 to 4-leaf stage and infested with red root pigweed and volunteer canola. The sprayer is equipped with a 6-ft. wide shroud that contains two booms - one to apply ammonia gas and one behind it to apply water. The ammonia gas completely covers all plants inside the shroud and the water converts it to liquid nitrogen fertilizer - in effect, providing the crop with a 20-0-0 foliar fertilizer.

Application rates range from a low of 1 gal. per acre (5 lbs. of 82-0-0 or about 4 lbs. of nitrogen per acre) to a high of 16 gal. per acre (80 lbs. of 82-0-0 per acre or 65 lbs. of nitrogen per acre) with about 3 seconds of exposure time.

Weeds were controlled and oats in the ammonia strips yielded significantly more than the untreated strips - 140 bu./acre in the ammonia-treated strips to 113 bu./acre in the untreated strips.

"With the yield increase, it's almost like having zero cost weed control," says Martens. "The ammonia acted as a contact broadleaf herbicide because broadleaf plants are more susceptible to damage from ammonia than grass. But we were surprised at how well the oats grew back. All the oats leaves were burned brown within 24 hours, but they grew back and looked completely green again within 10 days. Apparently the ammonia acts as a contact burnoff, allowing the growing point in the oats to keep on growing. The plants matured about one week later than normal.

"Of course, this idea won't work on grass weeds or wild oats."

Martens says he got the idea from observing a row crop cultivator that was applying anhydrous ammonia into the ground to add late season nitrogen. "Whenever the cultivator was lifted at the end of the row, any ammonia that escaped would kill all the broadleaf weeds but just burn back the corn plants. I think the same idea would work on row crops if you used a shroud between each row to protect the corn plants. Even if you were to broadcast ammonia over the emerged corn, the corn leaves would burn off like frost and then come back. "

Specially designed, 3-pt. mounted sprayer is equipped with a 6-ft. wide shroud that contains two booms - one to apply ammonia gas and one to apply water.

The ammonia under pressure, was released via a controller. An electric pump was used to spray the water. "I used an expensive controller because I was applying ammonia at very low rates of 5 to 10 lbs. per acre. Farmers typically apply 70 to 100 lbs. per acre," says Martens.

The sprayer was designed and built by Rob McClement of R-Tech Industries, Homewood, Manitoba. Martens plans to continue tests next year using a much bigger sprayer.

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Mouse Trap Powered By Electric Fence Charger

"You can catch mice with very little expense and no poison. All you need is an electric fence charger," says inventor Keith Lamb of Gruver, Texas.

According to Lamb, a single 12-volt or 110-volt fence charger can be used to operate any number of traps over an entire farm and can even be used inside vehicles such as combines, tractors, pickups, and motorhomes. "On my farm I have two traps inside my shop, one inside my pickup, and another one inside my motorhome. All the traps are hooked up to an electric fence that surrounds my pasture. "

What makes the idea work so well, says Lamb, is that fence chargers operate at high voltage - 3,000 to 9,000 depending on the model - which is more than enough to kill most mice. If the mouse doesn't die right away it will be stunned and fall into water at the bottom of his traps and immediately drown. And though they operate at high voltage, electric fence chargers draw very little amperage. "Fence chargers barely use up enough electricity to change your meter reading," notes Lamb.

His patent pending traps are made from 2 1/2-gal. chemical jugs cut down to 8 in. high. A 2-in. high hole is cut into each end of the container, about 6 in. off the bottom. A ramp - made out of cardboard, wood or even rocks - leads up to each hole. He then pop rivets a pair of 1-in. wide metal straps inside the container. One strap runs lengthwise about 3 in. above the bottom of the container, while the other strap runs across and about 5 in. above it. A ground wire leads from the bottom strap to the fence charger. The positive wire is attached to a small metal screen enclosure that contains the bait and hangs about 3 in. below the top strap. Water fills the container to a depth of 1 or 2 in.

The mouse enters the trap on the cardboard "ramp" and then follows the grounded strap to the bait. As it reaches for the bait, the mouse contacts the screen, gets electrocuted, and falls into the water.

"It's a simple idea but it works fantastic," says Lamb. "I've caught as many as 22 mice in a single trap in one night. I've caught more than 400 mice since I installed my first trap last year. The container can be any shape or size. I've used 1 gal. anti-freeze jugs and 5-gal. pails.

"The mouse usually gets electrocuted before it ever touches the bait, so the bait always stays fresh. You never have to reset the trap. The only maintenance is to remove the mice from the water. I think it's a practical idea even if you don't have livestock and have no need for an electric fence charger. You can buy a battery-operated charger for less than $40. Or you can install a 110-volt model and use it to operate traps inside your buildings, then run a wire from the buildings to your vehicles outside."

Lamb runs wires all over his farmstead, elevating it up over the driveway on poles so it's out of the way.

"I put an antiseptic in the water, such as lysol or household ammonia, to kill any bacteria carried by the mouse, and to keep the mouse from smelling for several days. During the winter you can put antifreeze in the water."

Fence charger can be used to kill mice anywhere, says inventor Keith Lamb. Mouse gets electrocuted as it reaches up to touch bait.

Lamb has already sold more than 100 traps in his local area. He's now looking for a manufacturer and is also designing a trap for rats.

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Lamb has a trap inside his motorhome. Trap is simply wired up to a nearby electric fence.

Stripper Header Chops Standing Straw

Shelbourne Reynolds recently went public with a new version of its successful stripper header that solves the machine's biggest problem: chopping the standing straw it leaves behind.

The British company has been selling stripper headers for more than a decade. Now that most countries have banned , or are planning to ban, straw burning, they had to come up with a better way to deal with the straw. The header can be fitted with either a cutterbar to mow down straw for baling or a flail chopper to mulch it. The cutters are located in front of the wheels so none of the straw will be flattened before it has a chance to be cut.

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Shelbourne Reynolds' new stripper header can be fitted with either a cutterbar or flail chopper to mow down standing straw.