

Africa-Inspired Trap Catches Thousands Of Flies

It may not look like the side of an animal to human eyes, but to biting flies the Nzi cloth trap apparently looks like a defenseless source of lunch. The pup tent-like trap is the brainchild of scientist Dr. Steve Mihok, who developed it while working to eliminate tsetse flies in Kenya in 1995. Over the years, the Nzi trap has been adapted to capture horse flies and other pests all over the world in jungles, forests and fields.

The best success in N.A. has been with horse flies, Mihok says, especially with horse owners in southern states. His record catch was about 10,000 horse flies in one day.

"Flies are attracted to the black between the blue wings. Then they get into trouble in the mosquito netting. Their main behavior is to go up to the light," says Mihok.

That light leads them to an opening through a screen cone into a bottle where they die from exposure.

Though the visual attraction is enough, Mihok has also added scent to traps. Cattle urine exposed to air for a week or two and octenol (available at hardware stores for mosquito traps) work well, he says.

The traps are about 6 ft. wide, 4 1/2 ft. tall and 2 ft. deep. They're set on T-posts or poles near water tanks or ponds where livestock gather.

"You can make one of these yourself and put it near your horses. It provides a distraction to the flies there. Instead of the horses, they're drawn to the trap," Mihok says.

Though DIYers have improvised with a variety of materials, he emphasizes using the right color of blue for the best results. His first choice is the UV-protected Pacific blue acrylic fabric made by Sunbrella® for outdoor furnishings.

That's the material used in Nzi traps sold by Rincon-Vitova Insectaries. Ron Whitehurst, co-owner of the California company that specializes in safe biological control products says that he discovered Mihok's trap while doing research.

"It seemed like a good addition to our



Flies that enter cloth trap are drawn to sunlight at the top, then channeled into a bottle where they die from exposure.

product line," he says. Along with the Sunbrella® blue and matte black acrylic fabric, he uses weather-resistant mosquito netting, and he contracted with a garment shop to make the traps. Rincon-Vitova sells the traps for \$195 (posts not included) and donates \$10 of that for biting fly control research.

"It's a simple thing farmers can use. There are no moving parts, no pesticides, no maintenance," Whitehurst says. "It fits in with our integrated pest management strategy to control flies."

While the current design works great for horse flies, Mihok has been experimenting on how to make it more effective for deer flies. Unfortunately it is only moderately effective for stable flies and doesn't work at all for mosquitoes, he notes.

Check out YouTube: Nzi Trap, to see how the Rincon-Vitova Insectaries trap is set up. Instructions to make your own cloth or wood versions are at www.nzitraps.com.

Contact: FARM SHOW Followup, Rincon-Vitova Insectaries, P.O. Box 1555, Ventura, Calif. 93002 (ph 800 248-2847; www.rinconvitova.com; bugnet@rinconvitova.com; smihok@bell.net).



Portable mineral feeder is covered by a rubber "roof" that cattle can push out of the way. Stilson pulls feeder behind a home-built water wagon.

Portable Mineral Feeder Pulls Behind Water Tank

Jeremy Stilson didn't like the waste associated with conventional tub-type mineral feeders. So the Morley, Mich., farmer built a portable mineral feeder covered by a pitched rubber "roof" that cattle can push out of the way from either the front or back. He pulls the feeder behind a home-built water wagon that lets his herd keep grazing instead of walking home for water (Vol. 43, No. 2).

The 4 by 6-ft. wooden feeder mounts on top of an old trailer axle and consists of a box built from treated 2 by 6's and 2 by 12's. The box is supported by a frame made out of 4-in. channel iron and holds 2 rows of mineral blocks, one on front and one on back, with 8 blocks per row weighing a total of 800 lbs. The roof was made from a 4 by 6-ft. rubber mat designed for horse stalls and

livestock trailers.

"The 2 rows of blocks are separated by a 2 by 12 divider, which gives the rubber mat roof its peak," says Stilson. "The center part of the mat is screwed down to the 2 by 12 divider, so cows can lift the mat up from both sides."

"At first we tried attaching a small box to the tank on front of our water wagon, but it was small and could hold only 4 blocks. The cows eventually ripped the box off, so we made something that has more capacity and is more versatile. If we want, we can even hook it up to our 4-wheeler."

Contact: FARM SHOW Followup, Jeremy Stilson, 21847 Four Mile Rd., Morley, Mich. 49336 (ph 231 414-4978; stilsonfarms@gmail.com).



Robotic mower and snow sweeper has on-board cameras that detect obstacles and also allow remote observations by operators.

Robotic Mower, Snow Sweep Catching On Fast

The robotic RT-100 mower and snow sweeper from Left Hand Robotics (LHR) is catching on fast for commercial groundskeeping and paying for itself quickly. The company's hometown of Longmont, Colo., reports reducing mowing costs from \$850 to \$3 to \$5 per acre per year.

"Originally we were considering the residential market, but as we investigated the market, we recognized the real need was in the commercial and municipality market," says Mike Ott, Left Hand Robotics.

Ott and his partner Terry Olkin introduced the gas-powered rotary snow sweeper followed quickly by a mower deck. They went with gas over diesel to save costs, as well as for easier winter starts. The 37 hp. Vanguard engine with its 12-gal. fuel tank offers a long run time and plenty of power for the 14 gpm, 3,000-psi hydraulic pump. The tractor unit weighs in at 1,250 lbs. with a 93-in. length.

"We went with a broom because a snow blower auger would be more dangerous on a robotic tractor," says Ott. "A broom system is limited to 3 to 4-in. depths for effective clearing. However, with an autonomous system, that is not a problem. Operators start the units when snowfall starts, and day or night, they continue until snowfall ends. As a result, sidewalks never have more than a few inches of snow on them."

The RT-1000 operates safely following dual band GNSS RTK maps. Multiple layers of obstruction detection systems using lidar and radar identify any unexpected obstacles. The 360-degree on-board cameras allow remote observations by operators and also serve for obstacle detection.

"No one technology is perfect, so we tackle the problem using multiple technologies. The software selects the best one for a situation," says Ott.

Designed with a no-nonsense approach and lowest cost goal, the RT-1000 has a simple design with straight lines and mostly flat sheet metal cowlings. Hydraulic drive motors powered through a flow-balancing manifold ensure one wheel spinning on ice won't rob flow from the other wheels. The articulated design offers a 7-in. turning radius that makes 90-degree turns on sidewalk corners a reality. The center-pivot design allows a wheel to climb as much as an 8-in. obstacle without affecting wheel-to-ground contact of the other 3 wheels.

The hydraulic pump also powers the mower with a 63-in. cutting width, and the broom has a 48-in. clearing width. A drop spreader with a 6-cu. ft. capacity hopper and a 36-in. spread is also available and can be used for pre-storm treatments, notes Ott.

"When mowing, our software defines multiple patterns for the operator to select. The software also constantly monitors operations and can instantly alert an operator about a problem."

LHR has established dealers in many areas of the U.S. and Canada and deals directly with prospects in other areas. The suggested retail price for the tractor, mower deck and broom is \$65,000.

Contact: FARM SHOW Followup, Left Hand Robotics, 1880 Industrial Circle, Longmont, Colo. 80501 (ph 720 526-2375; marketing@lefthandrobotics.com; www.lefthandrobotics.com).

"Ready To Roll" Wild Hog Trap

Harry Stracener's one-man "reel trap" makes catching wild hogs easy. The 8-ft. dia., 4-ft. high unit rolls into place by hand, flops over onto the ground, and is ready to go. Bait the trap, and the spring-loaded gate does all the work.

"One man can set it up in just a few minutes," says Stracener. "I fill the feed trough with bait such as shelled corn and dried strawberry jello. When the first hog to the feed hits a trigger on the trough, the gate closes. While the trapped hog can't get out, hogs outside can push through the one-way gate to get their share of the bait."

Stracener built the trap by welding livestock panels with 4-in. square openings onto the top and sides of a utility reel designed to hold underground cable. The gate is tripped when the feed trough located next to it is pushed down by feeding hogs.

A spring holds the gate shut, and a latch on top of the cage is connected by cable to the trough. When the gate is pushed back, the latch holds the gate open, and when the hog pushes down on the trough it trips the latch and the gate slams shut.

"One person can easily roll the reel around



Harry Stracener's one-man "reel trap" is equipped with a spring-loaded gate that makes catching wild hogs easy.

on its edge which makes it easy to load onto a trailer," says Stracener. "A metal shield wired on outside the trap keeps raccoons from reaching in from the outside and accidentally tripping the trigger."

Stracener has built 3 of the traps and says he's willing to sell one of them for about \$450.

Contact: FARM SHOW Followup, Harry Stracener, 514 Tanglewood Trail, Buda, Texas 78610 (ph 512 497-1151; todd.stracener@yahoo.com).