CO2-powered traps lure rodents with a long-lasting, chocolate-based bio-attractant paste. The traps and lures effectively kill rodents for approximately six months.

Modern Solutions For Rodent Control

Like most things in life, rodent and pest control is evolving due to technological advances.

The Automatic Trap Company Inc. is an example of this, having served as the exclusive distributor of the Goodnature product line in the U.S. and Canada for eight years.

One of its more unique offerings is the A24 "humane" rodent smart trap kit. These revolutionary, automated, CO2-powered traps lure rodents with a long-lasting, chocolate-based bio-attractant paste. The trap and lure work together to kill rodents for approximately six months. A Smart Shroud Cap shares trap data with any smartphone, including pest kill counts, dates, times and temperatures. The app also notifies the user when the lure and gas need to be replaced.

"The A24 is perfect for locations you don't visit very often or can't get to easily, like a cabin or a storage area," says Blair Calder, President of Automatic Trap Company. "Charge it with a CO2 gas canister, set it up, and come back in six months. It's an excellent system for rodent maintenance on an ongoing basis."

Once the rodent sticks its head into the trap, a powerful pneumatic piston strikes and instantly incapacitates the animal. The rodent falls aside and is left to be carried off by other natural predators and scavengers. The trap resets within three seconds. A single CO2 canister provides 24 strikes.

"Using older-style snap traps can be a messy business as dead animals must be removed, and they only work once before needing to be reset," Calder says. "Plus, they're not always effective, often trapping only legs and tails. No one wants to go searching for a still-alive rat partially caught in a trap."

For multiple kills, poisoning has long fit the bill.

"The problem with poison is it doesn't stop killing at the rodent," Calder says. "The mouse or rat eats it, and any number of predators, including coyotes, possums, raccoons, bears, falcons, hawks, eagles and other scavengers, feast on the dead rodent, in turn becoming poisoned themselves."

Calder says we're slowly realizing how disruptive these toxins are, not only for mice and rats but also for everything that preys on them. Every year, 70,000 veterinary calls are made in the U.S. regarding accidental rodenticide poisoning.

"We can't coexist with rodents," Calder says. "Their impact on building structures and spreading diseases must be minimized. Technology advances are appealing as they add value to management and performance, plus feature a more humane method of controlling pests."

The Good Nature A24 rodent smart trap kit retails for $219.99 plus S&H.

Contact: FARM SHOW Followup, Automatic Trap Company Inc., Goodnature USA, 19201 Sonoma Hwy. 196, Sonoma, Calif. 95476 (ph 877-992-8868; support@goodnature.co; www.goodnature.co).

An Amity harvester was stripped down and redesigned to fit on a trailer, and engineered with a cleaning platform to collect weights and samples.

Research Drives A New Sugar Beet Harvester

The sugar beet harvest has long been a cornerstone of research at North Dakota State University (NDSU) and the University of Minnesota. Studies have required accurate yield estimates and quality samples from over 3,000 plots annually. For decades, this work relied on labor-intensive manual methods and extremely outdated equipment. Specifically, a modified 1960s potato harvester served as the research centerpiece. This approach posed challenges in efficiency, data consistency, and staff recruitment.

"We knew our data quality wasn't as good as it should be and had too many variations," says Tom Peters, Extension sugar beet agronomist for NDSU and the University of Minnesota. "Persistent equipment breakdowns led to a near impossibility for finding parts, and us holding our breath, just wishing and hoping our machine wouldn't break down."

Faced with mounting obstacles and pressure from the research boards to modernize, they were compelled to identify an innovative solution and bring their harvest operations into the 21st century.

The search began with Amity Technology, whose harvester seemed promising but ultimately required extensive modifications, particularly to support advanced data collection, sampling systems, and efficient ride-along harvesting.

"Probably the largest obstacle was transporting the harvester four hours between trial plots, as constantly driving our old machine for that distance wasn't practical or safe," Peters explains. "Part of the custom design solution had to be the ability to move the tractor and harvester on a trailer."

Lily Bergman, an engineering student at NDSU, helped provide the answer. Her father, James Bergman, owner of Beamco, a small engineering company, stepped up to take on the challenge. They started with an Amity harvester and reimagined it from the ground up. They stripped down the original six-row machine, redesigned it to fit a trailer, and engineered a novel cleaning platform to collect weights and samples. Amity Technology remained an invaluable partner, supplying parts and computer drawings for future builds.

The journey was neither quick nor simple, taking 3 1/2 to 4 years from conception to completion. Construction began in August 2023 and concluded with delivery in September 2025. The result was the custom Beamco-2025-PH 101, a machine as unique as its backstory.

"Early plans were for the harvester to debut at an international sugar beet institute trade show, but it was unpainted and admittedly quite ugly," Peters says. "We found a little more money for paint and compromised on a gold color as both NDSU and the University of Minnesota share a gold trim on their school's color scheme."

Although they hoped to use the new machine in 2024, a hydraulic pump issue meant another season with the old harvester. By 2025, the custom Beamco machine was ready, and the results have been impressive. Early tests revealed some electrical quirks, especially in hot weather, but Beamco remains committed to troubleshooting and refining the design for 2026.

Peters says the harvester is more than machinery; it's the product of a collective vision. Growers, research and education boards, universities, service providers, and Beamco itself all contributed, with funding from over 15 entities. He's extremely happy with the outstanding data quality, reduced labor demands, and boosted team morale.

"We're more efficient, and spirits are high as we enter this 'honeymoon stage' with our new tool," Peters says. "We're proud of the collaboration and ingenuity that brought this project to life and optimistic about its impact for the next 20 to 25 years. It just shows what's possible when diverse groups unite to support farmers and advance agricultural research."

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Hydrogen Fuel Cell-Powered Autonomous Tractor

Kubota has introduced the world's first hydrogen fuel cell-powered autonomous tractor. The prototype was unveiled in Japan in September.

The 100-hp tractor can run up to 12 hrs. on a single refill, producing power with water as the only emission. It uses a solid polymer fuel cell to convert compressed hydrogen into electricity. Refueling takes only minutes.

The prototype measures 14.4 ft. long, 7.2 ft. wide and 7.5 ft. high. It has no cab or operator station and is designed for autonomous or remote operation. It uses cameras, sensors and AI to detect and stop when it encounters people or objects. Remote operation enables off-site supervision. Unlike most battery-powered tractors, it uses a single motor for drive implement power.

The body of the tractor contains two large hydrogen storage tanks and the fuel cell. They ride above two electric motors. One is dedicated to the 4-WD and conventional drive system, and the other powers the PTO.

Kubota introduced a manned hydrogen-fueled tractor in 2024. The autonomous version was introduced in Japan, where labor shortages are a major problem in agriculture. Kubota previously introduced the X tractor, a fully electric, autonomous concept. Agri Robo KVT, capable of operating independently or remotely, was another response to the problem. The company is working with Agtonomy, a U.S.-based company, to integrate autonomous features into diesel tractors for specialty crops. They're also developing retrofit systems for partial automation.

Future plans for the prototype include field demonstrations and verification of autonomous operation and hydrogen supply methods for agricultural use. The goal is to confirm its suitability for farming operations while advancing research and development.

100-hp tractor can run up to 12 hrs. on one refill, producing power with water as the only emission.

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