



Is Kaput Kaput?

A FERAL HOG TOXICANT FACES WARY WILDLIFERS

By David Frey

When Texas Agriculture Commissioner Sid Miller announced a new measure in February to combat feral swine (*Sus scrofa*), he did it with his usual flourish. A former rodeo competitor and state legislator, Miller wrote the 2011 “pork chopper” bill that legalized aerial hog hunting in Texas. This time he was expanding Texans’ arsenal, allowing a drug-laced poison to be used on the invasive animals for the first time.

tors to hold off on approving Kaput, which causes the animals to die by slowly bleeding, until it could be further studied.

National organizations, including The Wildlife Society and the Association of Fish and Wildlife Agencies, have similarly asked the Environmental Protection Agency to suspend or cancel its approval of the product for use against invasive swine until other federal agencies are consulted over concerns about the impacts on other wildlife.

Louisiana and Oklahoma briefly registered Kaput for use, then canceled the registrations over concerns about non-target species. In Louisiana, that included the Louisiana black bear (*Ursus americanus luteolus*), recently delisted federally as a threatened species.

An estimated 6 million feral hogs — or wild pigs, as some biologists believe they should be called (Keiter et al, 2016) — roam the United States, including

much of the South, causing at least \$1.5 billion a year in crop damage, property damage and control costs (Pimental, 2007). The Agriculture Department’s Wildlife Services says soon-to-be-published reports suggest the number may be as high as \$2.5 billion. No state has more than Texas, where the extension service estimates more than 2 million cause \$52 million in agricultural losses each year (Timmons et al, 2012).

Facing an out-of-control wild pig population, supporters say poison can be an effective approach to dealing with them, but

“With the introduction of this first hog lure,” he said in a press release, “the ‘Hog Apocalypse’ may finally be on the horizon.”

The announcement set the stage for a battle that has drawn together a long list of unlikely allies against the toxicant, a warfarin-based product marketed by Scimetrix Ltd. Corp., as Kaput Feral Hog Bait. A coalition that included the Environmental Defense Fund and the Texas Hog Hunters Association banded together to press state legisla-

▼ A wild pig and piglets roam in Guana Tolomato Matanzas National Estuarine Research Reserve in Ponte Vedra Beach, Fla. Descended from escaped domesticated pigs and introduced Eurasian boars, an estimated 6 million feral swine roam the United States, causing as much as \$2.5 billion in damages and control costs.



Credit: Craig O'Neal



critics fear Kaput could inadvertently be ingested by other species, including humans, and that it results in a prolonged, painful and inhumane death.

EPA approved

“We’re probably the first to say we’d like to have a way to better control feral pigs, but not if it causes collateral damage to other wildlife,” said AFWA President Nick Wiley, executive director of the Florida Fish and Wildlife Commission and a TWS member.

AFWA asked the EPA to “suspend or cancel the registration” of Kaput as a pesticide until the U.S. Fish and Wildlife Service, the Agriculture Department and the Food and Drug Administration review it.

“The damage and disease impacts from feral hogs are well known and their control is a priority for many state fish and wildlife agencies,” AFWA wrote in a May 5 [letter](#). “However, there are serious concerns regarding the environmental effects from the use of Kaput Feral Hog Bait on the landscape as a means of eliminating feral hogs.”

Kaput was [approved](#) as a pig pesticide by the EPA on Jan. 3, in the waning days of the Obama administration. Its active ingredient, warfarin, also called Coumadin, is prescribed for humans at risk of blood clots. Since 1952, it has been a common pesticide for killing rodents. The chemical inhibits the synthesis of vitamin K-dependent clotting factors, causing animals that ingest it to hemorrhage and “bleed out.”

Opponents worry Kaput will reach beyond wild pigs. Black bears (*Ursus americanus*) and raccoons (*Procyon lotor*) could lift the lids of feeders that dispense the bait, they fear. Predators or scavengers, including bald eagles (*Haliaeetus leucocephalus*), might be poisoned by feeding on the hogs’ carcasses. Warfarin washing into waterways may poison fish. They also worry hunters may inadvertently kill and eat hogs that have ingested the toxicant but haven’t yet died.

“The fast-tracked registration of Kaput Feral Hog Bait by the previous Administration has resulted in continued concern being raised over whether the impacts of this pesticide to non-target wildlife and public health were properly evaluated,” wrote four member organizations of the National Environmental Coalition on Invasive Species — TWS, the Center for Invasive Species Prevention, the National Wild-



Courtesy of Scimetrics Ltd. Corp.

◀ **Manufactured by Scimetrics, Kaput was approved as a feral hog bait in 2016 by the Environmental Protection Agency, but the approval prompted a backlash from opponents who worried about potential impacts on wildlife and humans.**

life Federation and the American Bird Conservancy — to EPA Administrator Scott Pruitt on [June 2](#).

Facing a backlash

Kaput has backers in the wildlife community, however.

“I think we’ve seen a great deal of knee-jerk reacting,” said Mark Smith, associate professor of wildlife science at Auburn University’s School of Fisheries & Wildlife Sciences. The president of TWS’ Southeastern Section and head of the National Wild Pig Task Force, an organization of natural resource professionals who deal with them, Smith said biologists should evaluate the research before abandoning what he called “a potentially effective tool in the toolbox.”

Scimetrics has assured officials that the concerns are overblown. Hogs are particularly susceptible to warfarin, the company says, so Kaput’s dosage is low — 0.005 percent of the bait, a fifth of the concentration of rodent bait. Scimetrics adds a dye that turns the pig’s internal fat blue — a warning to hunters that the pig has been poisoned, which according to the label appears within 24 hours. Scimetrics’ sells specially designed feeders that are made to prevent bears, raccoons and other animals from accessing the bait.

The company president, former U.S. Fish and Wildlife Service biologist and TWS member Richard Poché, declined to comment due to pending legal actions in Texas, but he has presented Kaput to Smith and other wildlife biologists who work with wild pigs.



“If you really look at the latest research Poché is producing, you can definitely see where there are some — restricted — situations where warfarin may have some practical applications,” Smith said. “We’ve got a lot of landowners out there who are losing a lot of money and they’re beyond upset with pig issues — not to mention all the natural resource damage that’s occurring out there. If you look at pig removal and pig management, it’s very time consuming the way we’re doing it: Trapping them. Shooting them. Aerial gunning them. We’re not going to solve the problem that way. We’re not going to be able to trap our way out of it. We’re definitely not going to shoot our way out of it.”

A slow death

Others aren’t convinced, in part because no peer-reviewed studies have been conducted to verify studies conducted by Scimetrics’ sister operation, Genesis Laboratories.

TWS member Tyler Campbell, chief program officer and principal scientist for the nonprofit wildlife conservation group the East Foundation, was feral swine project leader for Wildlife Services’ National Wildlife Research Center field station in Kingsville, Texas, when Kaput was tested on penned hogs there in 2008. He and Australian colleagues evaluated several prospective toxicants. Based on their findings, Wildlife Services and partners decided to pursue a different toxicant — sodium nitrite.

“At present I do not believe that Kaput feral hog bait should be used as a method to control feral hogs in Texas,” Campbell said in a deposition that was part of the lawsuit filed by the Texas business Wild Boar Meat LLC to block approval of Kaput in the state.

Campbell said he worried about humans, wildlife and livestock accidentally ingesting the toxin, which is fed to the hogs gradually over a number of days. But he also worried

about death of the hogs. Warfarin bait was once used against hogs in Australia, he noted, but it was soon considered inhumane and banned.

“I have personally worked with warfarin in tests on feral hogs,” he said. “Feral hogs that die from warfarin poisoning die a very slow, extremely painful death. It can take several days for a feral hog

that ingests warfarin to die. During that time, the hog can sustain massive internal hemorrhaging and discharge blood from body orifices, including the nose, eyes and anus.”

Looking forward

By his own count, Texan Will Herring has hunted thousands of wild pigs, and his company, Hubbard-based Wild Boar Meat, has paid hunters to kill thousands more, which it processes and sells for pet food. When Herring heard Miller’s announcement about Kaput, he worried it would be impossible to be sure he wasn’t handling tainted meat. An affected hog could wander for miles before dying, he feared. Herring succeeded in getting a restraining order against the approval of Kaput in Texas and in assembling a coalition of hunters, environmentalists, wildlife advocates and veterinarians on his side.

“Thousands of people realized that this might be a major problem,” he said, “and the biggest problem is that it may kill other animals, it may kill humans and it may cause the hog population to increase in Texas,” if it discourages hunters from shooting them.

In April, Scimetrics withdrew its request to register Kaput in Texas. Lawmakers included a rider in the state budget forbidding the state Agriculture Department from taking action to implement the toxicant.

Meanwhile, biologists are seeking an alternative they believe will be safer. Wildlife Services hopes to start field trials on sodium nitrite next year and have it registered with the EPA by 2021. Biologists say the chemical, which is used to cure bacon, is especially toxic to feral hogs and causes them to become faint, fall unconscious and die within three hours.

“It still has some risks but they are manageable,” AFWA President Nick Wiley said. “It’s not nearly as risky as warfarin.” ■

TWS Resources

Go to TWS’ website to read the Society’s position statements on:

- [Feral Swine in North America](#)
- [Wildlife Damage Management](#)



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