

UK researcher works to sharpen RNA-based defense against armyworms

BY JORDAN STRICKLER
UNIVERSITY OF KENTUCKY

LEXINGTON — A University of Kentucky Martin-Gatton College of Agriculture, Food and Environment researcher is leading a new project that could help farmers fight some of agriculture's hardest-to-control insect pests with a method designed to hit the target and leave other insects alone.

S. Reddy Palli, a professor in the UK Department of Entomology, received \$749,888 from the U.S. Department of Agriculture's National Institute of Food and Agriculture for a four-year project focused on improving RNA interference (RNAi) for managing lepidopteran pests, such as fall armyworm.

"RNAi is a process that can knock down key genes in a pest, shutting down functions the insect needs to survive," Palli said. "Researchers and companies have spent years studying it as a pest-control tool. This method has shown promise in some insects, especially beetles, but has not worked nearly as well in other insects like lepidopteran pests, the group that includes moths and butterflies."

That gap matters to agriculture.

"RNAi does not work very well in major agricultural



Photo provided by S. Reddy Palli

Armyworms could meet their match against an RNA attack.

pests," Palli said, noting that his lab has spent about a decade trying to learn why and improve the technology. "Previous work from my lab led to nanoformulations that showed some progress, but the new grant is meant to push the method farther, to the point of commercial use."

The new project will focus on fall armyworm, a destructive pest that feeds on corn and other crops. Fall armyworm causes economic losses across many crops and is especially difficult to manage due to its voracious feeding on multiple plant species, year-round breeding, ability to migrate, and strong detoxification system. Palli's team has already achieved 50%-65% mortality in larvae using nanoformulations of double-stranded RNA. The new goal

is to reach 100% mortality through improved gene targets and delivery methods.

"The stakes stretch well beyond Kentucky," Palli said. "Fall armyworm is native to the Americas, but they have spread across Africa and Asia, where they have become a serious concern for crop production. The insect has especially been tied to food security problems in places that rely heavily on corn."

For farmers, one of the biggest appeals of RNAi is precision.

Palli said the kind of product his lab is trying to develop could be sprayed onto corn and would be designed to affect fall armyworm but not beneficial insects such as honeybees and monarch butterflies. That kind of target-specific action sets RNAi apart

from many broad-spectrum insecticides and is a major reason researchers continue to work to improve it. The project description also lists testing for non-target effects as one of its next steps.

Palli has been involved in RNAi research since the technology first began drawing attention as a pest management method. Palli said his lab published the first paper showing the method could work against the Colorado potato beetle. He also pointed to work on Japanese beetles and said RNAi-based products are already in use against beetle pests such as corn rootworm and Colorado potato beetle. He added that another product was approved last year for mites that affect honeybee health.

That track record gives the team a clearer picture of both the promise and the limits of RNAi.

"In beetles, the method already has a path to the field. In lepidopteran pests, that path has been much harder to build," Palli said. "This grant is meant to help change that, giving researchers room to refine the science, test the best delivery system in greenhouse and field settings to see whether the method can move closer to real-world use for current pests and those drawing concern elsewhere."

State approves nearly \$3 million in agricultural loans

BY STAFF REPORTS

FRANKFORT — The Kentucky Agricultural Finance Corp. approved 16 agricultural loans totaling \$2,977,295 during its monthly board meeting, providing financing for projects supporting beef, forage, poultry and grain producers across the state.

The loans were approved March 13 and include funding through several state agricultural loan programs, according to a news release from the Kentucky Agricultural Finance Corp..

Four loans totaling up to \$712,000 were approved through the Agricultural Infrastructure Loan Program. Recipients were located in Caldwell County (\$250,000), Grayson County (\$250,000), McLean County (\$62,000) and Shelby County (\$150,000).

The program partners with commercial lenders to finance capital improvements for farm operations. Eligible projects include permanent farm structures with attached equipment designed to improve profitability. Producers may qualify for loans of up to \$250,000 covering as much as 50% of a project, the release said.

Ten loans totaling up to \$1,765,295 were approved through the Beginning Farmer Loan Program. Recipients were in Anderson

County (\$250,000); Caldwell County (\$250,000 and \$250,000); Hardin County (\$152,500); Harrison County (\$161,045); Laurel County (\$158,000); Metcalfe County (\$62,500); Monroe County (\$250,000); Rockcastle County (\$23,750); and Wayne County (\$207,500), according to the release.

The program assists individuals with some farming experience who want to develop, expand or buy into a farming operation. Funding may be used to purchase livestock, equipment or agricultural facilities, secure working capital, buy farm real estate or invest in a partnership or limited liability company, the release said.

One loan totaling \$250,000 was approved in Estill County through the Diversification through Entrepreneurship in Agribusiness Program, which supports businesses that sell agricultural products or services to farmers or consumers, according to the release.

Another \$250,000 loan was approved in Rockcastle County through the Large/Food Animal Veterinary Loan Program. The program helps licensed veterinarians build, expand, equip or buy into practices serving large animal producers, including goat, sheep, swine and other food animals, according to the release.

SNAPCHAT

FROM PAGE A7

"The headcount reduction is designed to further streamline our operations and reallocate resources toward our highest-priority initiatives, leveraging increased operational efficiencies to accelerate our path toward net-income profitability," the company said in its filing.

Snap had 5,261 full-time employees as of Dec. 31, 2025, the company said in its latest annual report.

CEO Evan Spiegel said in a letter to

staff that another 300 open roles would not be filled.

It's not the first time the Santa Monica, California-based company has eliminated jobs. In 2024, Snap cut 10% of its workforce, or about 530 employees.

Snap cut 3% of its staff in late 2023, and in 2022 it slashed its workforce by 20%.

Snapchat, which is popular with young people and known for its disappearing photos and videos, has 474 million users every day, on average, according to the annual report.

Snap said in its latest earnings report that its net loss in 2025 narrowed to \$460 million, as revenue rose to \$5.9 billion.



Richard Drew/AP Photo

This Aug. 9, 2017, file photo shows the Youtube, left, and Snapchat apps on a mobile device in New York.

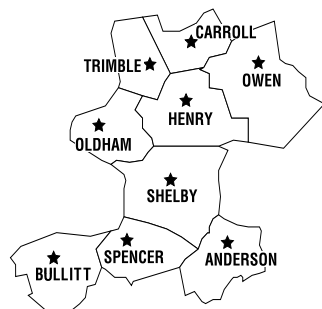
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Real Estate: 72+/- acre farm located at the end of Devin Drive. The ultimate privacy at your finest. The property is mostly wooded, with approximately 7 acres of open ground, with a nice barn on it. The real estate has nice creek frontage and plenty of wildlife for the hunting enthusiast. Great opportunity to buy a great asset at your price.

A lot of 4 pieces of farm equipment sold as a package: Post hole digger (3pt hitch), Box grader blade with teeth, Grader blade, 5ft finish mower. You will need to bring your own loading equipment to get the items, you will have 2 weeks to get the items off the property after the auction ends.

Terms: 10% Buyers Premium added to the final bid to determine the final sales price. 10% of the total sales price of the real estate will be due the day of the auction from the winning bidder as a deposit with the balance due on or before 5-25-26.

Public Viewing: Sunday, April 19th 2-4pm

Auctioneer's Note: This is to settle the estate of Edward Hofstetter.

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Auctioneers: H. Barry Smith (CAI), Jimmy Willard (CAI), Shawn Willard (CAI), Jeff Riggle (CAI), Patrick Hargadon, Todd Barlow, Rob Winlock, Dean Burk, Courtney Roberts



ABSOLUTE AUCTION SAT. APRIL 25, 10 A.M.

GAFFNEY CUSTOM HOMES, LLC

92.19 ACRE FARM • 7 TRACTS

4 BR., 3 BATH, 5775 SQ. FT. HOME

3 ACRE LAKE WITH ZIP LINE

MULTIPLE BLDGS. & HOMESITES

OPEN HOUSE: SUNDAY APRIL 19TH, FROM 1:00 TO 3:00 P.M

LOCATION:

537 DAWKINS LANE, SULPHUR, KY. 40070

GAFFNEY CUSTOM HOMES, LLC HAS DECIDED TO LIQUIDATE SOME OF THEIR INVESTMENT PROPERTY AND HAVE COMMISSIONED BISHOP REALTY & AUCTION, LLC TO SELL AT ABSOLUTE AUCTION THE FOLLOWING PROPERTY UNDER THE TERMS AND CONDITIONS AS STATED ON THE ABOVE DATE & TIME.

Selling 92.19 acres and a beautiful 5775 sq. ft. home in 7 tracts ranging from 3.82 acres to 35.34 acres. All tracts will have frontage on Dawkins Lane and offer some of the best homesites to be sold at Absolute Auction in this area in a long time. This property is located just off LaGrange Road and just minutes from I-71 with easy access to Louisville, Lexington and all of Northern Ky. You will find that these 7 tracts provide an opportunity to purchase real estate in a thriving market that you can build a new home on, use for recreational purposes or an excellent place for you to invest in land that has tremendous potential for growth due to the prime location.

THE TRACTS:

Tract #1: 11.95 Acres with 603 ft. of frontage and a prime homesite and some woodland.

Tract #2: 10.69 Acres with 341 ft. frontage being mostly clear with scattered woodland.

Tract #3: 11.36 Acres with beautiful views and a good mix of cleared land and woods.

Tract #4: 14.09 Acres with great views and the perfect spot for a home. Mostly clear with a small pond.

Tract #5: 35.34 Acres and loaded with extras. There is a 36x48 pavilion, a 36x50 barn/shop, 22x30 concession bldg. with full bath & kitchen area, plus a 2.5 acre stocked lake with a 3-tier zip line platform and over 900 ft. of cable for a ride over the lake. This tract offers a great homesite or just an excellent place for a cabin on your own recreational weekend get-away. Woodland at the rear provides excellent cover for wildlife if you are a hunter.

Tract #7: 4.93 Acres of Country living at its best. This home is an 1830's Log structure that has been built around and now has over 5700 sq. ft. of living area. Country kitchen with appliances, granite counter tops, poplar flooring, stone fireplaces, large laundry, double primary suites with baths, theatre room, bar area, covered porches, 4 car garage and a stocked 1-acre lake. Turn this property into your dream home or a perfect investment opportunity for an VRBO.

Tract #8: 3.824 Acres with scattered woods. Excellent lot for a walk-out basement.

AUCTIONEERS NOTE: This farm will be offered in a traditional manner as a whole and in tracts and will sell in the manner bringing the most dollars. The seller is installing a main water line along Dawkins Lane so that each tract will have city water available.

Restrictions: The property will be restricted to No mobile, modular or manufactured homes allowed on any tract.

TERMS: 20% of the purchase price to be paid down the day of sale and the balance with deed and possession on or before May 18th, 2026. This home was built prior to 1978, and all prospective bidders have until April 17th to inspect for lead base paint.

There will be a 10% Buyers Premium added to the final bid of everything sold to determine the total price. Announcements the day of sale take precedence over any and all advertisements.

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