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## Volkswagen Making E-Tractors In Africa

The Volkswagen Group Africa recently announced the creation of a multifunctional facility in Gashora, Rwanda, which includes the GenFarm Project and Empowerment Hub. The pilot project infrastructure aims to direct African modern farming with e-tractors.

The GenFarm Project is a holistic ecosystem of reliable, sustainable and environmentally friendly e-powered mechanized farming services for rural areas in Africa. It also provides mobility services for the transportation of goods and people.

“We’re growing our footprint in Africa and regard Rwanda as a key growth market,” says Volkswagen Group Africa Chairperson and Managing Director, Martina Biene. “This project demonstrates our commitment to sustainable practices and highlights our ability to provide mobility solutions to the rural and urban communities currently served by our Volkswagen Mobility Solutions Rwanda business.”

The Empowerment Hub is under development, and when complete, it’ll be a key component of the GenFarm. Equipped with photovoltaic power and energy storage

systems, it’ll supply clean energy, storage and business space to the involved Volkswagen cooperatives of the Mobility Solutions Rwanda and Volkswagen Group Innovation Centre Europe.

“We want to offer various services in the empowerment hubs. Farmers can book an e-tractor, including a trained driver, for affordable, sustainable farming. The project’s unique selling point is the battery swap system. In this way, the battery becomes part of the hub’s energy infrastructure and energy storage for the tractor,” says Managing Director of Volkswagen Group Innovation Dr. Nikolai Ardey.

Over the last 30 years, Rwanda’s economy has developed significantly, with the country’s agricultural sector remaining pivotal in improving the livelihoods of Rwandans and sustaining the economy. The agricultural sector currently accounts for 25% of the national Gross Domestic Product.

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## Earwigs Used To Protect Pome Fruits

Rolls of corrugated cardboard are easy devices for capturing earwigs, a major pest in stone fruits like peaches and cherries. The earwigs can then be released in apple and other pome fruit orchards where they’re beneficial. The concept was developed by a research team at Washington State University (WSU) and Oregon State University, with funding through the Temperate Tree Fruit and Vegetable Research Unit, Wapato, Wash.

“Earwigs are predators of many different pests in pome fruits, but they’re very poor dispersers,” reported Aldo Hanel, a WSU graduate student and lead author. He presented the results at the 2024 North Central Washington Tree Fruit Days Conference.

He explained that earwigs crawl around from 10 p.m. until 3 or 4 a.m. and aren’t seen during the day. The researchers found they could mass-trap earwigs using simple-to-construct cardboard rolls. They cut 4-in. by 250-ft. cardboard rolls into 30-in. lengths.

“The 250-ft. roll costs about \$10, and we were able to make 250 traps in about 90 min.,” said Hanel. “In 2021 and 2022, we attached them to cherry trees, returning in about a week to check for earwigs. We removed them weekly and in two years, had captured 50,000 earwigs.”

The stone fruit pests were released in groups of 100 in pome fruit orchards every other week from June through August. In June, a mass release of 500 was made in other orchards. The researchers started seeing results in the second year.

While the mass trapping in the cherry orchard didn’t reduce depredation there, repeated removal did reduce the population



**Hanel says earwigs can be a low-cost technique and encourage the use of milder pesticides in the orchards where they have been released.**

over the two years. The mass release in the pome fruit orchards did reduce the level of woolly apple aphids and pear psylla. The researchers found that the multiple releases helped control population increases, but couldn’t reduce already high populations. Earwig benefits were seen in orchards where integrated pest management was practiced, but not where broad-spectrum insecticides were used.

“The earwigs are easy to capture and release, but they aren’t a silver bullet for pest control,” suggested Hanel. “However, they’re a low-cost technique and can use off-season labor. They also encourage using milder pesticides in the orchards where they’ve been released.”

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## Technology Alters Crop Nutrient Analysis

A New Brunswick, Canada, Agtech startup is gaining momentum with its LENS (Leaf Evaluated Nutrient System) platform.

The LENS uses pattern-matching AI from leaf structure, sensor technology, and machine learning to quickly estimate the nutrient content of 13 key macro and micronutrients. Unlike traditional, inefficient, costly and time-consuming lab testing, the LENS provides real-time results, allowing quick, data-driven decision making.

“What used to take days waiting for lab results now happens instantly, empowering agronomists and growers with real-time information,” says a Picketa promotional release. “The quick turnaround time has been a game-changer, helping growers make decisions in minutes, not days.”

To use the LENS, producers collect plant tissue samples from their fields and scan them at a preferred location. The data is processed on Picketa’s cloud platform and transformed into nutrient concentrations, with the results displayed on the web platform.

“The gathered information can be used to manage the field’s resources,” says the promotional release. “Farmers can notice deficiencies and see field trends over the season. Results can be compared to analyze yields and results.”

The LENS supports in-season nutrient decisions and allows agronomists and fertilizer manufacturers to confirm new formulations.



**Waiting for lab results used to take days, but now they happen instantly, according to Picketa, empowering agronomists and growers with real-time information.**

The real-time plant nutrient data aids in profiling nutrient trends across different crops, regions and management practices for annual improvements.

Picketa’s technology is currently used in 13 U.S. states and six Canadian provinces.

Until now, the system has supported only potatoes and corn. Recently, Picketa announced the addition of canola to its LENS platform for the 2025 season. Soybeans, wheat, and cotton programs are also in development. The company aims to cover every major crop type in the future and make the LENS the standard for tissue analysis.

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## System Controls Grain Dryer

Alexander Sluijmers, a Perry of Oakley Ltd. development engineer, was recently declared the winner of the prestigious 2025 Lincolnshire Agricultural Machinery Manufacturers Association (LAMMA) Young Engineer Award for his role in the creation of the Grain Sentry, an automated moisture measurement and operational control system for continuous flow grain dryers.

“Traditionally, operating a continuous flow grain dryer is labor intensive,” Sluijmers says. “It requires a dedicated person to oversee and take manual moisture readings. Then the dryer temperature and/or discharge speed must be manually adjusted to achieve the optimal moisture content. The Grain Sentry replaces this person.”

The machine can be used to dry wheat, barley, oats, triticale, rye, corn, buckwheat, millet, sorghum, rice, coffee, peas, lupin, soybeans, rape, sunflowers, jojoba, and even seaweed. It uses pneumatic conveying to take a grain sample from the dryer filling and discharge equipment and analyzes it using the latest near-infrared technology.

“The algorithm we developed to run the system is self-teaching, gathering information from the two sampling points. It uses a series of calculations to determine the correct dryer speed and/or temperature to maintain the best possible moisture content,” Sluijmers says.

Once the dryer and Grain Sentry are running, the Sentry controls the dryer, ensuring the grain is stored at the proper moisture content. If any concerns arise, the app receives alerts.

The system operates from a dryer PLC panel or remotely from the app.



**Grain Sentry uses pneumatic conveying to take a grain sample from the dryer filling and discharge equipment and analyzes it using the latest near-infrared technology.**

Proper drying practices are important, as over-drying leads to excess fuel consumption, and under-drying can drive fungal growth, both of which decrease the price per ton.

Profitable arable farming is becoming harder to achieve, and the Grain Sentry helps address this challenge,” Sluijmers says. “It de-skills the grain dryer operator role and significantly reduces staff hours required while decreasing fuel consumption.”

The unit improves profitability, with potential savings on drying costs ranging from \$28,000 to \$69,000 per season.

The Grain Sentry is manufactured in Devon, England, and is available across North America. The unit price varies depending on the dryer but begins at \$32,000 plus S&H.

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