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Grain Cart System Logs Harvest Details

The Libra Cart, a grain cart scale and management system, was developed by Agrimatics to handle every detail of grain harvesting.

The wireless device is installed in minutes and is powered by a single battery or a tractor's 12-volt system. Hardware connects to the grain cart's load cells and communicates with the Libra Harvest app through Bluetooth.

The system automatically detects and records all filling and unloading without the need for additional sensors. It replaces handwritten notes, providing accurate, real-time data to a tablet or smartphone. Dates, times, GPS locations and weights are collected and saved to the app even when a connection to the internet is unavailable.

"Our automatic unload feature even detects unloading and automatically logs the transaction, so there's no need to write it down," says Agrimatics Customer Experience Coordinator Liam Neufeld. "Everything is tracked, including fields, amounts, trucks and destinations, whether bins or elevators. It can also run reports. There's no more guesswork."

Farmers can even calibrate their combine's

yield monitor or add a grain moisture sensor.

Agrimatics also offers the addition of Serial Link, an external LED scoreboard display to view live grain cart weights from the Libra Harvest app. The Serial Link pairs with the existing Libra Cart system and mounts directly to the cart, enhancing functionality and visibility.

"They're automatic and simple, so it doesn't matter if you have inexperienced or non-technical grain cart drivers," Neufeld says.

The Libra Cart and Serial Link units are manufactured in Saskatoon and are available across North America from a network of dealers. They're also offered in Australia. Additionally, products can be ordered directly from the website.

The Libra Cart sells for \$3,998, and the Serial Link retails at \$1,433, plus S&H.

Contact: FARM SHOW Followup, Agrimatics, 101-116 Research Dr., Saskatoon, Sask., Canada S7N 3R3 (ph 888-241-7216; info@agrimatics.com; www.agrimatics.com).

Attachment Delivers Fertilizer To The Root Zone

"Applying liquid fertilizer post-emergence has proven itself in yield benefits over the last few years," says Frost Inc. Spray Technology technical sales representative, Ken Rost. "If we can get the fertilizer applied exactly into the right zone, at the roots, not the middle of the row where much of the nitrogen won't get to where the plants need it, it's even more cost-effective and useful."

To make this critical application process easier and more accurate, Frost developed the SuperDrop Fertilizer Applicator. This lightweight and strong polyethylene attachment fits almost any existing nozzle bodies on 1 to 1 1/2-in. sprayer booms. The push-to-connect fittings and tubing are easy to install or replace in just seconds. A swivel plate connection and position detent accommodate boom folding.

Drop lengths are 30 and 40 in., and a Dial-A-Rate feature allows farmers to change flow rates with a twist of the hand.

"Changing rates for whatever reason can be a hassle with other application methods as you must replace the little orifices in the check valves, which often get dropped in the dirt, plus you get your hands wet with liquid fertilizer," Rost says. "Our unique Dial-A-Rate holds a disc with multiple internal orifices. Just rotate to the right flow to match the desired rates and ground speeds. It's kind of like a garden hose spray nozzle."



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A sturdy polyethylene shoe at the bottom of the fertilizer drop should be positioned about 6 in. off the ground for best results.

"It may dig into the soil occasionally, but they're tough and engineered to take abuse," Rost says. "We've never had one break."

Frost also features an easy-to-use corresponding calculator to match pressures, speeds and chemicals with desired settings.

Manufactured in St. Croix Falls, Wis., the units are sold with or without the Dial-A-Rate feature. Rost recommends that interested customers contact them through the website for pricing and availability information.

Contact: FARM SHOW Followup, Frost Inc., 2205 US Hwy 8, Saint Croix Falls, Wis. 54024 (ph 800-621-7910; info@frostserv.com; www.frostserv.com).



Savings with the 85% driverless Monarch over a diesel tractor with an operator were over \$28,000.

Autonomous Mowing Saves Money

Mowing with an all-electric, driver-optional tractor reduced labor needs and costs compared to mowing with a diesel tractor for a Washington apple orchard. A case study by Monarch Tractor presented the raw numbers from a high-density, V-trellis orchard with 12-ft. row widths.

The orchard reported a driver pay rate of \$24/hr. When multiplied by a usage rate of 1,000 hrs. per year, potential labor cost savings at an 85% driverless rate totaled \$20,400.

The electric tractor was compared to a diesel tractor with the same mower, a Perfect LF-250 7-ft. mower. The actual comparison period was 4.9 hrs. with a mowing speed of 5 mph. The two tractors each covered 18.21 miles and 26.49 acres.

Fuel use of 2 gals./hr. and fuel costs of \$5/gal. brought the cost of diesel to \$49 for

the trial. Electricity costs at 20¢/kWh for the Monarch tractor came in at only \$10.64 for the 4.9 hrs. of use. Extrapolated out to a 1,000 hrs. a year, fuel savings alone totaled an additional \$7,828.59.

Total savings with the 85% driverless Monarch over a diesel tractor with an operator came to \$28,228.59. Environmental savings were estimated at 9.92 metric tons of CO2 with the Monarch versus the diesel tractor. That's equivalent to driving 24,634 miles in an average passenger vehicle.

For additional e-tractor case studies, visit Monarch Tractor's website.

Contact: FARM SHOW Followup, Monarch Tractor, 151 Lawrence Dr., Livermore, Calif. 94551 (ph 833-247-4797; info@monarchtractor.com; www.monarchtractor.com).

Plant Clinics Provide Answers

When homeowners or farmers have a problem with plants, the place to go is the state's Plant Diagnostic Clinic. Every state has one. Clinics, like the South Dakota State University Plant Diagnostic Clinic, were created in response to biosecurity problems after 9/11 with funding from the federal government, according to Madalyn Shires, SDSU plant pathology specialist and assistant professor.

"We provide an accurate diagnosis for farmers, homeowners and the South Dakota Department of Agriculture and Natural Resources," says Shires. "In larger states, ag departments have their own labs, but we and others work together."

For Shires and her associates, the biggest question currently involves soybean cyst nematodes and viruses in winter and spring wheat. She adds that they're also looking at horticultural diseases.

"Farmers with a question may ask their agronomist to take a tissue sample and send it to us or call us directly," says Shires. "They can share their concerns, and sometimes, if they send a picture, that's enough for us to diagnose."

If a picture doesn't suffice, the farmer or homeowner may be asked to take a sample, sometimes an entire plant. Standard instructions are to wrap the plant in dry paper towels.

"Dry towels, or even wrapping them in newspaper, absorb any moisture given off, especially if the sample is in a plastic bag," says Shires.

She notes that vegetables often provide the most novel samples and a more challenging diagnosis.

"We had a parsnip that looked like it had tumors," says Shires. "The problem was nematodes that were eating and reproducing in the plant."

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says Shires. "We had a mild winter, so the mites were able to stay active longer."

If the clinic identifies the virus on samples from a field, they recommend breaking what they call the green bridge.

"Remove volunteer wheat and other hosts," says Shires. "We do a lot of screening and observation to get real-time data to solve the problem."

Contact: FARM SHOW Followup, SDSU Plant Diagnostic Clinic, Berg Agricultural Hall 203, Box 2207D, Brookings, S.D. 57007 (ph 605-688-5545; sdsu.pc@sdstate.edu; https://www.sdstate.edu/agronomy-horticulture-plant-science/sdsu-plant-diagnostic-clinic) or Madalyn Shires, SDSU Assistant Professor/Plant Pathology Specialist (ph 605-651-5631; Madalyn.Shires@sdstate.edu).