

# What John Deere's new driverless tractor means for farmers

By **SIERRA DAWN McCLAIN**  
Capital Press

MOLINE, Ill. — Equipment manufacturing giant Deere & Co. announced in January the upcoming release of its fully autonomous diesel tractor — a piece of equipment which, like a self-driving Tesla car, can operate without a driver.

The machine combines an 8R tractor, TruSet-enabled chisel plow and GPS guidance system.

“All of us here at John Deere are incredibly excited,” said Chad Passman, a Deere spokesman. “We brought it to market because our customers were telling us that they were ready and that the value was there.”

Deere's staff say farmers have been asking for a driverless tractor to save on labor expenses and time

in the field.

To use the autonomous tractor, a farmer must transport the machine to a field and configure it for autonomous operation. Then, the farmer is free to leave.

The Capital Press talked to John Deere's leadership about what this development means for farmers in the Western U.S.

According to Joe Liefer, senior product manager for John Deere, the first model of this tractor, to be released fall 2022, has already been pre-sold through rentals exclusively to large-scale Midwestern soybean growers who Deere worked with in trials last year.

Meanwhile, the company



Joe Liefer



Bill Krzyzanowski/Deere & Co.

Deere's fully autonomous diesel tractor.

will be working with farmers to test the equipment in other crops, including corn, cotton and wheat. Liefer said Deere plans to release more tractors and implements in 2023 and 2024. The company has not yet released pricing.

Liefer said Deere aims to manufacture driverless tractors capable of navigating a

variety of terrains and crop systems — potato and onion fields, vineyards, orchards and vegetable crops.

“We've got aspirations to take this into all the production systems and different customer bases that John Deere serves,” said Liefer.

Deere did not release the names of farmers participat-

ing in trials, but Liefer said the company will be talking to dealers to line up farmers to work with in the Western U.S. in 2022.

The company is starting in large production systems; Deere's 8R tractors, with models ranging from 230 to 410 horsepower, are big machines designed for big farms. But the technology is capable of use on small plots — for example, a 10-acre field — and Liefer said he expects autonomous tractors will prove useful to part-time operators or small-scale farms.

Some farmers, however, are skeptical because only John Deere mechanics — not farmers or third-party mechanics — are allowed to modify the new tractor's software system.

American Farm Bureau Federation President Zippy

Duvall advocates for the “right to repair.” In a statement last year, he said that “limiting who can work on a piece of machinery drives up costs and increases down-time.”

Liefer, of Deere, said this shouldn't be an issue because the imbedded software is the only part farmers aren't permitted to modify. Farmers can repair the tractor itself, for which Deere provides manuals.

“(John Deere) definitely support(s) farmers' right to repair,” he said.

The autonomous tractor also collects data, including video footage, while moving through a field. Growers can use this data to make farming decisions. Deere has access to the data but does not sell it or share it with third parties.

# Elk feast on farmers' haystacks across Pacific Northwest

By **ANNA KING**  
Northwest News Network

RICHLAND, Wash. — Anthony Leggett's farm is nestled in the foothills outside Anthony Lakes in Eastern Oregon.

He grows pasture grass and beardless barley and puts up big stacks of hay to earn extra money for his young family. Leggett's farm costs include equipment, chemicals, fencing and fertilizers. But hay makes money.

“Your hay is your paycheck,” Leggett told Northwest News Network. “That's how you pay your bills, that's how you support your family. And they just take it. You know, they're animals — that's what they do.”

He says it's a frustrating situation and he does his best to safely haze the animals.

“(But) you know, if I chase them off my property, they just go to the neighbor's property and get into their haystack,” Leggett says.

Across the West, wide-

spread drought has left elk, deer and even wild turkeys hungry and in poor condition — even a bit desperate.

Wild elk are even attacking farmers' haystacks in Washington and Oregon. Record snow across much of the Northwest's mountains has driven animals down to the lowlands — in gangs. And climate scientists say things may only get worse in the future.

Joey McCanna spends a lot of his winter teaching hay growers and ranchers how to build elk-proof electric fencing.

“The other big thing we have going on, that we have staff kind of running frantic on, is we have a lot of elk damage,” McCanna said on a recent wildlife management Zoom online session. “Elk getting into hay stacks is one of the big ones.”

McCanna is an expert on resolving wildlife conflicts with humans for the state Department of Fish and Wildlife. He teaches farmers



S. John Collins/EO Media Group File

Elk munch on alfalfa hay in Eastern Oregon. Farmers constantly battle elk to keep them away from their haystacks.

how to set up automatic propane cannons to haze them with noise. But elk are smart — and sometimes it doesn't always work.

This year, drought has upped the stakes — hay prices are up across the West.

“This summer was very hot and dry. And alfalfa and grass hay is at a premium right now,” McCanna says.

Meade Krosby is a senior scientist at the University

of Washington's Climate Impacts Group in Seattle.

“So, one of the primary ways that wildlife respond to changing climate is by moving,” Krosby says. “They shift their ranges — they want to track the change in climate as it happens.”

She says that now, more than ever before, animals will need to move quickly. Climate induced floods and fires in the Northwest are

dramatically pushing animals around on the landscape. She says wildlife will need safe corridors to run for it.

“They have to move so fast, but they have all this stuff in the way,” Krosby says. “They have roads and highways in the way, they have cities in the way, agricultural areas. And all of these form these barriers to wildlife getting to where they need to go to shift their ranges to adapt to climate change.”

Making things worse, elk can starve on hay.

Elk have four-chambered guts that change their bacteria with the season and what's available to eat. In the spring and summer, bacteria colonies adjust to digest green shoots and high-protein feed. But, in the fall and winter gut bacteria are essentially programmed to eat big quantities of dried twigs and grasses with a lower energy.

“The bug is clostridium perfringens,” Colin Gillin explains. He's the state vet for Oregon's Department of Fish and Wildlife.

“It's a bacteria that all ruminants carry in their guts, it's just you don't want that clostridium to get out of control,” Gillin says. “And it's when you throw corn in there, it starts to have a party.”

In this case, the corn is hay.

The bacteria break down the walls of the stomach and intestines, so an elk can starve to death with a belly full of alfalfa.

At the Northwest Hay Expo in Kennewick, Wash., mostly men, mostly unmasked, roam around the great hall, slapping hands and checking out the latest in twine, balers and tarping technology. Pamphlets, ball caps and squishy stress-balls shaped like little tractors litter vendors' tables.

# Washington's ag director recommends expansion of Columbia River Office

By **MATTHEW WEAVER**  
Capital Press

Washington's agriculture director is recommending that legislators consider a statewide expansion of the Department of Ecology's Office of the Columbia River.

Nothing formal has been proposed, Washington State Department of Agriculture director Derek Sandison told the Capital Press.

“We think it's a good idea,” he said. “We've been dealing with seemingly intractable problems in the Skagit, for example. Without a program like Office of the Columbia River, there's not a lot of answers.”

Currently, the office primarily serves the Columbia Basin and its tributaries in Eastern Washington.

Before becoming the agriculture director in 2015, Sandison was director of the Columbia River office.

“As we engage with farmers, Department of Ecology and other agencies, we've said, ‘Hey, this is a format and a series of processes that has worked pretty well in Eastern Washington,’” Sandison said. “I think it might be part of the answer that solves some of the problems that we're seeing in places like the Skagit Valley.”

Irrigation water supplies differ between Western and Eastern Washington, Sandison said.

In the Nooksack, Skagit, Clark County, Clallam and Dungeness areas, there's no program like the office to expand water supply opportunities to address water shortages for agricultural irrigation, he said.

“So you're unfortunately in a zero-sum game, where in order for someone to get a water right, someone else



Derek Sandison

has to lose that water,” Sandison said.

In Eastern Washington, the office has worked through

conservation projects and storage projects, for aquifers and repurposing surface storage, to expand supplies to provide additional water for farms and improve river flows for fish, Sandison said.

In Eastern Washington, Sandison pointed to “great progress” in the Odessa Project since 2005. The aquifer in that area is dropping, leaving some irrigators without an adequate supply of water.

“We remain at a point where, really, it's a just add-money proposition,” he said. “We've cleared all the legal hurdles for that project. ... It's a matter of funding.”

The legislature adds money for the Odessa project every biennium. The department and stakeholders have been pushing for federal funding through the U.S. Bureau of Reclamation and, more recently, USDA, Sandison said.

The Grant County Con-

servation District has applied for a grant under USDA's Small Watershed program, funded by the Farm Bill.

“We think that might be a good source of funding, not total funding, but I think it would provide an increment of funding that would help us achieve more construction of pumping plants and pipelines to move that water from the East Low Canal out to the farms,” he said.

Sandison also discussed: • The Columbia River Treaty. The 12th round of negotiations took place Jan. 12 via videoconference. The department's focus has been on flood management post-2024, Sandison said.

At that point, current flood risk management provisions change to a less-defined approach. Half of the flood risk management storage, more than 20 million acre-feet, that the U.S. relies on each year is behind dams in Canada.

In the absence of a new agreement, Grand Coulee Dam would assume more responsibility for upstream flood risk management. Lake Roosevelt's level would be lowered to handle the flood peak during spring runoff.

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