

Hemp

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But therein lies the challenge, Bionaz said — hemp is not currently approved for animal feed by the U.S. Food and Drug Administration. He hopes their research will generate the data needed for the FDA to take that next step.

"The more I study the plant,



Jersey cows at the Oregon State Universitv **Dairy Farm** in Corvallis will be fed hemp biomass as part of a research study, and their meat

> will then be tested for

residual can-

nabinoids

or THC.

such as CBD

George Plaven/ Capital Press

Suez Canal

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Part of the problem was a five-day wait for two large tugboats, according to Peter Berdowski, chief executive officer of Boskalis Westminster, the parent company of the salvage team.

"We were enormously helped by the strong tide, the orces of nature that push hard, even harder than the two tugboats can pull," he told Dutch radio. "The men were euphoric of course. But there was a tense moment when this giant was floating freely. You need to bring it under control quickly with the tugboats before it gets stuck on the other side, we would have gone from bad to worse. Those were a tense 10 minutes." The Suez Canal Authority said it could take around a week to clear the lineup of ships. On Monday evening, at least three ships were on the move, according to vessel-tracking data.

Egyptian authorities were desperate to get traffic flowing again through the waterway that's a conduit for about 12% of world trade and about 1 million barrels of oil a day. This has been the canal's longest closure since it was shut for eight years following the 1967 Six Day War.

Firms were forced to reroute their ships via the southern tip of Africa, which can add two weeks onto a journey between Europe and Asia. At least one ship appeared to do a double U-turn on Monday as news of the salvage operation emerged. The long-term impact of the canal's \$10-billionper-day closure will likely be small given that global merchandise trade amounts to \$18 trillion a year. Yet so many ships being thrown off schedule will ensure cargo delays for weeks, if not months. The dozen or so container carriers that control most of the world's ocean freight are already charging record-high rates on some routes, and shortages of ev-

erything from chemicals and lumber to dockside labor already abound.

'The dominoes have been toppled," Lars Jensen, chief executive of SeaIntelligence Consulting in Copenhagen, wrote on social media over the weekend. "The delays and re-routing which have already happened will cause ripple effects" which will be lt for several months Companies from Ikea to Caterpillar Inc. flagged potential impacts, and tens of thousands of live animals are stuck on ships in the area. Consumer goods, industrial inputs and commodities from oil to coffee are caught up in the jam, with Asian exporters and European importers affected most directly. The blockage held up about \$400 million an hour, based on rough calculations from Lloyd's List that suggested westbound traffic to Europe is worth around \$5.1 billion a day and eastbound traffic is approximately \$4.5 billion.

the more I see data, I get more enthused about it," Bionaz said.

The idea for the study traces back to 2019, when OSU first established the Global Hemp Innovation Center.

Jay Noller, the center director, approached Serkan Ates, an assistant professor specializing in sustainable pasture management, to discuss whether processed hemp byproducts could be fed to animals. Ates said he was intrigued, and partnered with Bionaz to examine the product's nutritional content.

What they found was hemp biomass has roughly the same protein content as alfalfa, and roughly the same fiber content as barley. In some attributes, Ates said hemp was nutritionally superior to the traditional feeds.

"There was this great potential," Ates said. "Many of the livestock farmers, they are interested in some sort of cheaper feed source."

With those traits in mind, the team worked up several proposals and received more than 10 tons of donated biomass from two Oregon-based extractors.

Last year, Ates fed the material to lambs for two months. Their diets included a mix of 10% and 20% hemp, along with a control group.

One question, Ates said, was whether the animals would even eat hemp. Not only did

they eat it, but he said the group that was fed 10% hemp ate more than any other group.

The lambs have since been slaughtered, and their meat will be lab tested for the presence of residual cannabinoids such as CBD or THC.

Those results, Ates said, will be key for future FDA authorization of hemp as animal feed.

A second trial, this time feeding hemp to cows at the OSU Dairy Farm in Corvallis, is set to begin in late April. Similar to the lamb study, the team will feed hemp biomass to cows for two months, and then test for residual cannabinoids in the animals' milk and meat.

In announcing the USDA grant for the project, Oregon Sen. Ron Wyden said the research could potentially be a big win for farmers and ranchers across the country.

"This OSU research will help to continue building the case for federal approval of hemp biomass on cattle farms, making a natural connection between

two signature Oregon products — livestock and hemp," Wyden

said. Jenifer Cruickshank, who works with OSU Extension Service as the regional dairy faculty for the Willamette Valley, said she is also contacting ranchers and consumers to gauge public acceptance of consuming products from animals fed with hemp.

Cruickshank is working with Juliana Ranches, another extension specialist at OSU's Eastern Oregon Agricultural Research Center in Burns, to survey producers. Their feedback will be included as part of the overall study.

When it comes to hemp, Ates said they are only at the beginning of what promises to be a vast area of continued research.

"It is a super exciting research area for all of us," he said. "This is a byproduct that has a high potential, but it requires extensive research before it's approved by the FDA and going into the food chain."

Earplugs

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The suit claimed Aearo knew about "dangerous design defects" in 2000.

In a 2018 report, the Army concluded that had the government known about tests Aearo had done in 2000 it may not have purchased Combat Arms earplugs. In the whistleblower settlement, 3M paid a \$9.1

million penalty, but denied all claims and did not admit liability.

At the heart of the MDL case is the U.S. Army's request in 1999 to Aearo to shorten the plugs so they would fit in a standard-issue military carrying case.

Tests in 2000 at Aearo's Indianapolis laboratory indicated that the shorter earplug didn't always fit properly

3M claims it told the military about the fitting issues, and that the military was responsible for informing soldiers about the earplugs' proper fit.

Plaintiffs claim the earplugs leaked noise, damaging soldiers' hearing. 3M said in a statement that the "product was not defectively or negligently designed and did not cause injuries."

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