



## Ag supply chains feel the pressure from labor shortage

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A labor shortage leads to frustrations and innovations in the ag supply chain

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*As part of our annual Agricultural Symposium, we dove into the real-world application of the research to be presented through stories like this. [Learn more about the Symposium.](#)*

By Su Bacon

The addition of an onsite processing facility completed the supply chain for the Lockhart Cattle Co. in Jackson Hole, Wyoming.

The Lockhart calves now are born and butchered on the ranch.

“The cattle are never more than seven miles away from where they were born,” said Kelly Lockhart, 70, who owns and operates the sixth-generation family farm with his wife and son.

Their Herefords roam freely and graze on a variety of grasses. They also will never know an 18-wheeler. They’re not transported across the country to a feedlot or later to a slaughter facility. And when the Lockharts’ beef is ready to go to market, they take it there themselves.

“We have three avenues of distribution,” Lockhart said. “We sell directly to consumers online and at farmers markets. We sell to restaurants and to various grocery stores in our area.”

Though they still depend on truckers to get the parts they need for their equipment, the shortage of truck drivers hasn’t directly disrupted the Lockharts’ supply chain. Across the country, however, agricultural supply chains have been stalled and slowed in producing, processing and delivering food to consumers.

That’s all due to a lack of labor, according to Tim Richards, professor and Morrison Chair of Agribusiness at Arizona State University. Richards is a speaker at the Federal Reserve Bank in Kansas City’s annual Agricultural Symposium titled “Help Wanted in Agriculture.”

“Currently there is a shortage of 160,000 truckers,” Richards said.

That shortage has meant delays for farmers waiting for tractor parts, for grocers needing a delivery to re-stock shelves and for consumers who have ordered steak, fruit, weekly prepared meals or other perishables online.

## Wide-ranging labor shortage

Yet, the labor shortage in agriculture is more than trucks without drivers.

The grocer waiting for a delivery needs a crew standing by to unload the truck and stock the shelves. Manufacturers need workers to make parts for agricultural equipment. Truck drivers themselves depend on others -- to clean and disinfect the trailer after hauling cattle to market.

“The pandemic exposed the dependence of agricultural producers, processors and others in the agri-food system on manual labor,” Richards said.

## Pain along the {supply} chain

And in addition to the effect of the COVID-19 pandemic, the supply chain has suffered a second setback with the Russian invasion of Ukraine.

“For our grains, the invasion was a big disruption,” said Amy Hagerman, assistant professor in the Department of Agricultural Economics at Oklahoma State University.

“There is a lot of volatility and uncertainty now about the availability of sunflower oil and seeds, fuel and fertilizer -- inputs necessary for ag production,” she said.

Closer to home, all links along the supply chain feel the shortage of labor.

“The meat-packing industry is labor-intensive,” said Julie Anna Potts, president and chief executive officer for the North American Meat Institute, and a panelist at the symposium.

Immigrant labor and first-generation refugees have been excellent sources of labor, Potts said.

“In some meat plants, as many as 80 languages are spoken,” she said.

To attract and retain workers, meat packers are increasing benefits and pay, reaching out to refugees settling in their communities and reskilling workers as some tasks become automated.

Reskilled workers “may no longer be wielding a knife but instead operating a computer and monitoring data,” Potts said.

## A partial solution: automation

Increasingly, automation is seen as at least a partial solution to the labor shortage.

“We replaced 18 positions in our packaging plant in 2020 by investing nearly \$3 million in optical sorting and robotic palletizing,” said Jared Smith, 37, of Three S Ranch Inc., in Blanca, Colorado.

Palletizing is the mechanical stacking of heavy loads, such as 100-pound bags of potatoes, onto pallets.

Three S Ranch, a third-generation family business, grows potatoes, barley and alfalfa. Even with automation, Three S Ranch is struggling to find more employees.

“We still need someone who knows how to operate a forklift and someone who can fix electronics in our packaging plant,” he said.

On the ranch, Smith has experienced his own micro-version of the trucker shortage.

During harvest, trucks haul potatoes to storage bins 12 miles away. Smith has enough trucks for the job. What he doesn’t have are enough drivers familiar with manual transmissions.

At Worley Family Farms in nearby Monte Vista, Colorado, Bob Mattive grows 1,900 acres of potatoes -- all harvested by machine.

Potatoes are grown, harvested, stored and packaged onsite. When they leave Worley Family Farms, the potatoes are headed for the produce aisle in a grocery store.

Like the Lockhart Cattle Co., much of Mattive’s direct supply chain is onsite.

“But there are the indirect impacts to our farming operation from labor shortages in other areas,” Mattive said.

Parts for tillage, tractors and other equipment may not be readily available and they take much longer to get. Mattive said he ordered a tractor early this year “and we won’t see it until November.”

The local labor supply is tight. A hailstorm last summer damaged buildings on the farm and “we’re still waiting on a building contractor to make repairs.”

Yet, Mattive remains optimistic about the future of agriculture.

“Throughout the pandemic shutdown, agriculture and most food producers and packing facilities remained in service,” he said. “If we hadn’t, I believe our country would have collapsed without food on the shelves. Agriculture kept America moving.”

The Kansas City Fed is a leader on topics related to the agricultural economy within the Federal Reserve System. Our work provides insights on agricultural and rural economies for our seven-state region of the Tenth Federal Reserve District and nationally. One way is through the Kansas City Fed's Agricultural Symposium, which explores topics of current and emerging significance to agriculture. [Learn more.](#)

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## Media

Timothy Richards, Morrison Chair of Agribusiness, W.P. Carey School of Business at Arizona State University, discusses how markets are working in favor of transportation workers. Richards spoke at the Kansas City Fed's 2022 Agricultural Symposium: Help Wanted in Agriculture.

<https://www.youtube.com/watch?v=MKFnCCUKYvw&list=PLRuFDIAZCtQ14rSkVyrgbeehflRgwq2wa&index=2>

Julie Anna Potts, President and CEO of the North American Meat Institute, talks about how meat packing plants are looking to automation in response to labor shortages. Potts spoke at the Kansas City Fed's 2022 Agricultural Symposium: Help Wanted in Agriculture.

[https://www.youtube.com/watch?v=XovD6f\\_Posg&list=PLRuFDIAZCtQ14rSkVyrgbeehflRgwq2wa&index=3](https://www.youtube.com/watch?v=XovD6f_Posg&list=PLRuFDIAZCtQ14rSkVyrgbeehflRgwq2wa&index=3)