

# C MAGAZINE

## Global Connections

Expanding export  
options add value

16  
Farm-Grown  
Whiskey

20  
Seed Treatment  
to Order

30  
Udderly  
Delicious



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Jay Debertin, president and CEO, CHS

## Connections That Deliver Value

Cooperatives were founded on the benefits of working together. Nearly a century later, we continue to see value in combining forces with our owners and business partners to create something better than any of us could do alone.

Our TEMCO joint venture demonstrates the power of that collaboration. Jointly owned by CHS and Cargill, the TEMCO grain export marketing business was established in 1992 in Tacoma, Wash., by predecessor companies Harvest States and Continental Grain. Today, TEMCO includes four export terminals that ship more than 600 million bushels of grain annually.

TEMCO has traditionally had a strong presence in the Pacific Northwest and now handles about one-third of the grain moving through the region. This year, a terminal in Houston, Texas, was added to the TEMCO family. With an extensive railroad network feeding into the Houston port, cooperatives and growers now have even greater direct access to grain-hungry customers in Central America, South America, North Africa and China.

Our other joint ventures are also delivering value for CHS owners. Ardent Mills, jointly owned by Conagra Brands, Cargill and CHS, is the largest wheat miller in the U.S. Our Ventura Foods joint venture with Mitsui is a leading provider of soy-based food ingredients. And our partnership in CF Nitrogen provides a steady supply of domestic fertilizer and is now working to produce and distribute low-carbon nitrogen fertilizer.

The opportunity to develop strategic partnerships with member cooperatives has also provided significant benefits as we make more efficient use of shared resources and build even greater strength into our extensive supply chain and international platform.

When we work together with partners who share our values and our commitment to agriculture and rural communities, we all succeed. Let's continue finding ways to create connections that empower agriculture.

A handwritten signature in black ink that reads "Jay D. Debertin". The signature is written in a cursive, slightly slanted style.

Have a question or feedback for the CHS management team? Get in touch with us at [feedback@chsinc.com](mailto:feedback@chsinc.com).

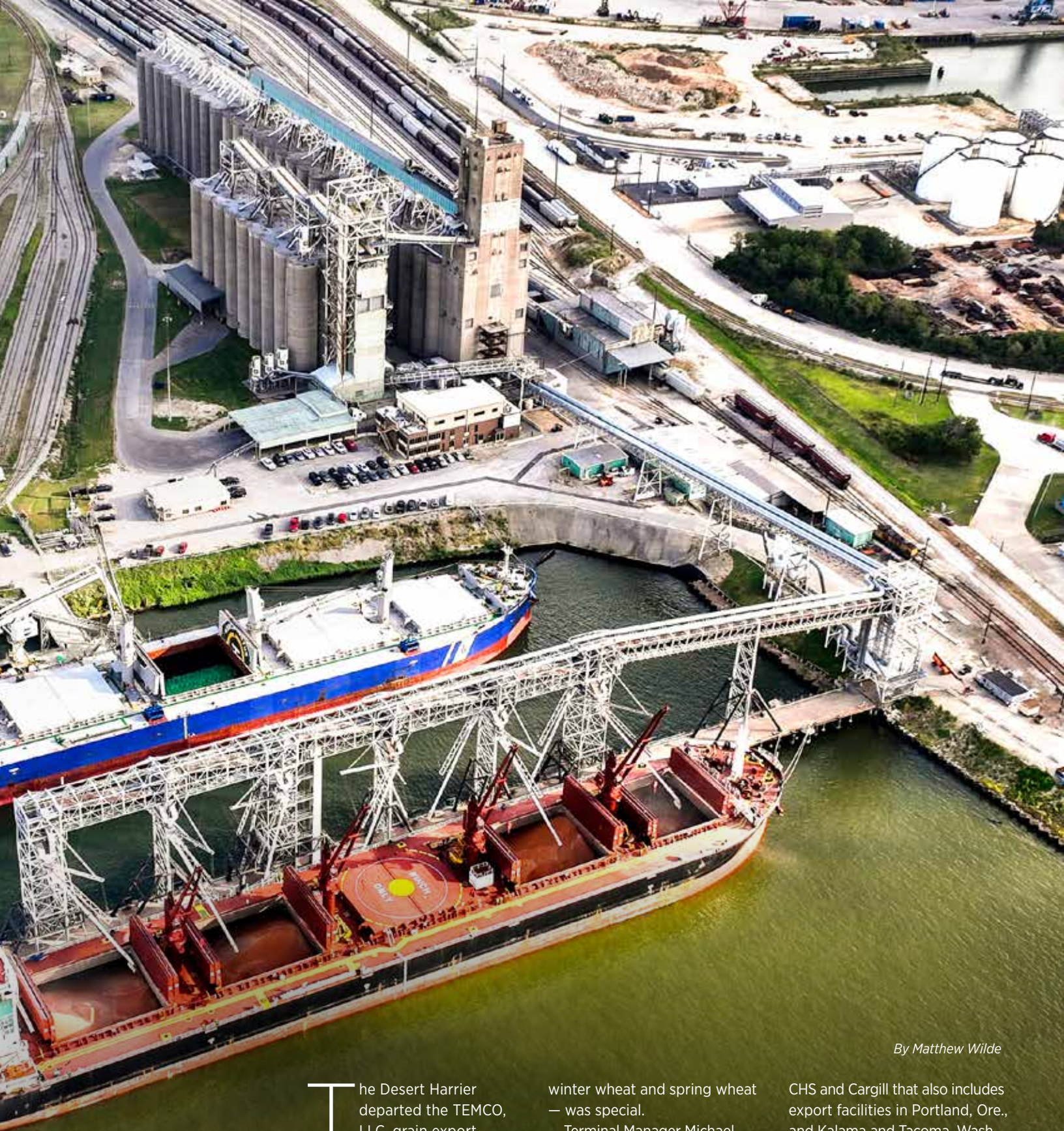




# DELIVERING RESULTS

Added export capacity adds options and opportunities.





*By Matthew Wilde*

The Desert Harrier departed the TEMCO, LLC, grain export terminal in Houston, Texas, for Nigeria on May 14, 2023. It looked like any other ship steaming into the Gulf of Mexico, but its cargo — more than 1 million bushels of hard red

winter wheat and spring wheat — was special. Terminal Manager Michael Bates says it was the first wheat shipment entirely sourced by CHS exported from the facility after it became the fourth terminal in the TEMCO family in early 2023. TEMCO is a joint venture between

CHS and Cargill that also includes export facilities in Portland, Ore., and Kalama and Tacoma, Wash. The expansion will serve farmers and cooperatives in the Southern Plains, says Brian Schouvieller, who represents CHS on the TEMCO board of governors. Grain produced in that region >



## Faster, Stronger, Better

Dale Schmidt recalls when the shuttle-loading facility jointly owned by Mid-Kansas Cooperative (MKC) and CHS opened nearly 10 years ago in Canton, a few miles from his McPherson, Kan., farm. The basis for many commodities, particularly hard red winter wheat, narrowed about 10 cents or more per bushel. He attributed that to lower shipping costs and stronger demand from end users.


Schmidt will be watching for a similar effect once the Sterling shuttle loader is shipping grain to the Houston TEMCO terminal.

“When we can gain on basis, that’s really what it’s all about,” he says. “At the end of the day, whether I get paid more for grain or patronage, I’m seeing value come back to me.”

Schmidt produces hundreds of thousands of bushels of hard red winter wheat, corn and soybeans each year. Sorghum is occasionally part of the crop rotation when prices are favorable.

The potential for higher commodity prices is intriguing, agrees grower Jason Gaeddert, Buhler, Kan., but he says he’s equally excited about investments in the integrated cooperative supply chain.

“The turn time for trucks from the field to the elevator and back is important,” Gaeddert says. “Refreshing assets or building new assets helps the whole supply chain. That brings value to the farmer.”



*Kansas farmer Dale Schmidt scouts soybeans for diseases and insects. He says the TEMCO expansion at the Port of Houston is a boon for Southern Plains producers and cooperatives.*

➤ naturally flows to the Texas Gulf for export.

“The Houston port gives us an additional export corridor to handle grain from beginning to end without sending it through a third party. That retains more value for farmers,” Schouvieller says.

The four TEMCO export facilities complement CHS export terminals in Myrtle Grove, La., and Superior, Wis., to provide efficient export options to benefit CHS owners and serve customers around the world.

“By expanding our integrated supply chain and export opportunities for the cooperative system, we improve market access and opportunities for farmers, which should increase the volume of patronage-eligible bushels exported through the Texas Gulf,” Schouvieller says. “Handling grain from the farm to the consumer through the cooperative system improves efficiency and quality control.”

### Options and Opportunity

Multiple export facilities provide risk mitigation against weather events, logistics problems, operational interruptions and market changes, says Brian Kubik, TEMCO general manager. Through the TEMCO joint venture, CHS is one of the largest exporters of grain from the Pacific Northwest (PNW) to Asian markets. TEMCO shipped more than 400 million bushels of grain from June 2022 through May 2023 and handles about one-third of the grain exported from the PNW.

With the addition of the Houston port, TEMCO is also the largest grain exporter in the Texas Gulf. The facility has 6 million bushels of storage capacity and annually loads more than 140 million bushels on 100 to 120 vessels. The primary crops shipped across all TEMCO locations are wheat, soybeans, sorghum and corn.

“The Houston expansion provides access to a larger basket of commodities, hopefully making us a more attractive trade partner,” Kubik says.

### Reaching New Markets

Tens of millions of bushels of wheat and sorghum are produced in Texas, Oklahoma and Kansas annually. Much of that grain is shipped via rail and truck to TEMCO in Houston. The facility’s railyard has been upgraded to hold 350 railcars and unload 250 cars per day.

“More direct access to global markets will give us the ability to set our bids accordingly and hopefully improve margins.”

— Jeff Boyd,  
Garden City Co-op

“With four export terminals in various parts of the U.S. through TEMCO, we have more options and increased market discovery,” Kubik adds. “The shared supply chain made possible by the joint venture improves efficiency and reduces logistics costs, which benefits customers.”

That added strength will boost sales to Asia and emerging markets in Africa. While volume has dropped from expectations, China remains the largest importer of U.S. soybeans and sorghum. Current projections indicate China



will import 100 million metric tons of soybeans, 38.4 million metric tons of coarse grain (mostly corn and sorghum) and 12 million metric tons of wheat during the 2023-2024 marketing year, according to U.S. Department of Agriculture (USDA) data.

Africa will likely become a key market for international trade and investment over the coming decades, according to the USDA. In a February 2023 report, the agency cited rapidly increasing population and urbanization and rising incomes on the continent, which are driving demand for meat, cereal grains and other foods.

“Having access to a consistent berth in the Texas Gulf opens up new opportunities with customers in Morocco and other North

African countries,” says Ryan Caffrey, who oversees the CHS wheat product line.

### Trading Up

Louis Deery, lead wheat trader for Star Trading based in New York City, says he expects to buy more wheat from CHS, thanks to the additional access to southern U.S. bushels and the opportunity to work with one company that has multiple ports in the PNW and Gulf of Mexico.

The trader bought the wheat loaded into cargo holds of the Desert Harrier for Flour Mills of Nigeria, one of the largest food companies in that country and Deery’s biggest client. In June, he purchased 850,000 bushels

of hard red winter wheat from CHS for Flour Mills of Nigeria. All of it was shipped through TEMCO in Houston.

“We have to time our shipments very carefully, so dealing with one supplier and having more shipping options improves efficiency and adds flexibility,” Deery says, noting if a storm were to damage one port, grain could be diverted and shipped from another. “We’re also very cautious about grain quality, and CHS has a very good [quality] track record.”

Deery typically sources about 17 million bushels of wheat annually from the U.S. for Flour Mills of Nigeria. CHS and Cargill provide the “lion’s share” of the bushels, Deery adds. >

“[An integrated supply chain will] enable us to move faster to reinvest in what is an aging infrastructure.”

— Brad Stedman, MKC

## TEMCO Portland, Ore.

Opened   1955	Joined TEMCO   2012
Primary product	Wheat
Top export destinations	Southeast Asia, Middle East, China
Storage capacity	1.3 million bushels
Grain loaded annually	35 million bushels
Loadout capacity	40,000 bushels per hour
Barges unloaded annually	400
Railcars unloaded annually	600
Oceangoing vessels loaded annually	40



## TEMCO Tacoma, Wash.

Opened   1975	Joined TEMCO   1992
Primary products	Soybean, corn
Top export destinations	China, Japan, South Korea, Taiwan
Storage capacity	3 million bushels
Grain loaded annually	200 million bushels
Loadout capacity	80,000 bushels per hour
Railcars unloaded annually	52,000
Oceangoing vessels loaded annually	100+





“The shared supply chain made possible by the joint venture improves efficiency and reduces logistics costs, which benefits customers.”

— Brian Kubik,  
TEMCO

> “Further integrating the supply chain is good, since it helps bring the farmer a little closer to the consumer. That’s what consumers want.

“Flour Mills of Nigeria is a fairly large durum wheat consumer and CHS is a big durum player,” he adds, “so I think [additional TEMCO shipping options from Houston] should open up more durum trade.”

### Retaining Value

Cooperative leaders in Kansas are excited about the integrated export opportunities for grain and improved revenue potential that TEMCO and its Houston expansion offers. They believe farmer-owners will benefit in several ways.

CHS and member cooperative Mid-Kansas Cooperative (MKC) expanded their grain marketing joint venture in April 2023 to

maximize the value of an end-to-end cooperative supply chain in the Southern Plains. The TEMCO expansion will optimize the partnership, says Brad Stedman, MKC president and CEO.

Based in Moundridge, Kan., MKC handles about 100 million bushels of hard red winter wheat, sorghum, corn and soybeans each year. Wheat is the largest export crop for the co-op at about 15 to 20 million bushels per year.

In the past, grain was often sold to companies with export capabilities, so that revenue wasn’t fully realized at the local level, says Stedman. But the dynamic has changed, he says, because MKC farmer-owners now have direct access to international buyers through the cooperative system.

“Those profits flow back through MKC, which then flow back to our 11,000 farmer-owners

in the form of patronage, equity redemption or building new assets such as shuttle train loading facilities,” he adds. “It’s going to enable us to move faster to reinvest in what is an aging infrastructure in this region.”

Many of those elevators were built in the 1950s and ’60s, he explains, when yields were less and trucks and farms were smaller. “Farmers are sometimes moving faster than we are right now,” Stedman says.

CHS and MKC are building a grain terminal with 5.2 million bushels of capacity near Sterling, Kan., which is scheduled to be operational in 2024. It will efficiently load shuttle trains, like other jointly owned facilities in Milan and Canton, with combined storage of 18.1 million bushels.

Neil Johnke, CHS senior director of feed grains, says



Control Room Operator Linel Wrice monitors ship-loading activities at the TEMCO export terminal in Houston, Texas.



## TEMCO Kalama, Wash.

Opened   1962	Joined TEMCO   2012
Primary products	Wheat, sorghum, soybeans, corn, peas
Top export destinations	China, Southeast Asia, Central America, Middle East
Storage capacity	6.5 million bushels
Grain loaded annually	250 million bushels
Loadout capacity	120,000 bushels per hour
Barges unloaded annually	300
Railcars unloaded annually	62,000
Shuttle trains unloaded annually	530+
Oceangoing vessels loaded annually	125+



## TEMCO Houston, Texas

Opened   1967	Joined TEMCO   2023
Primary products	Wheat, sorghum, corn, soybeans
Top export destinations	North Africa, China, Mexico, South America
Storage capacity	6 million bushels
Grain loaded annually	140 million bushels
Loadout capacity	140,000 bushels per hour
Railcars unloaded annually	40,000
Shuttle trains unloaded annually	480+
Oceangoing vessels loaded annually	100+



having multiple ports that can quickly unload shuttle trains, trucks or barges — all three in some locations — is an advantage for grain buyers and sellers.

“For a Kansas cooperative, if freight spreads tell us to take grain to either the PNW or the Texas Gulf to make \$2 more per ton, we can do that. If ocean freight spreads are cheaper at Myrtle Grove, we can go there,” Johnke says. “It will make us one of the preferred suppliers in the world. Farmers will get to share in that entire supply chain profitability.”

### Added Value

Jeff Boyd, Garden City Co-op CEO, is excited about expanded export opportunities with CHS and

the added value farmers will reap.

The co-op, based in Garden City, Kan., is building its first wholly owned shuttle loader facility with 1.1 million bushels of storage capacity in nearby Holcomb, Kan. It co-owns another similar transloader operation.

The co-op typically exports 20 shuttle trains each of hard red winter wheat and sorghum per year, plus ships some soybeans, says Boyd. A 115- to 120-car train carries about 435,000 bushels of wheat or soybeans and 465,000 bushels of sorghum.

Boyd says the ability to quickly fill trains with commodities lets the co-op leverage its grain origination and merchandising teams to reach more markets.

With the expansion of TEMCO in Houston and the new shuttle loader projected to open in May 2024, he expects more grain to be shipped and marketed through the cooperative system.

“It allows us to control more of our own destiny,” says Boyd, who oversees 20 elevators in southwest Kansas with a grain capacity of more than 37 million bushels.

What does this mean for Garden City Co-op’s 1,350 farmer-owners? Boyd and Mike Wisner, vice president of grain, hope the enhanced opportunities mean better grain prices and larger returns on investment for co-ops and their owners.






“More direct access to global markets will give us the ability

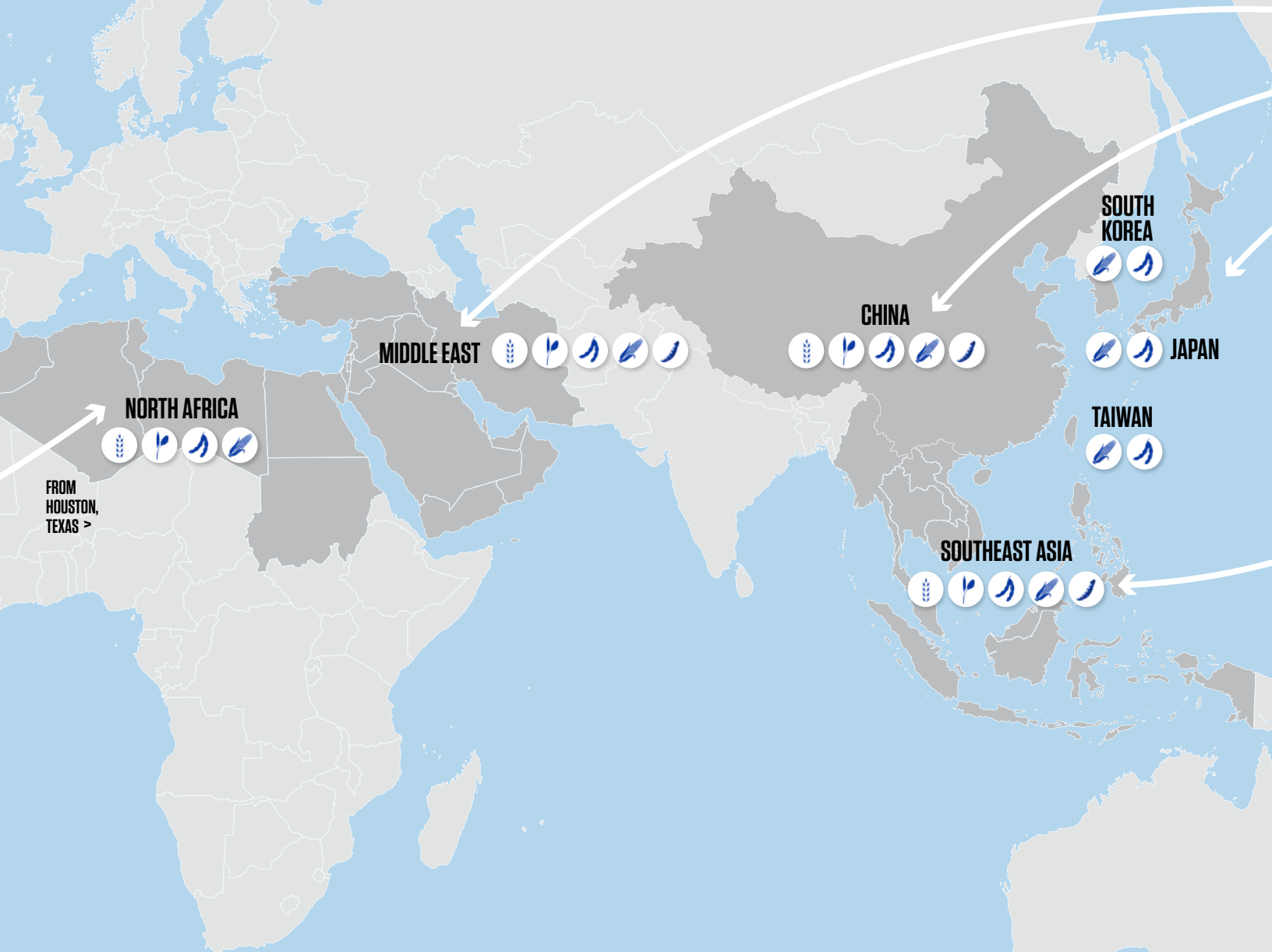
to set our bids accordingly and hopefully improve margins,” Boyd says. “The benefit of the cooperative model is that profits are shared with farmers — and that money stays locally.” ■



# SENDING U.S. GRAIN TO GLOBAL CUSTOMERS

CHS moves grains and oilseeds to global customers through TEMCO joint-venture facilities at Tacoma and Kalama, Wash.; Portland, Ore.; and Houston, Texas. Additional CHS export terminals are located at Myrtle Grove, La., and Superior, Wis.

-  **Wheat**
-  **Sorghum**
-  **Soybeans**
-  **Corn**
-  **Peas**







**TEMCO**  
Tacoma, Wash.

**TEMCO**  
Kalama, Wash.

**TEMCO**  
Portland, Ore.

Superior, Wis.

**TEMCO**  
Houston, Texas

Myrtle Grove, La.

**MEXICO**

**CENTRAL AMERICA**

**SOUTH AMERICA**

TO NORTH AFRICA >









## Home Run for Agriculture

Chiming in on the chorus of “Take Me Out to the Ball Game” during an outing to the ballpark now comes with a visible reminder of the role cooperatives and agriculture play in feeding the world.

Beginning with the first pitch of this season’s home opener, that’s true for baseball fans catching a Minnesota Twins game in person at Target Field in downtown Minneapolis or on TV.

On-field logos were allowed for the first time for the 2023 season by Major League Baseball, and CHS has become one of a few companies — and the only cooperative — to take advantage of this opportunity to tell agriculture’s story.

Colorful digital signs, videos and radio advertising reach Twins fans across five states and beyond. The new sponsorship at Target Field complements ongoing visibility at CHS Field, home base for the St. Paul Saints, the Twins’ Triple-A affiliate. With every inning, fans learn how CHS owners, customers and employees work together to cover every base in agriculture.

— Cynthia Clanton





*Craft distilleries and their tasting rooms are popular tourist attractions. A cocktail is poured, left, at the Far North Spirits tasting room near Hallock, Minn. Amanda Lemke, right, makes a smoked old fashioned at the Wildcat Distilling Co. tasting room in Webster City, Iowa.*



# Value-Added Spirits

On-farm distilleries add diversity and value.

By Matthew Wilde

Wildcat Distilling Co. was named for Wildcat Cave, where infamous outlaws Bonnie Parker and Clyde Barrow hid out after robbing a nearby bank. At least that's the story told around Duncombe, Iowa, say distillery owners and siblings Brad Lemke and Alissa Nelson.

"Our grandparents told us the story about Bonnie and Clyde," Nelson says. "We're not sure if it's true, but it makes sense, since they often hid out in secluded areas and robbed three gas stations in the area.

"The story is part of local lore and it's fun to tell to customers who ask how the distillery got its name."

Another on-farm distillery with a unique claim to fame is Far North Spirits. Only miles from the Canadian border near Hallock, Minn., the business lives up to its name as the northernmost maker of liquor in the contiguous United States.

"We take ownership of the claim since part of our farm where we grow rye for our whiskey is a few degrees farther north than a distillery in Baudette, Minn.," says Cheri Reese, who owns Far North with her husband, Michael Swanson. "We're one of only a handful of U.S. distilleries that grows our own grain."

Wildcat Distilling started making whiskey in 2020 and Far North began seven years earlier with the same goal: to bolster revenues to preserve the family farm for future generations. The best way to do that, each determined, was to

add value to grain by turning it into whiskey and other liquor.

"We're a smaller farm [460 acres] that can't compete on volume alone," Lemke says. "If you look back through history, the primary use for grain that wasn't sold for food or livestock

feed has been alcohol." He adds customers appreciate the farm-to-glass story, which they call "till, mill and distill."

## Wildcat Way

Lemke started farming his family's land in 2014, a few years after his grandfather, Alvin Isakson, retired. In 2017, Lemke remembers selling corn for \$3.10 per bushel, well below breakeven for the state.

That tough year is seared into Lemke's memory. "We needed another steady income source to survive."

Lemke, Nelson and their spouses decided to use their talents and the marketing hook of the cave to cash in on the artisanal spirits craze. U.S. craft spirits sales are growing 10.4% annually, according to the American Craft Spirits Association.

Lemke, a former operations manager with a fertilizer manufacturer, is the head distiller due to his knowledge of chemical processes. His wife, Amanda Lemke, runs the Wildcat Distilling tasting room in nearby Webster City, Iowa. Nelson and her husband, Tony Nelson, have full-time jobs in creative design and marketing and sales, respectively, and use their skills to promote and support the business. >





Brad and Amanda Lemke

## Wildcat Distilling Co.

**Products:** Harvest Moon, a white corn whiskey made with apples and cinnamon; Honey Moon, a white corn whiskey made with Iowa honey; Woodshed Red, a corn whiskey made from 100% Jimmy Red corn; and Planter's Pride, Plow Point and Tillman's small batch whiskeys

**Awards:** Tillmans Small Batch Whiskey, bronze medal, American Distilling Institute International Spirits Competition, 2023

Wildcat Cave is a limestone formation carved out of sandstone bluffs by the creek running below it. Mountain lions and bobcats reportedly made dens inside.

A speakeasy operated in a barn atop Wildcat Cave during U.S. prohibition in the 1920s and early '30s.



Michael Swanson, left, and Cheri Reese, right, co-owners of Far North Spirits, talk to Harlen Iverson, CHS Ag Services, about future propane deliveries. The business uses about 14,000 gallons a year. A propane-fired boiler heats the building, stills and mash cooker.

> About 20% of the farm is devoted to growing grain for whiskey, including yellow corn, Jimmy Red corn, hard red winter wheat, cereal rye, barley and sorghum. Corn is the primary grain used.

"We pride ourselves on being a farm-to-bottle distillery. It doesn't take much grain to make a batch of whiskey — about 600 pounds or just over 10 bushels," Lemke says, noting a batch typically fills 24 to 48 750-milliliter bottles, sometimes more. Whiskey yield varies due to corn starch content and fermentability.

"There's quite a bit of value [turning grain into whiskey]," he continues. "If corn is worth \$3 per bushel, we can make it worth almost \$80 per bushel."

There's a learning curve to adding specialty crops and small grains to what had been a simple corn-soybean crop rotation, Lemke says. Agronomists with Landus Cooperative, based in Ames, Iowa, help the operation acquire seed, fertilizer and other inputs and provide agronomic advice.

"I planted grain sorghum for the first time this year to make a new whiskey. When I had questions

about seeding depth and rate and crop protection, Landus came through," Lemke says.

Helping farmer-owners succeed is the primary goal, says Matt Carstens, Landus president and CEO.

"We're farmer-focused and our job is to provide them with everything they need," he continues. "Whether it's a value-added venture or not, we remain diligent on providing opportunities to help family farmers."

Wildcat Distilling sells six whiskeys ranging in price from \$28 to \$42 per bottle, with plans to expand production to include

bourbon and other spirits. The team's production goal is 380 bottles per week. Wildcat products are sold by regional retailers, including Hy-Vee stores.

## Far North Dreams

Reese grew up in tiny Hallock and Swanson was raised on a farm near town. While they say they loved the quiet beauty of the Red River Valley, both dreamed of living in a bustling city with rewarding careers and endless entertainment options.

After more than two decades of living that dream, most recently in St. Paul, Minn., the couple yearned for a "simpler life." Years of stressful work in public education consulting for Reese and pharmaceutical marketing for Swanson caught up with them.

"We needed something that would feed our souls," Reese recalls. "We wanted to do something with the farm, but it's hard to be profitable with 1,200 acres and we didn't want to scale up."

A business plan for a craft distillery that Swanson wrote for an MBA course in 2009 sparked another dream: turning

"There's quite a bit of value [turning grain into whiskey]. If corn is worth \$3 per bushel, we can make it worth almost \$80 per bushel."

— Brad Lemke



homegrown grain into world-class spirits. The couple quit their jobs, moved to the family farm and built a distillery, which opened in 2013.

“The idea is to take grain from a fraction of the acreage to make and sell a finished product that generates as much or more revenue than the entire farm can make selling grain,” Swanson says. A neighbor rents the rest of the land.

Swanson grows several varieties of rye — mostly Hazlet, which gives whiskey a unique flavor — and some heirloom corn on 200 acres. Far North makes several kinds of whiskey, gin and rum. All products

have Scandinavian names, like Roknar, to embrace their heritage and retail for \$30 to \$50 per bottle.

“Our brand is solid. The farm is our differentiator, which helps us compete nationally and internationally,” Reese says. Products are sold at retailers and restaurants throughout the U.S. and on the company’s website through a third-party vendor. Viking, which runs ocean and river cruises in the U.S. and Europe, is a Far North customer.

Sales are strong, the couple notes, but increased competition and regulations are a challenge. The number of U.S. craft distilleries nearly doubled



Dean Lipinski, assistant distiller at Far North Spirits, fills a white-oak barrel with whiskey. The barrels are made in cooperages in Minnesota.



Michael Swanson and Cheri Reese

## Far North Spirits

**Products:** Roknar, a Minnesota rye whiskey; Bodalen bourbon whiskey; four limited-release Roknar whiskeys; Solveig and Gustof gins; and three kinds of Alander rums (spiced, white and aged)

**Awards:** Best bourbon in Minnesota, Heartland Whiskey Competition, 2019; four-time winner Good Food Awards, 2016 (gin), 2021 (rye), 2023 (bourbon and rum); 2023 best buy, Wine Enthusiast, 2023 (Alander spiced rum and Alander white rum)

The Swanson century farm’s rich soils are thanks to the vast Ice Age body of water called Lake Agassiz, formed from meltwaters of a glacier that covered much of central North America 10,000 to 30,000 years ago.

Far North is the first U.S. farm distillery to be Bee Friendly Farming-certified by Pollinator Partnership.

to 2,290 from 2015 to 2021, according to the American Craft Spirits Association.

Getting up to date on farming techniques and technology was daunting, Swanson says. CHS Ag Services in Hallock provides advice and ag inputs. CHS also supplies 14,000 gallons of propane annually to heat the distillery and its stills.

“When it’s 30 degrees below zero, you can’t run out of propane,” says Reese. “Our stills run almost all week to

keep up with demand. Harlen Iverson, our propane delivery driver, doesn’t let us run out.”

The couple has embraced the return to their ag roots, sporting T-shirts that say, “Who’s your whiskey farmer?”

“We have a unique Midwest story,” says Reese, “and a lot of people want to hear it.” ■

**LEARN MORE:** Get details on these value-added businesses at [wildcatdistillery.com](http://wildcatdistillery.com) and [farnorthspirits.com](http://farnorthspirits.com).

# Custom Coatings

Blend-to-order seed treatments offer greater convenience and better value.

By Peg Zenk

Most farm input decisions are based on what will perform best in each field each season. Why should seed treatments be different?

For Brandon Udelhoven, who partners with his father, Bruce, farming 7,500 acres of small grains and pulse crops near Winifred, Mont., planting conditions vary widely from one year to the next. Whether they're planting lentils into wet, cool spring soils or seeding winter wheat into dry fall conditions, protecting the seed is critical.

"We're firm believers in using seed treatments. They always pay for themselves as a form of insurance," says Udelhoven. "Five years ago, we started using STI Customized blended seed treatments through CHS Big Sky in Lewistown, Mont. The flexibility Big Sky offers has been valuable, especially when grasshopper populations exploded."

## Season-specific Blends

A wet spring and good grass growth in 2019 followed by a hot, dry summer set up perfect grasshopper breeding conditions in Montana. "There wasn't a lot of crop damage that season, but grasshopper numbers have been unusually high here the last four years, with significant damage to small grains," says Udelhoven. "Using insecticide in our winter wheat seed treatment has provided important early protection for wheat seedings in the fall."

He says this year's cool spring appears to have delayed insect activity. "We're hoping for less pressure this fall, but if we need to add an insecticide to our winter wheat seed treatment again this year, we can make that decision based on field scouting just before we place our order, a few weeks prior to planting."

Wireworm populations can also do serious damage to cereal

crops, notes Kyle Rollness, western regional agronomy sales manager for CHS. "But you can't really predict the impact of that pest ahead of each season. Field scouting is key, and many growers have been able to add an insecticide to their customized winter wheat seed treatment to protect against wireworm damage or increase the rate used for better control."

## On-farm Flexibility

Preplant flexibility is important to many growers, especially those who apply seed treatments on the farm, like the Udelhovens. "With STI Customized seed treatments, they get the exact ingredients they want, arriving shortly before they need them, and they can apply the seed treatment as they plant so there's no leftover treated seed," says Perry Johnston, agronomy sales manager for CHS Big Sky.

"We typically produce four


to six different blends each season for farmers in our central Montana trade area, although we have developed up to a dozen in a year," he adds.

The premixed seed treatment is typically delivered to the Udelhoven farm in a 120-gallon returnable shuttle. "I don't have to mix anything, which helps minimize chemical exposure," says Udelhoven. "The blends stay in suspension well and apply uniformly on the seed. We've never had any handling problems."

A range of product packaging options are available, ranging from 15-gallon kegs to 260-gallon shuttles.

Growth enhancement products can also be added to the customized seed treatment blends, including plant growth regulators, inoculants, biologicals and micronutrients. Several years ago, the Udelhovens decided to try adding the plant growth regulator CHS Unlocked™ plant



A man with a beard and sunglasses, wearing a light blue t-shirt and jeans, stands in a field of golden wheat. He is holding a wheat stalk with both hands, examining it closely. The background is a clear blue sky.

hormone supplement to their winter wheat treatment blend.

“The first season we included Unlocked, we ran out of the custom blend before we finished seeding a field and finished up that day with an off-the-shelf product. It was literally a side-by-side comparison in the field and we saw two-day earlier emergence where Unlocked was applied and more robust, healthier plants later that fall. Now Unlocked is always part of our winter wheat seed treatment blend.”

## A Decade of Experience

CHS has been offering STI Customized seed treatments for more than a decade, explains Blake Murnan, product development manager with CHS.

“A large portion of our blending business involves seed treatments for wheat, but we also blend for soybeans, rice, potatoes and pulse crops, including field peas, lentils and chickpeas.” >

*Montana grower Brandon Udelhoven says customized seed treatments have become an important tool for raising high-quality wheat in challenging conditions.*



A new custom blender, opened in May 2023 in Jonesboro, Ark., is one of four CHS blending facilities that tailors seed treatments to regional and grower needs.



## BUILDING A BLEND

### STI Customized Seed Treatment Options

**Plant health** — Base fungicide  
Water mold protection  
Auxiliary fungicides  
SDS fungicides

**Pest control** — Insecticides  
Nematicides

**Growth enhancement** — Plant growth regulators  
Inoculants  
Biologicals  
Micronutrients

**Aesthetics** — Colors  
Polymers  
Seed finishers

> CHS maintains blenders in Willmar, Minn.; Fargo, N.D.; and Spangle, Wash.; plus a new facility in Jonesboro, Ark., which opened in May 2023. “The new blender in Arkansas will allow us to expand our business in the Delta and will serve customers in the eastern Corn Belt,” says Michael Browning, a CHS seed treatment specialist.

“We’ll be treating rice and soybean seed as well as wheat. We expect to have more than 20 blends next year.”

Nationwide, there are more than 660 unique seed treatment blends in the STI Customized system, Browning adds. “CHS created 70 individual blends for customers across the country this spring and has delivered 200 unique blends to customers since last September.”

### Only What’s Needed

“With STI Customized seed treatments, we start by looking at pest pressure in an area, then

building a blend based on those needs,” explains Murnan. “In Ohio, for instance, water molds are a common and serious problem, so our soybean seed treatments usually contain higher rates of fungicide active ingredients and multiple modes of action to protect against pythium and phytophthora.

“In North Dakota, those disease pressures are less of a problem, so we’re able to dial down or eliminate active ingredient rates,” he adds. “With the STI Customized system, you don’t pay for ingredients you don’t need.”

Building the best custom blend for a specific use usually starts with asking questions, says Derek Dolan, CHS agronomy account manager for Iowa and Wisconsin. “What are the biggest early-season agronomic challenges for the crop in that area? What are expectations for seed treatment? What

percentage of crop seed is currently being treated?”

Doing that homework with one retail customer, Dolan learned that about 30% of the retailer’s soybean seed was going out the door untreated. A little more research revealed a major sticking point for many growers was the price of the off-the-shelf premium seed treatment being offered. CHS worked with the retailer to develop a value-priced, agronomically sound alternative using cost-effective active ingredients that targeted key pest issues in the area.

The result was a customized soybean seed treatment that fit grower needs and was easy for the retailer to adopt. “The customized blend helped bring value to both growers and the retailer, so it was a real win-win.” ■

**LEARN MORE:** See details at [ch agronomy.com](https://ch agronomy.com).



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# lift smart

Plan ahead to prevent on-the-job injuries during the busy fall season.



By Cynthia Clanton

## Lift. Turn. Lift. Turn. Ouch!

"It only takes one improper lift to put you out of service," says Matt Surdick, a senior manager for environmental health and safety with CHS.

Moving heavy equipment, repetitive maintenance tasks and long days in the combine call for

extra care to avoid pain and injury.

"Everyone wants to hit the ground running, but working through fatigue and stress puts strain on bodies," says Surdick. "Make sure your body is ready to go when the busy season starts."

Working smarter, not harder, is the best approach, says

Vickie Kilgore, a senior risk management consultant in health and safety for Nationwide, one of the largest ag insurance providers in the U.S.

"If you lift something 10 times a day, can you set it up higher so you don't have to reach down to the floor? A change as simple as



setting something on a five-gallon bucket can make an amazing difference in how you feel at the end of the day.

“There are lots of easy fixes,” she adds, “if you’re aware and have a plan. Brainstorm about how things could be done differently to avoid injury and find ways to make the work easier.”

## Every Body Is Different

“We use our bodies as tools,” says Linda Emanuel, registered nurse and community health director with AgriSafe Network, a national nonprofit organization that helps health and safety professionals build skills to deliver effective health care to ag professionals. “That can take a toll over time and lead to shoulder strains, rotator cuff tears, tendonitis, carpal tunnel syndrome, lower back pain and more. You might start to feel discomfort, but decide to grind through it. Eventually, the pain can become overwhelming and interrupt normal activities.”

Understanding and accommodating for each person’s physical capabilities and skill set is a key factor in avoiding injury, says Kilgore.

“Consider what you and others can do safely and for extended periods of time, if required. Sometimes that means being honest with yourself and saying, ‘That’s not a job I’ll do anymore.’”

“We all work differently and our needs are different,” agrees Emanuel. “That could mean spacing out activities throughout the day and resting between activities.

“As we age, we tend to tire more easily and lose strength and endurance, which affects the kind of activities you can

handle,” she adds, “especially when you factor in heat and other weather conditions.”

Communication is the key to understanding and meeting the needs of everyone at work in the operation, Emanuel says. “Open conversations about working safely and setting an example can make all the difference. A healthy farmer is a safe farmer.”

## Working Smart Tips

Surdick, Kilgore and Emanuel offer the following tips to help avoid injury and downtime.

**Warm up.** “You wouldn’t run a race without warming up, so you

Avoid pivoting while carrying a heavy weight to reduce strain on your back.

**Clear the path.** Remove obstacles that block sightlines or could be tripping hazards.

**Look for help.** “Determine whether you need a second person — or equipment — to help with lifting,” says Surdick. “Trying to muscle through it alone could be the wrong approach.”

**Lift properly.** Lift with your legs and keep objects close to your body while lifting and carrying. Look for handles to make lifting easier. Shoveling is lifting too — keep shovelfuls small and manageable.

water jug nearby throughout the day. A healthy diet provides fuel for strength and helps manage stress.

**Switch it up.** “Standing or sitting for long periods of time is your enemy,” says Kilgore. She recommends rotating tasks and taking planned breaks. A 30-second timeout every 15 minutes or climbing out of the cab for five to 10 minutes every two hours lets you stretch, move or relax to help reduce muscle fatigue.

**Set up shop.** Kilgore recommends choosing hand tools with handles that are four to five inches long and have comfortable, slip-resistant grips that fit your hand.

Other suggestions include having tools organized and at arm’s reach; standing on an antifatigue mat; wearing comfortable, supportive boots or shoes; and choosing well-fitting work gloves for safety and to avoid hand fatigue.

**Get some rest.** “I can’t stress enough the need for seven to nine hours of quality sleep every night,” Emanuel adds. “Being overtired contributes to accidents while operating equipment and affects balance, which can lead to slips, trips and falls. Know when to end the day.”

**Make conditioning a year-round activity.** “Commit to daily stretching and strengthening your core,” says Emanuel. “You want to condition your muscles to be ready for the busy season.” ■

## Control These Injury Risk Factors

Nationwide lists these risk factors for pain and injury caused by tasks on the farm or ranch:

**Force:** Lifting or moving heavy objects can lead to muscle strain or back injury.

**Repetition:** Repeated movements can lead to muscle fatigue injuries; watch out for extreme stretching or awkward body positioning.

**Posture:** Standing or sitting in one position for long periods can lead to back injury or stiff muscles.

**Stress:** External pressures and mental stress contribute to muscle tension and tightness, which can cause pain and trigger other injuries.

shouldn’t start a task without doing some stretching, including shoulder rolls and hamstring stretches,” says Surdick. “Safe lifting starts with getting your body ready.”

**Plan ahead.** “Think about what you’re going to lift and where you’ll put it,” he advises.

**Stay focused.** “Be conscious of your body’s center of gravity at all times,” says Emanuel. “Reminding yourself to stand up straight helps maintain alignment to prevent injury.”

**Stay hydrated and eat well.** Emanuel suggests starting the day with water and keeping a

**LEARN MORE:** Find practical farm-focused health tips at [agrisafe.org/podcasts/talking-total-farmer-health](https://agrisafe.org/podcasts/talking-total-farmer-health).

# ***WHEN YOU'RE A CO-OP OWNER***







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## CHS REPORTS THIRD QUARTER EARNINGS

CHS Inc. has reported net income of \$547.5 million for its third quarter of the fiscal year that ended May 31, 2023, compared to a record third quarter net income of \$576.6 million in fiscal year 2022.

For the first nine months of fiscal year 2023, the company reported net income of \$1.6 billion and revenues of \$36.1 billion, compared to net income of \$1.2 billion and revenues of \$34.4 billion recorded during the same period of fiscal year 2022.

Fiscal 2023 third quarter highlights include:

- Our Energy segment delivered strong earnings, reflecting sustained favorable market conditions in our refined fuels business.
- Improved soybean and canola crush margins due to strong meal and oil demand resulted in higher earnings in our oilseed processing business.
- Market-driven price decreases for wholesale and retail agronomy products resulted in lower margins versus the same period last year.

“Consumer demand remains strong for energy and oilseed products, and our joint venture investments continue to contribute to strong earnings and round out our well-diversified portfolio,” says Jay Debertin, president and CEO of CHS Inc. “As we enter the end of our fiscal

year, opportunities remain for profitability and growth in the agriculture industry, and CHS is well-positioned to maximize value for our member cooperatives, farmer-owners and customers.”

**Energy:** Pretax earnings of \$199 million for the third quarter of fiscal year 2023 represent a \$35.8 million increase versus the prior year period and reflect:

- Strong refining margins attributed to global market conditions and favorable pricing of heavy Canadian crude oil in our refined fuels business
- Higher margins that were partially offset by

decreased refined fuels production volumes related to planned major maintenance at our refinery in Laurel, Mont.

**Ag:** Pretax earnings of \$233.5 million represent a \$40.2 million decrease in earnings versus the prior year period and reflect:

- Increased margins in our grain, oilseed and processing product categories, due primarily to strong meal and oil demand
- Market-driven price decreases, particularly for wholesale and retail agronomy products, which led to lower margins

**Nitrogen Production:**

Pretax earnings of \$56.3 million represent a \$121.9 million decrease versus the prior year period due to lower equity income from CF Nitrogen attributed to decreased market prices of urea and UAN.

**Corporate and Other:**

Pretax earnings of \$69.3 million represent a \$45.8 million increase versus the prior year period and reflect improved equity income from our Ventura Foods joint venture and increased interest income due to higher interest rates.

### CHS INC. EARNINGS\* BY SEGMENT (in thousands \$)

	Three Months Ended May 31		Nine Months Ended May 31	
	2023	2022	2023	2022
Energy	\$198,995	\$163,241	\$860,411	\$243,262
Ag	233,515	273,688	439,248	615,294
Nitrogen Production	56,263	178,212	234,869	429,052
Corporate and Other	69,347	23,596	154,084	48,619
Income before income taxes	558,120	638,737	1,688,612	1,336,227
Income tax expense	10,777	62,492	66,305	89,143
Net income	547,343	576,245	1,622,307	1,247,084
Net (loss) attributable to noncontrolling interests	(156)	(329)	(111)	(451)
<b>Net income attributable to CHS Inc.</b>	<b>\$547,499</b>	<b>\$576,574</b>	<b>\$1,622,418</b>	<b>\$1,247,535</b>

\*Earnings is defined as income (loss) before income taxes.

**GET MORE:** Sign up to receive CHS press releases by email or RSS feed at [chsinc.com/news](https://chsinc.com/news).



## CHS OWNERS TO ACT ON PROPOSED BYLAWS AMENDMENTS

Two groups of proposed CHS Bylaws changes will be brought to CHS owners at the 2023 CHS Annual Meeting, Dec. 7-8, 2023.

**Equity management:** The CHS Board has identified the need to make changes to the CHS equity management program to ensure it remains valuable to owners. Learn more at [chsinc.com/equity](https://chsinc.com/equity).

**CHS Board representation:** Amendments would adjust the number of CHS Directors per region to better reflect the CHS ownership base. Learn more at [chsinc.com/amendments](https://chsinc.com/amendments).

## CHS, CF INDUSTRIES PARTNER ON LOW-CARBON NITROGEN

CHS and CF Industries are working to reduce greenhouse gas (GHG) emissions through production and distribution of low-carbon nitrogen fertilizer. The companies will leverage CF Industries' investments to produce ammonia with lower scope 1 carbon dioxide emissions.

"We recognize the importance of helping growers optimize resources as they produce food the world needs," says Brian Schouvieller, senior vice president, commercial trade and risk management, CHS. "Zero- or low-carbon fertilizer can be an important tool as we pursue solutions that help growers simultaneously achieve their crop production and sustainability goals."

The companies expect to work together to promote use of low-GHG nitrogen fertilizer to help farmers and crop end users, such as consumer goods companies and ethanol producers, reduce the overall carbon footprint of agriculture.

Since 2020, CF Industries has advanced industry-leading projects to decarbonize its ammonia production network and position the company to supply a substantial volume of clean ammonia within the next few years. This includes leveraging carbon capture and sequestration technologies.



## CHS GRANT PURCHASES FIREFIGHTING EQUIPMENT

A heavy-duty flashlight can make all the difference for a firefighter engaged in a grain bin rescue or fighting a house or barn fire.

That's why Paul Scherschligt, Lesterville Fire and Rescue fire chief, Lesterville, S.D., is grateful for a \$5,000 matching grant from CHS based in Brandon, S.D. The CHS Seeds for Stewardship grant helped his team buy helmet-mounted flashlights.

"If not for the grant, each individual would have had to buy their own flashlight," he says. "Everyone in our department does extra. It's not just when the pager goes off or there's training — they clean trucks, work on fundraisers and help build the trucks. I can't say enough about this CHS grant and how awesome it is to be a recipient."

Learn more about how cooperatives can apply for up to \$10,000 in matching funds for local projects through CHS Seeds for Stewardship at [chsinc.com/stewardship](https://chsinc.com/stewardship).



## PLAN TO ATTEND CHS OWNER MEETINGS

### 2023 CHS New Leaders Forum, Dec. 5-6 Minneapolis, Minn.

Cooperatives are invited to nominate emerging leaders to gain personal skills, learn about the cooperative system and discover how they can help their co-ops and communities thrive. Information will be sent to co-op general managers.

### 2023 CHS Annual Meeting, Dec. 7-8 Minneapolis, Minn.

The CHS Board of Directors and company leaders will share business insights, financial updates and progress on initiatives. Owners can participate in CHS governance, create connections, ask questions and provide input. Registration will open in mid-October.



**Udder  
Brothers  
Creamery**  
Boscobel, WI





*The Sparrgrove family, Jason, Miranda, Layla (10), Emerson (6), Eva (4), Raiya (2) and Aliya (1 month), pause for a portrait at their Boscobel, Wis., creamery.*

# Local Love

Think back to your favorite small town — the one you love to visit every summer. Your vehicle slows as the ding-ding from the gas station sounds; your old softball coach waves with a smile while holding three ice cream cones; the movie theater sign is missing the “E” in “HERO” and makes do with a backward 3; and the air is so refreshing you wish you could bottle it.

The small towns that make up the backbone of America don’t thrive from generation to generation without good-hearted people who make those communities special places. It takes people like Jason and Miranda Sparrgrove, owners of Udder Brothers Creamery in Boscobel, Wis.

The Sparrgroves chose rural America to raise their young family. “Every morning, the kids can go see the sheep, pet the horses or help milk the cows,” says Jason. “Those are things a lot of their classmates can’t do.” At the same time, Jason knew their 100-plus-acre dairy operation couldn’t support a large family the same way his parents had raised him, his twin brother Justin and their four siblings.

Off-farm income has been a reality for Jason since he left a five-year service in the Navy in 2008. While working on the railroad, at construction gigs or milking cows, he and Miranda were also working to get their small-scale operation up and running. Then the creamery in the center of Boscobel came along and helped them find success both on and off the farm.

Ice cream might be a featured item on the menu at Udder Brothers, but it’s not their only specialty. The Sparrgroves work with local producers to offer fresh eggs, milk and cheese; choice cuts of beef, pork or lamb; and salsa and fermented products.

Their community engagement includes cooperative commitment. Jason has served on the board of New Horizons Cooperative for three years. “We pride ourselves on customer service at New Horizons,” he says.

When you see the well-known cow out front and the patio full of satisfied customers at Udder Brothers Creamery, it’s clear the Sparrgroves bring that same energy to their community.

— Adam Hester



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## C TOMORROW

### Tapping Technology

Refinery maintenance is a constant task, but every few years, an extensive round of technical tune-ups and upgrades — called a turnaround — is precisely planned to perform a choreographed sequence of mechanical steps that improve efficiency and output.

This spring, as thousands of employees and contractors arrived at the CHS refinery in Laurel, Mont., to complete more than 50,000 work activities in a 30-day marathon of rotating shifts, a key industry technology enhancement helped aid the colossal effort.

During a turnaround, parts of the refinery are taken offline. This year, new acoustic imaging equipment was used to detect and address potential leaks in the facility's infrastructure before each operation was brought back online.

The tablet-sized gadget employs ultrasound testing to pinpoint where otherwise undetectable leaks might be occurring.

"Leaks have the potential to not only cause costly downtime, but threaten the safety of our staff, which is our number one priority," says Jim Irwin, Laurel refinery manager.

"Ensuring no leaks is our key to a safe startup.

"Turnarounds are designed to ensure our facility can run safely and reliably for years to come," he adds. "Investments in technology set us up for success as we meet CHS owners' need for high-quality diesel and other energy products."

— Megan Gosch

