

Country Elevator Applications of the CME Grain Sorghum Futures Basis Contract



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KSU Arthur Capper Cooperative Center

Country Elevator Applications of the CME Grain Sorghum Basis Futures Contract

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WELCOME

Country Elevator Applications of the CME Grain Sorghum Basis Futures Contract

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Program - Agenda

10:30 a.m. Registration

10:00 a.m. Welcome, Dr. Brian Briggeman Professor & ACCC Director

11:05 a.m. Country Elevator Applications of CME Sorghum Basis Futures Contracts

Guy Allen Senior Economist, IGP

Dr. Daniel O'Brien Professor & Extension Agricultural Economist

12:15 p.m. Lunch (*with Discussion*)

1:00 p.m. Adjourn





PROBLEM STATEMENT

Country Elevator Applications of the CME Grain Sorghum Basis Futures Contract

Problem Statement

Without CME Grain Sorghum futures, **farmers, Country Elevators, End Users** & the trade overall have had *increased* price risk with *reduced ability* to manage that risk effectively - largely because corn futures are a less effective cross hedge substitute.

- a) **Increased Price Risk**
- b) **Lack of Efficient Price Discovery & Market Transparency**
 - **“Flat Price Risk”** (*direct price discovery*) & **Basis Risk** (*no convergence of futures-cash @ delivery*)
- c) **Greater Market Asymmetry** ⇒ *Unequal Market Power & Information Availability*
- d) **An Inefficient Corn Cross Hedge Mechanism** ⇒ *due to increased Basis Risk*
- e) **Limited Market Liquidity**

Why Now...?

➤ **CME Kansas Wheat Futures Operational Rule Changes**

CME Group announced revisions to the physical delivery rules and procedures for its Kansas City (HRW) Wheat Futures (and Mini-Sized KC HRW) contracts on December 16, 2024.

(Effective September 2026): New rules for "shuttle train" loading/unloading of HRW wheat (Rule 703) introduce premiums for faster loading & clearer processes for 110-car trains, aiming to provide incentives to improve logistics and convergence with physical markets. Restated, these changes aim to enhance the efficiency of the delivery process by incorporating modern logistics, specifically for unit trains.

➤ **CME Group's willingness to look at a smaller, more specialized derivatives & futures:**

CME Group New Futures Listings (2024–2026) Metals & Commodities

- **Rare Earths**: World's 1st rare earths futures targeting neodymium & praseodymium, essential for clean energy & defense
- **100-Ounce Silver**: A new contract launched in February 2026 specifically to address record retail demand
- **Micro Copper & Micro Silver**: Expanded the "Micro" suite with smaller contract sizes for copper & silver
- **South Asia Edible Oils**: Four new cash-settled futures contracts scheduled for March 2026
- **Wheat – Hard Red Spring (HRS) Wheat futures & options** launched on April 14, 2025
- **Wheat – Euronext Milling Wheat Spread futures contracts** on October 14, 2024, to allow traders to manage price differentials between North American & European wheat



Re-Introduction of a Grain Sorghum Futures Contract by the CME Group

Why has it not worked in the past...?

During the **1970's**, grain sorghum futures traded at the Chicago Mercantile Exchange (CME) & the Kansas City Board of Trade (KCBT) for 3 years. There was very little trading interest among grain market participants in either contract at that time.

Then, in **1988**, KCBT revised its grain sorghum futures contract and resubmitted it to the Commodity Futures Trading Commission (CFTC). The second KCBT grain sorghum contract was expected to succeed where previous versions had failed as it attempted to correct the underlying contract design & delivery process problems that existed in the earlier contract. These 1988 Sorghum contract changes included:

- Adding three more delivery points in addition to Kansas City;**
- Restricting the standards for delivering No.3 sorghum; &**
- Allowing that "Storage-In-Transit" (SIT) rail billing through a terminal market, as opposed to freight paid to a final destination.**
 - ⇒ **Concentrated physical market**
 - ⇒ Corn futures as a "Good Enough" proxy for cross hedging purposes...





CONTRACT TERMS & SPECIFICATION

Country Elevator Applications of the CME
Grain Sorghum Basis Futures Contract

Re-Introduction of a Grain Sorghum Futures Contract by the CME Group

Milo / Sorghum Futures

- 1) CME Group is launching physically delivered Sorghum futures, traded as a differential to Corn futures.
- 2) Sorghum futures will be available for trading on the CME Globex electronic trading platform & for submission for clearing via CME ClearPort.
- 3) The first trading day will be **Monday, August 24, 2026**.
- 4) The listed months available at launch will include **December 2026**, **March 2027**, **May 2027**, **July 2027**, **September 2027** & **December 2027**.



Re-Introduction of a Grain Sorghum Futures Contract by the CME Group

Contract Specification

SORGHUM FUTURES SPECIFICATIONS	
LISTING EXCHANGE	CBOT
CONTRACT UNIT	5,000 bushels
PRICE QUOTATION	U.S. cents per bushel
MINIMUM PRICE FLUCUATION	\$0.0025 per bushel (\$12.50 per contract)
PRODUCT CODES	CME Globex: MILO CME ClearPort: MILO Clearing: MILO
LISTING SCHEDULE	Two Decembers and all preceding March, May, July and September contracts listed annually following the expiry of the December contract
TRADING HOURS	CME Globex: Monday – Friday, 8:30 a.m. – 1:20 p.m. CT CME ClearPort: Sunday 5:00 p.m. – Friday 5:45 p.m. CT with no reporting Monday – Thursday from 5:45 p.m. – 6:00 p.m. CT
TERMINATION OF TRADING	Fourth to last business day preceding the contract month (first holding day for Corn futures)
SETTLEMENT METHOD	Physically delivered via shipping certificates
FIRST DELIVERY DAY	First business day of the contract month
LAST DELIVERY DAY	First business day of the contract month
DELIVERABLE GRADES AND QUALITIES	U.S. No. 2 at par; U.S. No. 1 at a 1.5 cent premium Maximum 14.0 percent moisture
DELIVERY LOCATIONS	Facilities registered on the KC HRW Wheat futures contract (with existing differentials of KC at contract price, Wichita at 6 under, Hutchinson at 9 under, and Salina/Abilene at 12 under, plus an additional 1 cent discount outside the switching district)
BLOCK MINIMUM	10 contracts

Source: CME Group: [Sorghum - CME Group](#)

Milo / Sorghum Futures – Key Features

1) Manage high-volatility basis risk

While sorghum correlates heavily with corn over long macro horizons, geopolitics & regional supply dynamics frequently fracture that relationship. In recent years, the sorghum-to-corn cash spread has “*swung wildly*” from sharp premiums to deep discounts.

- The Sorghum futures contract allows you to isolate & trade that volatile basis risk *without being exposed to the flat-price directional swings of the broader grain complex*.

2) A flexible new tool for the grain marketing toolbox

Sorghum futures are a **basis spread contract**, *not a flat-price market* and are engineered to build on deep, existing pools of liquidity.

- Traders can take a view on the basis relationship or hedge flat price risk, giving participants access to a) protect gross processing margins, b) hedge elevator inventory values, or c) capitalize on shifting feed-grain yield spreads.

Milo / Sorghum Futures – *More Key Features*

3) Insight into a highly versatile global commodity

Sorghum sits at the cross section of many global demand channels. A single contract gives the market a front row seat to:

- **The domestic feed sector**: Fueling major beef cattle feedlots and dairies across the High Plains
- **The biofuel grind**: Serving as a highly efficient, core feedstock for regional ethanol processors
- **International export corridors**: Sorghum represents a unique, concentrated global trade flow defined by stark demand shifts
 - U.S. Sorghum reacts strongly to **China Imports**, its primary international buyer



Changes to the CME Kansas HRW Wheat Contract

Physical Delivery – Key Features

➤ **Physical delivery in the heart of Sorghum country**

- Sorghum futures feature physical delivery of shipping certificates and loadout via **Road Truck** or **Railcars**.
- By utilizing the existing **KC Hard Red Winter Wheat** delivery footprint in the nation's largest sorghum-producing state, the contract provides a seamless, trusted mechanism for commercials to take title or load out physical grain.



Re-Introduction of a Grain Sorghum Futures Contract by the CME Group

Physical Delivery - Quality

Grain Quality Specifications

- **USDA Grades and Grade Requirements for Grain Sorghum - § 810.1404**
- The CME is currently recommending the acceptable grade of grain sorghum eligible for delivery be **USDA No.2 Sorghum**.
- The most common grade standard for grain sorghum trade into the U.S. domestic and export market is **USDA No.2 Sorghum**.
- It is noted maximum 14.0% moisture will apply.

The CME is currently recommending the Deliverable Grade / Grade Differentials for CME Grain Sorghum follow the same as for CME Corn, and delivery be:

- #1 Grain Sorghum at a 1.5 cent/bushel premium;
- #2 Grain Sorghum at par contract price; and,
- ~~#3 Grain Sorghum at a 1.5 cent/bushel discount.~~



Grading factors	Grades U.S. Nos. ¹			
	1	2	3	4
Minimum pound limits of				
Test weight per bushel:	57.0	55.0	53.0	51.0
Maximum percent limits of				
Damaged kernels:				
Heat (part of total)	0.2	0.5	1.0	3.0
Total	2.0	5.0	10.0	15.0
Broken kernels and foreign material:				
Foreign material (part of total)	1.0	2.0	3.0	4.0
Total	3.0	6.0	8.0	10.0
Maximum count limits of				
Other material:				
Animal filth	9	9	9	9
Castor beans	1	1	1	1
Crotalaria seeds	2	2	2	2
Glass	1	1	1	1
Stones ²	7	7	7	7
Unknown foreign substance	3	3	3	3
Cocklebur	7	7	7	7
Total ³	10	10	10	10

U.S. Sample grade is sorghum that:

(a) Does not meet the requirements for U.S. Nos. 1, 2, 3, or 4; or

(b) Has a musty, sour or commercially objectionable foreign odor (except smut odor); or

(c) Is badly weathered, heating or distinctly low quality.

¹ Sorghum which is distinctly discolored shall not grade higher than U.S. No. 3.

² Aggregate weight of stones must also exceed 0.2 percent of the sample weight.

³ Includes any combination of animal filth, castor beans, crotalaria seeds, glass, stones, unknown foreign substances or cocklebur.

Re-Introduction of a Grain Sorghum Futures Contract by the CME Group

Physical Delivery - Quality

CCL Code	Warehouse	Elevator	Capacity	Location Differential
Kansas City Switching District				(Cent/bu)
1665	Bartlett Grain Company	KCT#1	4,307,000	0
1666	Bartlett Grain Company	River Rail	10,039,000	0
1667	Bartlett Grain Company	Fairfax	10,031,000	0
1686	Hansen Mueller Co.	Katy	4,545,000	0
Elevators Outside of Switching District				
1690	Cargill Inc.	Atchison	6,443,000	-1
1691	Cargill Inc.	Crossroads	10,458,000	-1
1692	Cargill Inc.	Gordon	24,157,000	-1
Total	Kansas City Switching District		69,980,000	
Wichita Switching District				
1668	Bartlett Grain Company	Wichita	12,080,000	-6
1696	Bunge USA Grain LLC	Wichita	30,542,000	-6
1660	Ardent Mills	Wichita	5,682,000	-6
Elevators Outside of Switching District				
1653	The Scoular Company	Milan	7,532,000	-7
1699	The Scoular Company	Wellington	4,029,000	-7
Total	Wichita Switching District		59,865,000	

Huchinson Switching District			
1677	ADM Grain Company	Elevator A	3,231,000
1679	ADM Grain Company	Elevator I	6,836,000
1680	ADM Grain Company	Elevator J	18,307,000
1687	Cargill Inc.	Hutchinson	4,394,000
1688	Cargill Inc.	Hutchinson W	4,469,000
Elevators Outside of Switching District			
1690	Producer Ag LLC	Canton	3,472,000
1691	The Scoular Company	Pratt	5,711,000
Total	Huchinson Switching District		46,420,000
Salina / Abilene Switching District			
1689	Cargill Inc.	Salina	31,409,000
1695	Flint Hills Grain LLC	Abilene	2,152,000
1698	The Scoular Company	Salina	10,703,000
Elevators Outside of Switching District			
1658	AgMark LLC	Concordia	10,685,806
Total	Salina / Abilene Switching District		54,949,806
Grand Total			231,214,806
Total			231,214,806

Note: Transportation is conveyance via rail car

Note: A number of K&O Railroad facilities have applied to be regular for delivery, but thus far registration has not been granted.

While not on Class 1 Railroads, they do have Class 1 Rates, as opposed to a switching charge.

- **Expand delivery territory - Currently Effective with 8 additional locations**
- **Locations outside of Switching Districts at a 1 cent discount to Location Differential**



Changes to the CME Kansas HRW Wheat Contract

Expanded Delivery Locations

- a) Previous rules limited eligible delivery participants to be located with the “switching districts” of Kansas City MO/KS, Wichita, Hutchinson, or Salina/Abilene.
- b) New rules, effective with in September 2025 keep those definitions & add warehouses within 75 road miles of city halls of Wichita, Salina or Abilene, Hutchinson, or Kansas City MO and located in the state of Kansas.
- c) Houses under the new additions must be on a class 1 railroad and have shuttle loading capabilities.
- d) The new facilities are deliverable at the existing location differential of the nearest city hall as listed above, plus an additional 1 cent discount.
- e) Thus far eight new delivery locations have been added.



APPROACH TO PRICING...

Approach to Pricing

Sorghum – Corn Spread (Sorghum – Corn)

- Currently proposed idea is for grain sorghum futures to be priced (and traded) as a differential to corn futures.
- The product would be quoted, like corn, in cents per bushel but the price would represent the sorghum's price difference relative to corn rather than a flat price. ***
- Such a contract would allow market participants to hedge premiums or discounts specific to the sorghum market.

■ What will it look like on the screen...?



Approach to Pricing

Outright Absolute or “Flat” Price Buy / Sell Order

- A trader can also place a “flat price” order, which would simultaneously execute both a corresponding (buy or sell) Corn Futures & the Sorghum-Corn spread.
- This would effectively create a “*flat price*” grain sorghum contract.

An “implied” flat price Bid / Offer will show on the screen by calculating the:

- ☐ Corn at “Last Traded” price...
- ☐ Sorghum Spread at Bid / Offer



Approach to Pricing – EFP / EFR

Cash Sorghum Contracts hedge in Corn can be prices via an EFP or EFR...

■ **For Example:**

For a Country Elevator who holds a “long” hedged basis sorghum position of:

Bought physical Sorghum / Sold Corn Futures

They will need to execute one separate orders:

- EFP Corn...

“Classical Hedging of Sorghum in Corn Futures”



Approach to Pricing – EFP / EFR

Cash Sorghum – Corn Spread Contracts can be prices via an EFP or EFR...

■ **For Example: For a Country Elevator who holds a “long” hedged basis sorghum position of:**

Bought physical Sorghum / Sold Corn Futures and Sold Sorghum – Corn Spread

They will need to execute two separate ticket orders:

- EFP Corn...
- EFP Sorghum – Corn Spread...



Re-Introduction of a Grain Sorghum Futures Contract by the CME Group

Approach to Pricing – “On Delivery”

■ Exchange For Physical, Exchange For Risk - EFP / EFR

- Have until 2 days after last trading day to EFP before settlement.
- Make arrangements to price ahead of time, otherwise (trade at close”...)

**CME Market Regulation Outreach...*



STORAGE, DELIVERY, LOADOUT AND LOGISTICS...

Delivery & Storage...

Delivery & Storage intended to be the same as CME Corn

- 1) CME Sorghum “delivery” will be via **Shipping Certificate**
- 2) CME will be the tariff storage rate for grain sorghum delivered via a Shipping Certificate will be assessed at a rate of 8+/- cents per bushel per month rate (equivalent to 26.5/100 of one cent per bushel per day).
- 3) The storage charges for physically delivered corn must be paid up to the 18th day of the preceding month of delivery. These rates, along with interest costs, help determine the “**Financial Full Carry**”, which is a key factor in managing futures spread risk for market participants.



Delivery & Storage... more

Delivery & Storage intended to be the same as CME Corn ^{more}

4) Base Storage Rates Harmonized:

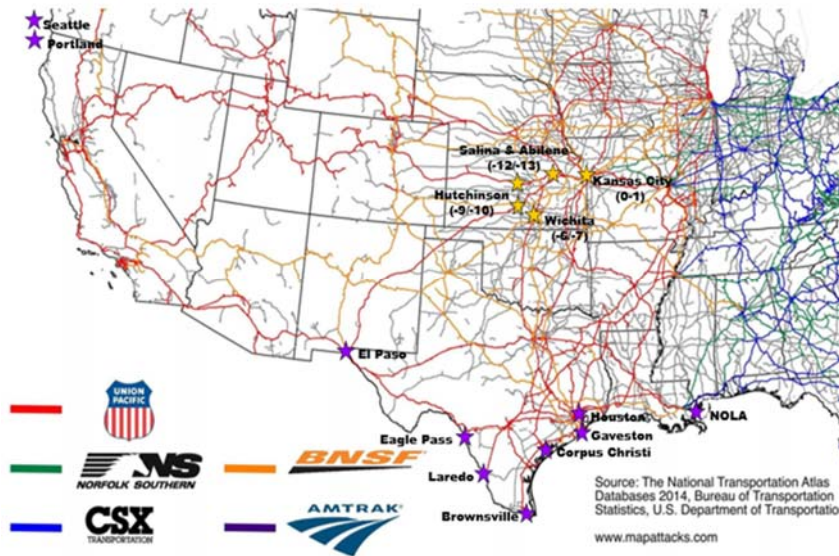
The Exchange will also harmonize the base storage rates of the wheat contracts to approximately 8 cents per bushel per month. This specific change is effective after the December 2026 expiry (December 17, 2026).

5) Increased Storage Rate for Shuttle Train Premium:

A premium of 10/100ths of one cent per bushel over the prevailing storage rate will be paid by the stopper to the issuer for each day of loading saved due to the increased cadence of unit train loading.



DVE Transportation – Major Export Destinations



With “Delivery” execution now capable of loading “Shuttle Trains”, it is now feasible deliver to major secondary cash markets for export; (i.e., Texas Gulf, NOLA, PNW, and Mexico Rail...)

Increased Loadout Charges

- **Increased Conveyance (Load Out Charge)** from 6 to 8 cents - Effective 17th December 2026, to 9 cents - Effective 17th December 2027.

- ❖ **Convergence is Positive, but small**

(This is a convenient change to create consistency across bulk grains but should have very limited effect on cash & futures convergence.)

- Elimination of “Weekly Loading Rate” obligation in favor of a “Daily Loading Rate” - Effective 17th September 2026

KC HRW Wheat under Shipping Certificate Delivered but Not Loaded Out	Load-Out Requirements In-Hopper Cars	
	Daily	Weekly
Up to 3,000,000 Bushels	30	150
3,005,000 to 4,000,000 bu.	40	200
4,005,000 to 5,000,000 bu.	50	250
Each Like Increment up, Add	10	50

Increased Loadout Charges – Shuttles

➤ **Premium for faster shuttle train loading rate than obligated daily rate:**

- Effective 17th September 2026

- Additional **14 cent premium** for loading shuttles.
- Shuttle Incentive falls to “deliverer”, & Demurrage falls to “stopper/taker”.
- Cash Premium for more than loading than the obligated Daily Loading Rate of 10/100 cent/bus/day paid by the stopper to the issuer.
- There is a long list of rules related to shuttle train loading execution...
These rules make execution of shuttle train loading feasible. Should make Kansas HRW Wheat Futures executable to the U.S. Gulf & pricing more in line with export markets...)
- **CME Rulebook:** Refer to Chapter 14H for KC HRW Wheat Futures.
- **CME Circulars/Notices:** Look for Specific Executive Reports (SERs) or Advisory Notices for implementation details, like SER-9483.



DELIVERY VALUE EQUIVALENTS

In a delivery, in a delivery month, Cash equals Futures...

Changes to the CME Kansas HRW Wheat Contract

DVE Calculations

December CBOT Grain Sorghum Futures

(Receive Shipping Certificates in Hutchinson, Kansas)

Take Delivery		+ 0 cents/bu
Hutchinson Discount		- 9
Storage (4 cents for 14+/- days)	+ 4	
Interest (1 cent for 14+/- days)	+ 1	
Load Out Charge		+ 9
Shuttle Train Premium		+14
Weights + Grades		+ 2
DVE FOB Rail		+21 SZ
Freight to Gulf		+155%
Rail Tariff - \$5,674 3,935/car (Shuttle Train)		
Market Prem/Disc - \$500/car		
Fuel Surcharge - \$.00/car		
Net Weight (222,000 lbs/car / 56 lbs/bu)		
DVE Texas Gulf		+176% SZ
Fobbing		+ 40
DVE FOB Gulf		+216.75 SZ
Costs and Vessel Freight (US\$64.00/mt)		+162%
Insurance		+ 1½
DVE C&F		+381 SZ



Changes to the CME Kansas HRW Wheat Contract

DVE Calculations

CORRECTED 22 FEB 2026		Kansas City (UP)	Wichita (UP)	Hutchinson (UP)	Salina / Abilene (UP)	
"Stopping" Futures						
Location Differential		0.0	-6.0	-9.0	-12.0	
Load Out Charges		9.0	9.0	9.0	9.0	Note: 8 cents to 9 cents, plus VSR
Quality Prem/Disc*		0.0	0.0	0.0	0.0	*Add or Subtract quality assumptions at the end
Weights		1.0	1.0	1.0	1.0	
Grades		1.0	1.0	1.0	1.0	
Storage Charges		4.0	4.0	4.0	4.0	Note: 1/2 of 8 cents / month
Interest		1.0	1.0	1.0	1.0	Note: 6.0% apr for 2 weeks
FOB WRH Value		16.0	10.0	7.0	4.0	
Transportation to Gulf						
	HGB					
Single Car Rate \$/Car		\$4,955	\$4,935	\$4,935	\$4,935	Note: This is a market that trades. Single Car vs Shuttle Train Rates
Single Car Additional Cost \$/Car		\$500	\$500	\$500	\$500	Market Value +/- of Rail Equipment \$/Car
Fuel Sir Charge		\$0	\$0	\$0	\$0	ADD Fuel Sir-Charge
Car Weigh in lbs		222,000	222,000	222,000	222,000	Net Standard Cars
Cents/Bu.		137.6	137.1	137.1	137.1	
Premium for 110 Car Shuttle Train		14.0	14.0	14.0	14.0	Note: 14 cent Load Out Premium
Shuttle Car Rate Tariff \$/Car		\$3,955	\$3,935	\$3,935	\$3,935	Tariff Rate per \$/Car to Texas Gulf (25 Jan 2026)
Shuttle Car Additional Cost \$/Car		\$500	\$500	\$500	\$500	Market Value +/- of Rail Equipment \$/Car
Fuel Sir Charge		\$0	\$0	\$0	\$0	ADD Fuel Sir-Charge
Car Weigh in lbs		222,000	222,000	222,000	222,000	Net Heavy High Capacity Cars
Cents/Bu.		126.4	125.9	125.9	125.9	
Spread = Single Car - Shuttle Train	Car per Bu	1,000.0 11.2	1,000.0 11.2	1,000.0 11.2	1,000.0 11.2	
Del Texas Gulf		142.4	135.9	132.9	129.9	
FOBing Costs	/mt	\$10.00	25.4	25.4	25.4	Note: In \$/mt DVE = cents/bu
Phyto-Sanitary Cert		0.4	0.4	0.4	0.4	
Weights, Grades, Etc...		1.0	1.0	1.0	1.0	
FOB Texas Gulf		169.2	162.7	159.7	156.7	



Changes to the CME Kansas HRW Wheat Contract

DVE Calculations – Single vs Shuttle

Transportation to Gulf	HGB					
Single Car Rate \$/Car		\$4,955	\$4,935	\$4,935	\$4,935	Note: This is a market that trades. Single Car vs Shuttle Train Rates
Single Car Additional Cost \$/Car		\$500	\$500	\$500	\$500	Market Value +/- of Rail Equipment \$/Car
Fuel Sir Charge		\$0	\$0	\$0	\$0	ADD Fuel Sir-Charge
Car Weigh in lbs		222,000	222,000	222,000	222,000	Net Standard Cars
Cents/Bu.		137.6	137.1	137.1	137.1	
Premium for 110 Car Shuttle Train		14.0	14.0	14.0	14.0	Note: 14 cent Out Premium
Shuttle Car Rate Tariff \$/Car		\$3,955	\$3,935	\$3,935	\$3,935	Tariff Rate per \$/Car to Texas Gulf (25 Jan 2026)
Shuttle Car Additional Cost \$/Car		\$500	\$500	\$500	\$500	Market Value +/- of Rail Equipment \$/Car
Fuel Sir Charge		\$0	\$0	\$0	\$0	ADD Fuel Sir-Charge
Car Weigh in lbs		222,000	222,000	222,000	222,000	Net Heavy High Capacity Cars
Cents/Bu.		126.4	125.9	125.9	125.9	
Spread = Single Car - Shuttle Train	Car	1,000.0	1,000.0	1,000.0	1,000.0	
	per Bu	11.2	11.2	11.2	11.2	

- In the example above: the single vs shuttle train freight spread is **25¼ cents**.
- Of this amount, **14 cents** is given back to the shipping elevator.
- Leaving a **potential 11¼ cents improved DVE** that can be reflected in the **Futures Bid for HRW Wheat**.



Changes to the CME Kansas HRW Wheat Contract

DVE Calculations – Gulf vs PNW

Ocean Freight USCG - Destination	/mt	\$64.00	162.6	162.6	162.6	162.6	Note: Paramax = \$/mt DVE = cents/bu
Insurance			1.5	1.5	1.5	1.5	Note: if sold C&F Buyer Pays Insurance
CIF Destination			333.3	326.8	323.8	320.8	
DVE - REVERSING C&F CALCULATIONS							
Ocean Freight USCG - Destination	\$40.00	101.6	101.6	101.6	101.6	101.6	Note: Paramax = \$/mt DVE = cents/bu
Insurance		1.5	1.5	1.5	1.5	1.5	Note: if sold C&F Buyer Pays Insurance
FOB PNW		230.2	223.7	220.7	217.7		
USCG - PNW Spread	\$24.00	61.0	61.0	61.0	61.0		
FOBing Costs	\$10.00	-25.4	-25.4	-25.4	-25.4		Note: In \$/mt DVE = cents/bu
Phyto-Sanitary Cert		-0.4	-0.4	-0.4	-0.4		
Weights, Grades, Etc....		-1.0	-1.0	-1.0	-1.0		
DLV PNW		203.4	196.9	193.9	190.9		





IMPACT ON MARKETS

Impact on Liquidity, Transparency, and Volatility...

Country Elevator Applications of the CME Grain Sorghum Basis Futures Contract

Re-Introduction of a Grain Sorghum Futures Contract by the CME Group

Increase Price Transparency...?

Having a derivative or futures price for Grain Sorghum quoted in the screen will:

- Keep the pricing active real time” pricing in front of buyers & sellers”;
- Enable a more robust forward pricing curve to evolve for the cash market assisting producers, end users & warehouse operators to make more profitable business decisions & reduce risk;
- Enable bankers & financiers to more effectively support producers, end users & trade finance.

Impact on Volatility...?

While general market volatility factors like weather and global supply/demand will persist, it is widely accepted that a dedicated, viable futures contract would be a valuable tool for managing price risk.

- More importantly, **Basis Risk** and **Volatility** for grain sorghum traded against a grain sorghum futures contract would be *significantly reduced & trade in a narrower and more clearly definable range, ultimately;*
 - ✓ *Improving price discovery*
 - ✓ *Increasing price transparency*
 - ✓ *Reducing the price uncertainty & volatility experienced by participants throughout the physical cash market*



What is Liquidity...?

- **Market liquidity** refers to the ease with which an asset can be bought or sold without causing a significant change in its price, while **trading activity** is the volume of buying & selling of a financial instrument over a specific period. These two concepts are closely related.
- **Market liquidity** is a crucial feature of a healthy market that impacts transaction speed, costs, & risk management.
- **Trading activity** is a measure of the total number of shares or contracts traded for a specific security within a given timeframe (e.g., hourly, daily, weekly, etc.). **High trading activity** generally leads to high market liquidity.



What will support Liquidity & its Impact...?

- **Electronic Trading** - on the screen vs the "Pit" in 1989 – 1999.
- **Trading as an inter-Commodity "Spread to Corn"** - This will leverage the liquidity in the corn futures back into the Grain Sorghum Futures...
Spread Orders need to be electronically viable...`
- **A functional underlying "delivery" process** will ensure convergence.
- **A significant reduction in "Basis Risk"** - make hedging a more viable exercise for the country elevator & all supply chain participants back into the markets.
(The inter commodity "Sorghum vs Corn" spread risk will now lie between each of the two individual commodities)
- **End Users** (i.e., ethanol plants & feedlots) will be able to price in significant lots/volumes of grain sorghum enabling & economic switch between the two commodities in their process or feed rations.



Potential Impact on Markets...

- **Reduce Basis Volatility:**
- **Improved Basis & Convergence:** Shuttle-loading facilities typically offer higher cash prices (a stronger basis) to farmers because they benefit from lower per-bushel freight rates from rail carriers. By formalizing this premium within the futures contract delivery terms, the CME reinforces the link between the futures market and these more efficient cash market dynamics, likely improving overall cash-futures price convergence at expiration.
- **Increased Commercial Participation:** The premium incentivizes a wider range of commercial entities, particularly those with shuttle-loading capabilities, to participate in the physical delivery process. This could increase the commercial liquidity of the futures contract itself.
- **Logistical Clarity:** The new rules also introduce specific logistical requirements, such as a 5 to 10-day pre-advice window for the "stopper" (taker of delivery) & clear specifications on responsibility for demurrage, providing greater clarity & reducing operational uncertainty during the delivery month.
- **Incentivize Shuttle Train Use:** The 14-cent premium acts as a direct financial incentive for elevator operators ("makers" of delivery) to use efficient, high-volume shuttle trains (typically 110-car unit trains) rather than less efficient shipping methods. This encourages faster loading times (one shuttle per 24 hours) & better utilization of rail infrastructure.



Changes to the CME Kansas HRE Wheat Contract

Likely Impact of Changes...

- ❖ Economic execution of shuttle trains, along with “Logistical Clarity”...
- ❖ Greater correlation between cash grain sorghum prices at the U.S. Texas Gulf & Center Gulf. (Also executable to Mexico & PNW)
- ❖ Greater ability to define basis, resulting in less basis volatility
- ❖ Increased commercial participation in the market
- ❖ Improved competitive pricing...



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Estimates for Grain Sorghum =
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DISCUSSION & QUESTION...

If you have more questions contact CME at agriculture@cmegroup.com

Link: [FAQ: Sorghum Futures - CME Group](#)

Country Elevator Applications of the CME Grain Sorghum Basis Futures Contract



ARTICLE FROM CHINA FUTURES DAILY...

“CME Sorghum Spread Futures Contract Fills the Gap in Industry Hedging”

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Country Elevator Applications of the CME Grain Sorghum Basis Futures Contract

“CME Sorghum Spread Futures Contract Fills the Gap in Industry Hedging”

As we enter July, both domestic and international derivatives markets are ramping up innovation in spread-based instruments. The CME plans to launch sorghum spread futures contracts, while commodity exchanges at home are also speeding up the implementation of spread arbitrage orders. The global derivatives market is driving product and system innovations around industry pain points, and derivative financial instruments are moving toward a more refined stage in serving the real economy.

“CME Sorghum Spread Futures Contract Fills the Gap in Industry Hedging”

■ Reporter: Zhang Tianmiao

Since the beginning of this year, major derivatives exchanges around the world have continued to accelerate the pace of product innovation, iterating and improving product lines closely aligned with the risk management needs of the real economy. Recently, CME Group announced plans to list a sorghum spread futures contract on the Chicago Board of Trade on August 24, pending regulatory approval. Unlike traditional single-commodity futures contracts, this contract is designed around the price spread between two major grains, helping industry players accurately hedge the price spread risk between sorghum and corn.

Sorghum is a bulk commodity with applications in feed, energy, and other areas, making it widely used. In the U.S. domestic market, sorghum is an important feed ingredient for beef and dairy cattle and a core production raw material for clean energy like ethanol. In the international trade market, sorghum has long been one of the key U.S. export agricultural products, with overseas demand significantly impacting U.S. sorghum prices.

From a medium- to long-term perspective, sorghum prices generally follow corn price trends. However, in recent years, geopolitical disruptions and shifts in regional supply and demand have repeatedly broken the correlation between the two. In the spot market, sorghum often experiences sharp premiums or deep discounts relative to basis risk. For decades, the U.S. sorghum industry has lacked targeted derivatives to hedge this price spread risk, making the need for industry hedging increasingly urgent.

John Ricci, CME Group Managing Director and Global Head of Agricultural Products, told Futures Daily in an exclusive interview that the core purpose of launching the sorghum spread futures contract is to address pain points in global grain supply chain risk management.



Notably, the design of the sorghum spread futures contract is deeply anchored to spot trading practices. It does not follow the conventional single-commodity absolute price model but directly uses the price spread between sorghum and corn as the trading target.

“This takes into account trading patterns in the sorghum spot market and the existing core weaknesses in risk management among industry hedgers,” John Ricci said. By leveraging CME’s highly liquid corn futures to build a cross-commodity spread contract, on one hand, it avoids creating internal liquidity competition with existing products; on the other hand, it complements the corn futures system, providing a complete hedging toolset for growers, traders, feed companies, and ethanol producers.

According to John Ricci, CME will also launch a cross-commodity spread trading mechanism between the sorghum spread futures and corn futures. Market participants can use spread combination trades to indirectly deduce the absolute price of sorghum, further enriching trading strategies and enhancing the tool’s practicality.

A head of a grain trading company told reporters that compared with trading sorghum and corn as separate futures contracts, spread contracts have smaller overall price fluctuations, lower margin requirements, simpler trading operations, and better alignment with day-to-day procurement and sales activities of spot enterprises.

Regarding contract details, the trading unit for the sorghum spread futures contract is 5,000 bushels, a quotation unit of cents per bushel, and a minimum price fluctuation of \$0.0025 per bushel. The minimum block trade size is 10 contracts, and it must be reported within 15 minutes after execution to accommodate large-scale hedging needs of institutions. The contract’s daily settlement price and final settlement price at expiration are both the volume-weighted average prices during the settlement period, a rule consistent with other grains and oilseeds on the CME.

To concentrate market liquidity, the trading hours are set from 8:30 to 13:30 Central Time. At the same time, the contract does not have traditional daily price limits but is supported by a market circuit breaker mechanism, balancing trading efficiency and market stability. Currently, details such as the margin standard and cross-commodity hedge discounts have not been announced but are expected to be released via official settlement notices before launch.

“CME Sorghum Spread Futures Contract Fills the Gap in Industry Hedging”

Although the underlying of the sorghum spread futures contract is the price difference between sorghum and corn, it ultimately settles through physical delivery of sorghum.

The formula for calculating the total delivery settlement price is “final settlement price of sorghum spread futures on the expiration date + corn futures settlement price on the delivery date”. In simple terms, the seller delivers sorghum that meets grade standards to a designated warehouse at expiry, and the buyer pays according to the total price above. This fulfills the original design purpose of hedging the basis of the spread contract while completing physical delivery and settlement of the commodity.

“The main sorghum growing region in the U.S. overlaps significantly with the Kansas City Hard Red Winter Wheat delivery region. In the future, this new product can directly use a well-established and experienced network of delivery warehouses, greatly reducing delivery risk and ensuring smooth settlement processes,” said John Ricci.

Regarding concerns about the small size of the sorghum spot market and whether the contract’s liquidity can be sustained, John Ricci responded that the contract was initially linked to major industry players throughout the supply chain, aligning with the trading needs of physical enterprises and laying a solid foundation for liquidity from the start. Meanwhile, the CME will launch a dedicated liquidity provider support program. “In fact, the market generally misunderstands the scale of the sorghum industry. Compared to smaller grain markets like oats and rice, the fundamentals of the sorghum industry can fully support the stable operation of a derivatives market. The innovative spread model will further boost market participation,” he said.

The introduction of sorghum spread futures will further enhance the CME’s global agricultural derivatives portfolio and support the stable operation of the grain supply chain. According to John Ricci, on the feed side, it can ensure stable operation for large-scale livestock farming in the U.S. High Plains and hedge against raw material price fluctuations. On the trade side, it can accommodate the global sorghum trade landscape and hedge risks from significant changes in international demand. On the renewable energy side, it allows ethanol producers to lock in raw material costs, meeting the risk management needs of the renewable fuel industry.

Entering July, both domestic and international derivatives markets are stepping up efforts to innovate in spread-based tools. The CME plans to launch sorghum spread futures contracts, while domestic commodity exchanges are also accelerating the implementation of spread arbitrage directives. Global derivatives markets are pushing

product and system innovations around industry pain points, and derivative financial instruments serving the real economy are moving toward a more refined stage.

“‘Precise Risk Control’ Provides In-Depth Services to the Real Economy”

■ Reporter: Zhang Tianmiao

Although spread derivatives are not mainstream trades in the commodity futures market, they are heavily used risk management tools by industrial institutions. In many cases, the biggest risk faced by physical enterprises is not the price fluctuation of a single commodity, but the relative price movement between different products or contracts. Spread products allow industrial companies to directly and efficiently manage ‘relative value’ risk, precisely hedging fluctuations in processing margins and substitution costs along the supply chain.

A spread refers to the price difference between different grades, delivery locations, delivery months of the same product, or between upstream and downstream related products. Futures, options, swaps, and other derivatives that use spreads as the trading target are called spread derivatives.

If a regular futures contract is like a ‘hammer’ that can ‘hit out’ absolute prices, spread products are like ‘calipers,’ measuring the gap between two objects precisely. They turn the originally complex, high-cost ‘multi-leg structured operations’ into a one-click standardized tool, allowing physical enterprises to lock in processing profits and substitution costs rather than raw material costs. These diversified product innovations signal that the derivatives market is moving from basic risk management towards a refined, structured advanced stage.

Two main implementation paths: Listing spread futures contracts and launching spread orders

Currently, there are two main ways global commodity market spread tools are implemented. The first is to directly list spread futures contracts, using the spread as the target, completed in a single trade—for example, CME’s soybean crush futures and the upcoming sorghum spread futures. The second is platform-supported spread combination orders, where traders can choose freely and enjoy margin discounts—for instance, the arbitrage orders (spread orders) introduced by the Zhengzhou Commodity Exchange and Dalian Commodity Exchange.



“CME Sorghum Spread Futures Contract Fills the Gap in Industry Hedging”

At present, directly listed commodity spread contracts are mainly concentrated in energy and agricultural products. According to professionals, based on different spread relationships, currently listed spread derivatives mainly fall into four types:

1. Cross-product spreads across upstream and downstream industry chain products. The most representative are CME's crack spread futures and options—the spread between refined oil and crude oil, directly reflecting refinery processing margins. Similarly, soybean crush spread futures and options reflect the spread between soybean meal, soybean oil, and soybeans, helping oil mills lock in crush profits. The core function of these tools is to help companies manage the risk of processing profit fluctuations.
2. Spreads among the same product in different regions. For example, Singapore vs. Rotterdam bunker fuel oil spread futures or WTI vs. Brent crude oil spreads. WTI and Brent are key global crude benchmarks produced in different regions with slightly different qualities; their spreads essentially reflect regional supply and demand differences.
3. Spreads between different grades of the same product. For example, Gulf Coast CBOB gasoline vs. RBOB gasoline spread futures, corresponding to price premiums for different refining processes.
4. Spreads between contracts of different months of the same futures product, called calendar spreads or intermonth spreads. For example, the spread futures and options for low-sulfur diesel at the Intercontinental Exchange, between the current month and next month contracts, help companies manage the cost of rolling positions—the price differences faced when holding positions across different monthly contracts.

In addition, there are some specialty spread products. For example, the CME offers spread futures based on spot quotes for fuel oil CIF (Cost, Insurance, and Freight) and FOB (Free on Board) prices to hedge transport and insurance costs, as well as “wheat-corn” spread options, further enriching hedging tools for the industry.

Currently, China's commodity futures market has not launched independent spread futures or options. However, public information shows that several futures exchanges provide alternative solutions through spread (arbitrage) orders, building combination trades on existing products and offering margin discounts to reduce trading costs for the industry.

The Zhengzhou Commodity Exchange's arbitrage rules use a “large-side margin” model, applying margin only to the higher side of two contracts and exempting the other side, with real-time arbitrage orders available during trading hours and confirmation after market close.

The Dalian Commodity Exchange also supports arbitrage order types, covering inter-month and inter-product arbitrage for the same product, and for some products, arbitrage between different delivery methods, with combination margin discounts.

In July, the Shanghai Futures Exchange announced the launch of arbitrage orders by releasing the “Shanghai Futures Exchange Trading Management Rules (Revised)” and carried out full-market testing on July 18 and July 25.

The value of spread tools is clear: Reducing capital occupation and highly fitting industry needs

Whether it's directly listed spread futures and options contracts or exchange-supported combination strategy orders, the main advantage of these spread tools is lower margin use and the ability to execute multiple legs simultaneously. Spread volatility is usually much smaller than that of a single commodity price, which helps unlock cash flow and improve capital turnover. During extreme market fluctuations, without exchange-provided spread products, trader-assembled arbitrage combinations can result in one leg filling while the other doesn't, exposing them to one-sided price risk. Spread products, however, embed real industry conversion factors in the design stage, enabling single-unit execution without split slippage issues.

According to John Ricci, Managing Director and Global Head of Agricultural Products at CME, for instance, trading one contract of CME's soybean crush spread futures is equivalent to holding 10 soybean futures, 9 soybean oil futures and 11 soybean meal futures provide a one-stop trading tool for industrial companies, including crushing plants, grain processing enterprises, feed manufacturers, and biofuel producers, helping them efficiently hedge the risk of fluctuations in processing profits.

During interviews, reporters learned that it is quite common for industry players and institutional participants in the domestic futures market to use arbitrage orders on the Zhengzhou and Dalian Commodity Exchanges. ‘Normally, a lot of our business involves spread trading.



“CME Sorghum Spread Futures Contract Fills the Gap in Industry Hedging”

For example, in the jujube and urea businesses, we use arbitrage orders very frequently, and the operations are relatively simple,’ Mr. Chen, the person in charge of a trade company in Hangzhou, told reporters. Since some varieties have not yet launched arbitrage orders, people will use certain software to combine arbitrage orders themselves.

According to him, spot trading is already a capital-intensive business, and when business is concentrated or market price volatility increases, arbitrage orders can effectively relieve the company's financial pressure. Many production enterprises and trading companies are using arbitrage orders. The market is highly anticipating the launch of arbitrage orders by the Shanghai Futures Exchange.

Now that spread orders work well, is there still a need to list independent spread futures or options products? Professionals told reporters that from a cost perspective, a new product usually takes several months or even years from research and development, approval, to listing, while arbitrage orders only need to open combinations among existing varieties, with low marginal costs for implementing the system. Moreover, setting up spread orders does not require designing new risk control parameters or developing new liquidity for market makers; it ‘borrows’ the liquidity of existing varieties to complete spread trading. In scenarios where both varieties are already listed, arbitrage orders are sufficient to meet most regular spread hedging needs.

However, in some complex industrial scenarios, independent spread products have irreplaceable value. If some related varieties are not yet eligible for separate listing, spread contracts can fill the hedging chain. At the same time, independent contracts have exclusive order books and continuous quotes, allowing traders to intuitively see the real-time fair price of the spread, allowing the price discovery function to be complete. Order combinations, on the other hand, require traders to calculate the differences themselves, limiting pricing transparency. On this basis, spread options can further hedge spread volatility risks and build nonlinear multi-dimensional risk management strategies.

Independent spread contracts also face implementation challenges. According to Chen Hanxun, Deputy General Manager of Guoxin Guozheng Futures, first, spreads can be positive or negative, so daily price limits, margin, and daily mark-to-market rules cannot be directly applied to conventional futures, requiring a customized risk control system.

Second, standalone spread contracts easily disperse liquidity; if participation is insufficient, it can lead to increased trading slippage, which in turn raises the hedging costs for enterprises.

Considering these factors, exchanges are paying more attention to the design and innovation of spread products. It is understood that the upcoming sorghum spread futures will rely on the highly liquid corn futures on the CME. Previously, the soybean crush spread futures listed on the CME used a combined derivative tool (implicit contract) model. According to John Ricci, the implicit structure of the soybean crush futures doesn't create open contracts but instead relies on existing highly liquid varieties on the exchange, making it easier for traders to lock in crush profits.

Whether to launch arbitrage orders or list spread futures contracts depends on factors like the maturity of the industry chain, the market risk control system, and the fundamentals of market liquidity. But no matter which path is taken, the ultimate goal is always to address the real risks faced by physical enterprises. Industry players choose the appropriate trading tools based on their own hedging situations, and only by properly managing risks like processing profits, replacement costs, and rolling costs can derivatives truly serve the real economy.

- End -





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