

2024-25 Sorghum Market Outlook

Kansas Grain Sorghum School

Garden City, Kansas – December 6, 2024

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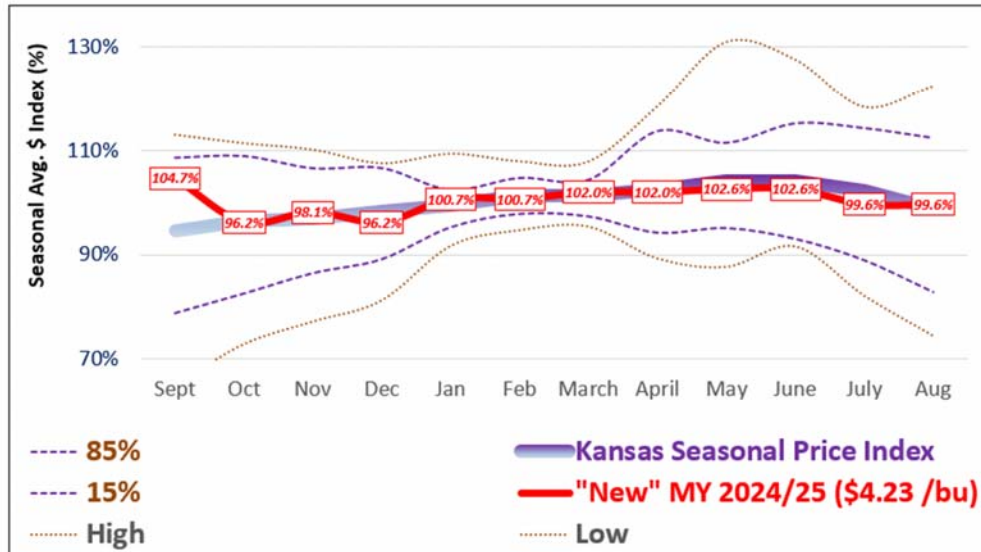


Current Global Grain Markets

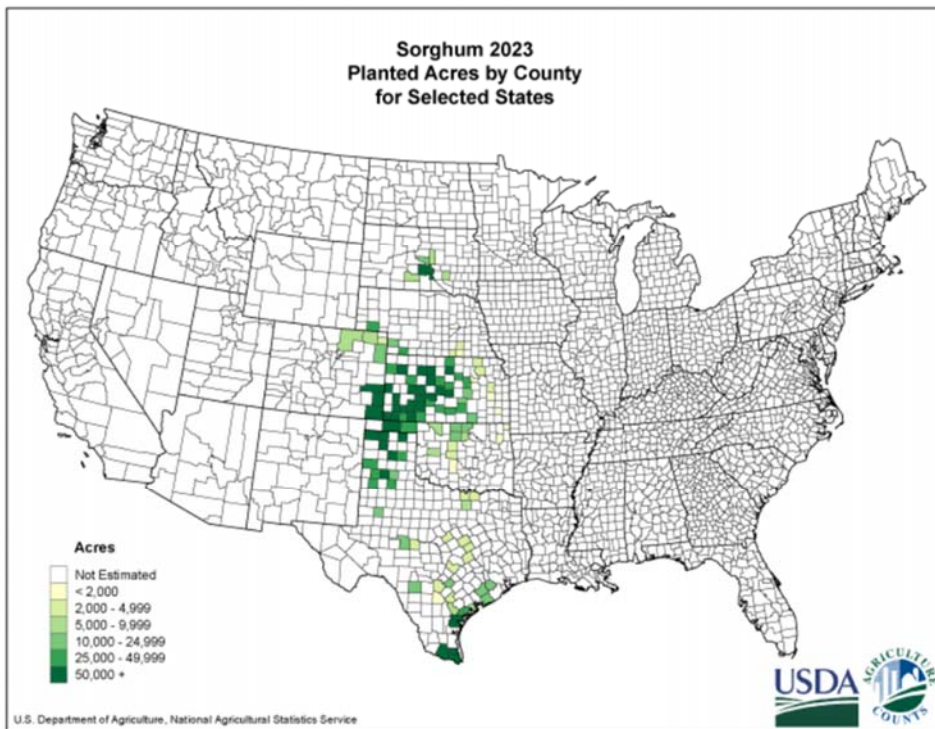
- 1) “*Adequate*” Feedgrain & Oilseed supplies are limiting Crop Prices
- 2) “*Tight*” World Wheat supplies, but weak U.S. exports hurt Prices
- 3) Crop Seasonal \$ Trends “*sideways-to-higher*” through Spring
- 4) U.S. & World Crop Production plans for 2025??
 - **Soybeans**: *More U.S. & South America plantings likely in 2025*
 - **Wheat**: *Uncertainty about Black Sea, EU, Australia, U.S. & other major areas*
 - **Feedgrains**: *2025 U.S. & South America acres likely “sideways-to-lower”*

Kansas Sorghum Seasonal Prices

MY 1999/00 – MY 2023/24 and "New Crop" MY 2024/25 as of 12/5/2024

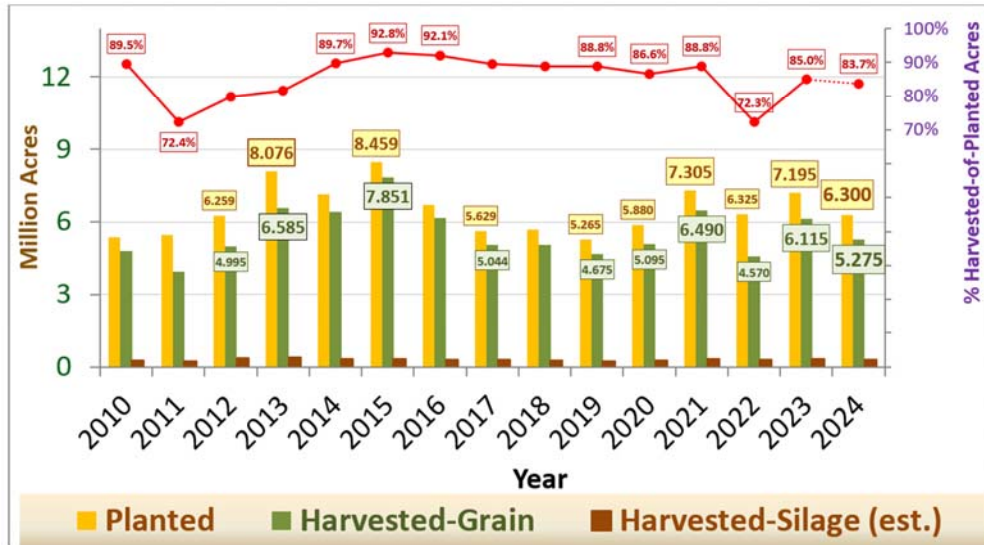


Sorghum 2023
Planted Acres by County
for Selected States



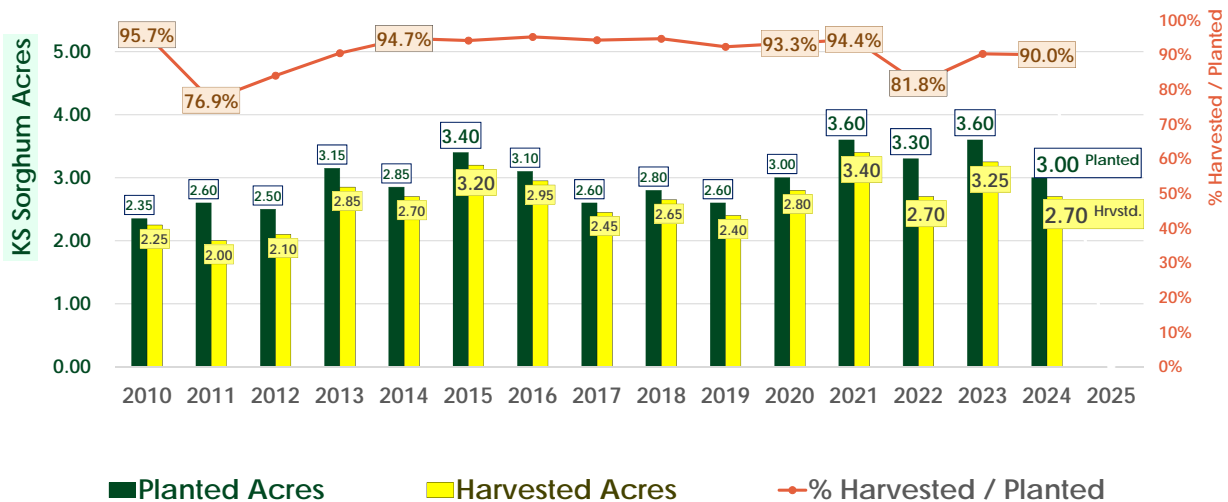
U.S. Grain Sorghum Acres

Years 2010 – 2024, Source: USDA NASS Crop Production Report 11/8/2024



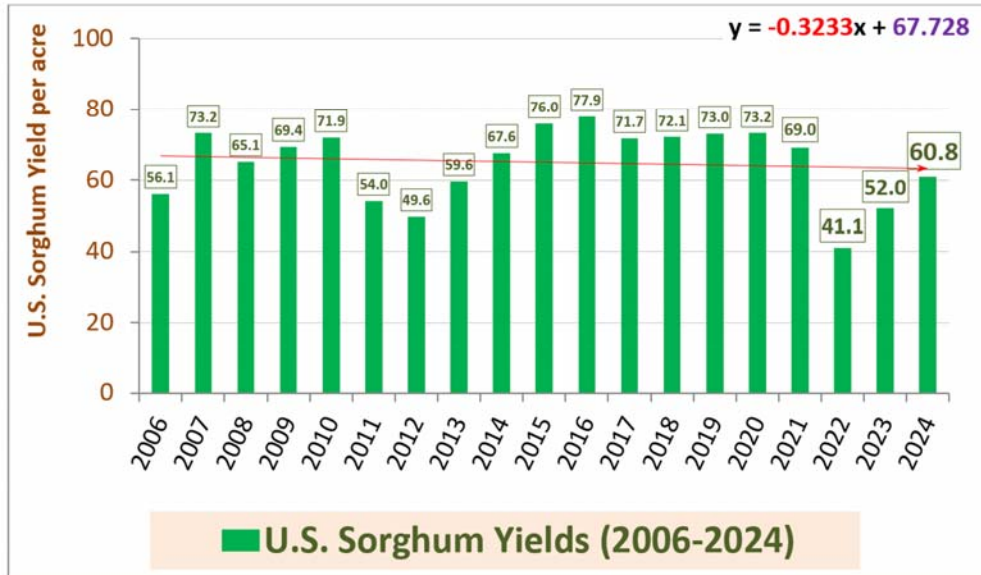
Kansas Grain Sorghum Acres

Kansas for years 2010 to 2024



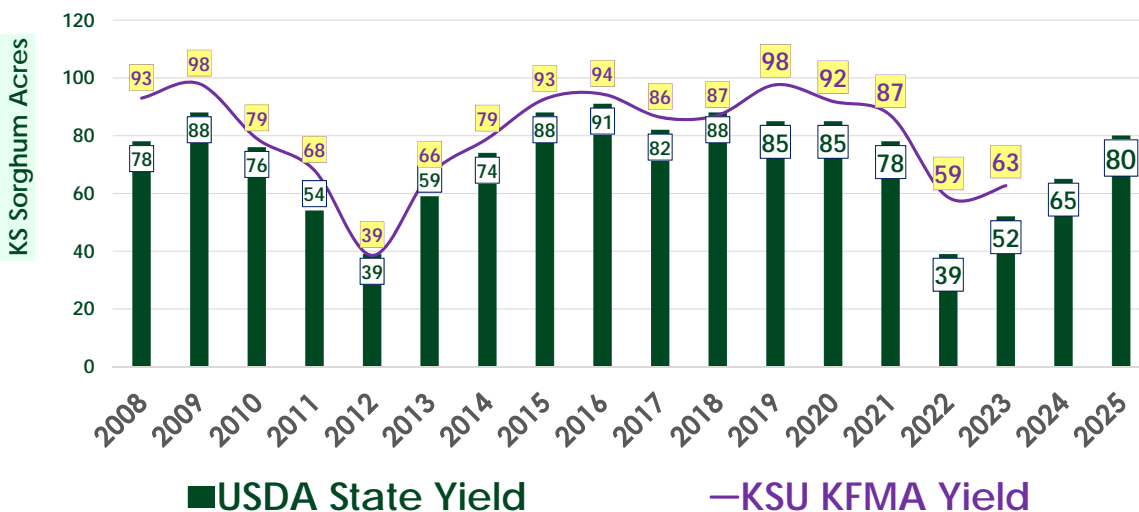
U.S. Grain Sorghum Yields

Years 2006 – 2024 as of the November 8, 2024 WASDE Report



Kansas Grain Sorghum Yields

State Averages for Kansas - Years 2008 to 2024



2025 Grain Sorghum (W-S-F Rotation) Cost-Return Budget in Southwest Kansas
 ----- MIDDLE YIELDS

Gregg Ibendahl, Daniel O'Brien, Sarah Lancaster, John Holman, and Lucas Haag

Budget abstract

Date: Nov-20-2024

| item | unit | price | quantity | amount | Sub-total | your farm |
|--|------|---------------------------------|----------|----------|-----------|-----------|
| INCOME | | | | | | |
| Product | | | | | | |
| Grain Sorghum - Southwest KS | bu | \$4.12 | 85.00 | \$350.20 | \$350.20 | _____ |
| --TOTAL INCOME-- | | | | | \$350.20 | _____ |
| DIRECT EXPENSES | | | | | | |
| Additional labor | | | | | \$0.95 | _____ |
| Crop insurance | | | | | \$21.43 | _____ |
| Diesel | | | | | \$10.00 | _____ |
| Fertilizers | | | | | \$57.11 | _____ |
| Herbicides | | | | | \$98.74 | _____ |
| Miscellaneous | | | | | \$6.85 | _____ |
| Operator labor | | | | | \$6.47 | _____ |
| Repair & Maintenance | | | | | \$13.66 | _____ |
| Seeds | | | | | \$11.10 | _____ |
| Interest on operating capital | | 7.5% percent on direct expenses | | | \$8.49 | _____ |
| --TOTAL DIRECT EXPENSES-- | | | | | \$234.79 | _____ |
| -----Total direct expenses per bu \$2.76 | | | | | | |
| FIXED EXPENSES | | | | | | |
| Cash rent | | | | | \$67.50 | _____ |
| Capital recovery (depreciation + interest) | | | | | \$50.72 | _____ |
| --TOTAL FIXED EXPENSES-- | | | | | \$118.22 | _____ |
| -----Total expenses per bu \$4.15 | | | | | | |

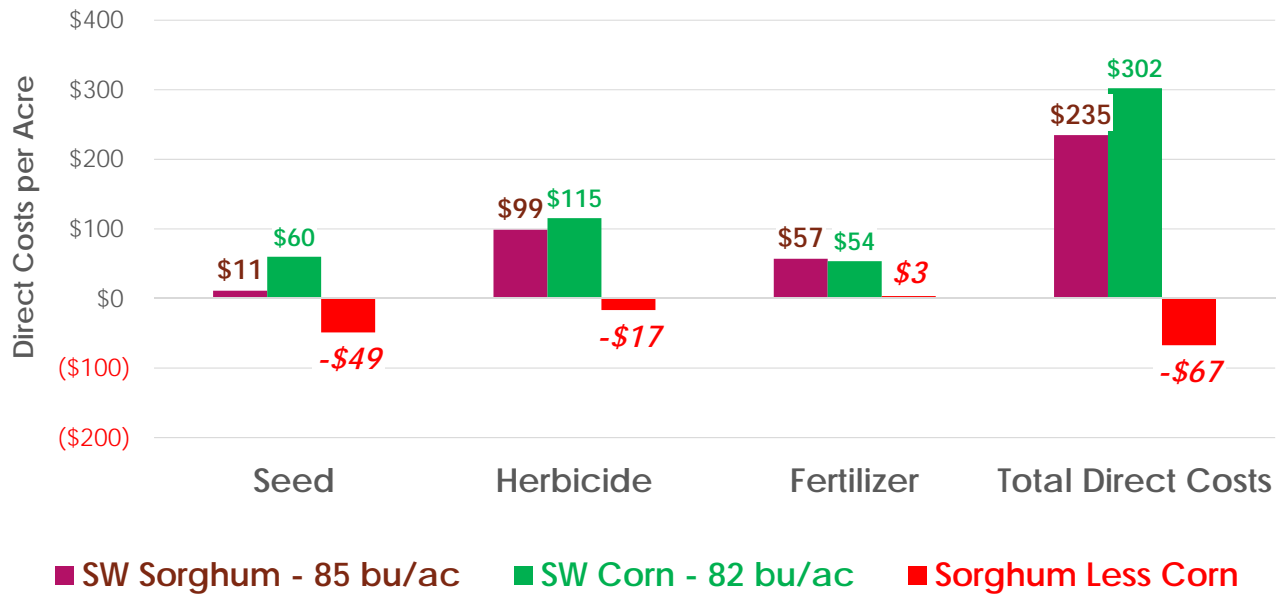
Non-Irrigated Sorghum Costs 2025 in SW Kansas

□ The Costs of Non-Irrigated Grain Sorghum vs Corn

- Comparing 85 bu/ac Sorghum vs 82 bu Corn in SW KS 2025 KSU Budgets

- **Seed** \$11.10 /ac (- \$48.90 /ac vs Corn)
- **Herbicide** \$98.74 /ac (- \$16.74 /ac vs Corn)
- **Fertilizer** \$57.11 /ac (+ \$3.49 /ac vs Corn)
- **Total Direct Cost** \$234.79 /ac (- \$67.35 /ac vs Corn)
- **Direct Cost / bu.** \$2.76 /bu (- \$0.92 /bu vs Corn)

SW Non-irrigated Sorghum vs Corn KSU 2025 Budgets



2025 Irrigated Grain Sorghum (center-pivot) Cost-Return Budget

-----Northwest KS - MIDDLE YIELDS

Gregg Ibendahl, Daniel O'Brien, Sarah Lancaster, Lucas Haag, John Holman

Budget abstract

Date: Nov-20-2024

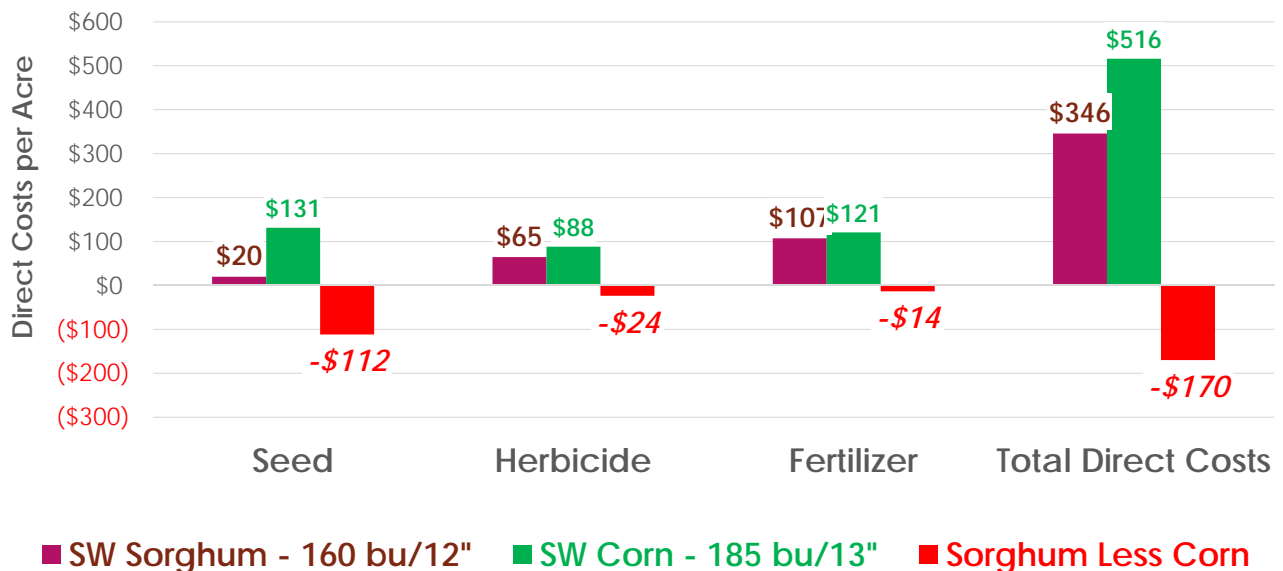
| item | unit | price | quantity | amount | Sub-total | your farm |
|--|------|---------------------------------|----------|----------|-----------|-----------|
| INCOME | | | | | | |
| Product | | | | | | |
| Grain Sorghum - Northwest KS | bu | \$4.42 | 160.00 | \$707.20 | \$707.20 | _____ |
| --TOTAL INCOME-- | | | | | \$707.20 | _____ |
| DIRECT EXPENSES | | | | | | |
| Additional labor | | | | | \$0.64 | _____ |
| Crop consulting | | | | | \$7.43 | _____ |
| Crop insurance | | | | | \$22.00 | _____ |
| Custom Operations | | | | | \$31.72 | _____ |
| Diesel | | | | | \$9.55 | _____ |
| Fertilizers | | | | | \$107.23 | _____ |
| Herbicides | | | | | \$64.63 | _____ |
| Irrigation energy (NG) | | | | | \$26.53 | _____ |
| Irrigation labor | | | | | \$8.64 | _____ |
| Miscellaneous | | | | | \$12.46 | _____ |
| Operator labor | | | | | \$6.28 | _____ |
| Repair & Maintenance | | | | | \$16.56 | _____ |
| Seeds | | | | | \$19.72 | _____ |
| Interest on operating capital | | 7.5% percent on direct expenses | | | \$12.50 | _____ |
| --TOTAL DIRECT EXPENSES-- | | | | | \$345.89 | _____ |
| -----Total direct expenses per bu | | | | \$2.16 | | |
| FIXED EXPENSES | | | | | | |
| Cash rent | | | | | \$221.00 | _____ |
| Capital recovery (depreciation + interest) | | | | | \$272.49 | _____ |
| --TOTAL FIXED EXPENSES-- | | | | | \$493.49 | _____ |
| -----Total expenses per bu | | | | \$5.25 | | |

Irrigated Sorghum Costs 2025 in SW Kansas

□ The Costs of Irrigated Grain Sorghum vs Corn

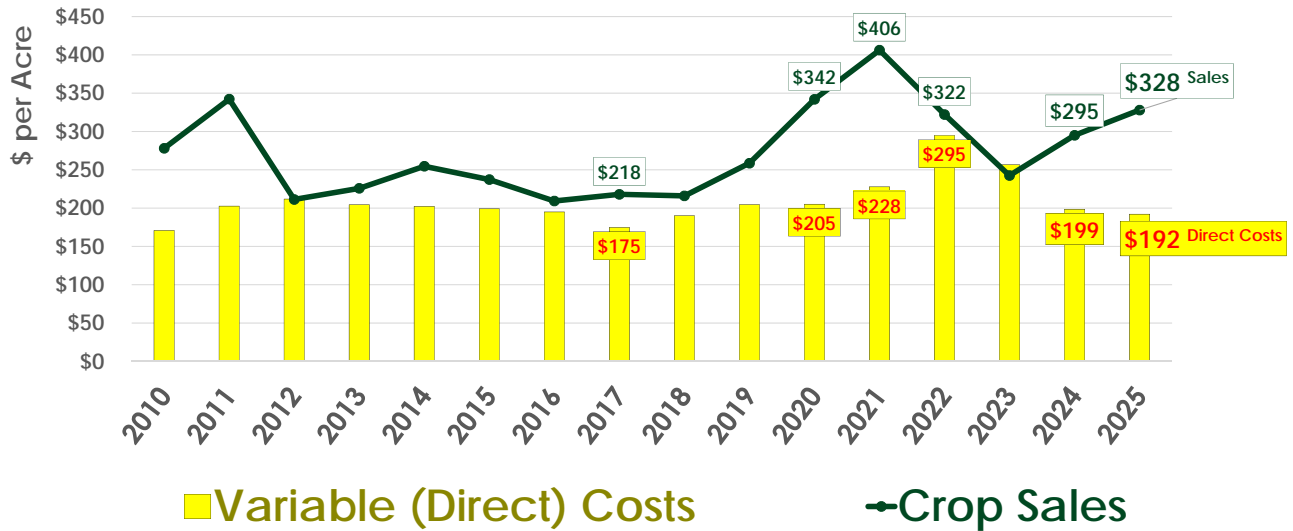
- Comparing 160 bu/ac Sorghum vs 185 bu/ac Corn in SW KS 2025 KSU Budgets
 - **Seed** \$19.72 /ac (- \$111.68 /ac vs Corn)
 - **Herbicide** \$64.63 /ac (- \$23.64 /ac vs Corn)
 - **Fertilizer** \$107.23 /ac (- \$13.56 /ac vs Corn)
 - **Total Direct Cost** \$345.89 /ac¹² in (- \$169.94 /ac vs Corn¹³ in)
 - **Direct Cost / bu.** \$2.16 /bu (- \$0.63 /bu vs Corn)

SW Irrigated Sorghum vs Corn KSU 2025 Budgets



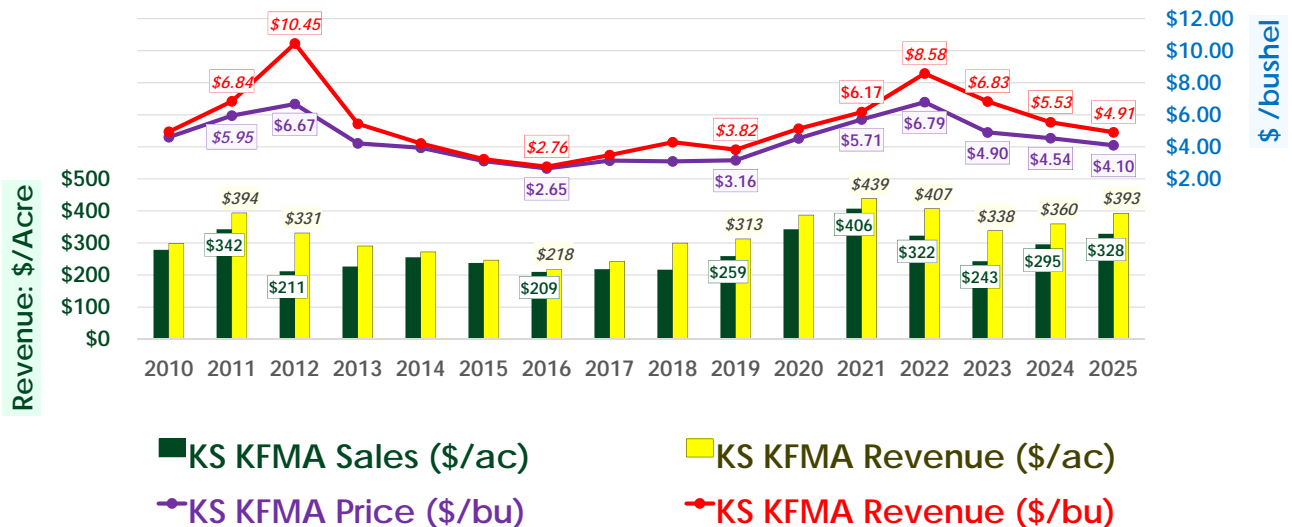
Sorghum Variable Costs & Crop Sales

Kansas – Non-irrigated 2010 - 2025 KFMA Crop Enterprise Records + 2025 KFMB Crop Ests.



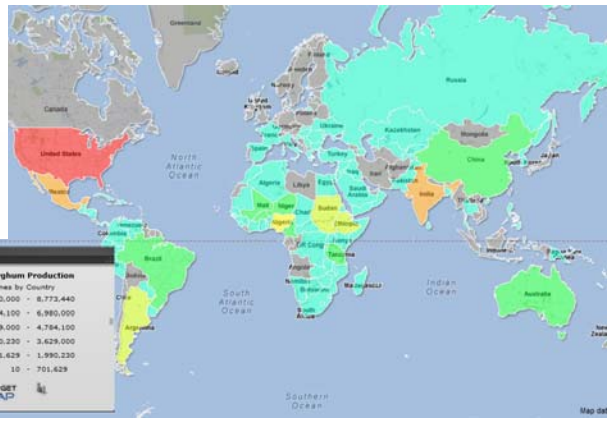
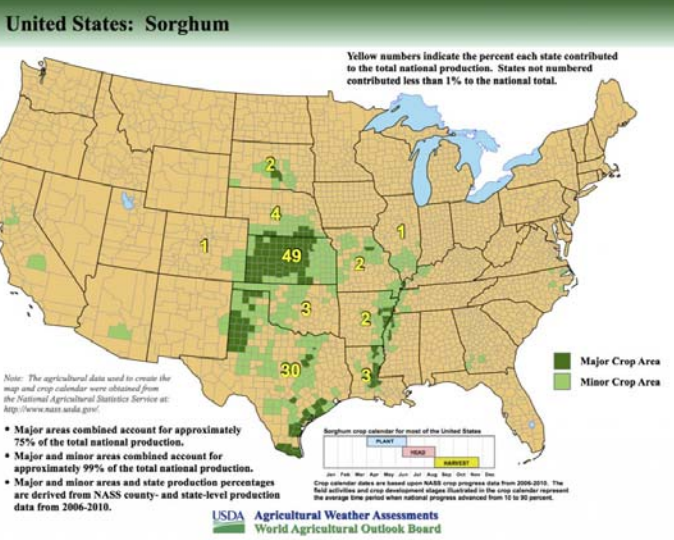
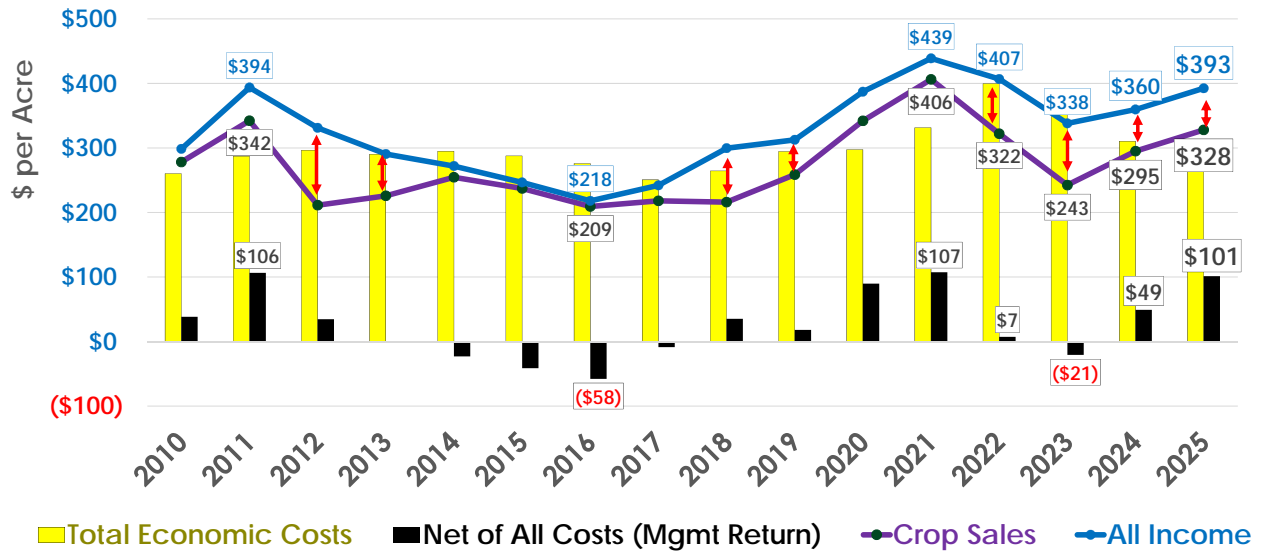
Kansas Sorghum Prices & All Revenue

Years 2010 - 2023 Kansas Farm Mgmt. Assoc. Enterprise Records + 2024 KFMA Budget Ests.



Sorghum Revenue, Costs & Returns

All Kansas – Non-irrigated Since 2010 Kansas Farm Mgmt. Assoc. Enterprise Records



Grain Sorghum Markets



KANSAS STATE UNIVERSITY Department of Agricultural Economics

CME Corn Futures

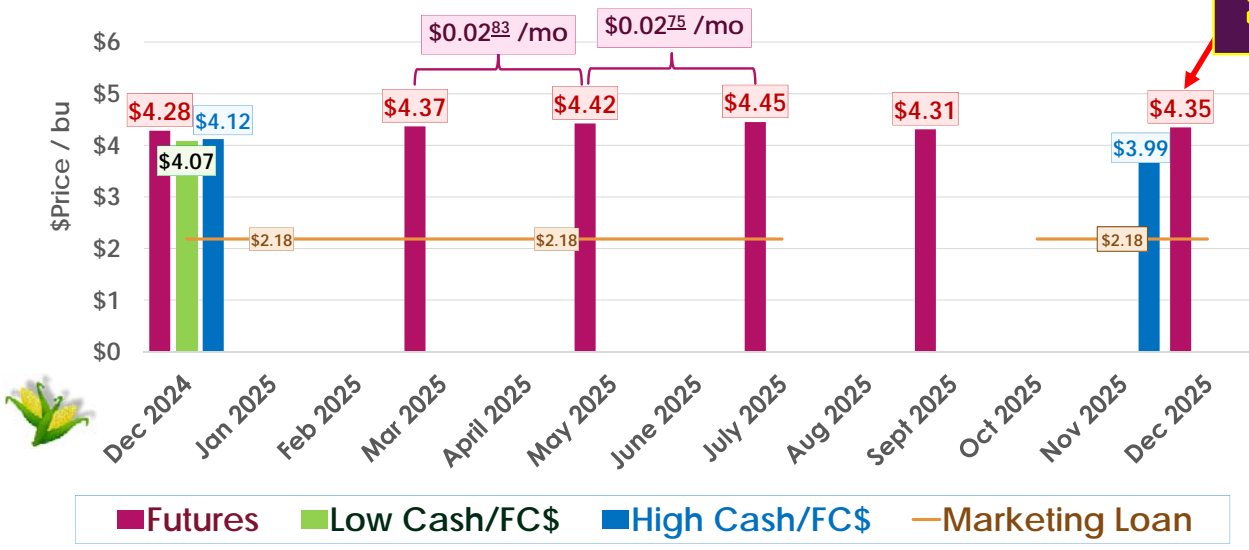


Monthly Chart: January 2005 – December 5, 2024



Sorghum Cash & Futures – Garden City KS

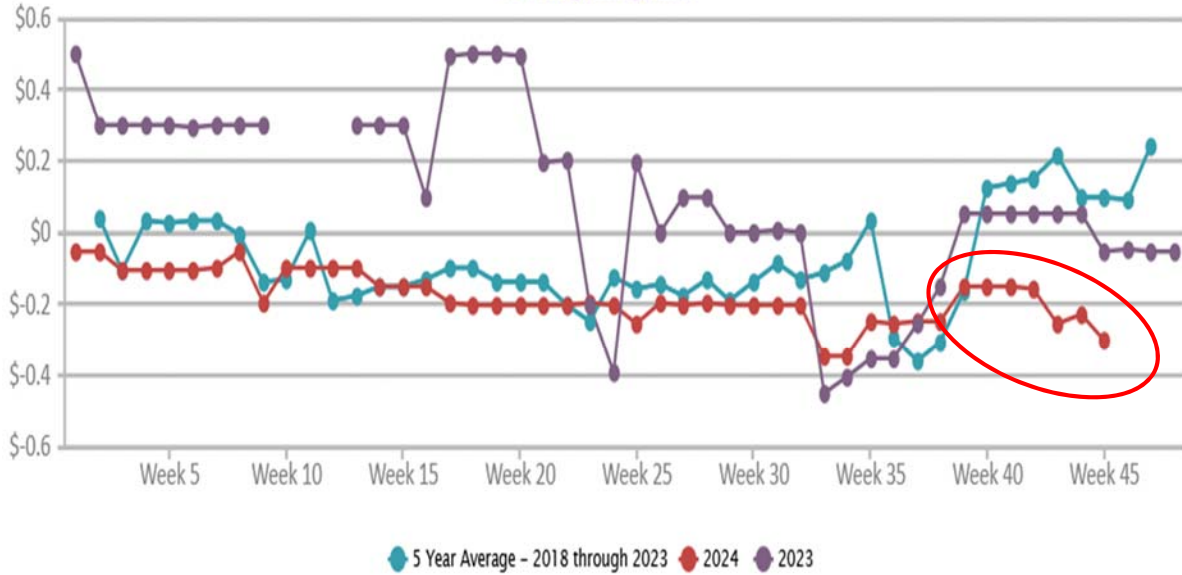
Local Elevators – December 6, 2024 9:00 a.m.



| Kansas Cash & Futures Prices | | | | | | |
|---|--|---|------------------------|-----------------------------|----------------------------|--------------------------|
| Date | | | | | | |
| 12/5/2024 - Closes | | | | | | |
| Grain Futures Contracts | | Closing \$ | | | | |
| MAR 2025 Corn | ^{New} MY 2024/25 Post-Harvest Futures | \$4.3500 | | | | |
| DEC 2025 Corn | ^{Next} MY 2025/26 Harvest Futures | \$4.3400 | | | | |
| 12/5/2024 - Closes | | Cash Grain & Harvest Contract Prices @ Kansas Grain Elevators | | | | |
| <i>Representing the highest bids available at each location</i> | | | | | | |
| Cash Market Spot & FC Bids | Colby ^{Area} | Salina ^{Area} | Topeka ^{Area} | Garden City ^{Area} | Hutchinson ^{Area} | Columbus ^{Area} |
| | NW KS | NC KS | EC-NE KS | SW KS | SC KS | SE KS |
| Grain Sorghum Spot Cash\$: Fall ²⁰²⁴ | \$3.95 | \$3.95 | \$3.92 | \$4.10 | \$4.20 | \$3.85 |
| 2024 Harvest Cash Market Basis | (\$0.40) | (\$0.40) | (\$0.43) | (\$0.25) | (\$0.15) | (\$0.50) |
| Grain Sorghum Harvest FC\$: Fall ²⁰²⁵ | \$3.90 | \$3.87 | \$3.79 | \$3.99 | \$3.94 | \$3.56 |
| ^{Next Crop} MY 2025/26 Harvest Frwd Contract | (\$0.44) | (\$0.47) | (\$0.55) | (\$0.35) | (\$0.40) | (\$0.78) |

GARDEN CITY, KS: Grain Sorghum Basis - GARDEN CITY COOP

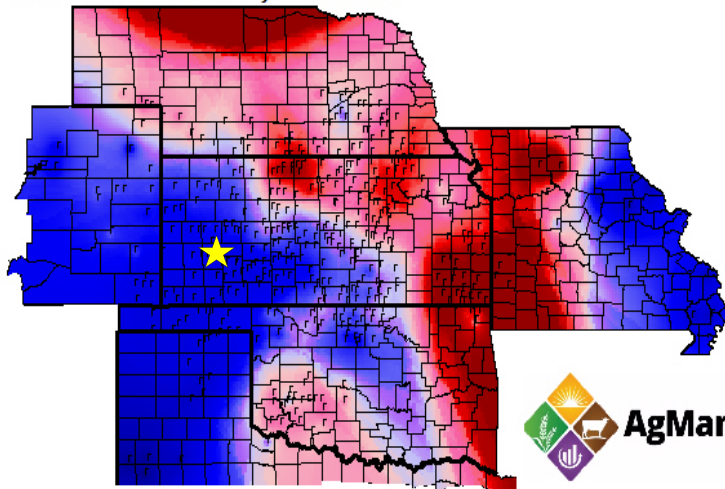
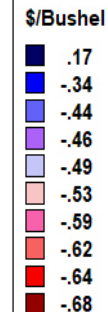
www.AgManager.info



Grain Sorghum Basis, 12-04-2024

Basis = Cash Price - Nearby Futures Price

CBT Corn
Mar Futures
Price: \$4.30

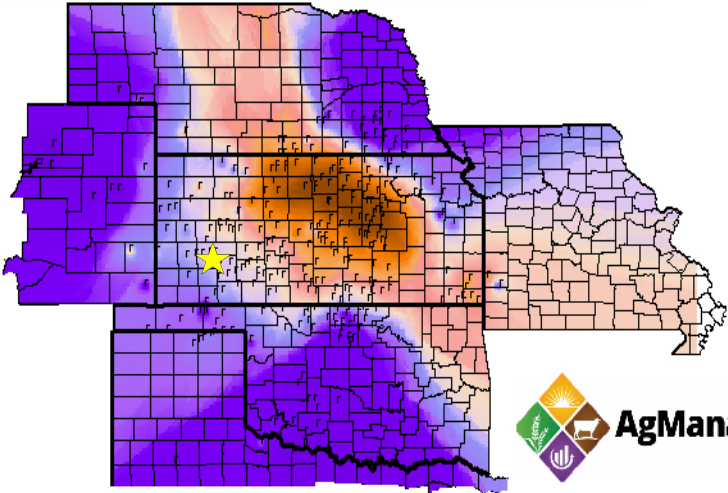




Grain Sorghum Basis Deviation, 12-04-2024

Basis Deviation = Current Basis - 3 Year Average Basis (2021, 2022, 2023)

| \$/Bushel | |
|-------------------|------|
| Dark Purple | -.01 |
| Medium Purple | -.46 |
| Light Purple | -.48 |
| Blue-Gray | -.51 |
| Light Blue | -.53 |
| Light Orange | -.55 |
| Red-Orange | -.59 |
| Orange | -.61 |
| Dark Orange | -.66 |
| Dark Orange/Brown | -.74 |



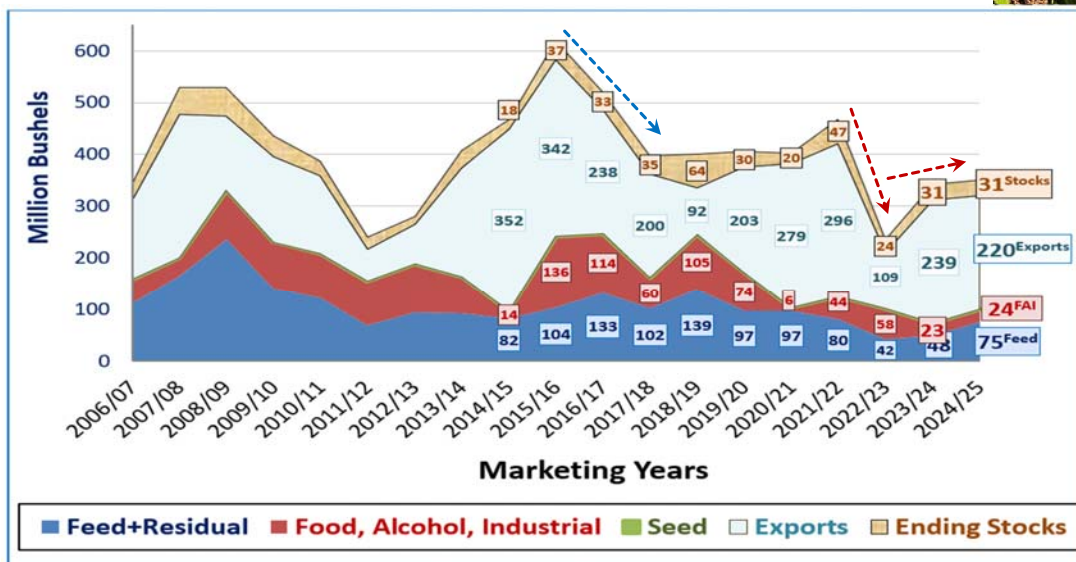
U.S. Sorghum Production & Supplies

NY 2000/01 to "Next Crop" MY 2017/18



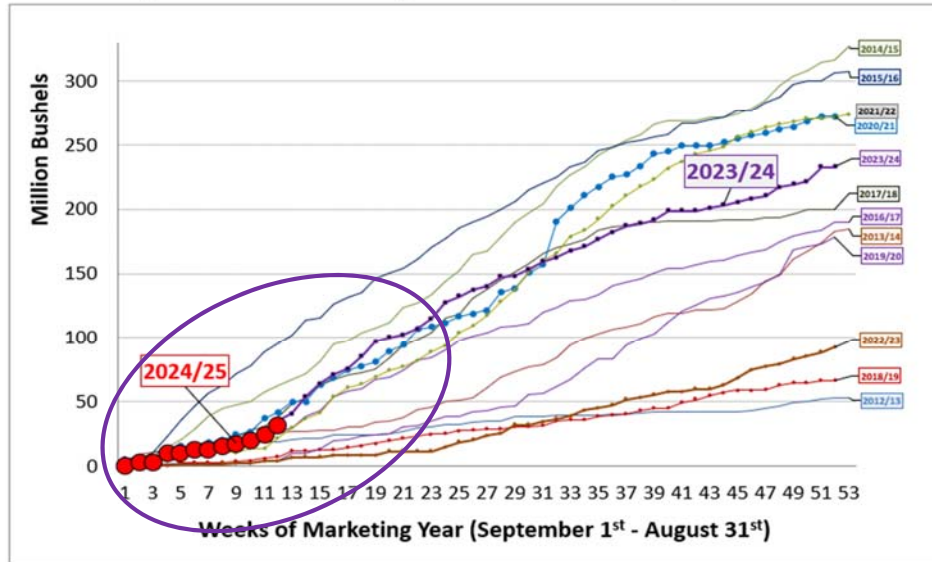
U.S. Sorghum Use & Ending Stocks

MY 2006/07 to "New Crop" MY 2024/25



U.S. Grain Sorghum Exports

MY 2012/13 - "New" MY 2024/25 as of November 28, 2024 - via USDA FAS



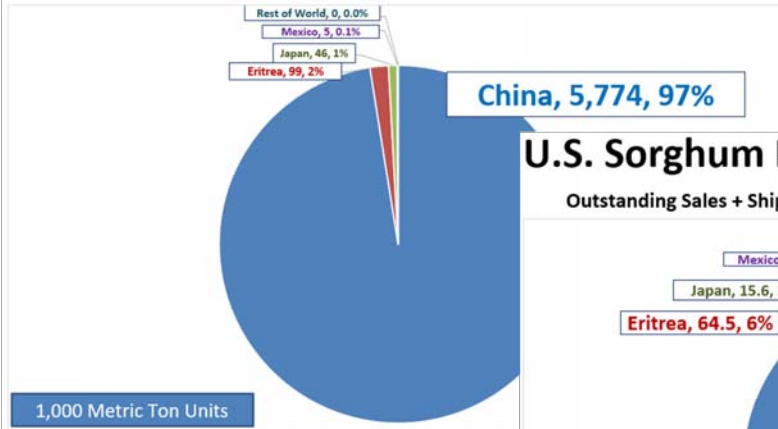
U.S. Sorghum Use & Ending Stocks

MY 2006/07 to "New Crop" MY 2024/25



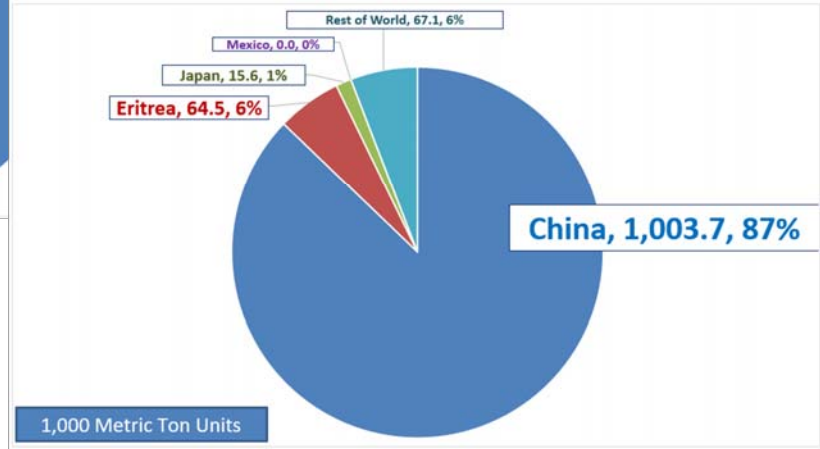
U.S. Sorghum Export Buyers "Old Crop" MY 2023/24

Outstanding Sales + Shipments for "Old Crop" MY 2023/24 as of 8/29/2024 USDA FAS Reports



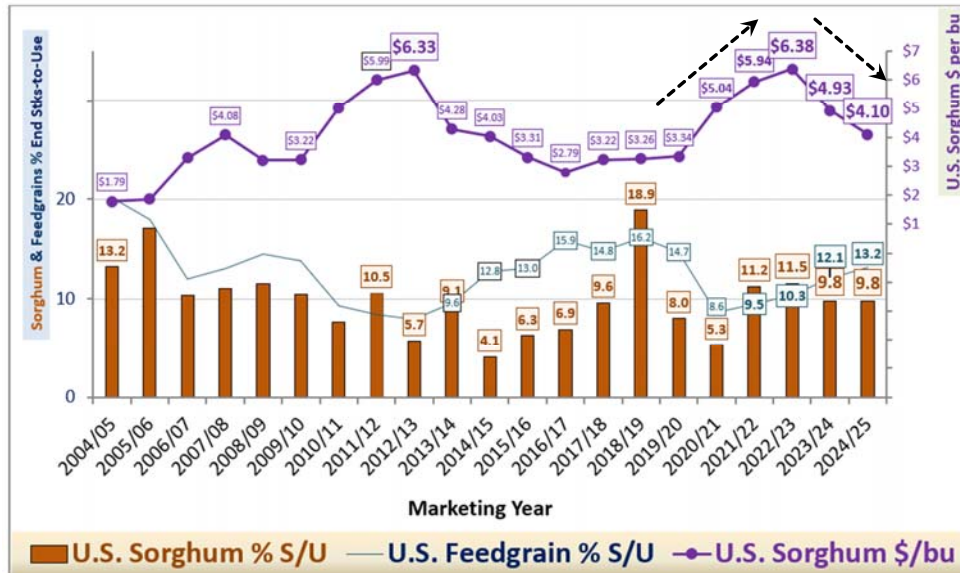
U.S. Sorghum Export Buyers "New Crop" MY 2024/25

Outstanding Sales + Shipments for "New Crop" 2024/25 as of 11/28/2024 USDA FAS Rpt.



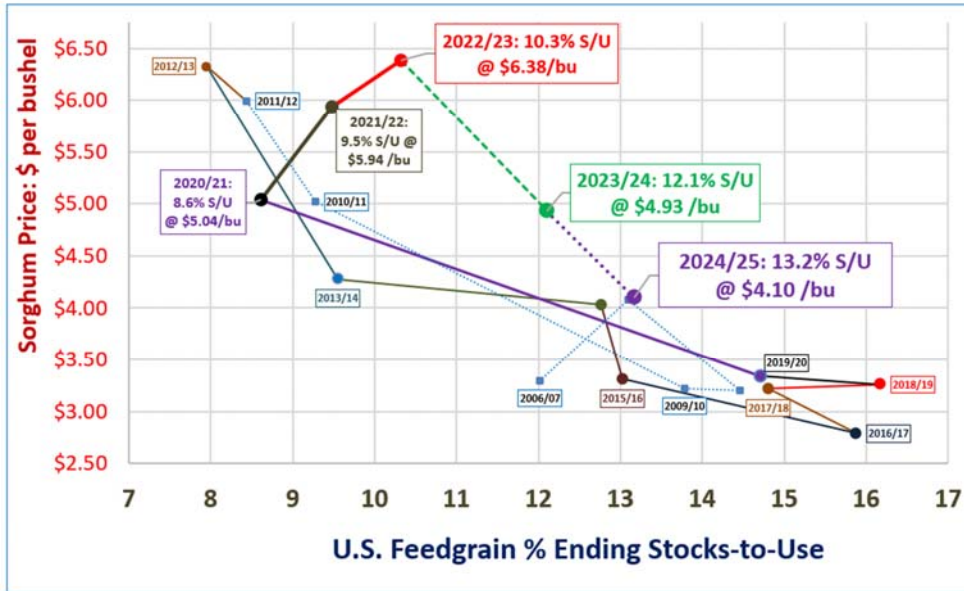
U.S. Sorghum %S/U vs Cash \$

MY 2004/05 - "New Crop" MY 2024/25; as of the USDA 11/8/2024 WASDE Report



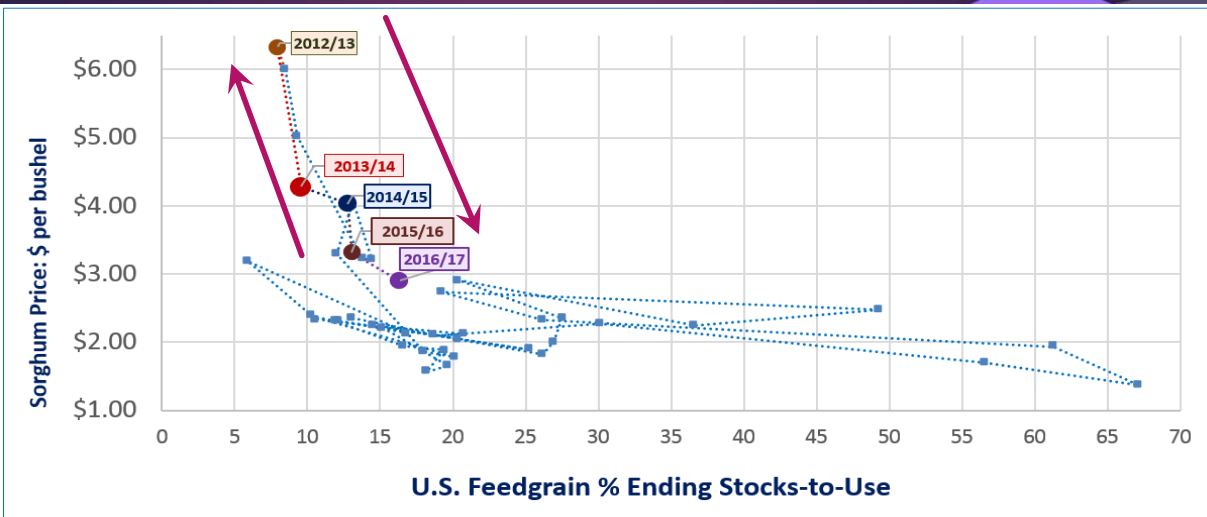
U.S. Sorghum \$ vs Feedgrain % S/U

MY 1975/76 - "New Crop" 2024/25 as of the November 8, 2024 USDA WASDE Report



U.S. Sorghum \$ vs U.S. Feedgrain % S/U

MY 1973/74 through "Current" MY 2016/17



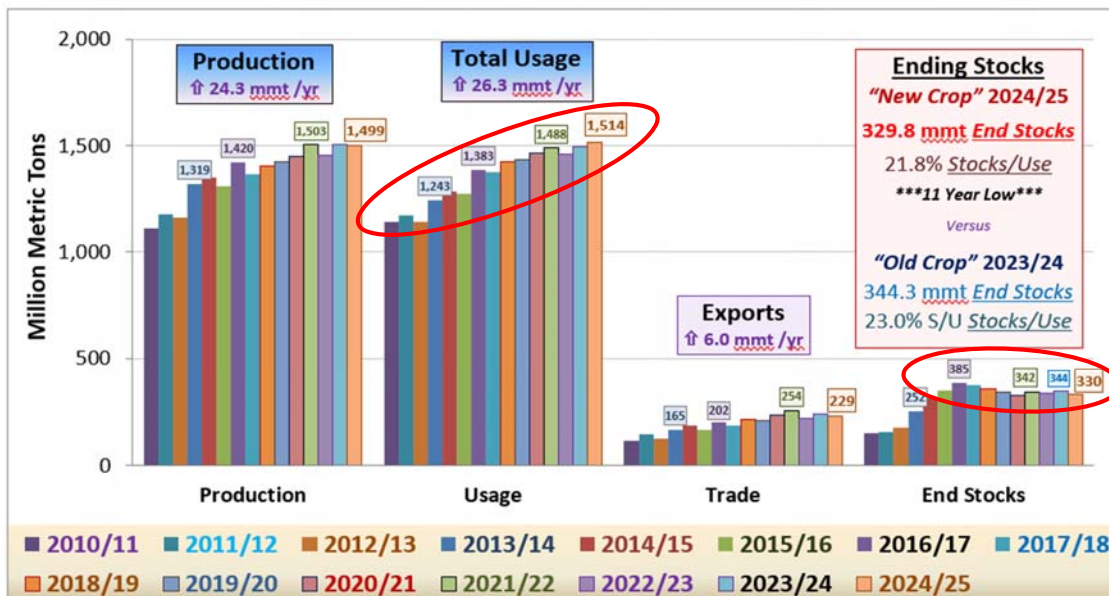
U.S. Sorghum S-D "New Crop" MY 2024/25

As of the November 8, 2024 USDA NASS Crop Production & WASDE Reports + KSU Scenarios ^{12/5/2024}

| Item | USDA Scenario #1 11/8/2024 WASDE | KSU Scenario #2 Lower Exports = 195 mb (-25 mb) | KSU Scenario #3 Higher Exports = 245 mb (+25 mb) |
|-----------------------------------|---|---|--|
| % Prob. of Occurring (KSU) | 65% KSU Est. | 25% KSU Est. | 10% KSU Est. |
| Planted Area (million acres) | 6.300 | 6.300 | 6.300 |
| Harvested Area (million acres) | 5.275 | 5.275 | 5.275 |
| Yield / harvested acre (bu/ac) | 57.3 | 57.3 | 57.3 |
| Beginning Stocks (million bu.) | 30.5 | 30.5 | 30.5 |
| Production (million bu.) | 320.7 | 320.7 | 320.7 |
| Total Supply (million bu.) | 351.3 | 351.3 | 351.3 |
| Food & Industrial Use (mln bu.) | 24.1 | 24.1 | 24.1 |
| Exports (million bu.) | 220 | -25 mb 195 | +25 mb 245 |
| Feed & Residual Use (million bu.) | 75 | +10 mb 85 | -13.7 mb 61.3 |
| Total Use (million bu.) | 305 | -25 mb 280 | +11.3 mb 315 |
| Ending Stocks (million bu.) | 22 | +15 mb 46.3 | -11.3 mb 20 |
| % Ending Stocks-to-Use | 9.77% | 15.69% | 6.03% |
| U.S. Sorghum Avg. Farm \$ (\$/bu) | \$4.10 USDA \$4.23 Futures 12/5/2024 | \$3.85 KSU \$4.23 Futures 12/5/2024 | \$4.45 KSU \$4.23 Futures 12/5/2024 |

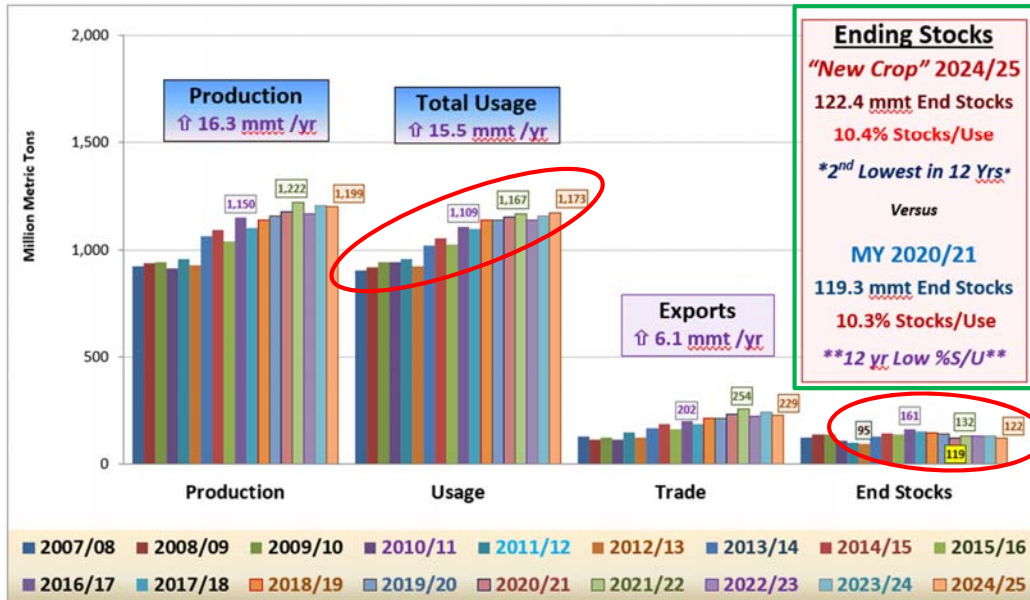
World Coarse Grain Supply-Demand

MY 2007/08 thru "New Crop" 2024/25 as of the November 8, 2024 USDA WASDE



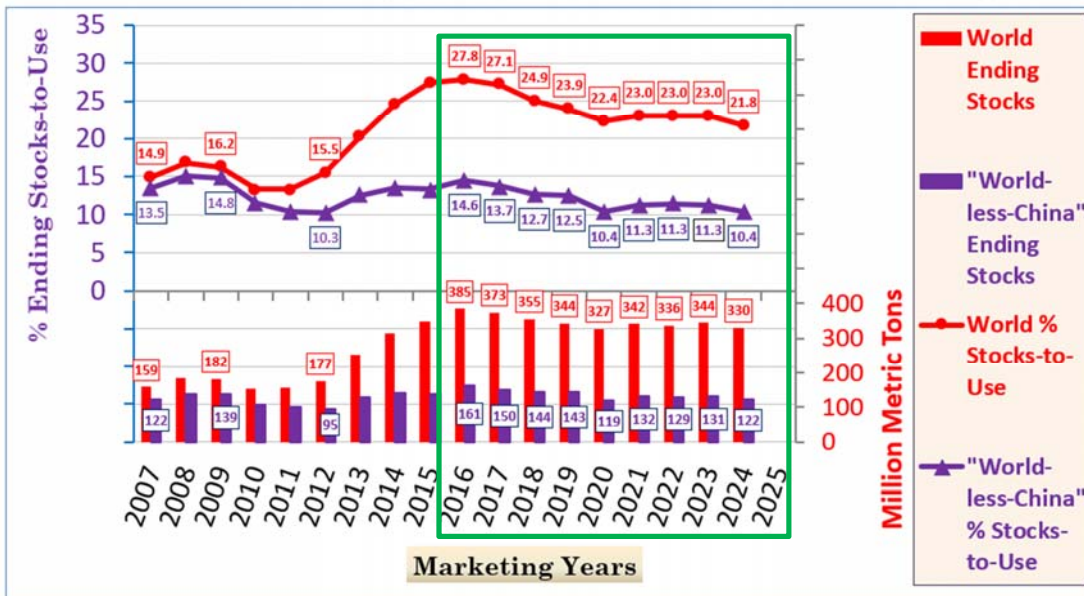
World *Less-China* Coarse Grain Supply-Demand

MY 2007/08 thru "New Crop" 2024/25 as of the November 8, 2024 USDA WASDE



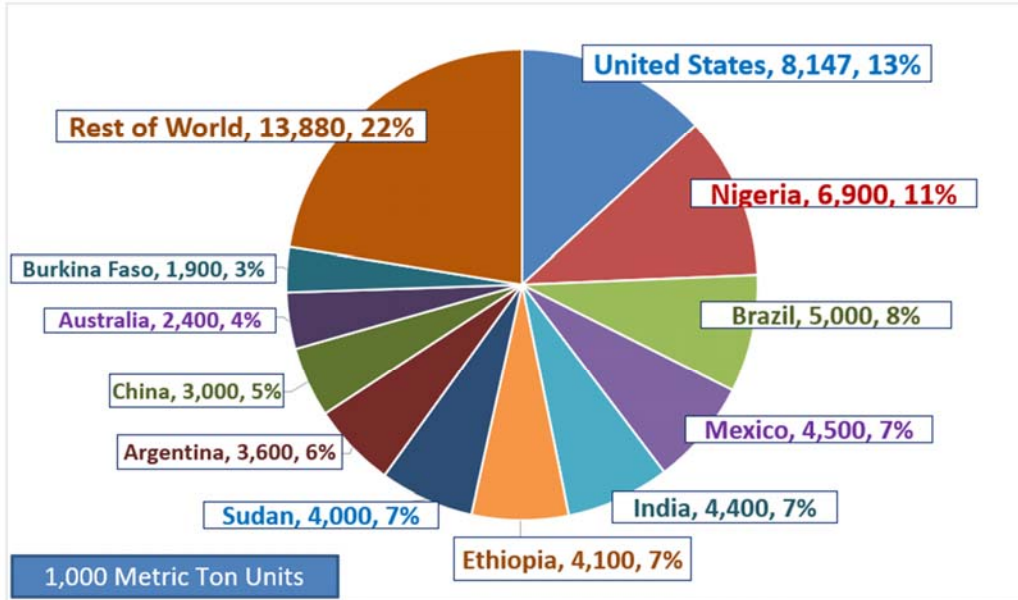
World vs World *Less-China* Coarse Grain % S/U

MY 2007/08 thru "New Crop" 2024/25 as of the 11/8/2024 USDA WASDE report



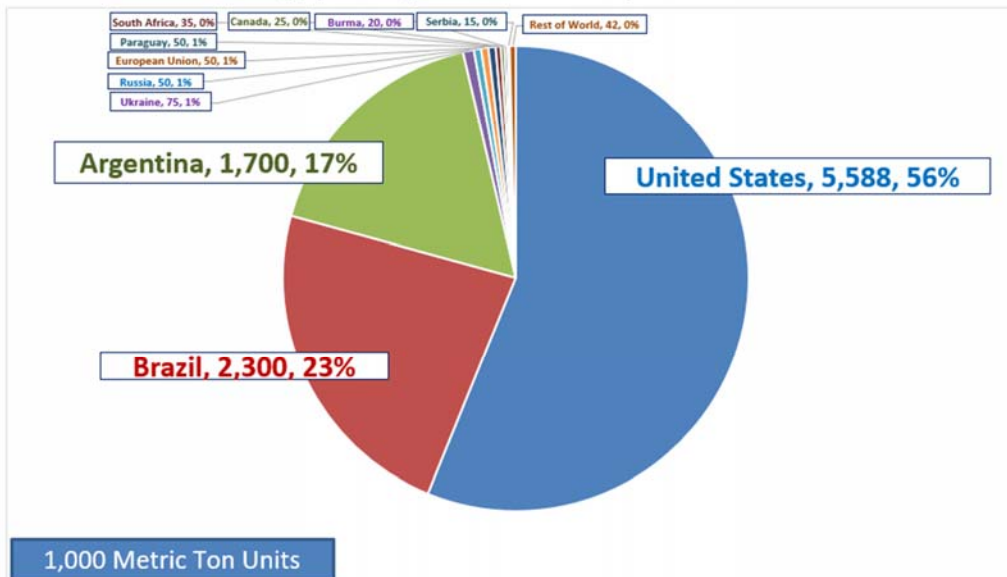
World Sorghum Producers "New Crop" MY 2024/25

USDA FAS PSD-Online, (1,000 mt); as of November 8, 2024



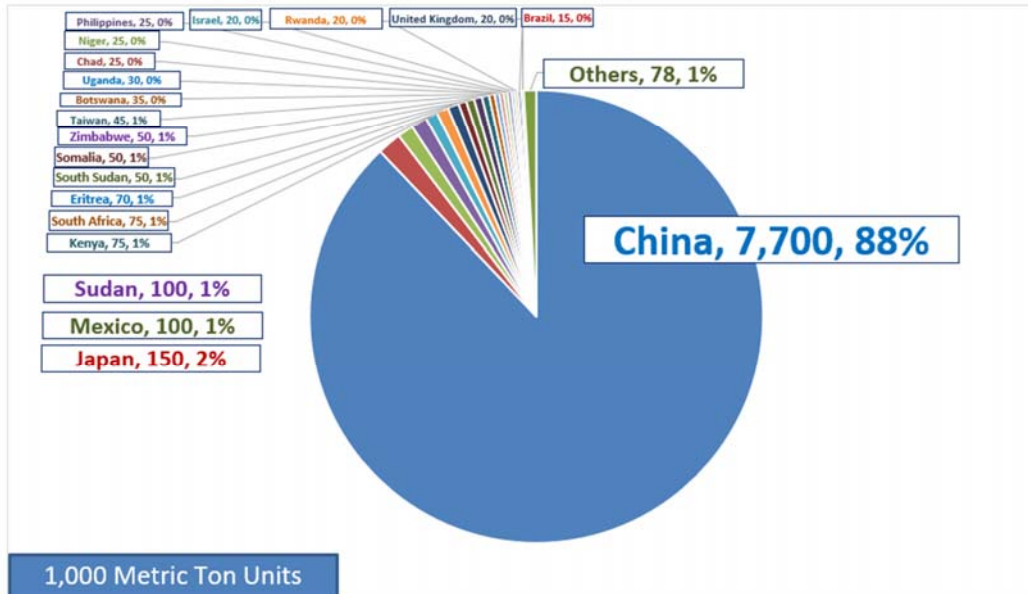
World Sorghum Exporters "New Crop" MY 2024/25

USDA FAS PSD-Online, (1,000 mt); as of November 8, 2024



World Sorghum Importers "New Crop" 2024/25

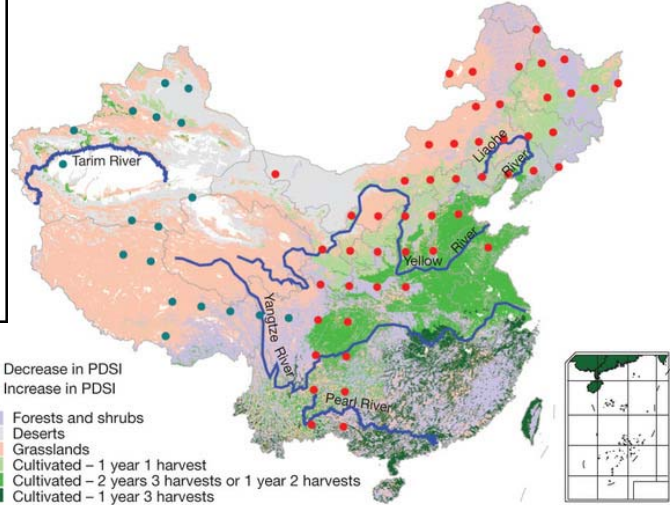
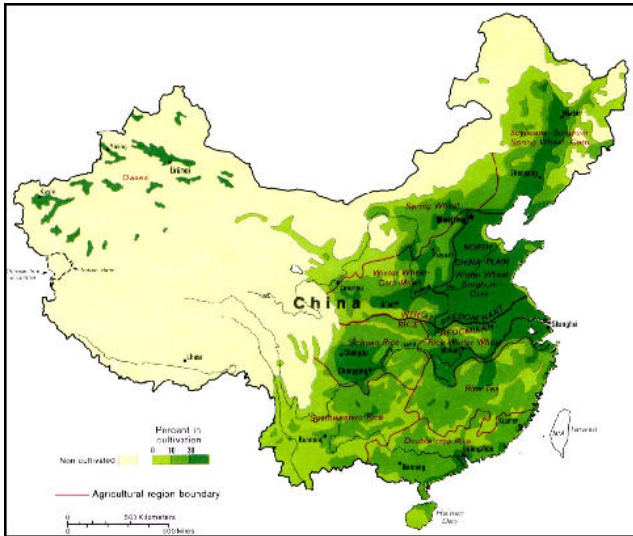
USDA FAS PSD-Online, (1,000 mt); as of November 8, 2024



China Sorghum Supply-Demand

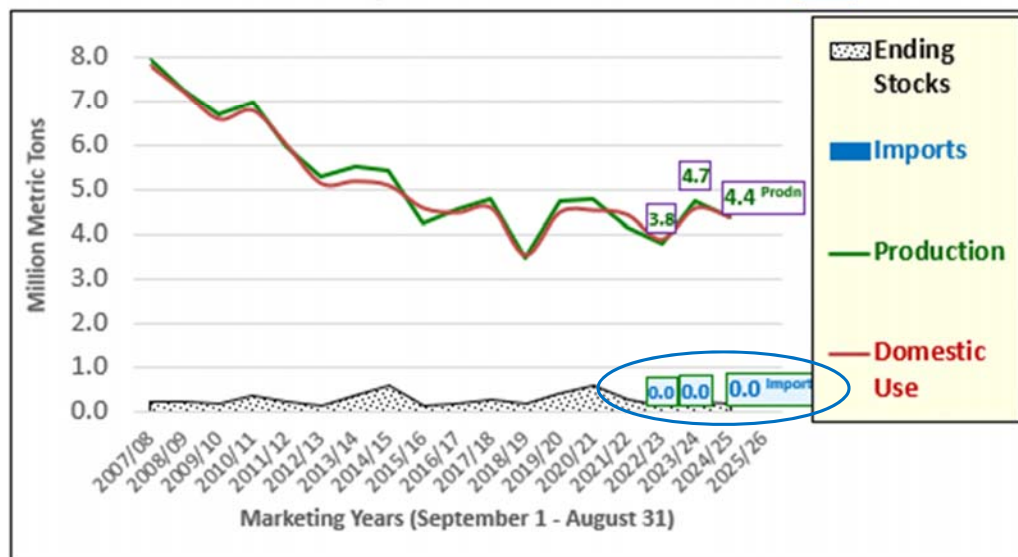
MY 2007/08 – "New Crop" 2024/25 as of the November 8, 2024 USDA WASDE report





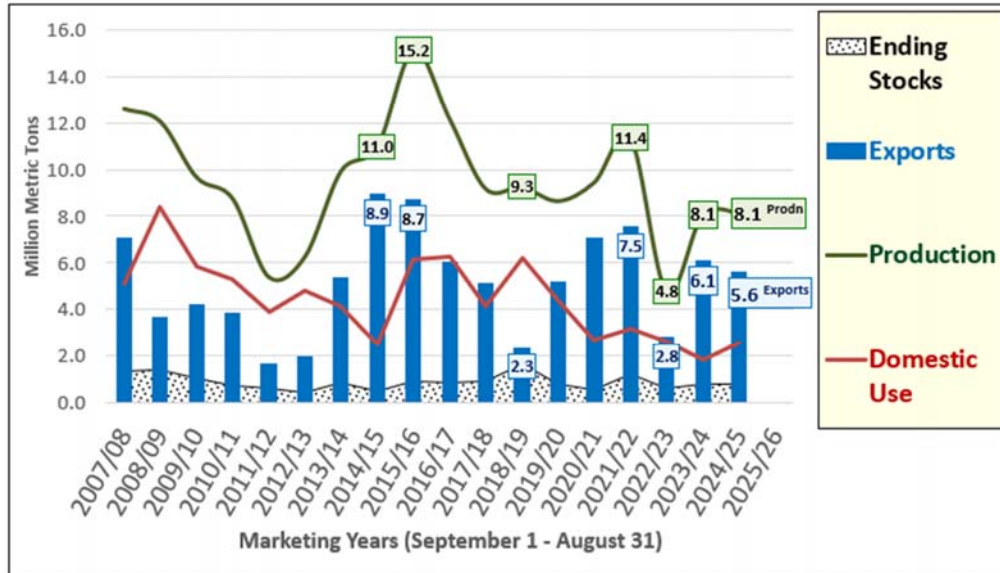
India Sorghum Supply-Demand

MY 2007/08 – “New Crop” 2024/25 as of the November 8, 2024 USDA WASDE



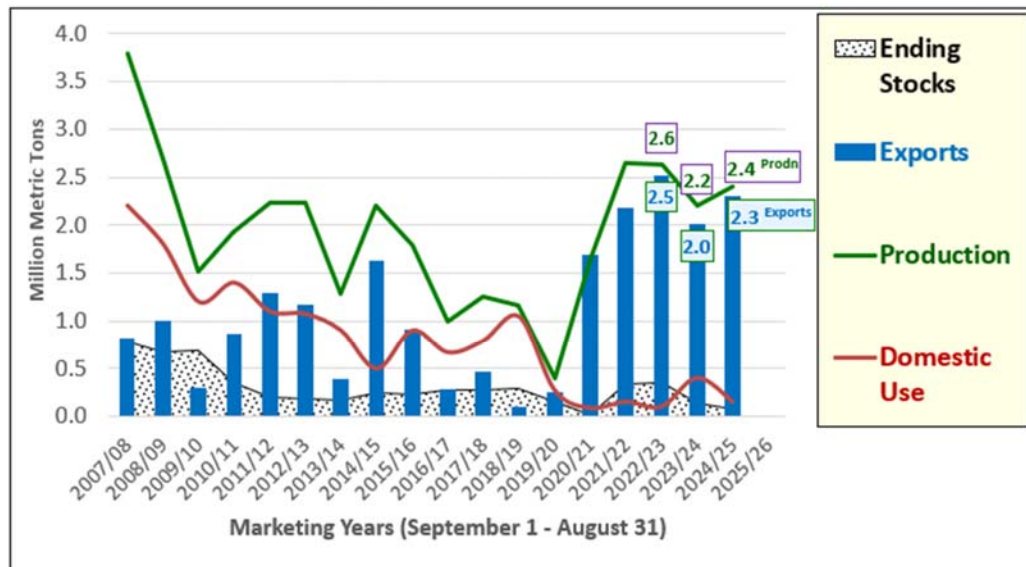
U.S. Sorghum Supply-Demand

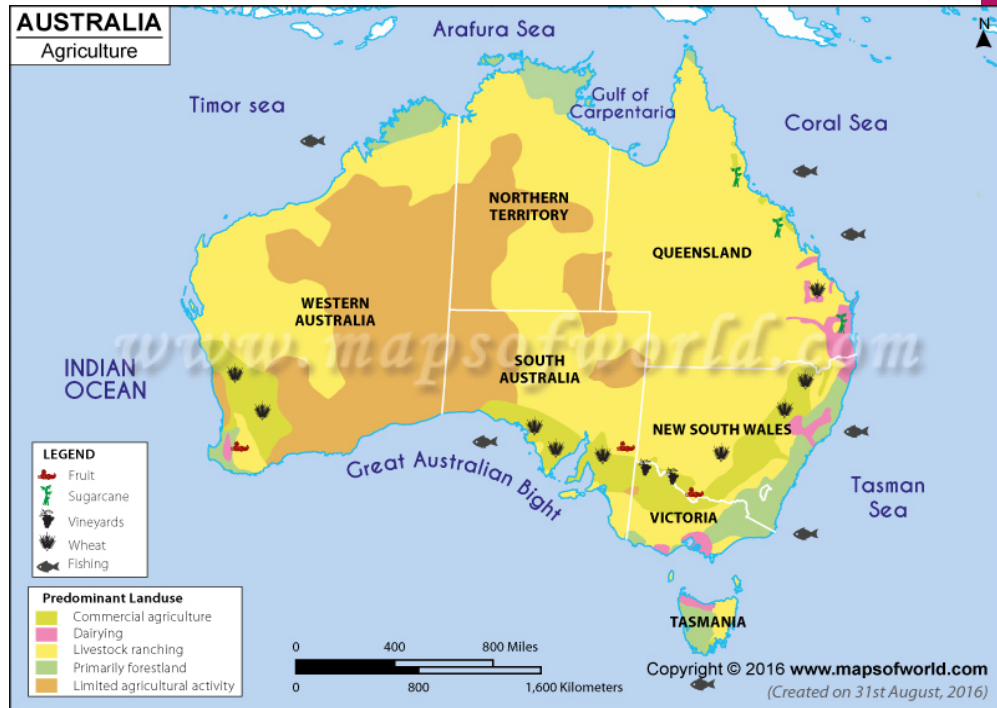
MY 2007/08 – “New Crop” 2024/25 as of the November 8, 2024 USDA WASDE



Australia Sorghum S-D

MY 2007/08 – “New Crop” 2024/25 as of the November 8, 2024 USDA WASDE





Argentina Sorghum S-D

MY 2007/08 – “New Crop” 2024/25 as of the November 8, 2024 USDA WASDE



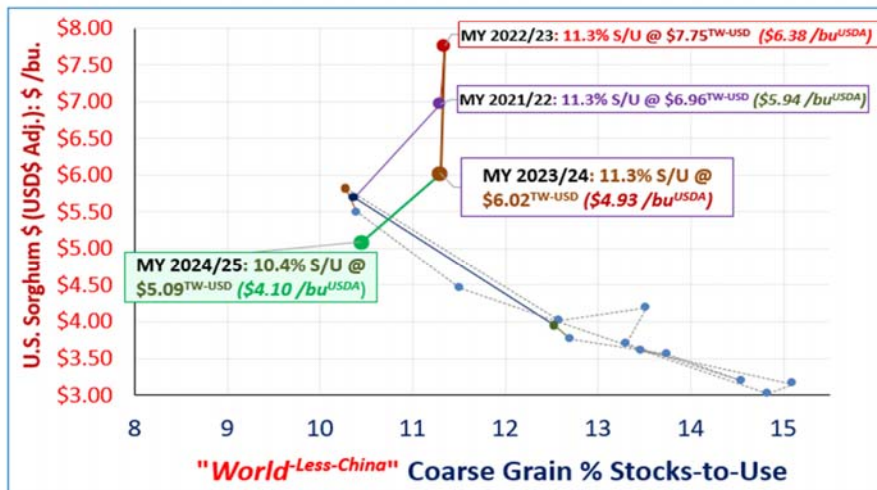
Brazil Sorghum Supply-Demand

MY 2007/08 – “New Crop” 2024/25 as of the November 8, 2024 USDA WASDE



U.S. Sorghum Prices *USD\$ Adj.* vs Coarse Grain *World-Less-China* % S/U

MY 2007/08 thru “New Crop” 2024/25 as of the 11/8/2024 USDA WASDE



Questions?

Daniel O'Brien – Kansas State University

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KSUGrains on Twitter

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"Daniel O'Brien" on Facebook



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Department of Agricultural Economics