



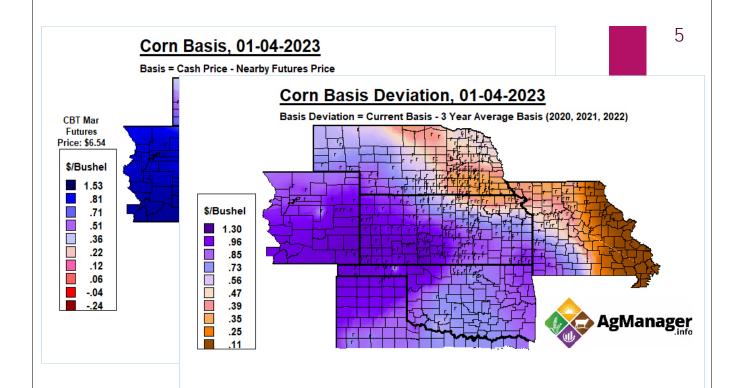
Grain & Corn Market Outlook 2023

in Kansas, the U.S. & Globally

- 1) "Tight!" 2023 Global Corn, Other Grain & Oilseed Stocks
 - The importance of South America's 2023 corn & soybean crops!!
 - Occurring &/or Anticipated in 2023:
 - o Drought in Argentina
 - o Smaller Crops & Exports from Ukraine

Grain & Corn Market Outlook 2023

- 2) Corn Production damage in the Western-Central Plains during 2022
 - Western Kansas / OK / TX / NE → Corn Basis strength Historic++
 - ▶ Q? 2023 U.S. Corn Production?
 - → Seasonal risk-Spring-Summer 2023



Grain Market Outlook 2023......

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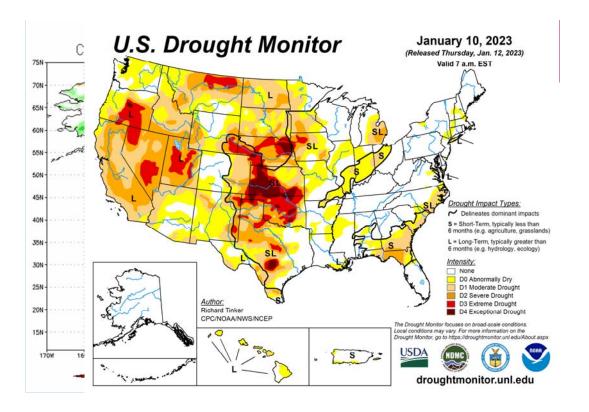
3) Continuance of dry La Nina Weather Pattern in 2023???

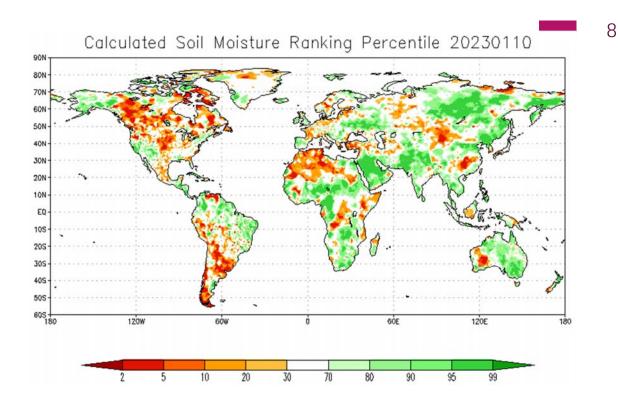
- "La Nina is expected to continue into winter, with equal chances of La Nina & ENSO-neutral during January-March 2023. In February-April 2023, there is a 71% Chance of ENSO-neutral."
 - U.S. Climate Prediction Center / NCEP January 3, 2023
- "La Nina is breaking down, and an El Nino is forecast to emerge in 2023.

 Returning after several years, an El Nino can completely change the weather patterns for the weather seasons of 2023 & 2024."

Severe Weather Europe, Andrej Flis January 11, 2023

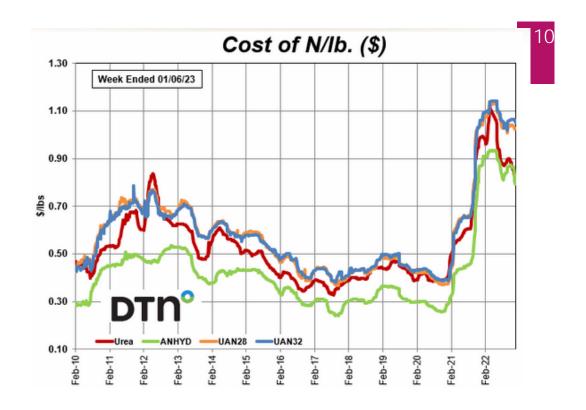


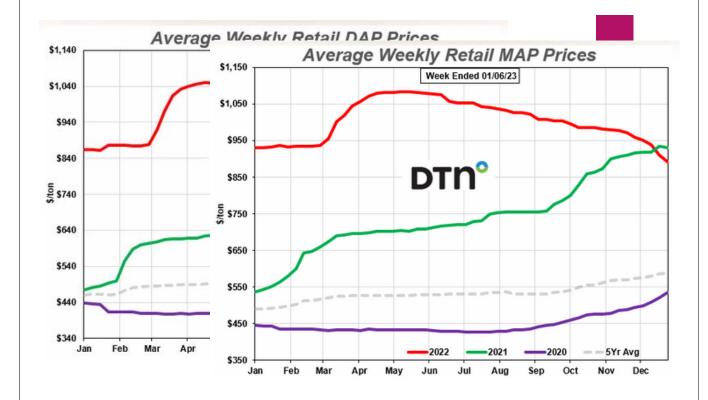


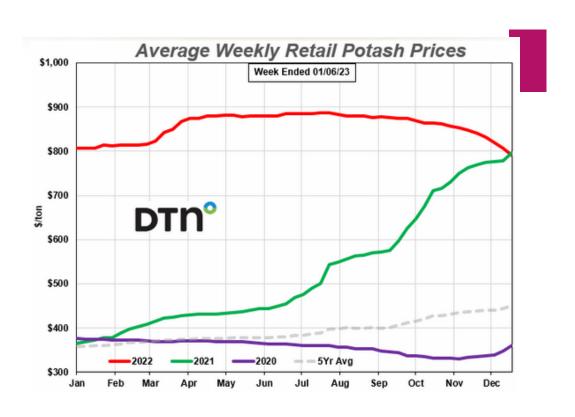


Grain Market Outlook 2023......

- 4) Moderating prices for Fertilizer & other Crop Inputs (but still historically high!)
 - Lower natural gas prices, w. but continued supply-chain challenges
 - Lower fertilizer / crop input costs will <u>encourage</u> 2023 U.S. Corn Acres $-\approx 92$ million acres in 2023
 - o 88.6 million acres in 2022
 - o 93.3 million acres in 2021
 - o 90.7 million acres in 2020

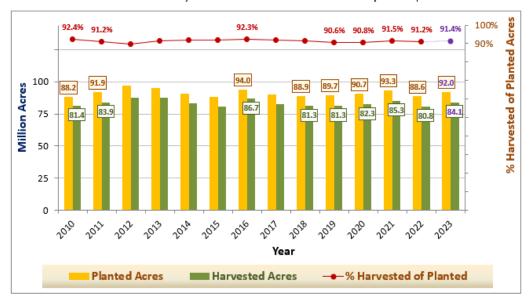






U.S. Corn Acreage for Years 2010-2023

as of the December 9, 2022 USDA NASS & WASDE Reports



Grain Market Outlook 2022-2023......

- 5) U.S. & Foreign Ag response in 2023 to current corn prices?
 - <u>Crop Acres</u>? *Usually,* û *Prices* → û *Corn Acres, BUT <u>ALL</u> crop \$'s are high (especially soybeans)*
 - <u>Crop Costs</u>? <u>IF</u> high fertilizer & other crop costs, <u>THEN</u> it limits Corn Acres in higher cost cropping systems²⁰²³
 - Rationing Grain Use: Evidence of reductions in Ethanol, Exports....
 - Cropland Markets & Cash Rents: High corn prices being reflected

Grain Market Outlook 2023......



- 6) Impact of Ongoing & Possible Geopolitical Conflicts In 2023
 - Ukraine-Russia War???: Prospects for de-escalation & grain trade?
 - China-Taiwan??? *IF* this occurs, it would impact the global economy along with U.S. grain trade
 - o Impacting U.S. soybeans, grain sorghum, likely all U.S. agricultural commodities including **U.S. corn**

Grain Market Outlook 2023......

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7) Overall Prospects for 2023 Corn Markets???

- <u>U.S. Corn Prices supported @ Moderate-to-High Levels</u> <u>until</u> grain markets are confident of larger crops & rebuilding of stocks
 - "2023/24 'New Crop' Forward Bids" are vulnerable to decline in late
 Spring Summer²⁰²³ on into 2023 Fall harvest
- <u>Ukraine-Russia War Effect</u>: <u>Smaller</u> Ukraine corn exports
- South America Crop Impact: Brazil & Argentina corn crop prospects will effect U.S. corn prices through August 2023

South America Corn-Soybean Calendar

- □ South America Planting Influences ⇒ "Bid for Acres"
 - Brazil & Argentina Corn & Soybean Crop Calendar
 - o Brazil
 - Corn: 1st crop Planting October-December
- Soybeans: Planting October-December
- Corn: 2nd crop *Planting* January-February
- Harvest: March-June

- Argentina
 - Corn: *Planting* mid September-December
- Harvest: mid March-early June
- Soybeans: 1st crop Planting November-December ⇒
- **Harvest**: Late March-early May
- Soybeans: 2nd crop Planting December-early Jan. ⇒ Harvest: mid April mid June

What to anticipate: Year 2023 (1st of 3)

- 2023 Spring Planting of Feedgrains & Oilseeds
 - With tight stocks across crops any threats to planting 2023 U.S. <u>corn</u> or <u>soybeans</u> could cause *STRONG* price volatility
 - o **NOV²⁰²³ Soybean futures** @ \$13.92 /bu ^{1/11/2023}
 - o DEC²⁰²³ Corn futures @ \$5.88 ½ /bu ^{1/11/2023}
 - Fall 2023 "New Crop" Soy/Corn \$ Ratio = \$13.92 ÷ \$5.88 ½ = 2.37 (Soybean +)
 - Strong "new crop" price competition likely for 2023 planted acres between Feedgrains & Oilseeds

 ⇒ Likely in February-April 2023

What to anticipate: Year 2023 (2nd of 3)

- Q? Are Corn, Soybeans & Wheat futures at risk to fall sharply in the last ½ of year 2023?
 - With "<u>tight" beginning stocks</u> across these crops less risk of declines until at least <u>late spring – early summer</u>
 - <u>THEN</u> the *risk* to grain sellers is that crop markets will discount the possibility of "short crops" in 2023
 - ⇒ <u>IF</u> in Summer ²⁰²³ <u>U.S. & Foreign crop prospects</u> become "OK-to-Good", <u>THEN</u> grain prices will likely "slide" into Fall 2023 (by traders with <u>no motive</u> to "buy the market")

What to anticipate: Year 2023 (3rd of 3)

- 20
- □ **USDA Reports** ⇒ Often associated with grain market volatility
 - Crop Production: Jan. 12; Feb. 8; March 8; April 8; May 12, June 9, July 12
 - Planted Area: Prospective Plantings May 31st & Acreage June 30th
- Prospects for "Active" Demand-Pull for Corn in Western KS
 - User's looking to secure available "new crop" supplies (i.e. "scrambling")
 - "Inverted" futures & strong basis possible during Sep-Nov²⁰²³ Quarter IF a short crop happens

Corn Prices & Market Fundamentals

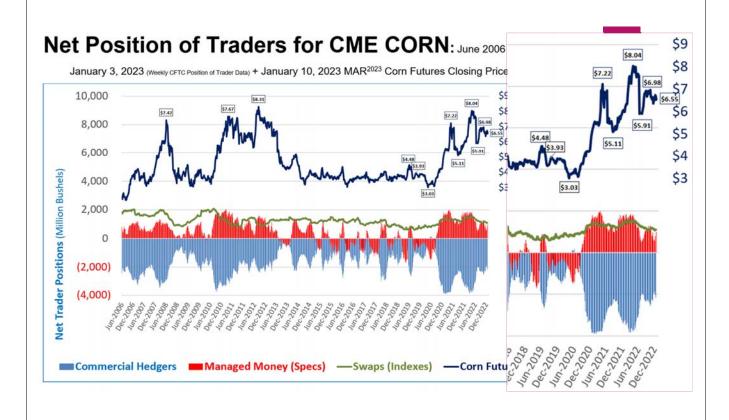


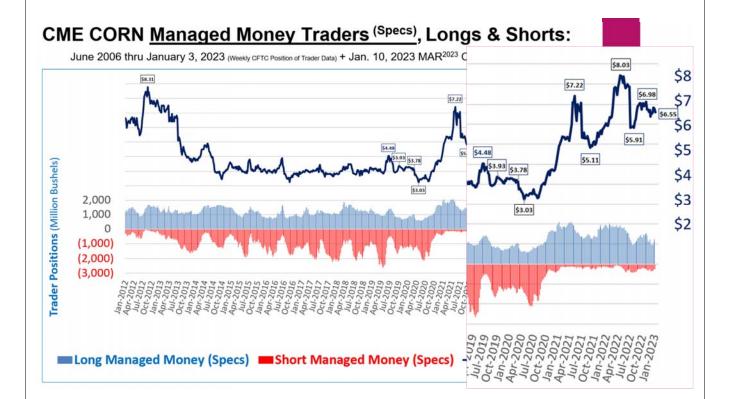
Kansas Corn Seasonal Prices

Long Term Seasonal \$ Trends + MY 2021/22 & "Current" MY 2022/23 As Of 1/11/2023



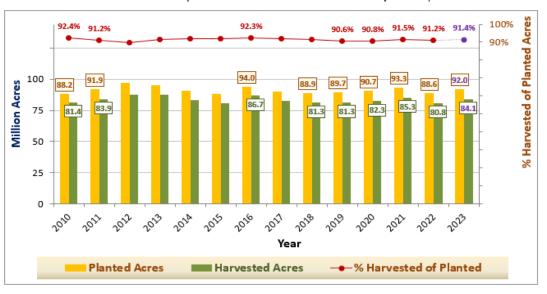






U.S. Corn Acreage for Years 2010-2023

as of the December 9, 2022 USDA NASS & WASDE Reports



U.S. Corn Yields for 2014-2023 as of the December 9, 2022 USDA NASS &

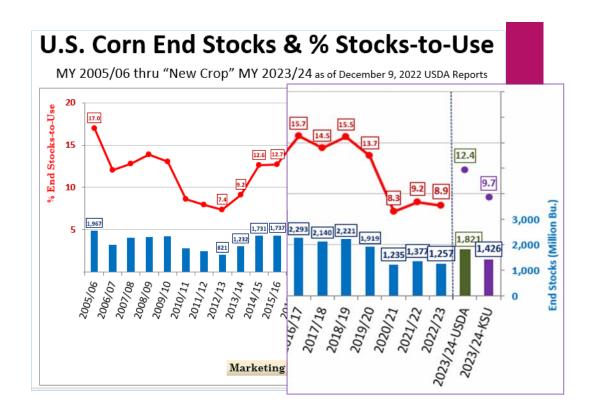


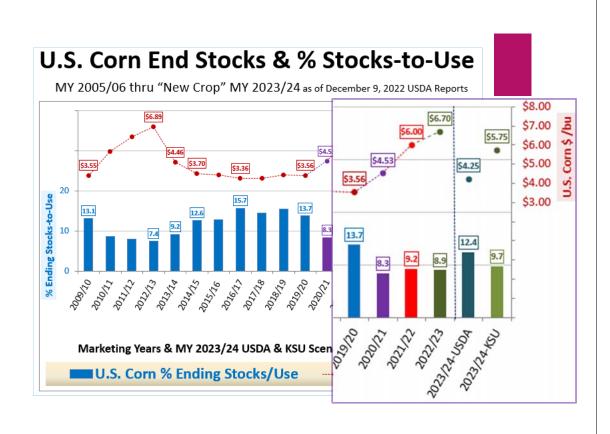


U.S. Corn Production & Total Supplies:

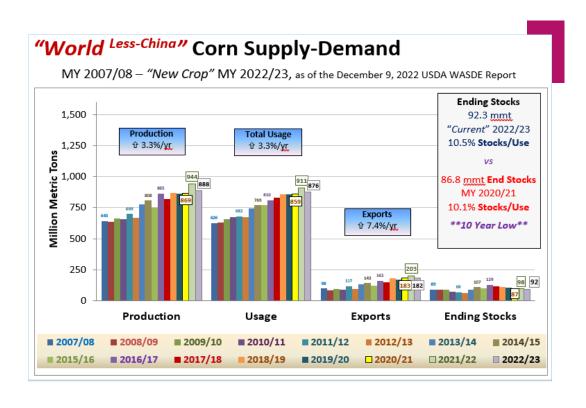
MY 2012/13 - "New Crop" MY 2023/24 as of the December 9, 2022 USDA Reports

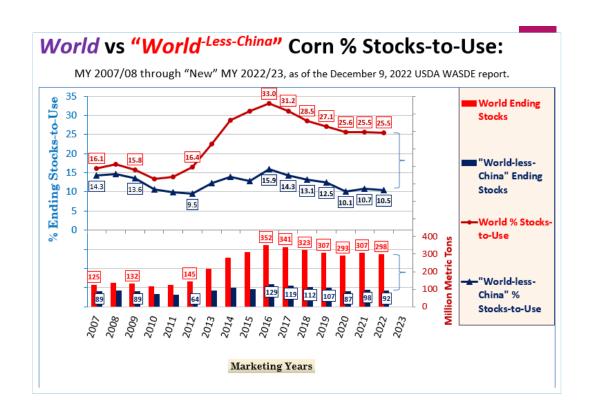


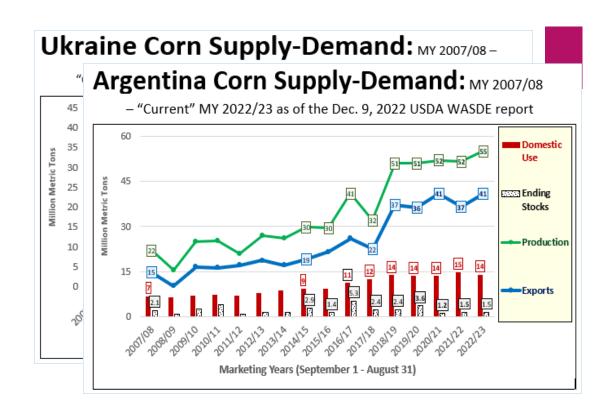




World Corn Supply-Demand MY 2007/08 - "Current" MY 2022/23 as of the December 9, 2022 USDA WASDE Report **Ending Stocks** 1,500 **☆** 3.4%/yr û 3.1%/yr 298.4 mmt "Current" 2022/23 1,250 25.49% Stocks/Use 1,171 Million Metric Tons **9 Year Low** 1,000 vs 292.5 mmt End Stocks 750 In MY 2020/21 **Exports** 25.57% Stocks/Use **企 5.7%/xr** 500 307 298 250 0 Production Usage Exports **Ending Stocks 2010/11 2007/08 2008/09 2009/10 2011/12 2012/13 2013/14 2014/15** ■ 2015/16 **2016/17 2017/18 2018/19 2019/20 2020/21 2021/22** 2022/23











CME DEC 2023 Corn Futures Daily

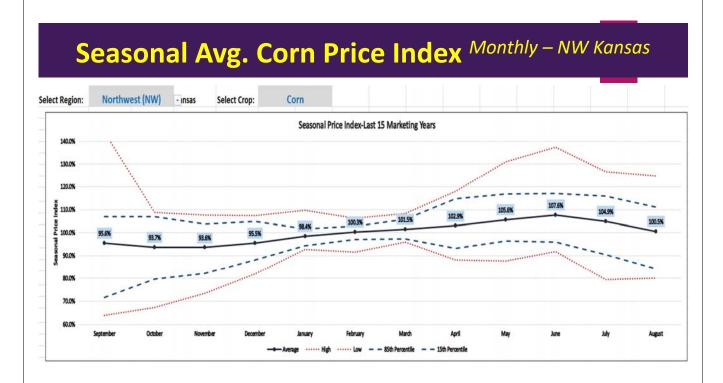


Preharvest Marketing Plan

WINNING THE GAME

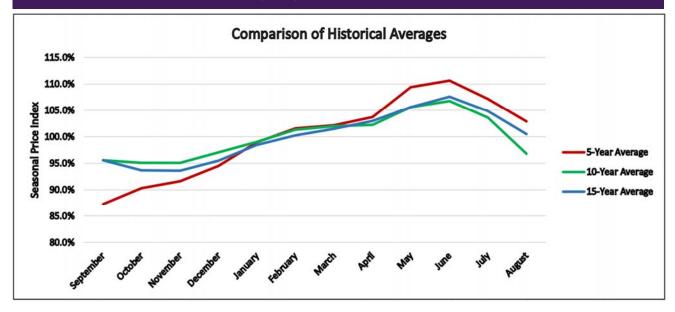
Objective: Buy crop insurance to protect my production risk and price _____% of my anticipated crop (based on APH yield) or _____bushels. Price _____ bushels at \$____ cash price (\$_ futures) (contract month) using __ Price _____ bushels at \$____f/_____, 2023, using ____ ____ bushels at \$_____f/_____c, or by _____, 2023, using __ Price ______ bushels at \$_____f/_____c, or by _____, 2023, using __ Price ______ bushels at \$_____f/_____c, or by _____, 2023, using ___ ____ bushels at \$_____f/____c, or by _____, 2023, using __ ____ bushels at \$____f/____c, or by _____, 2023, using ___ Plan starts on ____ __. Completed by ___ Ignore decision dates and make no sale if prices are lower than \$_ ____ (month/commodity) futures / \$_____ local cash price.

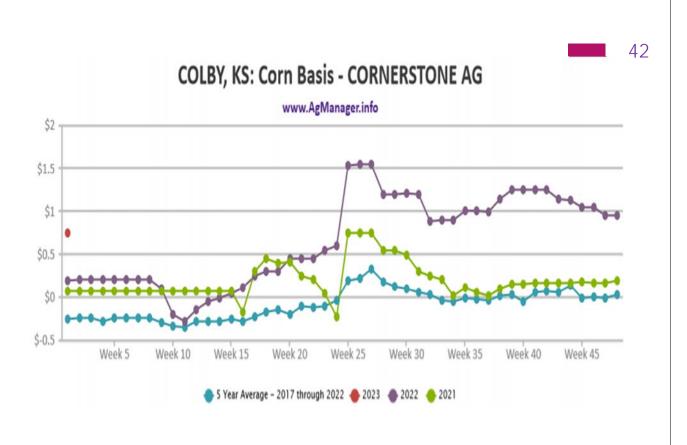
| Kansas Cash & Futures F | rices | | | | | |
|---------------------------------------|------------------|------------------------|-------------------|------------------|-----------------|---------------|
| Date | | | | | | |
| 1/11/2022 (10:00 p.m.) | | | | | | |
| Grain Futures Contracts | Closing \$ | | | | | |
| MAR 2023 Corn (2023 Lead contract) | \$6.5550 | | | | | |
| DEC 2023 Corn (2023 Harvest Contract) | \$5.8875 | | | | | |
| 1/11/2022 (10:00 p.m.) | Cash Grain & | Harvest Cor | tract Prices | @ Kansas Grai | n Elevators | |
| | Representing the | highest bids avai | lable at each loc | ation | | |
| 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 |
| Corn Spot Cash\$ | \$7.31 | \$7.31 | \$7.09 | \$7.86 | \$7.46 | \$7.51 |
| Corn Spot Cash Basis | \$0.76 | \$0.76 | \$0.54 | \$1.31 | \$0.91 | \$0.96 |
| Corn Harvest FC\$: Fall 2023 | \$5.64 | \$5.69 | \$5.59 | \$6.34 | \$5.89 | \$5.59 |
| Corn Harvest FC\$ Basis | (\$0.25) | (\$0.20) | (\$0.30) | \$0.45 | \$0.00 | (\$0.30) |



Changing Seasonal Avg. Corn \$ Indices

For the last 5, 10, & 15 Years in NW Kansas

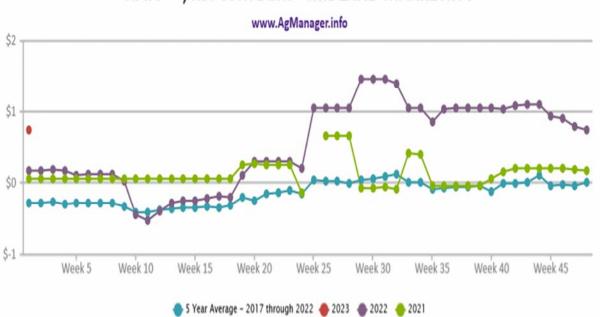




GARDEN CITY, KS: Corn Basis - GARDEN CITY COOP



HAYS , KS: Corn Basis - MIDLAND MARKETING



Preharvest Marketing Plan



| Price | bushels at \$ | cash | price (\$ | (contract mor | _ futures) nth) using |
|----------|---------------|------|-----------|---------------|-----------------------------|
| Price | bushels at \$ | f/ | c, or by | , 2023 | 3, using |
| Price | bushels at \$ | f/ | c, or by | , 2023 | 3, using |
| Price | bushels at \$ | f/ | c, or by | , 2023 | 3, using |
| Price | bushels at \$ | f/ | c, or by | , 2023 | 3, using |
| Price | bushels at \$ | f/ | c, or by | , 2023 | 3, using |
| Price | bushels at \$ | f/ | c, or by | , 2023 | 3, using |
| Plan sta | rts on | | Compl | eted by | |

| tem | ahl, Daniel O'Brien, Lucas Haa | unit | | quantity | | Sub-total | your farm | The state of the s |
|--------------------------|--------------------------------|--------|---------------|--------------|------------|------------|-------------|--|
| | | uiiit | price | quantity | amount | Sub-total | your lailii | 46 |
| NCOME Product | | | | | | | | ı o |
| Corn - Northwest | ve | bu | \$6.10 | 240.00 | 61 464 00 | \$1,464.00 | | |
| COM - NOLLIWOOL | No. | bu | \$6.10 | 240.00 | \$1,404.00 | \$1,464.00 | | |
| TOTAL INCOME | | | | | | \$1,464.00 | | |
| DIRECT EXPENSES | | | | | | | | |
| Additional labor - | | | | | | \$0.66 | | |
| Crop consulting - | | | | | | \$7.57 | | |
| Crop insurance - | | | | | | \$32.98 | | |
| Diesel - | | | | | | \$21.77 | | |
| Fertilizers - | | | | | | | | |
| Fungicides - | | | | | | | | |
| Herbicides - | | | | | | \$103.25 | | |
| Insecticides | | | | | - | \$12.20 | | |
| Irrigation energy (NG) - | | | | | | \$104.31 | | |
| Irrigation labor - | | | | | | \$9.00 | | |
| Miscellaneous | | | | | | \$12.10 | | |
| Operator labor - | | | | | - | \$7.92 | | |
| Repair & Maintenance - | | | | | | \$22.21 | | |
| Seeds - | | | | | | \$141.89 | | |
| interest on operating ca | pital | 8% per | rcent on c | lirect expen | ses | \$28.78 | | |
| TOTAL DIRECT EXPE | NICEC | | | | | \$748.22 | | |
| Total direct ex | | | | | | \$740.EE | | |
| FIXED EXPENSES | | | | | | | | |
| Cash rent - | | | ************* | | | \$218.00 | | |
| Capital recovery (depre | ciation + interest) | | | | * | | | 15 acre-inches of water applied |
| TOTAL FIXED EXPEN | ISES | | | | | \$516.37 | | 300 foot well depth |
| Total expense | | | | | | φο το.οτ | | \$ 6.95 fuel cost per acre-inch of water applied |
| rotal experies | o por da vo.Er | | | | | ======= | | .71 Mcf of natural gas per acre-inch of water applie |
| ETURNS ABOVE DIRECT | EXPENSES | | | | | \$715.78 | | \$ 9.75 per Mcf for cost of natural gas |
| | | | | | | | | 10.7 Mcf of fuel used in total |
| | | | | | | | | |

| 2023 Corn Cost-Return Budget (W-C-F R | 150 | | | | | udget abstrac |
|--|-----------------|------------|--------------|----------|-----------|---------------|
| Gregg Ibendahl, Daniel O'Brien, Sarah Lanc | aster, and Luca | s Haag | | | Date | : Nov-01-202 |
| item | unit | price | quantity | amount | Sub-total | your farm |
| INCOME | | | | | | |
| Product | | | | | | |
| Corn - Northwest KS | bu | \$6.10 | 89.00 | \$542.90 | | |
| TOTAL INCOME | | | | | \$542.90 | |
| DIRECT EXPENSES | | | | | | |
| Additional labor | | | | | \$0.83 | |
| Crop insurance | | | | | \$34.24 | |
| Diesel | | | | | \$16.77 | |
| Fertilizers | | | | | \$87.64 | |
| Herbicides | | | | | \$113.90 | |
| Miscellaneous | | | | | \$6.65 | |
| Operator labor | | | | | \$5.85 | |
| Repair & Maintenance | | | | | \$15.46 | |
| Seeds | | | | | \$49.87 | |
| Interest on operating capital | 8% pe | rcent on d | irect expens | es | \$13.25 | |
| TOTAL DIRECT EXPENSESTotal direct expenses per bu \$3.87 |) | | | | \$344.47 | |
| FIXED EXPENSES | | | | | | |
| Cash rent | | | | | \$105.00 | |
| Capital recovery (depreciation + interest) | | | | | \$55.16 | |
| TOTAL FIXED EXPENSESTotal expenses per bu \$5.67 |) | | | | \$160.16 | |
| | | | | | | |
| RETURNS ABOVE DIRECT EXPENSES | | | | | \$198.43 | |
| RETURNS ABOVE TOTAL SPECIFIED EXPENSES | | | | | \$38.28 | |

Preharvest Marketing Plan

WINNING THE GAME

| Price | bushels at \$ | cash | price (\$ | (contract mon | |
|----------|---------------|------|------------|---------------|-------|
| Price | bushels at \$ | f/ | c, or by _ | , 2023, | using |
| Price | bushels at \$ | f/ | c, or by _ | , 2023, | using |
| Price | bushels at \$ | f/ | c, or by _ | , 2023, | using |
| Price | bushels at \$ | f/ | c, or by _ | , 2023, | using |
| Price | bushels at \$ | f/ | c, or by _ | , 2023, | using |
| Price | bushels at \$ | f/ | c, or by _ | , 2023, | using |
| Plan sta | rts on | | Comple | eted by | |

