

Managing Risk in Grain Markets:

Examples & Application

DANIEL O'BRIEN^{KSU} & MARK NELSON^{KFB}

MANAGING RISK AND MARKETING GRAIN IN 2021

KSU ONLINE CONFERENCE

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“Great” Grain Marketing

ZC - Corn (Globex) - Monthly Chart

03/04/2021 O: 552.75 H: 554.25 L: 529.25 C: 532.5 Vol: 276560 OI: 1805969

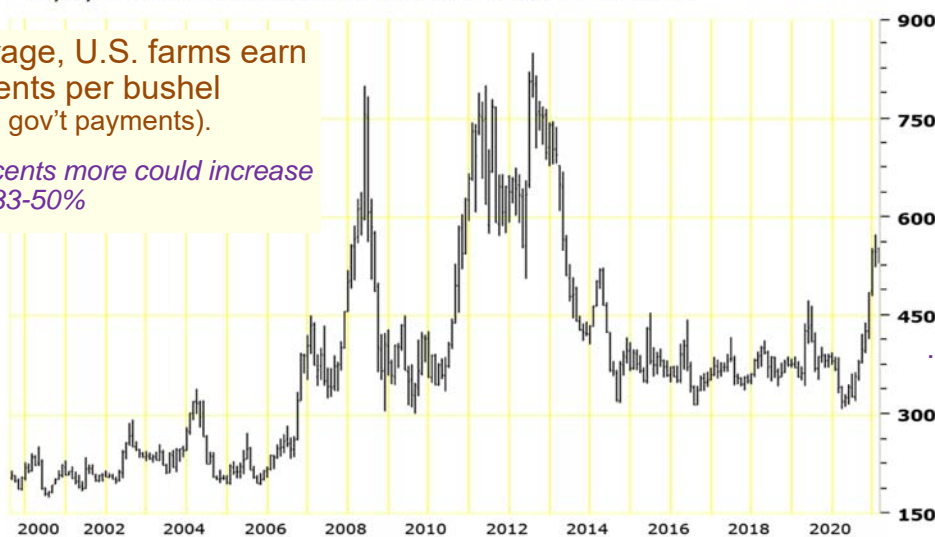
Session Change: -20.250

On average, U.S. farms earn 20-30 cents per bushel (including gov't payments).

Just 10 cents more could increase income 33-50%

It's NOT about finding the high; It's about finding that extra 10 cents.

... and avoiding BIG mistakes.



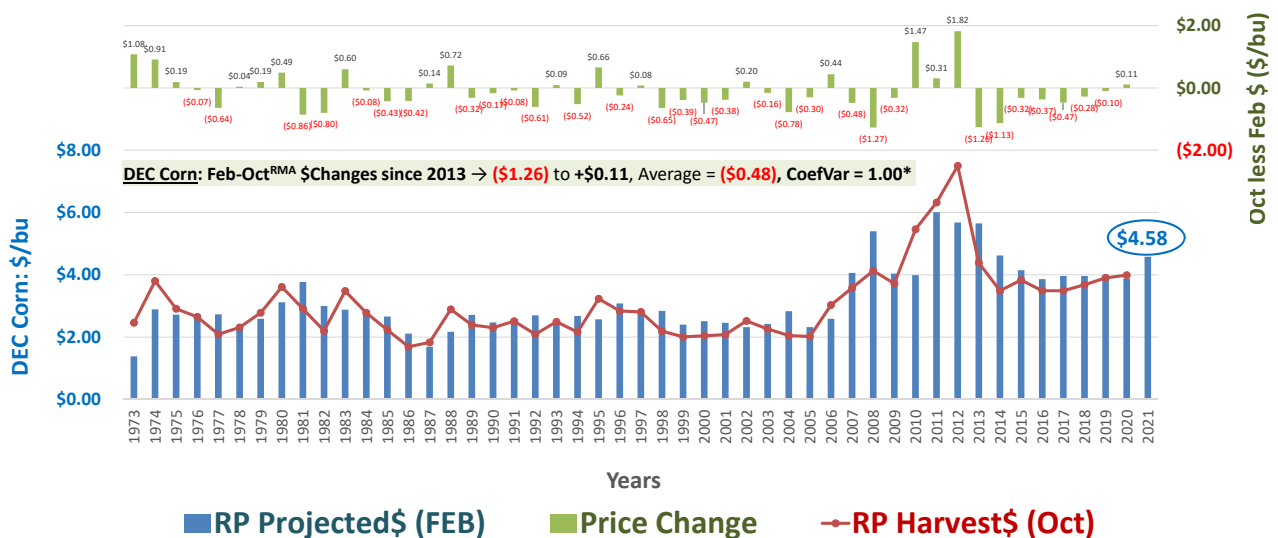
Organizing a Grain Marketing Plan

- ❑ A marketing plan is a **proactive strategy** to price your grain both before & after harvest
 - It considers crop production, price needs & objectives, storage capacity, crop insurance, financial & cash flow needs, & risk acceptance attitude

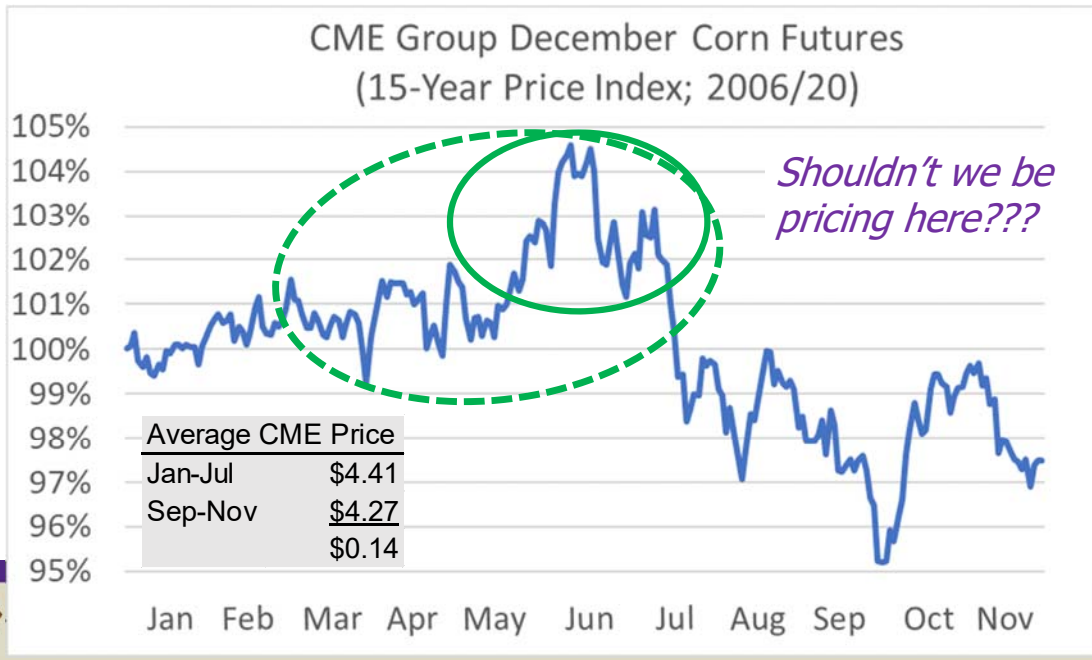
- ❑ A marketing plan is an **action plan**.
 - It includes pricing *INCREMENTS*, *TARGETS* & *DATES*, that guide your decisions and help take the emotion out of marketing.
 - *Less: "should I sell today?" & more: "my sales are complete for now."*



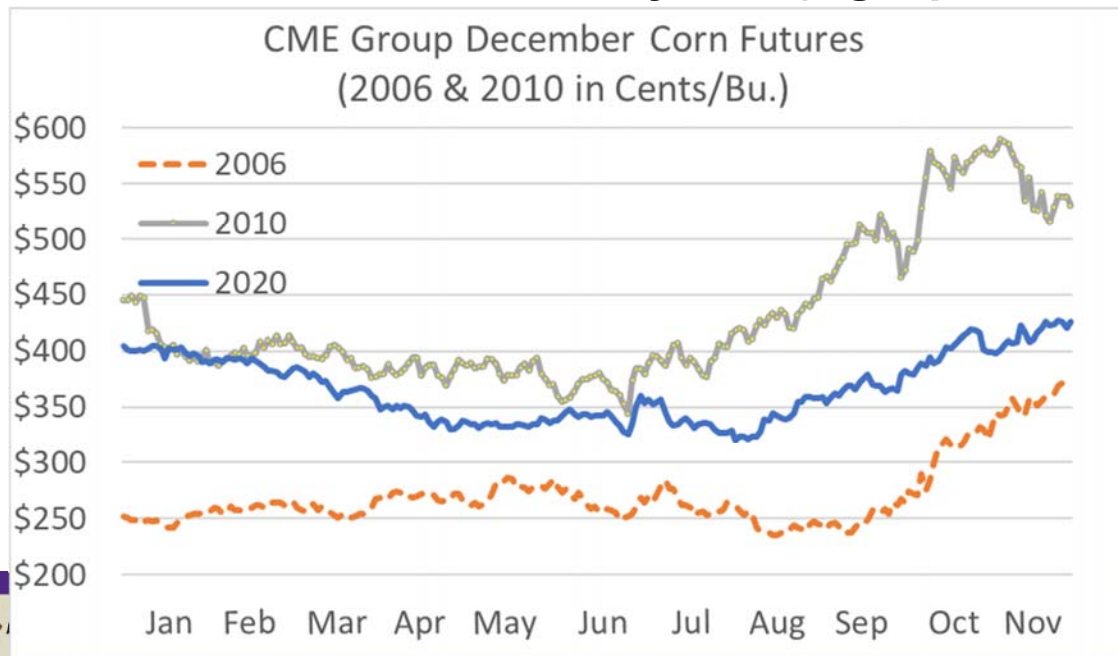
DEC Corn Changes: Feb – Oct^{RMA} Since 1973



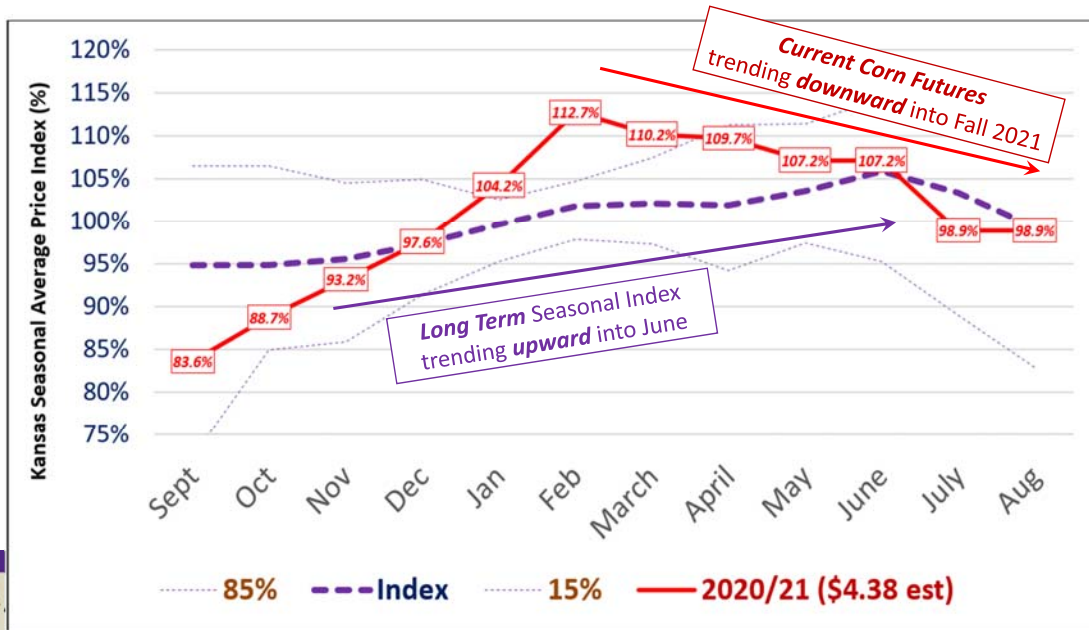
What Do the "Seasonal" Corn \$ Indices Tell Us?



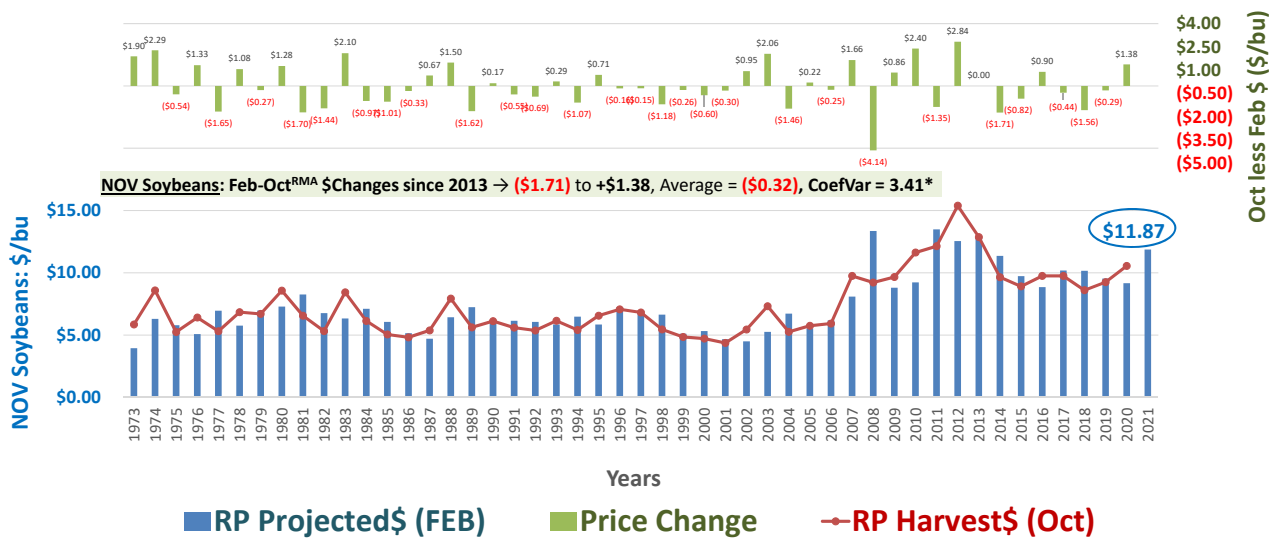
Account for counter-seasonal years (Ag Options??)



Kansas Corn Seasonal \$'s: Since MY 1999/00 + 3/4/2021 Futures



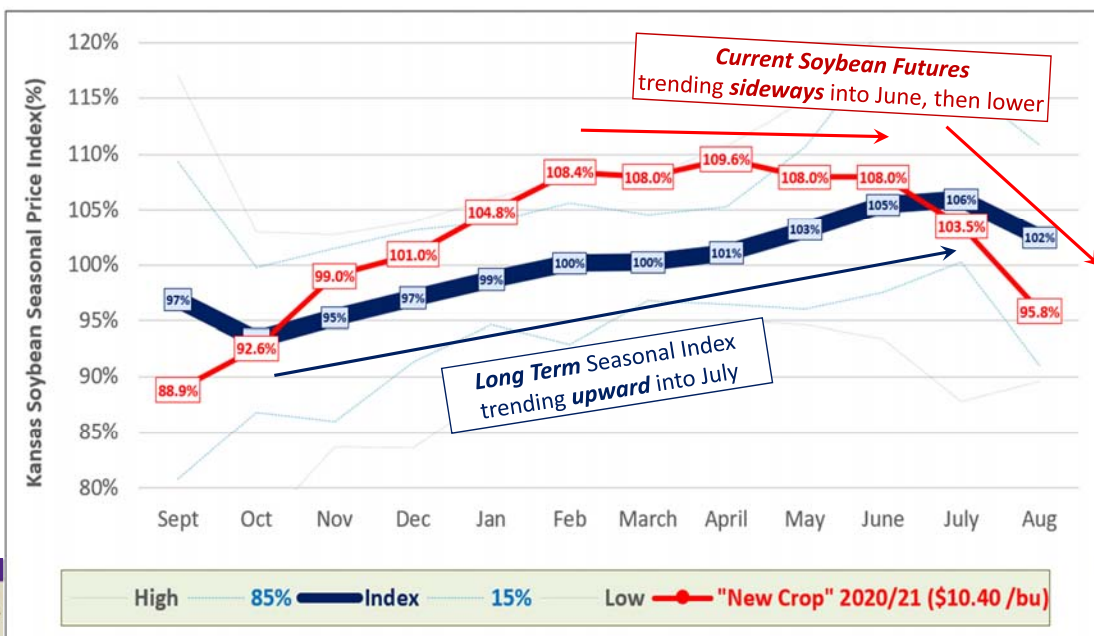
NOV Soybean Changes: Feb – Oct^{RMA} Since 1973



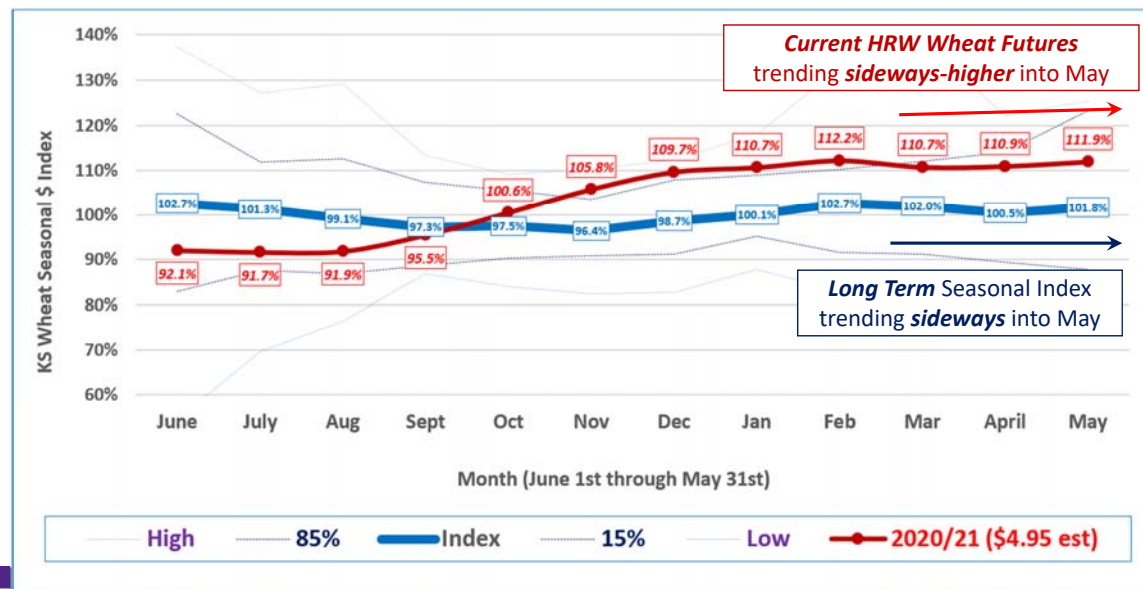
What Do the "Seasonal" Soybean \$ Indices Tell Us?



KS Soybean Seasonal \$'s: Since MY 1999/00 + 3/4/2021 Futures



KS Wheat Seasonal \$'s: Since MY 1999/00 + 3/4/2021 Futures



Why have preharvest grain marketing plans?

- ❑ Strong preharvest seasonal price tendencies may offer profitable forward pricing opportunities
- ❑ **Pros & Cons** of preharvest pricing strategies
 - **Early sales** are viewed by farmers as **“Neutral - Beneficial”** in flat (sideways) or **“bear”** (declining) grain markets
 - **BUT**, in up-trending **“bull”** markets, farmers likely view grain pricing commitments are **“lost pricing opportunities”**



Key Elements of Preharvest Grain Marketing Plan

- ❑ **Crop Insurance** – for *Bushel Coverage* of contracts @ harvest
- ❑ **Price Targets** – for “action points” of preharvest pricing strategies
 - **Cost of Production** – A minimum price for action*** (\$4.00 /bu Total Cost^{example})
 - **Crop Market Outlook** “New Crop” MY 2021/22
- ❑ **Pricing Increments** – Targets based on seasonal price potential
- ❑ **Decision Dates** – adding hard “discipline” to preharvest strategies
 - Relying on “seasonality” trends over time (+++++/- -)



Preharvest 2021 Corn Marketing Plan^{Example}

- **Objective:** Buy crop insurance to protect production risk & price **75% of expected corn crop**, based on APH yield (60,000 bu.) by August 1st (assume **-\$0.30** basis@Harvest)

❑ Using Six (6) 10,000-bushel Increments - **\$4.00 Cost of Production minimum**

- **March 10th:** Price 10,000 bu @ **\$4.30** DEC²⁰²¹ Corn^{Futures} / **\$4.00**^{Cash} Use Fwd Contract, Hedge, HTA/Basis Contract, or Ag Options
- **April 1st:** Price 10,000 bu @ **\$4.60** DEC²⁰²¹ Corn^{Futures} / **\$4.30**^{Cash} **OR** best \$ available (\geq \$4.00^{Cash} BEP\$)
- **May 1st:** Price 10,000 bu @ **\$4.90** DEC²⁰²¹ Corn^{Futures} / **\$4.60**^{Cash} **OR** best \$ available (\geq \$4.00^{Cash} BEP\$)
- **June 1st:** Price 10,000 bu @ **\$5.20** DEC²⁰²¹ Corn^{Futures} / **\$4.90**^{Cash} **OR** best \$ available (\geq \$4.00^{Cash} BEP\$)
- **July 1st:** Price 10,000 bu @ **\$5.50** DEC²⁰²¹ Corn^{Futures} / **\$5.20**^{Cash} **OR** best \$ available (\geq \$4.00^{Cash} BEP\$)
- **August 1st:** Price 10,000 bu @ **\$5.80** DEC²⁰²¹ Corn^{Futures} / **\$5.50**^{Cash} **OR** best \$ available ($>$ \$4.00^{Cash} BEP\$)

❑ **Starting 3/10/2021** – Ignore decision dates & **NO SALE** **IF** \leq \$4.30^{Fut} / \$4.00^{Cash}

- Exit all Ag Options positions by 10/1/2021. Futures Hedges, Forward-Basis-HTA Contracts all close/delivered @ Harvest

KS Corn Preharvest Minimum \$ Targets

□ How does a **\$4.00 break even cash \$**, relate to current **DEC²⁰²¹ Corn Forward Contracts & Put Option Price Floors?**

• **CME DEC²⁰²¹ Corn Futures close** ^{3/4/2021}

= **\$4.75⁵⁰ /bu**

○ February average \$ for DEC Corn ^{Last 15 Years}

= **\$4.39 /bu**

• **Forward Contracts – October²⁰²¹ Delivery** ^{3/4/2021}

○ +\$0.11 “new crop” basis DEC²⁰²¹ @ Garden City, KS

= **\$4.87 Forward Contract** ^{Oct 2021}

○ -\$0.20 “new crop” basis DEC²⁰²¹ @ Salina, KS

= **\$4.56 Forward Contract** ^{Oct 2021}



KS Corn Preharvest: Put Option \$ Floors

□ What an “at-the-money” **\$4.80 Strike Price DEC²⁰²¹ Corn Put Option** for **\$0.51²⁵ /bu** provide for an **October²⁰²¹ Corn Price Floor?**

• **DEC²⁰²¹ Corn Futures \$Floor**

○ Corn^{DEC 2021} \$Floor = \$4.80 SP – \$0.51 1/4 Premium – \$0.02 Broker

= **\$4.26²⁵ /bu**

• **Fall^{OCT 2021} Cash Corn \$Floors**

○ Corn^{Cash} \$Floor ^{Garden City} = \$4.26²⁵ DEC²⁰²¹ Corn \$Floor + **\$0.11 basis** ^{Garden City}

= **\$4.37²⁵**

○ Corn^{Cash} Floor ^{Salina} = \$4.26²⁵ DEC²⁰²¹ Corn \$Floor – **\$0.20 basis** ^{Salina}

= **\$4.06²⁵**



□ **Minimum Price Contracts = Forward Contract + buying Call Options**

A. Forward Contracts – October²⁰²¹ Delivery^{3/4/2021}

- +\$0.11 “new crop” basis DEC²⁰²¹ @ Garden City, KS = **\$4.87** Forward Contract^{Oct 2021}
- -\$0.20 “new crop” basis DEC²⁰²¹ @ Salina, KS = **\$4.56** Forward Contract^{Oct 2021}

B. Buy a DEC²⁰²¹ \$4.80 SP Call Option @ \$0.48⁵⁰ /bu^{3/4/2021}

- MPC^{Garden City} = \$4.87 FC^{Oct 2021} - **\$0.48⁵⁰ Premium** - \$0.02 Broker = **\$4.36⁵⁰ MPC Floor**
- MPC^{Salina} = \$4.56 FC^{Oct 2021} - **\$0.48⁵⁰ Premium** - \$0.02 Broker = **\$4.05⁵⁰ MPC Floor**

⇒ **\$ Gains @ DEC²⁰²¹ Corn > \$5.30⁵⁰ /bu** (= \$4.80 SP + \$0.48⁵⁰ Premium + \$0.02 Broker)



KS Soybean Preharvest Minimum \$ Targets

□ How does a **\$9.00 break even cash \$**, relate to current **NOV²⁰²¹ Soybean Forward Contracts, & Put Option Price Floors?**

- **CME NOV²⁰²¹ Soybean Futures close^{3/4/2021}** = **\$12.30⁵⁰ /bu**
- February average \$ for NOV Soybeans^{Last 15 Years} = **\$10.24 /bu**

Forward Contracts – October²⁰²¹ Delivery^{3/4/2021}

- - **\$0.90** “new crop” basis NOV²⁰²¹ @ Garden City, KS = **\$11.40** Forward Contract^{Oct 2021}
- - **\$0.55** “new crop” basis NOV²⁰²¹ @ Salina, KS = **\$11.76** Forward Contract^{Oct 2021}



KS Soybean Preharvest: Put Option \$ Floors

□ What an “at-the-money” **\$12.40 Strike Price** NOV²⁰²¹ Soybean Put Option for **\$0.99³⁷⁵ /bu** provide for an **October²⁰²¹ Soybean Price Floor**?

• **NOV²⁰²¹ Soybean Futures \$Floor**

○ Soybeans^{NOV 2021} \$Floor = \$12.40 SP – \$0.99 Premium – \$0.02 Broker = **\$11.39 /bu**

• **Fall^{OCT 2021} Cash Soybean \$Floors**

○ Soybean^{Cash} \$Floor^{Garden City} = \$11.39 NOV²⁰²¹ Soybean \$Floor – **\$0.90 basis**^{Garden City} = **\$10.49**

○ Soybean^{Cash} Floor^{Salina} = \$11.39 NOV²⁰²¹ Soybean \$Floor – **\$0.55 basis**^{Salina} = **\$10.84**



□ **Minimum Price Contracts = Forward Contract + buying Call Options**

A. Forward Contracts – October²⁰²¹ Delivery^{3/4/2021}

○ **-\$0.90** “new crop” basis NOV²⁰²¹ @ Garden City, KS = **\$11.40** Forward Contract^{Oct 2021}

○ **-\$0.55** “new crop” basis NOV²⁰²¹ @ Salina, KS = **\$11.76** Forward Contract^{Oct 2021}

B. Buy a NOV²⁰²¹ \$12.40 SP Call Option @ \$0.90 /bu^{3/4/2021}

○ MPC^{Garden City} = \$11.40 FC^{Oct 2021} – **\$0.90 Premium** - \$0.02 Broker = **\$10.48 MPC Floor**

○ MPC^{Salina} = \$11.76 FC^{Oct 2021} – **\$0.90 Premium** - \$0.02 Broker = **\$10.84 MPC Floor**

⇒ **\$ Gains @ NOV²⁰²¹ Soybeans > \$13.32 /bu** (= \$12.40 SP + \$0.90 Premium + \$0.02 Broker)



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