

FUTURES AND OPTIONS, AND YOUR CUSTOMER:

Are You Ready?

Edward Usset, Grain Marketing Economist, CFFM

Sam Miller, Managing Director, BMO Harris Bank



Center for Farm Financial Management
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FUTURES AND OPTIONS, AND YOUR CUSTOMER: ARE YOU READY?

1. Introduction
2. How to write a pre-harvest marketing plan
3. Pricing tools
4. break
5. Bankers - are you ready?
6. Pricing exercises



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How to Write a Pre-Harvest Marketing Plan

Edward Usset (usset001@umn.edu)

Grain Market Economist, University of Minnesota

Center for Farm Financial Management (www.cffm.umn.edu)

Columnist, Farm Futures Magazine



CORN: 2025 PRE-HARVEST MARKETING PLAN

Objective: Buy crop insurance to protect my production risk and price 75% of my anticipated corn crop (per APH yield) by late June.

Price 15,000 bushels at \$5.05 cash price (\$5.45 Dec. futures) using forward contract/futures hedge/HTA contract

Price 10,000 bushels at \$5.45c/5.85f, or by April 11, pricing tool tbd

Price 10,000 bushels at \$5.85c/6.25f, or by April 23, pricing tool tbd

Price 10,000 bushels at \$6.25c/6.65f, or by May 12, pricing tool tbd

Price 10,000 bushels at \$6.65c/7.05f, or by May 27, pricing tool tbd

Price 10,000 bushels at \$7.05c/7.45f, or by June 11, pricing tool tbd

Price 10,000 bushels at \$7.45c/7.85f, or by June 25, pricing tool tbd

Plan starts on January 1, 2025. Earlier sales may be made at a 50-cent premium and would be limited to 30,000 bushels.

Ignore decision dates and make no sale if prices are lower than \$5.05 local cash price/\$5.45 December futures.

Exit all options positions by mid-September 2025.

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(2) Decision dates

(1) Pricing targets

(3) Pricing tools

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Price 10,000 bushels at \$7.05c/7.45f, or by June 11, pricing tool tbd

Price 10,000 bushels at \$7.45c/7.85f or by June 25, pricing tool tbd

Plan starts on January 1, 2025. Earlier sales may be made at a 50-cent premium and would be limited to 30,000 bushels.

Ignore decision dates and make no sale if prices are lower than \$5.05 local cash price/\$5.45 December futures.

Exit all options positions by mid-September 2025.

(1) Pricing targets

CORN: 2025 PRE-HARVEST MARKETING PLAN

Objective: Buy crop insurance to protect my production risk and price 75% of my anticipated corn crop (per APH yield) by late June. **Adapt to your basis expectations (I assume 40 cents under in SW MN)**

Price 15,000 bushels at **\$5.05 cash price (\$5.45 Dec. futures)** using forward contract/futures hedge/HTA contract

Price 10,000 bushels at \$5.45c/5.85f, or by April 11, pricing tool tbd

Price 10,000 bushels at \$5.85c/6.25f, or by April 23, pricing tool tbd

Price 10,000 bushels at \$6.25c/6.65f, or by May 12, pricing tool tbd

Price 10,000 bushels at \$6.65c/7.05f, or by May 27, pricing tool tbd

Price 10,000 bushels at \$7.05c/7.45f, or by June 11, pricing tool tbd

Price 10,000 bushels at \$7.45c/7.85f, or by June 25, pricing tool tbd

Plan starts on January 1, 2025. Earlier sales may be made at a 50-cent premium and would be limited to 30,000 bushels.

Ignore decision dates and make no sale if prices are lower than \$5.05 local cash price/\$5.45 December futures.

Exit all options positions by mid-September 2025.

CORN: 2025 PRE-HARVEST MARKETING PLAN

Objective: Buy crop insurance to protect my production risk and price 75% of my anticipated corn crop (per APH yield) by late June.

Price 15,000 bushels at \$5.05 cash price (\$5.45 Dec. futures) using forward contract/futures hedge/HTA contract

Price 10,000 bushels at \$5.45c/5.85f, or by April 11, pricing tool tbd

Price 10,000 bushels at \$5.85c/6.25f, or by April 23, pricing tool tbd

Price 10,000 bushels at \$6.25c/6.65f, or by May 12, pricing tool tbd

Price 10,000 bushels at \$6.65c/7.05f, or by May 27, pricing tool tbd

Price 10,000 bushels at \$7.05c/7.45f, or by June 11, pricing tool tbd

Price 10,000 bushels at \$7.45c/7.85f, or by June 25, pricing tool tbd

Plan starts on January 1, 2025. Earlier sales may be made at a 50-cent premium and would be limited to 30,000 bushels.

Ignore decision dates and **make no sale if prices are lower than \$5.05 local cash price/\$5.45 December futures.**

Exit all options positions by mid-September 2025.

I have minimum price objectives!

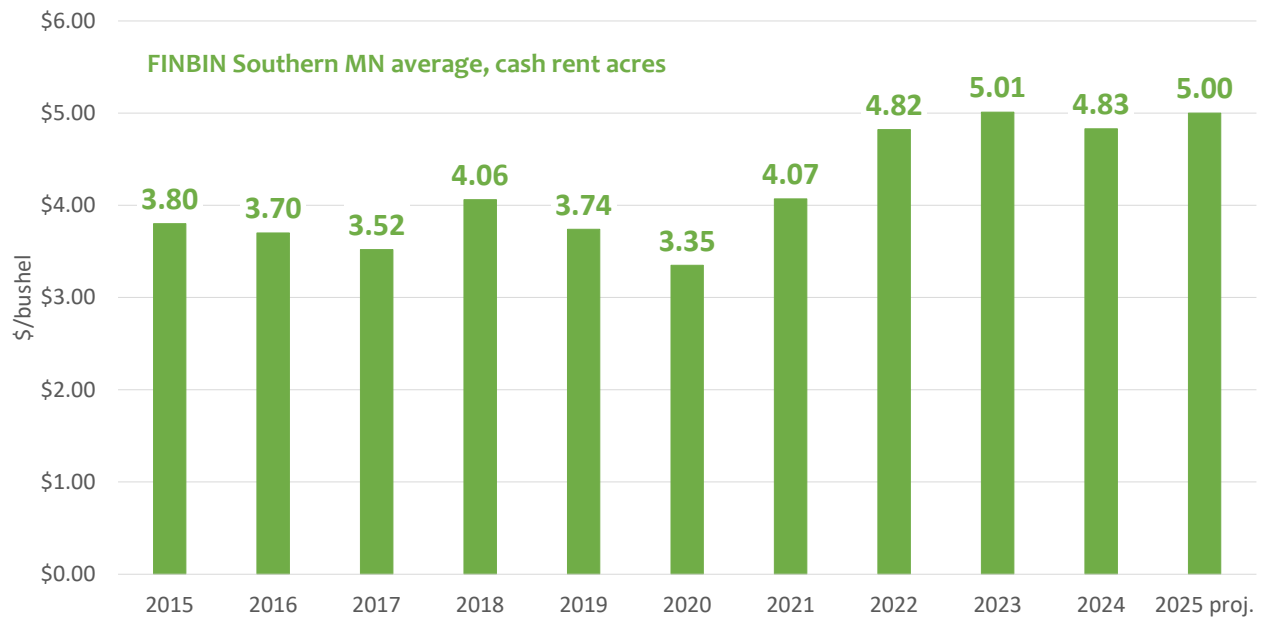
PRICING TARGETS

Choose your **minimum*** price threshold

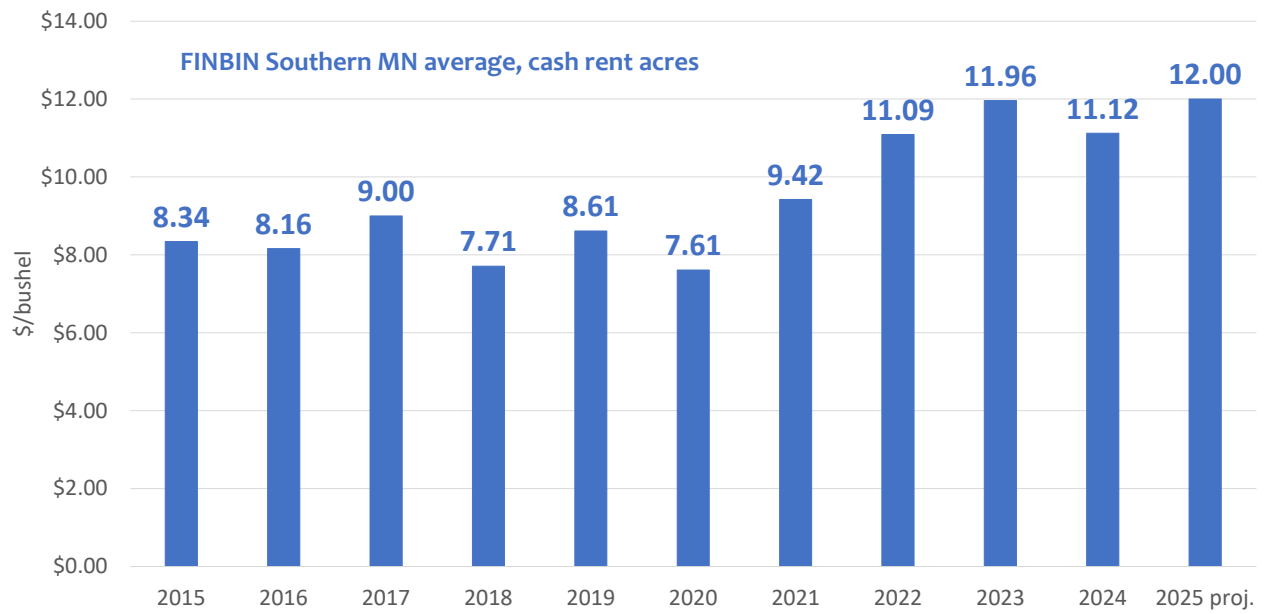
- Cost of production (pre-harvest only)
- Focus on local costs, not your costs

***Your most important choice in developing a pre-harvest marketing plan!**

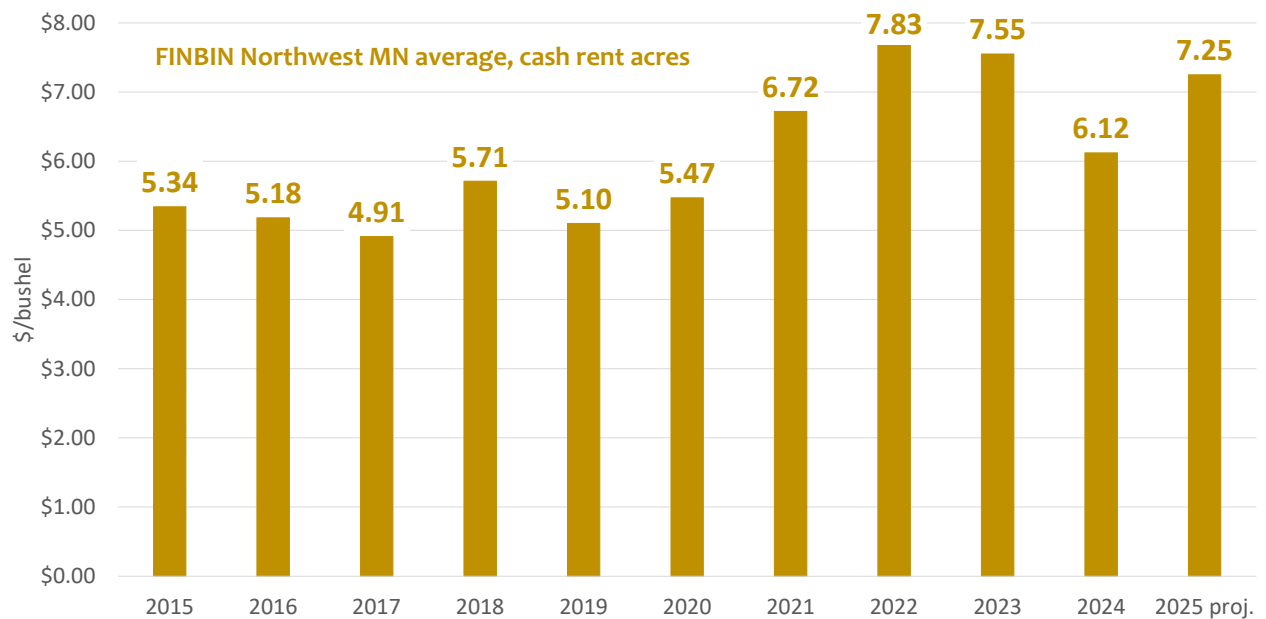
COST OF PRODUCTION - CORN




COST OF PRODUCTION - SOYBEANS



COST OF PRODUCTION – SPRING WHEAT





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CROP

LIVESTOCK

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Compare Your Farm

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Crop Enterprise

Corn

Location

State

Group

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PRICING TARGETS

Choose your **maximum*** price target

- This plan starts at \$5.45 Dec corn and works up to \$7.85 Dec
- Min and max price targets form “bookends” for other targets
- What is a realistic maximum price objective?

***Your least important choice in developing a pre-harvest marketing plan.**

PRICING TARGETS

Chicago December Corn Futures, 1990-2024

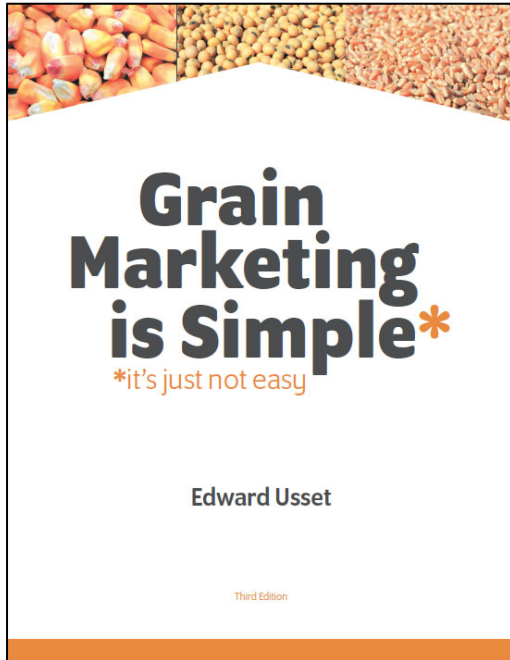
Contract Years with the Greatest Price Rise from Jan 1 forward

	Jan 1 price	Highest price (Jan 1 to exp.)	Highest price vs. Jan 1
Dec'08	\$4.80	\$7.88	\$3.08 / 64%
Dec'21	\$4.35	\$6.37	\$2.02 / 46%
Dec'12	\$5.90	\$8.39	\$2.49 / 42%
		average	\$2.53 / 50%

PRICING TARGETS

A process to set minimum and maximum price targets

- Select a minimum price based on local production costs
- Add an amount in line with figures from the previous table to create a maximum price. Use judgment to adjust this figure.
- You now have min and max “bookends” – place other price objectives between the min and max



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is here!**

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or

www.Lulu.com

CORN: 2025 PRE-HARVEST MARKETING PLAN

(2) Decision dates

Objective: Buy crop insurance to protect my production risk and price 5% of my anticipated corn crop (per APH yield) by late June.

Price 15,000 bushels at \$5.05 cash price (\$5.45 Dec. futures) using forward contract/futures hedge/HTA contract

Price 10,000 bushels at \$5.45c/5.85f, or by April 11, pricing tool tbd

Price 10,000 bushels at \$5.85c/6.25f, or by April 23, pricing tool tbd

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Price 10,000 bushels at \$7.05c/7.45f, or by June 11, pricing tool tbd

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Exit all options positions by mid-September 2025.

DECISION DATES

If I reach a decision date before a price target is reached, I price the grain.*

- **Decision dates make it a real plan for action**
- Crop insurance and/or options allow us to forward price with confidence
- What's so special about the March to June period?

*...if the price is above my minimum!

CORN: 2025 PRE-HARVEST MARKETING PLAN

Objective: Buy crop insurance to protect my production risk and price 75% of my anticipated corn crop (per APH yield) by late June.

Price 15,000 bushels at \$5.05 cash using forward contract/futures hedge/HTA contract

Why April-June?

Price 10,000 bushels at \$5.45c/5.85f, or by **April 11**, pricing tool tbd

Price 10,000 bushels at \$5.85c/6.25f, or by **April 23**, pricing tool tbd

Price 10,000 bushels at \$6.25c/6.65f, or by **May 12**, pricing tool tbd

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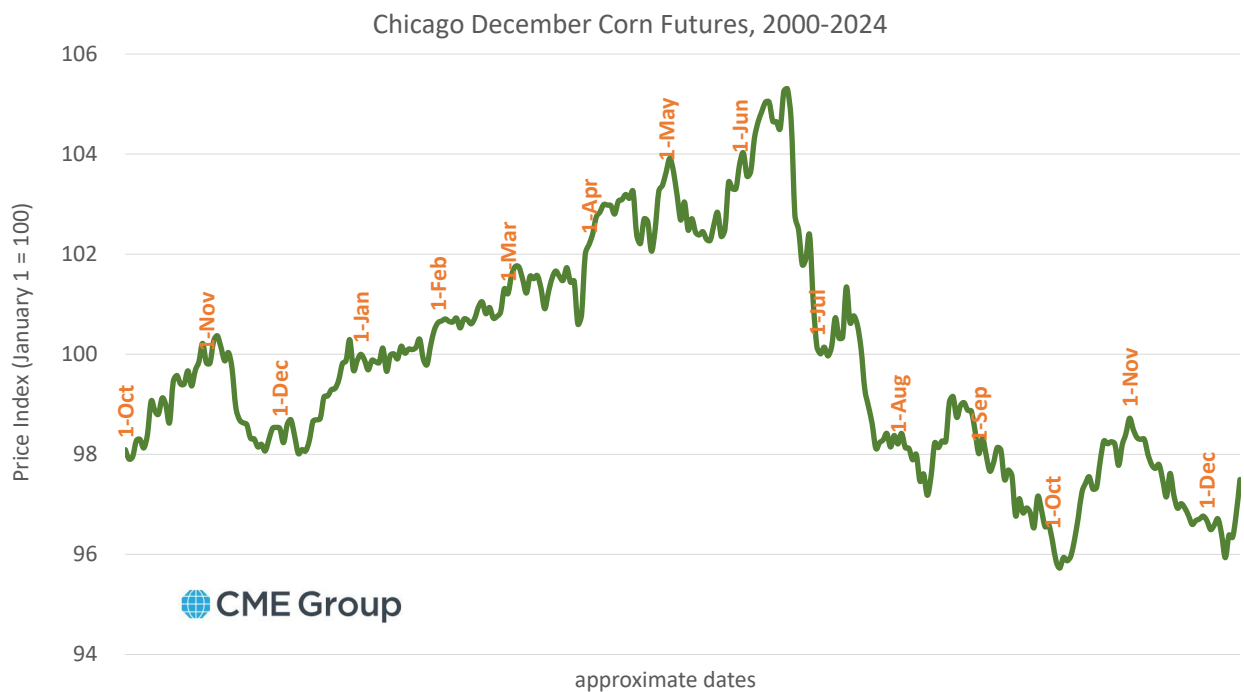
Exit all options positions by mid-September 2025.

CBOT DECEMBER CORN FUTURES, 2000-2025

- ✓ 19 years (76%) the market declined
- ✓ 6 years (24%) the market improved

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Year	1-May	1-Oct	Change
2000	2.62	1.99	(0.63)
2001	2.27	2.11	(0.16)
2002	2.20	2.56	0.36
2003	2.33	2.20	(0.13)
2004	3.17	2.06	(1.11)
2005	2.27	2.06	(0.21)
2006	2.72	2.68	(0.04)
2007	3.79	3.69	(0.10)
2008	6.32	4.84	(1.48)
2009	4.33	3.41	(0.93)
2010	3.92	4.66	0.74
2011	6.61	5.93	(0.69)
2012	5.39	7.57	2.18
2013	5.51	4.39	(1.12)
2014	5.00	3.21	(1.78)
2015	3.80	3.89	0.09
2016	3.97	3.37	(0.60)
2017	3.95	3.52	(0.43)
2018	4.20	3.66	(0.54)
2019	3.86	3.93	0.06
2020	3.37	3.83	0.46
2021	5.64	5.42	(0.22)
2022	7.42	6.78	(0.65)
2023	5.25	4.89	(0.37)
2024	4.73	4.29	(0.44)
2025	4.47		
Average	4.18	3.88	(0.30)



CBOT NOVEMBER SOYBEAN FUTURES, 2000-2025

- ✓ 15 years (60%) the market declined
- ✓ 10 years (40%) the market improved

Year	1-May	1-Oct	Change
2000	5.80	4.90	(0.90)
2001	4.34	4.52	0.18
2002	4.56	5.42	0.86
2003	5.53	6.87	1.34
2004	7.45	5.35	(2.10)
2005	6.22	5.73	(0.49)
2006	6.26	5.45	(0.81)
2007	7.84	9.92	2.08
2008	11.93	10.53	(1.40)
2009	9.71	9.18	(0.53)
2010	9.76	10.57	0.81
2011	13.74	11.79	(1.95)
2012	13.93	15.60	1.68
2013	12.09	12.68	0.59
2014	12.26	9.17	(3.09)
2015	9.41	8.77	(0.64)
2016	10.18	9.54	(0.64)
2017	9.65	9.57	(0.07)
2018	10.51	8.58	(1.93)
2019	8.73	9.20	0.47
2020	8.55	10.24	1.69
2021	13.40	12.47	(0.93)
2022	14.91	13.65	(1.26)
2023	12.75	12.77	0.02
2024	11.65	10.57	(1.08)
2025	10.24		
average	9.64	9.32	(0.32)

PRICING TARGETS

Soybeans show the need for a minimum price!

CBOT NOVEMBER SOYBEAN FUTURES, 2000-2025

- ✓ Soybeans needs a minimum price!
- ✓ Exclude 6 years when the selling price on May 1 was less than production costs.

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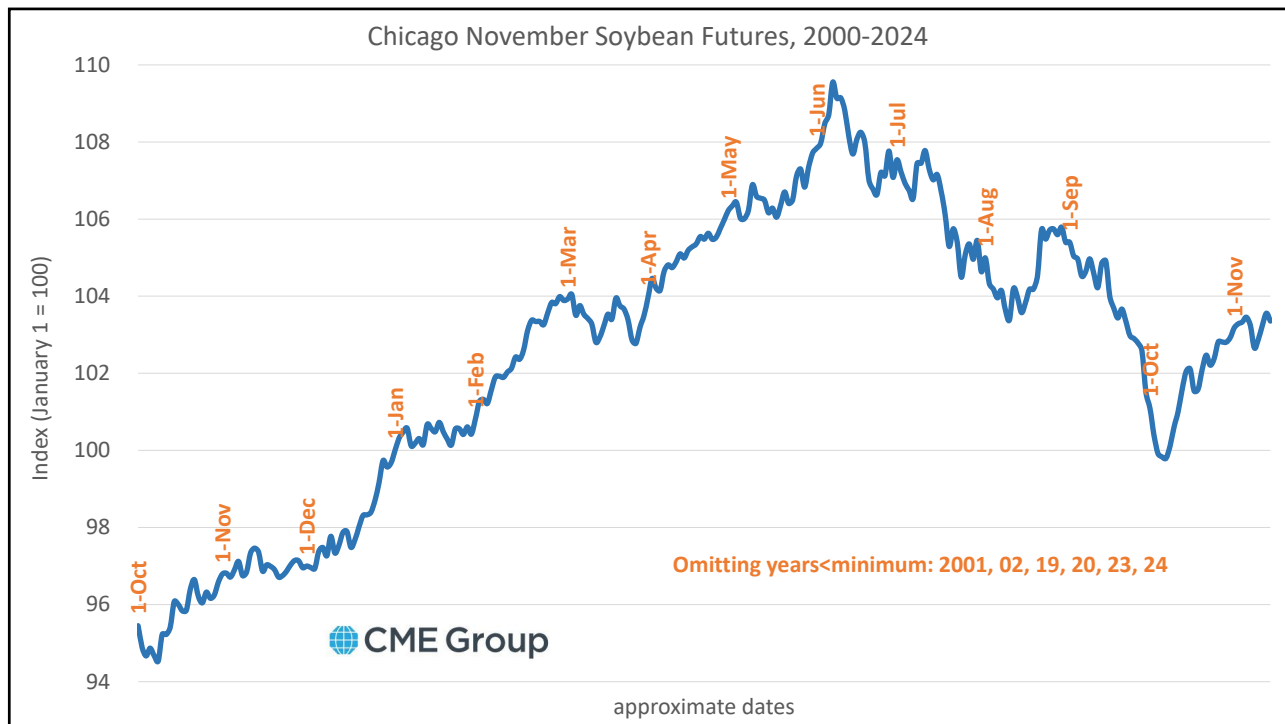
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2021	13.40	12.47	(0.93)
2022	14.91	13.65	(1.26)
2023	12.75	12.77	0.02
2024	11.65	10.57	(1.08)
2025	10.24		
average	9.64	9.32	(0.32)

CBOT NOVEMBER SOYBEAN FUTURES, 2000-2025

- ✓ 14 years (74%) the market declined
- ✓ 5 years (26%) the market improved

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Year	1-May	1-Oct	Change
2000	5.80	4.90	(0.90)
2003	5.53	6.87	1.34
2004	7.45	5.35	(2.10)
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2018	10.51	8.58	(1.93)
2021	13.40	12.47	(0.93)
2022	14.91	13.65	(1.26)
average	10.06	9.53	(0.53)



Does pre-harvest marketing pay?

Let's meet Barney and Terry...



Barney Binless

Barney has no marketing plan, no storage and no interest in early pricing. He is our benchmark. His price is the harvest price each year.

Terry Timer





Terry knows that seasonal highs in new crop futures often occur in the spring. For corn and soybeans, she prices 20% increments, March-June. For wheat, Feb-May. Prices must be above production costs.

IOWA AVERAGE CORN PRICES, 1989-2024

Barney Binless harvest price the Friday between Oct 12-18.

Terry is only willing to price insured bushels (80%), if the price is above production costs.

Terry made no pre-harvest sales in 9 corn years.



27 "active" years			
	Terry	Barney	Terry's advantage
corn	3.46	3.23	0.23
years >Barney	22 (81%)		
years >10%	14	3	

IOWA AVERAGE SOYBEAN PRICES, 1989-2024

Barney Binless harvest price the Friday between Oct 5-11.

Terry is only willing to price insured bushels (80%), if the price is above production costs.

Terry made no pre-harvest sales in 8 soybean years.

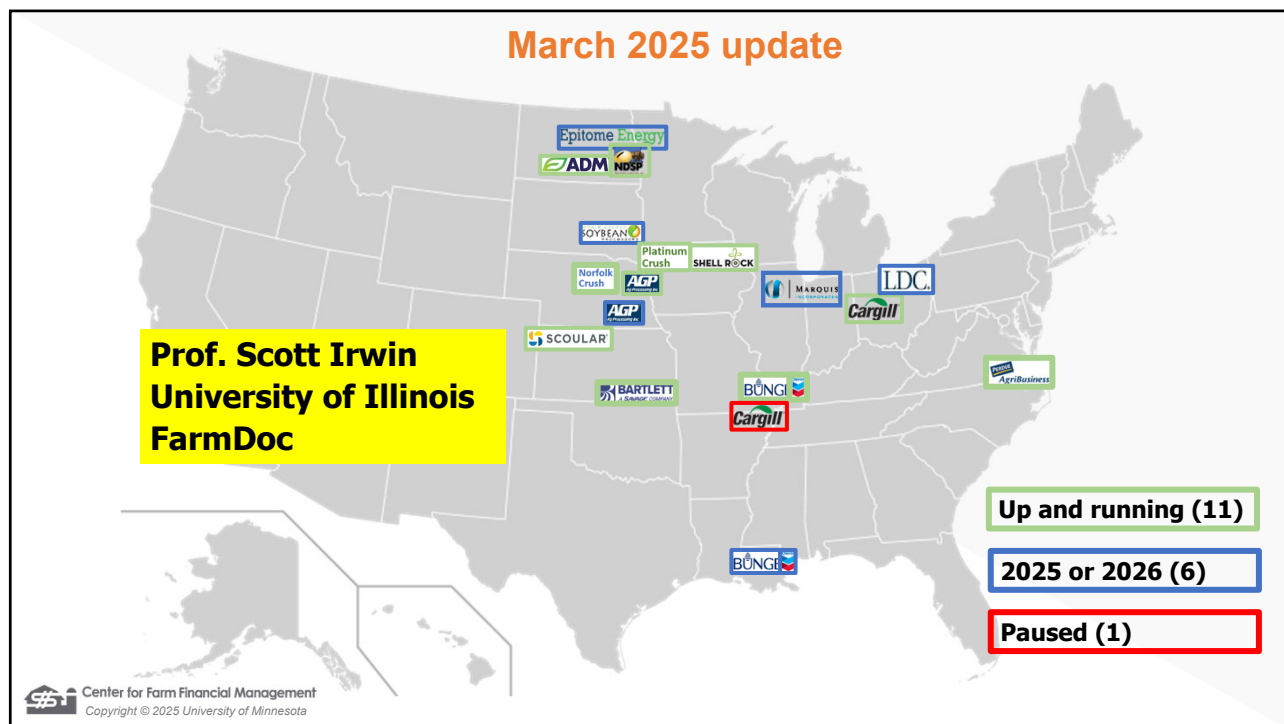
28 "active" years			
	Terry	Barney	Terry's advantage
soybeans	8.26	7.81	0.45
years >Barney	19 (68%)		
years >10%	11	4	

AN UPDATE...

The coming boom in soy crush capacity

Early 2023: Soybean crush capacity is expanding!

Over 600 million bushels of added annual crush capacity up and running by 2026.



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Objective: Buy crop insurance to protect my production risk and price 75% of my anticipated corn crop (per APH yield) by late June.

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Price 10,000 bushels at \$5.45c/5.85f, or by April 11, pricing tool tbd

Price 10,000 bushels at \$5.85c/6.25f, or by April 23, pricing tool tbd

Price 10,000 bushels at \$6.25c/6.65f, or by May 12, pricing tool tbd

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Ignore decision dates and make no sale if prices are lower than \$5.05 local cash price/\$5.45 December futures.

Exit all options positions by mid-September 2025.

(3) Pricing tools

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PRICING TOOLS “TBD” OR TO-BE-DETERMINED

Fixed-price tools

- forward contract
- sell futures
- futures fixed (HTA)
 - + low cost
 - + final price is known
 - no upside

Minimum-price tools

- forward contract & buy calls
- buy a put option
 - + upside potential
 - high cost

PRICING TOOLS – MY GENERAL PHILOSOPHY

Early in the plan, I prefer simple, low-cost tools to price grain.

- forward contracts, futures contracts, HTAs

I will consider options and/or technical tools for pricing decisions that come later.

- lowers the cost (i.e., time value) of options
- trends are more likely in summer months

SOYBEANS: 2025 PRE-HARVEST MARKETING PLAN

Objective: Buy crop insurance to protect my production risk and price 75% of my anticipated soybean crop (per APH yield) by late June.

Price 5,000 bushels at \$12.40 cash price (\$12.90 Nov. futures) using forward contract/futures hedge/HTA contract

Price 5,000 bushels at \$13.40c/13.90f, or April 11, pricing tool tbd

Price 5,000 bushels at \$14.40c/14.90f, or by May 12, pricing tool tbd

Price 5,000 bushels at \$15.40c/15.90f, or by June 11, pricing tool tbd

Plan starts on January 1, 2025. Earlier sales may be made at a 75-cent premium and would be limited to 10,000 bushels.

Ignore decision dates and make no sale if prices are lower than \$12.40 local cash price/\$12.90 November futures.

Exit all options positions by mid-September 2025.

Nov'25 @ \$10.05



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HOW IMPORTANT ARE AG EXPORTS?



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U.S.AG PRODUCTION EXPORTED IN 2023

	<10%	10-20%	20-30%	30-40%	40-50%	>50%
corn		15%				
soybeans					41%	
wheat					46%	
pork			25%			
beef		11%				
chicken		16%				



LET'S MEET ONE MORE CHARACTER...

Should we price grain less than production costs?
(i.e., Do we need a minimum price?)



Aunt Tilly



Terry Timer

Tilly and Terry price new crop corn and soybeans in 20% increments, March-June (Feb-May for wheat).

Tilly has no minimum price objective. Terry has a minimum price based on production costs.





Aunt Tilly





Terry Timer

Let's look at Aunt Tilly's batting average in years when Terry Timer was not able to price grain before harvest (pre-harvest pricing opportunities were less than production costs)

IOWA AVERAGE CORN PRICES, 1989-2024

9 years		
	Barney/Terry	Tilly
average	2.90	3.13
>Barney		6 (67%)
>10%	2	5

IOWA AVERAGE SOYBEAN PRICES, 1989-2024

8 years		
	Barney/Terry	Tilly
average	7.32	7.26
>Barney		3 (38%)
>10%	2	1

LESSONS FROM 35+ YEARS...



- ✓ Know your production costs and have a minimum price *but...*
- ✓ Sometimes we maximize profits- sometimes we minimize losses
- ✓ My preference is to price 20-40%, even with prices less than costs
- ✓ **What is your preference?**



MARKETING IS NOT EASY!

An approach that works **over** time is not guaranteed to work **every** time.

MARKETING WILL NEVER BE EASY!

Nothing is 100%



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PRE-HARVEST MARKETING PLAN FOR CORN

Objective: Buy crop insurance to protect my production risk and have _____% of my anticipated corn crop (based on APH yield) priced by _____.

Price _____ bushels at \$_____ cash price (\$_____ December futures) using _____

Price _____ bushels at \$_____ c/ _____ f, or by _____, using _____

Price _____ bushels at \$_____ c/ _____ f, or by _____, using _____

Price _____ bushels at \$_____ c/ _____ f, or by _____, using _____

Price _____ bushels at \$_____ c/ _____ f, or by _____, using _____

Price _____ bushels at \$_____ c/ _____ f, or by _____, using _____

Price _____ bushels at \$_____ c/ _____ f, or by _____, using _____

Plan starts on _____. Earlier sales may be made at a _____ cent premium to price targets noted above and limited to _____ bushels.

Ignore decision dates and make no sale if prices are lower than \$_____ local cash price/\$_____ December futures.



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PRE-HARVEST MARKETING PLAN FOR SOYBEANS

Objective: Buy crop insurance to protect my production risk and have _____% of my anticipated soybean crop (based on APH yield) priced by _____.

Price _____ bushels at \$_____ cash price (\$_____ November futures) using _____

Price _____ bushels at \$_____ c/_____ f, or by _____, using _____

Price _____ bushels at \$_____ c/_____ f, or by _____, using _____

Price _____ bushels at \$_____ c/_____ f, or by _____, using _____

Price _____ bushels at \$_____ c/_____ f, or by _____, using _____

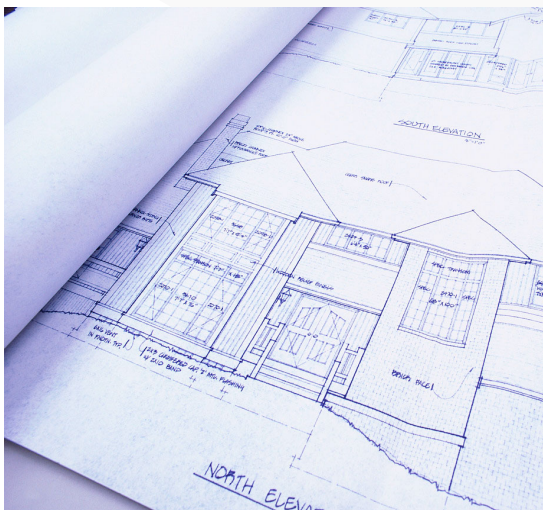
Price _____ bushels at \$_____ c/_____ f, or by _____, using _____

Price _____ bushels at \$_____ c/_____ f, or by _____, using _____

Plan starts on _____. Earlier sales may be made at a _____ cent premium to price targets noted above and limited to _____ bushels.

Ignore decision dates and make no sale if prices are lower than \$_____ local cash price/\$_____ November futures.

WHY IS AN IMPERFECT PLAN BETTER THAN NO PLAN AT ALL?



A plan is a benchmark for your goals.

If you have a plan, you have something to adapt in a changing environment.

PRE-HARVEST MARKETING PLAN REVIEW

1. Set pricing targets

- adjust for basis
- minimum price objective is critical!
- maximum price objective is less important but be realistic
- pricing grain below production costs—what is your preference?

2. Set decision dates

- seasonal trends support March–June pricing

3. Choose your pricing tools

- rely on simple, low-cost tools for initial sales
- options and technical tools offer flexibility with discipline—be selective!



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Pricing Tools



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PRICING TOOLS FOR THE SELLER

1. Forward contract
2. Selling futures contracts (short hedge)
3. Buy put options to establish a minimum price
4. Price windows/fences: Setting min./max. prices with put and call options
5. Selling call options

Commodity Challenge

Practice game update...

May 20: forward contract

- 20,000 bu. corn at \$4.11 (now \$X.XX)
- 5,000 bu. soybeans at \$9.64 (now \$XX.XX)

May 19, 2025 market prices

CHS in Canton, SD

- Harvest bid: \$9.62 /bu.
- Nov'25 soybean futures: \$10.37/bu.
- Expected basis at harvest: 55 cents under
- 1020 November put option: 41 cents/bu.
- 1040 November call option: 49 cents/bu.
- 1120 November call option: 24 cents/bu.

PRICING TOOLS FOR THE SELLER

1. Forward contract
2. Selling futures contracts (short hedge)
3. Buy put options to establish a minimum price
4. Price windows/fences: Setting min/max prices with put and call options
5. Selling call options

PRICING TOOLS FOR THE SELLER

1. **Forward contract**
2. Selling futures contracts (short hedge)
3. Buy put options to establish a minimum price
4. Price windows/fences: Setting min/max prices with put and call options
5. Selling call options

FORWARD CONTRACT

- + final price known (fixed basis)
- + contract for any bushel amount
- + no brokerage fees or margins
- ends in delivery
- sometimes difficult to get a fair basis
- institutional risk!

PRICING TOOLS FOR THE SELLER

\$9.62 and no upside

1. Forward contract
2. Selling futures contracts (short hedge)
3. Buy put options to establish a minimum price
4. Price windows/fences: Setting min/max prices with put and call options
5. Selling call options

PRICING TOOLS FOR THE SELLER

1. Forward contract
2. **Selling futures contracts** (short hedge)
3. Buy put options to establish a minimum price
4. Price windows/fences: Setting min/max prices with put and call options
5. Selling call options

SELLING FUTURES

- + price often higher than forward contract
- + not locked into delivery
- 5,000 bushel units
- margin account and margin risk
- basis risk



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SELLING FUTURES TO ESTABLISH A PRICE

$$\frac{10.37}{\text{fut. price (when sold)}} + \frac{(-0.55)}{\text{expected basis}} - \frac{.01}{\text{fees}} = \frac{9.81}{\text{expected price}}$$



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SELLING FUTURES TO ESTABLISH A PRICE

$$\frac{10.37}{\text{fut. price (when sold)}} + \frac{(-0.55)}{\text{expected basis}} - \frac{.01}{\text{fees}} = \frac{9.81}{\text{expected price}}$$

Your customer made a sale of futures contracts, and higher prices will lead to additional margin needs.

Between now and harvest, which direction do you (and the farmer) want the market to trend?

PRICING TOOLS FOR THE SELLER

- 1. Forward contract \$9.62 and no upside
- 2. Selling futures contracts (short hedge) \$9.81 and no upside
- 3. Buy put options to establish a minimum price
- 4. Price windows/fences: Setting min/max prices with put and call options
- 5. Selling call options

Commodity Challenge

Practice game update...

May 26: futures contracts

- 20,000 bu. corn at \$5.01 (now \$X.XX)
- 5,000 bu. soybeans at \$11.84 (now \$XX.XX)

BROKERAGE STATEMENT RED FLAGS



Your customer is using the futures market to
BUY contracts

How can we use puts and calls in place of futures to establish a new crop price?

PRICING TOOLS FOR THE SELLER

1. Forward contract
2. Selling futures contracts (short hedge)
3. **Buy put options** to establish a minimum price
4. Price windows/fences: Setting min/max prices with put and call options
5. Selling call options

BUY PUT OPTIONS

- + the right to sell futures
- + establish (nearly) a minimum price
- + no margin calls
- + not locked into delivery
- + basis opportunity
- basis risk
- 5,000 bushel units
- high cost!



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BUY PUT OPTIONS

$$\frac{10.20}{\text{strike price}} + \frac{-0.55}{\text{expected basis}} - \frac{0.41}{\text{premium}} - \frac{.01}{\text{fees}} = \frac{9.23}{\text{minimum price}}$$



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BUY PUT OPTIONS

$$\underline{10.20} + \underline{-0.55} - \underline{0.41} - \underline{.01} = \underline{9.23}$$

strike price + expected basis – premium – fees = minimum price

Put options increase in value as prices decline.

Between now and harvest, which direction do you
(and the farmer) want the market to trend?

BROKERAGE STATEMENT RED FLAGS



Your customer is using the futures market to
BUY contracts



Your customer is using the options market to
SELL PUT contracts



SHORT-DATED NEW CROP OPTIONS



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SHORT-DATED NEW CROP OPTIONS

What is a short-dated new crop option?

An option that references the new crop month but expires earlier.

For December corn and November soybeans futures, earlier expirations are available for March, May, July, and September.



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SHORT-DATED NEW CROP OPTIONS

Example

A standard put on Dec'25 futures expires November 21, 2025

A July short-dated put on Dec'25 futures expires on June 21, 2025

SHORT-DATED NEW CROP OPTIONS

Why would I choose a short-dated new crop option?

They cost less. Premiums are lower than standard new crop options because they have **less time value**.

Example: On May 19, Nov'25 soybeans priced at \$10.40/bu.

The standard 1040 put option contract was trading at 51 cents/bu.

The July short-dated put option was trading at 20.5 cents/bu.

SHORT-DATED NEW CROP OPTIONS

Why would I use them?

To manage risk at lower cost...

- during specific windows of time (e.g., planting season or the month of July)
- in anticipation of breaking news (e.g., change in the weather outlook)
- in anticipation of potentially high impact reports (e.g., USDA WASDE)



PRICING TOOLS FOR THE SELLER

- 1. Forward contract \$9.62 and no upside
- 2. Selling futures contracts (short hedge) \$9.81 and no upside
- 3. Buy put options to establish a minimum price \$9.23 and unlimited upside
- 4. Price windows/fences: Setting min/max prices with put and call options
- 5. Selling call options

Options are expensive! Is there a way
to make the transaction cheaper?

PRICING TOOLS FOR THE SELLER

1. Forward contract
2. Selling futures contracts (short hedge)
3. Buy put options to establish a minimum price
4. **Price windows/fences:** Setting min/max prices with put and call options
5. Selling call options

BUY PUTS/SELL CALLS PRICE WINDOW

- + establish (nearly) a minimum price
- + lower options cost
- + not locked into delivery
- + basis opportunity
- basis risk
- margin calls are possible!
- 5,000 bushel units
- establish (nearly) a maximum price
- cost

BUY PUTS/SELL CALLS PRICE WINDOW

_____ + _____ - _____ - _____ = _____
put strike price + expected basis - **net** prem - fees = **minimum** price

_____ + _____ - _____ - _____ = _____
call strike price + expected basis - **net** prem - fees = **maximum** price



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CALCULATING THE NET PREMIUM

Buy 1020 puts: 41 cents/bu.

Sell 1120 calls: 24 cents/bu.

Net cost: 41 - 24 = 17 cents/bu.



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BUY PUTS/SELL CALLS PRICE WINDOW

$$\underline{10.20} + \underline{-0.55} - \underline{0.17} - \underline{.02} = \underline{9.46}$$

put strike price + expected basis – **net** prem – fees = **minimum** price

$$\underline{11.20} + \underline{-0.55} - \underline{0.17} - \underline{.02} = \underline{10.46}$$

call strike price + expected basis – **net** prem – fees = **maximum** price

Your customer purchased puts and sold calls.

Between now and harvest, which direction do you (and the farmer) want the market to trend?



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BROKERAGE STATEMENT RED FLAGS



Your customer is using the futures market to
BUY contracts



Your customer is using the options market to
SELL PUT contracts



Your customer is using the options market to
BUY CALL contracts



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PRICING TOOLS FOR THE SELLER

- 1. Forward contract **\$9.62 and no upside**
- 2. Selling futures contracts (short hedge) **\$9.81 and no upside**
- 3. Buy put options to establish a minimum price **\$9.23 and unlimited upside**
- 4. Price windows/fences: Setting min/max prices with put and call options **\$9.46 min / \$10.46 max**
- 5. Selling call options

Options are still too expensive! I
ought to sell them, not buy them!

PRICING TOOLS FOR THE SELLER

1. Forward contract
2. Selling futures contracts (short hedge)
3. Buy put options to establish a minimum price
4. Price windows/fences: Setting min/max prices with put and call options
5. **Selling call options**

SELLING COVERED CALLS

- + higher price in two of three price scenarios
- + not locked into delivery
- + basis opportunity
- margin calls are possible!
- 5,000 bushel units
- **limited** upside (maximum price)
- **limited** hedge (premium)

SELLING COVERED CALLS

...offers a limited hedge and establishes a maximum price

$$\frac{10.40}{\text{strike price}} + \frac{-0.55}{\text{expected basis}} + \frac{0.49}{\text{premium}} - \frac{.01}{\text{fees}} = \frac{10.33}{\text{maximum price}}$$

Nov'25 at \$10.37/bu. and your customer sold 1040 covered calls.

Between now and harvest, which direction do you (and the farmer) want the market to trend?

SELLING COVERED CALLS

What if (flat price scenario)...

On October 20 (expiration), Nov soybeans are trading at **\$10.40**?

\$10.40 futures + (-0.55 basis) + 0.49 premium - 0.01 fees = **\$10.33 per bushel**

(selling futures would get you **\$9.81**)

SELLING COVERED CALLS

What if (**higher** price scenario)...

On October 20 (expiration), Nov soybeans are trading at **\$12.40**?

$\$12.40 \text{ futures} + (-0.55 \text{ basis}) + 0.49 \text{ premium} - 2.00 \text{ option loss} - 0.01 \text{ fees} = \textbf{\$10.33 per bushel}$

(selling futures would get you **\$9.81**)

limited gain!



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SELLING COVERED CALLS

What if (**lower** price scenario)...

On October 20 (expiration), Nov soybeans are trading at **\$9.60**?

$\$9.60 \text{ futures} + (-0.55 \text{ basis}) + 0.49 \text{ premium} - 0.01 \text{ fees} = \textbf{\$9.53 per bushel}$

(selling futures would get you **\$9.81**)

limited hedge!



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Selling covered calls is not a typical
hedge – use with caution.

BROKERAGE STATEMENT RED FLAGS



Your customer is using the futures market to
BUY contracts



Your customer is using the options market to
SELL PUT contracts



Your customer is using the options market to
BUY CALL contracts



Your customer is using the options market to
SELL CALL contracts

PRICING TOOLS FOR THE SELLER

1. Forward contract **\$9.62 and no upside**
2. Selling futures contracts (short hedge) **\$9.81 and no upside**
3. Buy put options to establish a minimum price **\$9.23 and unlimited upside**
4. Price windows/fences: Setting min/max prices with put and call options **\$9.46 min / \$10.46 max**
5. Selling call options **\$10.33 max and a limited hedge**



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Bankers - Are You Ready?



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Financing Hedge Lines of Credit

National School for Experienced Ag
Lenders

Black Hills State University

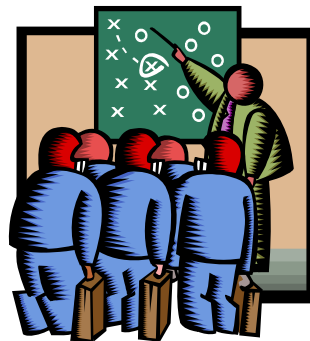
June 24, 2025

S. J. Miller
Principal, Fox St Advisors



Ag Commodity Marketing Strategies

- Put option
- Hedge
- Forward contract
 - Call options
 - Hedge
- Do nothing



Ag Commodity Marketing Strategies

Know cost of
production/breakeven

Analyze tolerance for risk

Speculation is not marketing

Know the Basis



Why Manage Margin Risk?

Reduce
net
income
variation

Obtain
financing

Peace of
mind

Added
profits to
borrower



Getting Started

- Must be borrowers responsibility
- Refer to broker(s)
- Get educated – seminars, webinars, one-on-one
- More than one tool available
- Start simple
 - Forward contract?
 - Hedge?
 - Forward contract with call options?
 - Put options?
 - Fence/Window?
 - Others?
- Evaluate and adjust

Financing Price Risk Management Plans

- Borrower develop and understand the plan
- Bank understand the plan
- Start simple
- Establish a line of credit
- Communicate with borrower and broker
- Execute and monitor

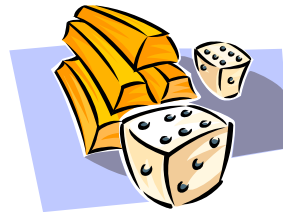


Documenting the Price Risk Management Plan

- Line – of – Credit Agreement/Note
- Hedge Account Security Agreement (3-Party)
- Securities Account Control Agreement (3-Party)
- UCC Filing covering:
 - All of debtor's rights, title and interest in the following investment property maintained in account # _____ with _____ (Broker)

Ground Rules

- Understand the plan (start simple)
- Adequate credit availability to feed the hedge
- Meet margin call timetables
- Settle up to plan monthly
- Only trade in commodities sold/used
- Trade within quantities produced/used
- No other trading accounts with broker
- How often can output/inputs be marketed?
- Speculation is Bad!



Sizing the Hedge Line of Credit Forward Contract

- Plan – Forward Contract – corn, beans, milk, hogs, beef, etc.
- No margin deposit
- No margin calls
- No line need



Sizing The Hedge Line

- Work with client and broker to size the need
- Plan for adequate range (\$2/bu corn?)
- Be prepared to “feed the hedge”
- Settle line as crops, livestock, milk is marketed

Options

- Work with client and broker to size line
- Treat as an input expense
- Settle
 - Monthly (?)
 - As output is sold (?)

Financing Considerations

- Don't forget input risk management
- Establish system for daily activity
- Statements direct from broker
- Don't get upside-down
- Keep responsibility on the borrower



Monitoring

DATE	AT	LONG/BUY	SHORT/SELL	DESCRIPTION	EX	PRICE/LEGND	CC	DEBIT	CREDIT
6/21/2	F1		2	CALL MAR 23 CORN	850 01	.25 7/8	US	1,175.00	
6/28/2	F1		1	CALL MAR 23 CORN	850 01	.19 1/2	US	587.50	
			3*	OPTION MARKET VALUE		.11 3/4		1,762.50*	
7/05/2	F1		1	SEP 22 SOYBEAN MEAL					4,970.00
			1*	OPEN TRADE EQUITY					4,970.00*
11/30/1	F1		1	MAR 23 SOYBEAN MEAL					7,530.00
			1*	OPEN TRADE EQUITY					7,530.00*
4/19/2	F1		2	PUT DEC 22 SOYBEAN MEAL	380 01	10.00	US	1,920.00	
			2*	OPTION MARKET VALUE		9.60			1,920.00*
12/29/1	F1		1	CALL DEC 22 SOYBEAN MEAL	390 01	25.00	US		4,135.00
			1*	OPTION MARKET VALUE		41.35			4,135.00*
12/29/1	F1		1	2,850.00 LIM EXPIRE 11/25/22	470 01	7.85	US	1,160.00	
			1*	OPTION MARKET VALUE		11.60		1,160.00*	
				EXPIRE 11/25/22					

US\$-SEGREGATED (F1)

BEGINNING BALANCE	35,674.57
THIS MONTH'S ACTIVITY	8,940.31-
ENDING BALANCE	26,734.26
NET FUTURES PROFIT OR LOSS	110.85-
NET OPTION PREMIUM	8,829.46-
FUTURES OPEN TRADE EQUITY	17,912.50
OPTIONS MARKET VALUE	76.25
ACCOUNT VALUE AT MARKET	44,723.01
CONVERTED MARKET VALUE	44,723.01

***** LME CONTRACT LEGEND *****

- An F2 in the account type (AT) column indicates:
This is NOT a LME REGISTERED client contract.

- An F3 in the account type (AT) column indicates:
This IS a LME REGISTERED client contract and as such is subject to the rules and regulations of the LME.

The LME counterparty for the purposes of this contract is R.J. O'Brien Limited which is a member of the LME and is authorized and regulated in the UK by the Financial Conduct Authority. R.J. O'Brien & Associates, LLC is not a member of the LME and is, therefore, only acting in an agency capacity in respect of this contract.



FOX ST. ADVISORS

119

Futures Hedge Example

Consider:

A cattle rancher wishes to price 360,000 pounds or 3,600 cwt. of expected cattle production to be sold at the beginning of December.

On March 1, DEC live cattle futures are trading at \$138.50/cwt. The farmer wishes to protect this price level by locking it in.

1 live cattle contract = 40,000 pounds
 $360,000 / 40,000 = 9$ contracts

Commodity & Ingredient Hedging

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Futures Hedge Example – Hedge Gain

- On March 1, farmer sells 9 DEC futures at \$138.50
- On December 1, cash cattle and futures are both \$127.25

Cash	Brokerage	Net
12/1: sell 360,000 lbs @ \$127.25/cwt.	3/1: sell 9 LCZ futures @ \$138.50/cwt.	Cash + Brokerage
3,600 cwt. <u>x \$127.25</u> \$458,100	12/1: buy 9 LCZ futures @ \$127.25/cwt.	\$127.25 + \$11.25 = \$138.50/cwt.
	\$138.50 <u>- \$127.25</u> \$11.25/cwt.	\$458,100 <u>+ \$40,500</u> \$498,600
	\$11.25 x 9 x 400 = \$40,500	\$498,600 / 3,600 cwt. = \$138.50/cwt.

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121

Futures Hedge Example – Hedge Loss

- On March 1, farmer sells 9 DEC futures at \$138.50
- On December 1, cash cattle and futures are both \$150.00

Cash	Brokerage	Net
12/1: sell 360,000 lbs @ \$150.00/cwt.	3/1: sell 9 LCZ futures @ \$138.50/cwt.	Cash + Brokerage
3,600 cwt. <u>x \$150.00</u> \$540,000	12/1: buy 9 LCZ futures @ \$150.00/cwt.	\$150.00 - \$11.50 = \$138.50/cwt.
	\$138.50 <u>- \$150.00</u> -\$11.50/cwt.	\$540,000 <u>- \$41,400</u> \$498,600
	-\$11.50 x 9 x 400 = -\$41,400	\$498,600 / 3,600 cwt. = \$138.50/cwt.

Commodity & Ingredient Hedging

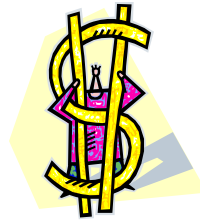
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122

Price Risk Management Financing Pitfalls

- Inadequate line availability
- Borrower speculation
- Margin call need without borrower consent
- Price higher/input cost lower than hedge
- “You made me do this.”
- Use of line for other needs
- Waiting too long to settle positions
- Trading in other commodities



Summary

- Price and input cost volatility is here to stay
- Borrowers must have a marketing plan
- Bankers must understand marketing tools
- Banks must provide financial tools to meet the need
- Returns to Borrower – reduce net income volatility
- Returns to Bank – Added value to relationship
 - Stronger loan portfolio



A TALE OF TWO YEARS

Are margin calls bad?

200,000 bus. corn produced, 50% hedged,
basis is -\$0.50 (50 cents under)



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A TALE OF TWO YEARS

Year One

100,000 bus. (50%) hedged at
\$4.50/bu. Dec futures

Drought! Dec futures at \$5.50/bu.

\$100,000 loss in margin account

Year Two

100,000 bus. (50%) hedged at
\$4.50/bu. Dec futures

Dec futures at \$3.50/bu.

\$100,000 gain in margin account

Which year would you prefer?



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A TALE OF TWO YEARS

Year One

100,000 bus. (50%) hedged at
\$4.50/bu. Dec futures

Drought! Dec futures at **\$5.50/bu.**

\$100,000 loss in margin account

Total Revenue = (100,000 bus.* \$4/bu.)
+ (100,000 bus.* \$5/bu.) = **\$900,000**
(vs. \$1,000,000 w no hedge)

Year Two

100,000 bus. (50%) hedged at
\$4.50/bu. Dec futures

Dec futures at \$3.50/bu.

\$100,000 gain in margin account

A TALE OF TWO YEARS

Year One

100,000 bus. (50%) hedged at
\$4.50/bu. Dec futures

Drought! Dec futures at \$5.50/bu.

\$100,000 loss in margin account

Total Revenue = (100,000 bus.* \$4/bu.)
+ (100,000 bus.* \$5/bu.) = **\$900,000**
(vs. \$1,000,000 w no hedge)

Year Two

100,000 bus. (50%) hedged at
\$4.50/bu. Dec futures

Dec futures at **\$3.50/bu.**

\$100,000 gain in margin account

Total Revenue = (100,000 bus.* \$4/bu.)
+ (100,000 bus.* \$3/bu.) = **\$700,000**
(vs. \$600,000 w no hedge)

Pricing Exercises

University of Minnesota remote learning opportunities

	Course
Sept. – Dec. 2025	3411 Ag Commodity Markets
Jan. – May 2026	4481 Futures and Options Markets

Interested? Send me an email... usset001@umn.edu



SUMMARY

1. Have a marketing plan
2. Know your pricing tools
3. Are you ready to work with customer hedge accounts?
4. Ed is the man



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