


Cattle Markets Are On Fire: What Price Risk Should We Be Managing For?

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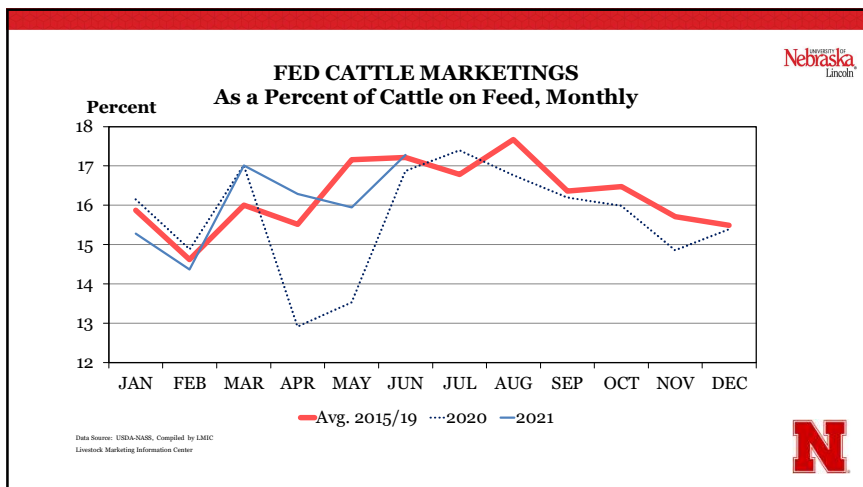
A Greater Need to Manage Risk




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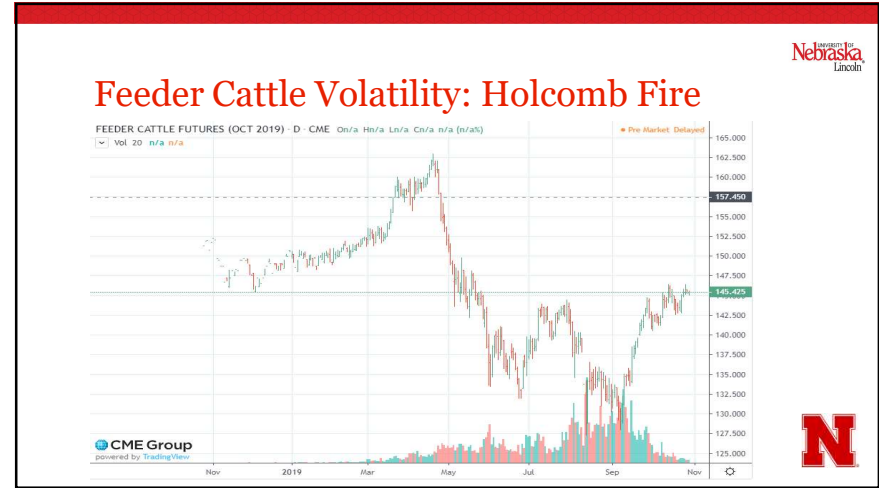
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At calving, how good are we at predicting weaning price?

CME Feeder Futures Prices from 1990 to 2019

P(Price October – Price March)

- 60% of the time price is higher in March
- Largest price difference (-\$31 in 2016, +62 in 2014)
- 2019 was -\$11
- 'largest losses' in value (>\$10): 2016, 2015, 2008, 2012, 2019

P(Price August – Price March)

- 66% of the time price is higher in March
- Largest price difference (-\$20 in 2019, +37 in 2014)
- 'largest losses' in value (>\$10): 2019, 2012, 2016, 1998, 2015



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Probability of Risk

Lots of variation in the price of feeder and fed cattle throughout the year

So....
Its not **if** something will happen but the **probability** it will happen

Know the “risks” you face with each potential decision



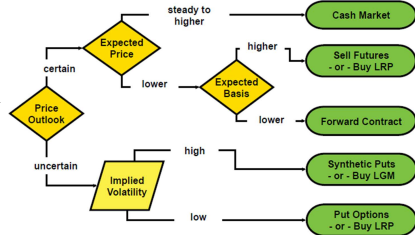
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Match the tool and market conditions

Operation
Cost of production, Breakevens

What we need to know
Price Certainty, Direction, Volatility, and Expected Basis

Ex. We don't use a hammer to cut wood....well at least most of us don't



Livestock Risk Protection (LRP)



Government Subsidized Safety Net

Livestock organizations have petitioned the government

Coverage Price	Subsidy Level by Year			
	2003	2018	May-2020	Sep-2020
95-100%	13	20	25	35
90-94.99%	13	25	30	40
85-89.99%	13	30	35	45
80-84.99%	13	30	35	50
75-79.99%	13	35	45	55
70-74.99%	13	35	45	55



Livestock Risk Protection (LRP)

- LRP is commonly referred to as "price insurance" for cattle
- Available in all counties across all states for:
 - Feeder Cattle Weight 1 (< 600 lbs.)
 - Feeder Cattle Weight 2 (600-900 lbs.)
 - Fed Cattle (> 900 lbs.)
 - For steers, heifers, brahman, and dairy cattle
- Operates like a **(European)** Put Option => "at-the-money"
 - Offered for 13, 17, 21, 26, 30, 34, 39, 43, 47 or 52-week periods
- Producers remain subject to basis price risk



European vs. American Options

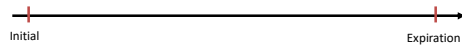
- When you own an option, you control the *right* but not the *obligation* to exercise

American (CME) Options

- Options may be exercised at any time up until expiration

European (LRP) Options

- Options may be exercised ONLY at expiration.



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New Changes

Fed Cattle, Feeder Cattle, Swine

• Increase head limits to:

- Feeder Cattle – 6,000 head per endorsement/12,000 head annually
- Fed Cattle – 6,000 head per endorsement/12,000 head annually
- Swine – 40,000 head per endorsement/150,000 head annually

• Modify the livestock ownership requirement to 60 days

• Able to insure unborn calves

• Pay premium after endorsement period ended

• No A&O cap of \$20 million



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Choosing Coverage and Calculating Payouts



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Basics of LRP – Feeder Cattle

Product Offered

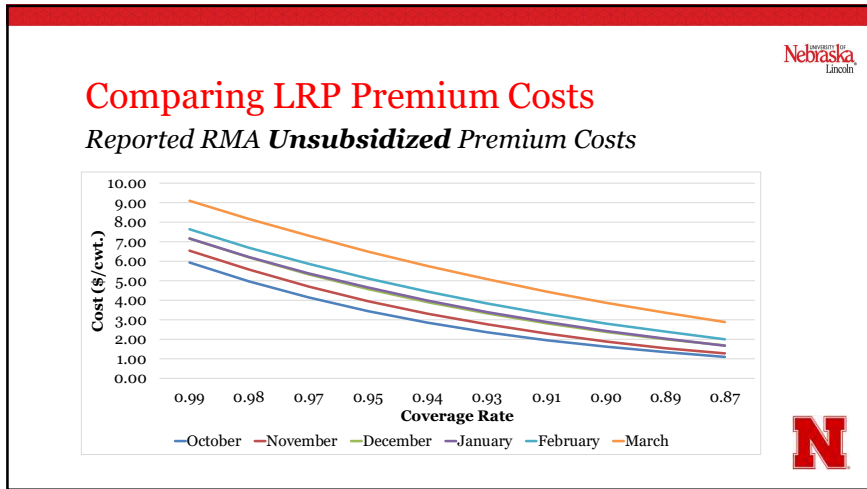
- Protection for producer against decline in cattle prices below the established coverage price

Insurance Period

- Offered for 13, 17, 21, 26, 30, 34, 39, 43, 47 or 52-week periods
- The producer will choose a time closest to the time cattle will be marketed or time when cattle will reach the desired weight



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Indemnity “Payout” Calculations

actual ending value > COVERAGE price ⇒ NO indemnity payout
indemnity = 0

actual ending value < COVERAGE price ⇒ indemnity payout
total production = head × target weight
price loss = coverage price – actual ending value ≥ 0
indemnity = total production × price loss × insured share

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Indemnity “Payout” Example

<p>Operation (Example 1)</p> <ul style="list-style-type: none"> - 66 head heifer feeder cattle => target weight 7.5 cwt. - Insured 100% - Insured ending value of cattle is \$140 / cwt. - Premium cost - Actual ending value \$120 <p>total insured production: 66 × 7.5 = 495 cwt. price loss: 140 – 120 = \$20 per cwt. indemnity: 495 × 20 × 1 = 9900 total payment: 9900 – 495 × 5 = +\$7,405 operation revenue: 495 × 120 + 7,405 = 66,805</p>	<p>Operation (Example 2)</p> <ul style="list-style-type: none"> - 66 head heifer feeder cattle => target weight 7.5 cwt. - Insured 100% - Insured ending value of cattle is \$140 / cwt. - Premium cost - Actual ending value \$160 <p>total insured production: 66 × 7.5 = 495 cwt. price loss: 140 – 160 < 0 indemnity: no payout total payment: 495 × -5 = - 2495 operation revenue: 495 × 160 – 2,495 = 81,695</p>
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Accessing LRP Quotes

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RMA Central Website: www.rma.usda.gov

<https://www.rma.usda.gov/en/Information-Tools/Livestock-Reports>

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Coverage Prices, Rates, Actual Ending Values

*** Choose a coverage or none ***

State	Enrollment Length	Commodity	Type	Exp. End Value	Coverage Price	Coverage Level	Rate	Cost Per CWT	Producer Premium Per CWT	End Date	Actual End Value
31 Nebraska	13	0801 Feeder Cattle	Beers Weight 2	143.281	\$142.43	0.9941	0.0432	\$ 8.88	5.11	1/9/	
31 Nebraska	13	0801 Feeder Cattle	Beers Weight 2	143.281	\$140.43	0.9801	0.0310	\$ 8.936	4.39	1/9/	
31 Nebraska	13	0801 Feeder Cattle	Beers Weight 2	143.281	\$138.43	0.9561	0.03002	\$ 4.155	3.91	1/9/	
31 Nebraska	13	0801 Feeder Cattle	Beers Weight 2	143.281	\$136.43	0.9522	0.02548	\$ 3.474	3.02	1/9/	
31 Nebraska	13	0801 Feeder Cattle	Beers Weight 2	143.281	\$134.43	0.9382	0.02143	\$ 2.881	2.51	1/9/	
31 Nebraska	13	0801 Feeder Cattle	Beers Weight 2	143.281	\$132.43	0.9243	0.01861	\$ 2.395	2.07	1/9/	
31 Nebraska	13	0801 Feeder Cattle	Beers Weight 2	143.281	\$130.43	0.9103	0.01574	\$ 1.974	1.72	1/9/	
31 Nebraska	17	0801 Feeder Cattle	Beers Weight 2	140.939	\$139.99	0.9933	0.04919	\$ 8.886	5.96	1/9/	
31 Nebraska	17	0801 Feeder Cattle	Beers Weight 2	140.939	\$139.99	0.9849	0.03712	\$ 8.948	4.39	1/9/	
31 Nebraska	17	0801 Feeder Cattle	Beers Weight 2	140.939	\$133.99	0.9507	0.03318	\$ 4.274	3.72	1/9/	
31 Nebraska	17	0801 Feeder Cattle	Beers Weight 2	140.939	\$123.99	0.8797	0.01374	\$ 1.703	1.48	1/9/	
31 Nebraska	21	0801 Feeder Cattle	Beers Weight 2	139.336	\$138.39	0.9532	0.05383	\$ 7.45	3.48	1/4/	
31 Nebraska	21	0801 Feeder Cattle	Beers Weight 2	139.336	\$134.39	0.9465	0.0419	\$ 6.51	4.9	1/4/	
31 Nebraska	21	0801 Feeder Cattle	Beers Weight 2	139.336	\$132.39	0.9501	0.03961	\$ 6.847	4.22	1/4/	
31 Nebraska	21	0801 Feeder Cattle	Beers Weight 2	139.336	\$122.39	0.8794	0.01740	\$ 2.141	1.89	1/4/	

***For LRP Fed Cattle, Feeder Cattle, and Swine, coverage levels and rates shown are available only on the selected effective date until 9 a.m. the following day.**

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Options vs. LRP?

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“Premium Gap”: LRP and CME Options

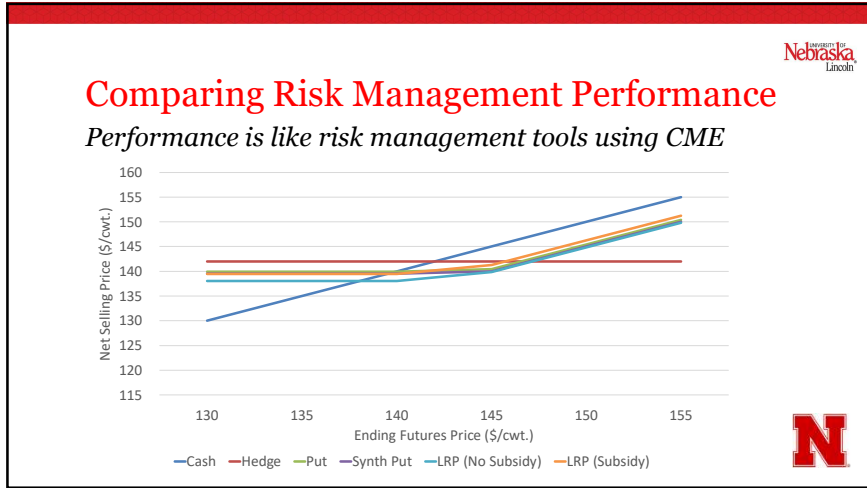
At-the-money put

Difference Between Option Premiums (\$/cwt.)

Percent of CME Premiums

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CME Option Quotes vs. LRP Quotes

- CME Options can be more expensive because can offset at any time
- LRP premiums can be more CME Options reflecting the added flexibility in contract (can select the amount of production)
- LRP only has one payout date -> prices can move in and out of the money during that time period

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Which Coverage Paid Out?

Who received a payout?

Type	Coverage Price	Coverage Level	Producer Premiums Per CWT	End Date	Actual End Value	Net Payout (\$ per cwt.)
Steers Weight 2	\$142.43	0.9941	5.11	11/9/	125.99	11.33
Steers Weight 2	\$140.43	0.9901	4.29	11/9/	125.99	10.15
Steers Weight 2	\$138.43	0.9961	3.61	11/9/	125.99	8.83
Steers Weight 2	\$136.43	0.9922	3.02	11/9/	125.99	7.42
Steers Weight 2	\$134.43	0.9382	2.51	12/7/	125.99	5.93
Steers Weight 2	\$132.43	0.9243	2.07	12/7/	125.99	4.37
Steers Weight 2	\$130.43	0.9103	1.72	12/7/	125.99	2.72
Steers Weight 2	\$129.99	0.9933	5.99	12/7/	131.07	2.93
Steers Weight 2	\$135.99	0.9949	4.39	12/7/	131.07	0.53
Steers Weight 2	\$133.99	0.9507	3.72	12/7/	131.07	-0.3
Steers Weight 2	\$123.99	0.8797	1.48	12/7/	131.07	-1.48
Steers Weight 2	\$138.39	0.9932	6.48	1/4/	133.07	-1.18
Steers Weight 2	\$134.39	0.9845	4.9	1/4/	133.07	-3.59
Steers Weight 2	\$132.39	0.9501	4.22	1/4/	133.07	-4.22
Steers Weight 2	\$122.39	0.8784	1.86	1/4/	133.07	-1.89

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