

Using LRP as a Tool for Price Protection for Cow-Stockers-Yearling Producers

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Livestock Risk Protection (LRP) Insurance for Cattle

- LRP insurance offers *national price* protection for cattle
- Operates like a (European) Put Option
 - Offered for 13, 17, 21, 26, 30, 34, 39, 43, 47 or 52-week periods
- Producers remain subject to *basis price risk*
- Available in all counties across all states
- Primary classes of cattle:
 - Feeder Cattle Weight 1 (< 600 lbs.)
 - Feeder Cattle Weight 2 (600-900 lbs.)
 - Fed Cattle (> 900 lbs.)



Livestock Risk Protection (LRP) Insurance for Feeder Cattle

- Based on the CME Feeder Cattle index
- Feeder Cattle Weight 1 (< 600 lbs.)
 - Feeder Cattle Weight 1 – Steers: CME index + 10%
 - Feeder Cattle Weight 1 – Heifers: CME index
 - Unborn Steers & Heifers – 50/50 mix: CME index + 5%
- Feeder Cattle Weight 2 (600-900 lbs.)
 - Feeder Cattle Weight 2 – Steers: CME index
 - Feeder Cattle Weight 2 – Heifers: CME index - 10%



Marketing Contracts

- Transfer risk outside the business
- National Price Risk (Chicago Mercantile Exchange or CME price)
 - Futures contract
 - Options contract
 - LRP insurance contract
- Local Price Risk
 - Cash contract
 - Basis contract

$$\begin{array}{r} \textit{Futures Price} \\ + \textit{Basis} \\ \hline \textit{Local Cash Price} \end{array}$$



Recent Focus on LRP

Most recent changes have targeted this product

Subsidy Level by Year

Coverage Price	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



Looking at Market Conditions Today

- Cost of put options has increased with market volatility!



Cost for LRP for March 24 on 7/29/2024

Coverage Price	Cost Per CWT after Subsidy	Effective Floor Price / CWT	Cost for 850#
\$252.75	\$8.33	\$244.42	\$70.81
\$250.22	\$7.44	\$242.78	\$63.24
\$247.69	\$6.66	\$241.03	\$56.61
\$245.17	\$5.91	\$239.26	\$50.24
\$242.64	\$5.22	\$237.42	\$44.37
\$240.11	\$4.59	\$235.52	\$39.02
\$233.79	\$3.08	\$230.71	\$26.18



Put Options or LRP is Historically Expensive – Volatility & Time March Feeder Cattle

Coverage Price	Cost Per CWT after Subsidy	Effective Floor	Cost for 850#	Price Increase to Pass Futures Contract
\$252.75	\$8.33	\$244.42	\$70.81	\$261.08



LRP Compared to other Price Protection Opportunities?

- Sell a futures contract
- Sell a call and purchase a put or LRP insurance (Option Fence)
- Sell cash now to buyer for future delivery



Understand What You Want Price Risk Management Tools to Do for You

- Be an informed consumer
- Understand price protection alternatives
- Recognize futures-based price protection does not protect against basis risk.
- Basis levels are historically high in Nebraska



Additional Changes

Fed Cattle, Feeder Cattle

- Increase head limits to 12,000 head per endorsement/25,000 head annually
- Modify the livestock ownership requirement to 60 days until the end of the contract
- Moved premium due date from the beginning to the end of the endorsement period
- Expanded availability to include all 50 states
- Updated Chicago Mercantile Exchange (CME) trading requirements to allow for more insurance endorsement contracts to be offered
- Added the Unborn Calves category to the LRP-Feeder Cattle type.
- No A&O cap of \$20 million



Livestock Risk Protection Feeder Cattle Insurance (LRP-Feeder Cattle) Usage in Nebraska 2013-2024.

Year	Policies Sold	Policies Earning Prem	Quantity (Head)	Liabilities (\$)	Total Prem (\$)	Policies Indemnified	Indemnity (\$)	Loss Ratio	Subsidy (\$)	Subsidy (%)	Producer Prem (\$)	Producer Loss Ratio
2013	1386	85	10386	10806100	282484	34	247183	0.88	36718	13%	245766	1.01
2014	1310	197	25398	32211424	701899	2	252	0.00	91247	13%	610652	0.00
2015	1457	141	15456	23890729	616680	69	872264	1.41	80165	13%	536515	1.63
2016	1402	75	9885	10773447	460552	67	625482	1.36	60411	13%	400141	1.56
2017	1552	191	21735	20816435	995861	50	195421	0.20	128310	13%	867551	0.23
2018	1224	117	15802	16967064	640475	45	406191	0.63	82998	13%	557477	0.73
2019	1238	69	9095	10390904	309240	47	584929	1.89	40691	13%	268549	2.18
2020	1237	46	7325	8403175	324531	18	224896	0.69	70725	22%	253806	0.89
2021	1721	291	62555	74252751	3126675	211	1144021	0.37	1105096	35%	2021579	0.57
2022	2595	599	200590	273807929	11230777	473	11178262	1.00	3953344	35%	7277433	1.54
2023	2296	1376	494483	848576249	32560089	600	11678516	0.36	11426300	35%	21133789	0.55
2024*	3410	1728	632092	1119557849	51930243	560	19646343	0.38	18232877	35%	33697366	0.58
AVERAGE	1583	290	79337	120990564	4659024	147	2468856	0.53	1552364	33%	3106660	0.79

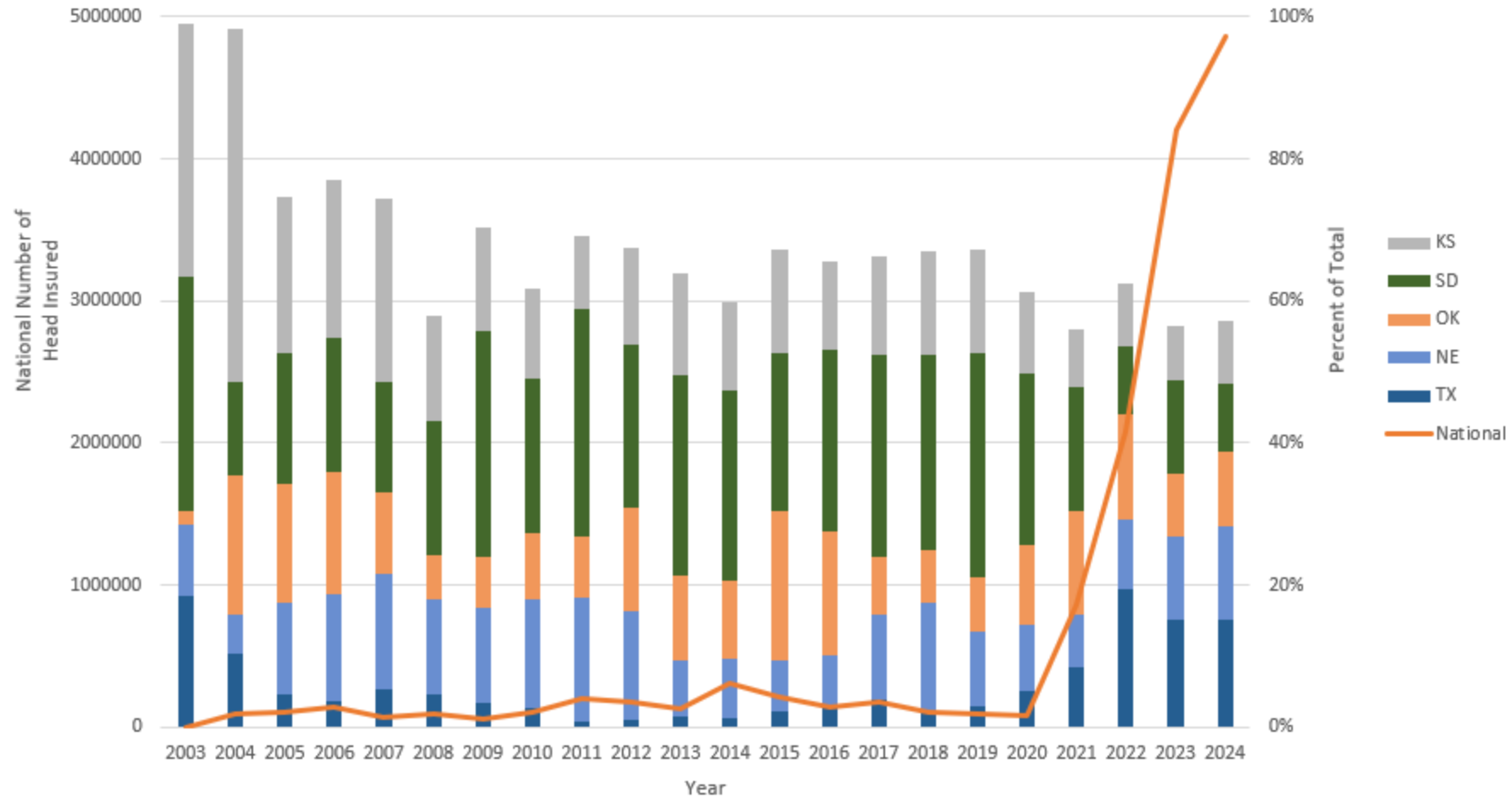
*2024 is still in progress and not included in the averages.

Source: <https://www.rma.usda.gov/en/Information-Tools/Summary-of-Business>, July 30, 2024.

	2013-2024	2023
Policies Indemnified	51%	44%
Policies earning Prem	18%	60%
Avg Hd/Policy	274	359
Avg Producer Premium/Hd	\$39.16	\$42.74

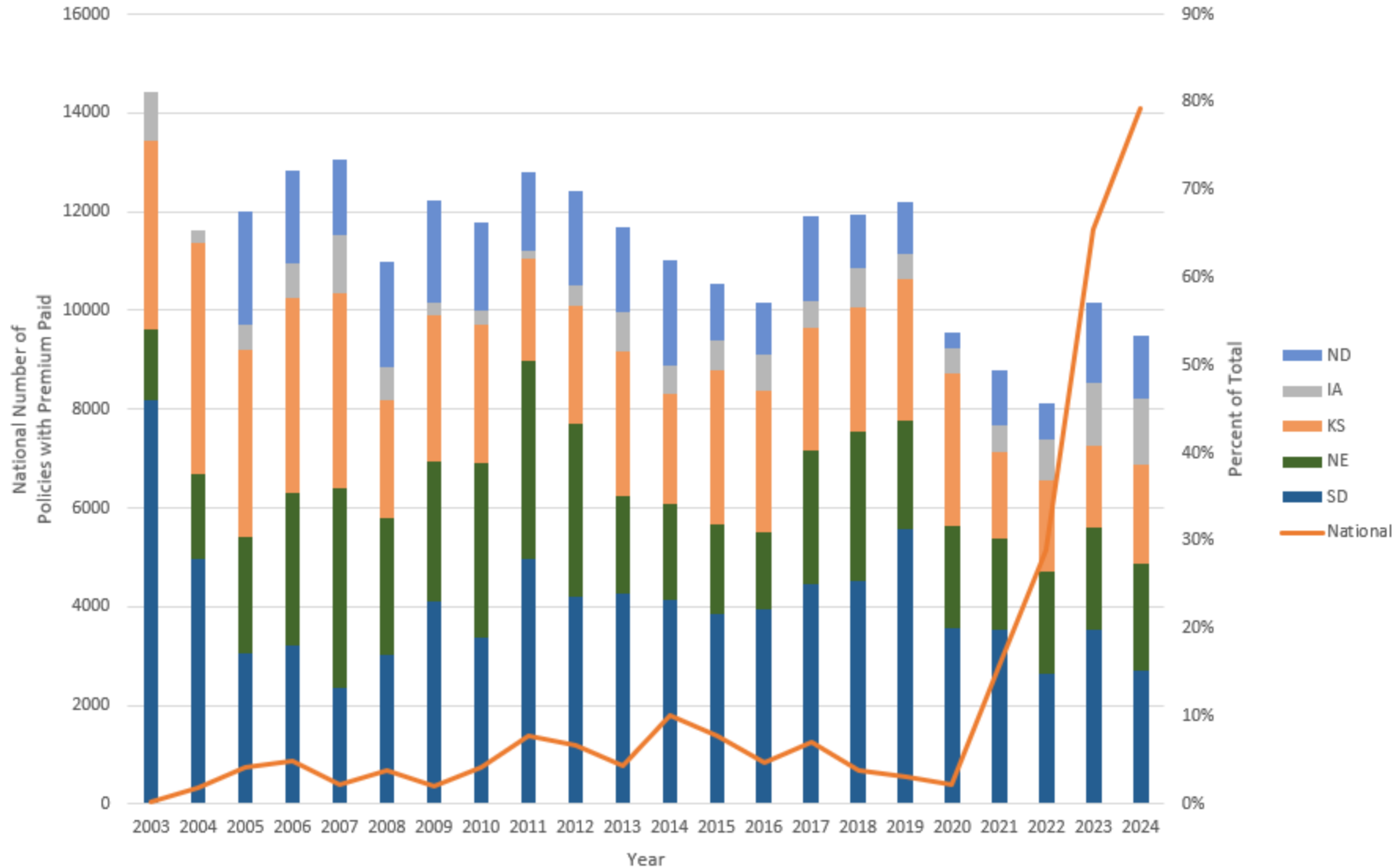
Historical Number of Head Insured

LRP-Feeder Cattle



Historical Number of Policies with Premium Paid

LRP-Feeder Cattle



LRP Example – early August to early November

LRP-Feeder Cattle Example Performance for Steers Weight 2 (600-900 lbs.) and Heifers Weight 1 (< 600 lbs.)												
Purchase Date	Expected Ending Value (Nov 5-7)	Actual Ending Value (Nov 5-7)	Net Change in Ending Value	Coverage Price	Indemnity	Total Premium	Subsidy ¹	Producer Premium	Net LRP Effect	Effective National Price	Deviation from Expected Ending Value	Indemnity Ratio (Indemnity /Producer Premium)
8/8/2005	105.335	116.06	\$10.73	98.34	0	0.804	0.105	0.70	(\$0.70)	115.36	\$10.03	0.00
8/7/2006	115.273	103.20	(\$12.07)	108.32	5.12	1.037	0.135	0.90	\$4.22	107.42	(\$7.85)	5.69
8/6/2007	117.336	108.76	(\$8.58)	116.01	7.25	3.182	0.414	2.77	\$4.48	113.24	(\$4.10)	2.62
8/6/2008	118.101	96.59	(\$21.51)	117.40	20.81	4.669	0.607	4.06	\$16.75	113.34	(\$4.76)	5.13
8/6/2009	101.586	93.15	(\$8.44)	99.71	6.56	2.806	0.365	2.44	\$4.12	97.27	(\$4.32)	2.69
8/6/2010	113.395	111.32	(\$2.08)	109.90	0	2.204	0.287	1.92	(\$1.92)	109.40	(\$4.00)	0.00
8/8/2011	135.654	141.97	\$6.32	131.65	0	3.484	0.453	3.03	(\$3.03)	138.94	\$3.29	0.00
8/6/2012	141.348	144.12	\$2.77	122.85	0	0.441	0.057	0.38	(\$0.38)	143.74	\$2.39	0.00
8/6/2013	160.211	164.59	\$4.38	159.54	0	3.693	0.480	3.21	(\$3.21)	161.38	\$1.17	0.00
8/6/2014	219.081	240.36	\$21.28	216.93	0	5.764	0.749	5.01	(\$5.01)	235.35	\$16.27	0.00
8/7/2015	206.948	188.47	(\$18.48)	200.82	12.35	3.776	0.491	3.29	\$9.06	197.53	(\$9.42)	3.75
8/8/2016	142.000	126.46	(\$15.54)	140.68	14.22	5.786	0.752	5.03	\$9.19	135.65	(\$6.35)	2.83
8/8/2017	144.965	159.01	\$14.05	140.12	0	5.279	0.686	4.59	(\$4.59)	154.42	\$9.45	0.00
8/6/2018	152.700	153.32	\$0.62	151.88	0	5.083	0.661	4.42	(\$4.42)	148.90	(\$3.80)	0.00
8/6/2019	138.671	146.26	\$7.59	137.97	0	5.669	1.134	4.54	(\$4.54)	141.72	\$3.05	0.00
8/6/2020	146.970	136.63	(\$10.34)	145.85	9.22	5.526	1.934	3.59	\$5.63	142.26	(\$4.71)	2.57
8/6/2021	166.700	154.62	(\$12.08)	165.43	10.81	5.944	2.080	3.86	\$6.95	161.57	(\$5.13)	2.80
8/8/2022	188.763	176.59	(\$12.17)	187.69	11.10	6.481	2.268	4.21	\$6.89	183.48	(\$5.28)	2.64
8/7/2023	253.344	238.89	(\$14.45)	251.87	12.98	8.045	2.816	5.23	\$7.75	246.64	(\$6.70)	2.48
Average	150.967	147.39	(\$3.58)	147.52	5.81	4.193	0.867	3.33	\$2.49	149.87	(\$1.09)	1.75

¹Subsidy from 2005-18 is 13%, 2019 is 20%, 2020-23 is 35%.

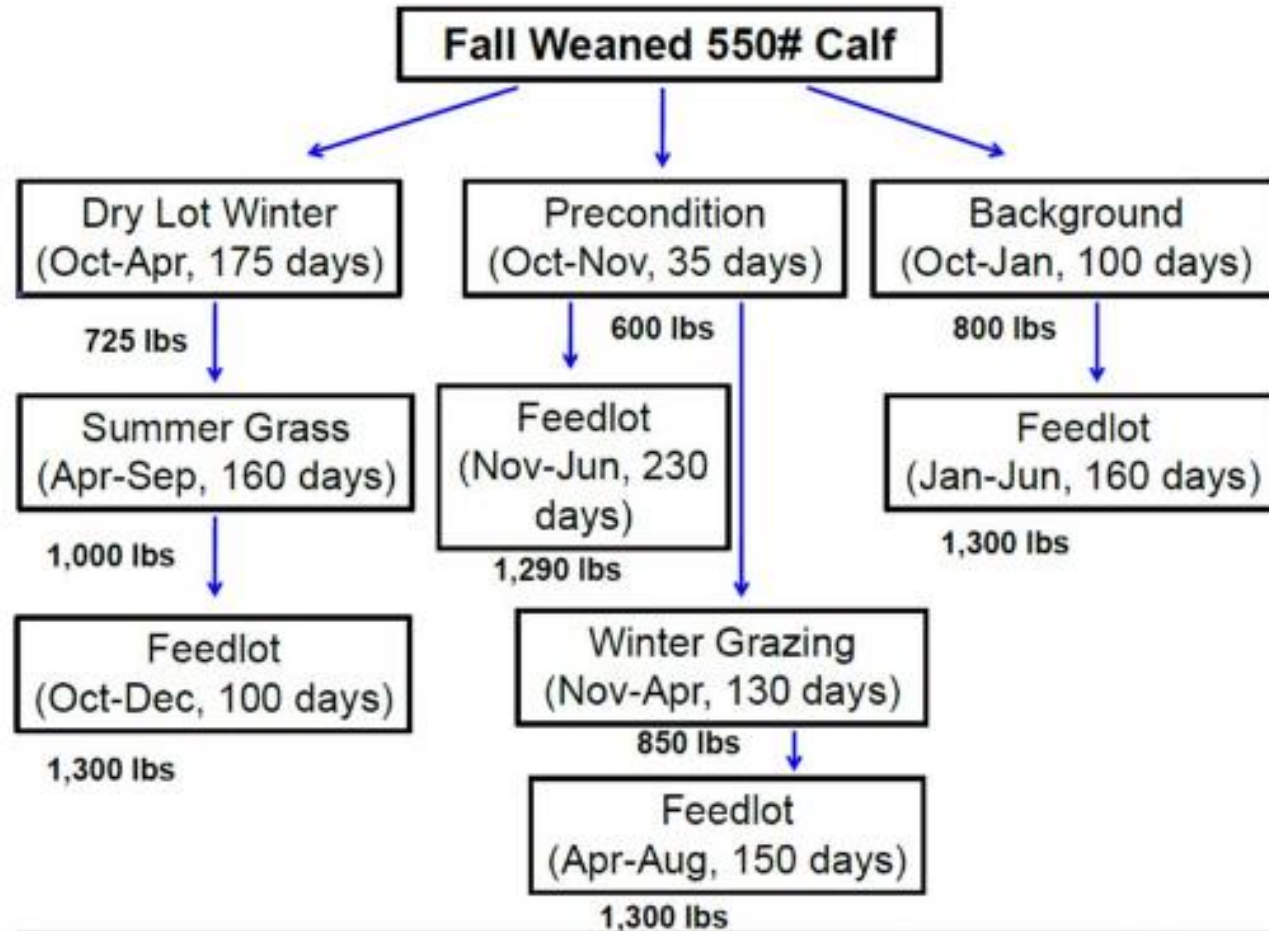
Source: http://www3.rma.usda.gov/apps/livestock_reports/



LRP Example – early August to early November



Matching Linked Decisions with Resources



CattleFax | THE DECIDING FACTOR



How “Unusual/Rare” are major changes in price expectations?

CME March Feeder Futures Prices from 1990 to 2023

• P(Price March 15 – Price October 15)

- 61.8% of the time price expectations are higher in October
- Largest price difference (-\$32.43 in 2019 (-23%), +19.48 in 2017 (+18%))
- 2021 was -\$5.97 (-3.7%)
- 2022 was \$11.55 (+6.5%)
- 2023 was -\$4.75 (+1.9%)
- Minimum differences (-\$1.23, -1.5% in 1993) and (+\$2.00, +1.9% in 2004)
- Average Difference (-\$1.54, -0.9%)



How “Unusual/Rare” are major changes in price expectations?

CME March Feeder Futures Prices from 1990 to 2023

• P(Price January 15 – Price October 15)

- 50% of the time price expectations are higher in October
- Largest price difference (-\$24.90 in 2015 (-14%), +18.93 in 2016 (+17%))
- 2021 was +\$1.18 (+0.7%)
- 2022 was +\$4.55 (+2.6%)
- 2023 was -\$23.97 (-9.5%)
- Minimum differences (-\$0.17, -0.2% in 2001) and (+\$1.07, +0.7% in 2012)
- Average Difference (-\$1.31, -0.3%)



Livestock Risk Protection (LRP) Insurance

LRP – Feeder Cattle Example: Retention from Late Oct. to Late Jan. 2015-2023 (Steers Weight 2)

Purchase Date	10/30/2015	10/31/2016	10/31/2017	10/31/2018	10/31/2019	10/30/2020	10/29/2021	10/31/2022	10/31/2023	Average	Loss Ratio
Expected Ending Value (Jan 29-30)	183.075	115.542	159.043	150.125	144.675	134.104	156.165	179.711	237.588	162.23	
Coverage Price	181.9	111.27	158.97	150	144	126.58	154.77	178.14	235.84	160.16	
Actual Ending Value (Jan 29-30)	160.58	130.29	147.51	142.57	142.38	136.43	158.44	180.42	236.32	159.44	
Indemnity	21.32	0	11.46	7.43	1.62	0	0	0	0	4.65	
Producer Premium	6.59	3.99	5.42	3.98	3.59	1.94	3.05	3.37	4.68	4.07	
Net Effect	\$14.73	(\$3.99)	\$6.04	\$3.45	(\$1.97)	(\$1.94)	(\$3.05)	(\$3.37)	(\$4.68)	\$0.58	1.14
<i>Net Effective Price</i>	<i>\$175.31</i>	<i>\$126.30</i>	<i>\$153.55</i>	<i>\$146.02</i>	<i>\$140.41</i>	<i>\$134.49</i>	<i>\$155.39</i>	<i>\$177.05</i>	<i>\$231.64</i>	<i>\$160.02</i>	



LRP for Retained Ownership of Calves

- Cow-Calf Enterprise Profitable
 - Grow calves till after first of year or retain as summer yearlings (Value of Gain/Cost of Gain)
 - Add value to grazing/hay/grain and efficiently use overheads
 - Protect a profit for cow-calf enterprise
 - How much would you spend to protect a profit?

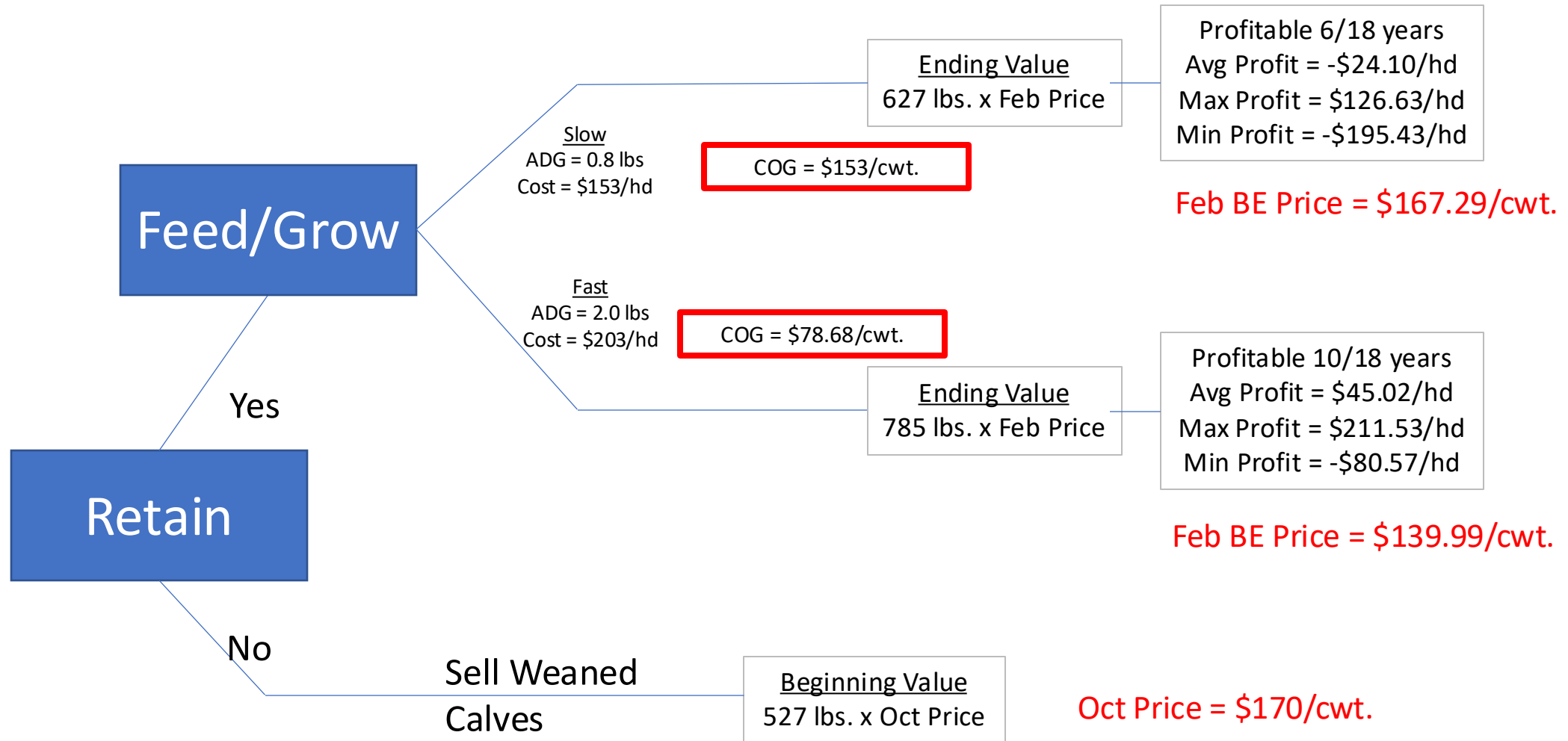


LRP for Backgrounding & Stocker-Yearling

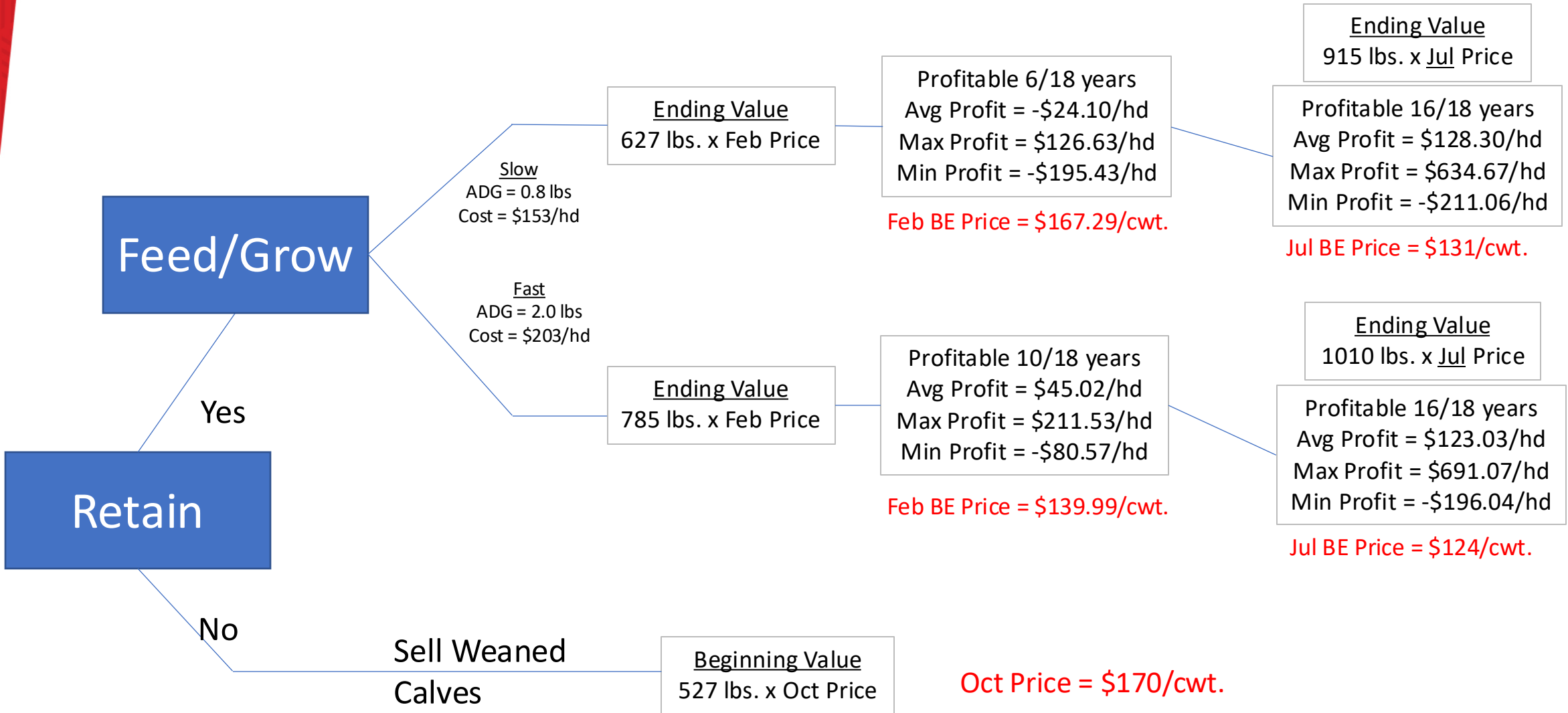
- Stocker-Yearling
 - Risk reward relationship
 - Large capital outlay
 - What percent of capital financed?
 - Interest rates are high for recent history
 - Cover first costs, interest and direct costs



Klopfenstein et al. (2020 Nebraska Beef Report); Merial, et al. (2021 Nebraska Beef Report)



Klopfenstein et al. (2020 Nebraska Beef Report); Merial, et al. (2021 Nebraska Beef Report)





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