

## BACKGROUNDING / STOCKER PROFITABILITY CONFERENCE



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**KBN**  
KENTUCKY BEEF NETWORK



**KADF**  
KENTUCKY AGRICULTURAL  
DEVELOPMENT FUND

A huge thanks to the Agricultural Development Board for funding this program through the Kentucky Beef Network!



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Extension Livestock Economist  
UK Agricultural Economics

## Livestock Risk Protection (LRP) Insurance For Margin Operations

### THE BASICS OF LRP INSURANCE

- LRP is a subsidized insurance product to protect against falling cattle prices
- Payouts (indemnities) are based on price changes in the CME feeder cattle index
  - Same index that settles futures, not what you sell cattle for!
- Producers choose how much protection they want in the form of "coverage levels"
- Works very similar to a put option to establish price floor

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### WHAT IS THE CME® FEEDER CATTLE INDEX

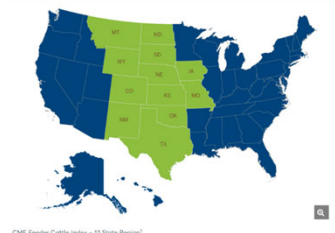
- 7-day moving average of feeder cattle prices in 12 states
- Medium / Large Frame #1-2 Steers - 700-900 lbs
  - No thin, fleshy, dairy, etc.
- LRP works to extent that this index moves with local prices
  - Basis should be considered

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### STATES INCLUDED - CME® FEEDER CATTLE INDEX



CME Feeder Cattle Index - 12 State Region!

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### LRP FEEDER CATTLE NUTS AND BOLTS

Type of Cattle	Calves, steers, heifers, Brahman, dairy, unborn calves
Ending Weights	Under 600 lbs. or 600-900 lbs.
Coverage Period	13-52 weeks
Coverage Level	70-100%
Maximum #Head per SCE	6,000
Maximum #Head per Year	12,000
Minimum #Head per SCE	1


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### HOW DOES IT WORK

- Available through many types of insurance agents
  - USDA has agent locator tool
- Each policy has an ending date and expected ending value
  - This is for the CME© index (will be very close to futures)
- Choose ending date near when cattle will be sold



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### POLICY ILLUSTRATION (SIMPLIFIED)


- Ending date: August 17, 2022
- Expected Ending Value: \$179 per cwt
- Selected available coverage levels
  - \$178 for \$5.22 per cwt – \$1 per cwt deductible
  - \$172 for \$3.45 per cwt - \$7 per cwt deductible
  - \$166 for \$2.06 per cwt - \$13 per cwt deductible

Premium is paid on lbs covered - \$3.45 per cwt X 700 lbs = \$24.15 per head



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### LET'S CONSIDER A SIMPLE STOCKER SCENARIO


- Place 550 lb steer, 1.5 lbs / day gain, 167 days
- Sell 800 lb steer in fall
- 0.75 acres per head
- October board at \$184
- Expected ending values at \$184
  - \$12 under basis estimate





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### SIMPLE SUMMER STOCKER BUDGET

Sales	# units	unit	price per unit	total
Feeder		800 lbs	\$1.72	\$1,375.98
<b>Expenses</b>				
Stocker	550 lbs		\$1.90	\$1,045.00
Pasture Cost	0.75 acre		\$35.00	\$26.25
Pasture Rent	0.75 acre		\$40.00	\$30.00
Mineral	0.25 lbs / day		\$0.40	\$16.67
Vet / Med	1 head		\$25.00	\$25.00
Sale Expenses	1 head		\$25.00	\$25.00
Hauling	1 head		\$20.00	\$20.00
Other	1 head		\$10.00	\$10.00
Interest	4.0% rate			\$20.87
Death loss	2.0%			\$21.33
<b>Total Expenses</b>				\$1,240.12
<b>Return to L, K, and M</b>				\$135.87

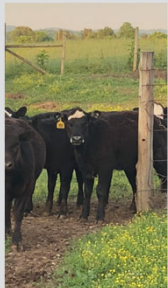
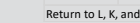
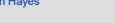


Photo: Dustin Hayes



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### SIMPLE LRP SCENARIO

- Plan to sell feeder steers in October weighing 800 lbs
  - Worried market will drop between now and October
- Purchase LRP policy with ending date in October
  - Expected ending value: **\$184** (CME Index)
  - Buy a **\$176** coverage level for \$4 per cwt (\$32 per head)
- Basis estimate – \$12 under for 800 lb steers?
- Estimated price floor around **\$164, minus \$4 premium**



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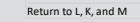


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### STOCKER BUDGET WITH LRP


Sales	# units	unit	price per unit	total
Feeder		800 lbs	\$1.72	\$1,375.98
<b>Expenses</b>				
Stocker	550 lbs		\$1.90	\$1,045.00
Pasture Cost	0.75 acre		\$35.00	\$26.25
Pasture Rent	0.75 acre		\$40.00	\$30.00
Mineral	0.25 lbs / day		\$0.40	\$16.67
Vet / Med	1 head		\$25.00	\$25.00
Sale Expenses	1 head		\$25.00	\$25.00
Hauling	1 head		\$20.00	\$20.00
<b>Insurance</b>	<b>1 head</b>		<b>\$32.00</b>	<b>\$32.00</b>
Other	1 head		\$10.00	\$10.00
Interest	4.0% rate			\$20.87
Death loss	2.0%			\$21.33
<b>Total Expenses</b>				\$1,272.12
<b>Return to L, K, and M</b>				\$103.87





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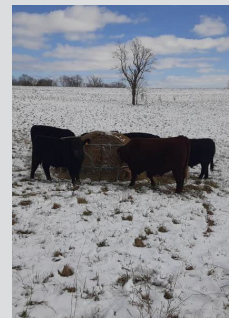
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### PRICES RISE

- LRP ending value ends up being \$204 per cwt (\$20 more than expected)
- You sell your steers for \$192 per cwt (\$1,536 per head)
- You spent \$4 per cwt on LRP insurance (\$32 per head)
- Best case scenario – purchased insurance and market improved

### RETURNS – RISING PRICES

Sales	# units	unit	price per unit	total
Feeder		800 lbs	\$1.92	\$1,535.98
<b>Expenses</b>				
Stocker	550 lbs		\$1.90	\$1,045.00
Pasture Cost	0.75 acre		\$35.00	\$26.25
Pasture Rent	0.75 acre		\$40.00	\$30.00
Mineral	0.25 lbs / day		\$0.40	\$16.67
Vet / Med	1 head		\$25.00	\$25.00
Sale Expenses	1 head		\$25.00	\$25.00
Hauling	1 head		\$20.00	\$20.00
Insurance	1 head		\$32.00	\$32.00
Other	1 head		\$10.00	\$10.00
Interest	4.0% rate			\$20.87
Death loss	2.0%			\$21.33
<b>Total Expenses</b>				\$1,272.12
<b>Return to L, K, and M</b>				\$263.86

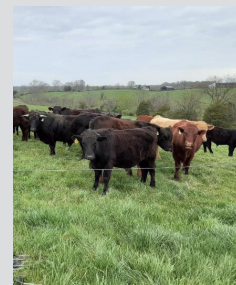


### PRICES FALL – A LITTLE

- LRP ending value ends up being \$180 per cwt (\$4 less than expected)
  - Still above \$176 coverage level – no insurance help
- You sell your steers for \$168 per cwt (\$1,344 per head)
- You spent \$4 per cwt on LRP insurance (\$32 per head)
- Market fell, but not enough to trigger indemnity

### RETURNS – SMALL PRICE DECLINE

Sales	# units	unit	price per unit	total
Feeder		800 lbs	\$1.68	\$1,343.98
<b>Expenses</b>				
Stocker	550 lbs		\$1.90	\$1,045.00
Pasture Cost	0.75 acre		\$35.00	\$26.25
Pasture Rent	0.75 acre		\$40.00	\$30.00
Mineral	0.25 lbs / day		\$0.40	\$16.67
Vet / Med	1 head		\$25.00	\$25.00
Sale Expenses	1 head		\$25.00	\$25.00
Hauling	1 head		\$20.00	\$20.00
Insurance	1 head		\$32.00	\$32.00
Other	1 head		\$10.00	\$10.00
Interest	4.0% rate			\$20.87
Death loss	2.0%			\$21.33
<b>Total Expenses</b>				\$1,272.12
<b>Return to L, K, and M</b>				\$71.87

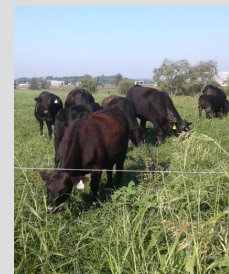


### PRICES FALL – BY A LOT

- LRP ending value ends up being \$164 per cwt (\$20 less than expected)
- You sell your steers for \$152 per cwt (\$1,216 per head)
- You spent \$4 per cwt on LRP insurance (\$32 per head)
- You receive an indemnity of \$12 per cwt (\$96 per head)
- Insurance paid out, but worse price result

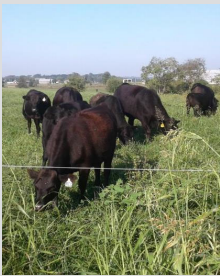
### RETURNS – LARGE PRICE DECLINE - WITH LRP

Sales	# units	unit	price per unit	total
Feeder		800 lbs	\$1.52	\$1,215.98
Indemnity	1 head		\$96.00	\$96.00
<b>Expenses</b>				
Stocker	550 lbs		\$1.90	\$1,045.00
Pasture Cost	0.75 acre		\$35.00	\$26.25
Pasture Rent	0.75 acre		\$40.00	\$30.00
Mineral	0.25 lbs / day		\$0.40	\$16.67
Vet / Med	1 head		\$25.00	\$25.00
Sale Expenses	1 head		\$25.00	\$25.00
Hauling	1 head		\$20.00	\$20.00
Insurance	1 head		\$32.00	\$32.00
Other	1 head		\$10.00	\$10.00
Interest	4.0% rate			\$20.87
Death loss	2.0%			\$21.33
<b>Total Expenses</b>				\$1,272.12
<b>Return to L, K, and M</b>				\$39.87



### RETURNS – LARGE PRICE DECLINE - NO LRP

Sales	# units	unit	price per unit	total
Feeder	800	lbs	\$1.37	\$1,215.98
Indemnity	1	head	\$0.00	\$0.00
<b>Expenses</b>				
Stocker	550	lbs	\$1.90	\$1,045.00
Pasture Cost	0.75	acre	\$35.00	\$26.25
Pasture Rent	0.75	acre	\$40.00	\$30.00
Mineral	0.25	lbs / day	\$0.40	\$16.67
Vet / Med	1	head	\$25.00	\$25.00
Sale Expenses	1	head	\$25.00	\$25.00
Hauling	1	head	\$20.00	\$20.00
Insurance	1	head	\$0.00	\$0.00
Other	1	head	\$10.00	\$10.00
Interest	4.0%	rate		\$20.87
Death loss	2.0%			\$21.33
Total Expenses				\$1,240.12
Return to L, K, and M				(\$24.13)



### LRP NET RETURN OUTCOMES \$176 COVERAGE LEVEL, \$12 BASIS, \$4 PREMIUM

LRP Ending Value	Local Price	Premium Cost per cwt	Indemnity per cwt	Return per Head

### LRP NET RETURN OUTCOMES \$176 COVERAGE LEVEL, \$12 BASIS, \$4 PREMIUM

LRP Ending Value	Local Price	Premium Cost per cwt	Indemnity per cwt	Return per Head
\$180	\$168	\$4	\$0	\$72

### LRP NET RETURN OUTCOMES \$176 COVERAGE LEVEL, \$12 BASIS, \$4 PREMIUM

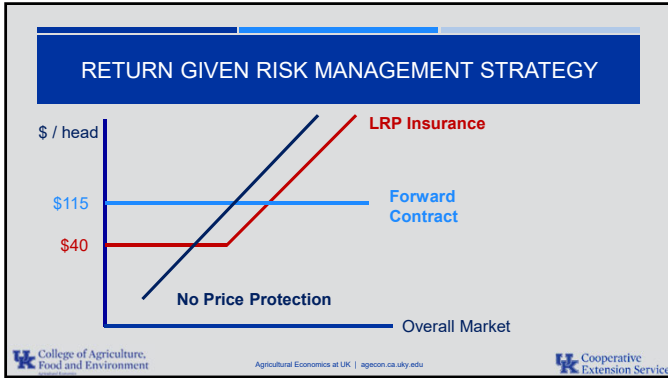
LRP Ending Value	Local Price	Premium Cost per cwt	Indemnity per cwt	Return per Head
\$180	\$168	\$4	\$0	\$72
\$170	\$158	\$4	\$4	\$40
\$160	\$148	\$4	\$14	\$40

### LRP NET RETURN OUTCOMES \$176 COVERAGE LEVEL, \$12 BASIS, \$4 PREMIUM

LRP Ending Value	Local Price	Premium Cost per cwt	Indemnity per cwt	Return per Head
\$190	\$178	\$4	\$0	\$152
\$180	\$168	\$4	\$0	\$72
\$170	\$158	\$4	\$4	\$40
\$160	\$148	\$4	\$14	\$40

### LRP NET RETURN OUTCOMES \$176 COVERAGE LEVEL, \$12 BASIS, \$4 PREMIUM

LRP Ending Value	Local Price	Premium Cost per cwt	Indemnity per cwt	Return per Head
\$210	\$198	\$4	\$0	\$312
\$200	\$188	\$4	\$0	\$232
\$190	\$178	\$4	\$0	\$152
\$180	\$168	\$4	\$0	\$72
\$170	\$158	\$4	\$4	\$40
\$160	\$148	\$4	\$14	\$40



### WHAT IF I NEED TO SELL AT A DIFFERENT TIME

- Indemnity is calculated on ending date!
- Can sell up to 60 days before
  - Rally after sale could lower indemnity
- Can sell anytime after
  - Unprotected past ending date




### WHAT COVERAGE LEVELS ARE BEST

- Risk preference / financial situation?
  - Coverage level vs cost
- How much risk can you stand?
  - Cost of production
  - Bank loan
  - Can you self-insure



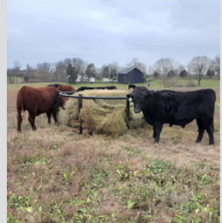
### WHEN COMPARING TO PUT OPTIONS...

- LRP Advantages
  - Available in any quantity
  - Significant premium subsidy
  - No commission or margin
  - Can combine with other strategies
- LRP Disadvantages
  - 12,000 head per producer max
  - Less flexible



### FINAL RISK MANAGEMENT THOUGHTS

- Know how changes in price impact profit
  - Budget sensitivity
- Seek stability, don't chase prices
- Set pricing targets ahead
  - Takes the emotion out of decisions
- Don't look back after decision is made
- If you aren't leaving money on the table occasionally...



### Contact Information

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