

USU LRP Decision Tool User's Guide

The purpose of this document is to provide a user's guide for the USU Livestock Risk Protection (LRP) Support Tool. This tool provides a simple way to analyze historical LRP contracts to aid producers in making current LRP insurance coverage selections that have historically been associated with optimal outcomes. The first step in using the tool is to load the website on your browser. The web address is <https://farmanalysis.usu.edu/lrp/>.



The screenshot displays the 'Livestock Risk Protection (LRP) Support Tool' website. The page features a header with the title and navigation links for 'Main', 'About', and 'Help'. A central 'Policy Options' form is overlaid on a background image of a cow herd in a field. The form includes a dropdown menu for 'Commodity type' and a dropdown menu for 'Marketing month'. The background image shows a herd of cows of various colors grazing in a green field with mountains in the distance.

Livestock Risk Protection (LRP) Support Tool

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Policy Options

LRP

Commodity type: ----- ▾

Marketing month: ----- ▾

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Once the main page of the LRP Support Tool is loaded, you can begin entering the required information. You will first need to enter the commodity type that you are interested in insuring. The drop-down menu has options for the different types of Feeder Cattle (Steers, Heifers, Predominately Brahman, and Predominately Dairy), Fed Cattle, and Swine which are currently insurable under the LRP program. Unborn livestock contracts are not included in the dropdown list.

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Policy Options

LRP

Commodity type:

Marketing month:

- Feeder Cattle**
 - Feeder Steers Weight 1
 - Feeder Steers Weight 2
 - Feeder Heifers Weight 1
 - Feeder Heifers Weight 2
 - Feeder Brahman Weight 1
 - Feeder Brahman Weight 2
 - Feeder Dairy Weight 1
 - Feeder Dairy Weight 2
- Fed Cattle**
 - Fed Cattle
- Swine**
 - Swine

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The second required piece of information is the marketing month. This will be the month that the contract expires, which normally corresponds with the month you are planning to sell your livestock. All twelve months are included in the drop-down menu.

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Policy Options

LRP

Commodity type: ----- ▾


Marketing month: ----- ▾

- January
- February
- March
- April
- May
- June
- July
- August
- September
- October
- November
- December

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For this example we will choose “Feeder Cattle Steers Weight 2”, and the marketing month of “October”. Once you have selected the commodity type and the marketing month the page will automatically update to show the analysis based on the available historically LRP data.

If you want to analyze different combinations of commodity type and marketing month, you can input new information by changing your selection in the drop-down menu at the top center of the screen in the box titled “Policy Options” and the page will update automatically.

Historically Optimal Policies - Net Return Amount			Historically Optimal Policies - Probability of Positive Net Return			Historically Optimal Policies - Either		Historically Optimal Policies - Both	
Length (weeks)	Coverage Level	Net Return	Length (weeks)	Coverage Level	Probability	Length (weeks)	Coverage Level	Length (weeks)	Coverage Level
17	>97.5%	\$0.19	13	>97.5%	48%	17	>97.5%	13	>97.5%
13	>97.5%	\$1.20	Avg Probability of Positive Return 48%			Avg Net Return per CWT \$0.70		Avg Net Return per CWT \$1.20	
Avg Net Return per CWT \$0.70			Avg Cost per CWT \$3.58			Avg Probability of Positive Return 36%		Avg Probability of Positive Return 48%	
Avg Cost per CWT \$3.84						Avg Cost per CWT \$3.84			

After you have entered that information, you will be able to analyze historical “optimal” contracts. Four tables and two charts are generated. The first table displays the historically optimal policies that have been associated with the highest average net return. Contracts are shown as a combination of length (weeks), coverage level (percentage) and the average net return for that combination. The average net return per CWT and average cost per CWT of all optimal contracts identified are also provided. From this example for “Feeder Steers Weight 2” with a marketing month in October, the 13- and 17-week contracts with a coverage level above 97.5% have been identified as having been historically optimal in regards to maximizing the average net return.

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Policy Options

LRP

Commodity type: Feeder Steers Weight 2

Marketing month: October

Historically Optimal Policies - Net Return Amount

Length (weeks)	Coverage Level	Net Return
17	>97.5%	\$0.19
13	>97.5%	\$1.20
Avg Net Return per CWT \$0.70		
Avg Cost per CWT \$3.84		

Historically Optimal Policies - Probability of Positive Net Return

Length (weeks)	Coverage Level	Probability
13	>97.5%	48%
Avg Probability of Positive Return 48%		
Avg Cost per CWT \$3.58		

Historically Optimal Policies - Either

Length (weeks)	Coverage Level
17	>97.5%
13	>97.5%
Avg Net Return per CWT \$0.70	
Avg Probability of Positive Return 36%	
Avg Cost per CWT \$3.84	


Historically Optimal Policies - Both

Length (weeks)	Coverage Level
13	>97.5%
Avg Net Return per CWT \$1.20	
Avg Probability of Positive Return 48%	
Avg Cost per CWT \$3.58	

The second table displays the historically optimal policies that have been associated with the highest probability of a positive net return. Contracts are shown as a combination of length (weeks), coverage level (percentage) and the probability of a positive net return for that combination. The average probability and average cost per CWT of those optimal contracts are also provided. From this example for “Feeder Steers Weight 2” with a marketing month in October, the 13-week contract above 97.5% has been identified as having been historically optimal in regards to probability of a positive net return.

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Policy Options

LRP

Commodity type:

Marketing month:

Historically Optimal Policies - Net Return Amount

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Historically Optimal Policies - Either

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Historically Optimal Policies - Both

Length (weeks)	Coverage Level
13	>97.5%
Avg Net Return per CWT \$1.20	
Avg Probability of Positive Return 48%	
Avg Cost per CWT \$3.58	

The third table displays the historically optimal policies that have historically provided either quality of the first two tables (highest average net return or highest probability of a positive net return). Contracts are shown as a combination of length (weeks), and coverage level (percentage). The average net return per CWT, average probability of a positive net return, and average cost per CWT of those optimal contracts are provided. From this example for “Feeder Steers Weight 2” with a marketing month in October, the 13- and 17-week contracts with a coverage level above 97.5% have been identified as having been historically optimal in regards to either maximizing the average net return or probability of a positive net return.

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LRP

Commodity type: Feeder Steers Weight 2 ▼

Marketing month: October ▼

Historically Optimal Policies - Net Return Amount

Length (weeks)	Coverage Level	Net Return
17	>97.5%	\$0.19
13	>97.5%	\$1.20
Avg Net Return per CWT \$0.70		
Avg Cost per CWT \$3.84		

Historically Optimal Policies - Probability of Positive Net Return

Length (weeks)	Coverage Level	Probability
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Avg Probability of Positive Return 48%		
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Historically Optimal Policies - Either

Length (weeks)	Coverage Level
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Avg Net Return per CWT \$0.70	
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Avg Cost per CWT \$3.84	

Historically Optimal Policies - Both

Length (weeks)	Coverage Level
13	>97.5%
Avg Net Return per CWT \$1.20	
Avg Probability of Positive Return 48%	
Avg Cost per CWT \$3.58	

The fourth table displays the historically optimal policies that have been simultaneously associated with the highest average net return and the highest probability of a positive net return. Contracts are shown as a combination of length (weeks), and coverage level (percentage). The average net return per CWT, average probability of a positive net return and average cost per CWT of those optimal contracts are provided. From this example for “Feeder Steers Weight 2” with a marketing month in October, the 13-week contract with a coverage level above 97.5% has been identified as having been historically optimal in regards to both simultaneously maximizing the average net return or probability of a positive net return.

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LRP

Commodity type:

Marketing month:

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Historically Optimal Policies - Net Return Amount

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Historically Optimal Policies - Probability of Positive Net Return

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Historically Optimal Policies - Either

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Historically Optimal Policies - Both

Length (weeks)	Coverage Level
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Avg Net Return per CWT \$1.20	
Avg Probability of Positive Return 48%	
Avg Cost per CWT \$3.58	

The LRP tool generates two graphs, the first graph illustrates the historical average net return. Contracts of 13, 17, 21, 26, and 30 weeks are shown with coverage levels of 85-90%, 90-92.5%, 92.5-95%, 95-97.5%, and >97.5%. One convenient feature of this graph is the ability to add or remove coverage lengths from the displayed output by clicking on the coverage lengths within the legend of the graph. Hovering the mouse over a bar within the bar chart displays the average net return amount for that combination of coverage length and level.



The second graph highlights the historical probability of a positive net return. Similar to the graph of average net returns, contracts of 13, 17, 21, 26, and 30 weeks are shown with coverage levels of 85-90%, 90-92.5%, 92.5-95%, 95-97.5%, and >97.5%. Coverage lengths can be added or removed from the displayed output by clicking on the coverage lengths within the legend of the graph. Hovering the mouse over a bar within the bar chart displays the average probability of a positive net return for that combination of coverage length and level.

