

6-2-2016

Annual Forage Production Insurance

Jay Parsons

University of Nebraska-Lincoln

Follow this and additional works at: http://digitalcommons.unl.edu/agecon_cornhusker



Part of the [Agricultural Economics Commons](#)

Parsons, Jay, "Annual Forage Production Insurance" (2016). *Cornhusker Economics*. 790.
http://digitalcommons.unl.edu/agecon_cornhusker/790

This Article is brought to you for free and open access by the Agricultural Economics Department at DigitalCommons@University of Nebraska - Lincoln. It has been accepted for inclusion in Cornhusker Economics by an authorized administrator of DigitalCommons@University of Nebraska - Lincoln.

Cornhusker Economics

Annual Forage Production Insurance

Market Report	Year Ago	4 Wks Ago	5-27-16
Livestock and Products.			
Weekly Average			
Nebraska Slaughter Steers, 35-65% Choice, Live Weight.	159.41	123.79	*
Nebraska Feeder Steers, Med. & Large Frame, 550-600 lb.	*	179.32	*
Nebraska Feeder Steers, Med. & Large Frame 750-800 lb.	*	148.94	153.75
Choice Boxed Beef, 600-750 lb. Carcass.	259.11	215.51	223.19
Western Corn Belt Base Hog Price Carcass, Negotiated.	79.71	70.35	73.35
Pork Carcass Cutout, 185 lb. Carcass 51-52% Lean.	85.11	81.76	83.47
Slaughter Lambs, woolled and shorn, 135-165 lb. National.	150.05	132.10	139.03
National Carcass Lamb Cutout FOB.	356.20	241.09	343.53
Crops.			
Daily Spot Prices			
Wheat, No. 1, H.W. Imperial, bu.	4.46	3.80	3.68
Corn, No. 2, Yellow Nebraska City, bu.	3.42	3.60	3.81
Soybeans, No. 1, Yellow Nebraska City, bu.	9.14	9.56	10.21
Grain Sorghum, No.2, Yellow Dorchester, cwt.	6.73	5.66	3.07
Oats, No. 2, Heavy Minneapolis, Mn, bu.	2.69	2.57	2.56
Feed			
Alfalfa, Large Square Bales, Good to Premium, RFV 160-185 Northeast Nebraska, ton.	*	128.00	167.50
Alfalfa, Large Rounds, Good Platte Valley, ton.	*	80.00	*
Grass Hay, Large Rounds, Good Nebraska, ton.	120.00	85.00	85.01
Dried Distillers Grains, 10% Moisture Nebraska Average.	160.00	128.50	141.50
Wet Distillers Grains, 65-70% Moisture Nebraska Average.	51.00	49.51	46.50
* No Market			

Annual crops planted for forage production are increasing throughout Nebraska. Historically, this production would have fallen outside of normal crop insurance coverage options. However, in 2014, the Annual Forage Insurance Plan was offered for the first time from the USDA – Risk Management Agency (RMA) as a pilot program for the states of Nebraska, North Dakota, South Dakota, Kansas, Oklahoma, and Texas. It was expanded to include Colorado in 2016.

The Annual Forage Insurance Plan is designed to meet the production risk management needs of producers planting *annual* forage crops for use as livestock feed or fodder. This includes but is not limited to grazing, haying, grazing/haying, grain/grazing, green chop, grazing/green chop, or silage.

It is available for two different seven month growing seasons.

The signup/sales closing date is July 15 for coverage on Growing Season 1 (forage planted between July 15 and November 15) with coverage available for a growing season from September 1 to March 31. The acreage reporting deadline is November 15 so a producer has until then to report actual planted acreage upon which coverage will apply. Growing Season 1 would fit a traditional second crop forage season following a late summer or early fall harvest of the primary crop.

Annual Forage Insurance is also available for a spring growing season (Growing Season 2) from March 1 to September 30 for forage planted between December 15 and July 15. The signup/sales closing date for this coverage is December 15. The acreage reporting deadline for Growing Season 2 is July 15.

It is the policy of the University of Nebraska–Lincoln not to discriminate based upon age, race, ethnicity, color, national origin, gender-identity, sex, pregnancy, disability, sexual orientation, genetic information, veteran’s status, marital status, religion or political affiliation.

Both irrigated and non-irrigated acres are insurable. Each county has a County Base Value determined for it by RMA that represents its annual forage productive value regardless of production method. In Nebraska, the County Base Value varies from \$146.42 per acre in the Panhandle to \$157.56 per acre in the northeastern corner of the state (Figure 1).

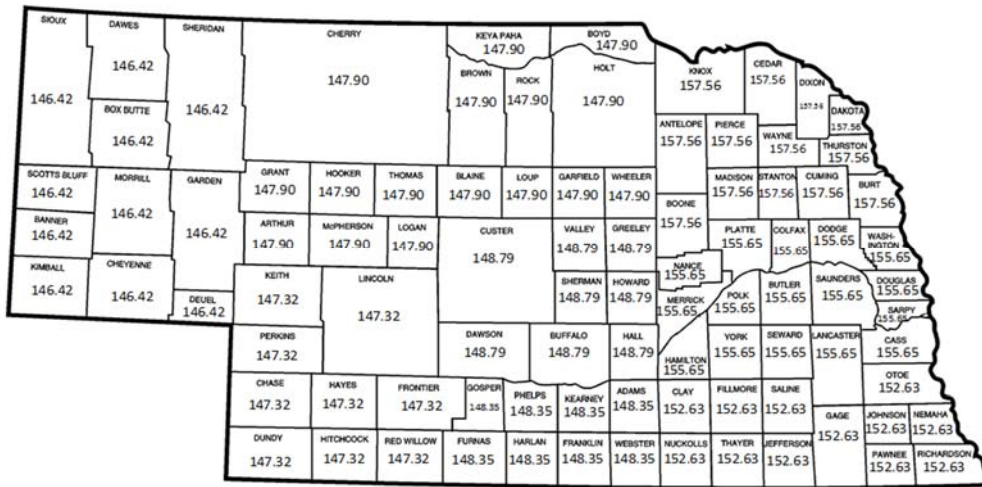


Figure 1: Nebraska Map of County Base Values for the RMA Annual Forage Insurance Plan (2016).

Producers participating in the program insure a percentage of their County Base Value by designating a productivity factor between 60% and 150%. This allows them to customize their coverage to fit their risk management needs. For example, in Lancaster County, a producer could attach liability coverage between \$93.39 per acre and \$233.47 based on their productivity factor selection and a County Base Value of \$155.65 per acre.

Similar to Pasture, Rangeland and Forage insurance (PRF), the Annual Forage Insurance Plan is based on rainfall index data provided by the National Oceanic and Atmospheric Administration Climate Prediction Center (NOAA CPC). Producers are able to insure annual forage production value by dividing their liability across a series of two month intervals and insuring based on the Expected Grid Index representing the average precipitation data for the Grid ID during each interval. The grids are 0.25 degrees in latitude by 0.25 degrees in longitude. This translates to roughly 17 miles by 17 miles at the equator. Producers can choose to allocate between 10% and 45% of their coverage protection to any one two-month interval without coverage overlap.

Producers select a coverage level between 70% and 90% of the Expected Grid Index to attach to their policy. This acts

as an insurance deductible. If the current year precipitation index for an insured interval falls below the coverage level, the producer purchasing the insurance may receive an in-demnity payment based on the amount of the deficit and the dollar value insured.

The coverage level selected also determines the level of premium subsidy. Premium costs are subsidized between 51% and 59% depending upon the coverage level selected (Table 1).

Annual Forage Insurance Plan coverage can be applied to a double crop forage (for example, a forage planted in the fall following soybeans). However, evidence of similar production practices in two out the last four years are part of the eligibility requirements for the coverage.

RMA provides a Grid ID Locator, Decision Support Tool, Historical Indices tool online at the URL <http://www.rma.usda.gov/policies/ri-vi/annualforage.html> to allow people to experiment with possible policy coverages.

For example, suppose a Lancaster County producer wanted to insure

100 acres of annual forage at 100% of the County Base Value (\$155.65) at a 90% coverage level. The dollar amount of protection would be $100\% \times \$155.65 \times 90\% = \140.09 per acre.

For illustrative purposes only, I selected Grid ID 24733 in Lancaster County, NE to produce Tables 2-4 under the assumption of acquiring Annual Forage Insurance Plan coverage on 100 acres of fall planted forage in Growing Season 1. A sample interval coverage selection of 45% of value in Sep-Oct, 35% of value in Nov-Dec, and 20% of value in Jan-Feb was used to produce the sample calculations.

Table 2 represents a sample premium calculation for 2016. Table 3 shows the actual rainfall index values for the insured intervals in the 2014-2016 crop years. Finally, Table 4 shows the indemnity payments that would have been paid out under this sample coverage in 2014-2016 given the actual index values.

The average per acre indemnity payment of \$18.30 indicated in Table 4 exceeds the average per acre premium cost to the producer of \$14.86 as indicated in Table 2 over the three year sample period. While the differences are not large, Annual Forage Insurance Plan coverage

provides another avenue for producers to protect the investment associated with planting a crop.

Lack of precipitation is one of the main risks associated with growing crops. The Annual Forage Insurance Plan is an attempt to address the potential impacts of this uncertainty when it comes to growing annual forages. In a rain fed cropping situation where the annual forage is planted in the fall following a primary crop, timely precipitation can play a key role in success or failure. In my opinion, expanding or moving Growing Season 1 forward to include the month of August would make the Annual Forage Insurance Plan an even more effective risk management tool for Nebraska producers.

As it is, there were 26 Annual Forage Insurance Plan policies in force in Nebraska during the 2015 crop year. These policies covered 12,593 acres. Nineteen (73%) of the policies earned an indemnity with an overall unsubsidized loss ratio of 0.54. Overall the total indemnity payments exceeded the total producer premiums collected by approximately 4.8, indicating a lower than expected payout but a positive net cash flow to the producers.

People interested in purchasing Annual Forage Insurance should contact their local crop insurance agent and consult the online resources available at the RMA website (<http://www.rma.usda.gov>).

Table 1: Annual Forage Insurance Plan Coverage Levels and Premium Subsidy Rates

Coverage Level	90%	85%	80%	75%	70%
RMA Premium Subsidy	51%	55%	55%	59%	59%

Table 2: Annual Forage Insurance Plan 2016 sample premium calculation (Grid ID 24733, Lancaster County, NE)

Index Interval	% of Value	Policy Protection	Total Premium	Premium Subsidy	Producer Premium
Sep - Oct	45	\$6,304	\$1,121	\$572	\$549
Nov - Dec	35	\$4,903	\$1,235	\$630	\$605
Jan - Feb	20	\$2,802	\$677	\$345	\$332
Policy Total	100	\$14,009	\$3,033	\$1,547	\$1,486
Per Acre		\$140.09	\$30.33	\$15.47	\$14.86

Table 3: Annual Forage Insurance Plan Actual Index Values (Grid ID 24733, Lancaster County, NE)

Index Interval	Actual Index Values		
	2014	2015	2016
Sep - Oct	131.3	166.4	70.6
Nov - Dec	64.5	60.7	288.9
Jan - Feb	53.2	114.1	119.2

Table 4: Annual Forage Insurance Plan 2016 sample indemnity calculations (90% coverage in Grid ID 24733, Lancaster County, NE)

		Sample Indemnities			
Index Interval	% of Value	2014	2015	2016	Average
Sep - Oct	45	\$0	\$0	\$1,359	\$453
Nov - Dec	35	\$1,389	\$1,596	\$0	\$995
Jan - Feb	20	\$1,146	\$0	\$0	\$382
Policy Total	100	\$2,535	\$1,596	\$1,359	\$1,830
Per Acre		\$25.35	\$15.96	\$13.59	\$18.30

Jay Parsons, (402) 472-1911
 Associate Professor
 Dept. of Agricultural Economics
 University of Nebraska-Lincoln
jparsons4@unl.edu