

BARNYARDS & BACKYARDS

2017 Wyoming Crop Insurance Summary

Wyoming crop insurance use for 2017 in Wyoming was relatively steady for crop policies (2,081), down slightly from 2016 (see RMA Summary of Business bit.ly/wyorisksum).

The 2017 overall loss ratio was lower at 0.60 (losses divided by premiums paid) and significantly lower than 2016 (0.95).

Producers insured 2,470,837 acres, which was over 400,000 more acres than 2016. Most of this growth was in Pasture, Rangeland, Forage - Rainfall Index (PRF-RI) policies. The total crop acres insured by PRF was 49 percent of all acres reported (797,296 acres) compared to 48 percent in 2016 (820,621 acres).

The loss ratio is at its second lowest level, as well as the number of reported losses, when comparing current values to the previous five years. This, along with the net acreage increase, seems to indicate producers are making these insurance programs an established part of their year-to-year risk management planning.

Crop Policies

The four main types of crop policies sold in Wyoming are the traditional Actual Production History (APH), Revenue Protection (RP), Revenue Protection with Harvest Price Exclusion (RP-HPE), and Yield Protection (YP).

Information for these policies mirrors the overall insurance data for Wyoming; significantly fewer indemnities when compared with 2016 and relatively similar acreages. Both APH and RP policies showed an increase in insured acres, while YP declined 14.2 percent from 2016.

Pasture, Range and Forage - Rainfall Index (PRF-RI) Insurance

PRF-RI is one of the more popular policies among livestock producers for covering forage losses due to lack of precipitation. This program has seen significant growth from 2016, when the conversion was made from Vegetative Index to Rainfall Index.

Net acres grew to 2,081,288 in 2017 from 1,654,474 in 2016, with just a 5.99 percent increase in the number of policies sold. The loss ratio of 0.66 indicates overall conditions in the state improved over 2016.

Livestock Policies and Whole Farm Policies

Insurance options for livestock in Wyoming have always been relatively undersold when compared to the total number of livestock in the state. The two main price/revenue insurance programs available include Livestock Risk Protection (LRP) and Livestock Gross Margin (LGM).

These policies help offset overall market price declines associated with the livestock. While no LGM policies were sold in Wyoming in 2017, a sizeable increase occurred in two types of LRP policies for 2017. Table 4 describes a significant decline in LRP sales for fed cattle, down 75 percent, but LRP for feeder cattle and lambs showed large increases. This may indicate more price uncertainty than in previous years and an increasing willingness to use insurance to counter price risk.

Whole Farm Revenue Protection (WFRP) was again available to Wyoming producers in 2017. While complex when compared to other insurance programs, WFRP offers protection against income losses for producers of crop or livestock commodities that may not be served by other insurance programs. Total liability covered in 2017 by Wyoming producers was \$3,209,542, up substantially compared with \$1,229,026 in 2016.

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Table 1. 2013-2017 Insurance Data Comparison

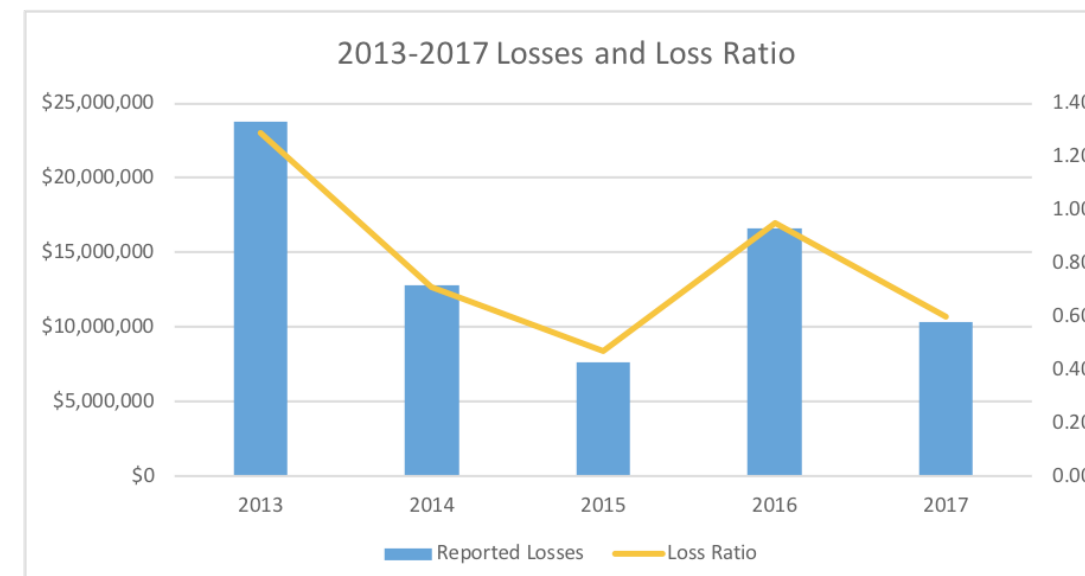


Table 2. Wyoming 2016-17 Crop Insurance Policy Data Comparison

Type	Policies Earning Prem.	Policies w/ Indemnity	Net Acres	Liabilities	Total Premium	Indemnity	Loss Ratio
2016 APH	799	329	154,722	\$43,449,252	\$5,822,101	\$5,931,095	1.02
2017 APH	772	239	161,249	\$47,821,518	\$5,335,366	\$3,318,864	0.62
% Change	-3.38%	-27.36%	4.22%	10.06%	-8.36%	-44.04%	-39.22%
2016 RP	585	270	136,095	\$27,512,875	\$4,515,185	\$4,086,679	0.91
2017 RP	576	202	137,192	\$28,496,921	\$4,559,057	\$2,997,907	0.66
% Change	-1.54%	-25.19%	0.81%	3.58%	0.97%	-26.64%	-27.47%
2016 YP	571	144	104,005	\$27,593,667	\$2,423,655	\$1,571,087	0.65
2017 YP	517	100	89,235	\$22,368,691	\$2,079,060	\$1,084,779	0.52
% Change	-9.46%	-30.56%	-14.20%	-18.94%	-14.22%	-30.95%	-20.00%

Note: No policies for RP-HPE were sold and therefore are not reported.

Table 3. PRF-RI Policies in Wyoming 2016-17 Comparison

Year	Number of Policies	Net Acres	Total Liability	Total Premium	Indemnity	Loss Ratio
2016	167	1,654,474	\$27,268,989	\$4,527,876	\$4,794,386	1.06
2017	177	2,081,288	\$28,496,921	\$4,559,057	\$2,997,907	0.66
% Change	5.99%	25.80%	4.50%	0.69%	-37.47%	-37.74%

RI-PRF Resources

- Visit RMA's PRF Support Tool at bit.ly/prftool
- Use the Grid Locator to determine a grid(s) area for coverage.
- Use the Decision Support Tool to decide coverage levels, view historical indices and actuarial information, and determine the coverage that best fits a specific situation.

Federal crop insurance has become a vital part of successful risk management for America's ag producers.

The number of programs and policy types has grown to where there is most likely an insurance policy or program to benefit any ag operation.

Visit RightRisk.org to learn more about how crop insurance can fit with risk management planning or for other risk management information.

Table 4. LRP Policies in Wyoming, 2016-17

Policy	Year	Total Liability
LRP Fed Cattle	2016	\$537,681
LRP Fed Cattle	2017	\$131,242
% change		-75.59%
LRP Feeder Cattle	2016	\$401,921
LRP Feeder Cattle	2017	\$3,680,383
% change		815.70%
LRP Lamb	2016	\$1,229,026
LRP Lamb	2017	\$4,929,527
% change		301.09%

The RightRisk Analytic Toolbox

- Available at RightRisk.org
- 7 spreadsheet-based risk management tools
- Allows for a more full accounting of risk in business operations by allowing the user to enter a range of data for expected outcomes in several tools
- Covers a wide range of risk management topics including forage leasing, budgeting, and machinery cost accounting

Pulmonary arterial pressure testing helps show brisket disease susceptibility

How well suited cattle are to grazing at high altitude is becoming a bigger part of discussion among producers in Wyoming.

Pulmonary Arterial Pressure (PAP) testing gives high-altitude beef producers a prediction of how adapted the cattle's heart and respiratory systems are for Wyoming's high places.

A PAP test measures the blood pressure in the pulmonary artery and estimates the force required to push blood into the lungs at high altitude. Cattle grazing in Wyoming summer pastures up to 9,000 feet is common, where there is less oxygen in the air. Cattle that graze, at higher elevations (greater than 6,000 feet) and not equipped to deal with lower oxygen levels are at risk of brisket disease, increased morbidity, and decreased overall performance.

Too low of oxygen levels for some cattle causes arterial walls to thicken and decrease in diameter, making it difficult for the heart to pump blood into the lungs. This extra effort eventually causes the right ventricle of the heart to enlarge and lose its ability to contract. As blood pressure builds, the valves in the heart begin to fail and leak. Fluid then congregates in the lower portions of the animal, which are most commonly the neck and brisket area (hence the name brisket disease). Fluid will likely continue

to build and eventually spread to the jaws and belly.

The most effective treatment is to immediately move affected cattle to lower elevations, treat them in a hyperbaric chamber to increase oxygen levels, and administer diuretics/antibiotics. However, once visual signs are noticed, it's often too late. Cattle are commonly found dead with no visual symptoms. Even if cattle survive or are only moderately affected, expect economic losses due to poor performance.

Using sires with desirable PAP test results can be helpful in decreasing losses to brisket disease, as these traits have been determined moderate to highly heritable (40 percent or greater). The measurement is taken by inserting a large needle with a catheter into the jugular vein. The catheter is then fed into the right ventricle of the heart, through a valve, and into the pulmonary artery.

A pressure transducer then measures the systolic and diastolic pressure in millimeters of mercury (mmHg). The mean of the two measurements is the PAP score. PAP scores generally range between 30-80 mmHG. The lower the score, the lower the risk for complications. A score below 41 mmHG is generally considered acceptable, whereas scores ranging from 41-49 mmHG are considered a moderate risk (especially if younger than 16 months). Any animals (including their offspring) with scores greater than 49mmHG must always be considered high-risks for brisket disease.

University of Wyoming researchers have worked on developing tools to locate a "brisket disease gene"; however, a PAP test is still the best tool available to cattle producers to help predict high-altitude performance.

A reliable PAP test result is dependent on various factors. These include a three- to six-week acclimation period to the elevation at which they are tested; cattle should be mature when tested and at least 1 year of age (preferably 16 months); and tests should be done in temperatures above freezing, as extreme cold temperatures have been shown to



Pulmonary arterial pressure test taken during this year's Wyoming Beef Cattle Improvement Association bull test in Riverton.

increase PAP scores by 25-55 percent. Additionally, cattle with concurrent illnesses or with excessive body condition scores may result in elevated PAP scores. Lastly, access to experienced technicians is critical in obtaining dependable results.

Even with a reliable test, cattle breeders should consider the circumstances of where the PAP test took place. Often, guidelines for results are available and should be taken into account and compared to the environment in which the cattle will actually graze.

PAP scores only predict survivability at the tested elevation. For example, a PAP test done in Colorado at 5,600 feet will not necessarily predict how that animal will perform on a summer forest allotment at 8,000 feet in Wyoming. However, some research has suggested that for every 1,000 feet increase in elevation, a 1-1.5 mmHG increase in score can be expected. More research is needed to truly understand how elevation changes affect PAP scores.

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Monitor showing pulmonary arterial pressure