

Pasture, Rangeland and Forage Fact Sheet



National Crop Insurance Services®

1. Pennsylvania Crop Insurance Webinars

The objective of the Pennsylvania Crop Insurance Webinar series is to help Pennsylvania farmers and ranchers manage risk understand a variety of crop insurance products to make informed insurance decisions.

2. Pennsylvania Rainfall Index Pasture, Rangeland, Forage (PRF) – Scheduled for October 1, 2019

Webinar objectives:

- Review the Federal crop insurance structure
- Review elements of the Rainfall Index plan of insurance.
- Discuss PRF coverage under RI, your duties to obtain coverage, and how an indemnity is determined.

3. The Plan of Insurance and Insured Crop

The Rainfall Index (RI) plan of insurance is an area-based plan designed to insure against a decline in an index value based on long-term historical average precipitation in a latitude/longitude structured grid for a specific two-month period. For Pasture, Rangeland, Forage (PRF), this coverage protects a rancher's operation by covering outside-of-historical-normal precipitation for a specific grid (area) with a specific intended use – grazing or haying – with the understanding that lack of precipitation at given times will lead to lack of thriving crops for feeding livestock.

To purchase insurance, you will report your number of insurable acres in a county, number of *insured* acres by grid ID (can insure all or some eligible acres), the intended use for those acres (grazing or haying), a productivity factor, a coverage level, your share in the acreage (haying) or livestock on range (grazing), and choose at least two 2-month time periods, called Index Intervals. Selection of index intervals is **critical** to the effectiveness of the Rainfall Index plan of insurance as a risk management tool. Factors to be considered when determining which index intervals to select include, but are not limited to, the type of forage and whether it is for haying or grazing and *when* it will be hayed or grazed during a given year. You'll also want to consider the location, elevation, and the time period when precipitation is needed under normal conditions for the crop in the field to thrive so your livestock have food **when they need it**.

You will also identify the grid(s) where your insured acreage is physically located. Rainfall Index insurance uses grid areas and data from the National Oceanic and Atmospheric Administration (NOAA) Climate Prediction Center (CPC) to calculate normal precipitation and deviations from normal for each specific grid. This precipitation data does not measure, capture, or use actual crop production and it does not use local weather or on-farm rain gauges in any historical or current-year results. This means the results you have in a particular location might not match the overall historical-data-based area results used in this program.

4. Coverage Availability

Details of the PRF coverage offered in each state, including types, practices, dates, and special provisions of insurance, are available through the Risk Management Agency's **Actuarial Information Browser** at <https://bit.ly/2NZo44f>.

Work with a licensed crop insurance agent to explore your coverage options.

5. Key RI and PRF Policy Definitions

Dollar Amount of Protection per Acre

The dollar amount of protection per acre is the PRF "guarantee." To calculate it, take the County Base Value per Acre from the actuarial documents times the coverage level you selected times the productivity factor you selected.

Expected Grid Index

An expected grid index is determined for each grid ID and index interval using the long-term historical gridded precipitation data for the grid ID and index interval. The expected grid index represents the average precipitation for that grid ID during the index interval based on NOAA CPC data from 1948 to two years prior to the crop year.

Final Grid Index

A final grid index is based on NOAA CPC precipitation data, and is expressed as a percentage. An index of 100 represents average precipitation; below 100 represents below average precipitation; and above 100 represents above average precipitation. Only the precipitation received during the index interval is used to determine a final grid index. Precipitation received during a previous index interval has no effect on the final grid index for any subsequent index intervals.

Forage

Plants grown for haying or grazing.

Grazing

Acreage used solely as pasture for livestock to roam and feed on.

Grid

An area identified by longitude and latitude used to determine the expected grid index, final grid index, premium and indemnity. A grid is a 0.25-degree gridded area, or a successor area, established by the NOAA CPC.

Grid Identification Number

A grid identification number (grid ID) is a specific number assigned by NOAA CPC to each grid.

Index Interval

A 2-month period of time designated in the Actuarial Documents during which NOAA CPC precipitation data is collected. In Pennsylvania, you must choose at least two Index Intervals for PRF insurance and place a portion of risk – your percent of value – into each 2-month period.

Lease

A written document granting use or occupation of property for a specified compensation, during a specified period of time. Compensation may include, but is not limited to: cash, share of insured crop, proceeds, labor, calf crop, honey, services, etc. Leases are particularly critical when PRF insured acreage has a grazing intended use.

Livestock

Domesticated animals, including but not limited to, cattle, sheep, horses, swine, goats, and poultry.

Pasture

A community of plants grown for haying or grazing.

Percent of Value

The percentage of the total insured value you allocate, in whole numbers, to the index intervals you selected. The minimum percent of value in Pennsylvania is 10% and the maximum is 60%.

Point of Reference

The location provided by you of the insured acreage. The point of reference must be provided using the maps contained on RMA's website, or reinsured company mapping software. The latitude and longitude for the selected point of reference must be included on your acreage report.

Productivity Factor

The percentage factor you select that allows you to individualize your coverage based on the productivity of the acreage of the insured crop.

Forage

A community of plants composed primarily of native plants grown for grazing.

Trigger Grid Index

The result of multiplying the expected grid index by the coverage level you selected.

6. Insurance Period

The Insurance Period for PRF is January 1 to December 31 of the crop year. Insurance attaches for all 12 months even if you do not select index intervals covering all 12 months. Although insurance attaches to all 12 months, you are only eligible to have policy protection and potentially receive an indemnity for the index intervals you selected.

7. 2020 Crop Year Important Dates

- Sales Closing Date = 11/15/2019
- Cancellation Date = 11/15/2019
- Colony Reporting Date = 11/15/2019
- End of Insurance Date = 12/31/2020
- Premium Billing Date = 9/1/2020
- Termination Date = 11/15/2020

8. County Base Value per Acre

The PRF county base value per acre is an FCIC-determined value of the crop in the county published in the actuarial documents. You can decrease or increase this value by selecting a productivity factor above or below 100.

9. Coverage Levels and Premium Discounts

Coverage levels range from 70% to 90% and are discounted as shown in the table below. PRF currently does not allow Catastrophic Risk Protection (CAT) coverage.

Item	Percent				
Coverage Level	70	75	80	85	90
Premium Discount	59	59	55	55	51
Your Premium Share	41	41	45	45	49

10. Unit Structure

PRF does not have unit structure options we find under row crop or perennial crop policies. A unit, for PRF, is the insured acres by intended use, index interval, share, irrigated practice (haying intended use only), and county within or assigned to a grid.

11. Application and Acreage Reporting

You must complete an acreage report the same time as your PRF insurance application.

In addition to standard crop insurance application data, your PRF application will include at least two index intervals, and a percent of value allocation for each index interval.

Your PRF acreage report will include grid ID numbers for the locations insured; a point of reference per grid ID and intended use and that point of reference's latitude and longitude; your share percent for acreage in each grid by intended use; the total number of insurable (eligible for insurance) acres in the county in which you have a share; the insured acres by grid ID and intended use; the intended use of grazing or haying; for haying intended use, the irrigation practice; and the land identifiers associated to your insured acreage (FSA common land unit or RMA resource land unit).

12. Coverage Calculations

- **Dollar Amount of Protection per Acre** = county base value x coverage level x productivity factor
- **Gross Premium** = dollar amount of protection per acre x premium rate (for the coverage level and index interval selected) x insured acres x percent of value x share
- **Policy Protection per Unit** = dollar amount of protection per acre x number of insured acres x percent of value x share
 - *Sum all policy protection per unit amounts to arrive at a total policy protection.*
- **Gross Premium** = dollar amount of protection per acre x premium rate (for the coverage level and index interval selected) x insured acres x percent of value x share
 - *Alternative: policy protection per unit x applicable premium rate*

13. Perils Protected Against

A PRF policy only covers a decline from the long-term historical normal interpolated precipitation for a grid and index interval.

PRF does not cover other perils such as, but not limited to, livestock mortality, loss of or lack of market, flood, fire, or hail.

Additionally, Rainfall Index coverage is not "drought insurance." It does not insure against abnormally high temperatures or windy conditions. While a drought may cause a decline in the index value to the point that an indemnity payment is issued to eligible insured producers, a drought being declared in a state, county or area does not, by itself, trigger an indemnity payment under the RI program.

14. Losses

Indemnity payments are earned only when the final grid index is less than the trigger grid index. Your amount of forage or hay production or the productivity of your rangeland is not considered when determining eligibility for an indemnity payment.

Because the Rainfall Index plan of insurance is an area plan and does not measure, capture, or use any actual crop production, you may experience a loss of production and not receive an indemnity payment. It is also possible to receive an indemnity payment without suffering a loss of production.

Indemnity Calculation Components

- **Trigger Grid Index** = expected grid index x coverage level
- **Final Grid Index** = as published by RMA using NOAA CPC values
- **Indemnity Payment Calculation Factor** = (trigger grid index – final grid index) / trigger grid index
- **Indemnity** = indemnity payment calculation factor x policy protection

Basic Indemnity Calculation Example

A rancher with 100% share is insuring forage as haying intended use in grid ID 25400. Their coverage level is 90% and productivity factor is 150%. They place a portion of the insured acre risk into the March-April, May-June, and September-October Index Intervals with 30% of the total value – or ‘risk’ – allocated to the March-April and September-October Index Intervals, and 40% allocated to May-June.

The March-April Index Interval has:

- Trigger grid index = 1.2040
- Final grid index = 0.8890
- Policy Protection = \$167,063

The May-June Index Interval has:

- Trigger grid index = 1.4610
- Final grid index = 1.6030
- Policy Protection = \$222,750

The September-October Index Interval has:

- Trigger grid index = 1.6060
- Final grid index = 1.0920
- Policy Protection = \$167,063

1. $(1.2040 - 0.8890) / 1.2040 = 0.3150$ Mar-Apr payment calculation factor
2. $0.3150 \times \$167,063 = \$52,625$ **Mar-Apr indemnity**
3. $(1.4610 - 1.6030) / 1.4610 = -0.0972$ May-Jun payment calculation factor
4. $-0.0972 \times \$222,750 = -\$21,651$ **May-Jun indemnity (NO INDEMNITY)**
5. $(1.6060 - 1.0920) / 1.6060 = 0.3200$ Sep-Oct payment calculation factor
6. $0.3200 \times \$167,063 = \$53,460$ **Sep-Oct indemnity**
7. Total PRF haying grid ID 25400 indemnity = **\$106,085**

15. Get Covered: Find an Agent

A crop insurance agent is your local expert and best resource on how, when, and what kind of crop insurance coverage to add to your risk management toolkit.

Crop insurance is available through independent crop insurance agents licensed in your state. If you need an agent, review the Risk Management Agency’s Agent Locator (<https://bit.ly/2sohz1f>).

16. View the Recorded Webinar

A recording of this Pennsylvania webinar will be viewable after the live presentation concludes. To view the recording, visit <https://cropinsuranceinamerica.org/pennsylvaniacrop-insurance-webinars/>