



Pasture, Rangeland Forage (PRF) Insurance New in Wisconsin for 2011 September 7, 2011

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Key Points

- Pasture, Rangeland Forage (PRF), a new crop insurance policy to protect grazing and forage production, is available in Wisconsin starting fall 2011.
- PRF is Rainfall Index insurance – indemnities are based on rainfall over an area rather than on actual forage production.
- The deadline for purchasing PRF for coverage in 2012 is September 30, 2010.

Pasture, Rangeland and Forage (PRF) crop insurance is available to Wisconsin producers for the first time starting this fall. PRF gives forage and livestock producers the ability to buy insurance protection for losses of forage for grazing or harvested for hay. Unlike traditional crop insurance, which covers yield losses from multiple perils (drought, flood, hail, frost, etc.), PRF is Rainfall Index insurance – a single peril insurance that only pays indemnities for lack of precipitation during predetermined months. This fact sheet summarizes the new PRF policy to help Wisconsin forage producers make more informed insurance decisions.

How PRF Works

Rainfall is a primary determinate of forage and grazing of production. PRF insurance pays an indemnity when rainfall is below the grower-selected coverage level for a given region or grid. The NOAA Climate Prediction Center has kept official rainfall records in the United States since 1948. PRF uses these records to calculate the “normal” average rainfall within a defined grid area during each month. These areas are known as Grid IDs and growers identify the Grid ID or IDs where their forage production occurs. Growers then choose a percentage of this average rainfall during select months as their coverage level. If actual rainfall, as officially published by the NOAA Climate Prediction Center, for the chosen months for the Grid ID is less than the chosen coverage level, then the insured grower receives an indemnity.

Producers have three main choices if they buy PRF for a Grid ID. They choose a coverage level, a protection factor, and the coverage months. Producers select a coverage level from 65% to 90% for the percentage of the area’s historical average rainfall during the coverage months to set as the precipitation guarantee. If actual rainfall, as officially published by the NOAA Climate Prediction Center, falls below this chosen guarantee, then PRF indemnities are triggered. The protection factor is a multiplier ranging from 60% to 150% that allows producers to insure their forage at a value matching their needs. Each Grid ID has an expected value for forage production (\$/ac) and producers use the protection factor so that the insured production matches their assessed value of their forage. Finally, a producer must select 2 different two-month time intervals as coverage months, for example, July-August and September-October. Note that since indemnities are based on precipitation as officially published by NOAA’s Climate Production Center, individual rainfall and yield records are not required.

PRF uses grids that are 0.25 degrees of latitude and 0.25 degrees of longitude, making a grid about 12 miles east to west and 17 miles north to south. Each grid has an official Grid ID. To identify a Grid ID, consult with your crop insurance agent or go to USDA RMA Grid Locator:

<http://agforceusa.com/rma/ri/prf/maps>. A producer can select any and all of his forage or grazing acreage to insure in a Grid ID. Thus, producers can insure only those acres that are critical to their operations. After selecting specific acres, then growers identify which Grid ID that the acreage falls within. Note that growers can have acreage in more than one Grid ID.

Producer Example

Suppose a producer insuring forage acreage in central Wisconsin chooses April-May and July-August as the 2 two-month intervals that most affect his production. Average precipitation for the Grid ID is 6.7" during April-May and 7.5" during July-August, so rainfall below $75\% \times 6.7 = 5.03$ " during April-May or $75\% \times 7.5 = 5.63$ " during July-August triggers a PRF indemnity. The USDA-RMA published county base value for hay production is \$261.60 per acre and the producer chooses a 75% coverage level and a protection factor of 100%. Thus, the dollar amount of protection is $75\% \times 100\% \times \$261.60 = \$196.20$ per acre. The total premium is \$20.38 per acre, but with a 59% federal premium subsidy, the producer premium paid is \$8.36 per acre.

Suppose actual rainfall as officially by NOAA's Climate Prediction Center is 6.0" in April-May and 4.0" in July-August. In this case, the producer would not receive an indemnity for April-May, as actual rainfall of 6.0" exceeded the 5.03" guarantee, but would receive an indemnity for July-August, as actual rainfall of 4.0" is below the 5.63" guarantee. More specifically, recall that average precipitation during April-May was 6.7" and 7.5" for July-August. For April-May, the rainfall index is $6.00/6.70 = 0.90 > 0.75$ and no indemnity is triggered because rainfall was 90% of the average and 75% coverage level was chosen. For July-August, the rainfall index is $4.00/7.50 = 0.53 < 0.75$ and so an indemnity is triggered, as rainfall is 53% of average. Specific indemnity calculations for this example are:

$$\begin{aligned} \text{Dollar amount of protection} &= \text{County base value} \times \text{Coverage Level} \times \text{Protection Factor} \\ \$196.20 &= \$261.60 \times 75\% \times 100\% \end{aligned}$$

$$\begin{aligned} \text{Indemnity} &= \text{Dollar amount of protection} \times (\text{Insured index} - \text{Actual index}) / \text{Insured Index} \\ \$57.55 &= \$196.20 \times (75 - 53)/75 \end{aligned}$$

Basis Risk

Since PRF only covers rainfall in a Grid ID, basis risk remains, as factors besides rain influence forage production. For example, rain may be "spotty" so that your acreage may not receive rain sufficient for adequate forage production but other areas do, so that the average for the grid may remain above the indemnity trigger. The point is that it is possible to have reduced forage production on your insured acreage and still not receive an indemnity. Examine the historical rainfall records for your Grid ID to determine how closely they match your production. If precipitation is the primary factor that affects your production and the precipitation history closely follows your yields, PRF Rainfall Index insurance can be a useful risk management tool.

Additional Resources

- **USDA RMA Pasture, Rangeland, Forage Fact Sheet:**
<http://www.rma.usda.gov/pubs/rme/prffactsheet.pdf>
- **USDA RMA Grid Locator:** <http://agforceusa.com/rma/ri/prf/maps>
- **Pasture, Rangeland, Forage Historical Indices:**
http://agforceusa.com/rma/ri/prf/dst?active_tab=graph&load_chart=true
- Contact your crop insurance agent for more information about premiums for PRF Rainfall Index insurance for your forage and grazing production.