

# The Pasture, Rangeland, Forage Rainfall Index Program



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UMaine Cooperative Extension

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# Maine Crop Insurance Education Program



Funding provided by the USDA  
Risk Management Agency



Intro to the program

How has it worked?

Demo of the PRF Decision Tool

- Protects against a lack-of-precipitation on hay and grazing acres
- An area-based policy
- No yield records, no loss adjustments

## PRF Crop Insurance

But why? ...



## **Drought-challenged farmers see worry, not green grass, in their fields this summer** , Sept. 2017, BDN



The pasture behind organic  
from the lush green field  
farmer's ability to make

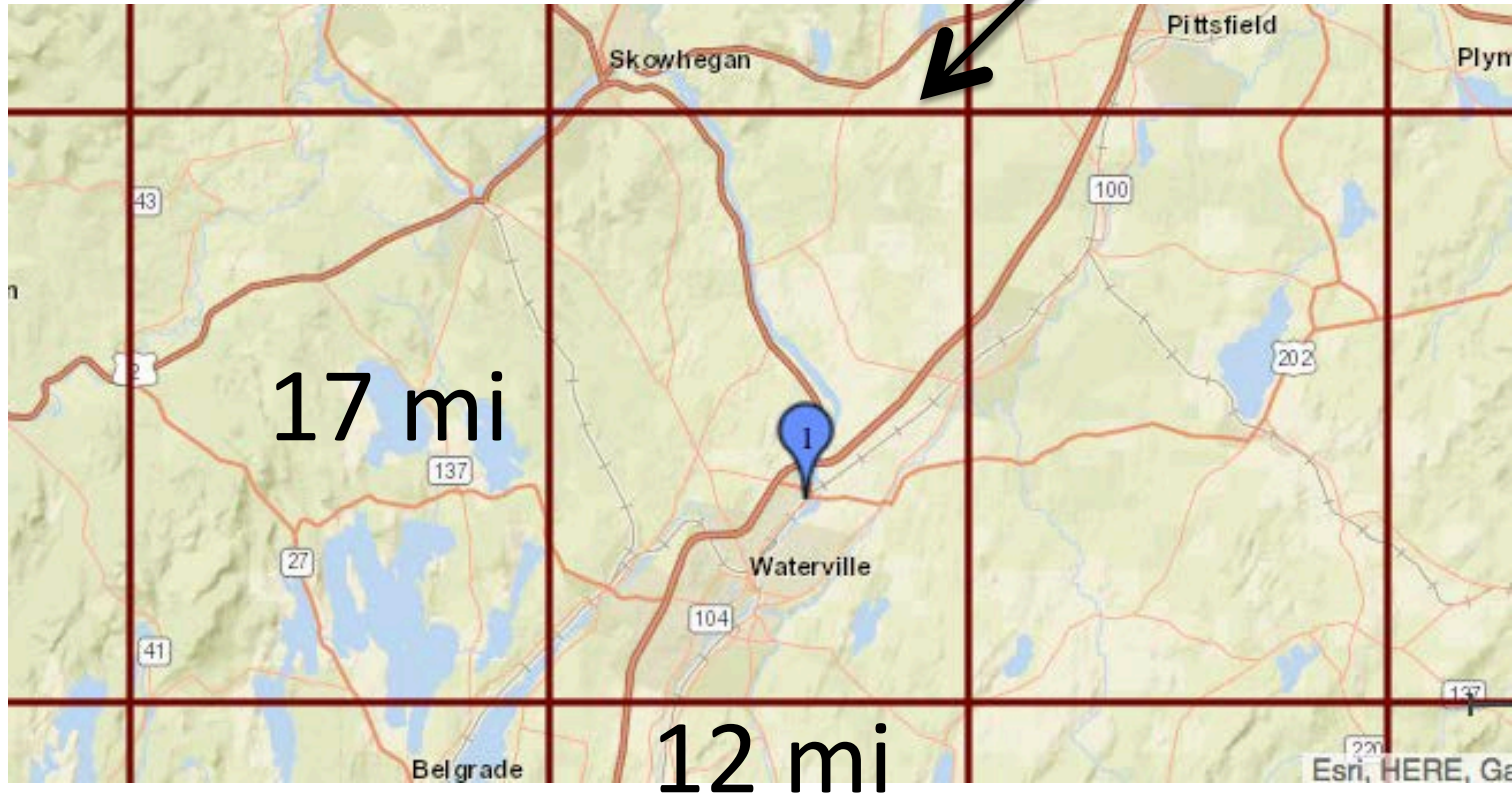
### Why consider PRF?

- Offsets costs associated with drier-than-normal weather
- Risk management strategies for grass are limited
- An affordable option?

# Insurance decisions

- Perennial “grazing” acres or “hayland”;
- Which months to insure  
(i.e., Jan/Feb and Apr/May);
- Farmer decides what % of the grid’s historical average precipitation to insure.

# What is a grid?



The Rainfall Index is based off of NOAA data

# Options

- Coverage levels- 70 to 90% of historic precip.
- Productivity factor- 60 to 150%
  - \* Way to put a lower or higher value on your “hay” or “grazing” acres.







# PRF is unique

- Actual yields don't matter with PRF
- Possible to receive an indemnity (loss payment) without an actual crop loss
- Possible to experience an actual crop loss and receive no indemnity





2016, State	% policies indemnified	Total Premium	Farmer Premium	Indemnity
NY	92% (155)	\$1,261,694	\$616,780	\$2,343,457
MA	100% (5)	\$15,738	\$7,082	\$26,926
VT	100% (1)	\$118	\$53	\$47

For every \$1 in farmer premium,  
the farmer received \$3.74 in losses





Questions so far?





Leon Ripley  
Granville, MA



# Ripley Farm

- 120 acres of hayland
- 12,000 square bales of dry hay
- 13 head of grassfed beef
- Purchased PRF in 2016 as “another way to cover potential risks and assets”



# Ripley Farm

Leon selected:

- Mar/Apr, May/June, Aug/Sept
- 85% coverage level on “hay”
- 150% productivity factor
- He paid \$23/ac for coverage
- Losses in 2016 & 2017



## Pasture, Rangeland, Forage Support Tool

Grid Locator

Historical Indexes

Decision Support Tool

Estimated Indemnities

Grid Lines  
Grid Labels

Gulf of



Clear All

Zoom to Grid

Find address or place



[www.prodwebnlb.rma.usda.gov/apps/prf](http://www.prodwebnlb.rma.usda.gov/apps/prf)

Or search:

prf rainfall-rma server description

Address: -



Pasture, Rangeland, Forage

PRF Rainfall

https://prodwebnlb.rma.usda.gov/apps/prf

USDA

United States Department of Agriculture

Risk Management Agency

Pasture, Rangeland, Forage Support Tool

Grid Locator

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Grid Lines

Grid Labels

County Lines

County Labels

Pin Information

Clear All

Zoom to Grid

granville ma

X

Q

?

Current Pin Information

Grid ID: 26629

Latitude: 42.06732°

Longitude: -72.85977°

County: Hampden

State: Massachusetts

Address: 470 Main Rd.  
Granville,  
Massachusetts  
01034

1

Grid: 26629

Current Location

Grid ID: 26629

Latitude: 42.06732°

Longitude: -72.85977°

County: Hampden

State: Massachusetts

[Zoom to](#)

Imagery

1000km

600mi

Esri, HERE, Garmin, NGA, USGS





United States Department of Agriculture  
Risk Management Agency



## Pasture, Rangeland, Forage Support Tool

Grid Locator

Historical Indexes

Decision Support Tool

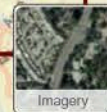
Estimated Indemnities

Grid Lines ☒  
Grid Labels ☐

County Lines ☐  
County Labels ☐

Pin Information ☒

Clear All Zoom to Grid  
granville ma



### Current Pin Information

Grid ID: 26629  
Latitude: 42.06732°  
Longitude: -72.85977°  
County: Hampden  
State: Massachusetts  
Address: 470 Main Rd.  
Granville,  
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### Current Location

Grid ID: 26629  
Latitude: 42.06732°  
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[Zoom to](#)

Grid: 26629

Esri, HERE, Garmin, NGA, USGS, NPS

# Pasture, Rangeland, Forage Support Tool

Grid Locator

Historical Indexes

Decision Support Tool

Estimated Indemnities

## Location Information

State

County

Grid ID

Search By Grid ID

Massachusetts

Hampden

26629

OR

Enter Grid ID

Search

## Historical Filter

### Year Range

End

2018

Start

2008

## Index Values - Percent of Normal

Export to CSV

Year	Jan-Feb	Feb-Mar	Mar-Apr	Apr-May	May-Jun	Jun-Jul	Jul-Aug	Aug-Sep	Sep-Oct	Oct-Nov	Nov-Dec
2018	132.2	102.5	93.6	89.7	89.8	149.3	N/A	N/A	N/A	N/A	N/A
2017	97.3	71.9	82.8	117.1	105.1	96.5	82.0	55.7	120.9	103.3	39.5
2016	112.2	111.8	56.5	57.7	52.3	51.3	73.1	66.4	52.6	58.4	80.6
2015	98.2	66.1	66.9	48.0	103.1	149.3	87.4	85.8	93.6	65.0	75.1
2014	93.3	95.5	88.9	103.8	96.6	123.9	130.5	53.8	76.2	105.3	99.5
2013	82.9	83.4	50.5	94.5	190.0	173.3	113.6	97.2	55.1	61.7	85.1
2012	64.1	39.7	58.5	83.8	94.5	78.7	92.5	130.3	107.9	41.1	72.4
2011	109.2	145.3	152.8	126.6	128.3	117.3	175.0	235.4	176.9	113.9	96.0
2010	117.2	183.6	121.3	50.9	84.2	83.7	74.5	70.0	134.7	150.5	112.5
2009	72.6	59.3	72.0	98.8	146.6	189.0	162.8	84.2	88.6	102.1	106.1
2008	183.9	226.3	127.1	79.9	101.6	179.6	162.8	170.9	154.5	76.9	117.2



### Protection Information



Intended Use

Irrigation Practice

Organic Practice

Coverage Level

Productivity Factor

Insurable Interest

Insured Acres

Sample Year

### Policy Information



County Base Value

Dollar Amount of Protection

Total Insured Acres

Total Policy Protection

### Protection Table

Export to CSV

Index Interval	Percent of Value (%)	Policy Protection Per Unit	Premium Rate Per \$100	Total Premium	Premium Subsidy	Producer Premium	Actual Index Value	Estimated Indemnity
Jan-Feb	<input type="text" value="N/A"/>	\$0	10.58	\$0	\$0	\$0	112.2	\$0
Feb-Mar	<input type="text" value="N/A"/>	\$0	9.12	\$0	\$0	\$0	111.8	\$0
Mar-Apr	<input type="text" value="40"/>	\$15,541	10.42	\$1,619	\$891	\$728	56.5	\$5,211
Apr-May	<input type="text" value="N/A"/>	\$0	9.53	\$0	\$0	\$0	57.7	\$0
May-Jun	<input type="text" value="N/A"/>	\$0	11.13	\$0	\$0	\$0	52.3	\$0
Jun-Jul	<input type="text" value="30"/>	\$11,656	10.61	\$1,237	\$680	\$557	51.3	\$4,621
Jul-Aug	<input type="text" value="N/A"/>	\$0	9.22	\$0	\$0	\$0	73.1	\$0
Aug-Sep	<input type="text" value="30"/>	\$11,656	13.78	\$1,606	\$883	\$723	66.4	\$2,551
Sep-Oct	<input type="text" value="N/A"/>	\$0	13.31	\$0	\$0	\$0	52.6	\$0
Oct-Nov	<input type="text" value="N/A"/>	\$0	12.03	\$0	\$0	\$0	58.4	\$0
Nov-Dec	<input type="text" value="N/A"/>	\$0	9.75	\$0	\$0	\$0	80.6	\$0
Per Acre	N/A	N/A	N/A	\$42.91	\$23.60	\$19.31	N/A	\$119.06
Total	104	\$38,852	N/A	\$4,462	\$2,454	\$2,008	N/A	\$12,382

Calculate

This tool is using insurance data from 2019.

### Protection Information



Intended Use Haying

Irrigation Practice Non-Irrigated

Organic Practice Not Organic

Coverage Level 90%

Productivity Factor 150%

Insurable Interest 100%

Insured Acres 104

Sample Year 2016

### Policy Information



County Base Value \$293.00

Dollar Amount of Protection \$395.55

Total Insured Acres 104

Total Policy Protection \$41,137

### Protection Table

[Export to CSV](#)

Index Interval	Percent of Value (%)	Policy Protection Per Unit	Premium Rate Per \$100	Total Premium	Premium Subsidy	Producer Premium	Actual Index Value	Estimated Indemnity
Jan-Feb	N/A	\$0	12.74	\$0	\$0	\$0	112.2	\$0
Feb-Mar	N/A	\$0	11.27	\$0	\$0	\$0	111.8	\$0
Mar-Apr	40	\$16,455	12.39	\$2,039	\$1,040	\$999	56.5	\$6,125
Apr-May	N/A	\$0	11.58	\$0	\$0	\$0	57.7	\$0
May-Jun	N/A	\$0	13.31	\$0	\$0	\$0	52.3	\$0
Jun-Jul	30	\$12,341	12.95	\$1,598	\$815	\$783	51.3	\$5,307
Jul-Aug	N/A	\$0	11.59	\$0	\$0	\$0	73.1	\$0
Aug-Sep	30	\$12,341	16.11	\$1,988	\$1,014	\$974	66.4	\$3,236
Sep-Oct	N/A	\$0	15.65	\$0	\$0	\$0	52.6	\$0
Oct-Nov	N/A	\$0	13.94	\$0	\$0	\$0	58.4	\$0
Nov-Dec	N/A	\$0	11.87	\$0	\$0	\$0	80.6	\$0
Per Acre	N/A	N/A	N/A	\$54.09	\$27.58	\$26.50	N/A	\$141.04
Total	104	\$41,137	N/A	\$5,625	\$2,869	\$2,756	N/A	\$14,668

Calculate

This tool is using insurance data from 2019.



### Protection Information ?

Intended Use

Irrigation Practice

Organic Practice

Coverage Level

Productivity Factor

Insurable Interest

Insured Acres

Sample Year

### Policy Information ?

County Base Value

Dollar Amount of Protection

Total Insured Acres

Total Policy Protection

### Protection Table

[Export to CSV](#)

Index Interval	Percent of Value (%)	Policy Protection Per Unit	Premium Rate Per \$100	Total Premium	Premium Subsidy	Producer Premium	Actual Index Value	Estimated Indemnity
Jan-Feb	N/A	\$0	12.74	\$0	\$0	\$0	112.2	\$0
Feb-Mar	N/A	\$0	11.27	\$0	\$0	\$0	111.8	\$0
Mar-Apr	40	\$10,970	12.39	\$1,359	\$693	\$666	56.5	\$4,083
Apr-May	N/A	\$0	11.58	\$0	\$0	\$0	57.7	\$0
May-Jun	N/A	\$0	13.31	\$0	\$0	\$0	52.3	\$0
Jun-Jul	30	\$8,227	12.95	\$1,065	\$543	\$522	51.3	\$3,538
Jul-Aug	N/A	\$0	11.59	\$0	\$0	\$0	73.1	\$0
Aug-Sep	30	\$8,227	16.11	\$1,325	\$676	\$649	66.4	\$2,157
Sep-Oct	N/A	\$0	15.65	\$0	\$0	\$0	52.6	\$0
Oct-Nov	N/A	\$0	13.94	\$0	\$0	\$0	58.4	\$0
Nov-Dec	N/A	\$0	11.87	\$0	\$0	\$0	80.6	\$0
Per Acre	N/A	N/A	N/A	\$36.06	\$18.39	\$17.66	N/A	\$94.02
Total	104	\$27,425	N/A	\$3,750	\$1,913	\$1,837	N/A	\$9,778

 Calculate

This tool is using insurance data from 2019.

### Protection Information



Intended Use **Grazing** ▼

Irrigation Practice **Please Select** ▼

Organic Practice **Please Select** ▼

Coverage Level **85%** ▼

Productivity Factor **150%** ▼

Insurable Interest **100%**

Insured Acres **25**

Sample Year **2016** ▼

### Policy Information



County Base Value **\$46.30**

Dollar Amount of Protection **\$59.03**

Total Insured Acres **25**

Total Policy Protection **\$1,476**

### Protection Table

[Export to CSV](#)

Index Interval	Percent of Value (%)	Policy Protection Per Unit	Premium Rate Per \$100	Total Premium	Premium Subsidy	Producer Premium	Actual Index Value	Estimated Indemnity
Jan-Feb	N/A	\$0	10.58	\$0	\$0	\$0	112.2	\$0
Feb-Mar	N/A	\$0	9.12	\$0	\$0	\$0	111.8	\$0
Mar-Apr	40	\$590	10.42	\$62	\$34	\$28	56.5	\$198
Apr-May	N/A	\$0	9.53	\$0	\$0	\$0	57.7	\$0
May-Jun	N/A	\$0	11.13	\$0	\$0	\$0	52.3	\$0
Jun-Jul	30	\$443	10.61	\$47	\$26	\$21	51.3	\$176
Jul-Aug	N/A	\$0	9.22	\$0	\$0	\$0	73.1	\$0
Aug-Sep	30	\$443	13.78	\$61	\$34	\$27	66.4	\$97
Sep-Oct	N/A	\$0	13.31	\$0	\$0	\$0	52.6	\$0
Oct-Nov	N/A	\$0	12.03	\$0	\$0	\$0	58.4	\$0
Nov-Dec	N/A	\$0	9.75	\$0	\$0	\$0	80.6	\$0
Per Acre	N/A	N/A	N/A	\$6.78	\$3.73	\$3.04	N/A	\$18.81
Total	25	\$1,476	N/A	\$169	\$93	\$76	N/A	\$470



Calculate

This tool is using insurance data from 2019.

This tool is for illustration purposes only. Your actual information may differ. [?](#)



“The benefit is that you have income coming in on a bad year.”



“Without PRF for dairy or beef operations you’d have to find income to purchase feed you don’t have.”

# Important reminders

- Enrollment deadline is November 15, 2019.
- Find a crop insurance agent: [Agent Locator Tool](#)
- Try the [PRF Decision Support Tool](#)
- Questions? email [erin.roche@maine.edu](mailto:erin.roche@maine.edu)