

# Wisconsin Crop Manager

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## Late Season Soybean Diseases

Paul Esker, Extension Field Crops Plant Pathologist

The 2011 growing season has been one of great variability in terms of the weather and its impact on soybean diseases. Early season conditions were cool and wet planting which was then followed by high heat and humidity. Now, as reported in the [August 19th blog posting](#), abnormally dry conditions are being reported in several areas of the state. Thus, a common question as we get closer to harvest is, "Given these variable weather conditions, what is the potential effect of soybean diseases on yield?" Based on recent reports and our observations of different field trials, we highlight below several diseases that are popping up in soybean fields and provide specific links for further information about each disease.

In spite of the heat during flowering in many areas, we have seen [white mold](#) occurring. This is not necessarily a surprise as we do find the disease each growing season. Based on our current observations and reports though, it appears that the disease intensity is low in many locations, although variation to the soybean variety is being noted.

Also, over the past week to two weeks, we have seen an increase in [Frogeye leaf spot](#). This disease, caused by the fungus *Cercospora sojina*, was observed in 2010 across the state and conditions in 2011, especially the hot and humid periods that occurred a few weeks ago, were favorable for disease development. In some of the plots that were recently visited, the severity of the disease appears higher than what we observed in 2010, however, levels still appear to be low.

Similar to some of the conditions we saw in [2008](#), we have seen fields and soybean plants with symptoms of either [Phytophthora root and stem rot](#) or [stem canker](#). These two diseases can easily be confused for one another so it is important to make sure a proper identification.

Last, but not necessarily least, we have had several reports and also seen symptoms of [sudden death syndrome](#) (SDS). Reports are still being compiled, but based on our observations, the severity of SDS is probably going to be lower than in 2010. With soybean in the R6 growth stage in many areas, it is also important to make sure that the disease identification is correct for SDS, since foliar symptoms are similar to [brown stem rot](#) (BSR). In particular, make sure to examine the whole plant, including stems (looking for internal browning due to BSR) and roots (looking for a root rot and also a bluish hue that is the fungus of SDS). Do not just rely on the foliar symptoms to verify your diagnosis of either disease.

## Vegetable Crop Updates and Disease Supplements Now Available

Vegetable Crop update 20 and 21 are now posted under the "Veg Crop Updates" page or by following this link <http://ipcm.wisc.edu/WCMNews/VegCropUpdate/tabid/115/Default.aspx>.

The 20th issue includes:

Potato and vegetable crop status reports  
Late blight & early blight updates  
Cucurbit downy mildew updates

The 21st issue includes:

WI Ag Market Bulletin  
Potato and vegetable crop status reports  
Potato Zebra chip updates  
Late blight & early blight updates  
Cucurbit downy mildew updates

In addition to the vegetable crop updates, Disease Supplementals 6, 7, and 8 have also been posted on the "Veg Crop Update" page.

## Pasture, Rangeland Forage (PRF) Insurance: New in Wisconsin for 2011

David Moll and Paul D. Mitchell, Agricultural and Applied Economics, UW-Madison

### 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 Prediction 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% x 6.7 = 5.03” during April-May or 75% x 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% x 100% x \$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:

Dollar amount of protection = County base value x Coverage Level x Protection Factor  
 $\$196.20 = \$261.60 \times 75\% \times 100\%$

Indemnity = Dollar amount of protection x (Insured index – Actual index) / Insured Index  
 $\$57.55 = \$196.20 \times (75 - 53)/75$

### 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](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.

## UW-Extension/Madison Plant Disease Diagnostic Clinic (PDDC) Updates

Brian Hudelson, Ann Joy, Amanda Zimmerman, Adam Greene, and Erin Schmid, Plant Disease Diagnostics Clinic

The PDDC receives samples of many plant samples from around the state. The following diseases/disorders have been identified at the PDDC from August 17, 2011 through August 23, 2011:

PLANT/SAMPLE TYPE	DISEASE/DISORDER	PATHOGEN	COUNTY
<b>FIELD CROPS</b>			
Corn	Fusarium Stalk Rot	<i>Fusarium</i> sp.	Columbia
	Gibberella Stalk Rot	<i>Fusarium graminearum</i>	Columbia
	Phoma Stalk Rot	<i>Phoma</i> sp.	Columbia
Wheat	<a href="#">Scab</a>	<i>Fusarium graminearum</i>	Iowa
<b>VEGETABLES</b>			
Dill	Bacterial Blight	<i>Xanthomonas</i> sp.	Monroe

The following diseases/disorders have been identified at the PDDC from August 24, 2011 through August 30, 2011:

PLANT/SAMPLE TYPE	DISEASE/DISORDER	PATHOGEN	COUNTY
<b>FIELD CROPS</b>			
Corn	Goss' Wilt	<i>Clavibacter michiganensis</i> subsp. <i>nebraskensis</i>	Winnebago, McHenry (IL)
	Gray Leaf Spot	<i>Cercospora sorghi</i>	Shawano
		<i>Bipolaris zeicola</i>	Shawano
	Northern Corn Leaf spot		
Soybean	Fusarium Root Rot	<i>Fusarium</i> sp.	Outagamie
	Phytophthora Root Rot	<i>Phytophthora</i> sp.	Outagamie
	Pythium Root Rot	<i>Pythium</i> sp.	Outagamie
	Soybean Cyst Nematode	<i>Heterodera glycines</i>	Outagamie
Triticale	<a href="#">Scab</a>	<i>Fusarium graminearum</i>	Langlade
	Black Point	<i>Alternaria</i> sp., <i>Helminthosporium</i> sp.	Langlade
Wheat	<a href="#">Scab</a>	<i>Fusarium graminearum</i>	Ozaukee
<b>FRUITS</b>			
Apple	Blister Canker	<i>Biscogniauxia marginata</i>	Dane
	Sphaeropsis Canker	<i>Sphaeropsis</i> sp.	Dane
Cranberry	Upright Dieback	<i>Phomopsis</i> sp.	Wood
	Viscid Fruit Rot	<i>Phomopsis</i> sp.	Wood
Pear	ear Scab	<i>Venturia pirina</i>	Dane
<b>VEGETABLES</b>			
Carrot	Alternaria Leaf Blight	<i>Alternaria dauci</i>	Dane
	Bacterial Soft Rot	<i>Pectobacterium carotovorum</i>	Waushara
	Fusarium Dry Rot	<i>Fusarium</i> sp.	Waushara
Eggplant	Verticillium Wilt	<i>Verticillium</i> sp.	Winnebago
Tomato	Bacterial Speck	<i>Pseudomonas syringae</i> pv. <i>tomato</i>	Waukesha