Wisconsin Department of Agriculture, Trade and Consumer Protection

Wisconsin Pest Survey Reports 2009

http://pestsurvey.wi.gov/

- Phytophthora Root Rot of Soybean Seedlings
- Viruses of Soybeans
- Viruses of Snap Beans
- Foliar Diseases of Winter Wheat
- Seed Corn Survey
- Potato Surveys
2009 PHYTOPHTHORA ROOT ROT SURVEY OF SOYBEAN SEEDLINGS

Location: Wisconsin soybean growing area.

Total fields tested: 50

Field sampling: Symptomatic seedlings in randomly chosen fields.

Time frame: July 6 - 17 early vegetative stages.

Cool spring delayed seedling development.

Sporangia of *Phytophthora sojae* on soybean root

http://www.plantpath.wisc.edu/soyhealth/prr.htm
http://www.planthealth.info/prr_basics.htm
Result:

One fifth of all fields surveyed, tested positive for *P. sojae* for two years in a row.
18% in 2009 and 20% in 2008

Infected fields were found across the state from Racine to Chippewa County.
Total soybean fields surveyed: 47

Later than usual, mid-August to early September.

R2-R6 growth stages. Surveyors randomly collected leaves from five plants at four sites from each field.
Laboratory testing is performed at Plant Industry Laboratory. We use ELISA (enzyme linked immunosorbent assay) and nucleic acid assays, PCR (polymerase chain reaction).

References:
AMV detection as described by Martinez-Priego et al., Plant Dis. 88:908, 2004; SbDV detection, Harrison et al. Plant Dis. 89:28-32, 2005. ELISA reagents from Agdia Corp.
<table>
<thead>
<tr>
<th>Year</th>
<th>Total No. of Fields Surveyed</th>
<th>AMV</th>
<th>BPMV</th>
<th>CMV</th>
<th>Potyvirus group</th>
<th>SbDV</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>177</td>
<td>NA</td>
<td>29.9%</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>2003</td>
<td>286</td>
<td>NA</td>
<td>4.2%</td>
<td>0.3%</td>
<td>0.3%</td>
<td>1.7%</td>
</tr>
<tr>
<td>2004</td>
<td>293</td>
<td>1.0%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>1.7%</td>
</tr>
<tr>
<td>2005</td>
<td>276</td>
<td>NA</td>
<td>0.0%</td>
<td>NA</td>
<td>0.0%</td>
<td>1.4%</td>
</tr>
<tr>
<td>2006</td>
<td>188</td>
<td>NA</td>
<td>0.0%</td>
<td>NA</td>
<td>0.0%</td>
<td>3.2%</td>
</tr>
<tr>
<td>2007</td>
<td>227</td>
<td>2.2%</td>
<td>0.4%</td>
<td>0.0%</td>
<td>0.4%</td>
<td>3.1%</td>
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<tr>
<td>2008</td>
<td>238</td>
<td>8.8%</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>6.7%</td>
</tr>
<tr>
<td>2009</td>
<td>47</td>
<td>19.1%</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>pending</td>
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</table>
Location: Participating vegetable processors and fresh market producers.

Total fields tested: 101

Time frame: July 6 – Aug 13, 2009 ~48 days post planting.

Field sampling: Ten leaves (five from the top of the plants and five mature leaves) from four locations in each sampled field.

Lab testing: AMV, BPMV, CMV, Potyvirus.
<table>
<thead>
<tr>
<th>Year</th>
<th>Total No of Fields Surveyed</th>
<th>AMV (%)</th>
<th>BPMV (%)</th>
<th>CMV (%)</th>
<th>Potyvirus (%)</th>
<th>SbDV (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>25</td>
<td>NA</td>
<td>0</td>
<td>72</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>2005</td>
<td>33</td>
<td>NA</td>
<td>0</td>
<td>3</td>
<td>9</td>
<td>NA</td>
</tr>
<tr>
<td>2006</td>
<td>62</td>
<td>NA</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>NA</td>
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<tr>
<td>2008</td>
<td>25</td>
<td>4</td>
<td>0</td>
<td>8</td>
<td>0</td>
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<tr>
<td>2009</td>
<td>101</td>
<td>7</td>
<td>0</td>
<td>4</td>
<td>2</td>
<td>0</td>
</tr>
</tbody>
</table>
2009 SNAP BEAN SURVEY

- Survey will be continued in 2010.
- Snap bean growers are invited to participate!
- Contact Adrian Barta
  Adrian.Barta@wi.gov
  (608) 224-4592
• **Total fields tested:**
  45 fields in 13 counties.

• **Time frame:** June 2009
  Feekes Stage 8 (flag leaf visible) to Feekes 10.5.3
  (flowering complete to base of spike).

• **Field sampling:**
  In each field, at 5 sites, 10 plants were examined.

• Collected foliar samples for future virus and phytoplasma testing.

**Powdery Mildew**
*Blumeria graminis*
Export Certification

- 62 seed corn inspections in 7 counties (Columbia, Dane, Eau Claire, Grant, Rock Portage and Pierce Counties).
- 4 Stewart’s wilt finds in Dane and Eau Claire Co.
- Gray leaf spot in Grant and Pierce Counties.

Gray leaf spot (Cercospora zeae-maydis) on corn.
• Total fields tested: 150 as of December 2009
• All samples tested negative for Tobacco rattle virus, the virus that causes Corky ringspot disease in potatoes.
• Testing will continue in 2010.

Potato growers are invited to participate!
Contact Tim Leege (715) 623-4039 or Sara Ott (715)486-0429.
Wisconsin Department of Agriculture, Trade and Consumer Protection

Wisconsin Pest Survey Report

2009 Potato Survey for Powdery Scab

• **Total fields tested:** 150 as of December 2009.

• Disease causing organisms: *Spongospora subterranea subterranea*.

• Infested potato fields in Adams, Oconto, Portage, Langlade and Waushara Counties.

• Testing will continue in 2010.

Potato growers are invited to participate!

Contact Tim Leege (715) 623-4039 or Sara Ott (715) 486-0429.
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THANK YOU TO:

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