SURVEY OF SCN IN WISCONSIN

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Motivation for the Survey

- General perception is SCN is not widespread
- This attitude brings apathy
- Historically, SCN in most states has gone from undetected for years to a widespread problem
- Our goal is to prevent a repeat of history
- It is not a case of *if*, but *when* SCN damage will be evident and widespread
FOUR DIFFERENT STAGES OF BEHAVIOR

- **Know.** What is SCN?
- **Think.** Could I have it and not know it?
- **Feel.** If I’m losing yield to SCN, I want to know about it and stop it now.
- **Do.** I’m going to test my fields for SCN.
SCN Distribution in the US-1973

SCN – A BIG PROBLEM

SOYBEAN CYST NEMATODE REGULATED AREAS
Counties entirely colored are completely regulated April 1, 1973
SCN Distribution in the US Today
Controlling SCN

- Identify its existence
- Rotate crops and varieties
  - Relieve stress from weeds, fertility, herbicide, etc.
EDUCATIONAL

Soil Testing Program

- Goal is to help growers identify pest in fields
- Begun in 2002
- Free kit sent to growers
- Grower responsible for taking sample and sending in
EDUCATIONAL Soil Testing Program

- Promotion through field days, Ag agents, crop consultants and commodity associations
- Sponsored by a grant from the Wisconsin Soybean Marketing Board
SCN Kit

• Postage paid mailer
• Sample bag
• Field information sheet
• Guide to soil sampling
• Letter
• SCN brochure
Participation

- 300 test kits sent out
- 160 were returned to lab
- 25 counties represented
# UNDERSTANDING SCN SOIL TEST RESULTS

<table>
<thead>
<tr>
<th>Risk</th>
<th>Egg count range</th>
<th>Potential yield loss for SCN susceptible variety</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>0 eggs/100 cm$^3$ soil</td>
<td>None</td>
</tr>
<tr>
<td>Low</td>
<td>1-500 eggs/100 cm$^3$ soil</td>
<td>0-10% silt or clay soils</td>
</tr>
<tr>
<td></td>
<td>1-500 eggs/100 cm$^3$ soil</td>
<td>10-30% sandy soils</td>
</tr>
<tr>
<td>High</td>
<td>500-10,000 eggs/100 cm$^3$ soil</td>
<td>10-50% all soils</td>
</tr>
<tr>
<td>Very High</td>
<td>&gt;10,000 eggs/100 cm$^3$ soil</td>
<td>Very high-expect yield loss for resistant variety</td>
</tr>
</tbody>
</table>
And the Survey Says....
Frequency Distribution of SCN egg Counts in 2002 Survey

- 63% with 0 SCN count
- 22% with 1-99 SCN count
- 10% with 100-499 SCN count
- 1% with 500-1000 SCN count
- 3% with 1000-2000 SCN count
- 2% with 2000-4000 SCN count

SCN Count (eggs/100 cc soil)
Known Distribution of Soybean Cyst Nematode 2002

Mississippi river effect?

SCN Positive

2001 DATCP Negative

Introduction area into WI??
Number of soil samples submitted to UW-SCN sampling program - 2002

Percentage positive samples for county:
- 0
- 1-25
- 26-50
- 51-75
- 76-100

Map showing the number of soil samples submitted to UW-SCN sampling program for each county in Wisconsin for the year 2002.
Known Distribution of Soybean Cyst Nematode 2002

SCN Positive

Additional UW Positive 2002
Summary of Survey

- 63% of the fields tested, no SCN was found
  - No change in management practices
- 30% had 1 - 500 eggs/100 cc soil
  - Moderate risk
  - rotate with non-host crops, resistant varieties, and tolerant or susceptible varieties when SCN numbers are low again
- 10 fields had very high levels >500 eggs/100 cc soil
  - High risk
  - rotation out of soybean for several years and careful selection of resistant varieties
Summary

- SCN will never go away
- Continued monitoring needed
- More growers need to test their fields
Support for this project provided by: