
$25 Million...
How Much Did
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Soybean Cyst Nematode

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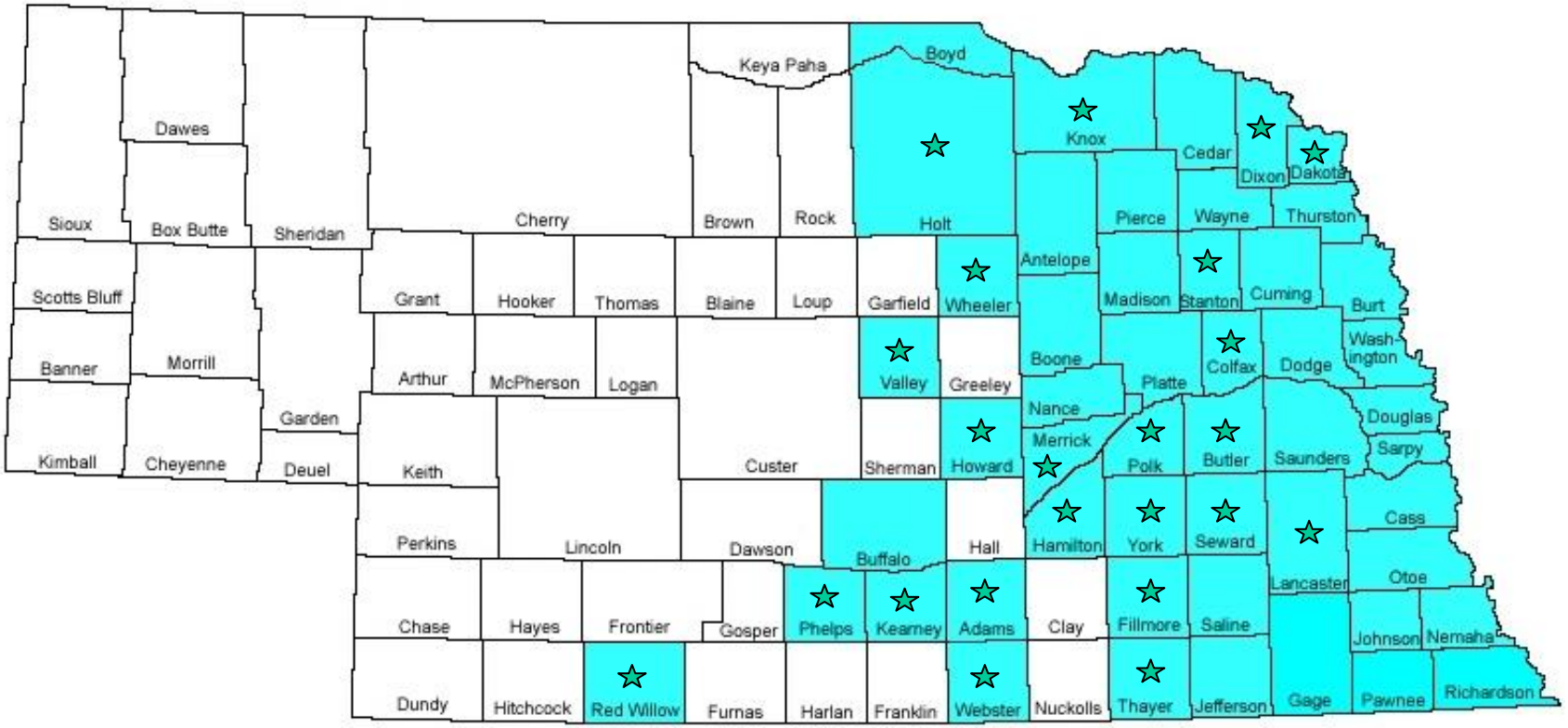
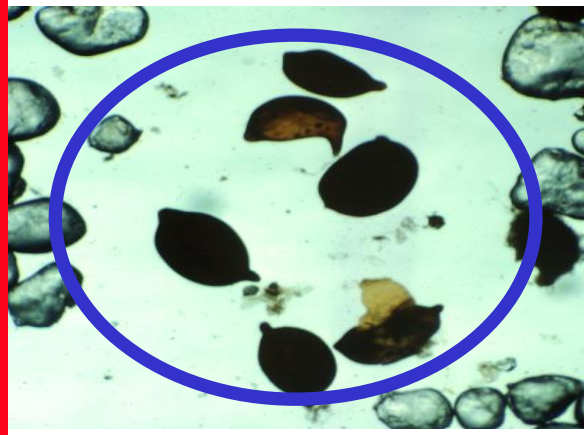
Soybean Cyst Nematode

23 New Counties Identified (2005 - 2009)



SCN IS FOREVER…



BUT IT CAN BE MANAGED!

Obstacle

SCN

≠

STD

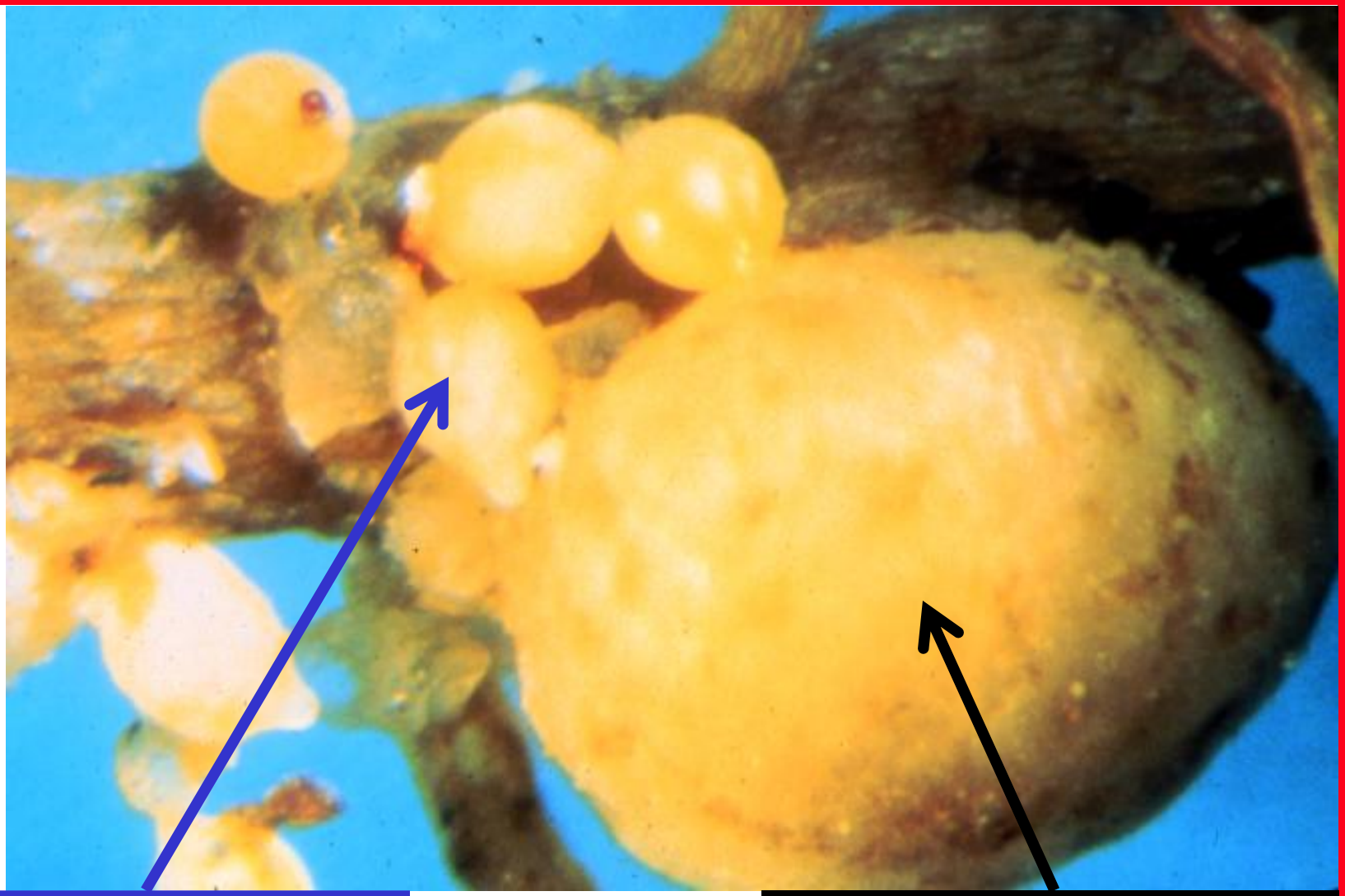
MANAGEMENT

- IDENTIFICATION
- SANITATION
- ROTATION
- RESISTANT VARIETIES

IDENTIFICATION

- First step to managing SCN
- Visual observation – one month or more after emergence *(may or may not detect)*
- Soil test – any time throughout the year, after harvest easiest *(more conclusive)*

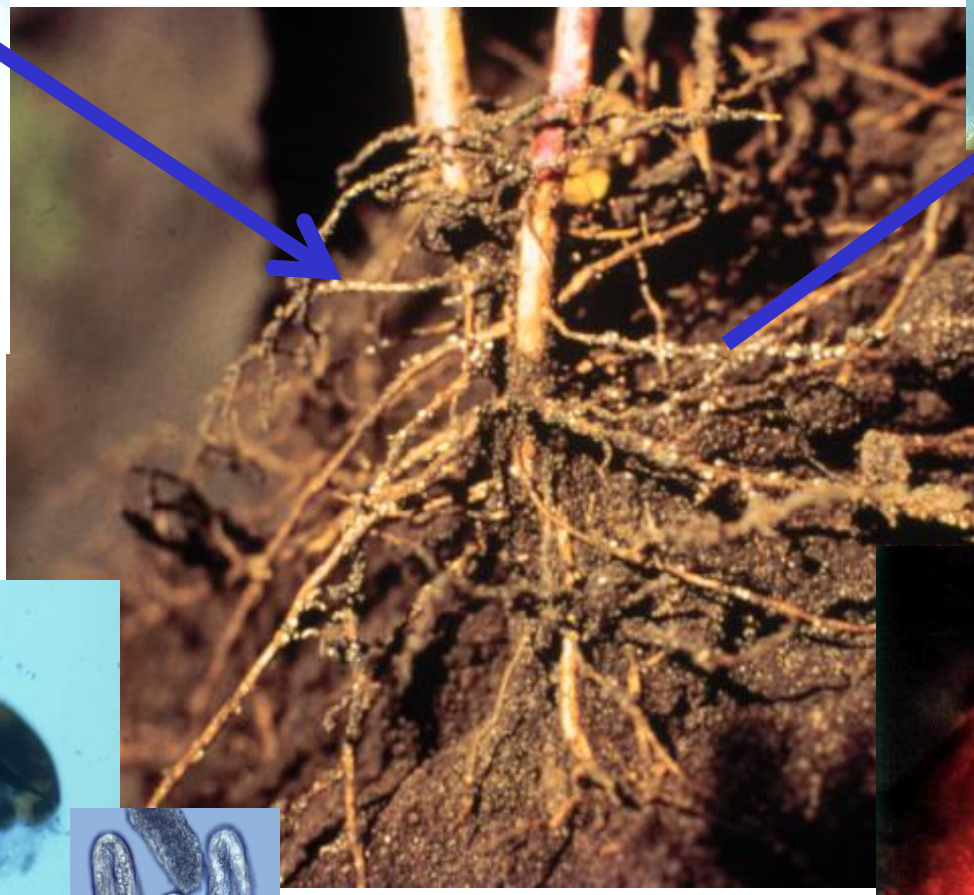
IDENTIFICATION

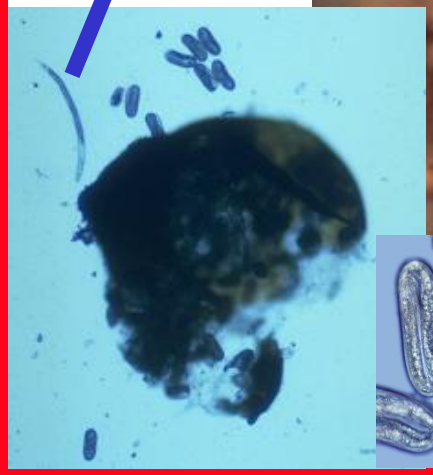


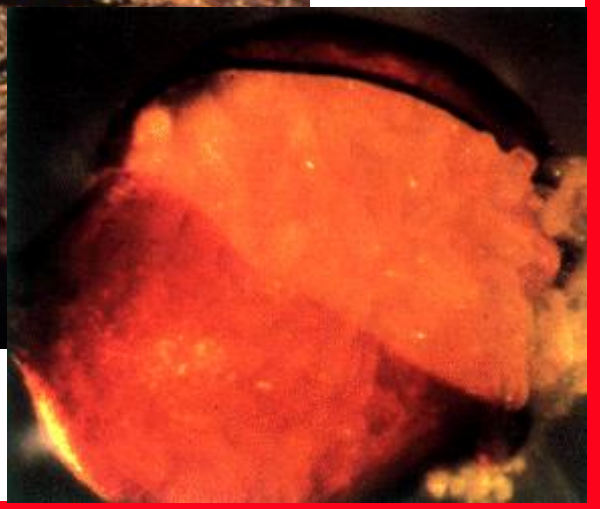
nematode cysts

Rhizobium nodule

SCN Life Cycle







SANITATION

- Clean equipment between fields
- Plant/till SCN infested fields last
- Minimize soil movement within and between fields
- Control weedy hosts

WEED HOSTS

Most Common:

- **Field Pennycress*, Henbit***
- **Common Chickweed*, Common Mullein, Pokeweed, Purslane, Other Wild Mustards***

*** - *may grow as a winter annual***

Management:

- **SCN-infested fields with any of the weeds listed above should be considered a priority for fall or early spring weed control.**

Winter Annual Weed Hosts

- Research is ongoing to determine Nebraska SCN population reproduction levels on weedy hosts

ROTATION

- Year 1 – Non-host Crop
- Year 2 – ***Resistant Variety****
- Year 3 – Non-host Crop
- Year 4 – ***Resistant Variety****
- Year 5 – Non-host Crop
- Year 6 – ***Resistant Variety****

**** Know the source of resistance and rotate to a different source than you used the last time you planted soybeans.***

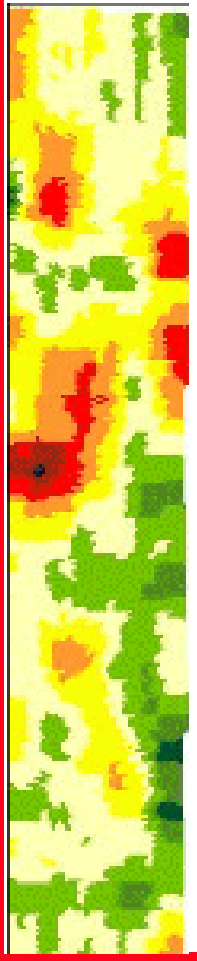
RESISTANT VARIETIES

- Know the source of resistance
  - PI88788 *(most common)*
  - Peking (PI54840)
  - Hartwig (PI437654)
  - Cyst-X *(selection from Hartwig)*
  - Others

SOIL SAMPLING

- 15-25 soil cores per sample
- 6-8 inches deep, through roots
- Randomly sample field, or
- Sample problem spots
- Mix thoroughly
- Submit 1-pint sample to UNL P&PDC

PROBLEM SPOTS



- Previously flooded areas
- Along fence lines
- Low areas in field
- Field entryways
- Areas with consistently lower soybean yields, but good corn yields

Soil Sampling

- Completed 5th year of project
- # of samples/year increasing
- About 20-25% positive for SCN
- Many farmers had no idea it was in their fields, even at high counts

UNL SCN RESEARCH

2006 - 2009

Ave. yield: 15 infested sites

- **Resistant varieties: 52.9 bu/A**
- **Susceptible varieties: 47.6 bu/A**

Ave. yield: 7 non-infested sites

- **Resistant varieties: 63.1 bu/A**
- **Susceptible varieties: 65.7 bu/A**

UNL SCN RESEARCH

2006 - 2009

Egg counts at 12 infested sites

(eggs per 100 cc's of soil)

Egg count: susceptible varieties

- **Spring:** 1,707 eggs
- **Fall:** 5,711 eggs + 235%

Egg count: resistant varieties

- **Spring:** 2,151 eggs
- **Fall:** 1,571 eggs - 27%

2010 SCN FIELD DAYS

Tentative Dates

- August 17 – Waterloo
- August 18 – Silver Creek
- August 23 – Waverly
- August 24 - Fairmont

New Project

Kit for testing for SCN in the Classroom

FFA chapters can purchase kits at a reduced price that include a training video and all the materials needed to test for SCN in the classroom.

Training Video Includes:

- Introduction 1:30
- Economic Impact & Global Demand 4:15
- Soybean Utilization 5:30
- Soybean Pests 4:45
- Field Inspection & Survey 3:00

Training Video Includes:

▪ Soil Sampling	1:30
▪ SCN Test Kit	6:30
▪ Egg Extraction from Soil	6:15
▪ Management of SCN	2:20
▪ Soybean Breeding	7:40
Total Run Time	43:15

Thank You!

Questions?