# Emerging Plant Disease Problems for 2001-2002

Adrian Barta

WI DATCP

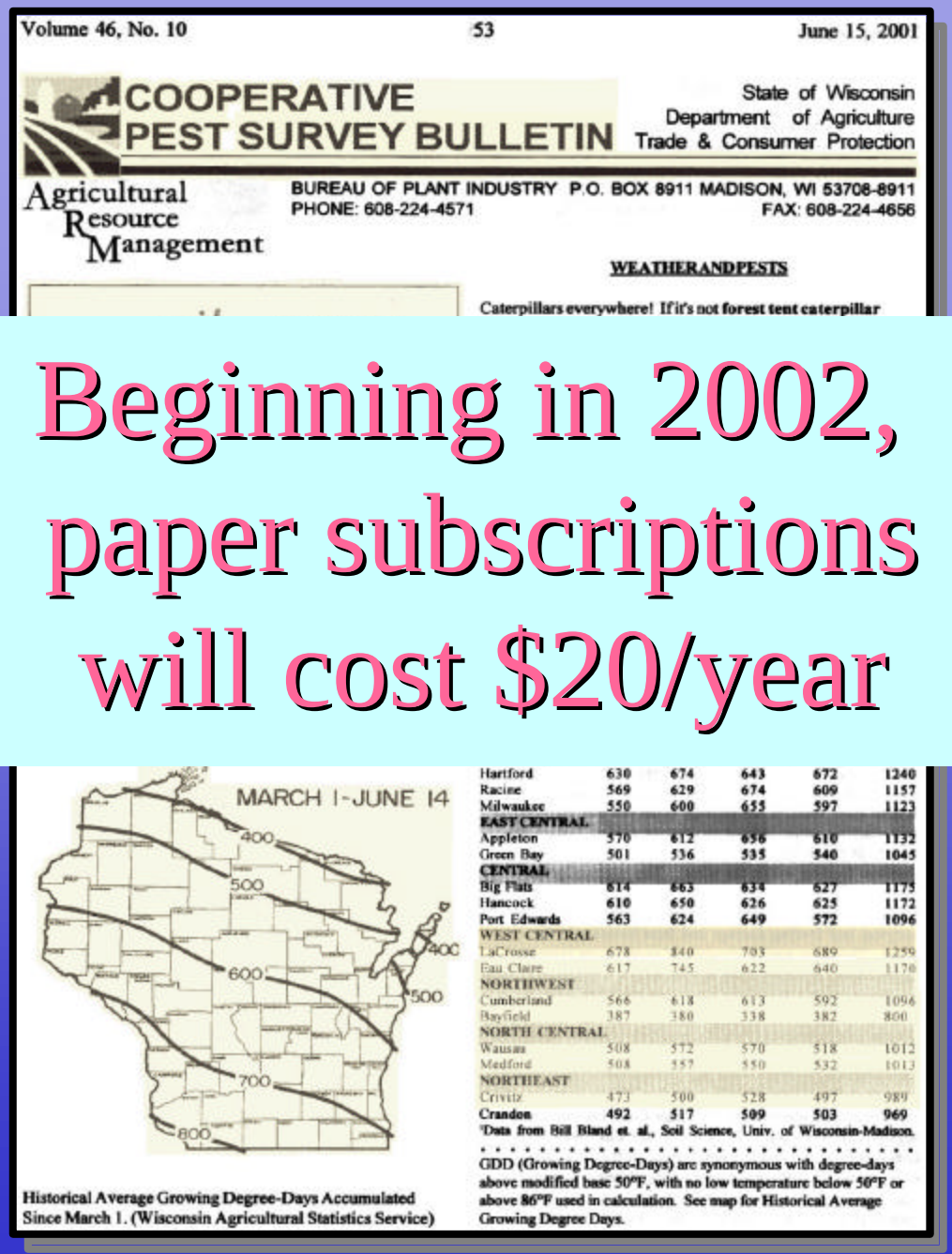
# DATCP Crop Pest Survey

- Monitor endemic pest and pathogen populations for changes

- Detect introductions of potential new pest species

- Work with Federal and University programs to provide a coordinated response to threats

- Inform farmers, other concerned parties and the public of pest and disease situations



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COOPERATIVE PEST SURVEY BULLETIN

State of Wisconsin Department of Agriculture Trade & Consumer Protection

Agricultural Resource Management

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WEATHERANDPESTS

Caterpillars everywhere! If it's not **forest tent caterpillar**

MARCH 1-JUNE 14

400 500 600 700 800 400 500

Historical Average Growing Degree-Days Accumulated Since March 1. (Wisconsin Agricultural Statistics Service)

| | | | | | |
|---|---|---|---|---|---|
| Hartford | 630 | 674 | 643 | 672 | 1240 |
| Racine | 569 | 629 | 674 | 609 | 1157 |
| Milwaukee | 550 | 600 | 655 | 597 | 1123 |
| EAST CENTRAL | | | | | |
| Appleton | 570 | 612 | 656 | 610 | 1132 |
| Green Bay | 501 | 536 | 535 | 540 | 1045 |
| CENTRAL | | | | | |
| Big Flats | 614 | 663 | 634 | 627 | 1175 |
| Hancock | 610 | 650 | 626 | 625 | 1172 |
| Port Edwards | 563 | 624 | 649 | 572 | 1096 |
| WEST CENTRAL | | | | | |
| LaCrosse | 678 | 840 | 703 | 689 | 1259 |
| Eau Claire | 617 | 745 | 622 | 640 | 1170 |
| NORTHWEST | | | | | |
| Cumberland | 566 | 618 | 613 | 592 | 1096 |
| Bayfield | 387 | 380 | 338 | 382 | 800 |
| NORTH CENTRAL | | | | | |
| Wausau | 508 | 572 | 570 | 518 | 1012 |
| Medford | 508 | 557 | 550 | 532 | 1013 |
| NORTHEAST | | | | | |
| Crivitz | 473 | 500 | 528 | 497 | 989 |
| Crandon | 492 | 517 | 509 | 503 | 969 |

'Data from Bill Bland et. al., Soil Science, Univ. of Wisconsin-Madison.

GDD (Growing Degree-Days) are synonymous with degree-days above modified base 50°F, with no low temperature below 50°F or above 86°F used in calculation. See map for Historical Average Growing Degree Days.

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# DATCP Crop Pest Survey

What We Didn’t Find In 2001

What We Did Find In 2001

Concerns for 2002 and Beyond

# What We Didn't Find In 2001

- Stewart's wilt of corn
  - present in 1999 and 2000
  - not found in 2001 DATCP survey or seed field inspections
  - probably due to poor flea beetle winter survival 2000-2001

# What We Didn't Find In 2001

- Southern rust of corn
  - widespread in 2000
  - not found in 2001
    - common maize rust was…common

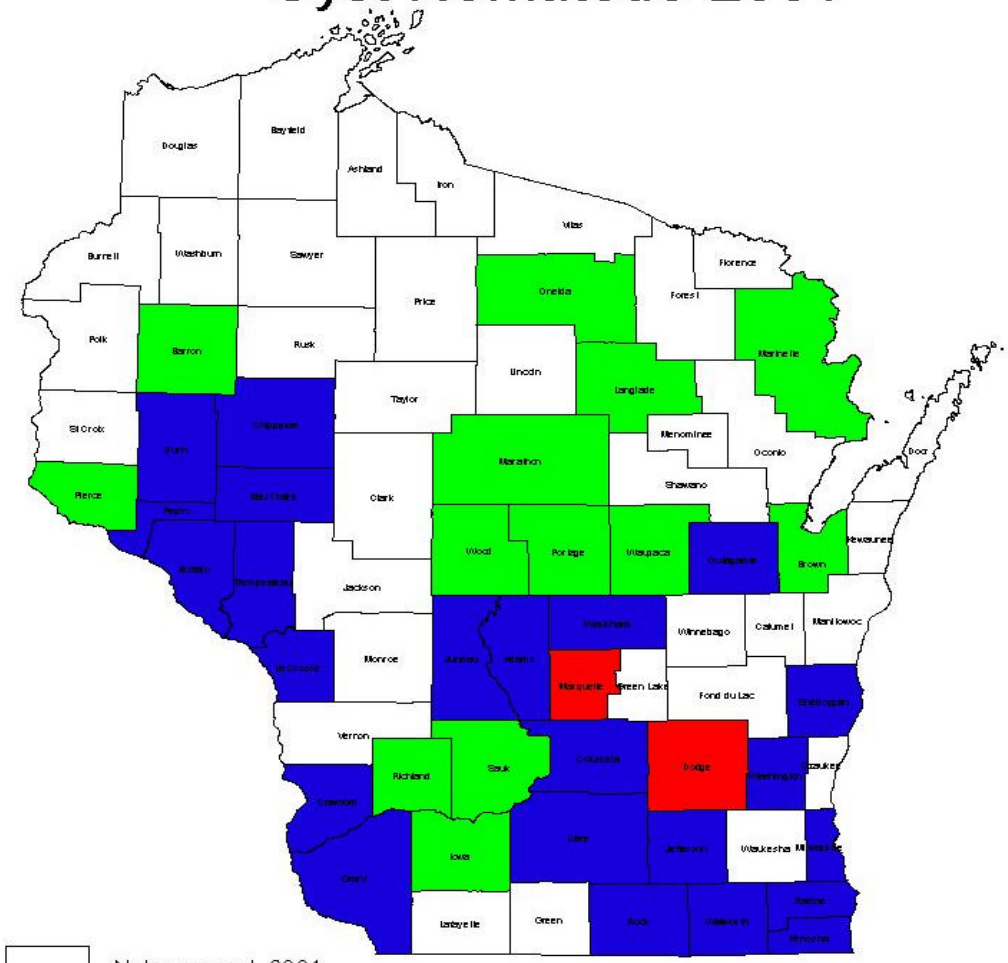
# What We Didn't Find In 2001

- Soybean Cyst Nematode

- DATCP sampled in 13 counties
- extensive sampling in Pierce and Brown counties
- no new county records added by DATCP in 2001

- SCN was identified in 2001 by Dr. Ann MacGuidwin of UW from Marquette and Dodge counties

# Known Distribution of Soybean Cyst Nematode-2001



# What We Did Find In 2001:
# New
# and
# Unusual Diseases

# Frogeye leaf spot of soybean

- First found in WI in 2000 in Iowa and Green counties
- Found in Dane county in 2001

Caused by *Cercospora sojina*

# Frogeye leaf spot of soybean

- First described in Japan in 1915
- First observed in U.S. in 1942
- Has been known to cause significant yield losses in the Delta region

# Stripe Rust of Wheat

- Found in the major wheat-growing counties of WI in 2001

- Usually a disease of the Pacific NW or high elevations

# Stripe Rust of Wheat

- Great Plains had the most widespread stripe rust seen in 40 years this past year

- Probably ephemeral in WI

# Concerns for 2002 and beyond

# Concerns For 2002 And Beyond

## Soybean viruses that may be associated with the soybean aphid

- Soybean Mosaic Virus (SMV)
- Alfalfa Mosaic Virus (AMV)
- Soybean Dwarf Virus (SbDV)

# Concerns For 2002 And Beyond

Soybean Mosaic Virus
and
Alfalfa Mosaic Virus
are endemic in Wisconsin

Soybean dwarf virus is
not
currently found in Wisconsin

# Concerns For 2002 And Beyond

Soybean Dwarf Virus (SbDV) =
Subterranean Clover Red Leaf Virus

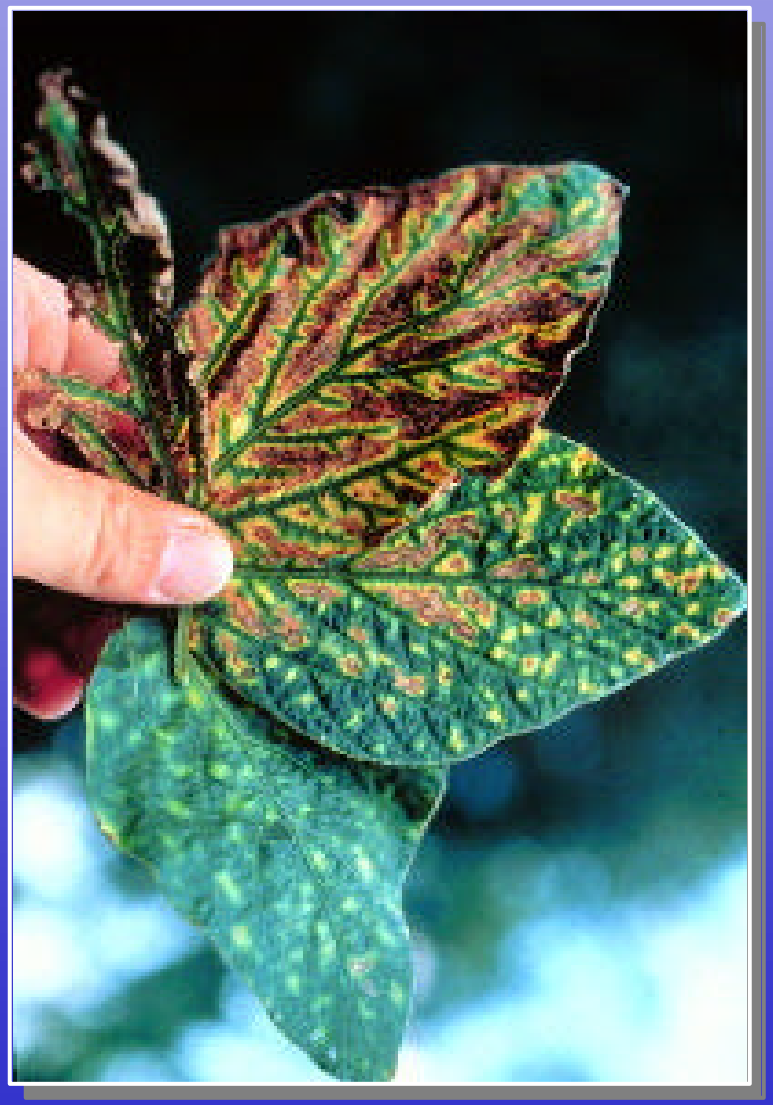
SCRLV is found in California

Hosts of SCRLV include red clover, white clover and subterranean clover

# Concerns For 2002 And Beyond

## Soybean Sudden Death Syndrome

- found in Wisconsin sporadically
- widespread and damaging in Illinois, Indiana and southern states

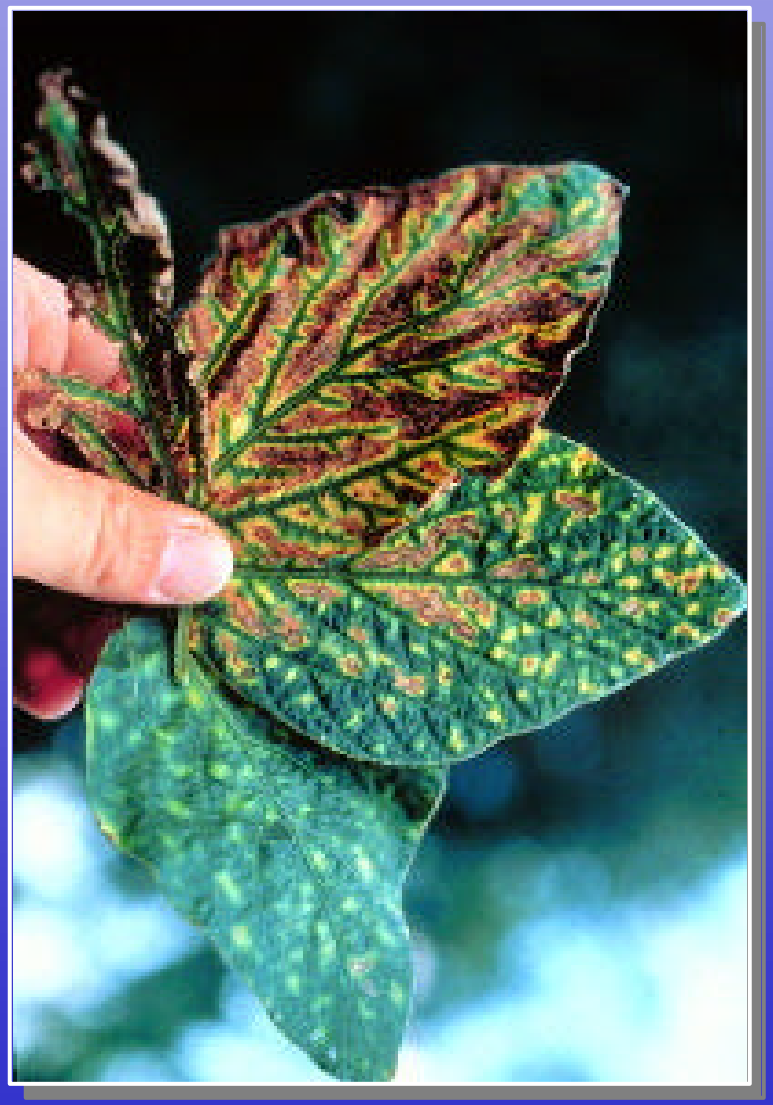


# Concerns For 2002 And Beyond

## Soybean Sudden Death Syndrome

- Caused by *Fusarium solani* f. sp. *glycines*

- Presence of soybean cyst nematode may increase incidence of SDS



Best wishes to Dr. Alemu Mengistu,
now with USDA/ARS
at Stoneville, Mississippi