Soybean Aphid Suction Trapping

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Eileen M. Cullen
Assistant Professor
Department of Entomology
University of Wisconsin – Madison
cullen@entomology.wisc.edu

Soybean Aphid Suction Traps in Wisconsin

North Central IPM Center

Regional Soybean Aphid Suction Trap Network

CSREES

Wisconsin Soybean Marketing Board

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UW Extension

Suction Traps started in Illinois Fall 2001.

<u>Predictive potential</u> based on fall trap captures of winged soybean aphid males and females flying back to buckthorn to overwinter.

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Illinois Experience …

Fall 2001 Trap Catches Very Low

2002 Growing Season low soybean aphid year

Fall 2002 Traps caught 700+ migrants

2003 Growing Season outbreak soybean aphid year

Fall 2003 Trap Catches again Very Low

2004 Growing Season very low soybean aphid year

Fall 2004 Traps caught 1,765 migrants

2005 Growing Season moderate to high aphid year

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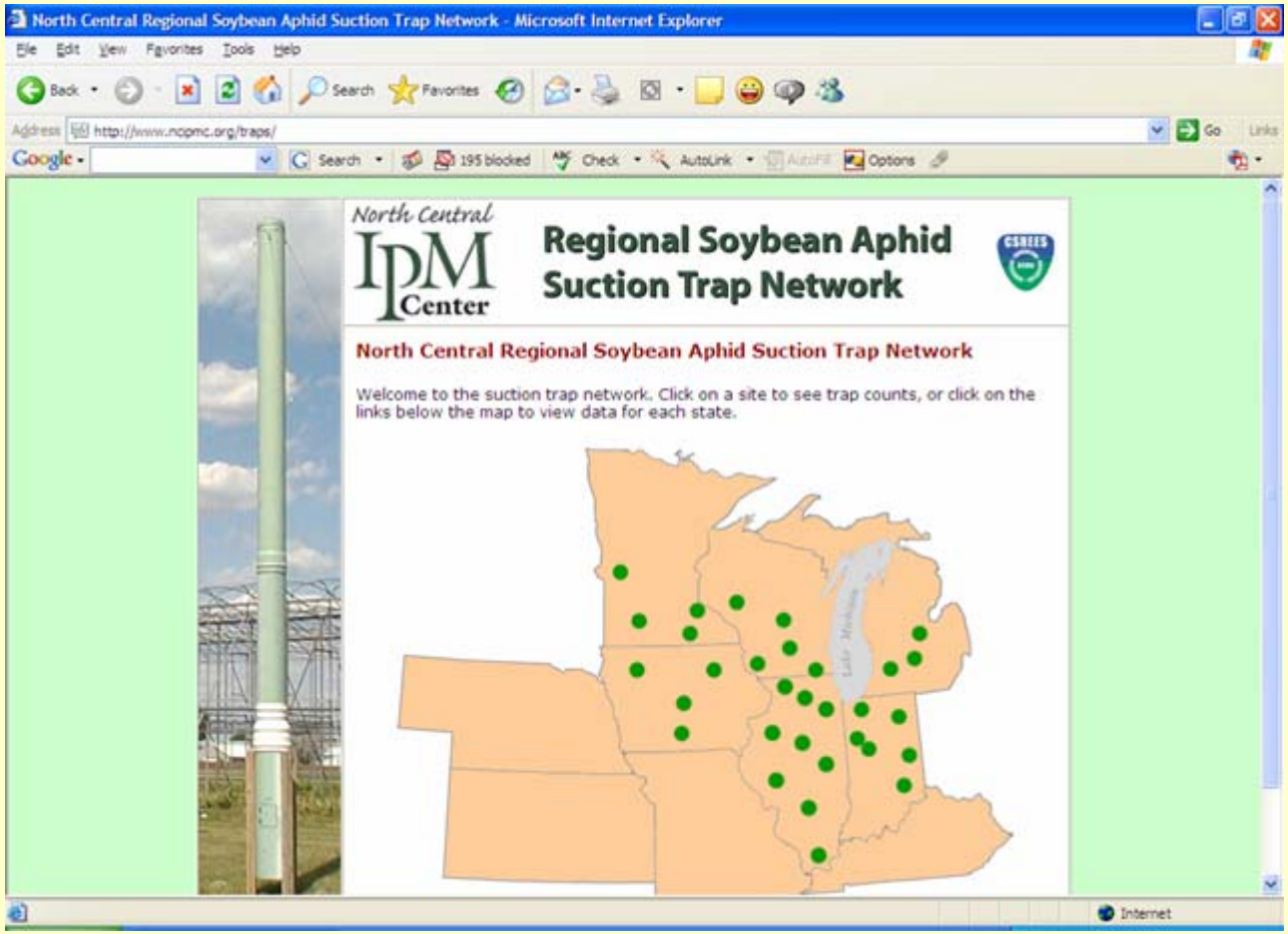
http://www.ncipm.org/traps/



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Fall 2005 to
2006 Growing Season

6 states now testing suction trap predictive value

Collection Jars sent weekly June – October to *Illinois Natural History Survey* for expert aphid identification.

Counts posted to Website

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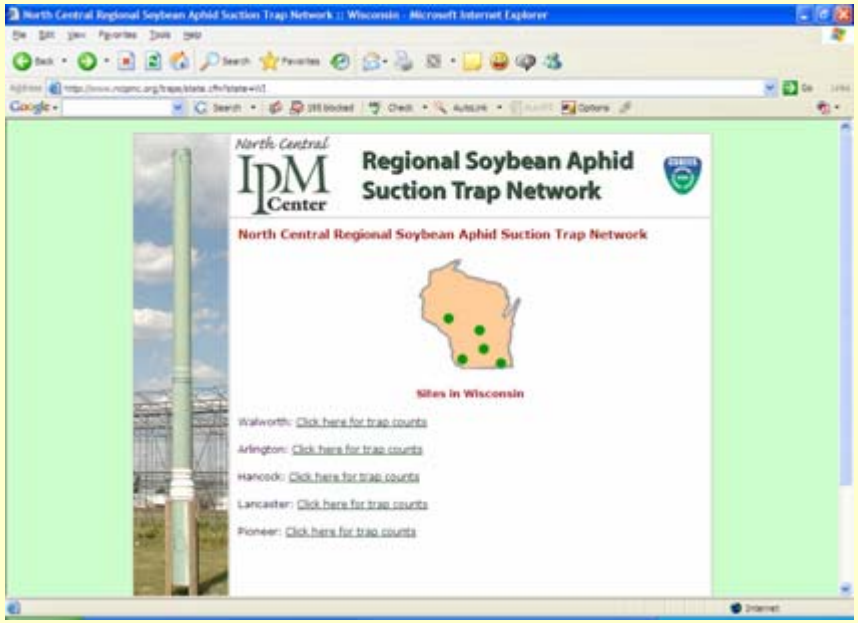

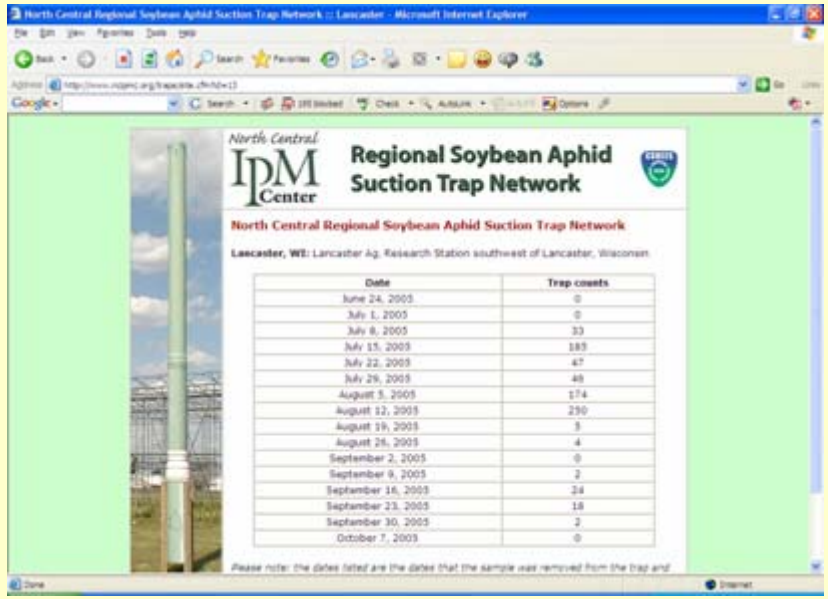

Walworth Co. (near Sharon, WI)
Arlington Agric. Res. Station
Lancaster Agric. Res. Station
Hancock Agric. Res. Station
Pioneer Research Station (near **Eau Claire, WI**)

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WI Soybean Aphid Suction Trap Catch, 2005

Date	Walworth	Arlington	Hancock	Lancaster	Eau Claire
Jul 15	75	316	46	185	17
Jul 22	147	---	81	47	38
Jul 29	30	42	11	46	33
Aug 5	180	83	51	174	226
Aug 12	75	78	120	250	278
Aug 19	4	19	35	5	222
Aug 26	5	8	0	4	8
Sept 2	3	0	1	0	7
Sept 9	0	1	1	2	3
Sept 16	0	1	3	24	1
Sept 23	5	0	0	18	3
Sept 30	0	0	---	2	1
Oct 7	0	0	0	0	---
Oct 14	0	0	0	0	0

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Key Points ...

- Summer suction trap catch is not predictive, these catches represent all-female population. Dispersal flight between fields in growing season.
- Watch September-October flights for predictive potential! These are winged males & females migrating to buckthorn, the host plant where overwintering eggs are laid.

- Through the end of October 2005, Illinois suction traps captured significantly fewer soybean aphids than was true for 2004.

2001 (seven traps)--24

2002 (eight traps)--732

2003 (nine traps)--71

2004 (nine traps)--1,700

2005 (nine traps)--269

- Through the end of October 2005, cooperating states captured:

Wisconsin 2005 (five traps)– 77

Michigan 2005 (three traps) - 49

Indiana 2005 (6 traps) - 377

Iowa 2005 (four traps) - 496

Minnesota 2005 (four traps) – 2,166

- Wisconsin and Michigan fall trap captures relatively low.
- Regionally, moderate to high (MN) fall trap captures.
- What can this tell us about 2006? – answer cannot be based solely on trap captures. However, 2005-06 is first year to test the predictive value on a regional scale.

- Spring natural enemy (e.g., lady beetles) predation of soybean aphids on buckthorn.
- Were eggs successfully deposited on buckthorn? Fall flights indicate so, but are eggs found on buckthorn?
- Weather conditions during spring and summer 2006 will be important during soybean aphid generations on buckthorn and subsequent migration to soybeans.

  heavy rains? dry? temperature?

- Will soybeans be planted early or late in 2006? (late planted soybeans tend to have greater soybean aphid problems).
- What effect did insecticide and miticide applications in 2005 have on soybean aphids?

- Stay tuned to spring and summer reports in 2006, Wisconsin Crop Manager, and other outlets.
- Regular scouting visits in soybeans during growing season will continue to provide information needed for treatment decision-making within season – and to check the utility of 2005 suction trap numbers to predict relative aphid pressure from year to year.