

IMPLICATIONS OF THE SOYBEAN APHID TO PROCESSING BEANS

**Dave Hogg, UW Entomology
WFCA Conference
January 17, 2002**

The Soybean Aphid In Wisconsin – A Collaborative Effort

**Entomology: Dave Hogg, John Wedberg,
Tom German**

**Plant Pathology: Craig Grau,
Nancy Kurtzweil**

Agronomy: Chris Boerboom, John Gaska

Other: Tom Klubertanz (UW Rock Co.)

The Soybean Aphid – *Aphis glycines*

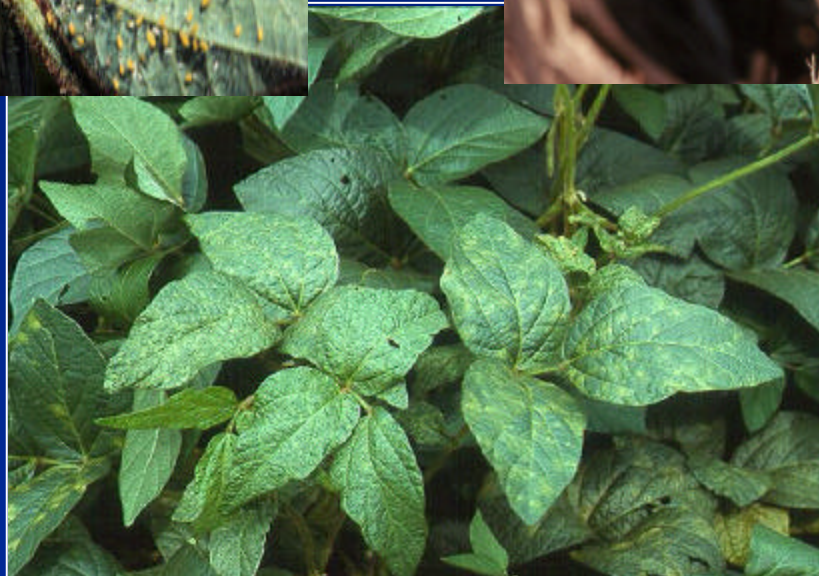
Where did it
come from?



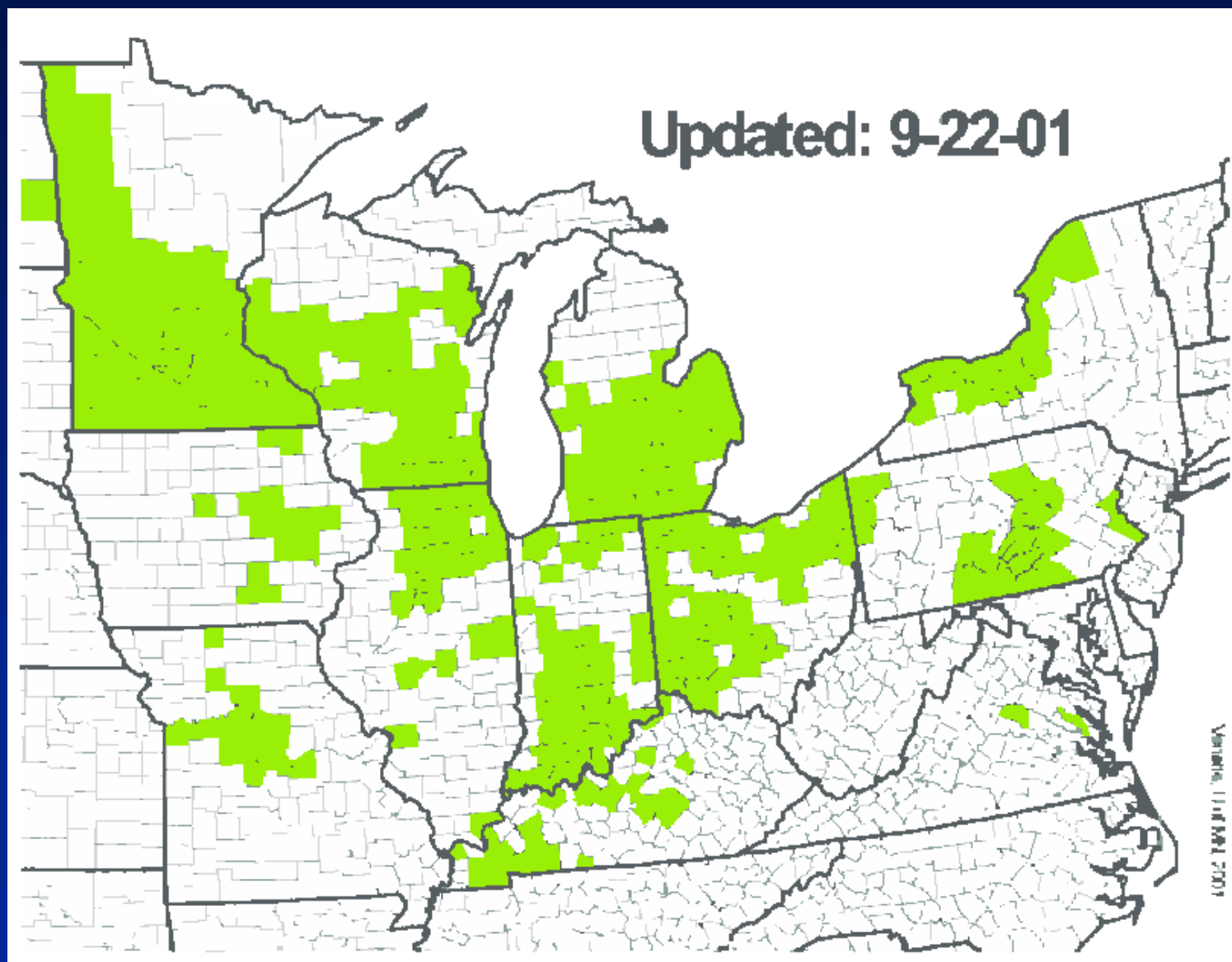
When/how
did it get
here?



Soybean Aphid – Impacts on Soybean

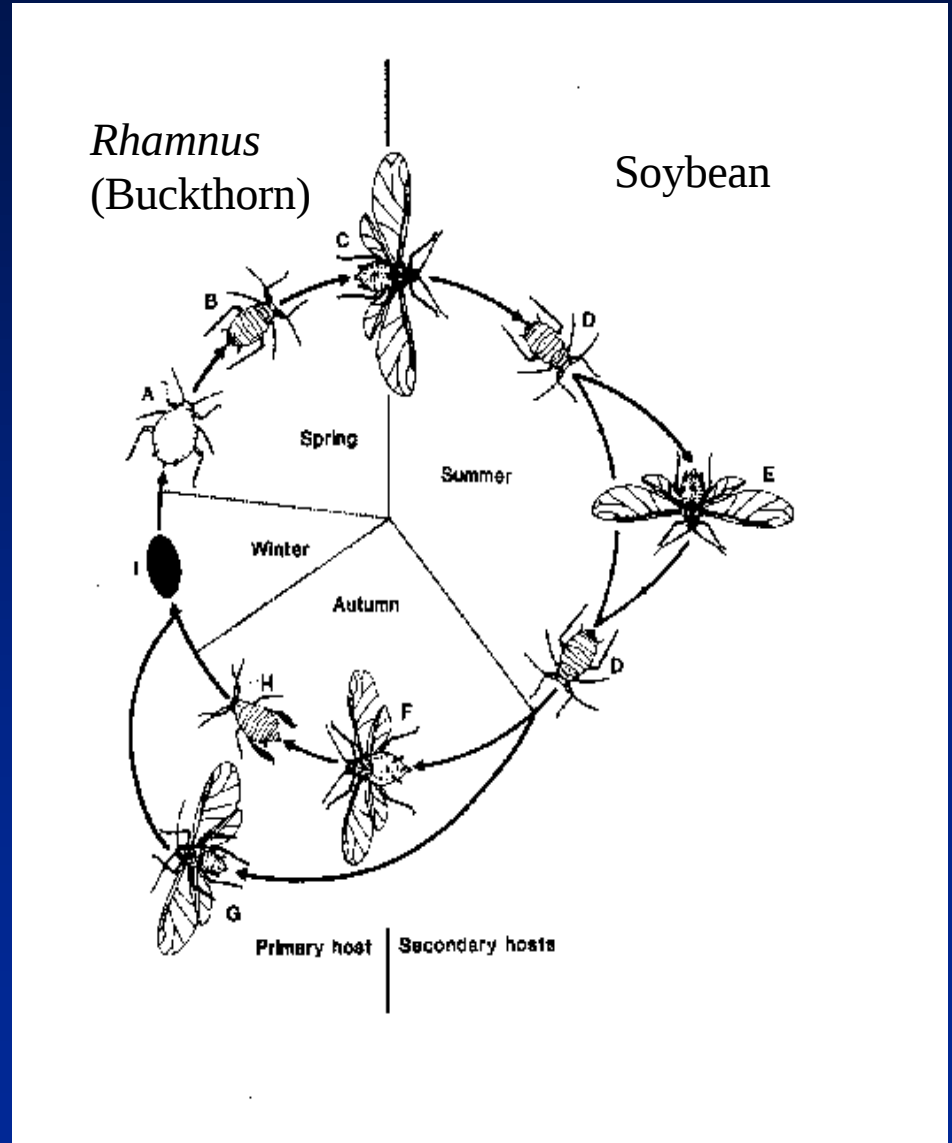


SOYBEAN APHID DISTRIBUTION



Soybean Aphid Seasonal History

- A: fundatrix
- B: fundatrigenia
- C: spring migrant
- D: apterous exule
- E: alatae exule
- F: gynopara
- G: male
- H: ovipara
- I: egg



Buckthorn, *Rhamnus cathartica*



Soybean Aphid Seasonal Pattern in China (Wang et al. 1962)

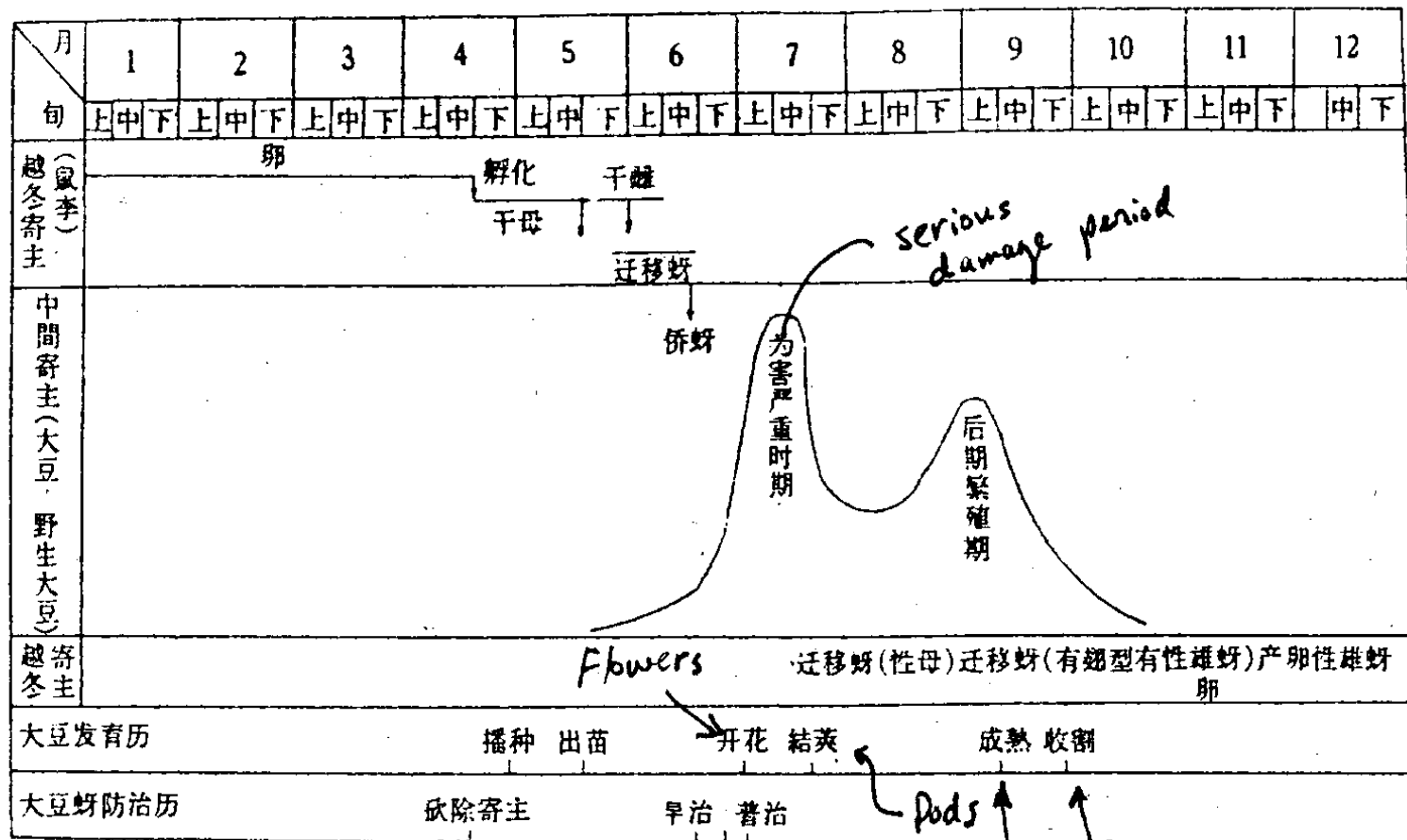
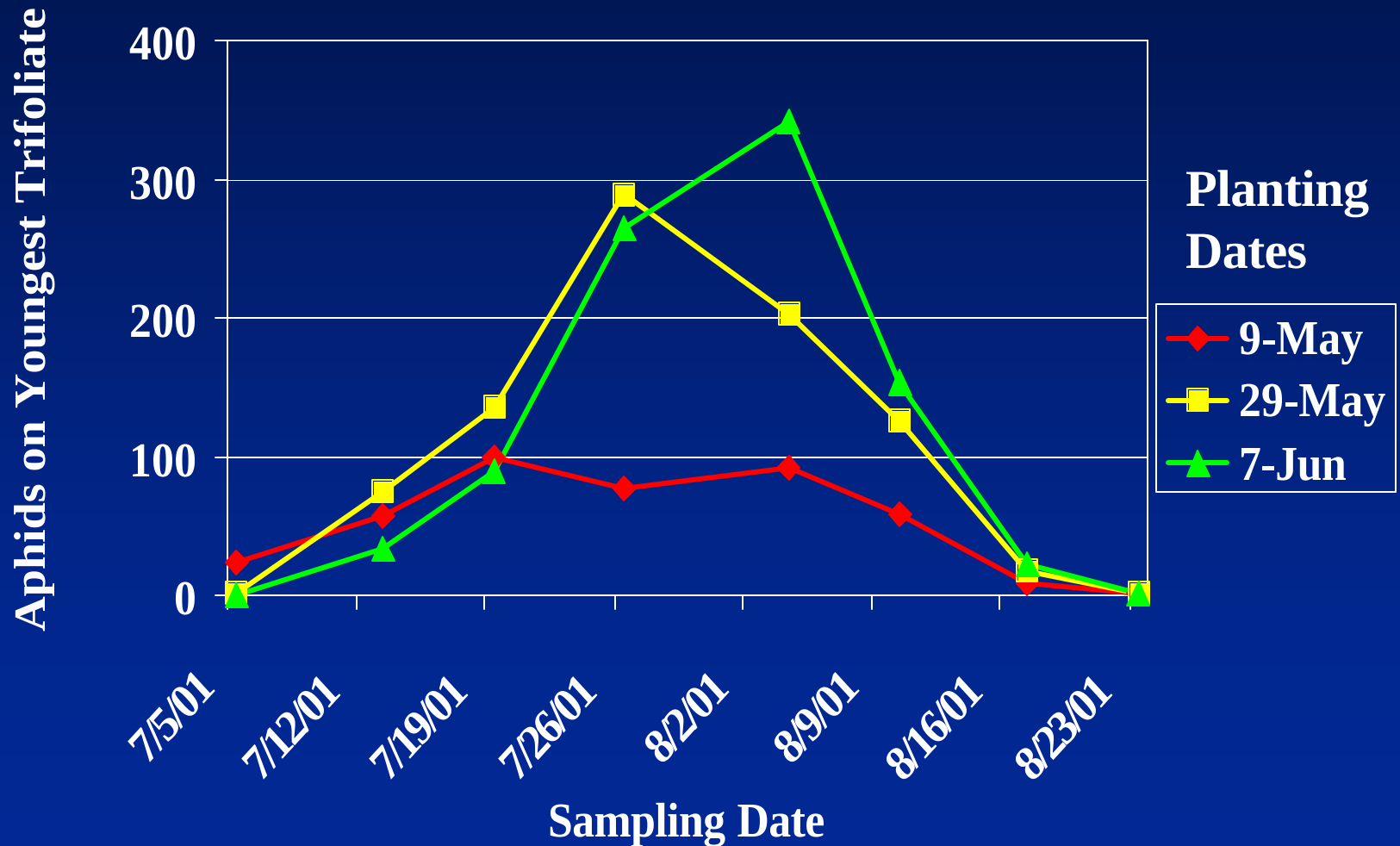


图4 大豆蚜发生及防治历

Soybean Aphid Population Dynamics

Arlington, WI 2001



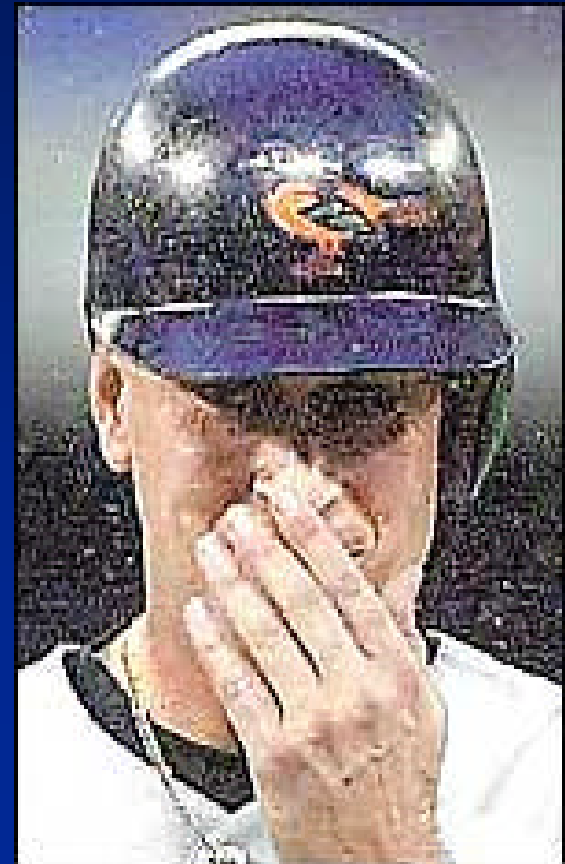
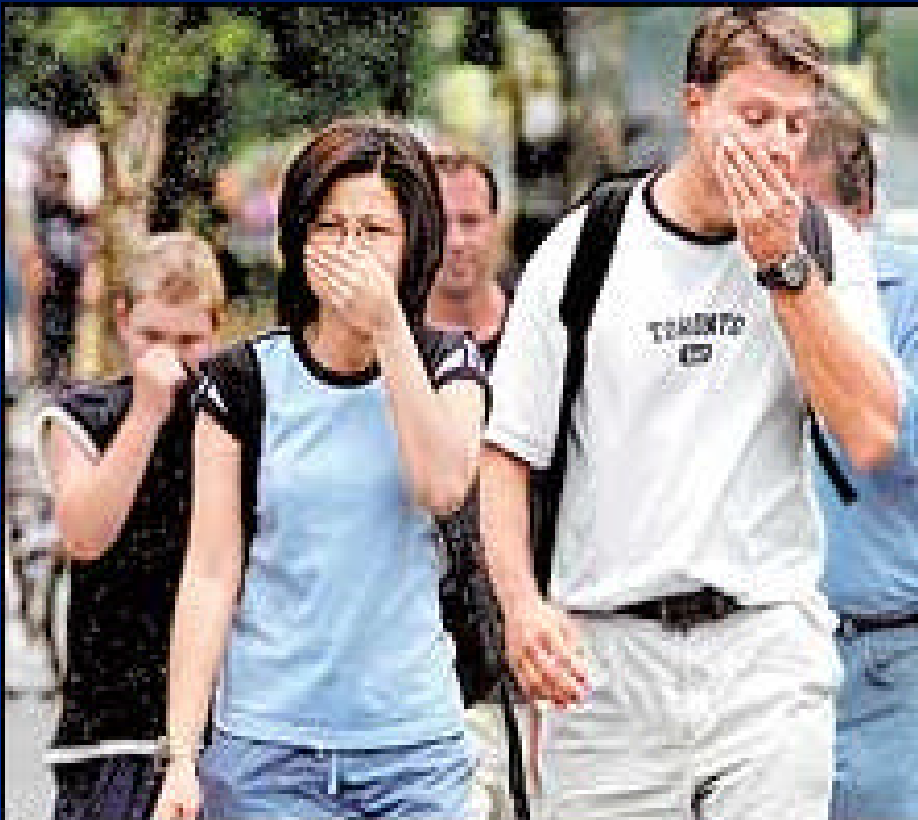
SOYBEAN APHID – POPULATION GROWTH POTENTIAL

- A soybean aphid can begin reproducing when she is 5 days old
- Under optimal conditions a soybean aphid population can increase by a factor of 1.6 per day, which means a population can potentially grow from 10 to 1,000 aphids in a little under 10 days!

(Bob Ellingson data, UW Biotron, spring 2001)

Soybean Aphids Descend on Toronto

August 2-3, 2001



The Soybean Aphid Infests Snap Bean Fields in Wisconsin



Acceptability of Selected Legumes as SBA Hosts

Plant Species	Cultivar	Reproduction
Alfalfa	3 tested	+
Birdsfoot trefoil	Leo	++
Pea	Little Marvel	0
Red clover	Marathon	+++
Snap bean	Evergreen	+++
	Fury	+++
	Hystyle	+++
	Top Crop	+++
Soybean	BSR 101	+++

Suitability of Selected Legumes as SBA Hosts

Plant species	Cultivar	# of Nymphs	% Surviving
Alfalfa	3 tested	2	50 (1 alate)
Birdsfoot trefoil	Leo	10	0
Red clover	Marathon	29	90
Snap bean	Evergreen	38	5
	Fury	42	0
	Hystyle	42	0
	Top Crop	40	0
Soybean	BSR 101	50	98

Soybean Aphid – Biological Controls

**Predators – Multicolored
Asian Lady Beetle**



Asian Lady Beetle – Help or Just Another Problem?

