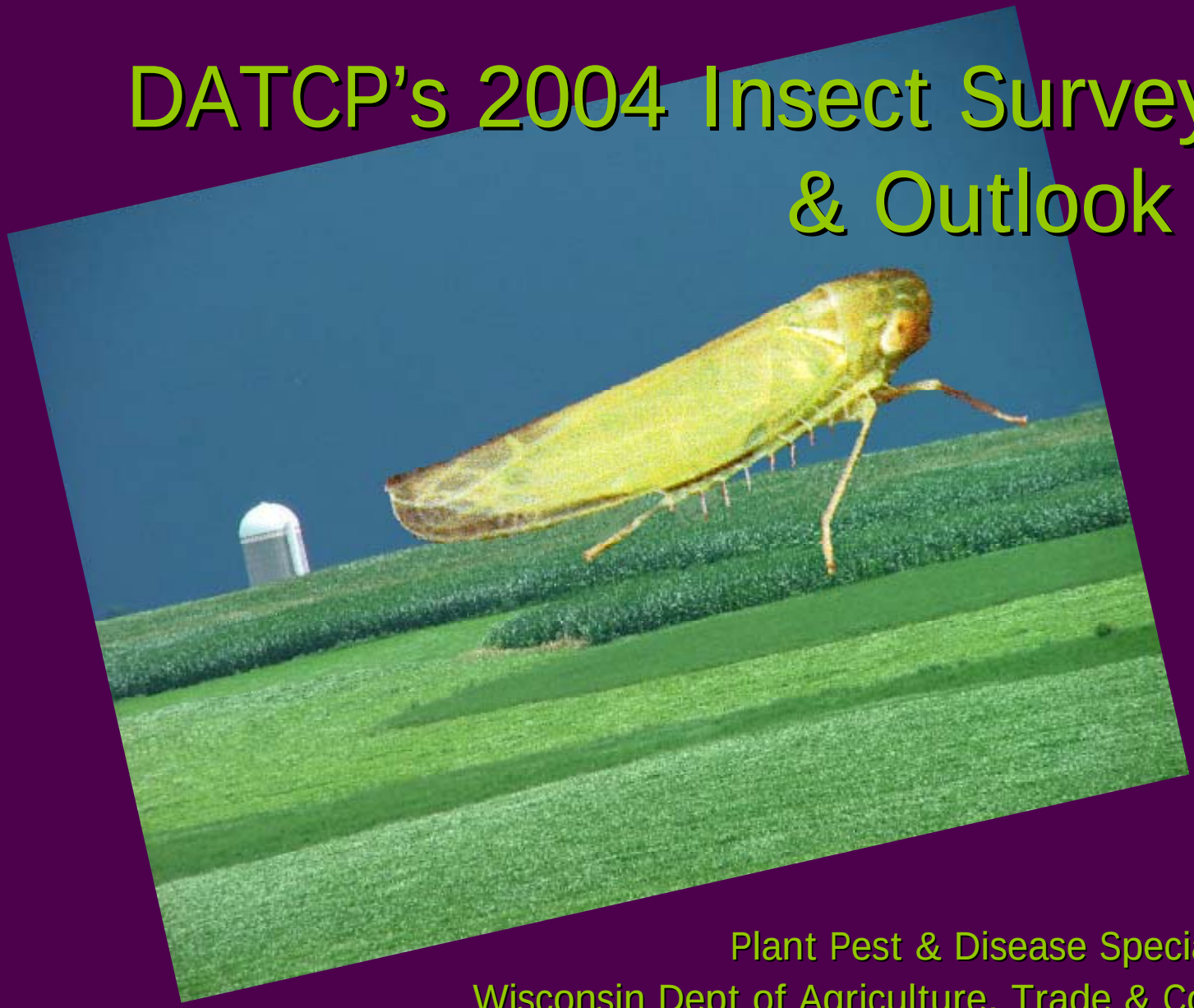
DATCP's 2004 Insect Survey Results & Outlook for 2005



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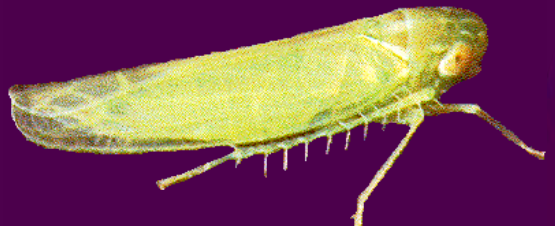
The Pests

European corn borer

Bean leaf beetle

Western bean cutworm

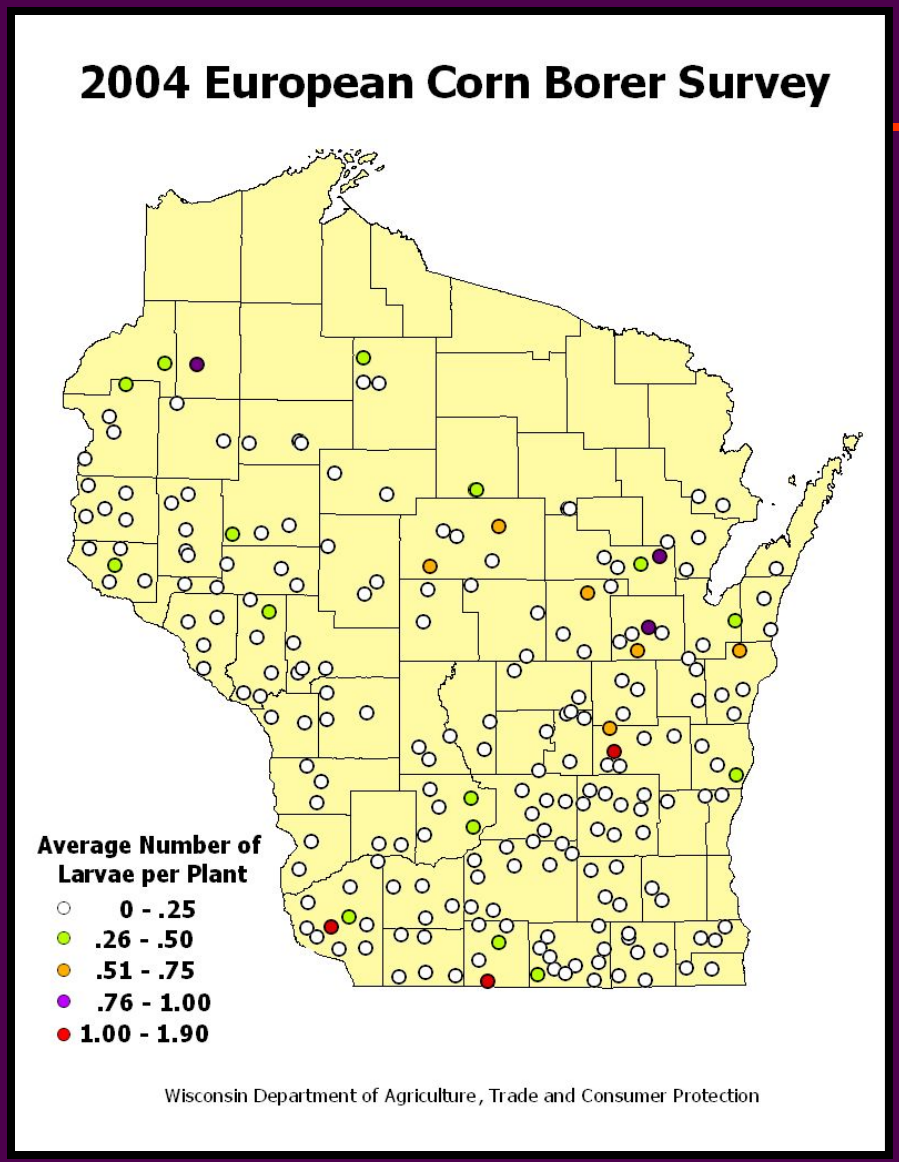
Alfalfa weevil



Potato leafhopper

Corn rootworm

Soybean aphid



Fall ECB Survey Summary

[Statewide average ECB larvae per plant]

- 2004: 0.10
- 2003: 0.30
- 10-year: 0.49
- 50-year: 0.48
- Threshold: 0.75
- 222 survey sites in 2004

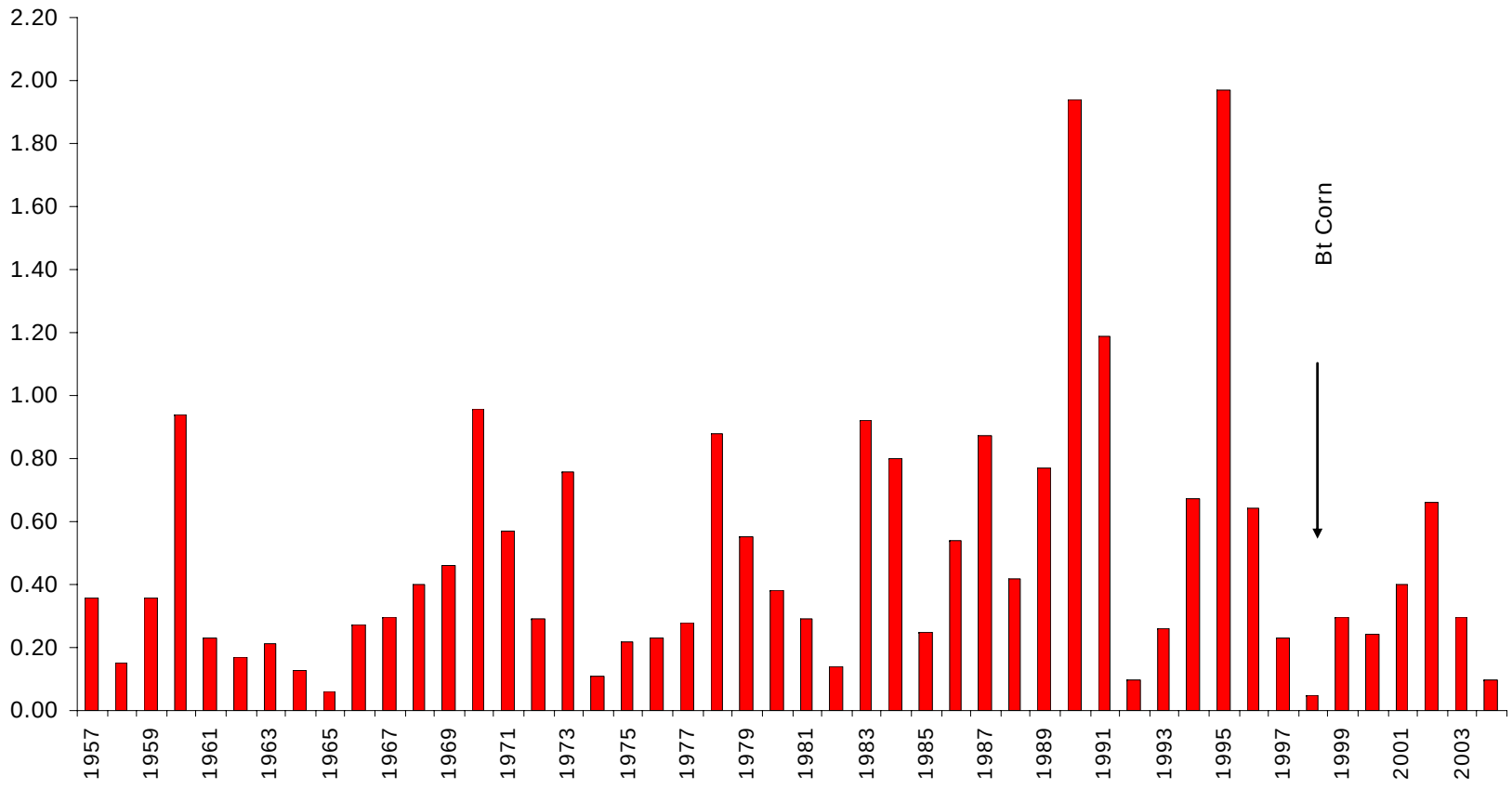
Average ECB Larvae per Plant

10-year District & Statewide Averages

District	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	10 Yr Ave
NW	0.10	0.32	0.03	0.02	0.15	0.24	0.33	0.44	0.20	**0.13**	0.20
NC	0.17	0.41	0.26	0.01	0.03	0.04	0.05	0.26	0.14	**0.20**	0.16
NE	0.53	0.47	0.18	0.01	0.18	0.03	0.07	0.75	0.23	**0.22**	0.27
WC	1.21	0.80	0.15	0.02	0.30	0.31	0.67	0.71	0.16	**0.05**	0.44
C	1.23	1.02	0.09	0.02	0.30	0.41	0.48	1.21	0.44	**0.06**	0.52
EC	2.49	0.65	0.26	0.03	0.25	0.19	0.33	0.44	0.20	**0.22**	0.50
SW	6.31	0.51	0.39	0.17	0.57	0.39	0.87	0.65	0.34	**0.10**	1.03
SC	2.65	0.83	0.35	0.10	0.61	0.33	0.48	0.86	0.51	**0.05**	0.68
SE	3.08	0.79	0.35	0.10	0.31	0.16	0.36	0.61	0.21	**0.02**	0.60
State Ave	**1.97**	**0.64**	**0.23**	**0.05**	**0.30**	**0.24**	**0.40**	**0.66**	**0.30**	**0.10**	**0.49**

Average ECB Larvae per Plant

Fall Surveys 1957 - 2004



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http://datcp.state.wi.us/arm/environment/insects/pest-bulletin/

Conclusion

The 2004 fall population of ECB was very low because:

- Small ECB population carried over from 2003
- Below-normal temps & heavy precipitation in May & June
- Unseasonably cool temps (<60ºF) while 2nd fight was active

Outlook for ECB in 2005

- Expect a very light moth flight next spring
- ECB densities not likely to rebound enough to cause substantial damage in 2005

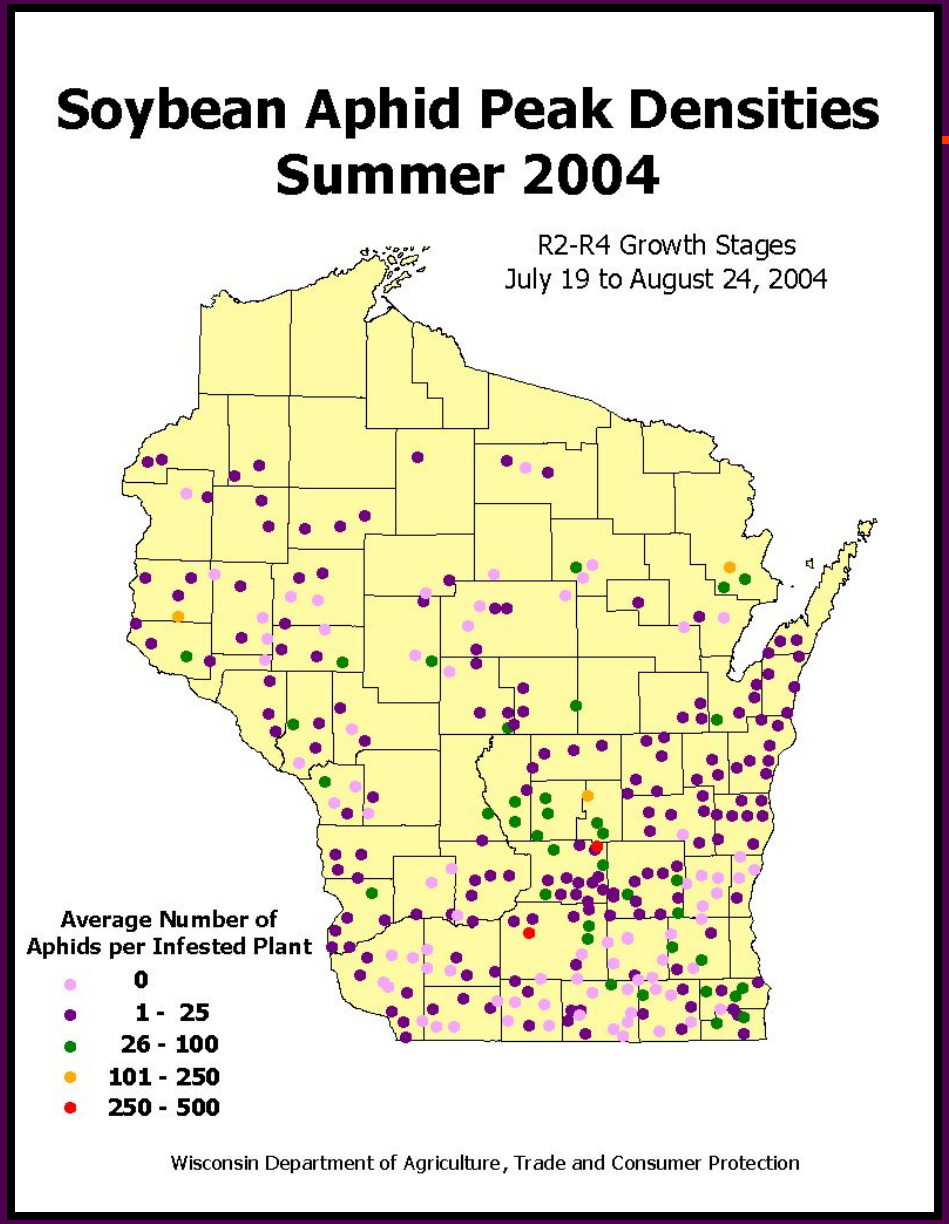
2004 Corn Rootworm Summary

- June 11 — Early instar larvae found in Columbia Co.
- July 1 — Mature larvae present in Green Co.
- July 5 — Lodging becomes visible (through mid-July)
- July 8 — First adults observed in Green Co.
- August — Egg laying slowed due to below-normal temps
- Sept. — Egg laying increased and continued to October
  (counts of 4-7 beetles per plant common in September)

Outlook for Corn Rootworm in 2005

QUESTION: Were corn rootworm populations in 2004 heavy enough to result in a damaging larval hatch next spring?

- Counts of beetles per plant in September suggest the potential exists for heavy rootworm pressure in 2005
- Expect heavy larval populations and instances of severe lodging in 2005



Soybean Aphid Survey

- July 19-August 24 (293 sites)
- R2-R4 stages of growth
- 2004 survey found lowest densities of aphids since 2000
- Statewide average number of aphids per infested plant = 15 (compared to 770 in 2003)
- 27% of sites with no aphids

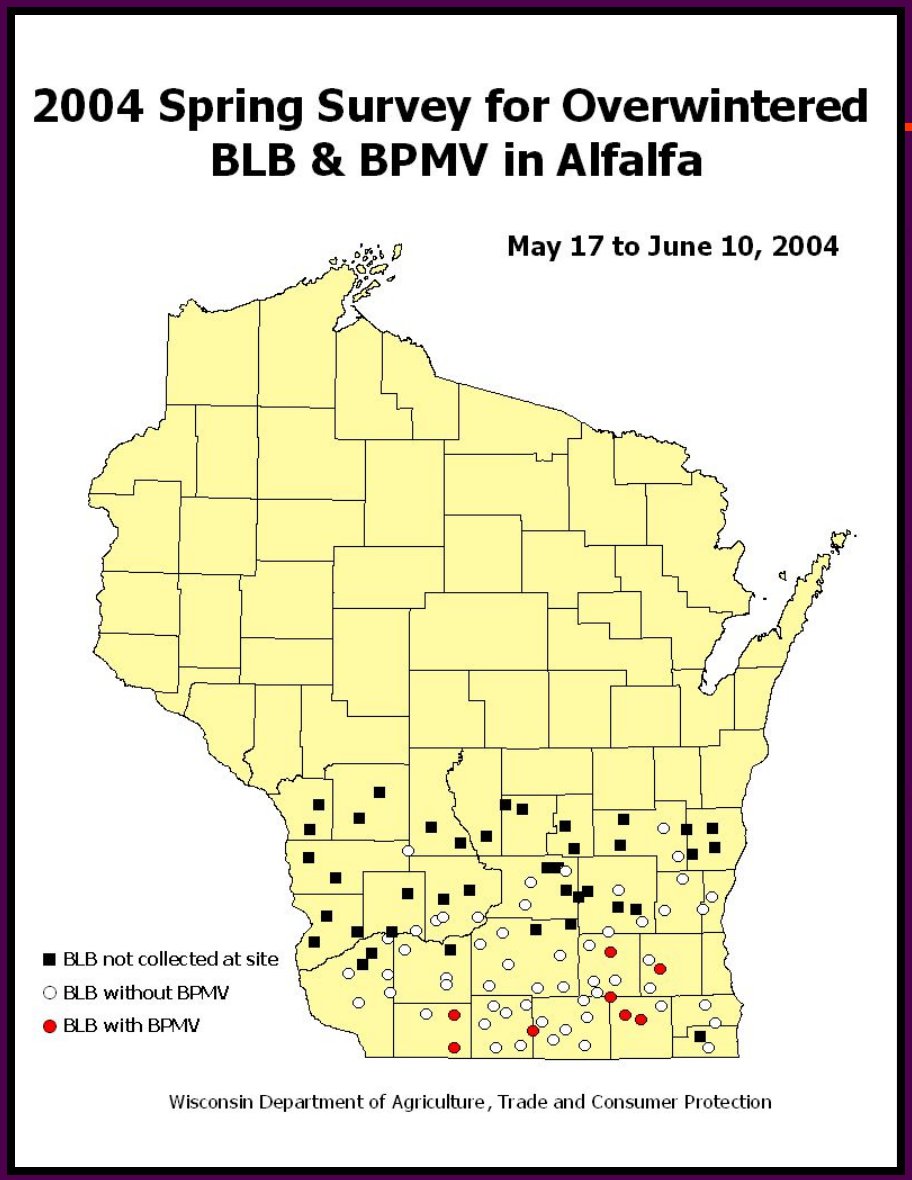
Outlook for Soybean Aphid in 2005

- Experts forecast higher densities of soybean aphids in 2005
- Scout early & often to monitor rate of population build-up
- Action threshold = 250 aphids per plant (late vegetative through R3 growth stages, when populations are actively increasing)

Bean Leaf Beetle

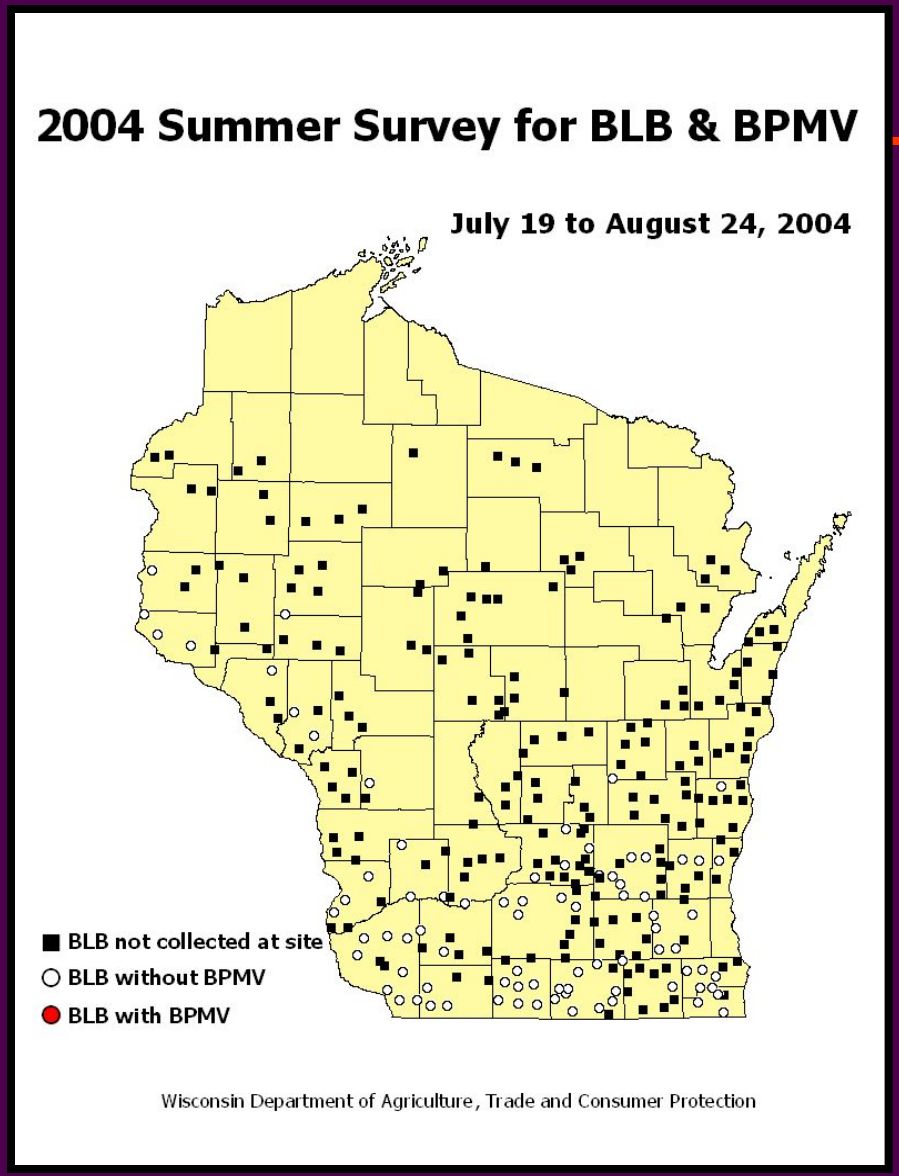
DATCP conducted 2 surveys for BLB in 2004:

- Spring survey for OVERWINTERED beetles (May 17 - June 10)
- Summer survey for 1st & 2nd GENERATION beetles (July 19 - August 24)
- Bean leaf beetles collected during both surveys were tested for Bean Pod Mottle Virus (BPMV) using ELISA test kits



Spring BLB Survey

- 101 survey sites (alfalfa fields)
- BLB found at 64 sites (63%)
- BLB from 8 of 64 sites tested + for BPMV (12.5%)
- BPMV^{+} beetles found in:
  - Jefferson Co.
  - Lafayette Co.
  - Walworth Co.
  - Waukesha Co.



Summer BLB Survey

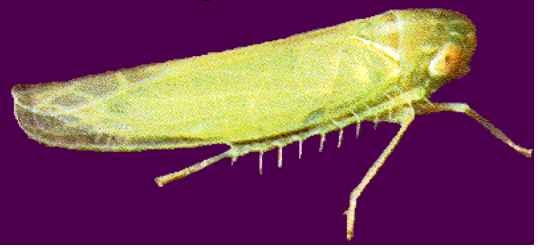
- 293 survey sites
- BLB collected from 82 sites (27%)
- No BLB tested positive for BPMV
- No soybean leaf samples tested positive for BPMV

BLB Survey Conclusions & Outlook for 2005

- BPMV was present in overwintered beetles collected in spring of 2004
- BPMV was not found to be present in 1st & 2nd generation beetles collected in summer of 2004
- BPMV was not found to be present in any of the 293 soybean fields surveyed in 2004
- It is unclear whether BLB or BPMV will be a concern in 2005

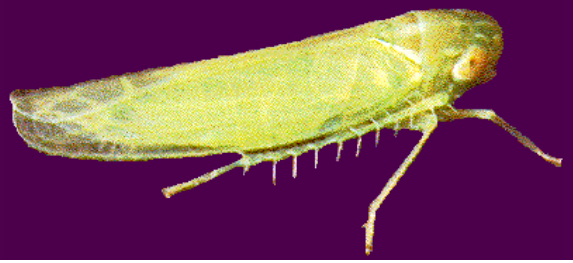
Potato Leafhopper 2004 Summary

- May 21 — First migrants of 2004 detected
- June 5 — First nymphs detected
- June 14-18 — Nymph production underway
- July 4 — Second major influx of migrants
- July 16-30 — Populations peaked
- August 13-20 — Nymph production slowed substantially



Outlook for Potato Leafhopper in 2005

- Cannot forecast PLH damage potential from year to year
- Pay attention to low-level jet stream activity delivering PLH migrants around mid-May
- Monitor PLH population build-up



Alfalfa Weevil 2004 Summary

- Alfalfa weevil larvae were abundant in 2004
- Alfalfa growth delayed by temps 4-8º below normal in late May/early June
- Record amounts of rainfall in May prevented farmers from cutting hay
- As a result, hay fields were exposed to heavy larval pressure 2-3 weeks longer than normal
- Quality of first crop hay was very poor (in general)

Recommendations for 2005

- Follow alfalfa weevil degree days (base 48ºF)
- Begin scouting activity at 250-300 GDD (early May)
- Be prepared to make first cuttings earlier than normal to reduce weevil damage
- Don’t underestimate the alfalfa weevil in 2005 and in years to come. Although heavy loss of first cutting is less common, chemical intervention may still be necessary on rare occasions

NEW PEST ALERT

Western Bean Cutworm

- Historically a pest in western cornbelt
- Severe pest of corn & dry beans - affects crop yield & quality
- Late-season pest with 1 gen/year
- Infestations with several larvae/ear can cause 30%-40% yield reduction
- Larvae from one egg mass can infest plants within 6-10 foot radius

Western Bean Cutworm

- Moth emergence begins late June/early July
- Damage becomes visible mid-August to early September
- Begin scouting as soon as the first moth is noticed
- Black lights traps are best tool to monitor moth flight
- Treat when 8% of plants have egg masses and/or small larvae

Western Bean Cutworm

WBCW moth emergence dates can be predicted with GDD
(beginning May 1, base 50ºF data from University of Nebraska-Lincoln*)*

- 25% emergence — 1319 GDD
- 50% emergence — 1422 GDD
- 75% emergence — 1536 GDD

Corn earworm

Western bean cutworm

For weekly updates on pest conditions
throughout the growing season visit:

The Wisconsin Pest Bulletin

http://datcp.state.wi.us/arm/environment/insects/pest-bulletin/