DATCP'S INSECT SURVEY RESULTS: 20 YEARS IN REVIEW

KRISTA HAMILTON, ENTOMOLOGIST
DATCP PEST SURVEY PROGRAM

DATCP PEST SURVEY PROGRAM

- The Pest Survey was established in 1915 to:
  1. Collect data on economic pests of WI crops
  2. Detect regulated exotic pests
  3. Support export certification
- DATCP specialists sample more than 1,000 crop fields annually and receive pest data from over 50 cooperators
- The program is unique in the state for its consistent, large-scale surveys

Volume 64 No. 18 August 29, 2019

WISCONSIN PEST BULLETIN

Timely crop pest news, forecasts, and growing season conditions for Wisconsin

STATE OF WISCONSIN DEPARTMENT OF AGRICULTURE, TRADE AND CONSUMER PROTECTION PLANT INDUSTRY BUREAU
2811 Agriculture Dr. Madison, WI 53718 • http://pestbulletin.wisconsin.gov

WEATHER & PESTS

Mostly dry weather dominated the state during the last week of August, facilitating harvest of potato, small grain, and vegetables. Near or below-normal temperatures prevailed for a fifth consecutive week, with afternoon highs limited to the 60s and 70s and overnight lows falling to the upper 30s along Lake Michigan,. A storm system on August 26 brought rain to much of the state, including storm totals exceeding 2 inches in the far southeast near Racine and Kenosha, though lighter amounts (<.25 inch) were recorded in the west. Conditions supported fieldwork such as seeding fall crops and baling hay, but crop development continued to lag the normal pace by 2-3 weeks, raising concern for potential damage if the first autumn freeze comes early. A rare combination of sustained September heat, adequate moisture, and a very late frost will be needed for Wisconsin's late-developing corn and soybeans to reach maturity this fall.

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LATE BLIGHT: Additional reports of late blight were confirmed in Crawford, Pierce, Polk, Sauk and St. Croix counties this week, bringing the total number of counties with verified late blight cases to 12 (also Adams, La Crosse, Monroe, Portage, Vernon, Waushara and Wood). Continued treatment of susceptible potato and tomato crops with a combination of antisporulant and protectant fungicides is advised by UW, particularly for locations in close proximity to the recent late blight detections. Reapplication every 5-7 days is required for most late blight-specific products.

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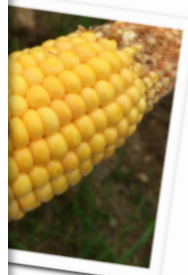

Krista Hamilton DATCP

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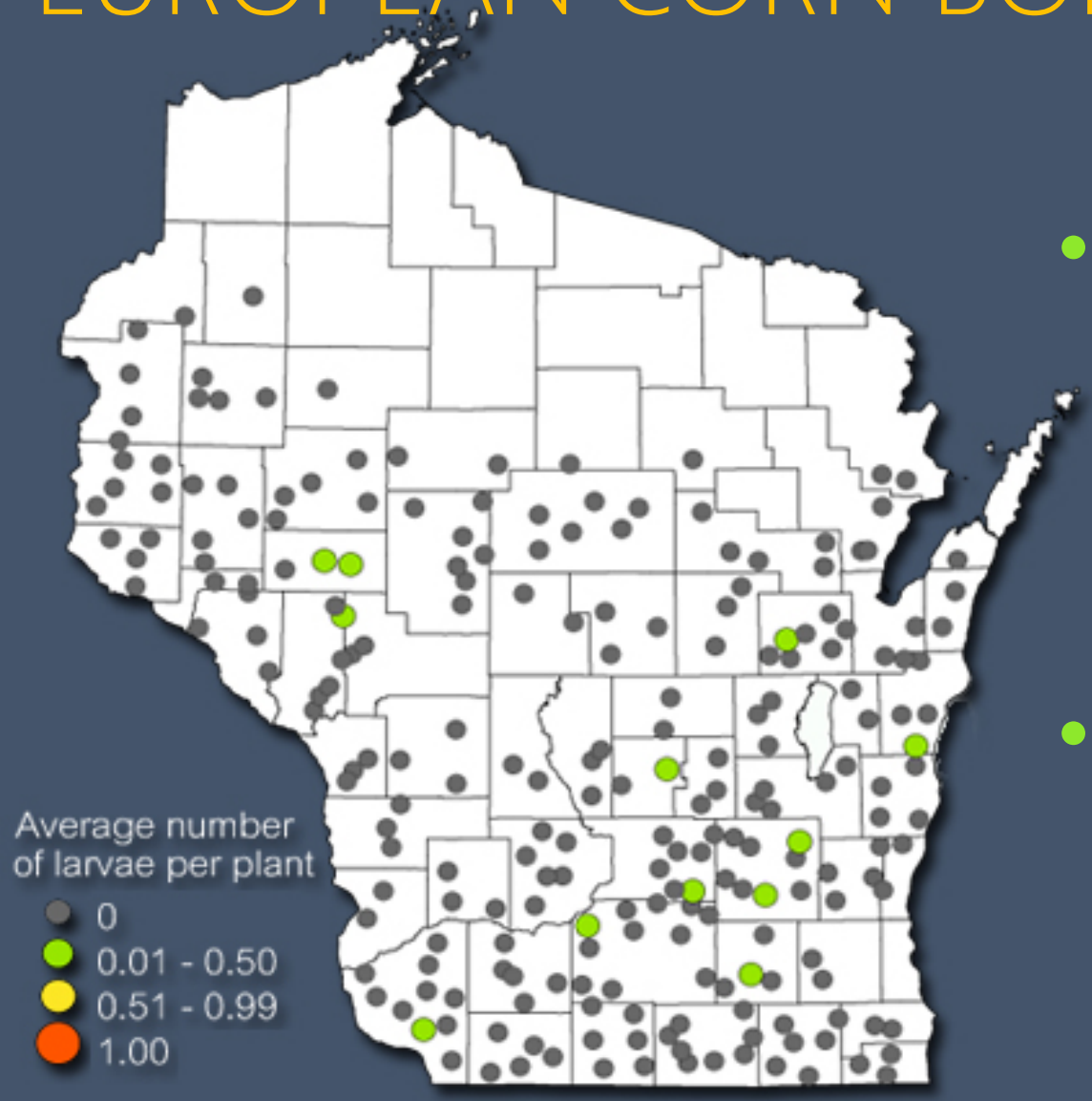
INSECT SURVEYS 2019

- European corn borer
- Corn rootworm beetle
- Western bean cutworm
- Soybean aphid
- Japanese beetle
- Brown marmorated stink bug

EUROPEAN CORN BORER

EUROPEAN CORN BORER SURVEY

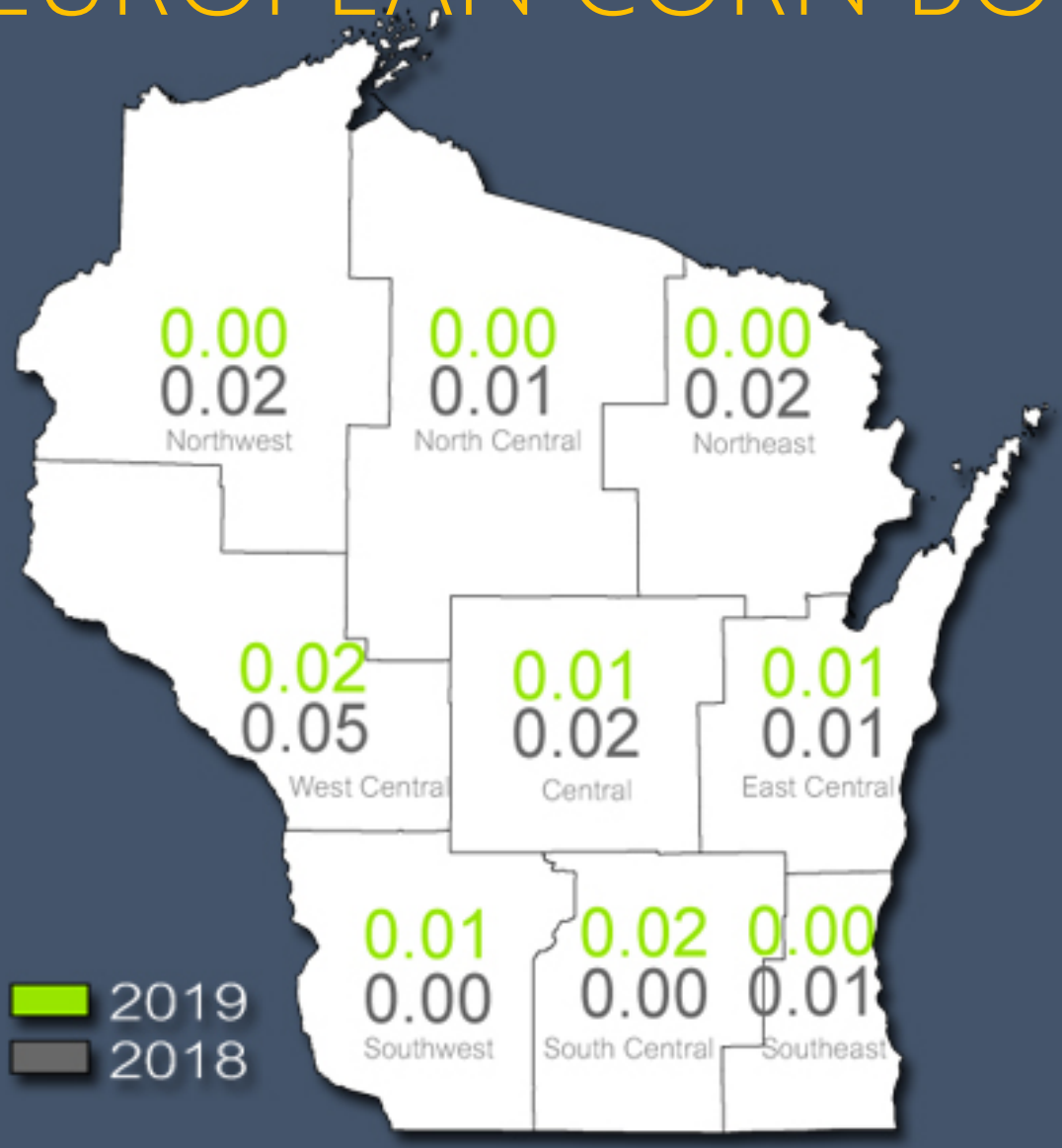


- State average number of ECB larvae per plant:

2019	0.01
2018	0.01
20-year	0.17
Threshold	1.00

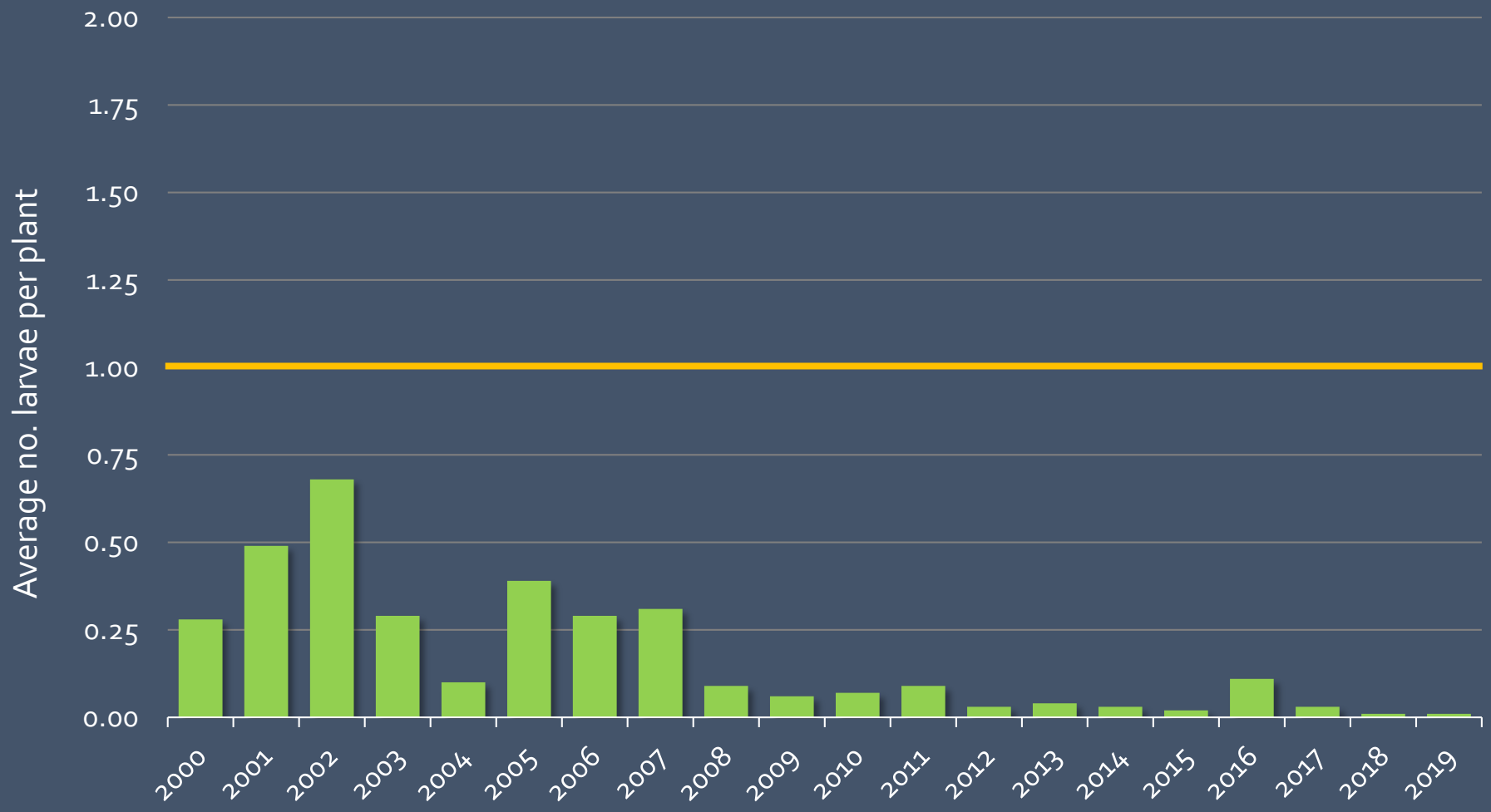
- 89% of sites had no signs of ECB infestation

EUROPEAN CORN BORER SURVEY

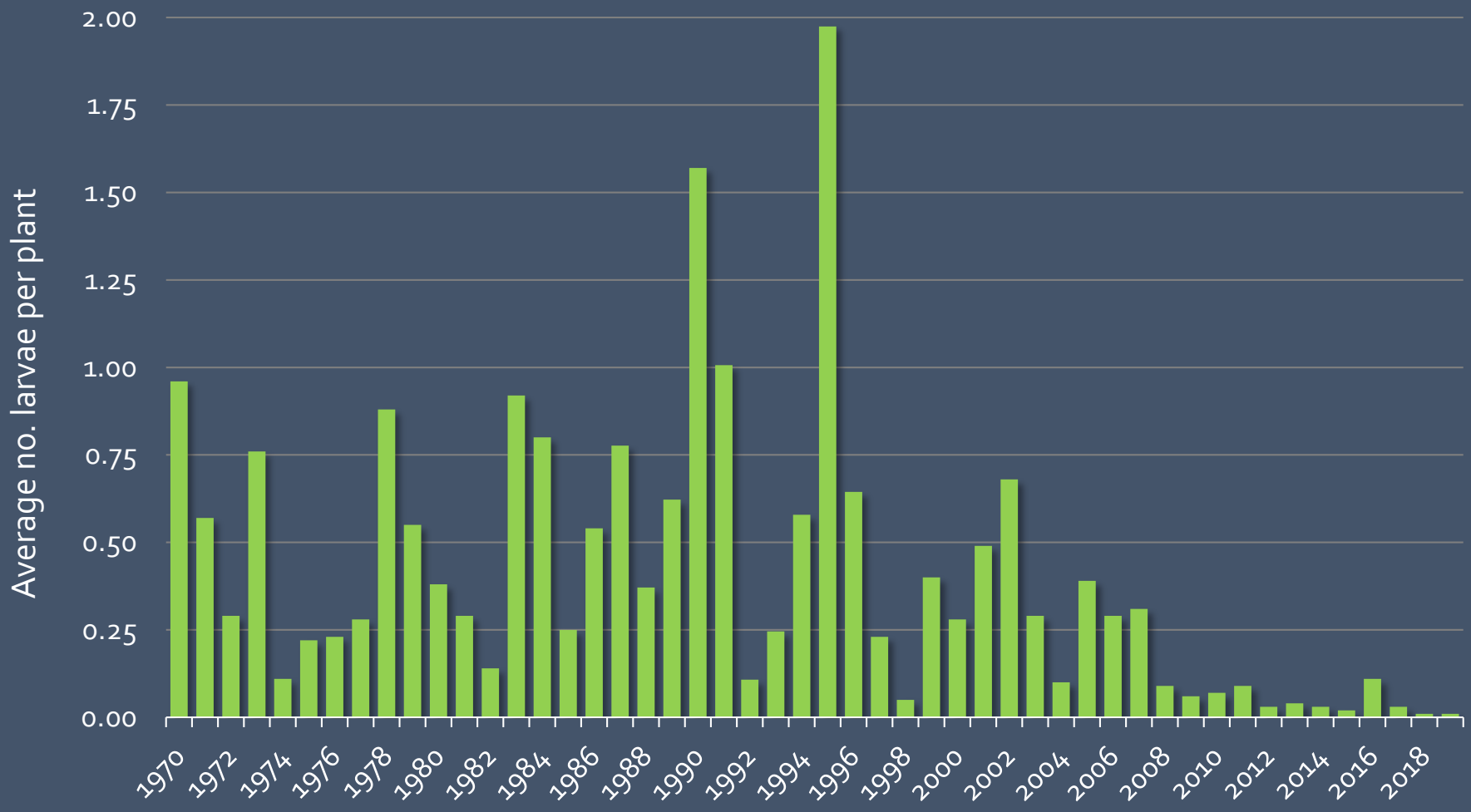


- State average = 0.01 corn borer larva per plant
- Averages decreased or remained unchanged in 7 of the 9 crop districts (except SW and SC areas)

ECB SURVEY RESULTS 20 YEARS



ECB SURVEY RESULTS 50 YEARS

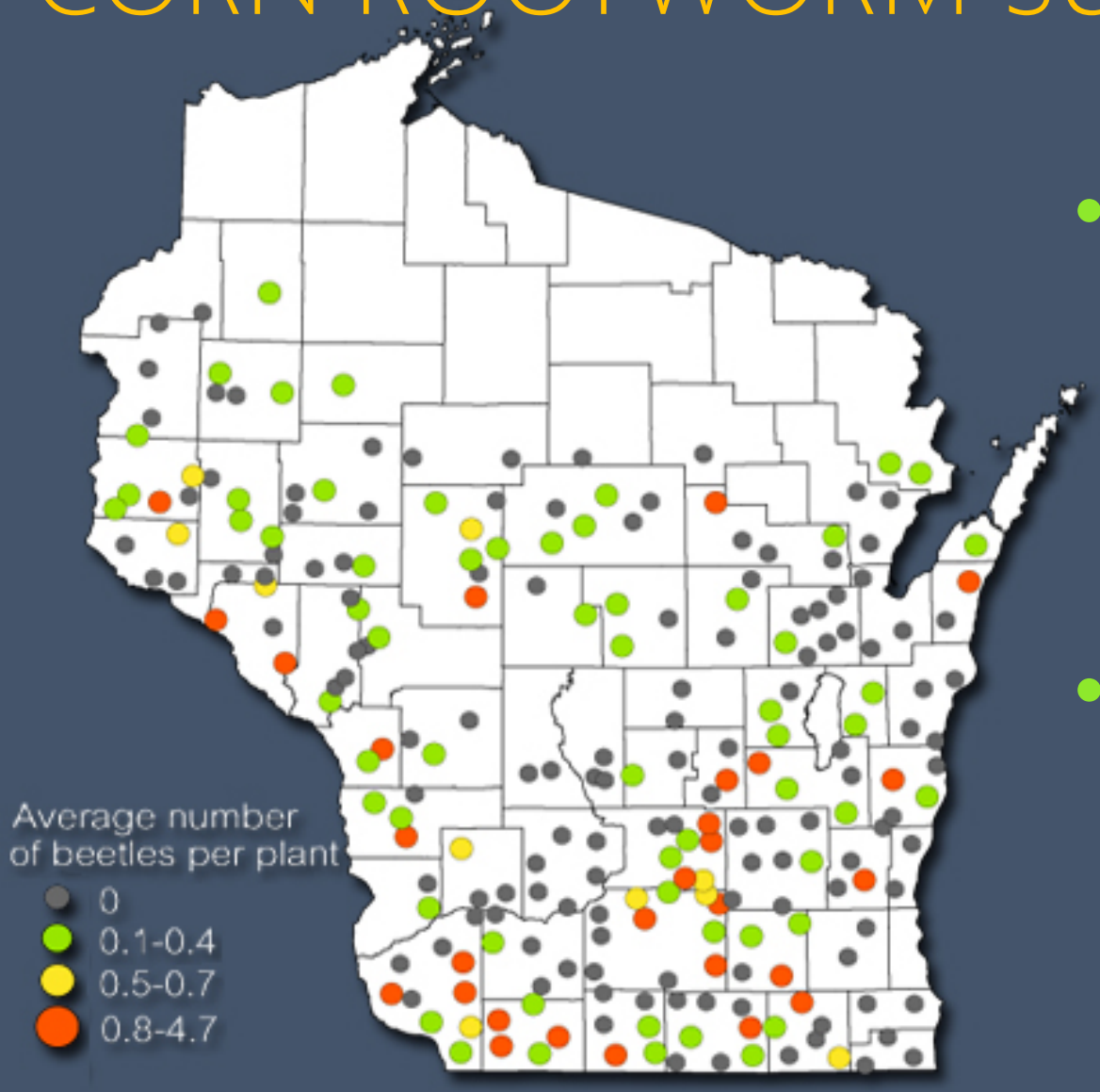


ECB OUTLOOK FOR 2020

- Fall ECB counts in 2019 tied 2018 for the lowest on record since 1942
- Low ECB pressure expected to continue in 2020, with localized "hot spots"
- Non-GM corn must be scouted

CORN ROOTWORM BEETLE

CORN ROOTWORM SURVEY 2019



- State average number of CRW beetles per plant:

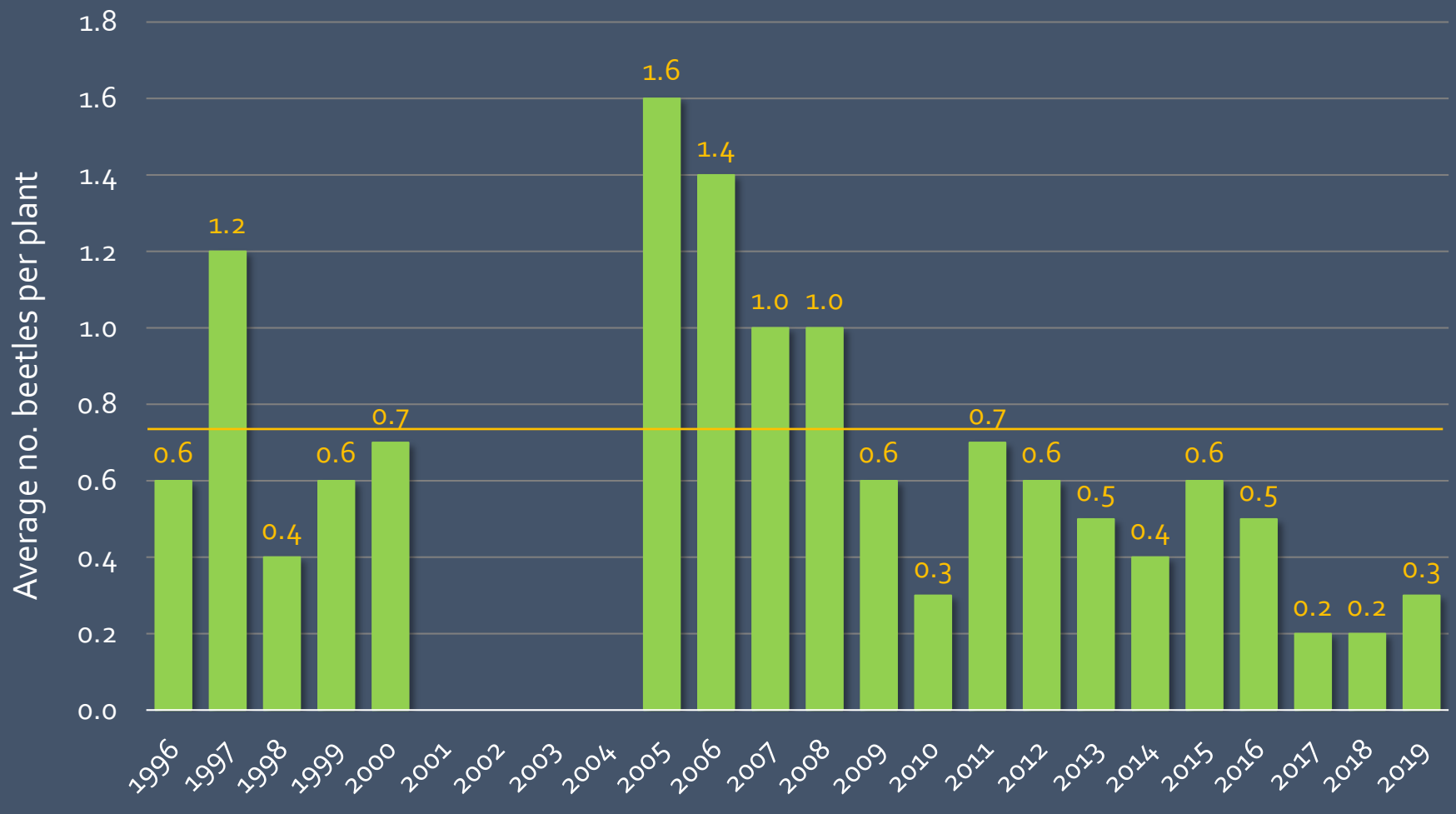
2019	0.3
2018	0.2
20-year	0.7
Threshold	0.75

- 52% of sites had no crw beetles

CORN ROOTWORM SURVEY 2019

- State average = 0.3 crw beetles per plant
- Averages decreased or remained unchanged in 7 of the 9 crop districts
- Higher crw pressure found in SW and SC areas in 2019

CRW SURVEY RESULTS 20 YEARS

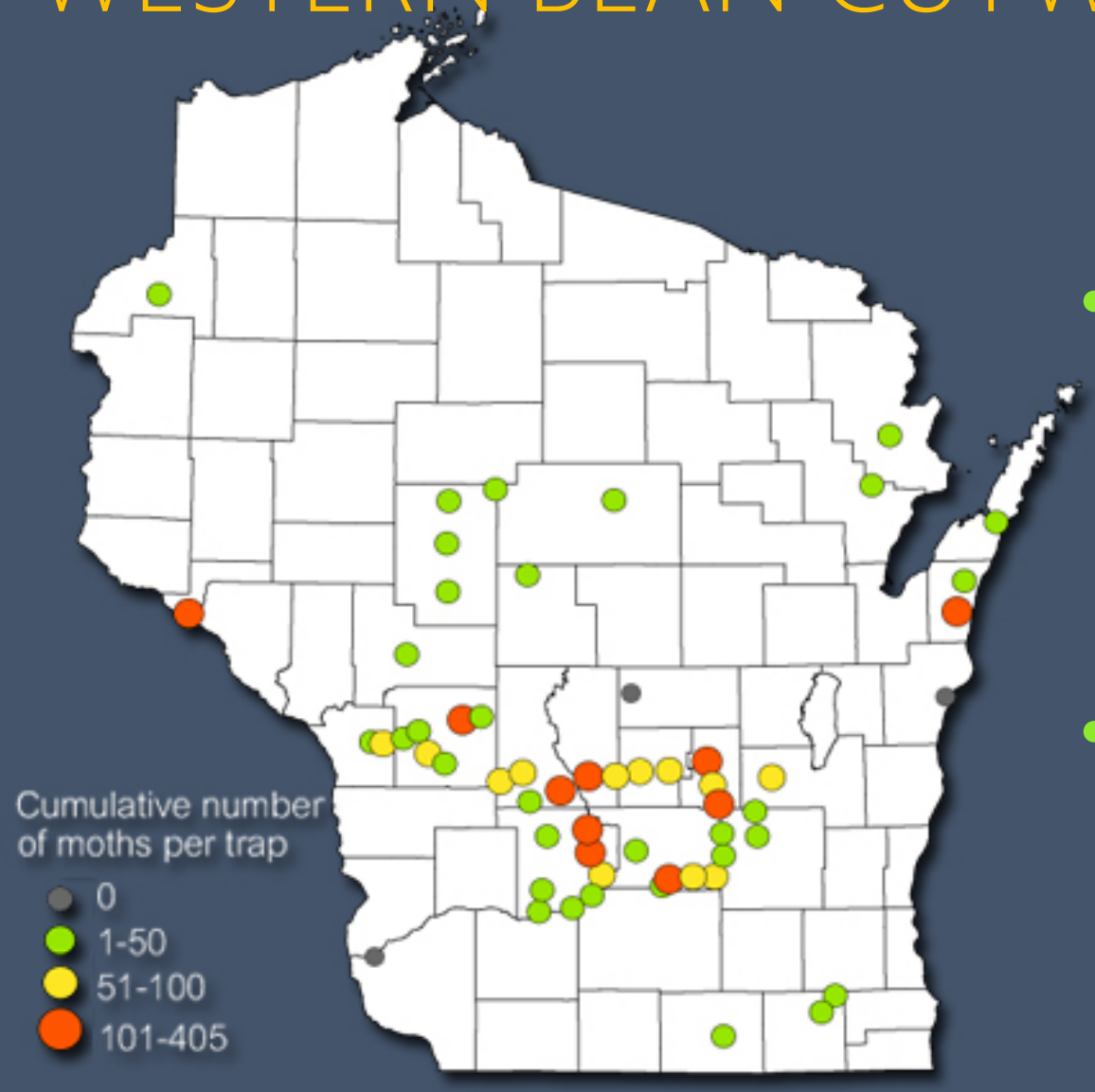


CORN ROOTWORM OUTLOOK 2020

- Beetle counts increased from historic lows in 2017-18, but remained low overall
- Population increases were limited to SW and SC areas
- Rotate Bt traits, rotate crops, and scout corn fields in August and September

WESTERN BEAN CUTWORM

WESTERN BEAN CUTWORM SURVEY

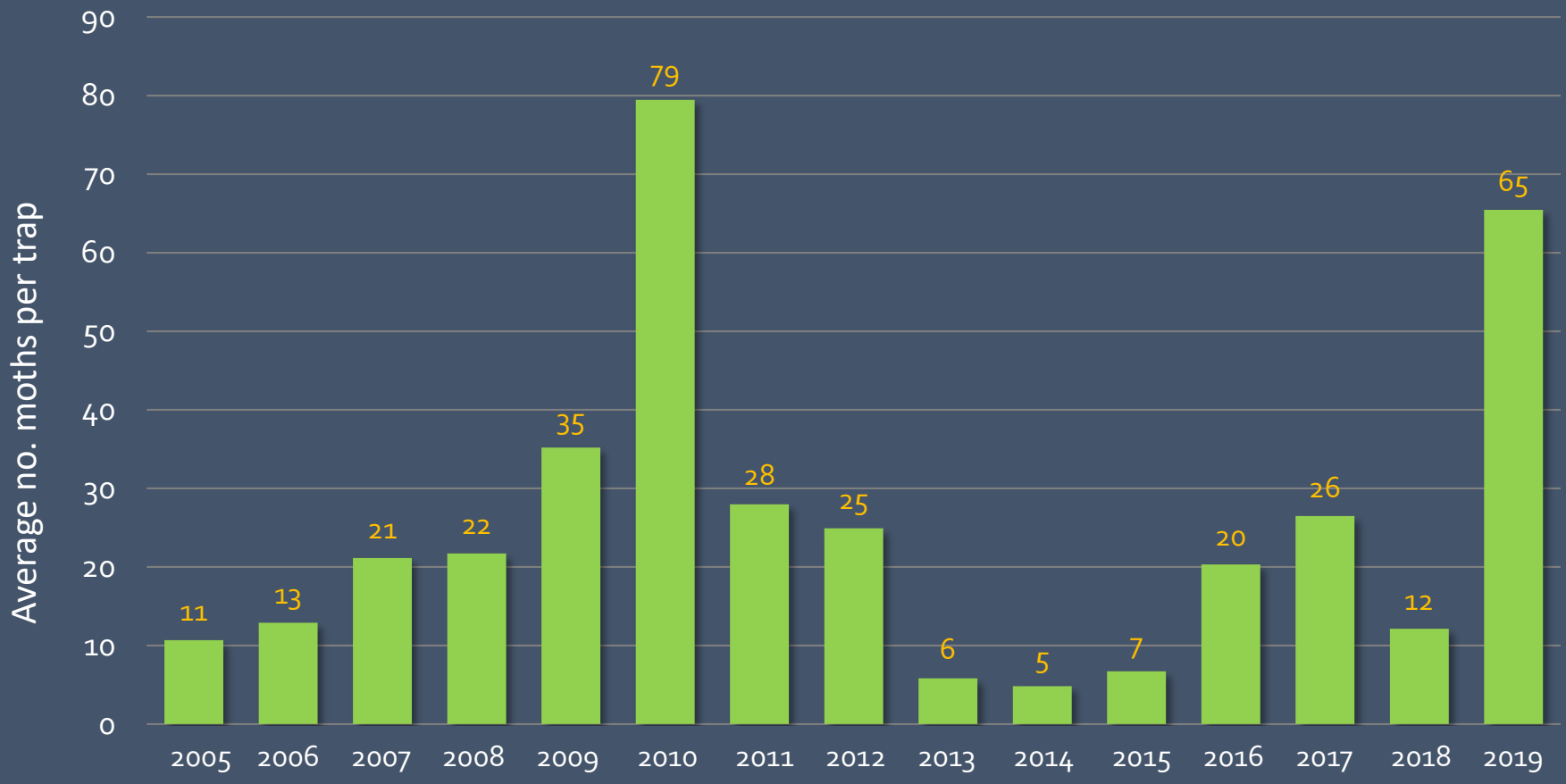


- Annual total moth count:

  2019: 3,600 or 65 per trap
  2018: ~~607 or 12 per trap~~
  2010: 10,807 or 79 per trap
  15-year: 25 moths per trap

- Highest individual count was 405 moths in a Green Lake County trap

WBCW SURVEY RESULTS 15 YEARS

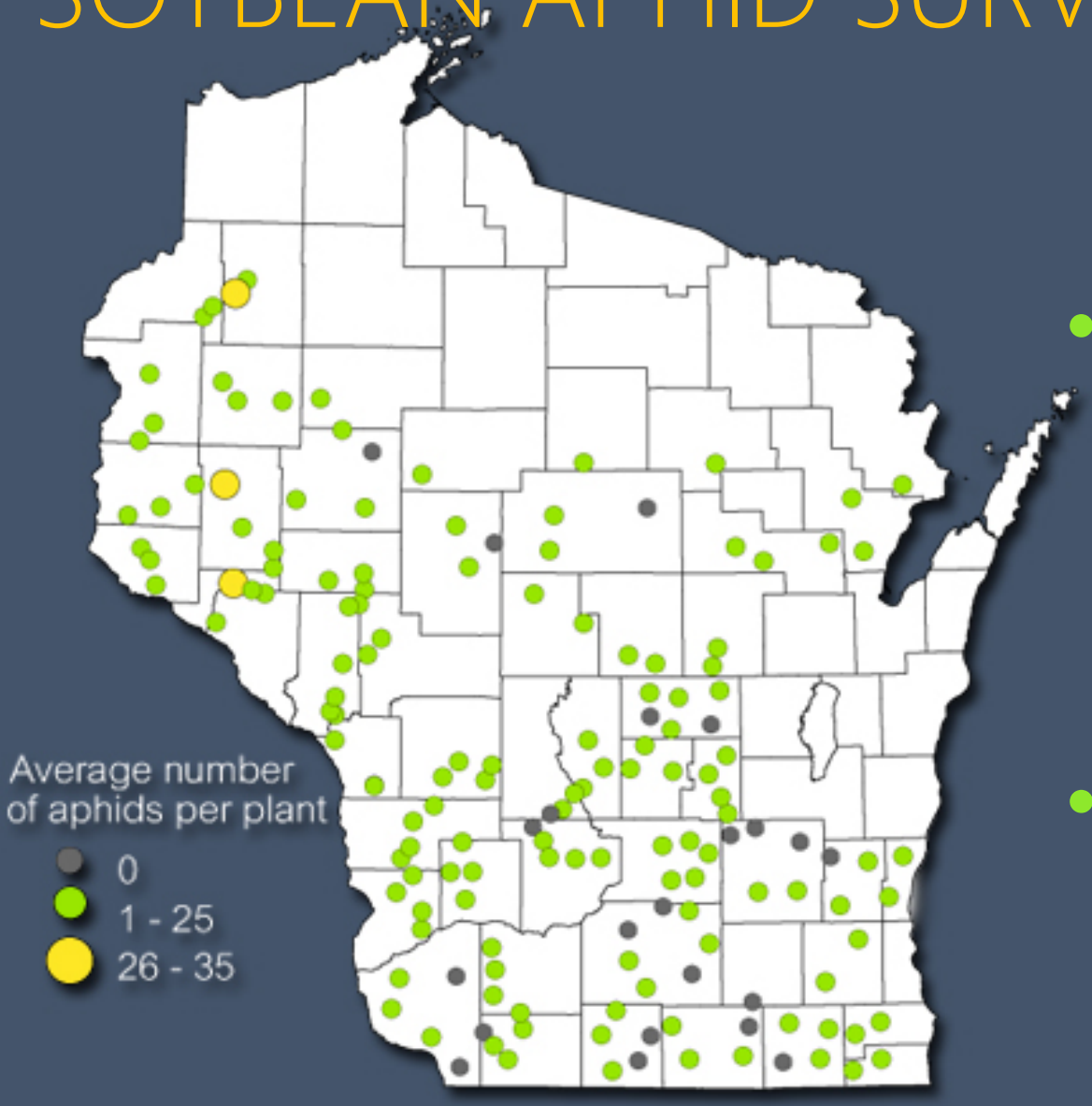


WBCW OUTLOOK FOR 2020

- Average moth count in 2019 was second highest in 15 years
- WBCW trap catches are not a reliable predictor of field damage
- Traps should be used to time start and peak of the moth flight, and optimal scouting period

SOYBEAN APHID

SOYBEAN APHID SURVEY 2019

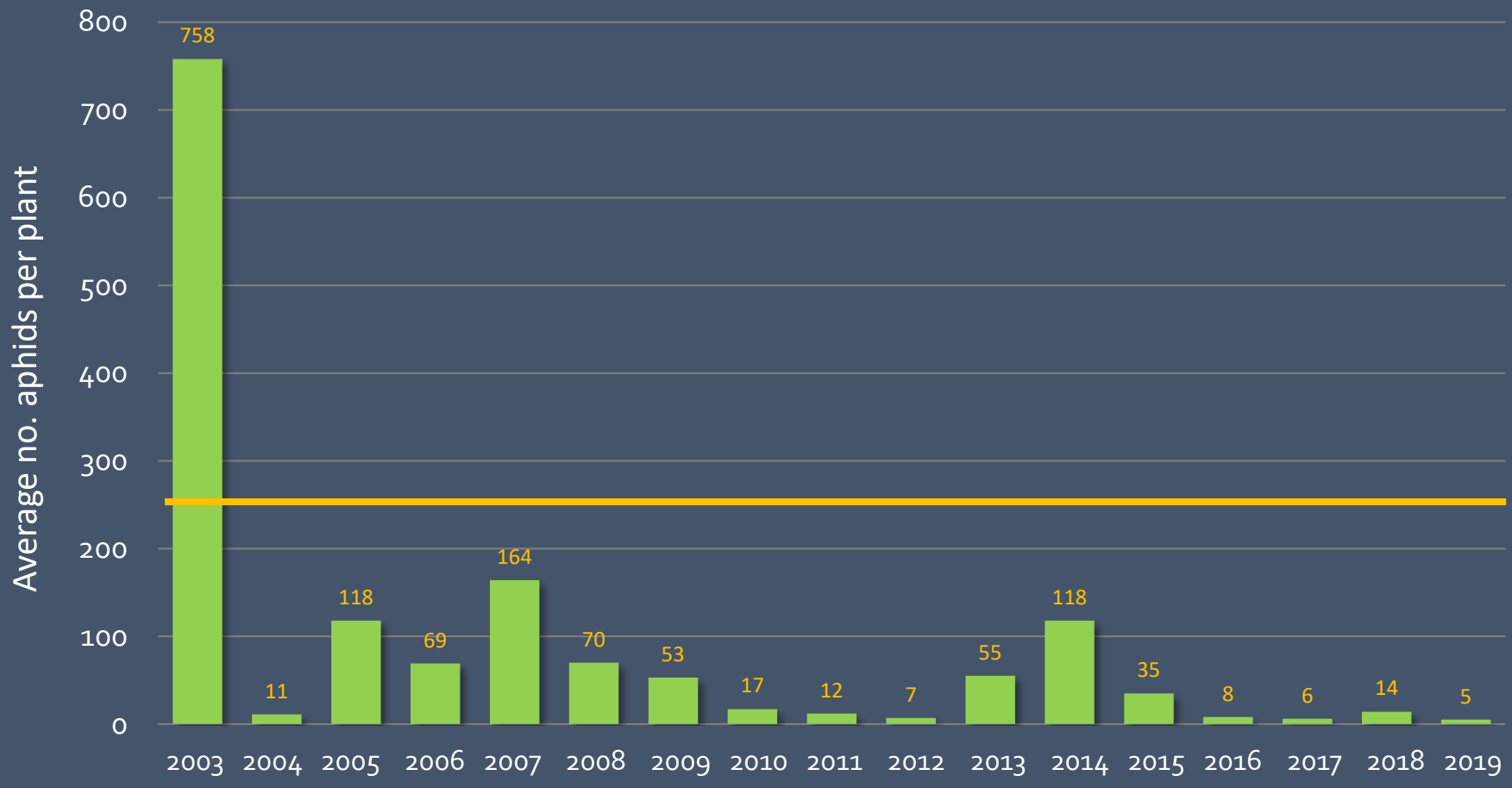


- State average number of aphids per plant:

2019	5
2018	14
17-year	89
Threshold	250

- 98% of sites had an average below 25 aphids per plant

SOYBEAN APHID RESULTS 17 YEARS



SOYBEAN APHID OUTLOOK 2020

- Aphid counts in 2019 were the lowest on record
- Natural enemies continue to be very effective at regulating aphids
- Continue to use 250 aphid per plant action and DO NOT spray early or preventively

JAPANESE BEETLE

SOYBEAN DEFOLIATOR SURVEY

Average no. insects per 100 sweeps

	Bean leaf beetle		Japanese beetle		Northern CRW		Western CRW		Green Cloverworm		Grasshopper		Stink Bug	
DISTRICT	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018
NW	0.3	0.0	1.5	3.9	0.1	0.0	0.0	0.0	5.2	0.0	3.5	0.4	0.7	0.0
NC	0.0	0.0	0.6	0.0	0.1	0.0	0.0	0.0	3.0	0.2	5.8	0.2	0.6	0.4
NE	1.3	0.2	2.7	0.2	0.0	0.0	0.0	0.0	2.0	0.0	2.6	2.0	1.0	0.1
WC	0.1	0.0	27.0	13.2	0.9	0.0	0.2	0.0	12.8	0.4	3.3	1.4	1.3	0.3
C	1.1	0.0	7.9	3.6	1.9	0.0	1.5	0.0	2.8	0.1	7.2	1.3	1.2	0.2
EC	NA	0.0	NA	0.0	NA	0.1	NA	0.0	NA	0.0	NA	0.7	NA	0.1
SW	0.3	0.1	17.3	7.7	1.7	0.9	1.0	0.1	1.0	0.6	4.5	1.4	1.5	0.2
SC	0.2	0.1	14.9	16.6	1.8	1.0	0.0	0.0	7.1	0.3	1.7	0.8	0.4	0.2
SE	0.1	0.4	18.3	20.6	7.7	0.4	0.5	0.0	16.3	2.9	1.1	1.5	0.3	0.2
STATE AVE.	0.4	0.1	14.4	8.4	1.8	0.3	0.5	0.0	6.6	0.5	3.8	1.2	1.0	0.2

JAPANESE BEETLE OUTLOOK 2020

- Japanese beetle control based on percent defoliation, not beetle counts
- Economic thresholds are:
  - 30% prior to bloom
  - 20% pod formation-pod fill


BROWN MARMORATED STINK BUG

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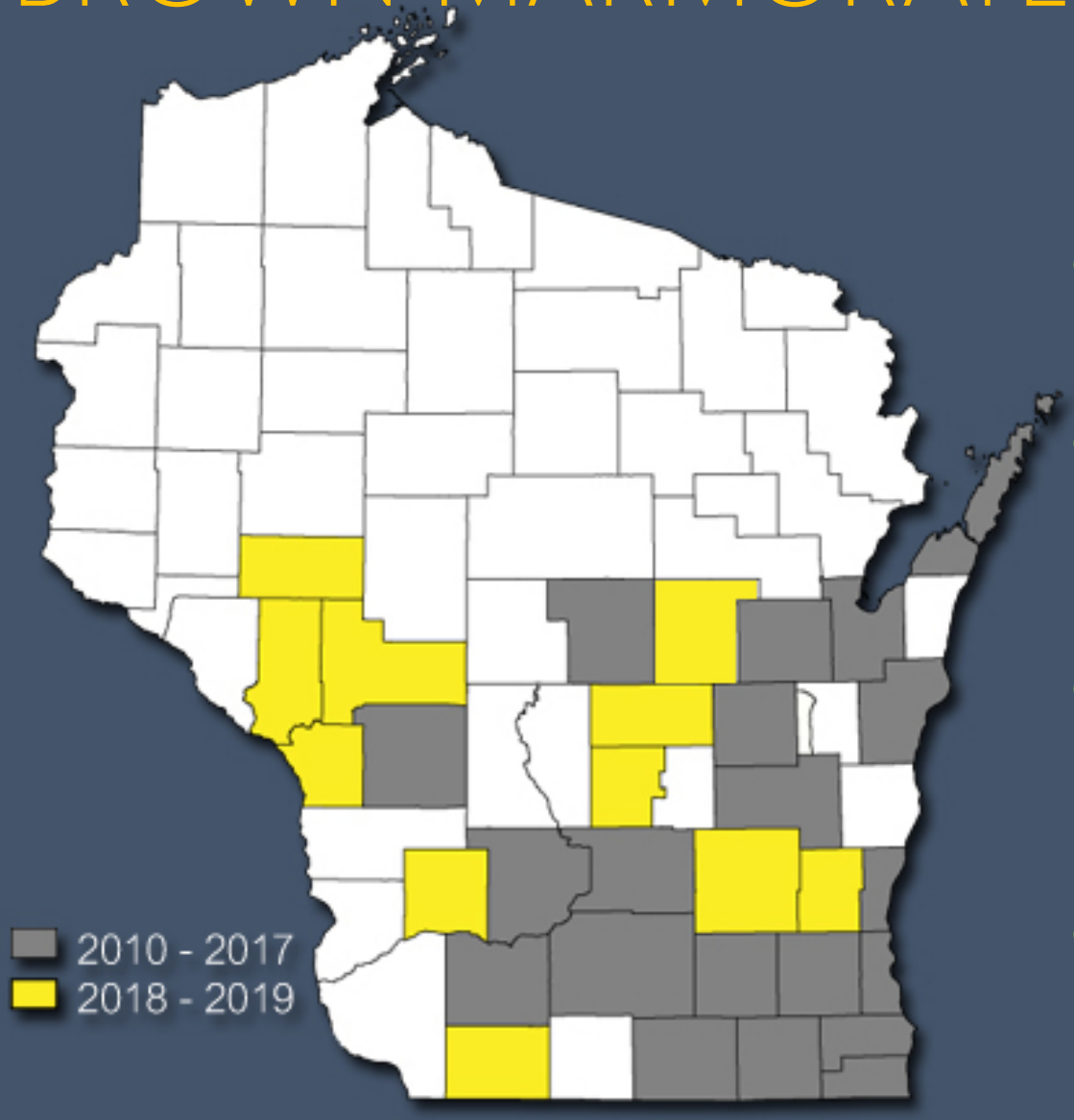

- BMSB confirmed in 31 counties since 2010
- Three new counties last year: Dodge, Lafayette, Waupaca
- Urban nuisance problems in Green Bay, Fond du Lac, Madison and Milwaukee
- BMSB detections in field crops expected in 2020

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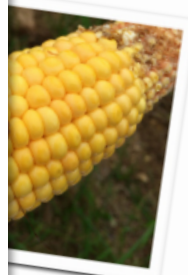

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cutworm;

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