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CITRUS HEALTH MANAGEMENT AREAS

CHMA

Citrus Health Management Areas

WHAT IS A CHMA?

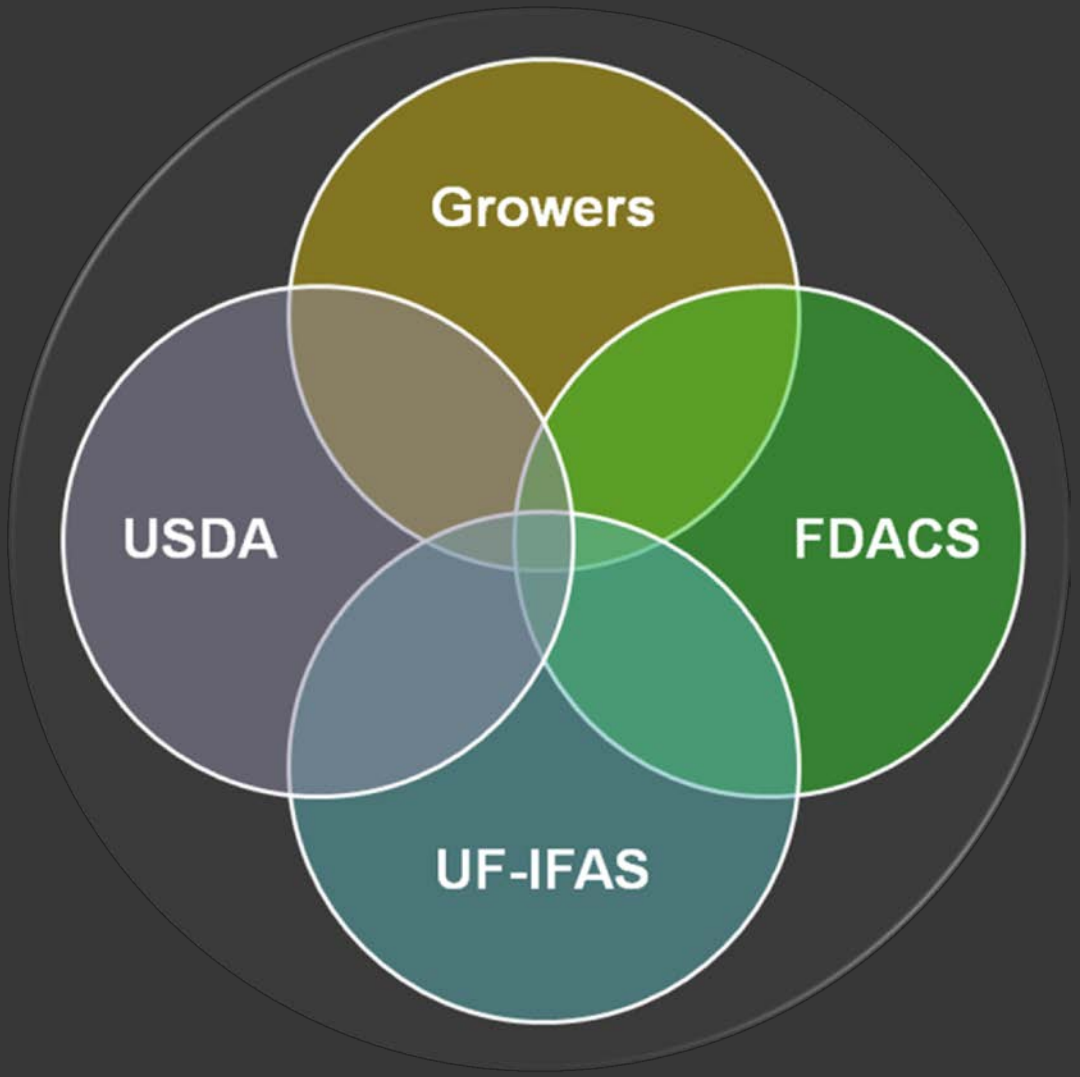
- Citrus Health Management Area
- Grower defined grouping of citrus acreage
- Grower participants coordinate psyllid control efforts (year-round pesticide applications)
- Manage pesticide resistance through coordinated rotation of MOAs

WHY DEVELOP A CHMA?

- Slow spread of HLB through use of improved psyllid control methods
- Prolong the usefulness of our current management tools

WHY DEVELOP A CHMA?
cont'd

- Sustain current citrus acreage until an HLB remedy is developed
- Facilitate adoption of new technology
- Utilize the CHMA concept for addressing production issues in the future

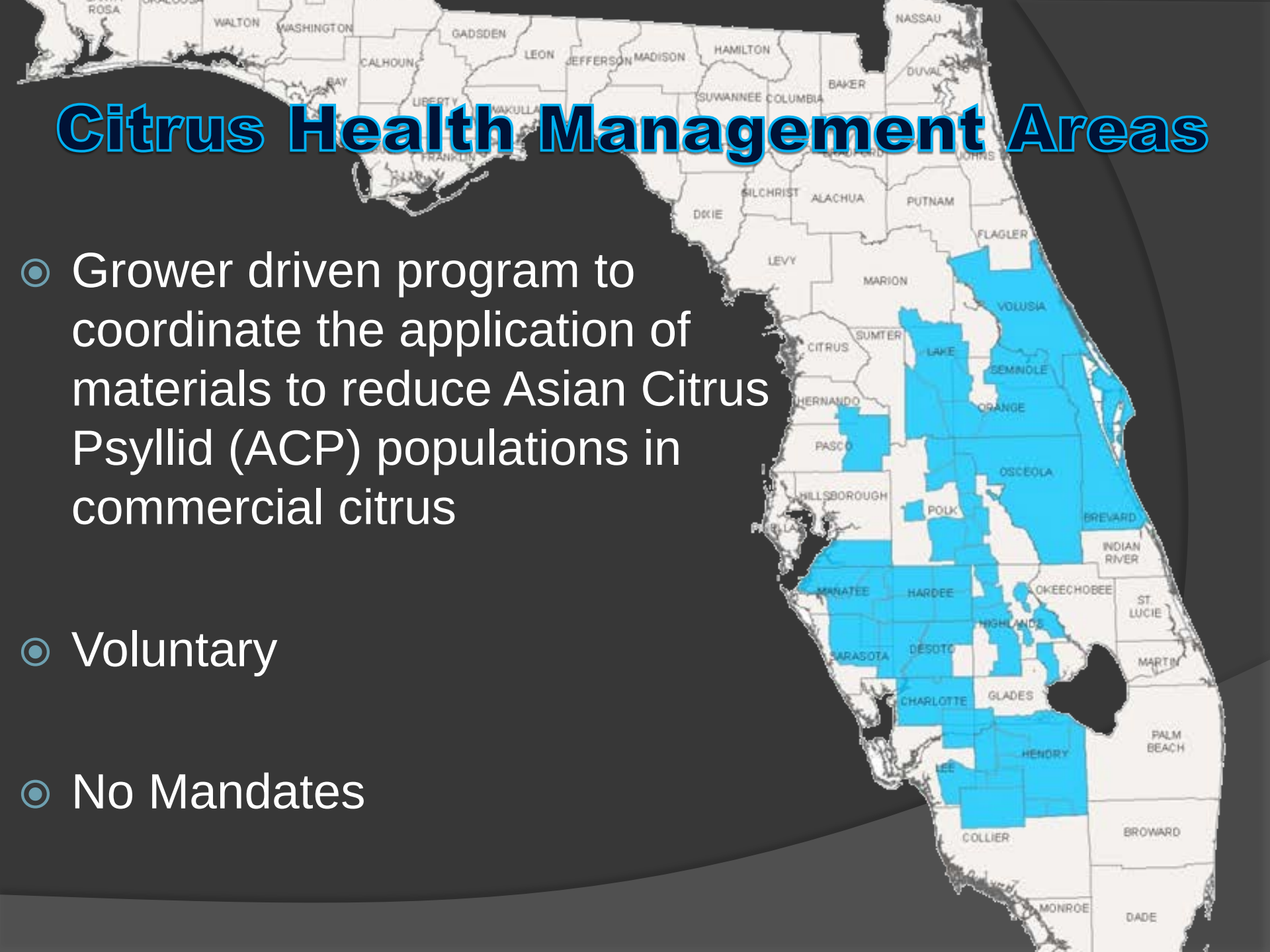


CHMA Participants

Collaborative efforts of growers, federal and state regulatory agencies and researchers

Citrus Health Management Areas

- Grower driven program to coordinate the application of materials to reduce Asian Citrus Psyllid (ACP) populations in commercial citrus
- Voluntary
- No Mandates



Citrus Health Management Areas

- USDA & DPI personnel jointly monitor ACP populations
- USDA and DPI information systems provide data to growers for coordination of applications
- IFAS maintains the CHMA Website
- IFAS provides application recommendations

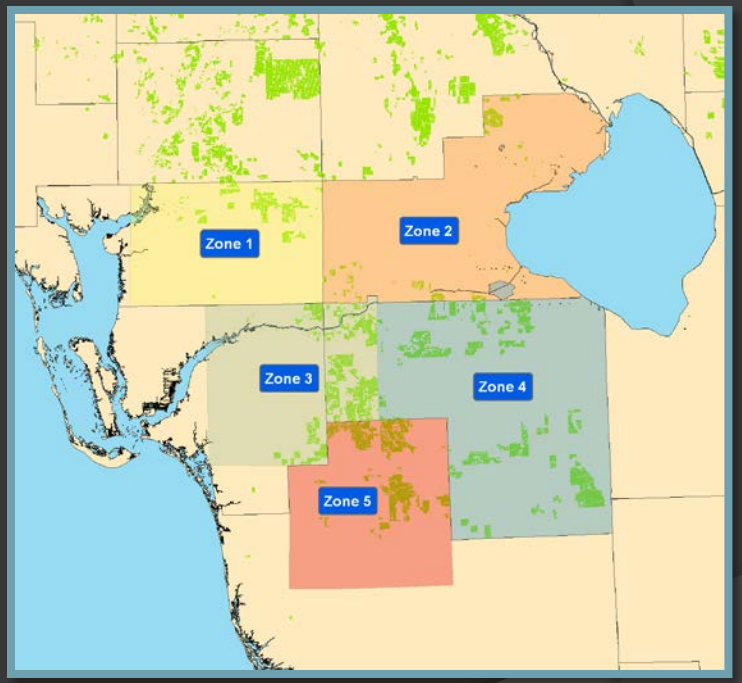
CHMA Participants

- Growers motivate neighboring growers to participate
  - Facilitated by citrus extension agents and industry leaders

- Work with other non-grower participants
  - UF/IFAS, USDA, FDACS, and industry organizations

CHMA Organization

- County Extension Agents assist growers in delineating CHMA areas
  - Based on presence and grouping of groves in region
- Establish CHMA leader



CHMA Meeting Goals

- Develop a plan of action
  - Timing and frequency of applications
- Coordinate as many sprays as possible
  - Pesticide rotation schedules
  - Application methods
  - Grower practices/limitations

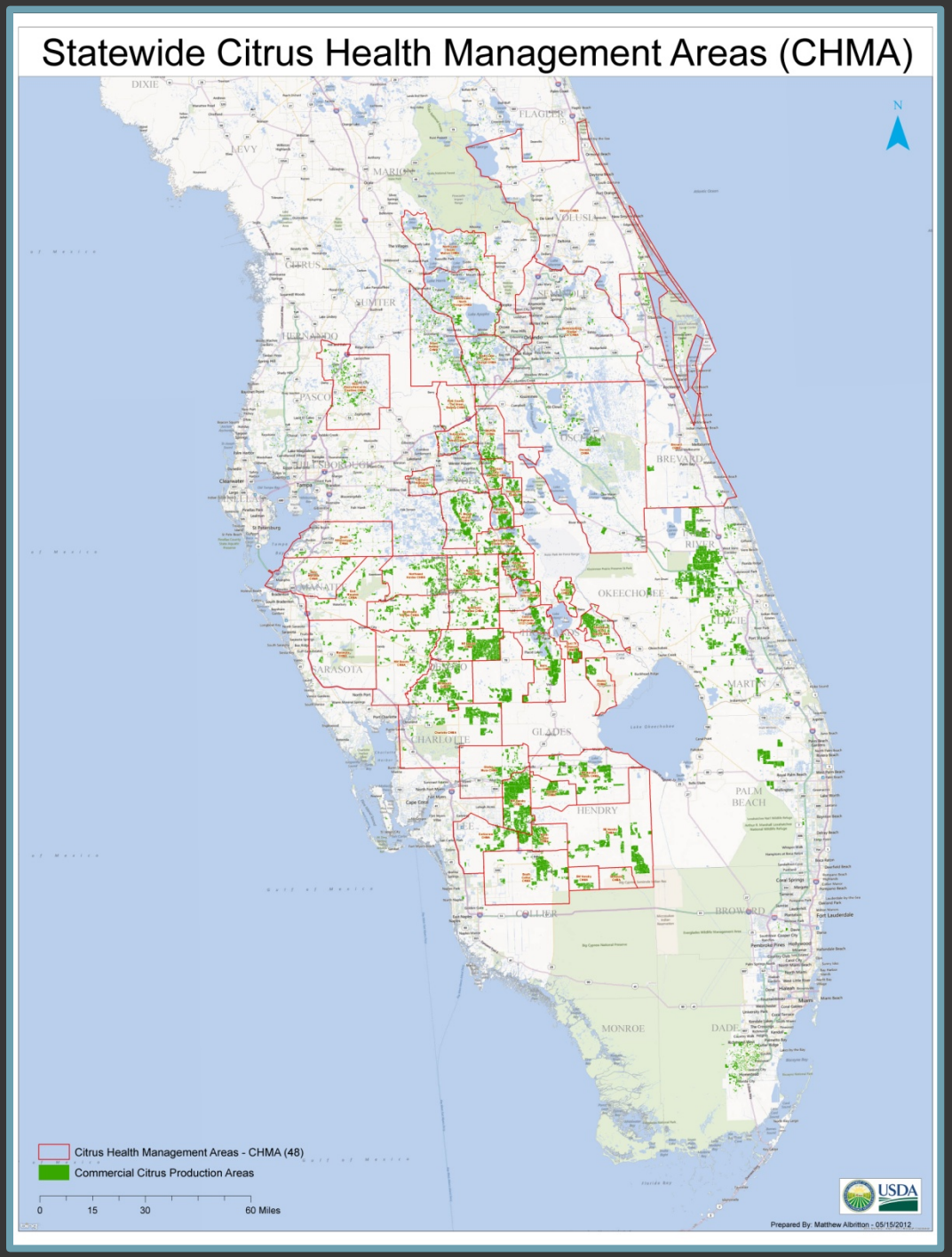
Strategies

Individual Control

- Single grove
- Grove hopping
- ACP exposed to multiple MOA
- Quick re-infestation
- Frequent applications

Coordinated Control

- Large amount of acreage
- Quick application
- Single MOA
- More ACP killed = Extended period of control
- Possible reduced number of sprays
- Plan of attack



48 CHMAs

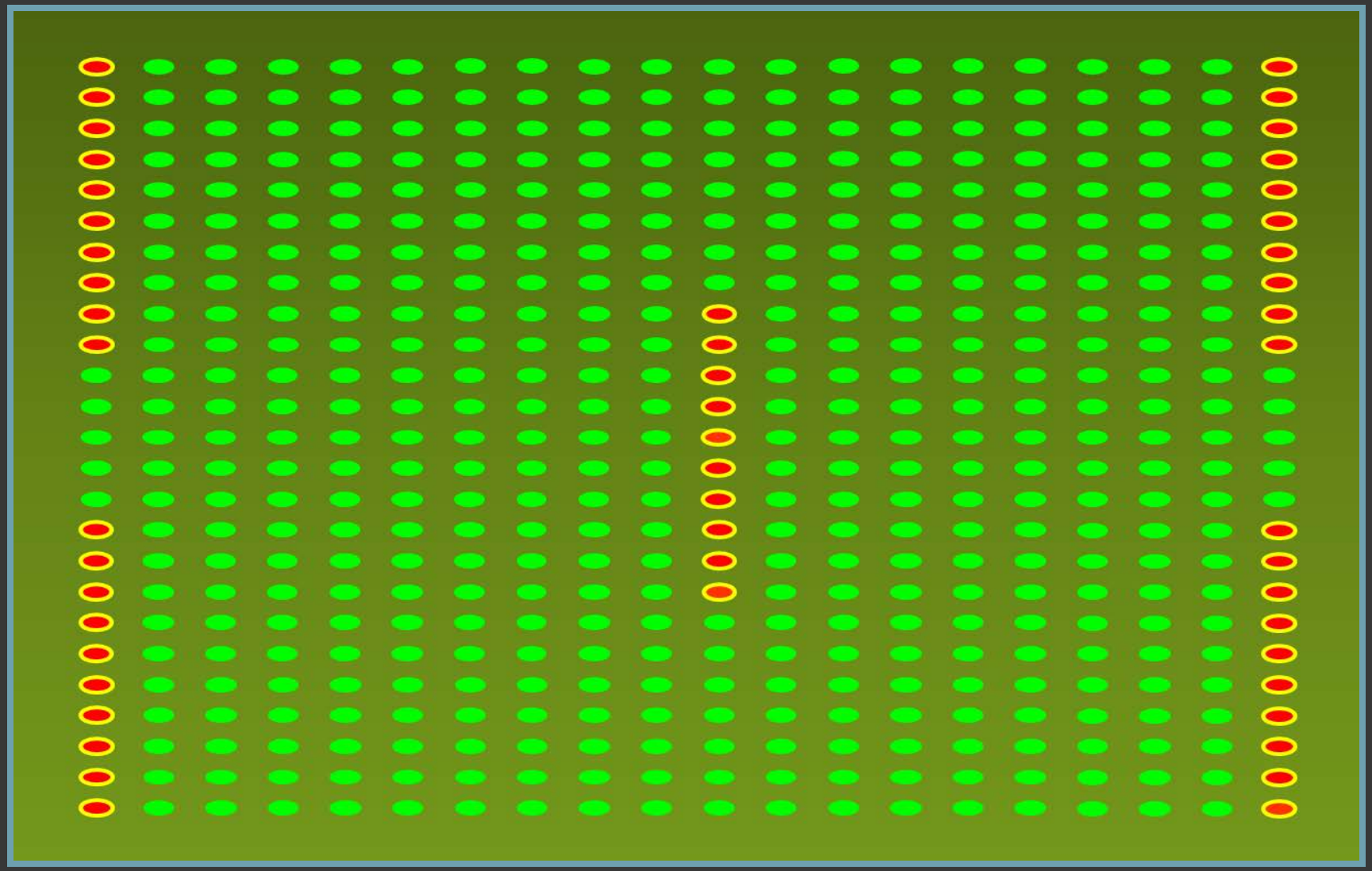
Represents 486,000 acres

93% of Florida Citrus Industry

Area-Wide Surveillance of Asian Citrus Psyllid

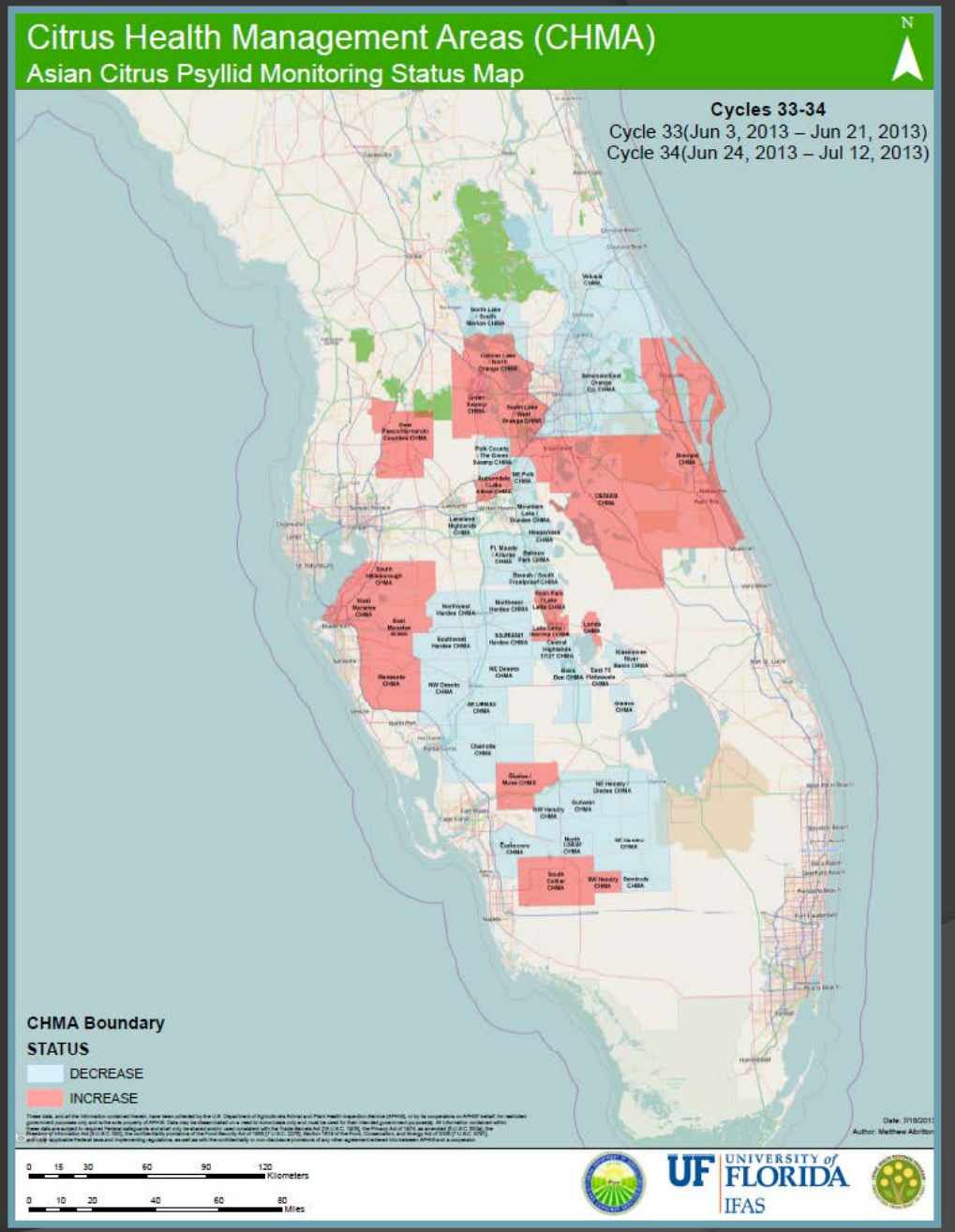
- **Survey**
  - **6,000 blocks statewide**
  - **3-week monitoring cycle**
  - **50 trees / grove block**
  - **1 tap sample per tree**
  - **Data input into IPHIS**
  - **FDACS and USDA formats data and places on UF/IFAS website for grower access**

Monitoring **Site Locations** within Block



IFAS CHMA Website

ACP Statewide Status Map

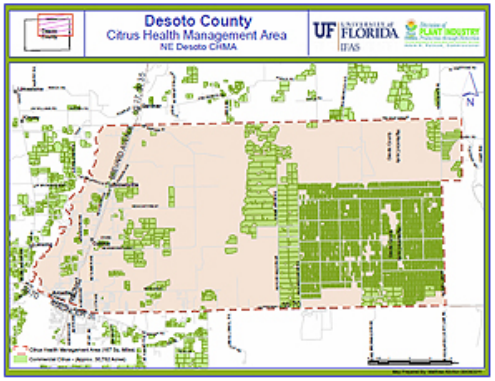


Active CHMA Websites

- CREC Home
- Extension Home
- CHMA Overview
- CHMA Toolkit
- Contact Information
- Active CHMA Websites
- Related Sites
- Resources

Citrus Health Management Areas (CHMAs)

NE Desoto CHMA



(click to enlarge map)

- Current planned pesticide applications
- Past pesticide applications
- Psyllid scouting reports
- CHMA wide ACP trend graph
- Join this CHMA – (Receive automatic email updates regarding the latest news and proposed coordinated spray schedules for this CHMA)

NE Desoto CHMA Contacts

Jerry Newlin – OCLP
(863) 494-4939 ext. 201
JNewlin@orangecofla.com

Buddy Strickland – OCLP
(863) 381-2676
bstrickland@orangecofla.com

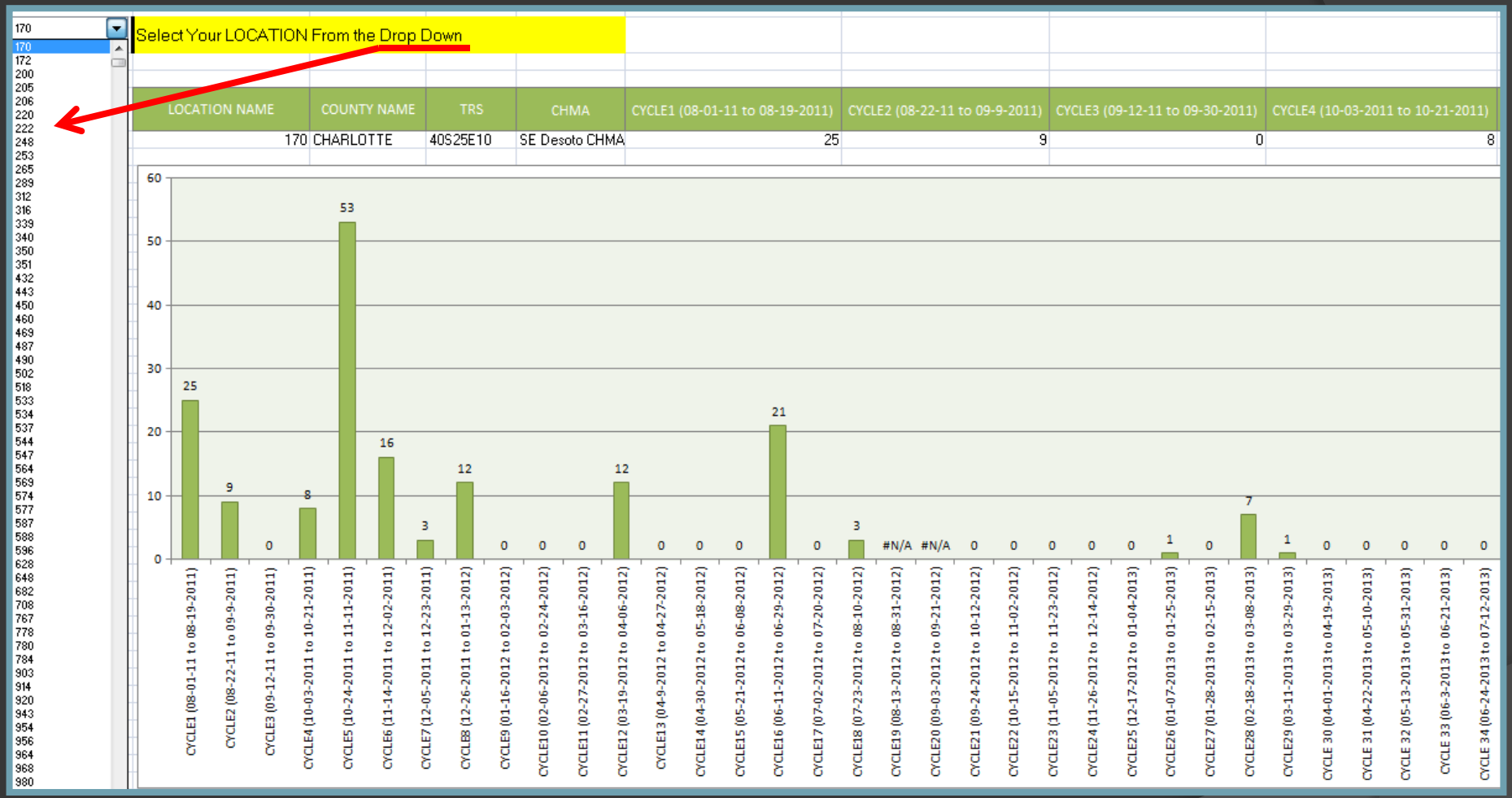
Steve H. Futch – UF-IFAS
Citrus Ext. Agent
(863) 956-8644 ext.18644
shf@ufl.edu

Latest News

NE Desoto report 7/31/13

News Archive

Block Specific Data



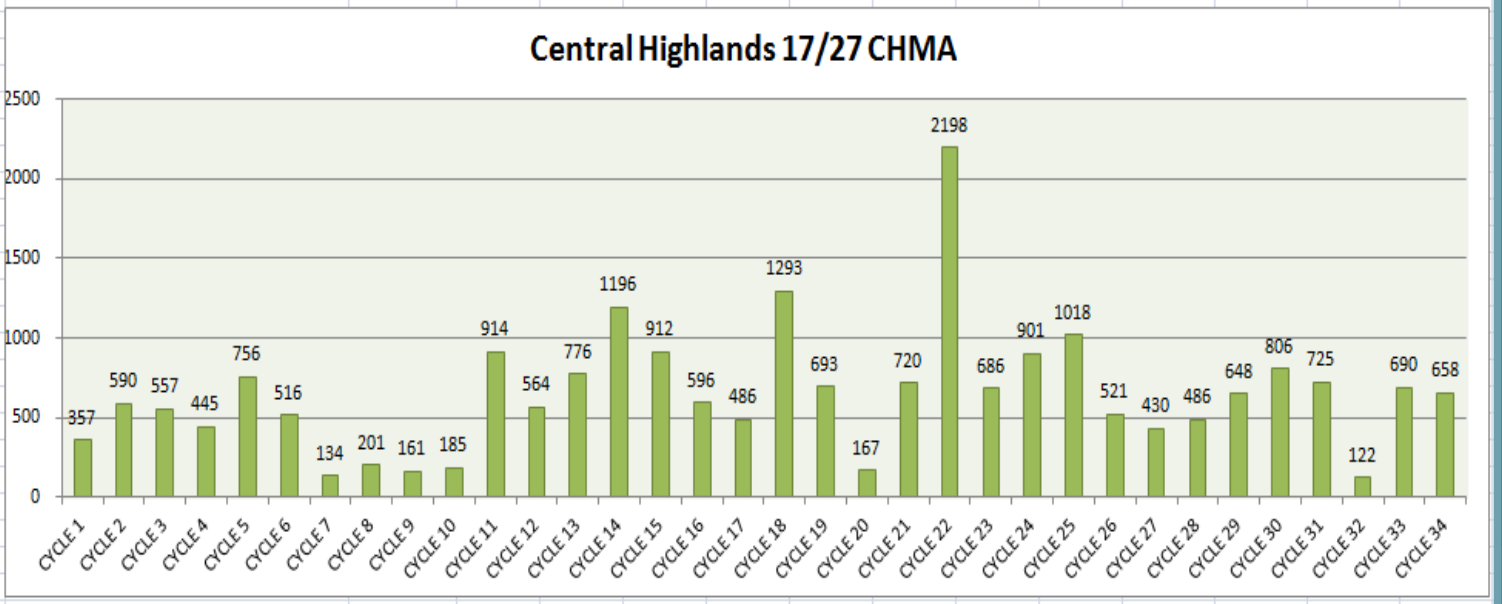
CHMA Data Graph

Central Highlands 17/27 CHMA

Select CHMA From Drop Down List

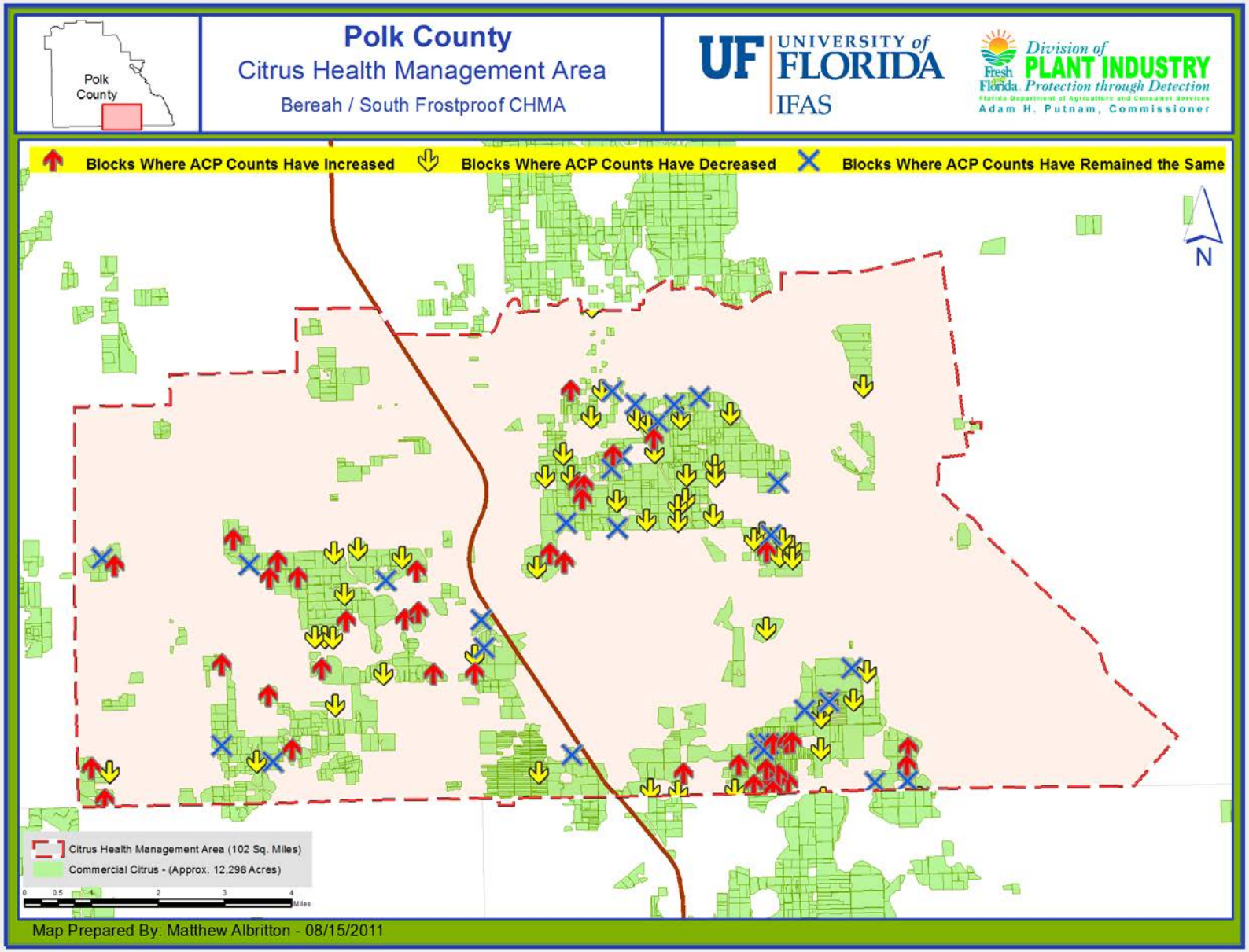
- Central Highlands 17/27 CHMA
- Central Lake / North Orange CHMA
- Charlotte CHMA
- Corkscrew CHMA
- East 70 Flatwoods CHMA
- East Manatee CHMA
- East Pasco/Hernando Counties CHMA
- Ft. Meade / Alturas CHMA
- Glades / Muse CHMA
- Glades CHMA
- Green Swamp CHMA
- Gutwein CHMA
- Hesperides CHMA
- Kissimmee River Basin CHMA
- Lake Letta / Sebring CHMA
- Lakeland Highlands CHMA
- Lorida CHMA
- Manasota CHMA
- Mountain Lake / Dundee CHMA
- NE Desoto CHMA
- NE Hendry / Glades CHMA
- NE Polk CHMA
- North Collier CHMA
- North Lake / South Marion CHMA
- Northeast Hardee CHMA
- Northwest Hardee CHMA
- NW Desoto CHMA
- NW Hendry CHMA
- Osceola CHMA
- Polk County - The Green Swamp CHMA
- SE Desoto CHMA

CHMA NAME	CYCLE 1	CYCLE 2	CYCLE 3	CYCLE 4	CYCLE 5	CYCLE 6	CYCLE 7	CYCLE 8	CYCLE 9	CYCLE 10	CYCLE 11	CYCLE 12	CYCLE 13
Central Highlands 17/27 CHMA	357	590	557	445	756	516	134	201	161	185	914	564	776



NUMBER OF ACRES	2,285
NUMBER OF BLOCKS	105

ACP CHMA Change Map

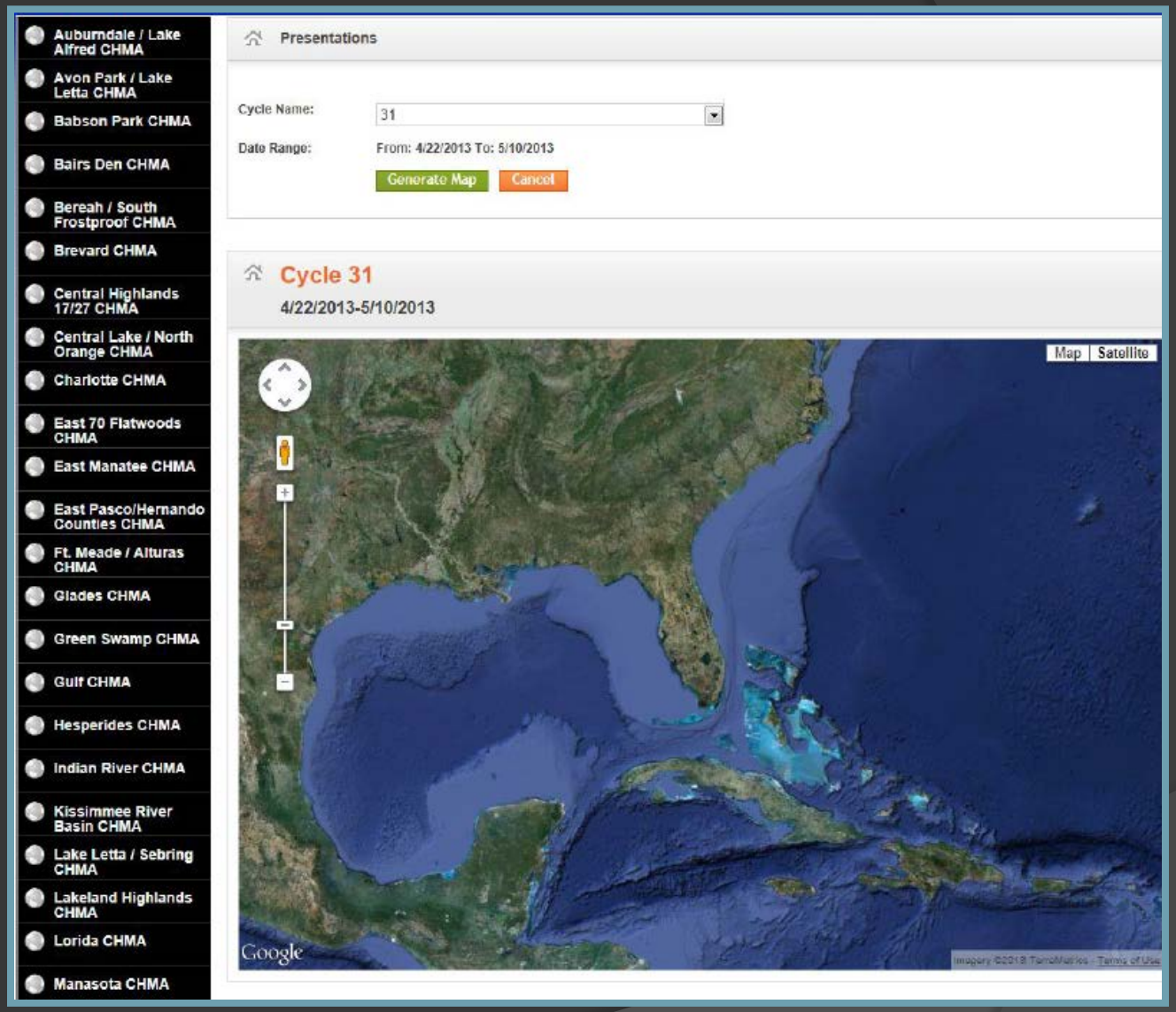


Sectional Mapping Program

CHMA Sectional Mapping Program

- Utilizing the FDACS and USDA scouting data
- TRS (Township, Range, Section) / square mile
- Grouping scouted blocks by TRS
- Plotting data and TRS locations onto interactive map

CHMA Selection

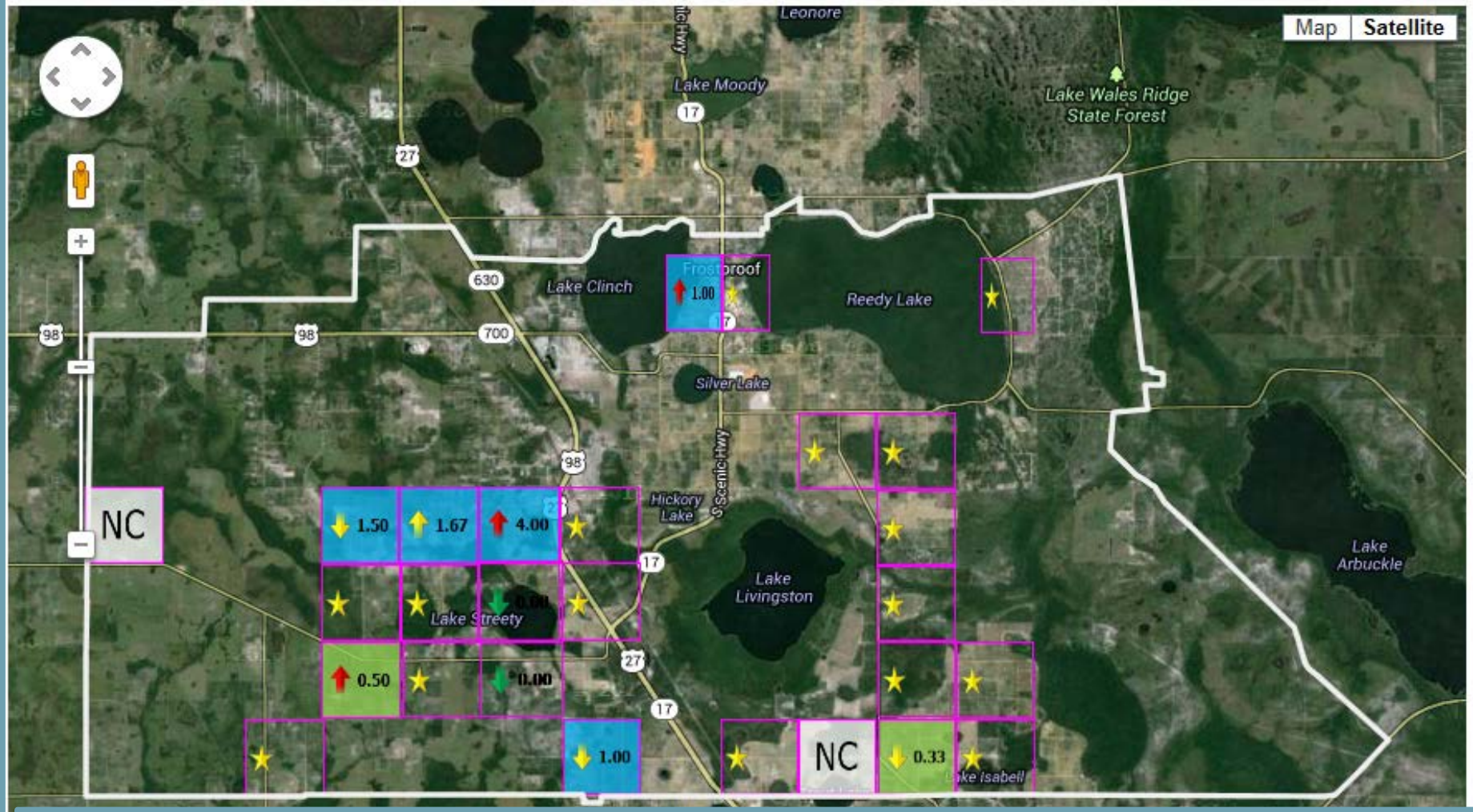


Cycle 33

6/3/2013-6/21/2013

Bereah/South Frostproof CHMA

Average Psyllids = 0.42



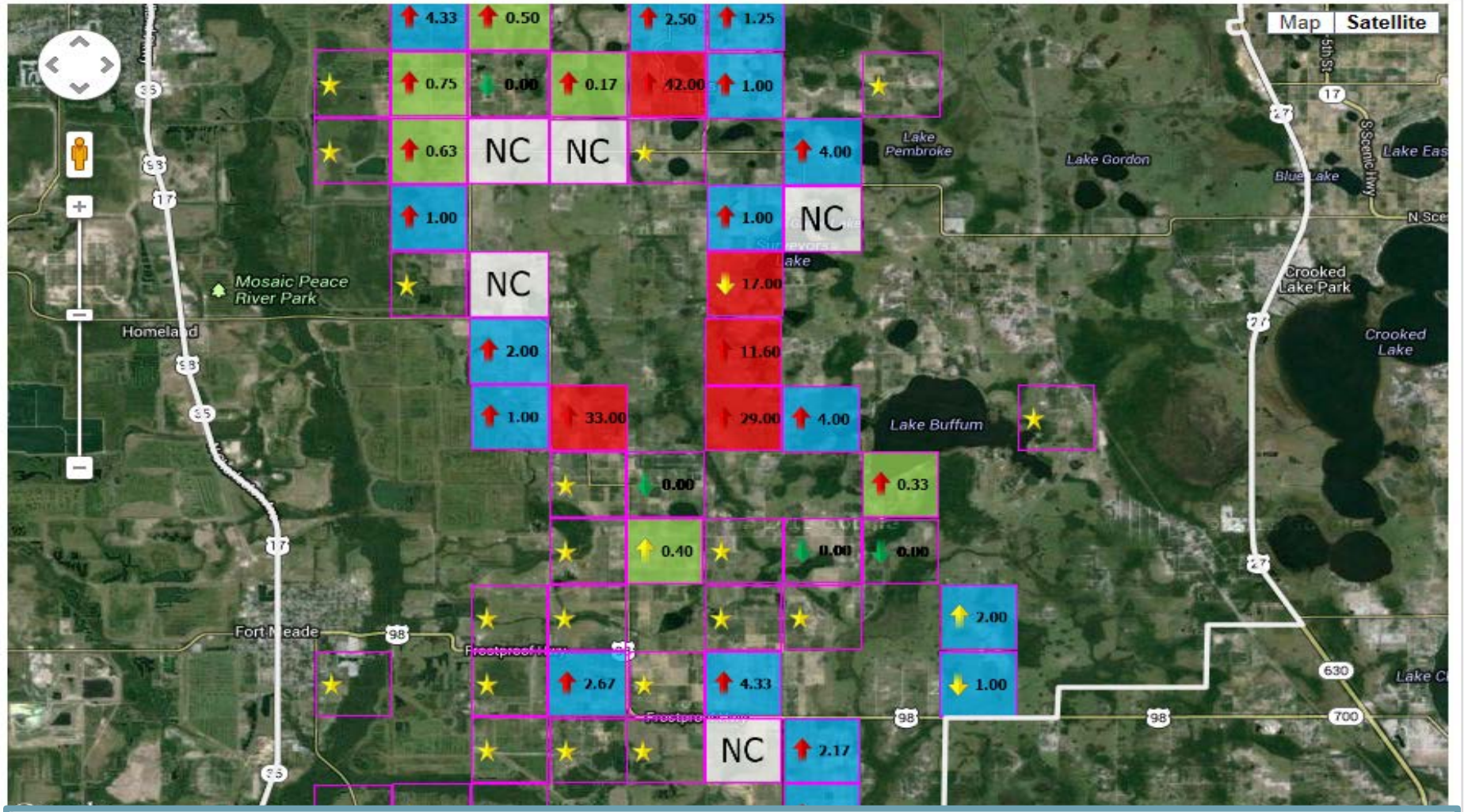
Legend

0 Psyllids	<1 Psyllids	1-5 Psyllids	6-10 Psyllids	>10 Psyllids
o psyllids for two consecutive cycles	Psyllids decreased to a lower category	Psyllids decreased but remained in same category	Psyllids increased but remained in same category	Psyllids increased to a higher category

Fort Meade/Alturas CHMA

Cycle 33
6/3/2013-6/21/2013

Average Psyllids = 3.11



Legend

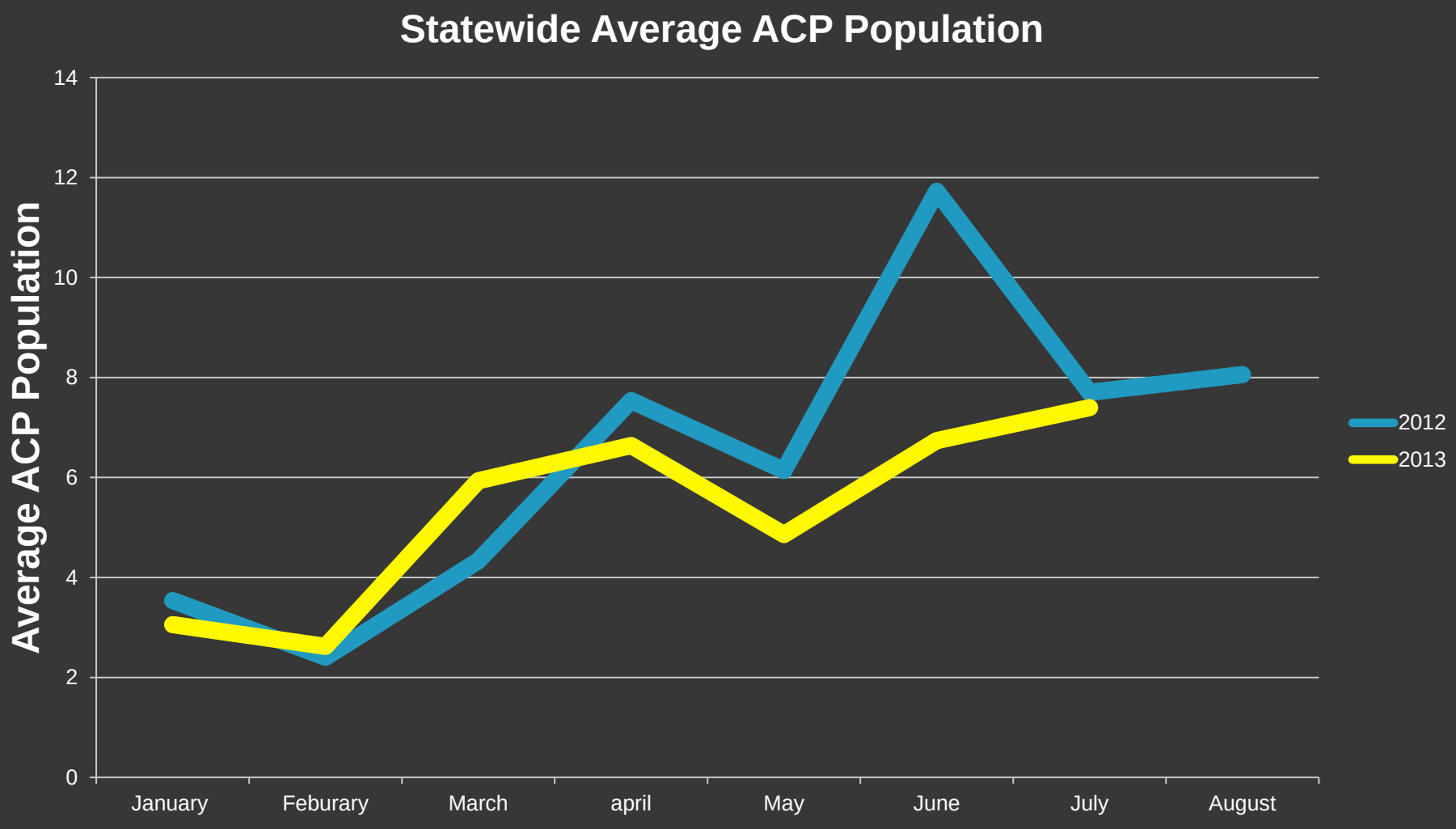
0 Psyllids	<1 Psyllids	1-5 Psyllids	6-10 Psyllids	>10 Psyllids
o psyllids for two consecutive cycles	Psyllids decreased to a lower category	Psyllids decreased but remained in same category	Psyllids increased but remained in same category	Psyllids increased to a higher category

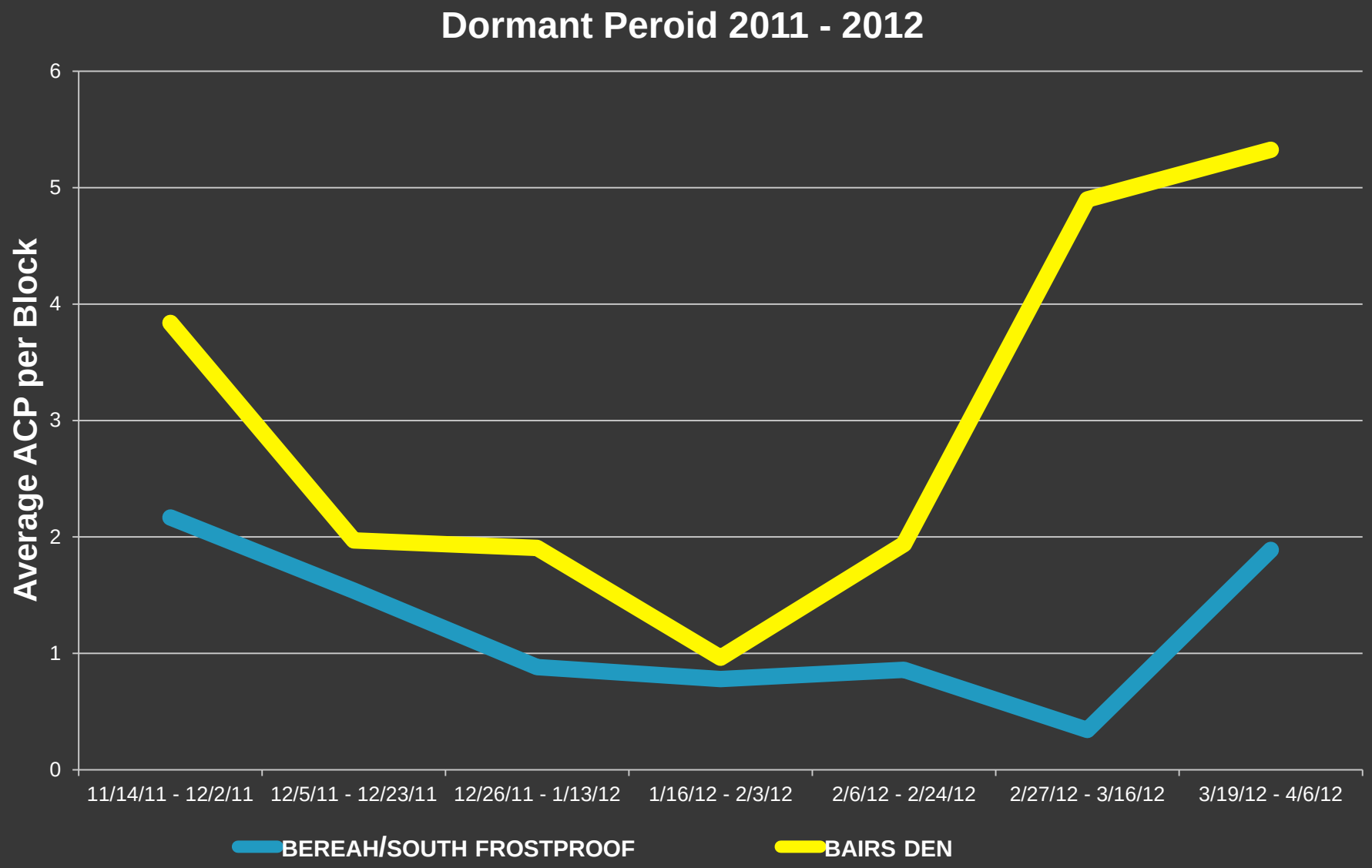
Results and Observations

- **Grower participation is increasing as they see the data and results**
- **Psyllid populations are decreasing where coordinated applications have been implemented**

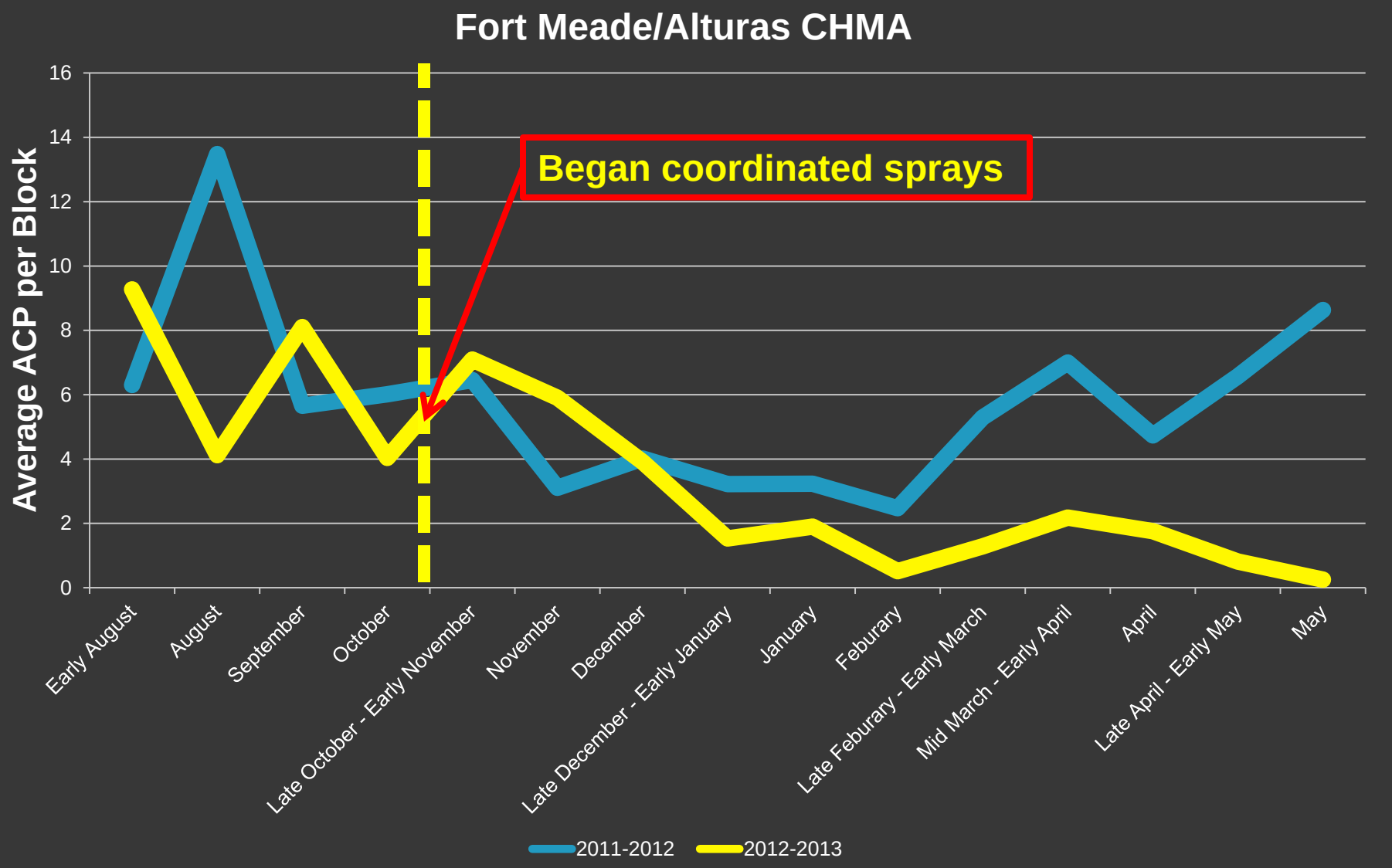
Results and Observations

- **Applications are being postponed several weeks due to the effectiveness of the coordinated treatments**
- **Grower interaction is enhanced**
- **The CHMA concept is a venue for managing other pests and diseases**

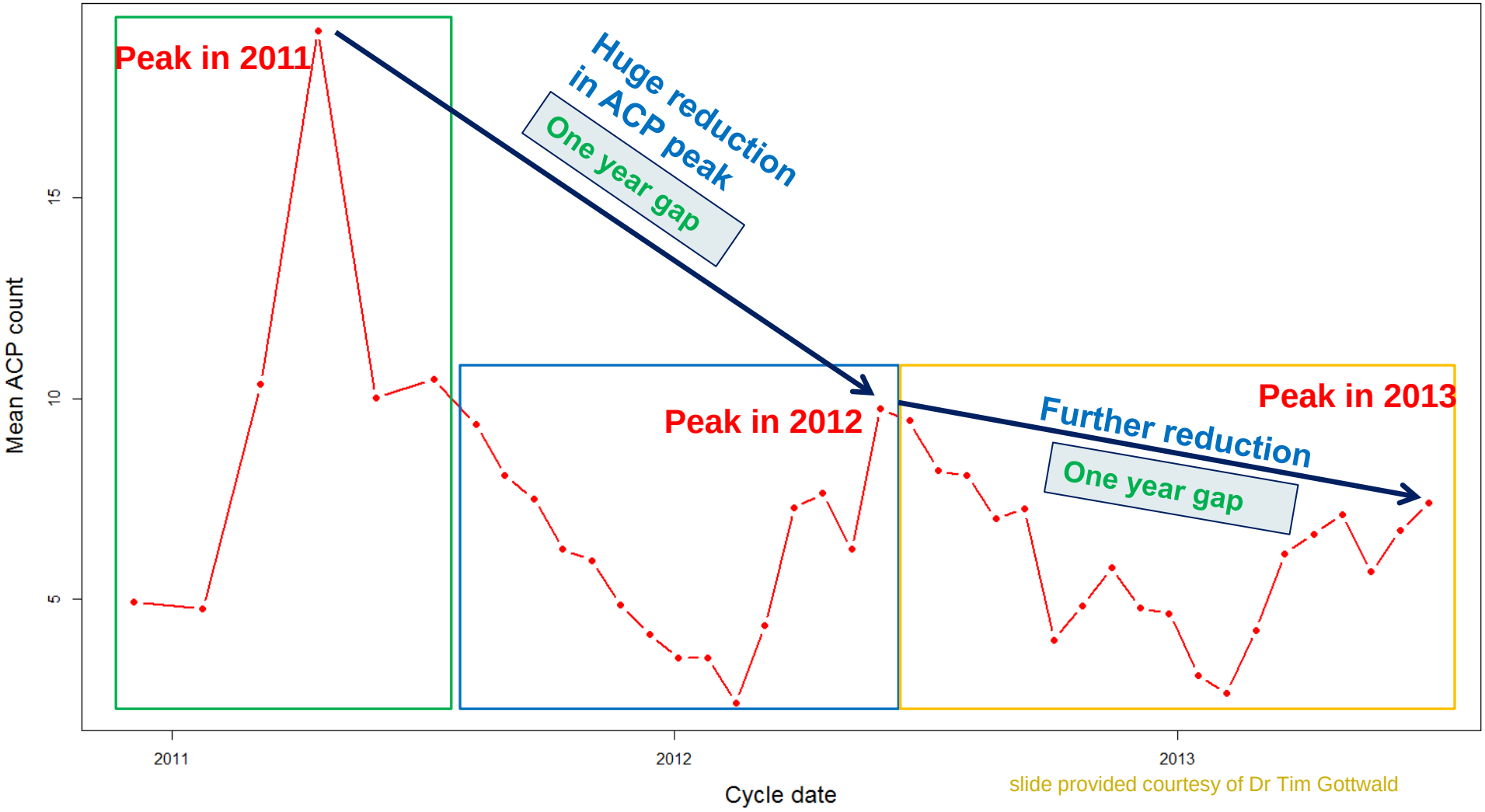

Statewide Average ACP Population
Average ACP Population
14
12
10
8
6
4
2
0
January
Feburary
March
april
May
June
July
August
2012
2013



Low Participation vs High Participation


Fort Meade/Alturas CHMA
Average ACP per Block
16
14
12
10
8
6
4
2
0
Began coordinated sprays
Early August
August
September
October
Late October - Early November
November
December
Late December - Early January
January
Feburary
Late Feburary - Early March
Mid March - Early April
April
Late April - Early May
May
2011-2012
2012-2013

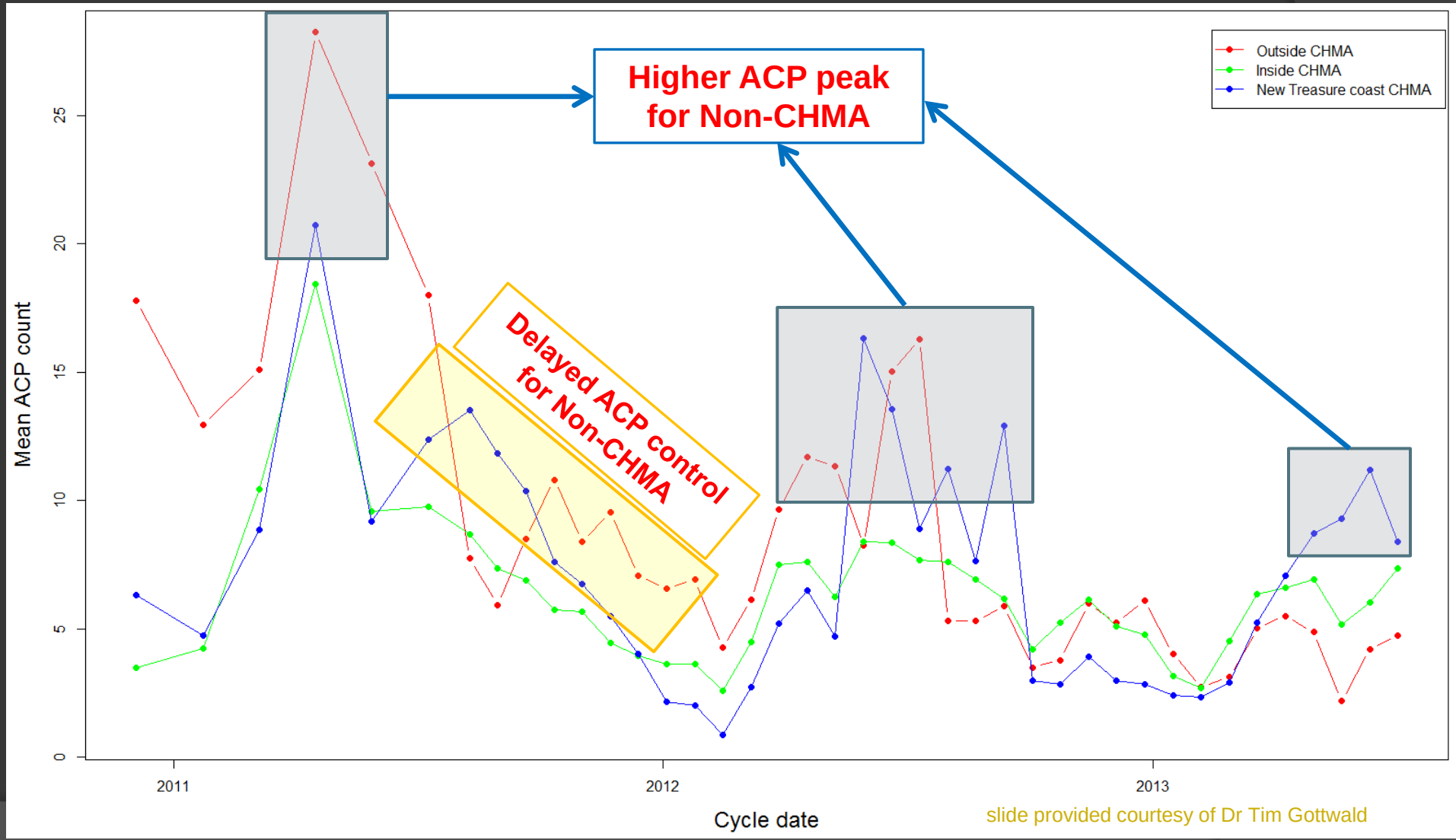
ACP controls



slide provided courtesy of Dr Tim Gottwald

ACP controls for CHMA

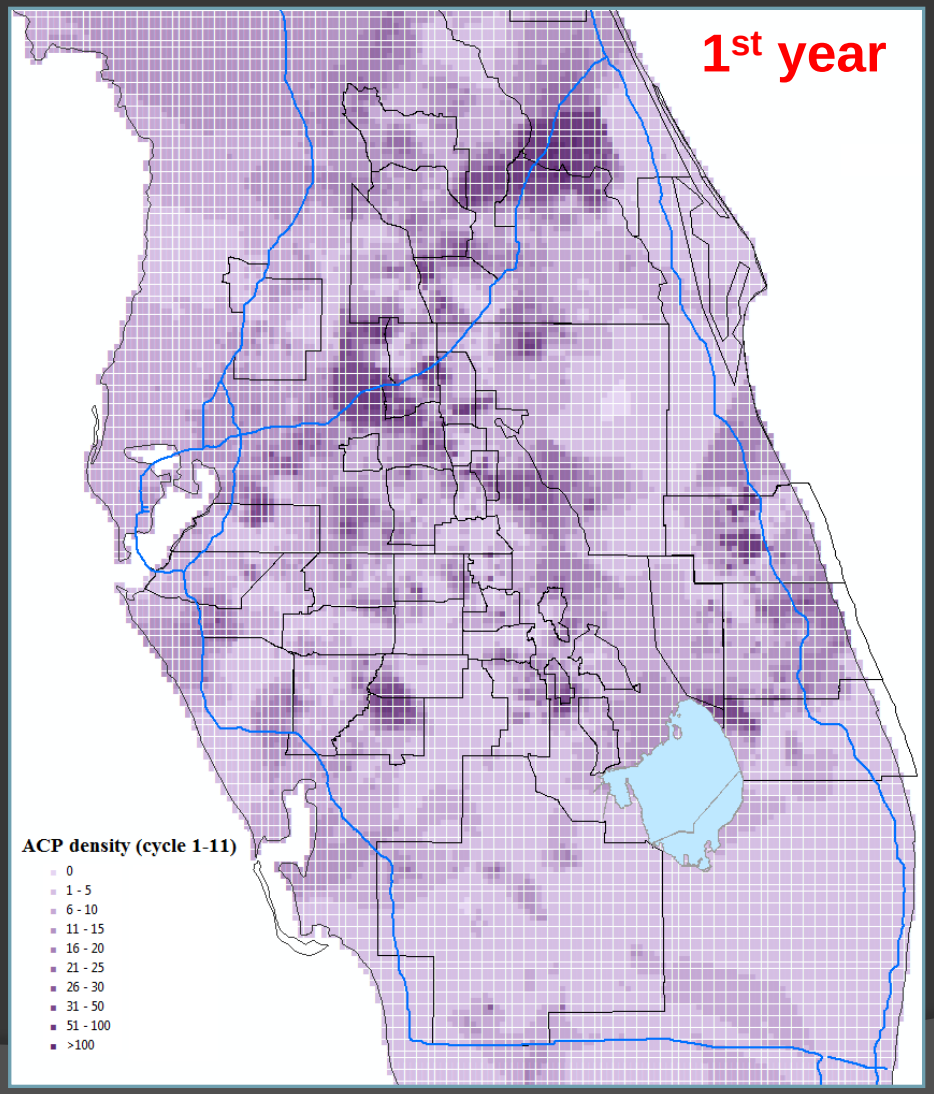
- Paired t test was used to test the significant difference between ACP controls.
- ACP pressure is significantly lower inside CHMA, compared with outside CHMA (*p=0.001*) or New Treasure coast CHMA *(p=0.04)*



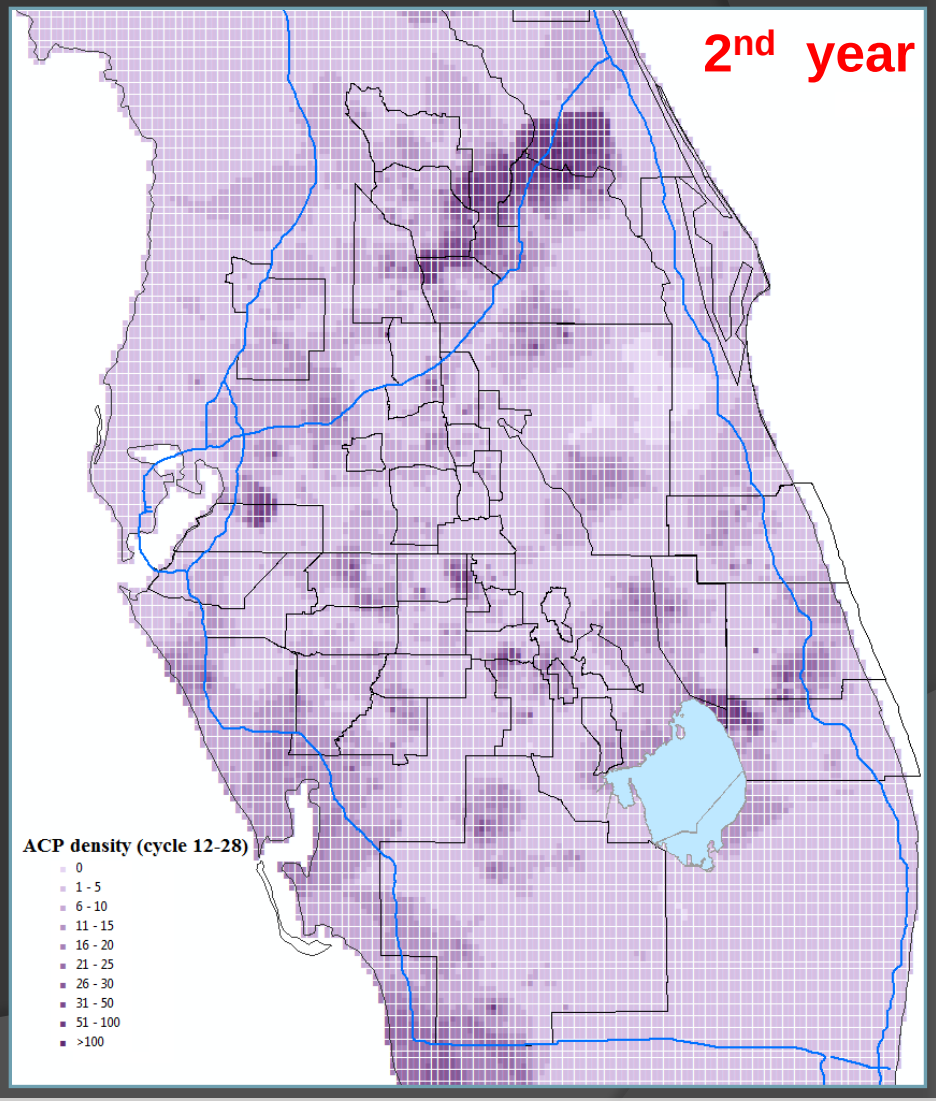
slide provided courtesy of Dr Tim Gottwald

ACP controls for CHMA

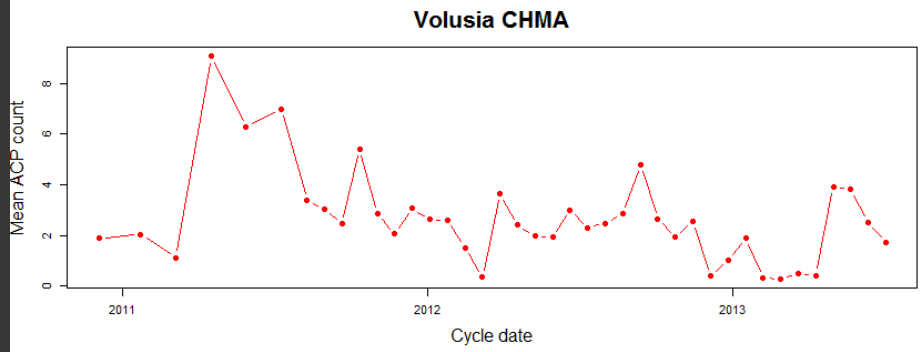
11/08/2010 to 11/11/2011

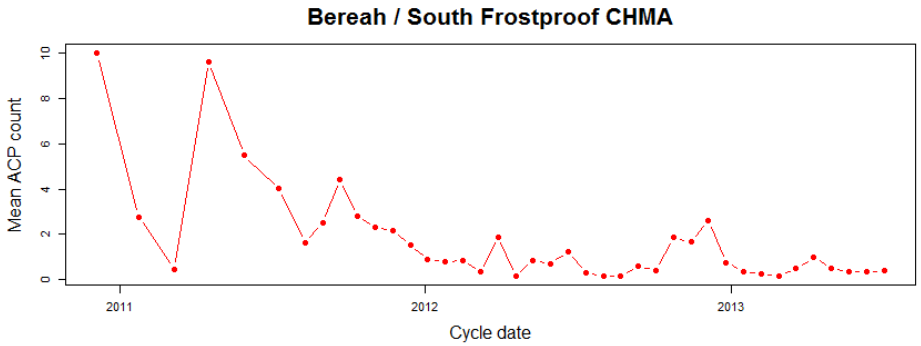


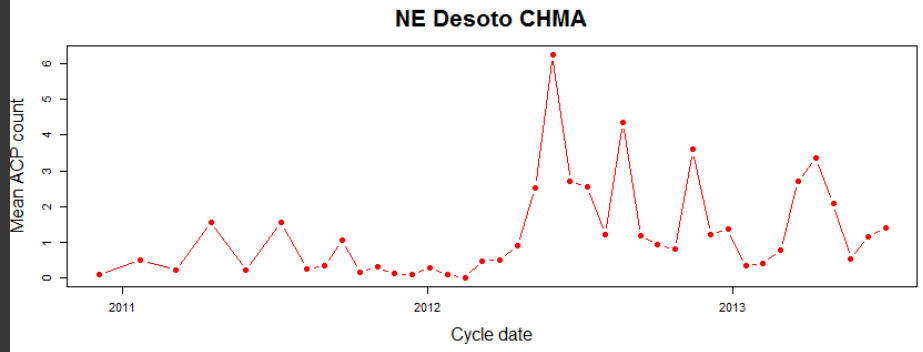
11/14/2011 to 11/02/2012

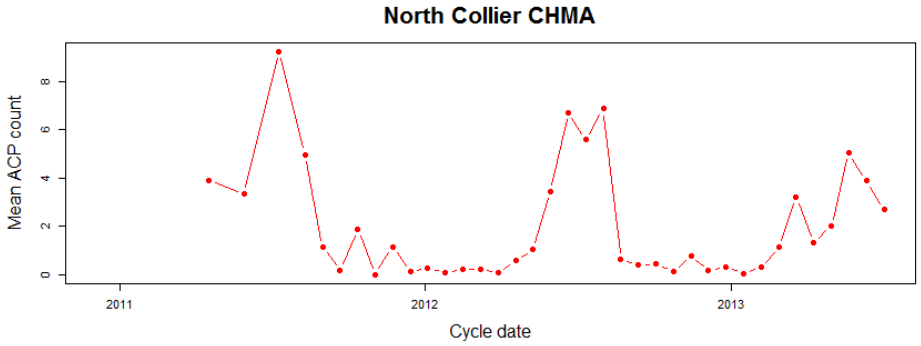


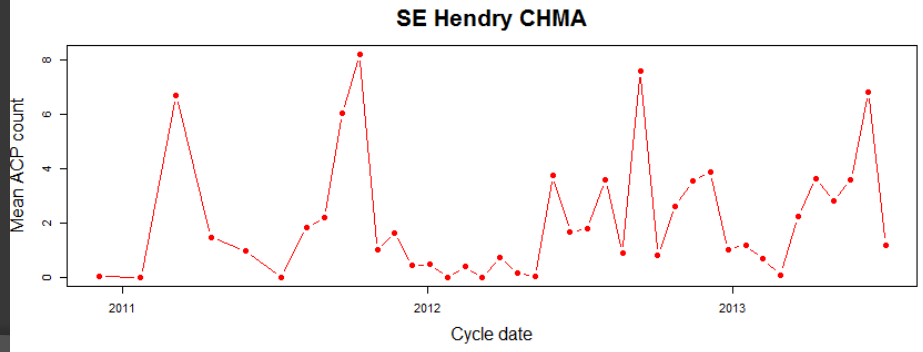
ACP controls for CHMA comparisons











Acknowledgements

- Brandon Page, IFAS
- Dr,. Michael Rogers, IFAS
- Tim Riley, USDA
- CRDF
- FDACS
- USDA

For more information:

Visit the Florida CHMA Website:

www.flchma.org

Thank you