

Toward Area Wide Management of Asian Citrus Psyllid in Florida

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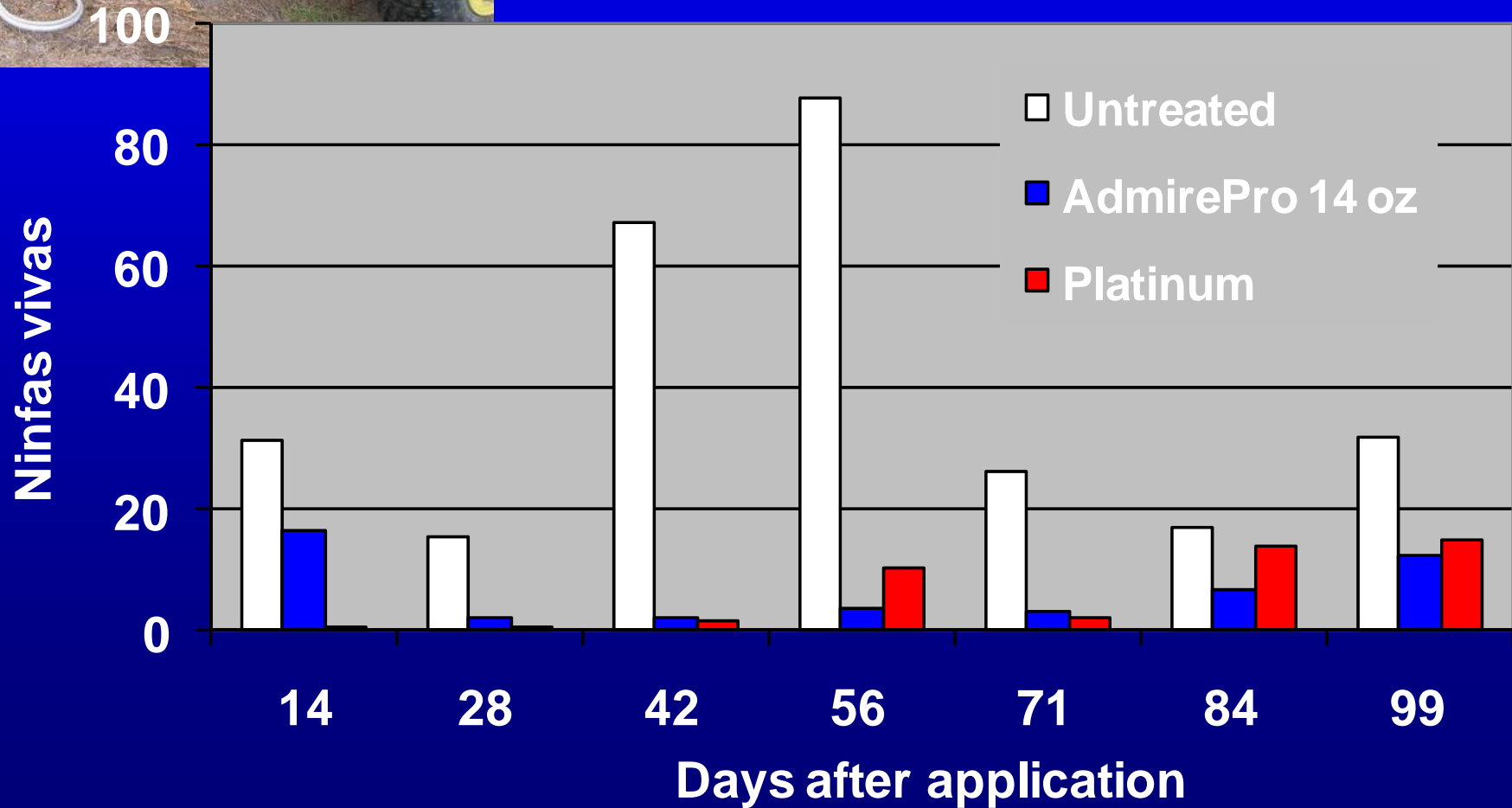


Joel Mendez

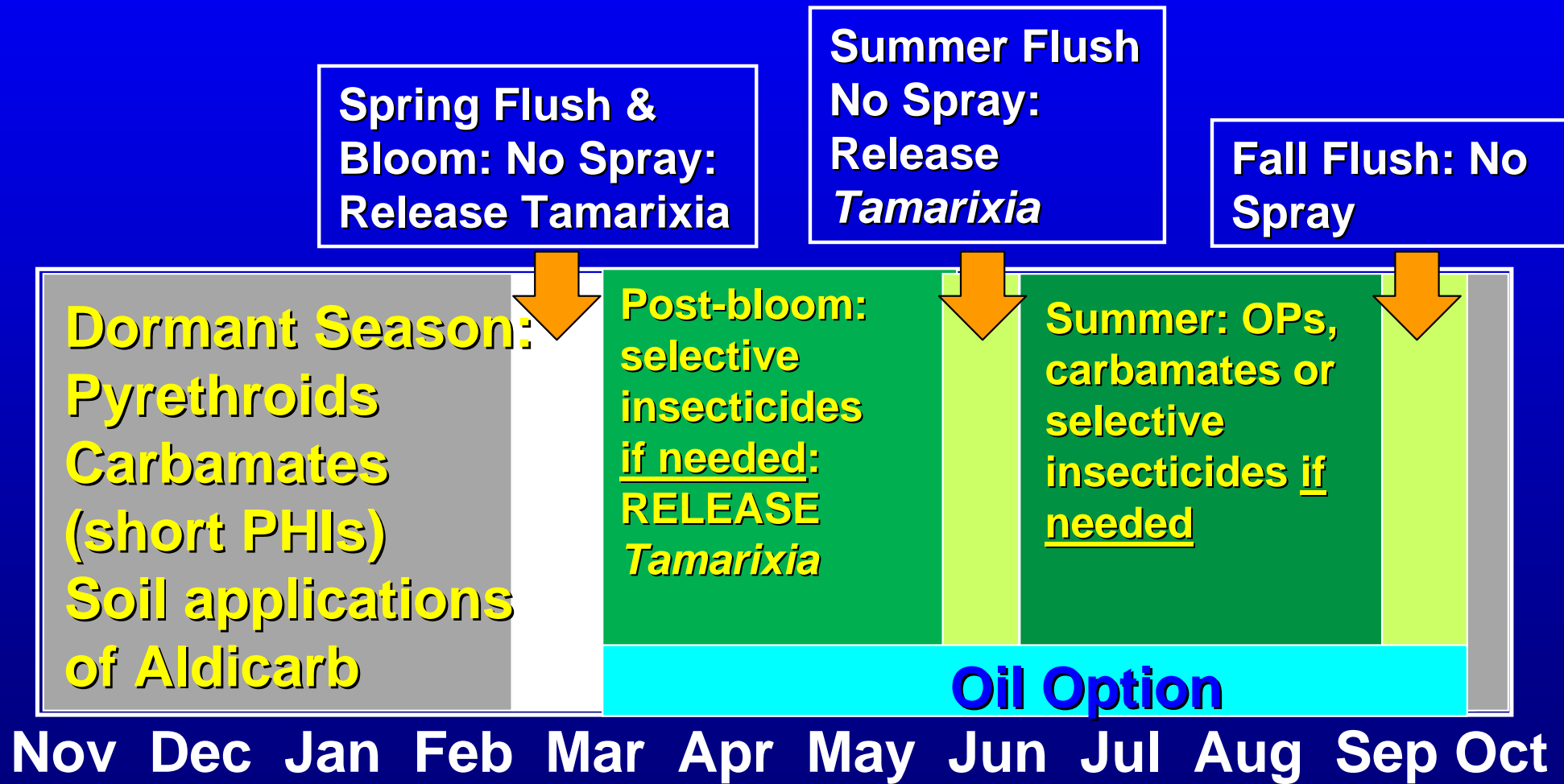
Management Plan for ACP

- **Dormant season (winter)**
 - One or two broad-spectrum sprays
 - Directed against adults
 - Protect Spring Flush
- **Growing Season**
 - Soil applications of systemic insecticides for young trees
 - Monitor psyllid populations
 - Selective chemistry preferred if necessary
 - Frequent oil sprays possible option?
 - Mass release of parasitoids ?
 - Flush control?

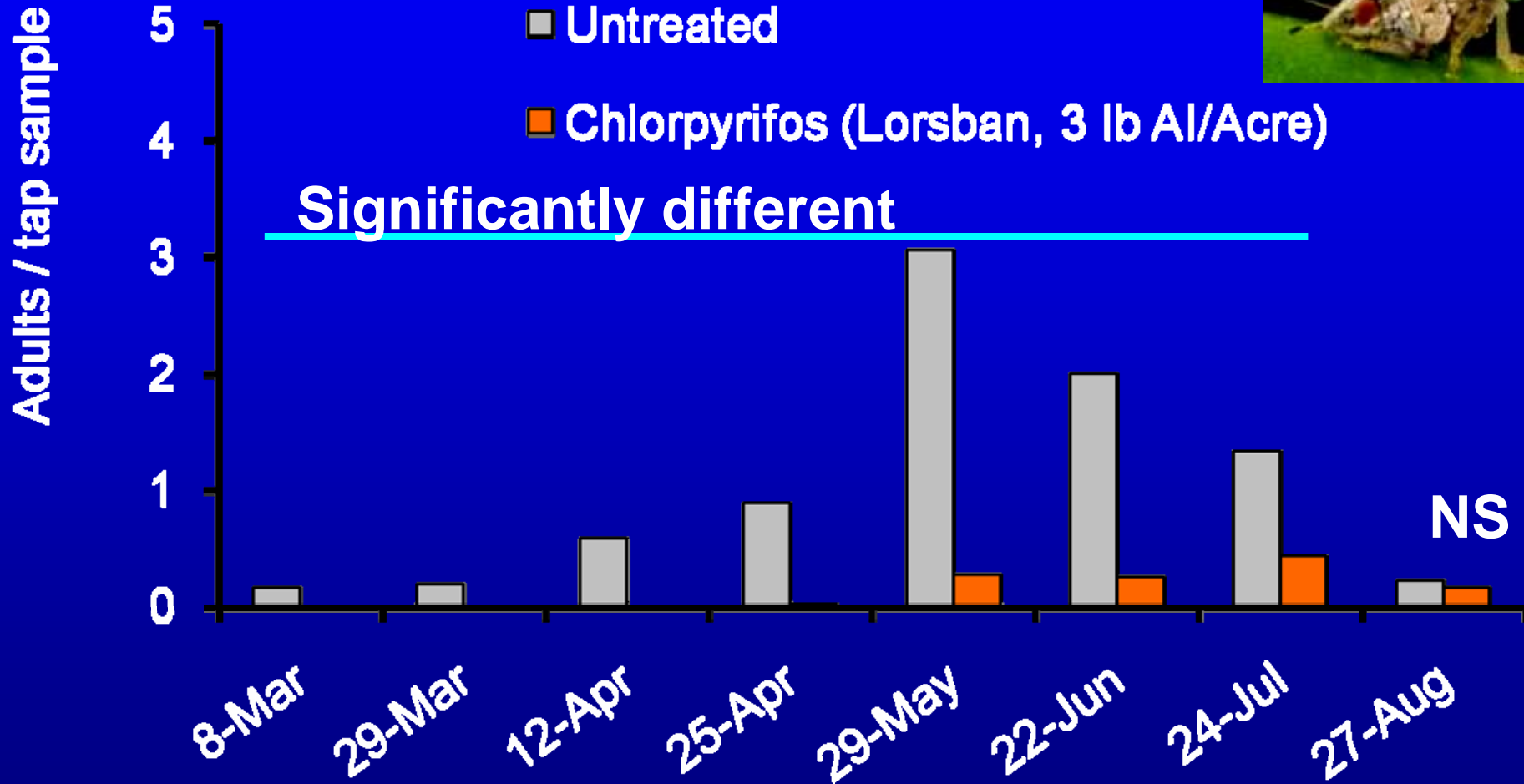
Soil applications of systemic insecticides for young trees



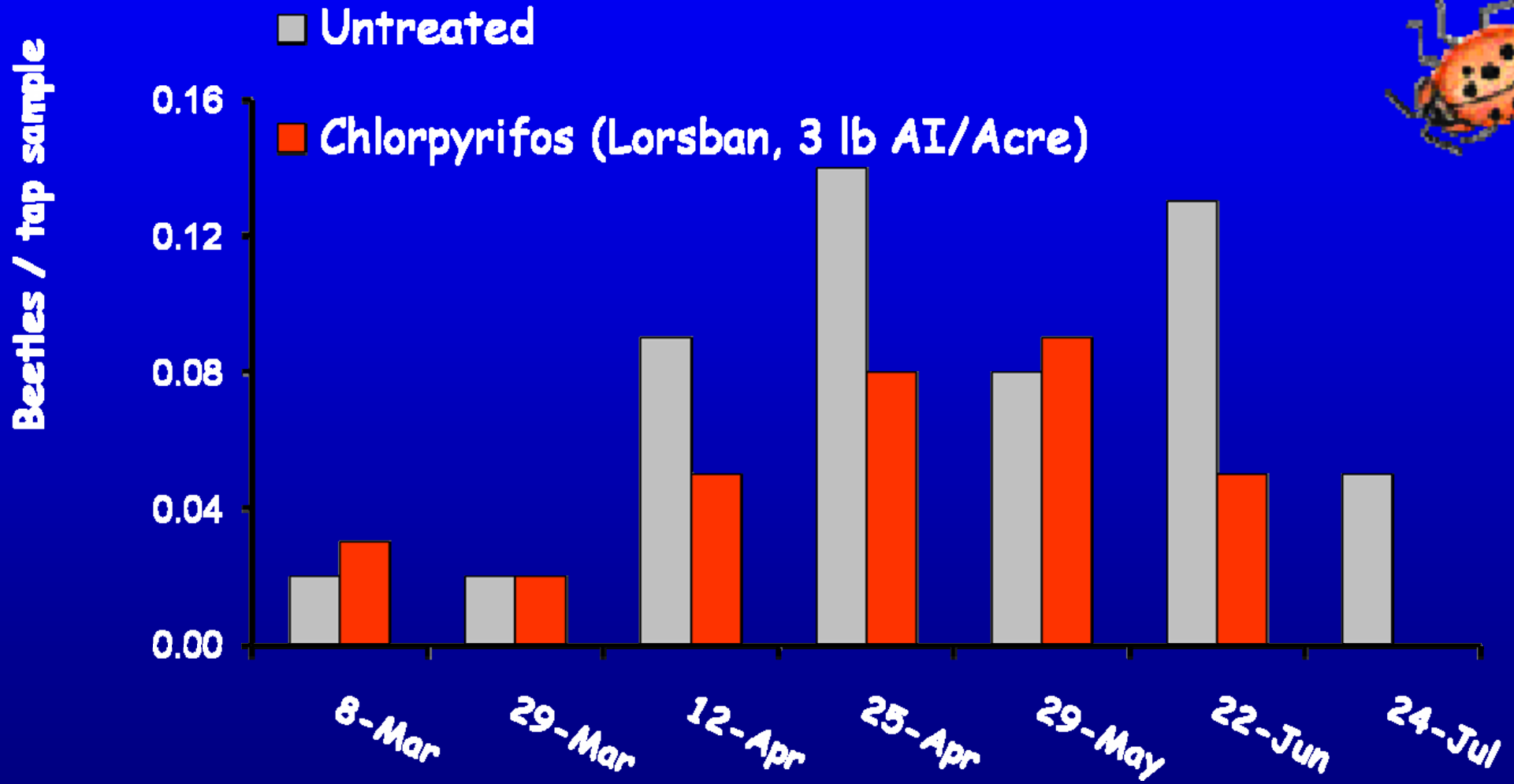
Management Plan for ACP in Mature Citrus



Dormant Sprays: Effect of a Single Spray Made Jan 15 2007 on Adult ACP



No Significant Effect of a Single Spray Made Jan 15 2007 on Ladybeetles



Area Wide Dormant Spray in SW Florida



- A dormant spray is a foliar application of broad-spectrum insecticide directed at over-wintering adult psyllids.
- Dormant sprays attack the psyllid population at its weakest point and when beneficial insects are least exposed.
- The larger the treated area of citrus, the greater the effectiveness of dormant sprays.
- Broad spectrum insecticides are needed
 - Rotate modes of action (pyrethroids, OPs Carbamates)
 - Chose from recommended products based on PHI and previous history

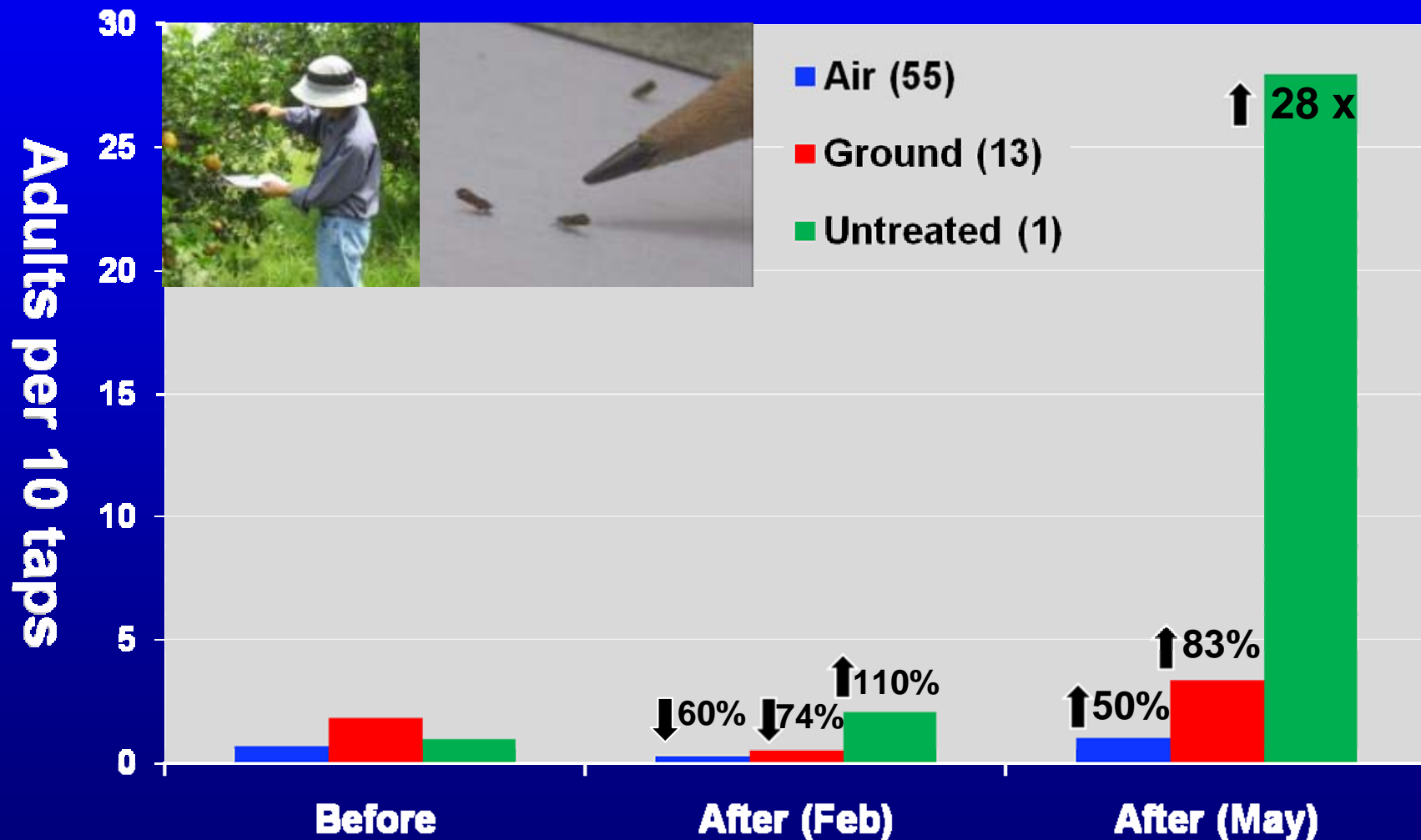
Voluntary Cooperative Dormant Applications in SW Florida

	Dec 08 – Feb 09	Oct 09 – Feb 10
Application	Acreage	
Aerial	71,916	73,180
Ground (estimated)	30,000	30,000
Total	101,916	103,180
Sprays (no)	1.15	1.33

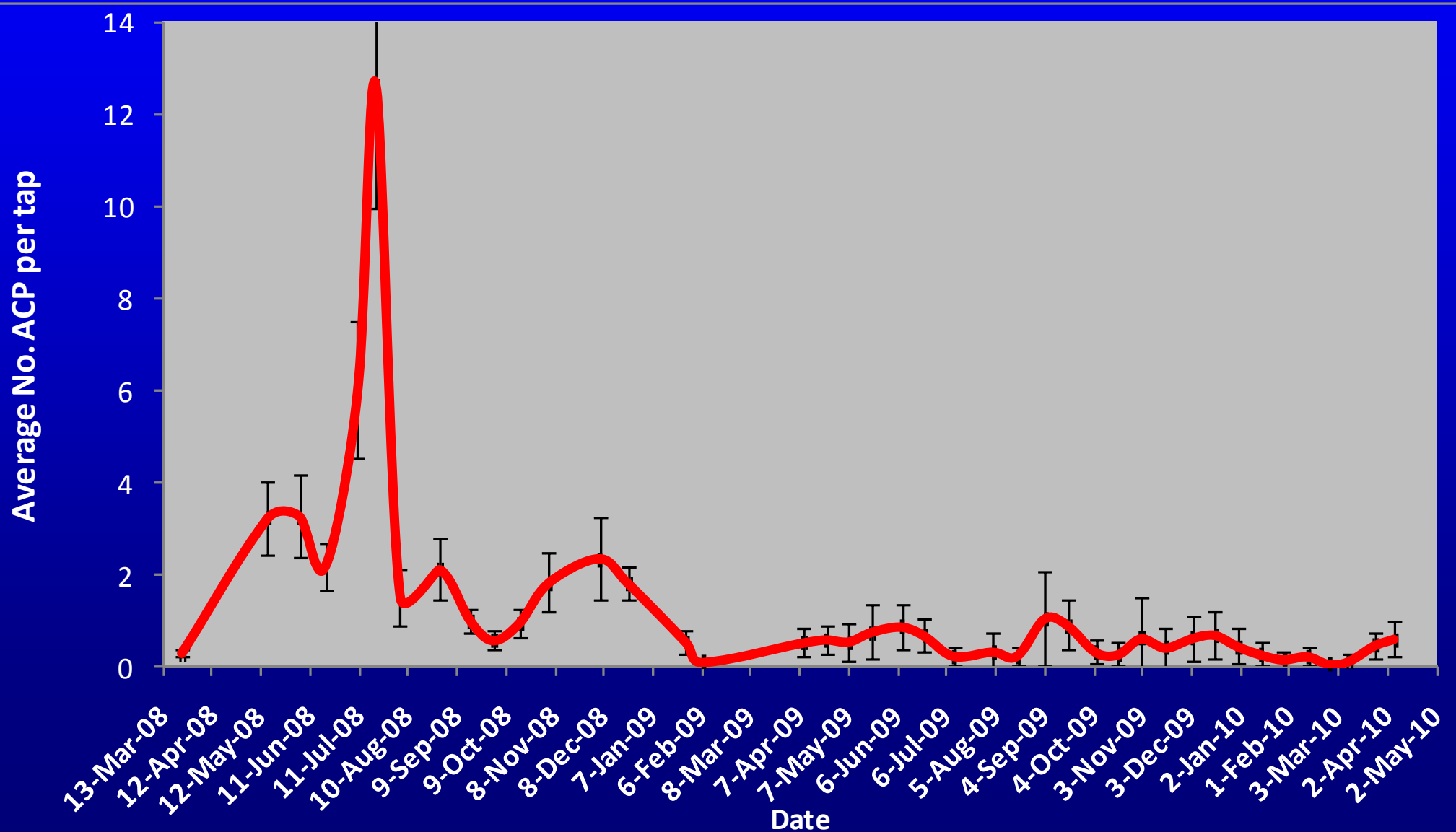
* Estimation based on survey of 27 growers in 2009 covering 106,000 acres

DPI-CHRP Field Survey Results:

Average ACP Adults per 10 Tap Samples Before and After Dormant Sprays, 2008-2009

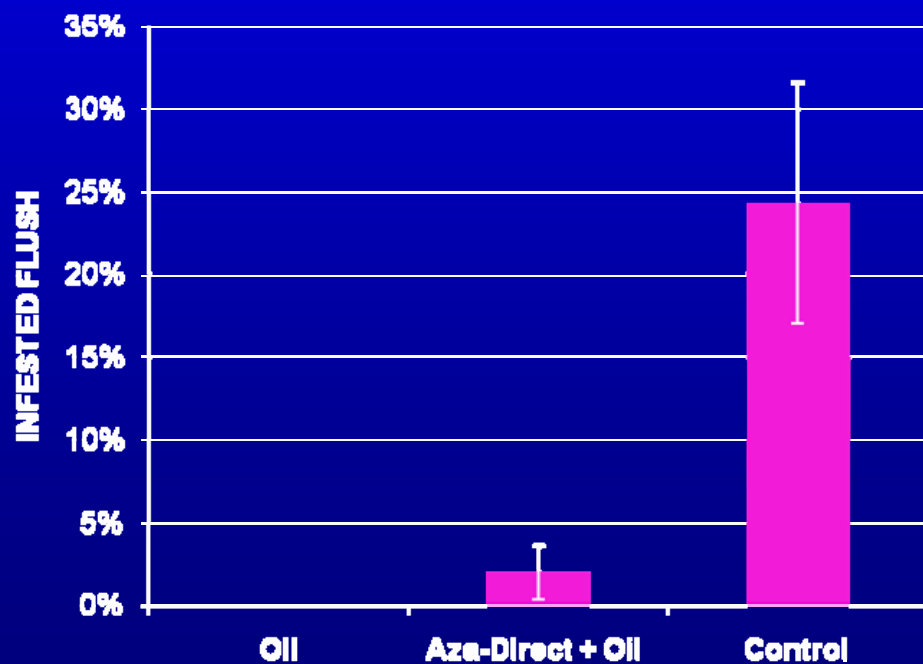


Declining ACP Populations in Untreated Plots Commercial Grove in Immokalee FL



LV Applications of Oil and Azadirachtin 2008

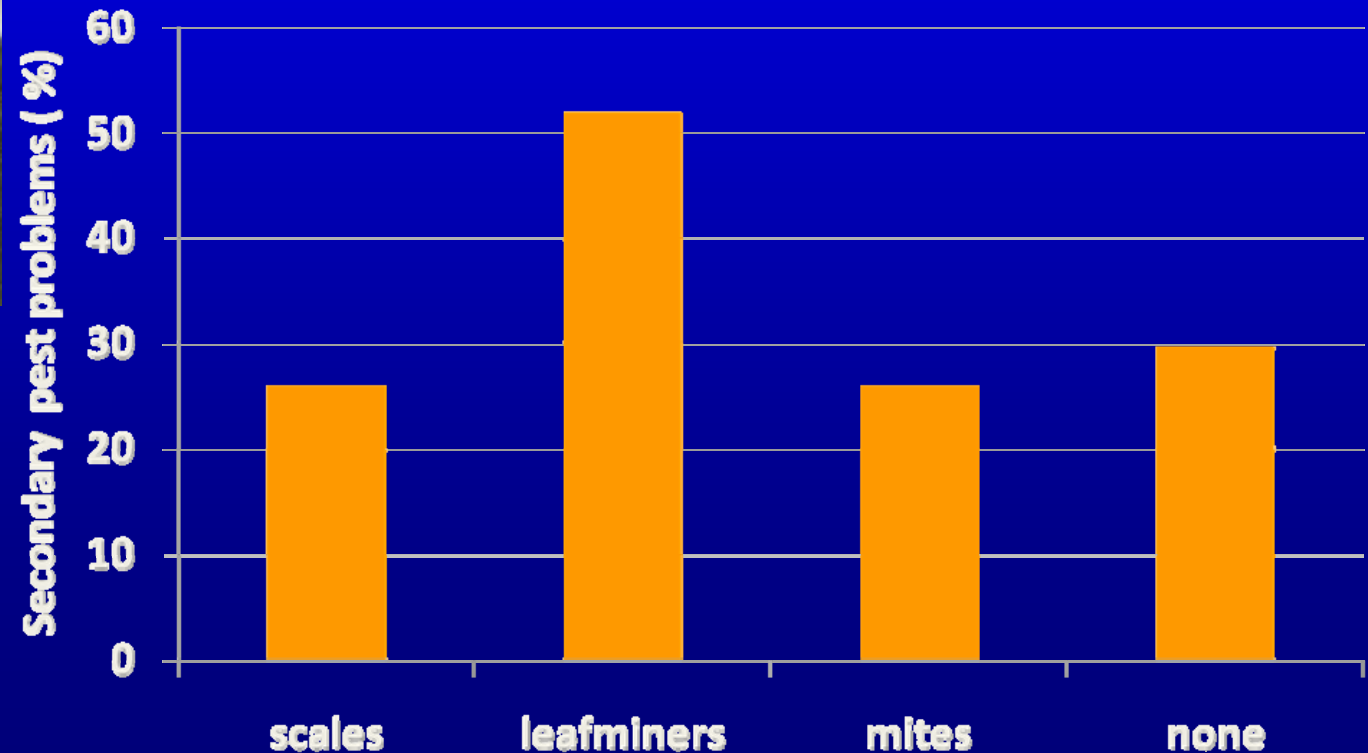
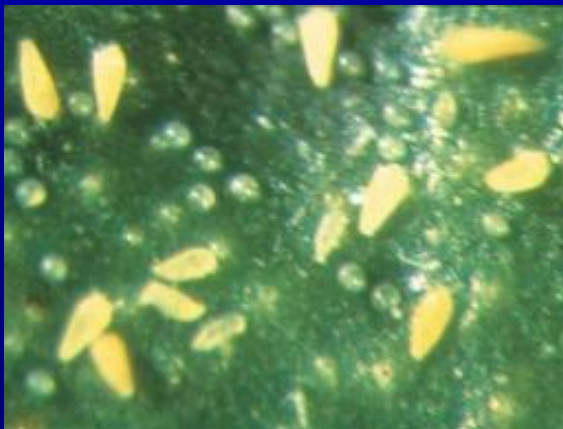
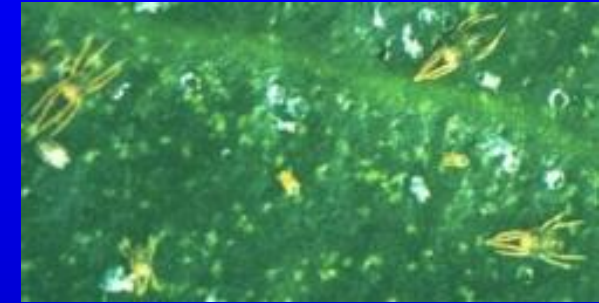
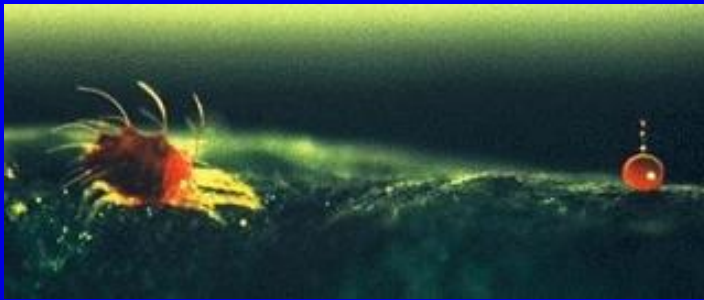
- 65 Acre block, 5 bed plots, treated 5 times once every 2 weeks beginning June 24
- “London Fogger” (Beck Bros.) 1 gal/acre oil only or with 12 oz Aza-Direct



All flush on 20 trees/plot Aug. 1

Increase of Secondary Pests:

2009 Survey: Average No of sprays per year = 6



ACP Monitoring System

<http://swfrec.ifas.ufl.edu/entlab/>

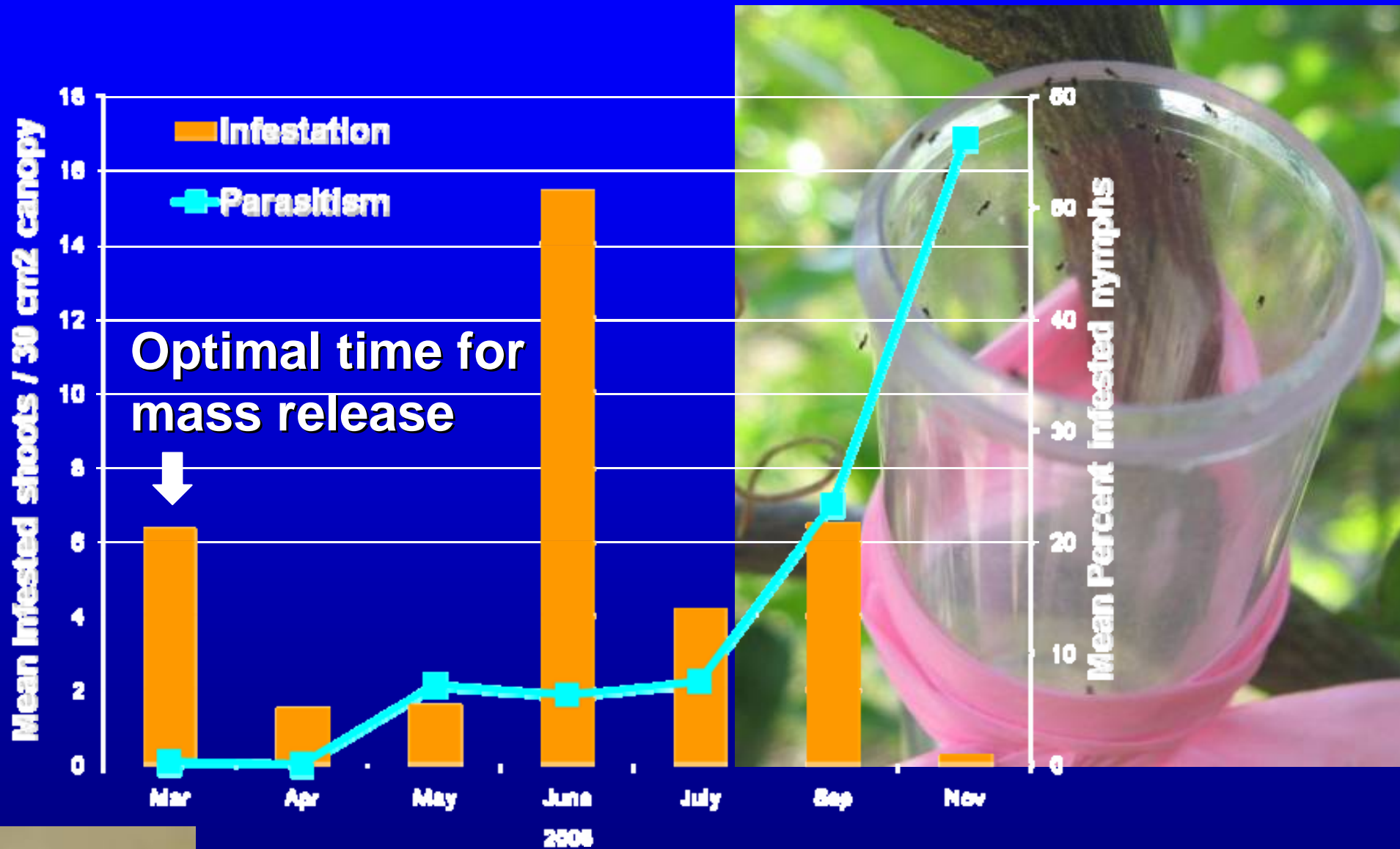


- Tap Sample
10 trees per stop



- Visual inspection
10 flush per stop

Incidence of ACP Infestation and Parasitism by *Tamarixia radiata* in Central and SW Regions of Florida 2006



Area-Wide Integrated HLB Management

- **Dormant Sprays : Just a start!**
- **Knowledge based**
 - **HLB Infection level**
 - **Real-time psyllid data**
 - **Grower programs/preferences**
 - **Threshold based recommendations**
Tailored to grove and block
 - **Biological control, Flush management**
- **HLB is providing an opportunity to upgrade technology**