

Foliage Pests of Pecan

Will Hudson

Extension Entomologist

Objective : Protecting Pecan Foliage



- Budbreak to Harvest is 8 months
- Pecan foliage has to be conserved and protected from insects and diseases to produce photosynthate for next season's crop and to reduce the amplitude of alternate bearing cycle

Foliage Pests

■ Aphids

- Yellow Pecan Aphid
- Black-margined Pecan Aphid
- Black Pecan Aphid

■ Mites

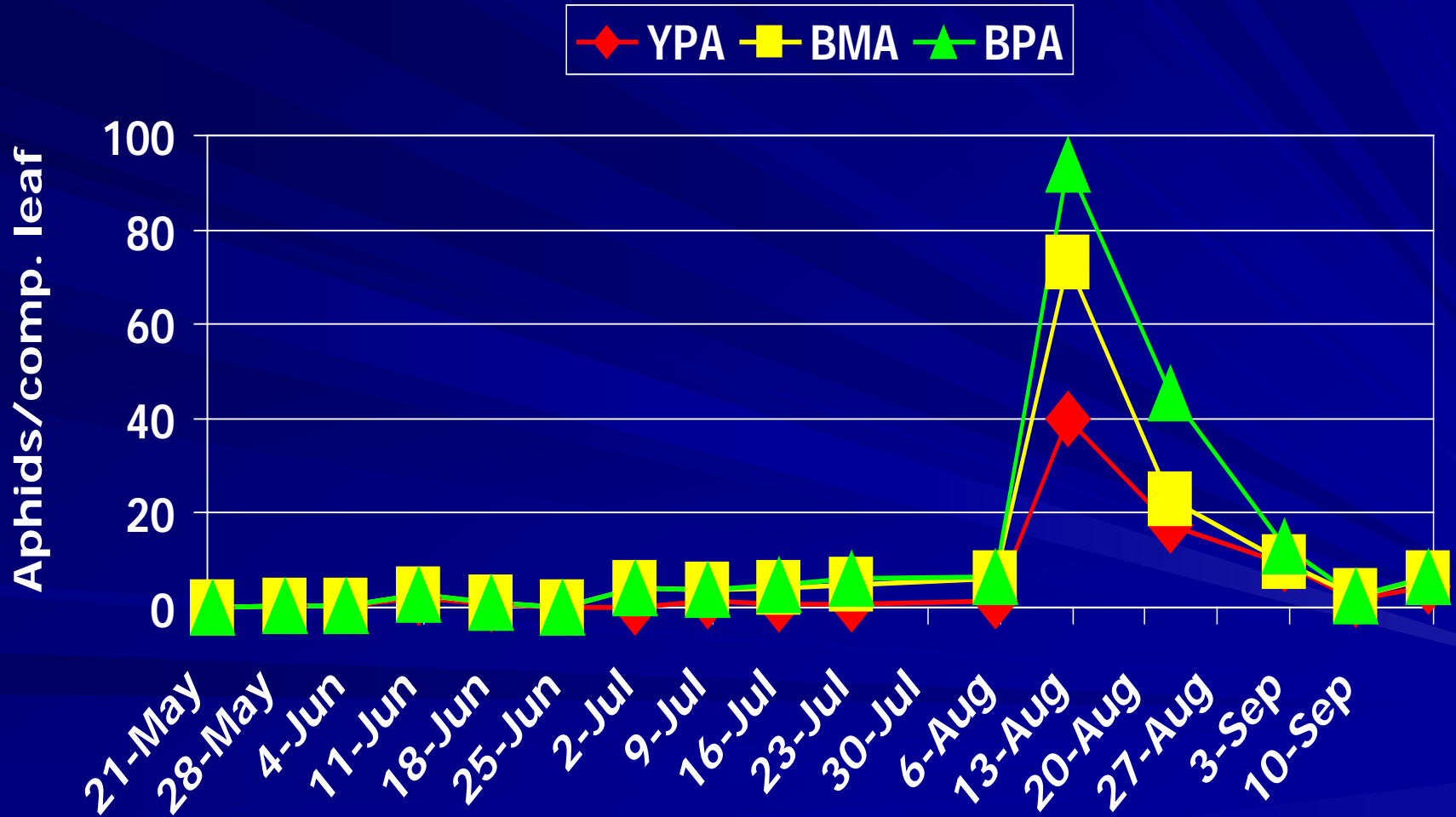
■ Phylloxerans

■ Caterpillars

Aphids

- Short life cycle and high reproductive potential result in explosive population growth in favorable conditions
- Lots of natural enemies, so biological control can be effective
- Scouting is critical
- Both systemic and contact insecticides are used

Aphid Abundance by Date in Untreated Trees



Predicting Aphid Outbreaks

Population Growth - Days to Double

	June	July	August	Sept.	Oct.
aphid	28 C	27 C	28 C	27 C	23 C
BMA	1.8	1.6	1.7	1.8	2.1
YPA	2.1	2.0	2.0	2.0	2.4
BPA	2.9	2.7	2.7	2.8	3.4

Kaakeh and Dutcher. 1992. Environ. Entomol. 21: 632-9.

Scouting for Aphids

- Orchards should be scouted weekly
- Examine a “random” sample of terminals from trees throughout the orchard
- Know how to identify the aphids
- Recognize beneficials
- Know your trees and orchard history
- Keep up!

Yellow Pecan Aphid

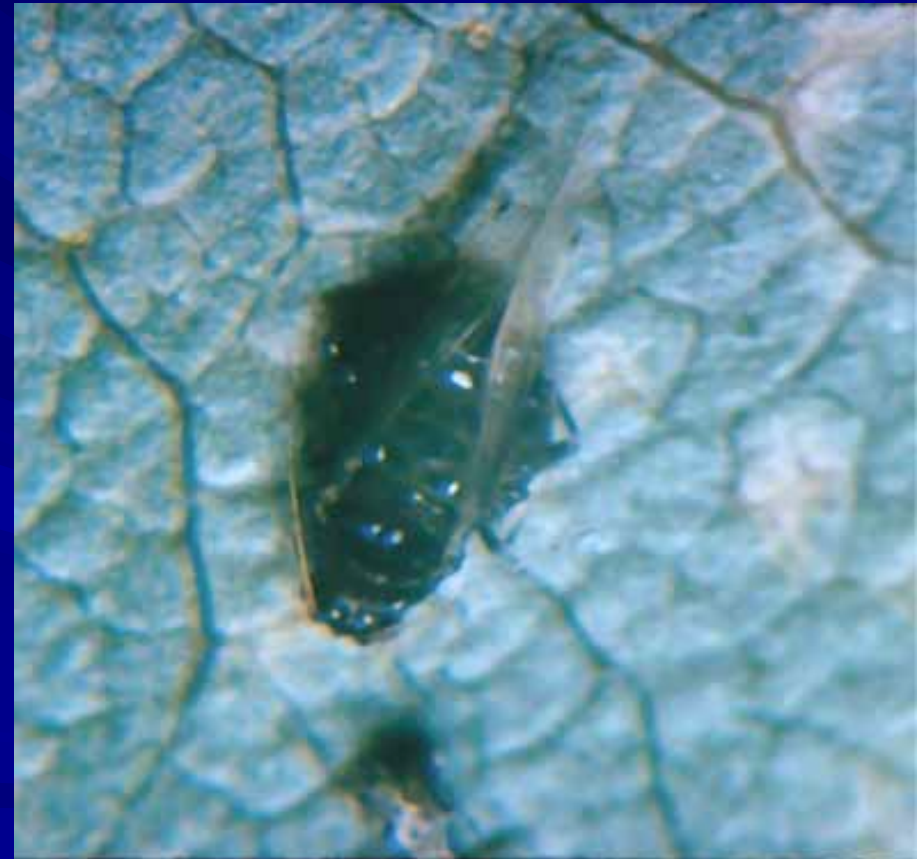
- May be found any time during the season
- Winged adults are not always present
- Populations usually peak in late summer
- “Threshold” is 20 per compound leaf





Black Pecan Aphid

- Populations usually peak in late season
- Some varieties are very susceptible to damage
- Feeding causes chlorosis and leaflets drop prematurely
- Threshold is 15% of terminals with >1







Lady Beetles



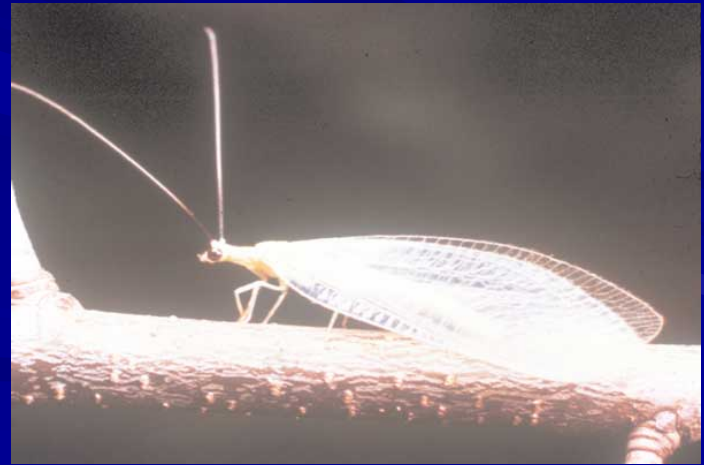




LADY BEETLE PUPA



Lacewings



Green Lacewing Eggs



BROWN LACEWING



BROWN LACEWING LARVA



LACEWING CAMOUFLAGE



SYRPHID FLY ADULT AND LARVA



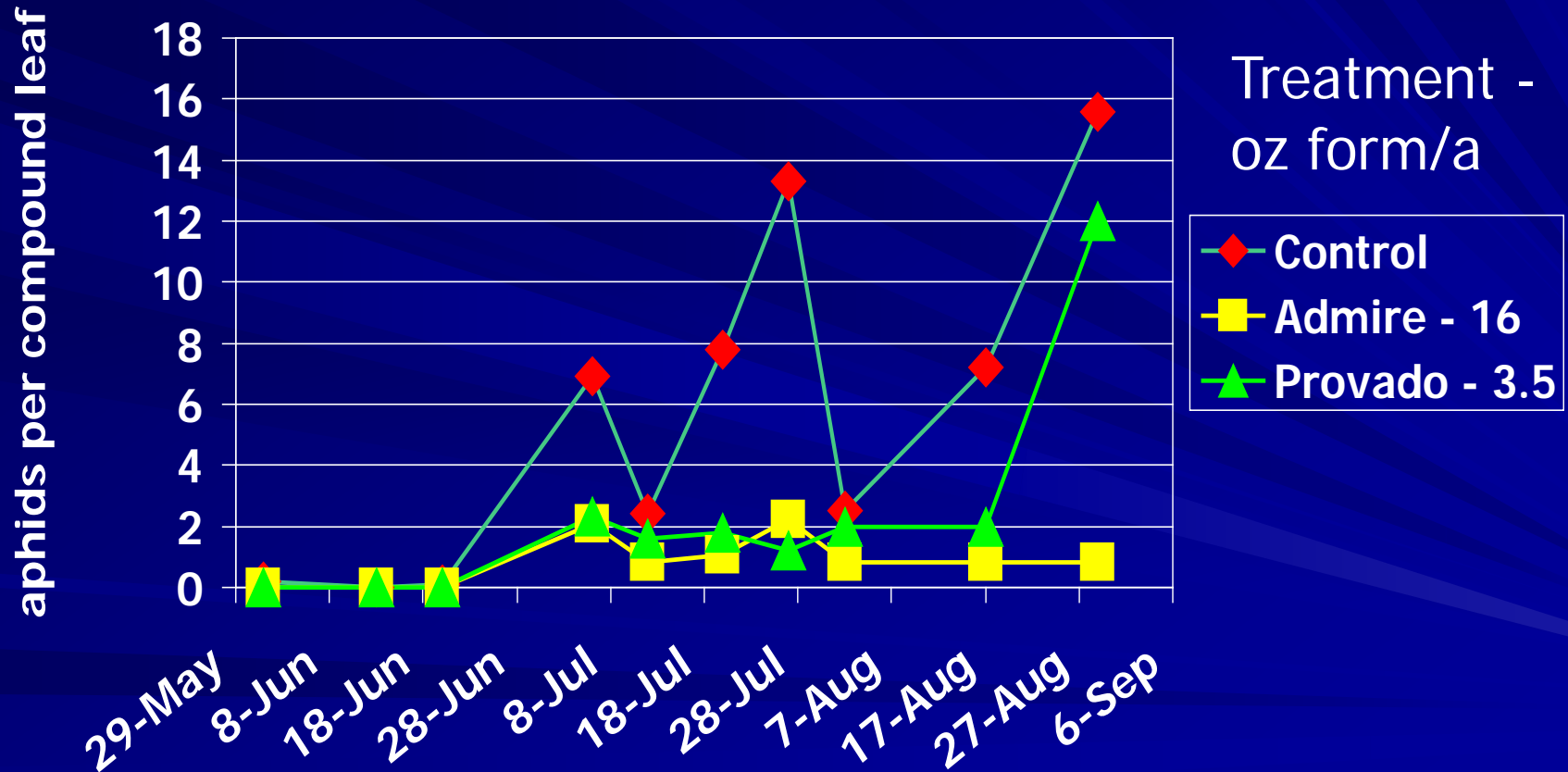
Pecan Aphid Chemical Control

- Soil Treatment – Season-long chemical control is effective with application of systemic insecticide – Temik or Admire
- Foliage Treatment - Reliance on beneficial insects for control through early August and foliage application of Dimethoate, Fulfill, Centric, Provado + Lorsban, etc. from then until October

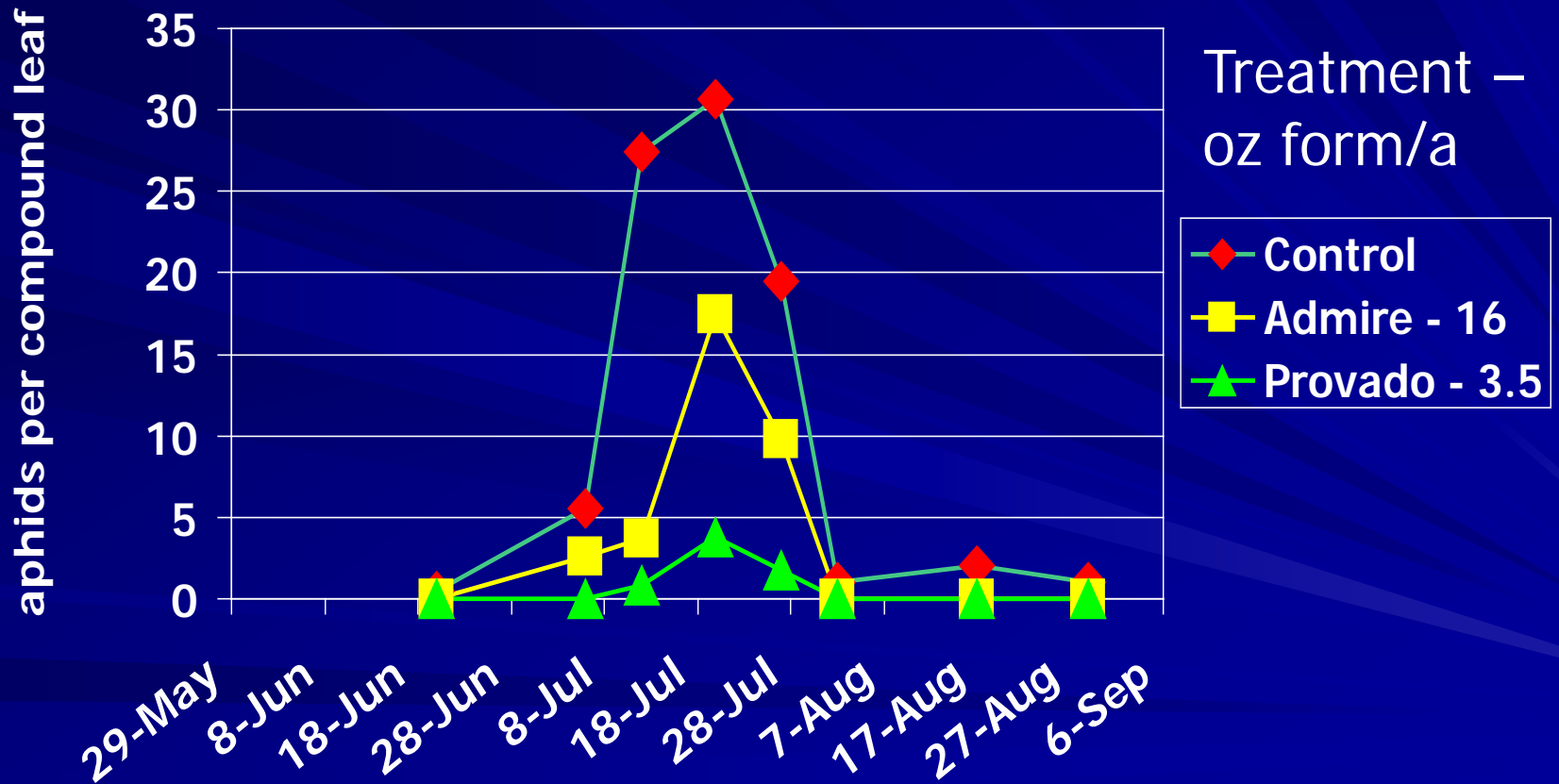
Insecticide Application Methods



Black-margined Aphid Abundance in Insecticide-Treated and Untreated Trees



Black Pecan Aphid Abundance in Insecticide-Treated and Untreated Trees



To Treat or Not To Treat

- What aphid?
- What else is there?
 - Beneficials
 - Other pests
- Weather conditions
- Cultivar
- Time of the season

Pecan Leaf Scorch Mite

- Feeding causes “scorching” effect on leaves
- Mites are usually found on underside of leaflet
- Infestations often start low in the center of the tree
- Symptoms look like some diseases
- Dicofol, Vendex, Temik provide control





Photo by HC Ellis



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Caterpillars

- Most foliage feeders are minor in importance
- Usually infest only a few trees
- Many insecticidal options are labeled
- Sprays for other insects usually get these also

Walnut Caterpillar



Fall Webworm



Phylloxera

- Two types – stem and leaf
- “Sucking bugs”, related to aphids
- One generation per year
- Once the galls form, control is difficult
- Treat at bud-break, or go systemic

Leaf Phylloxera



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Stem Phylloxera



Extension Programs

- Annual spray guide
- Scout school odd years
- Field day Sep 8
- Telephone hotline and direct line
 - 1-800-851-2847
- Websites and handbook
 - <http://sacs.cpes.peachnet.edu/pecan/>
- Grower association meetings
 - GPGA annual meeting May 5 in Perry