
Sugarcane Aphid

What are sugarcane aphids?

- Soft bodied insects that suck sap from plant tissues and produce honeydew that may hamper transpiration.

Crops Affected

- Forage Sorghum
- Grain Sorghum
- Sorghum Sudan
- Sudangrass
- Johnsongrass


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How does this affect the plant?

- Reduced sugars
- Black sooty material
- Reduced yield
- Complete destruction of the crop


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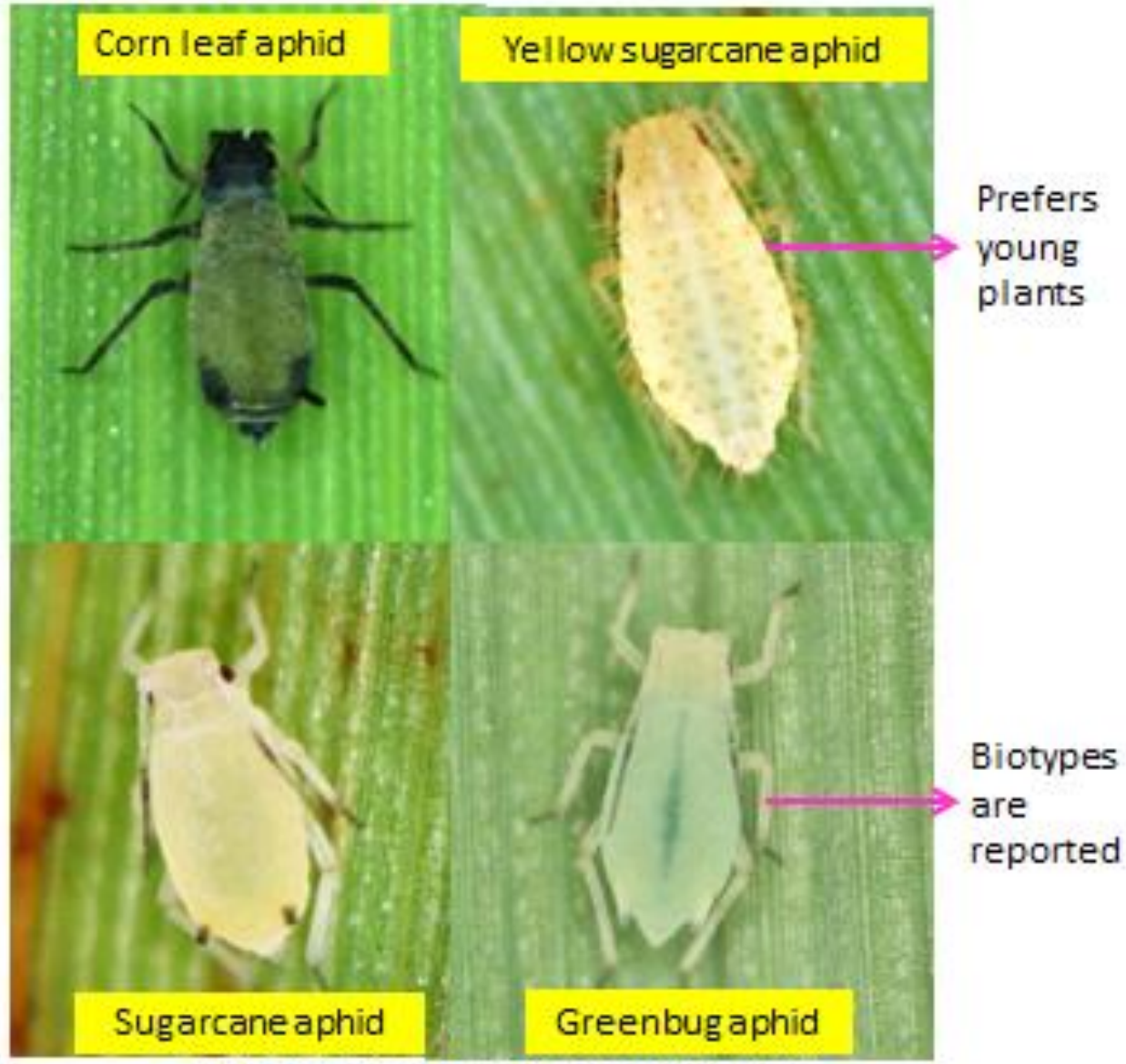
Identifying the Aphid

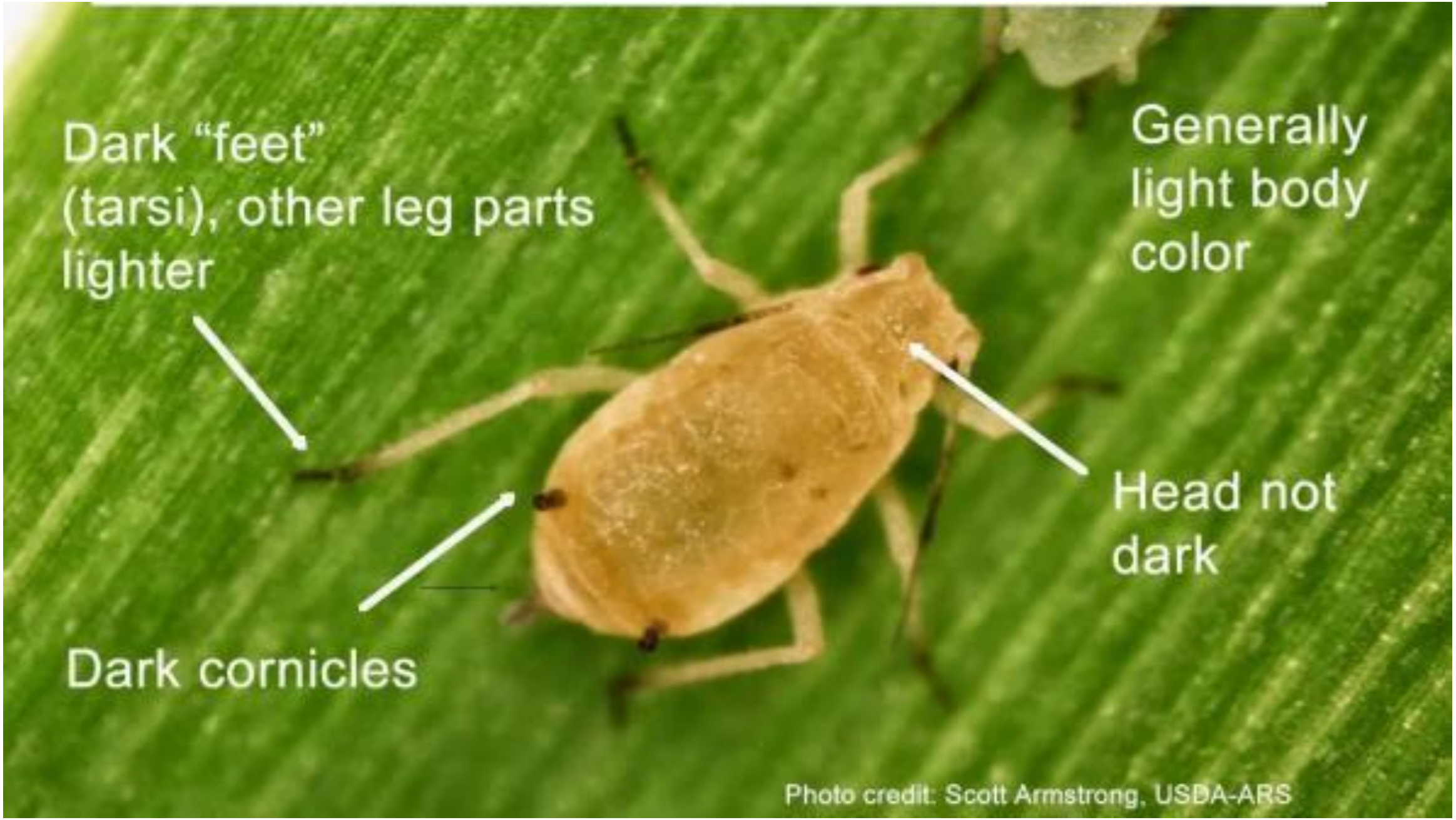
White vs. Yellow Aphid

Wingless sugarcane aphid specimens observed in 2013 and 2014 were light yellow to gray. They have dark cornicles (paired tail-pipe like structures on the rear of the abdomen) and tarsi (insect feet) that contrast with the remainder of the body. Most other commonly occurring aphids in sorghum have clear cornicles and tarsi .These morphological features are more easily viewed with a hand lens or other magnification source. Sugarcane aphids can be distinguished from green bugs by the absence of a dark line that appears on the back of green bugs. Yellow sugarcane aphids can be differentiated from these newest pests by the presence of numerous hairs covering the entirety of the body of yellow sugarcane aphids (magnification source often needed). Corn leaf aphids possess a dark head and legs that are easily discernable from sugarcane aphids.

Other aphids species pests of sorghum



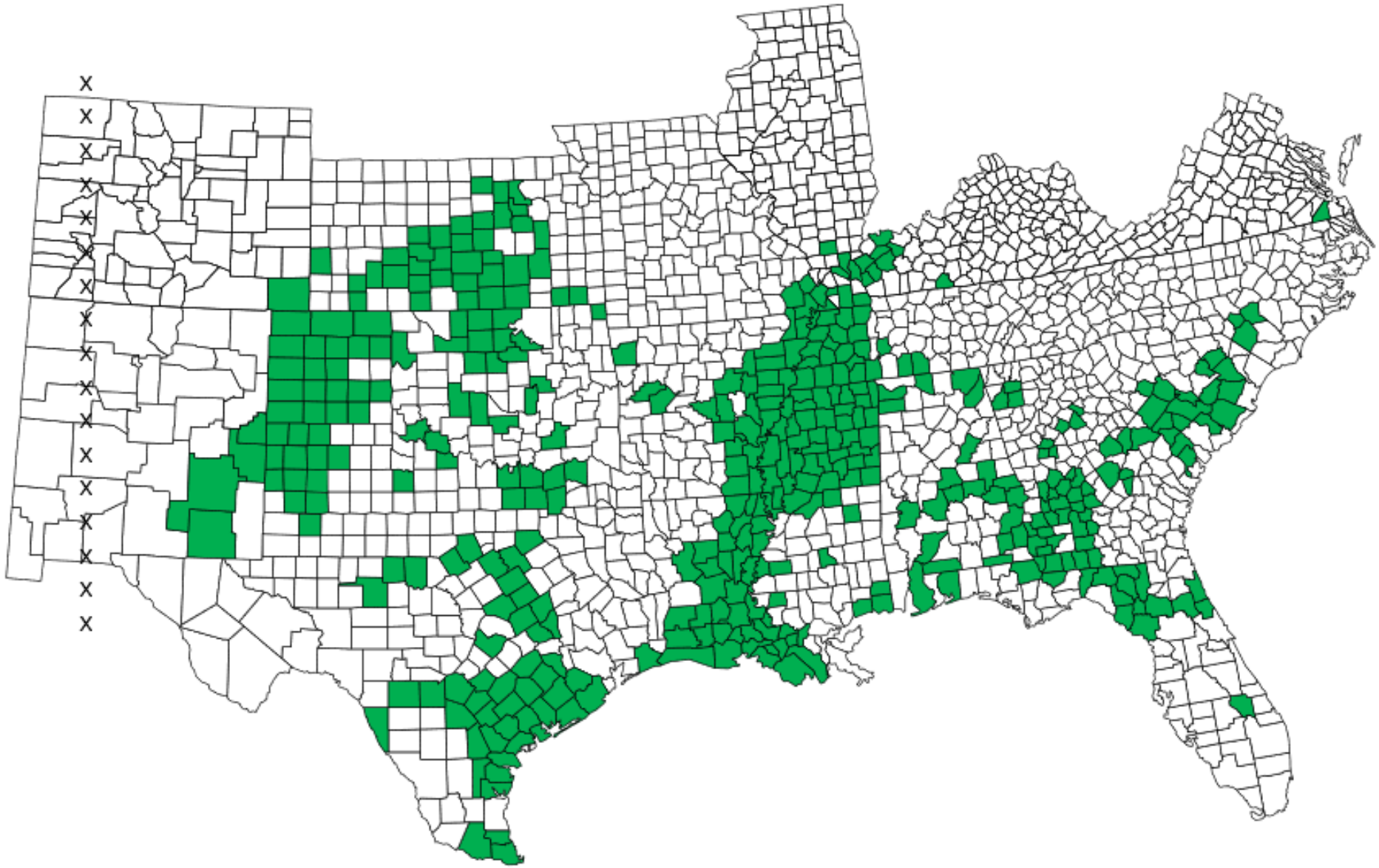
Slide by: R.T. Villanueva and D. Sekula


Dark "feet" (tarsi), other leg parts lighter
Generally light body color
Head not dark
Dark cornicles
Photo credit: Scott Armstrong, USDA-ARS

TEXAS A&M AGRILIFE EXTENSION

2015 Sugarcane Aphid, *Melanaphis sacchari*, Occurrence on Sorghum
September 18, 2015

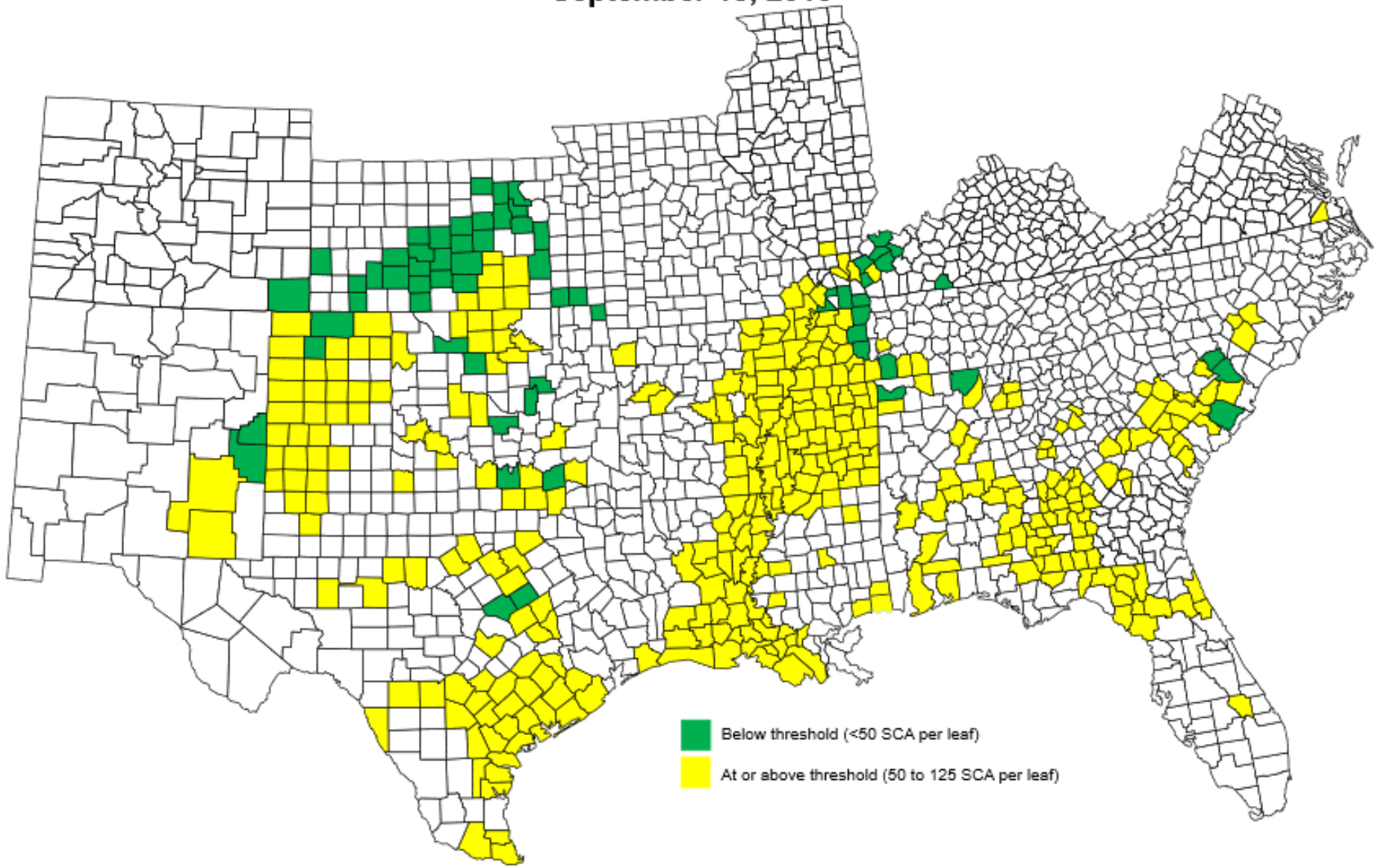
TEXAS A&M AGRILIFE RESEARCH



TEXAS A&M AGRILIFE EXTENSION

TEXAS A&M AGRILIFE RESEARCH

2015 Sugarcane Aphid, *Melanaphis sacchari*, Occurrence on Sorghum and Johnsongrass September 18, 2015



How can they spread so fast?

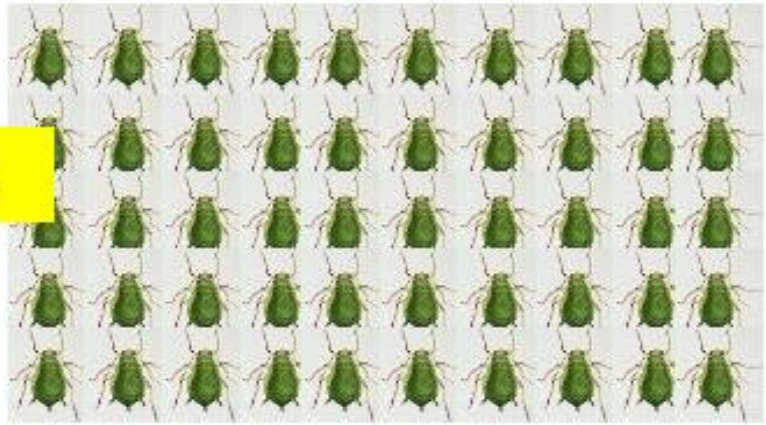
- They reproduce asexually
- Birth live young
- Short maturity cycle

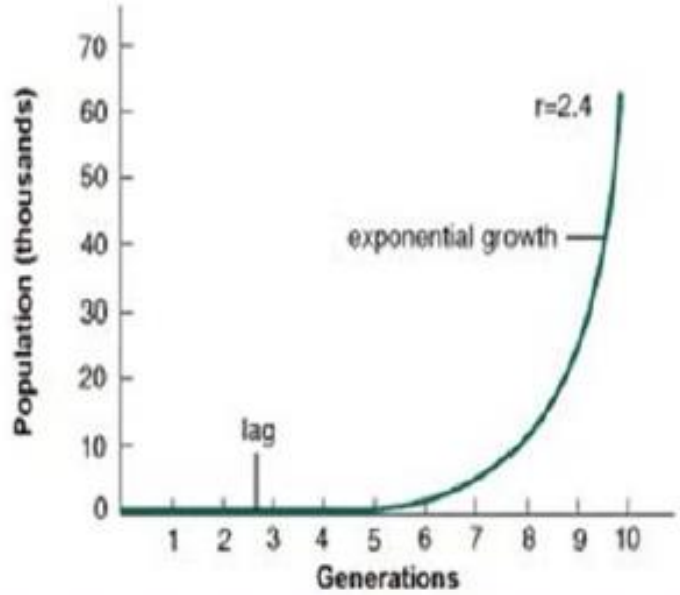
Exponential growth of populations

Foundress

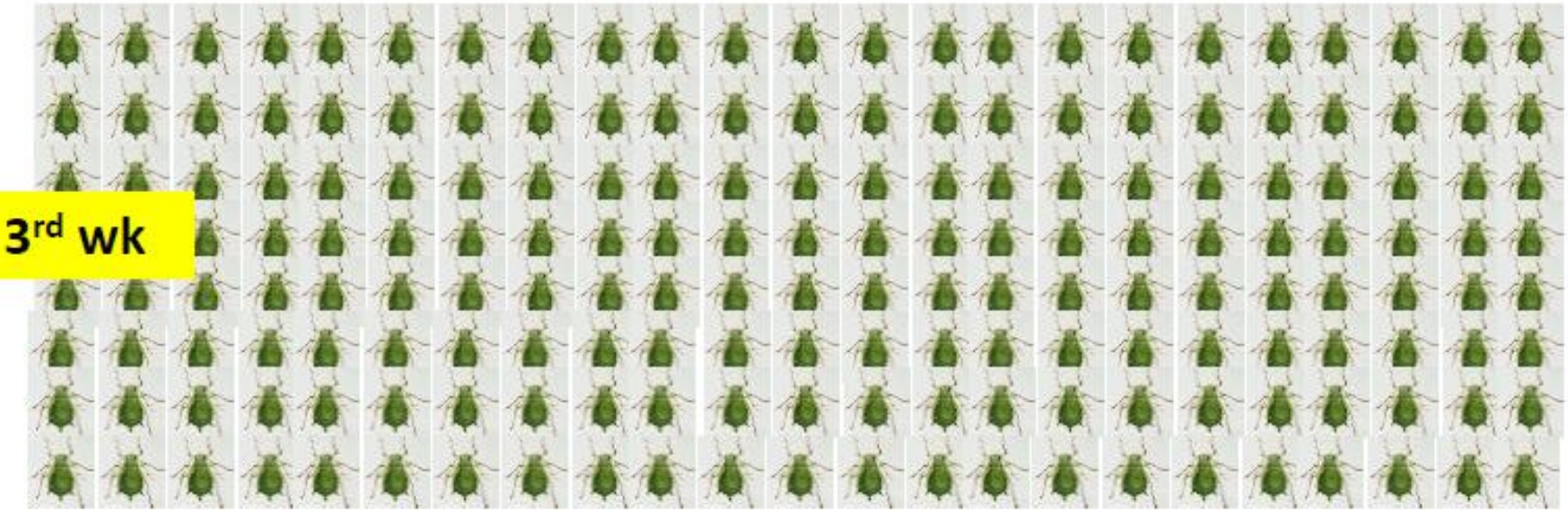
1st wk

2rd wk





3rd wk



Treatment Threshhold

Treat when 30% of the plants have at least 1 aphid with the average running 100-250 per leaf. Be more aggressive on water deficit stress fields.

See more at: http://www.mississippi-crops.com/2014/06/26/white-sugarcane-aphid-a-potentially-devastating-pest-of-grain-sorghum/#sthash.dPkYpMZn.dpuf

How are they controlled?

- Natural Predators

- Wasps, lady bugs, etc
- Effectiveness is unknown
- Challenged by the rapid reproduction of aphids.

- Chemical Control

- PYRETHROID INSECTICIDES ARE NOT EFFECTIVE and may flare infestations by killing all the aphid predators. Regardless of the insecticide, rapidly expanding populations are difficult to control.

- Crop Rotation

- There are alternative crops that are available which are not effected by the aphids.

Predatory beetles and flies, and parasitoids (black mummies) have been observed, limiting aphid increase late season

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Courtesy D. Kazmer, USDA ARS

Aphelinus sp.
(to be determined)
J. Woolley et al.

Millet as a Rotational Solution

Newer, leafy, BMR millets provide a great solution for producing higher quality summer annual forages. However, consider the 15% yield disadvantage of millets versus SSX and Sudangrass.

http://sorghumcheckoff.com/pest-management/

http://agrilifeextension.tamu.edu/solutions/sugarcane-aphid/

Questions?