

Aphid and Thrips Management in Desert Lettuce



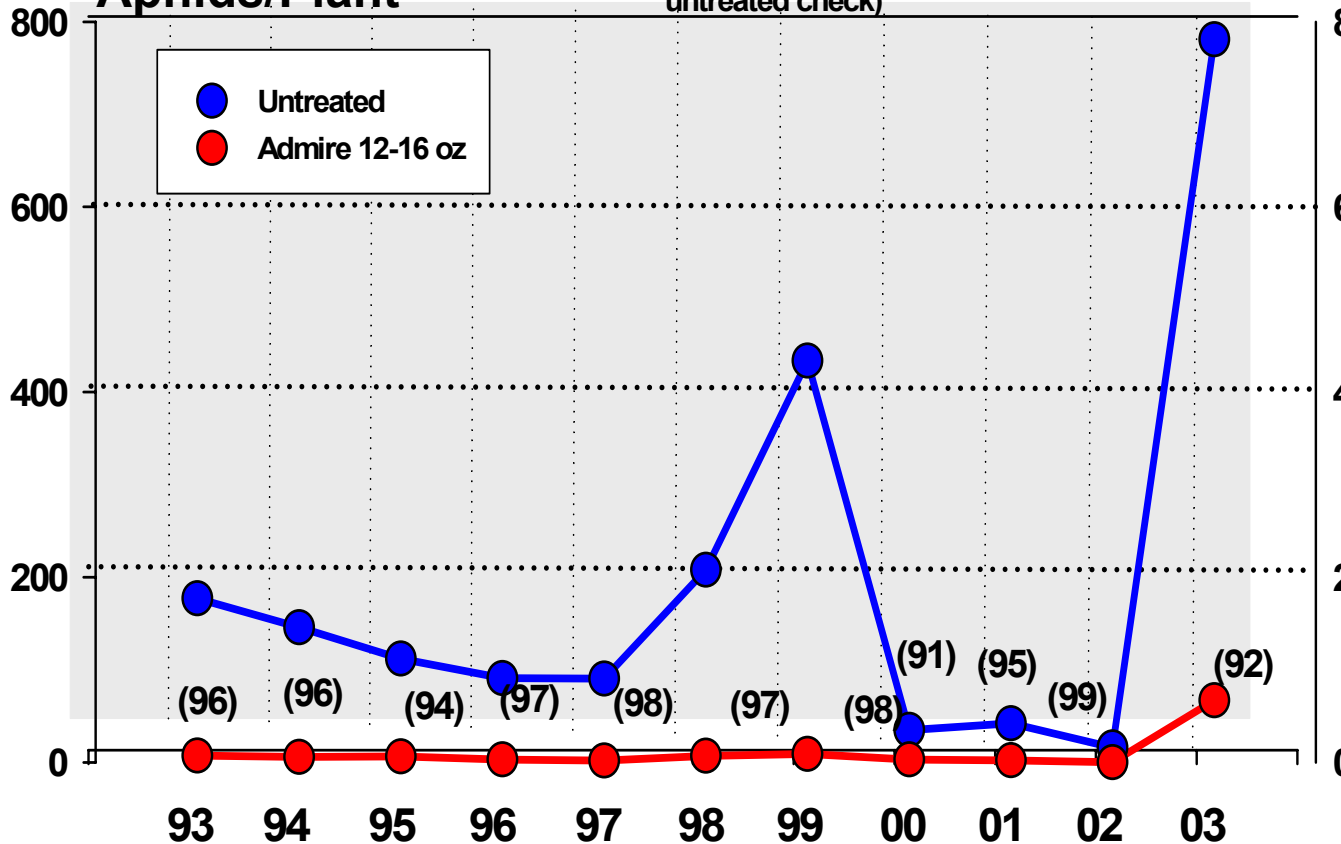
Aphids in the Desert

Total Aphid Complex

Harvest Densities

(% reduction compared with untreated check)

Aphids/Plant



What happened in 2003 ?

Rocky Mountain Aphis, *Aulacorthum solani*





Lettuce Aphid
Nasonovia ribisnigri



Foxglove Aphid
Aulacorthum solani



Green peach Aphid
Myzus persicae



Lettuce Aphid
Nasonovia ribisnigri

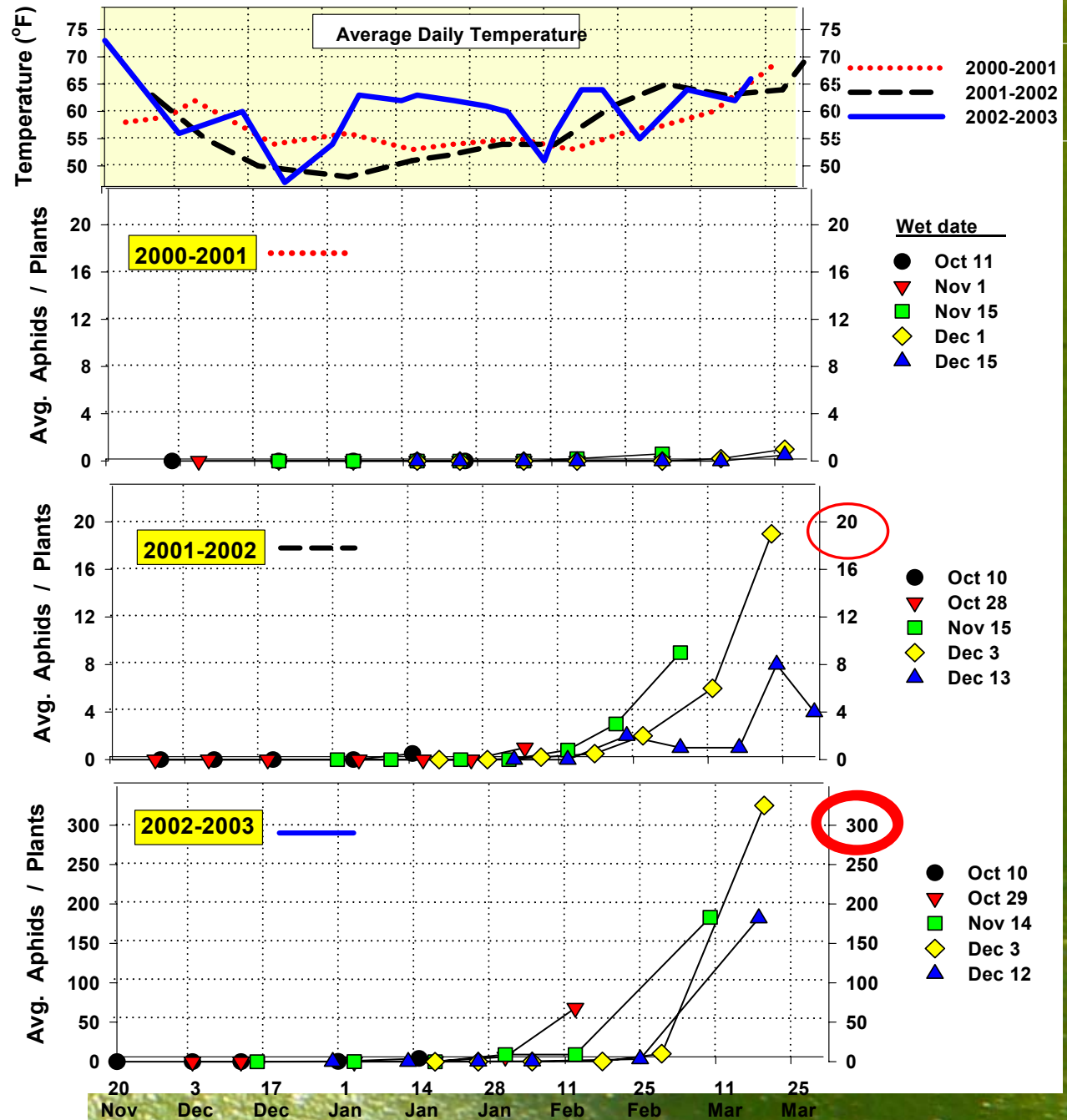


Foxglove Aphid
Aulacorthum solani

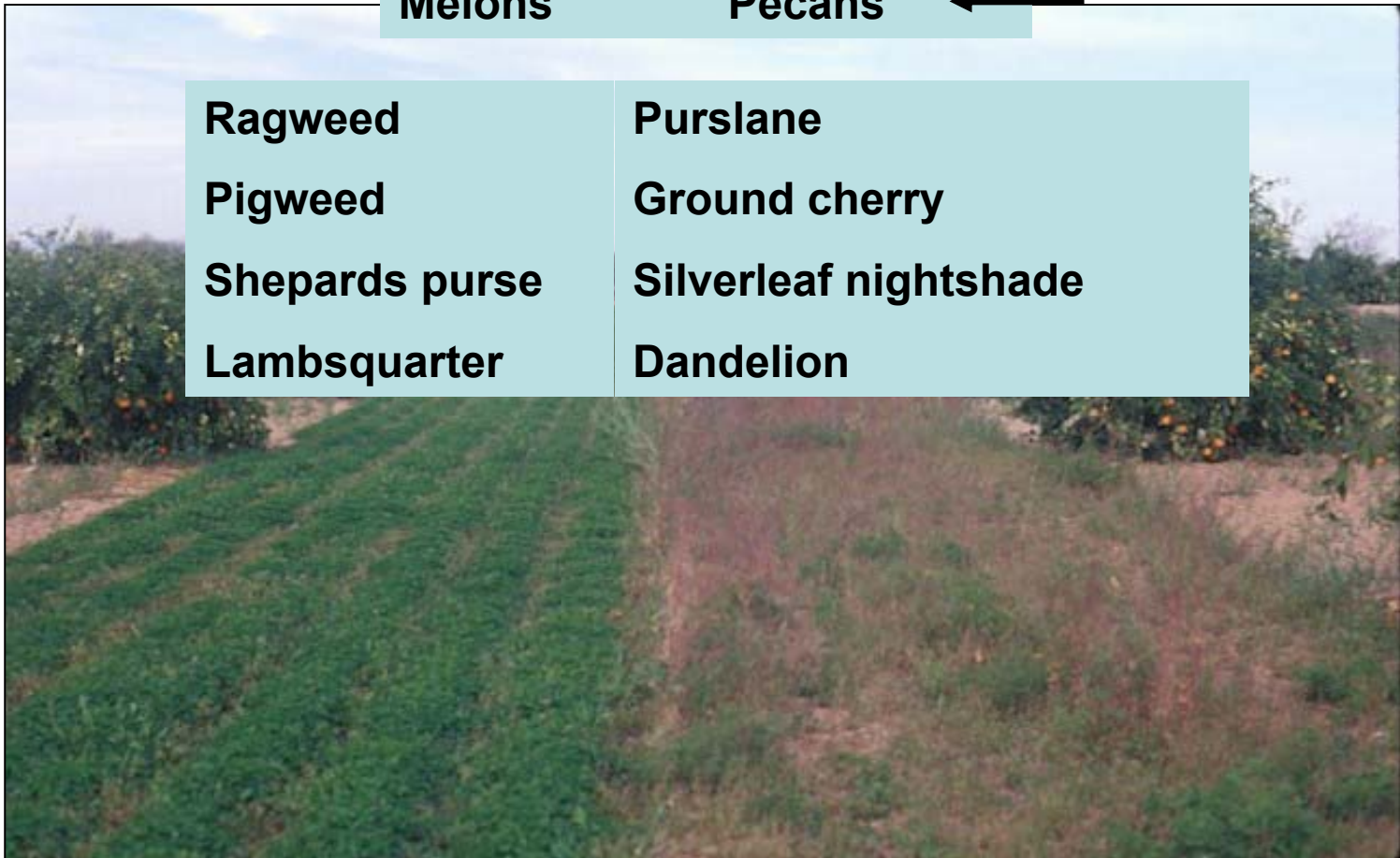


Green peach Aphid
Myzus persicae

Foxglove Aphid in Head Lettuce



Will Foxglove Aphid Continue to be a Desert Pest?



Keys to Economic Aphid Management



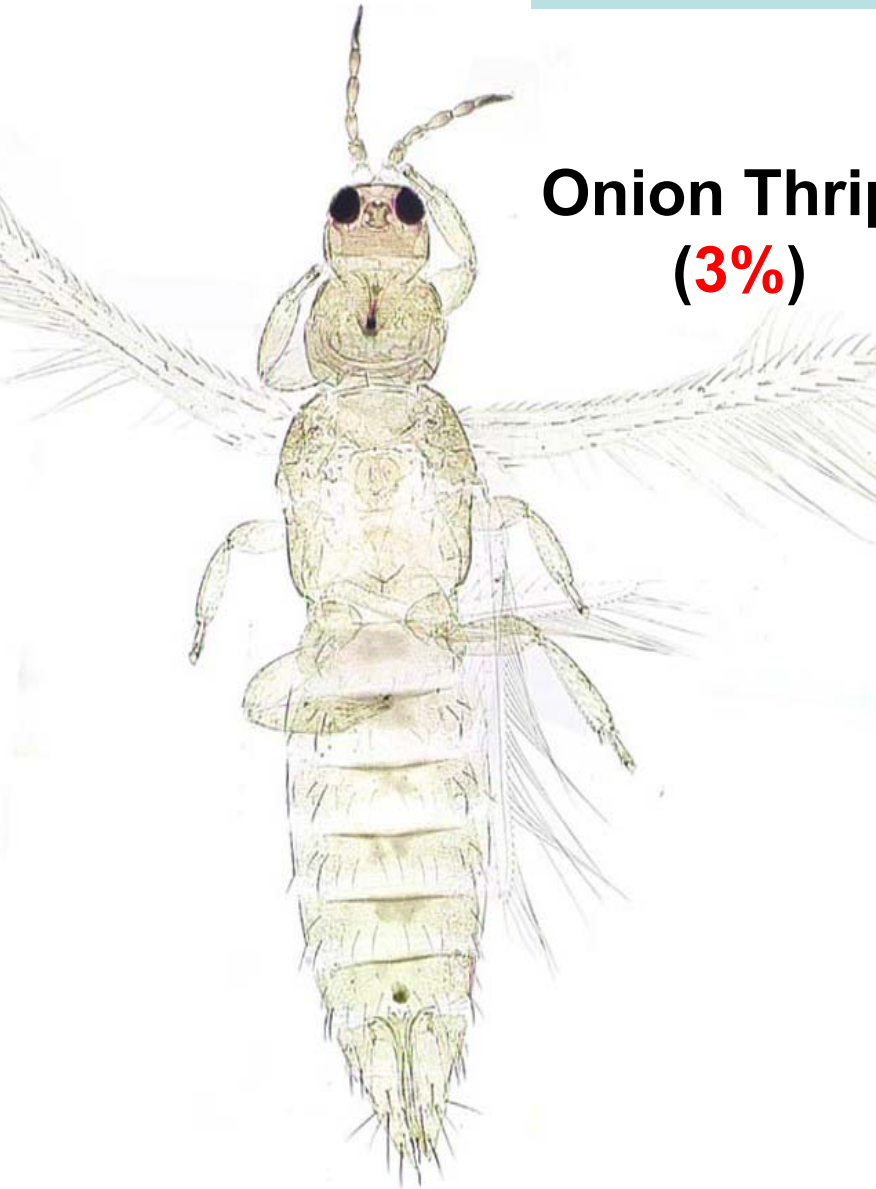
- Early detection of colonization
- Proper ID of species
- Treat when populations begin to colonize plants (1- 5% infestation)
- Use Insecticides at effective rates

Effective Insecticides for Aphid Management

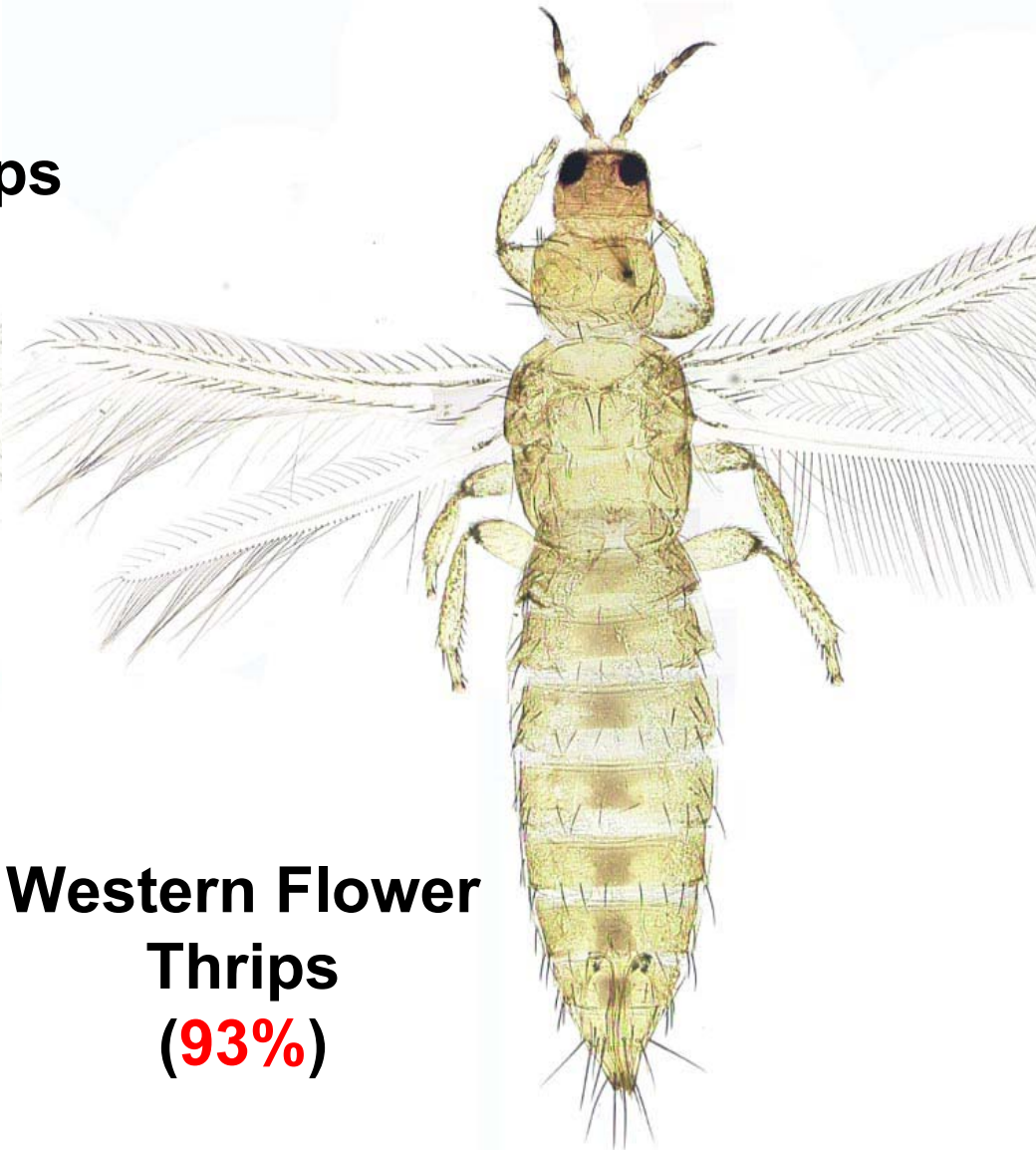
Admire	Season-long *	★★★★
Provado	7-14 d	★★
Endosulfan	7-14 d	★★
Dimethoate	10-14-d	★★★
Orthene	Head lettuce; 21 d PHI	★★★
MSR	Head lettuce; 28 d PHI	★★★★
Fulfill	7-10 d	★★
Assail (CA)	7-14 d residual	★★

* Higher rates in late Nov-Dec plantings for foxglove aphid

Population Dynamics

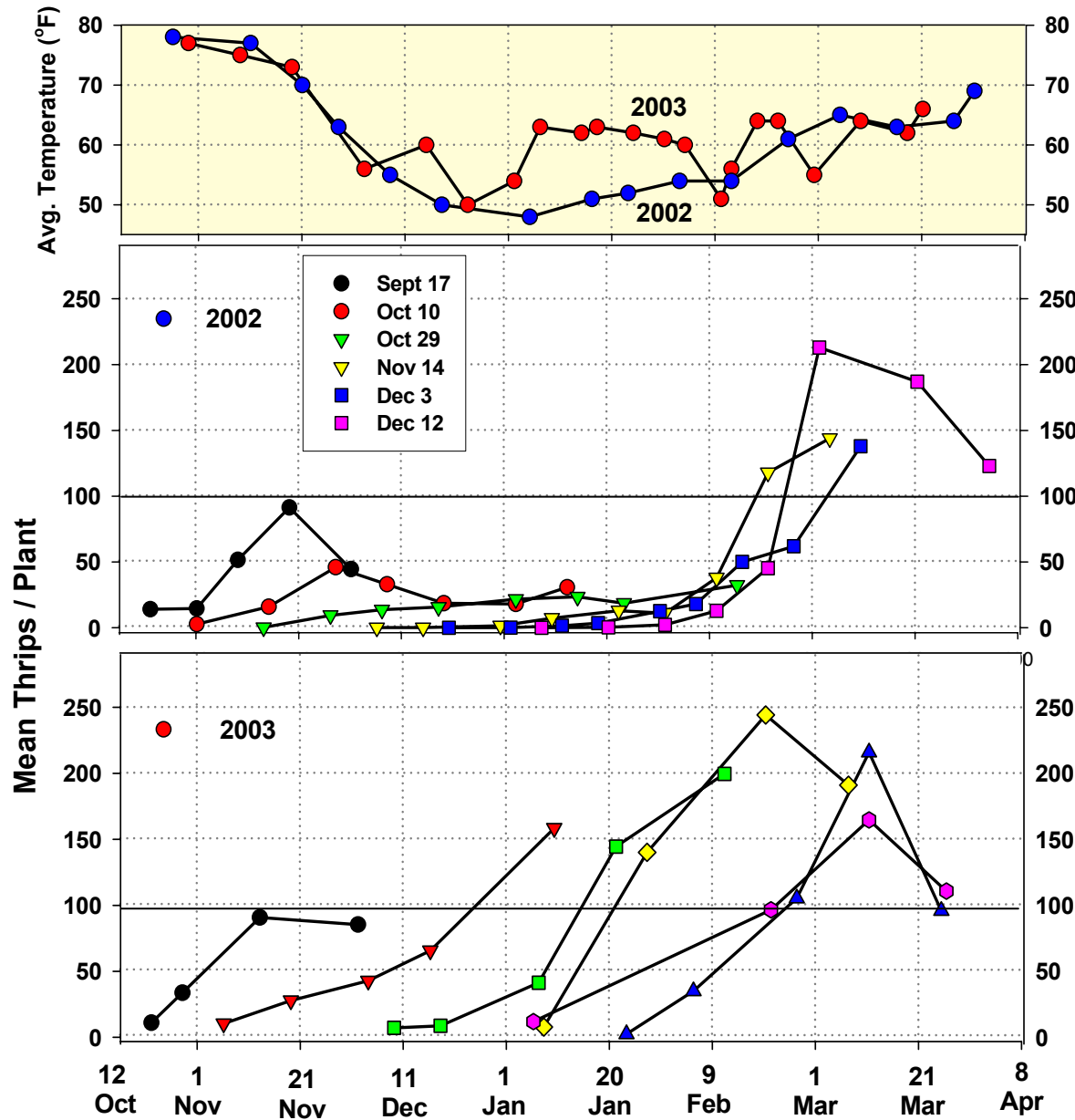


Onion Thrips
(3%)



Western Flower Thrips
(93%)

Thrips Population Dynamics in Head Lettuce





Thrips Sampling

- **Determining presence and abundance**
- **Initiating Control**
- **Evaluating Control**
- **Research**



Direct Visual Counts



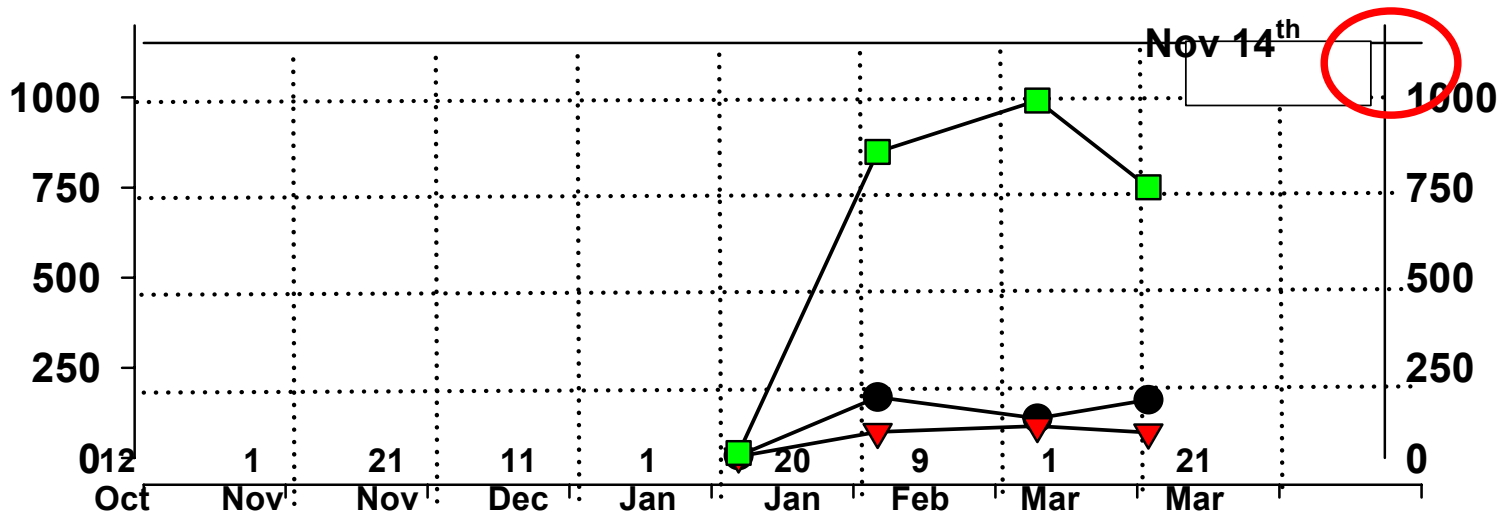
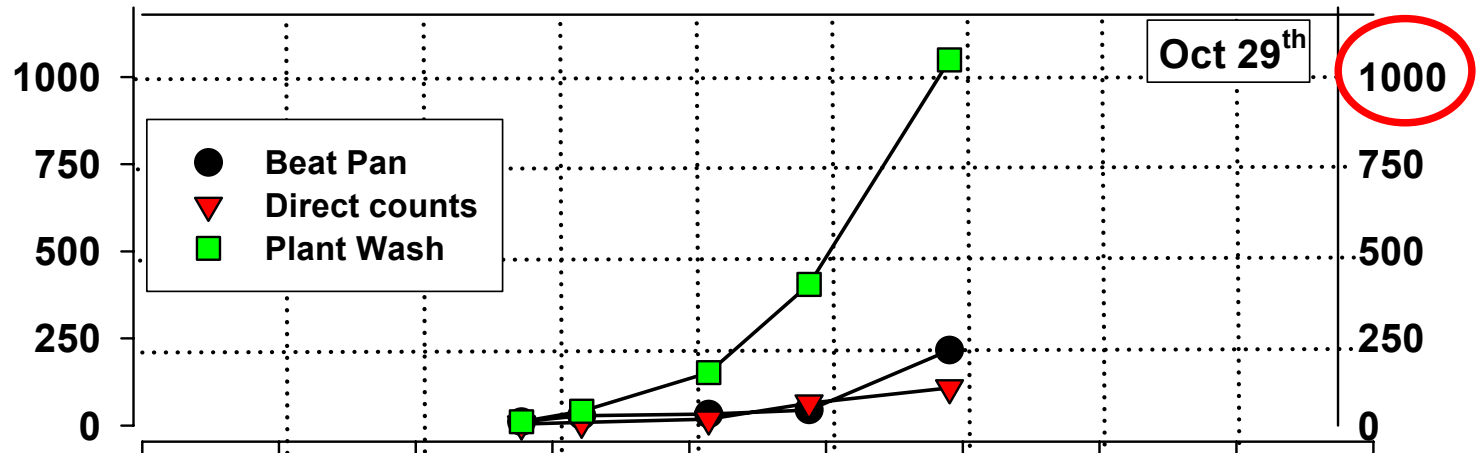
Beat Pan





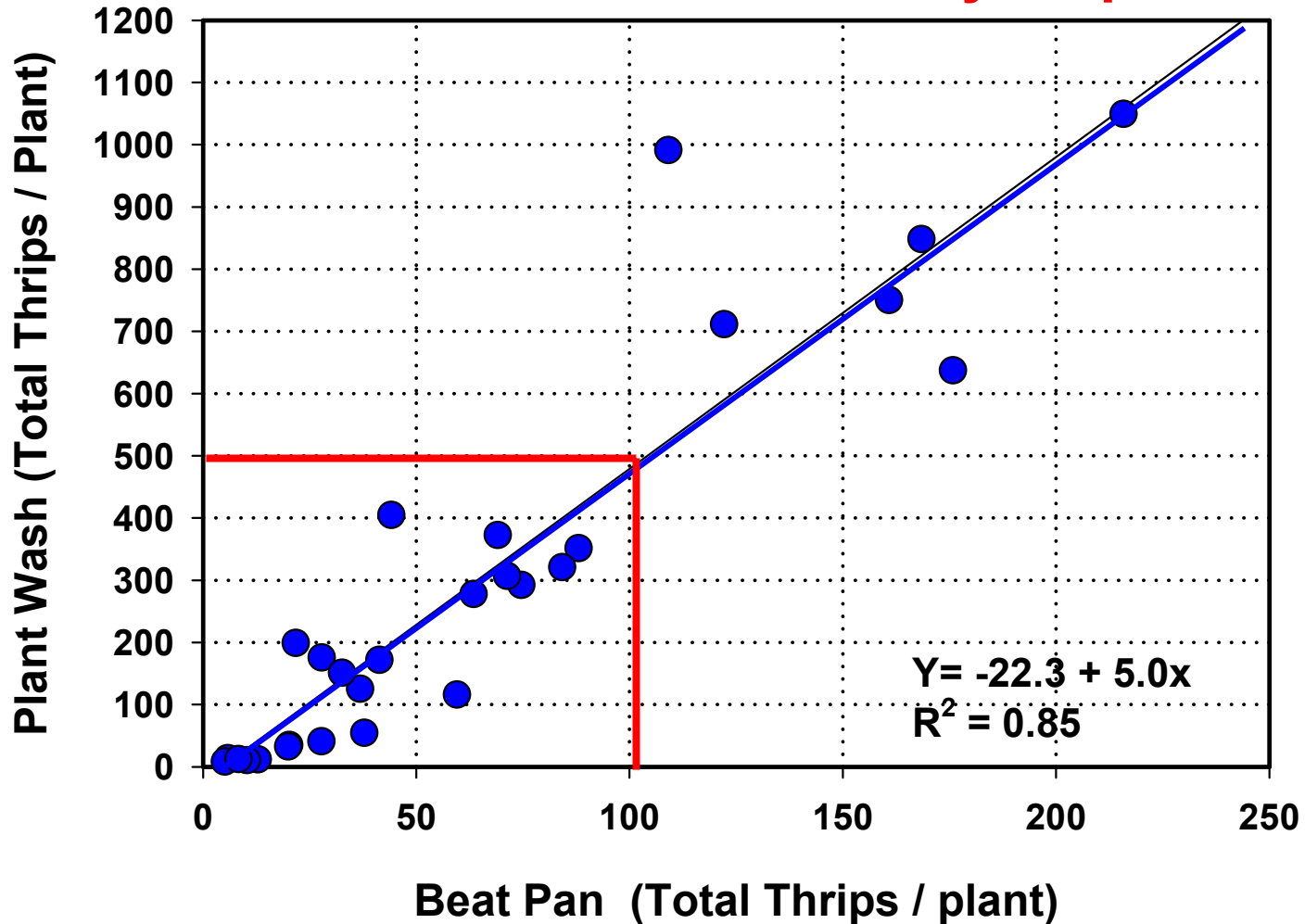


Population Dynamics of Thrips in Head Lettuce 2003



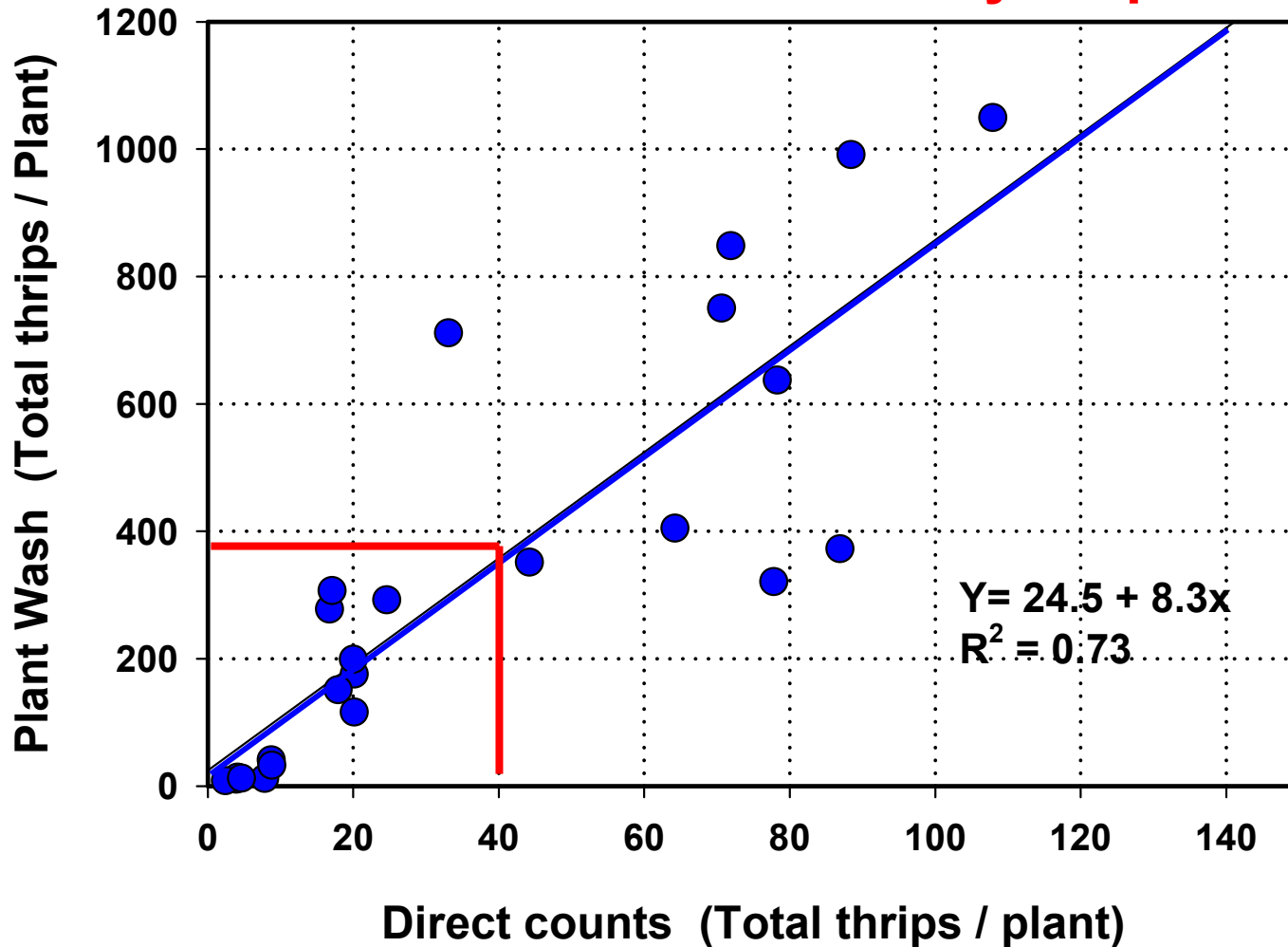
Beat Pan Counts (n=27)

~ 20 % of what was actually on plant

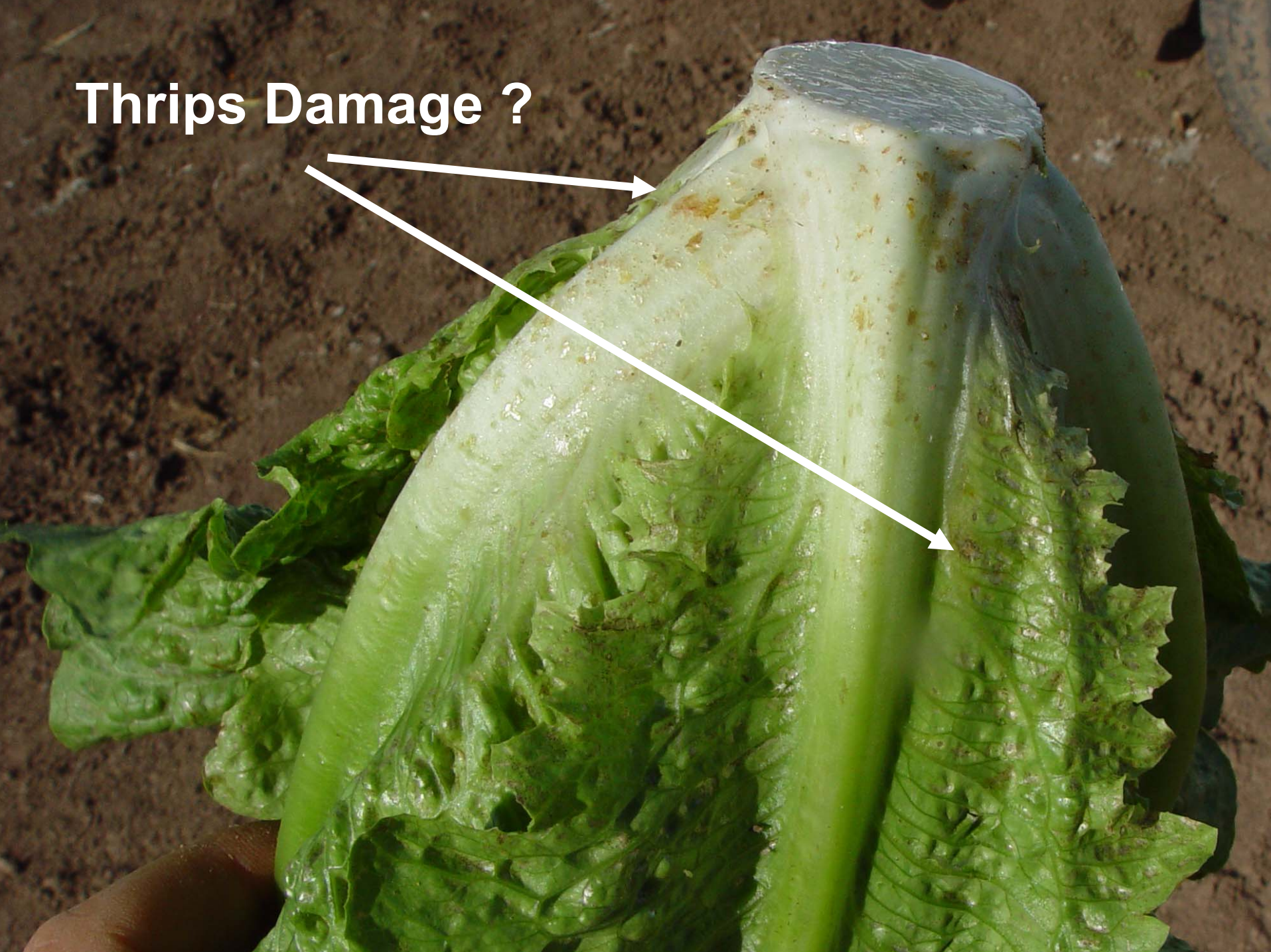
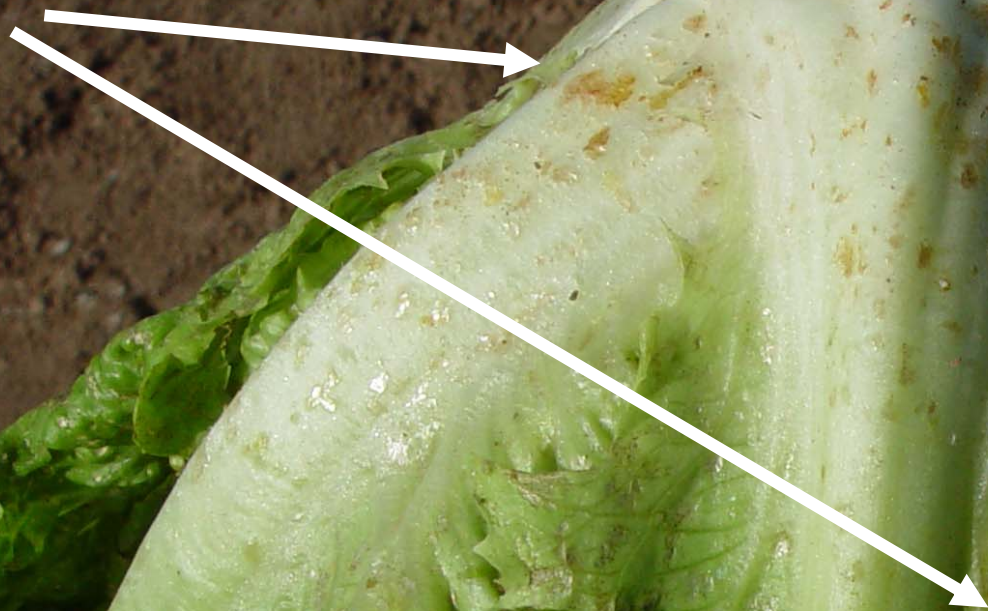


Direct Visual Counts (n=27)

~ 12 % of what was actually on plant

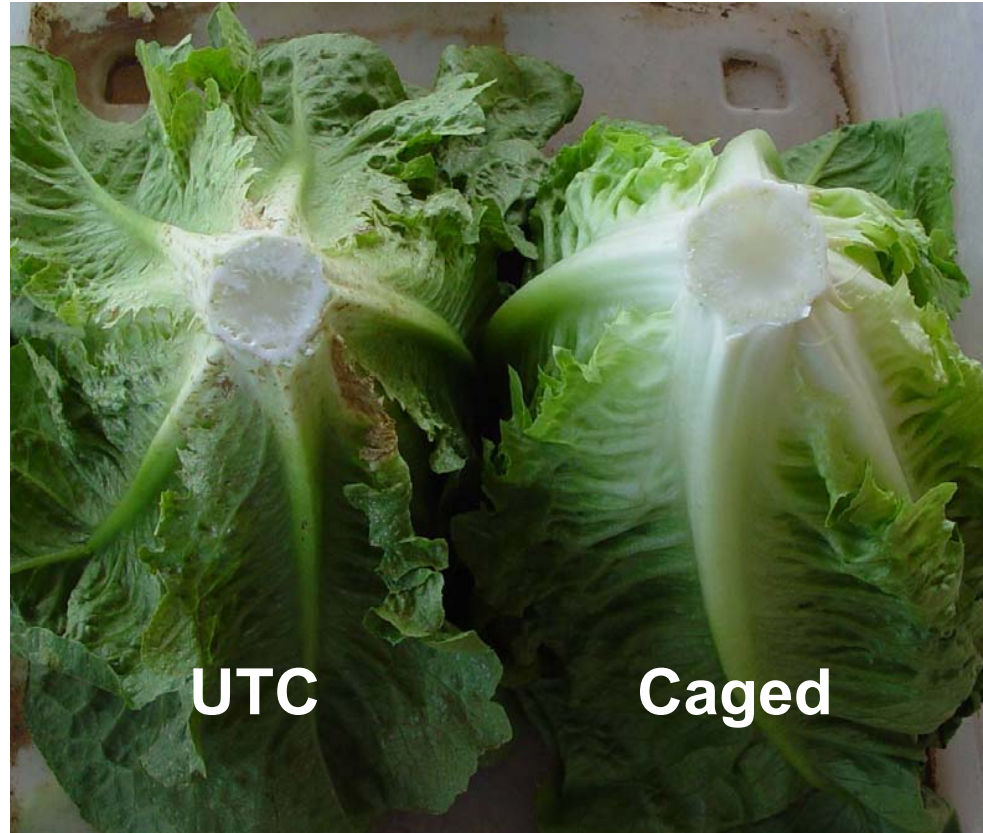


Thrips Damage ?





Thrips Damage on Romaine

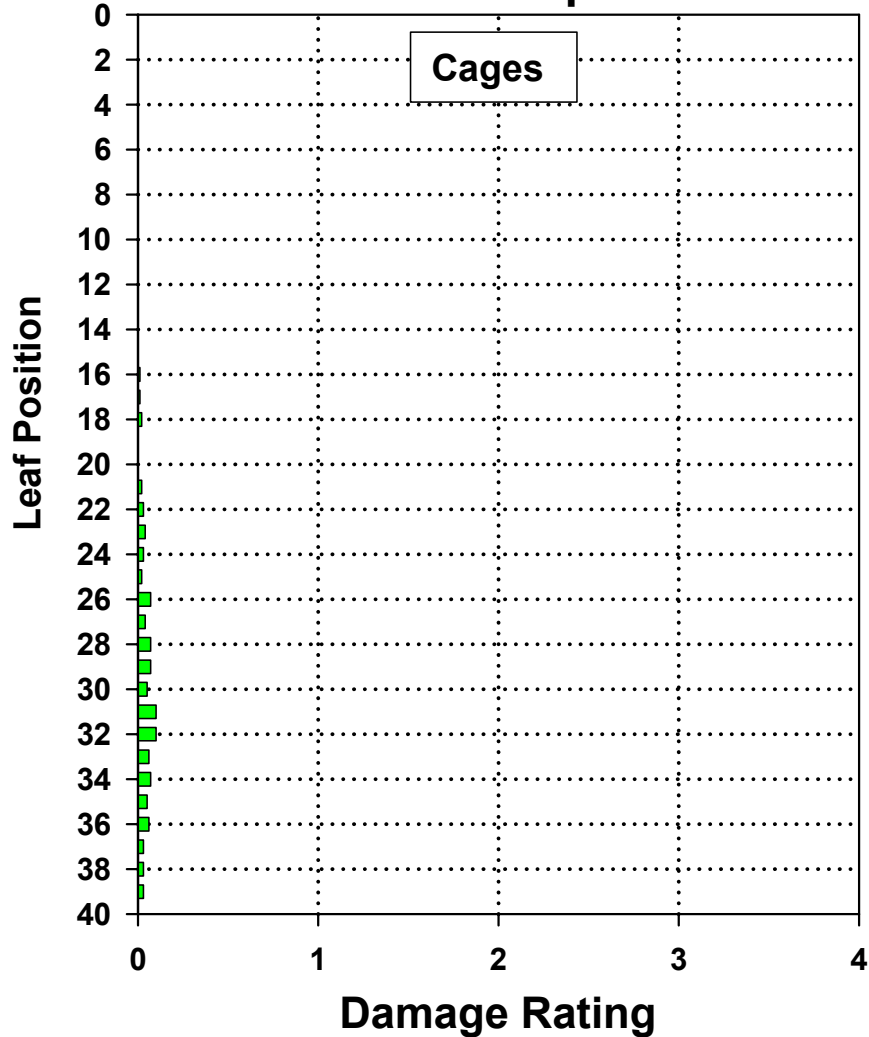


UTC

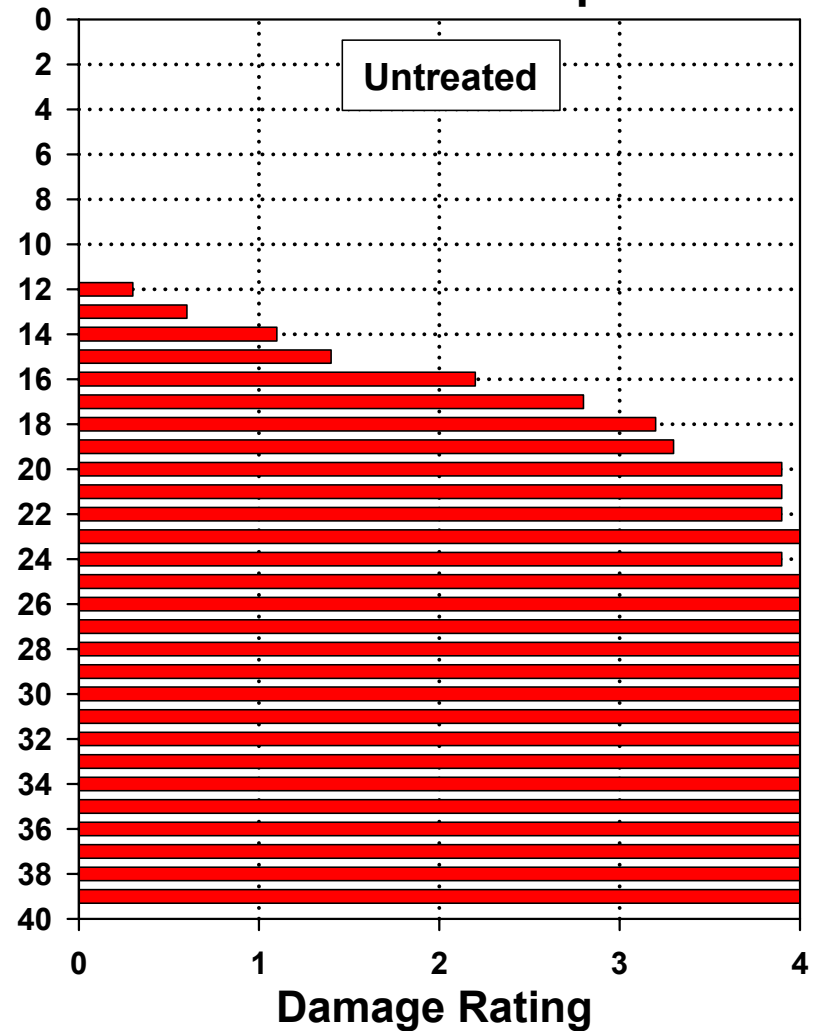
Caged

Thrips Damage 'scarring' in Romaine

17 adults/ plant
42 larvae / plant



231 adults/ plant
1122 larvae / plant



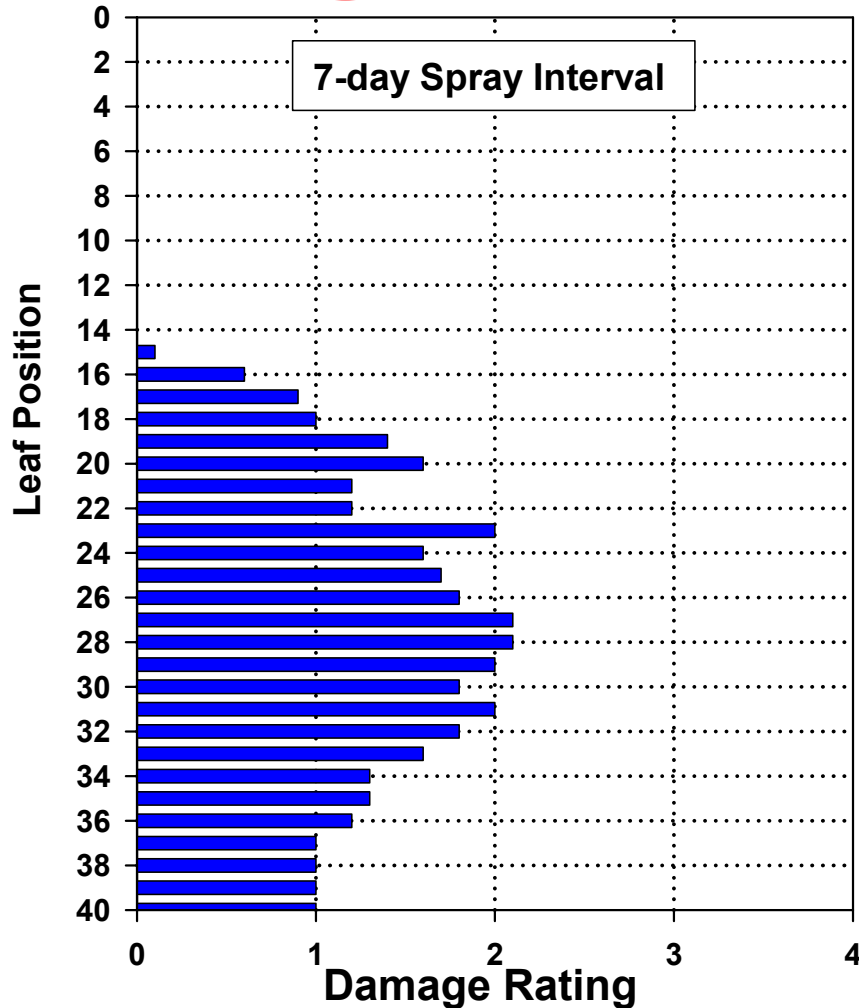


Weekly Sprays

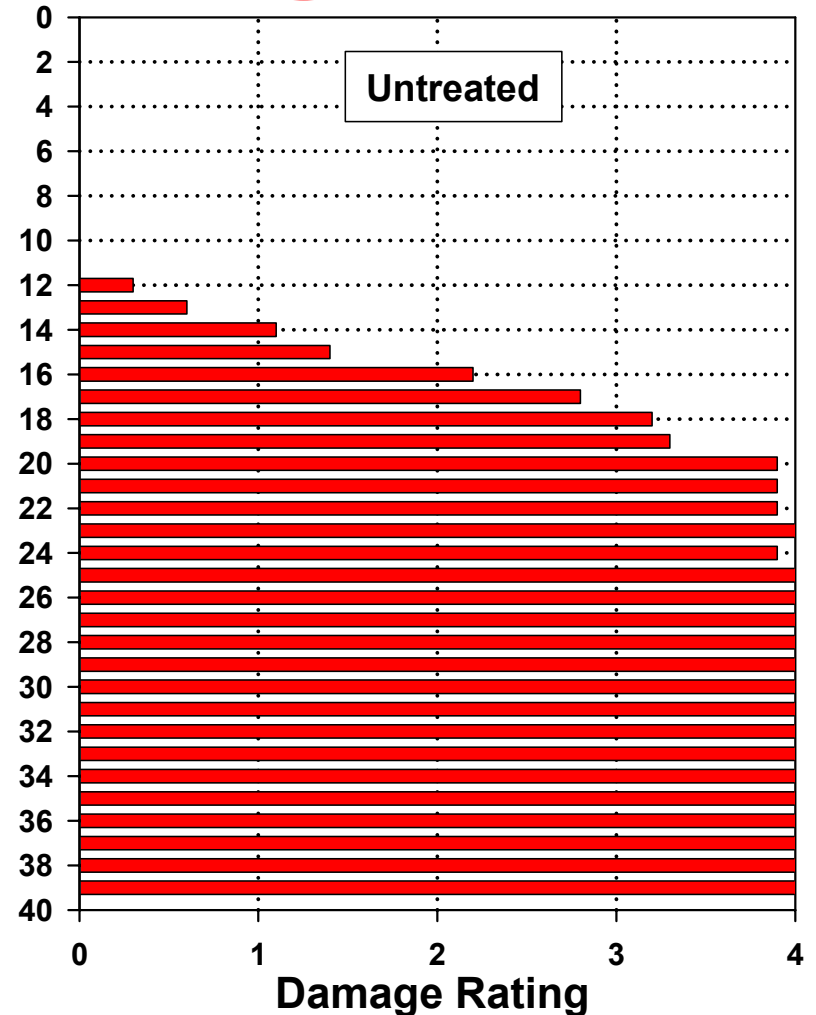
Caged Plants

Thrips Damage 'scarring' in Romaine

203 adults/ plant
390 larvae / plant



231 adults/ plant
1122 larvae / plant

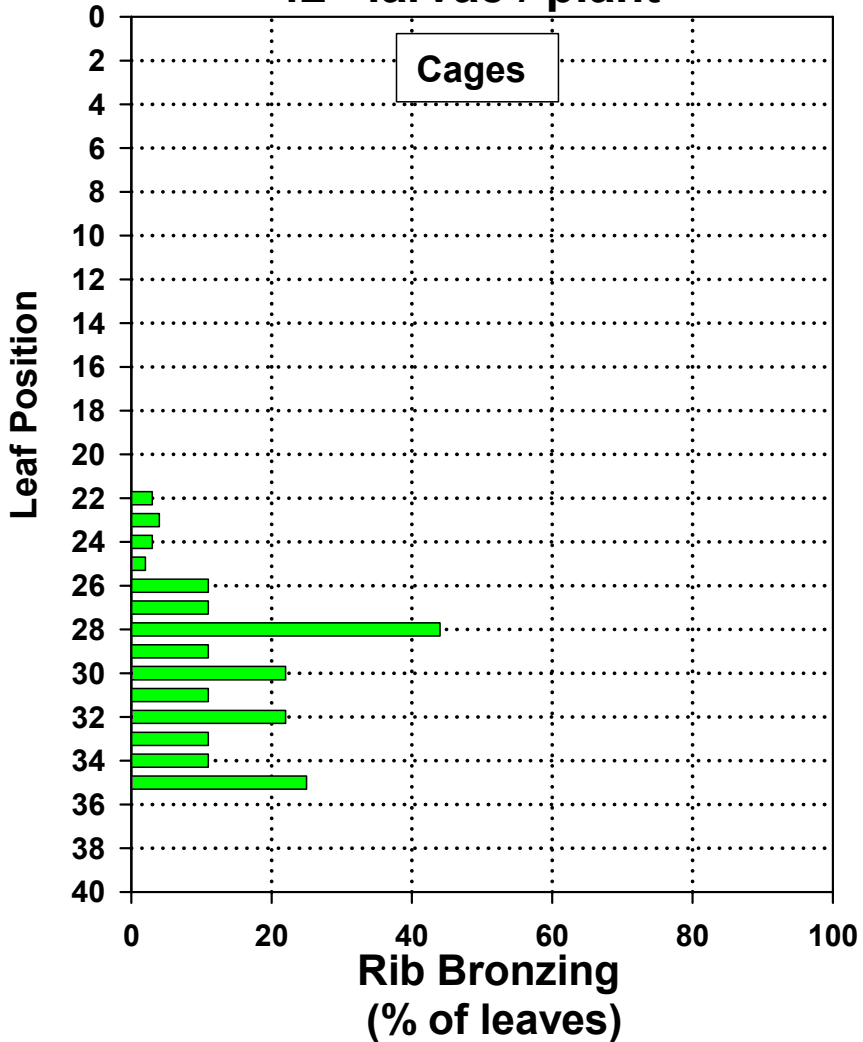


Rib Bronzing

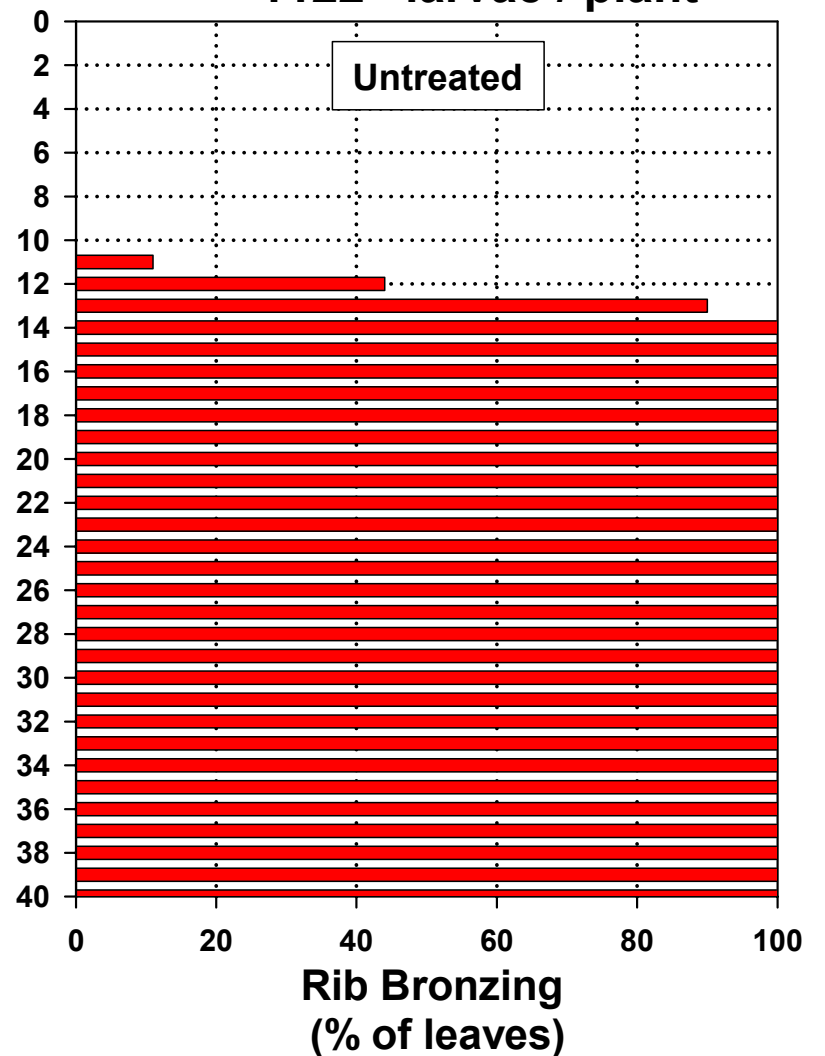


Thrips Damage 'Rib bronzing' in Romaine

17 adults/ plant
42 larvae / plant



231 adults/ plant
1122 larvae / plant



Key to Economic Thrips Management



- Early detection of thrips populations
“A few probably means a lot”
- Treat before thrips larval populations become established
- Use Insecticides at effective rates
- By ground when possible



Western Flower Thrips in Lettuce

**What Rate of Success®
Should I Use For Thrips?**



What Rate of Success® Should I Use For Thrips?

