

Cicada Wounding and Cicada Management

June 7, 2012



Chorus Cicada



- linked to sooty mould on fruit
- Nymphs feed on vine roots
- egg-laying habits creates wounds in canes

Are cicada nests a potential site for Psa-V infection?

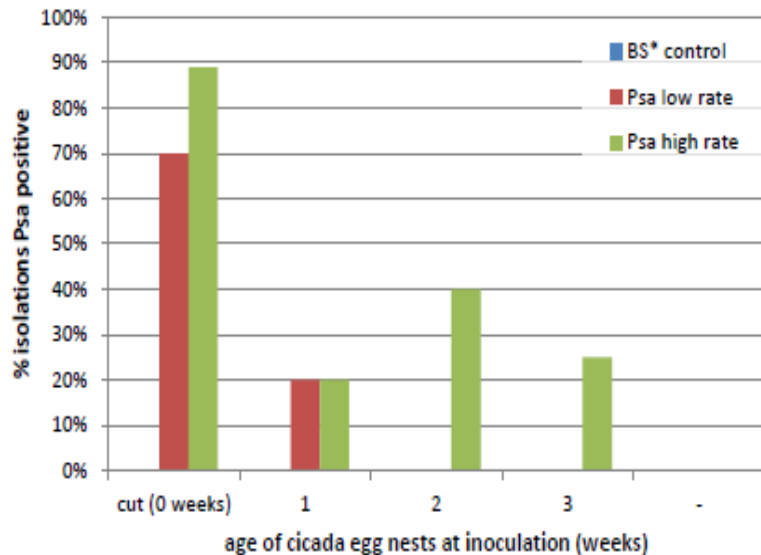


Experiment 1: Inoculation trial

- cicada egg-nests of different ages were collected from Hort16A and Hayward vines
- controls without nests were created (cuts)
- inoculated with Psa-V
- after a three week period the nests or cut sites were tested for the presence of Psa-V.

Experiment 1: Inoculation trial

'Hort16A'

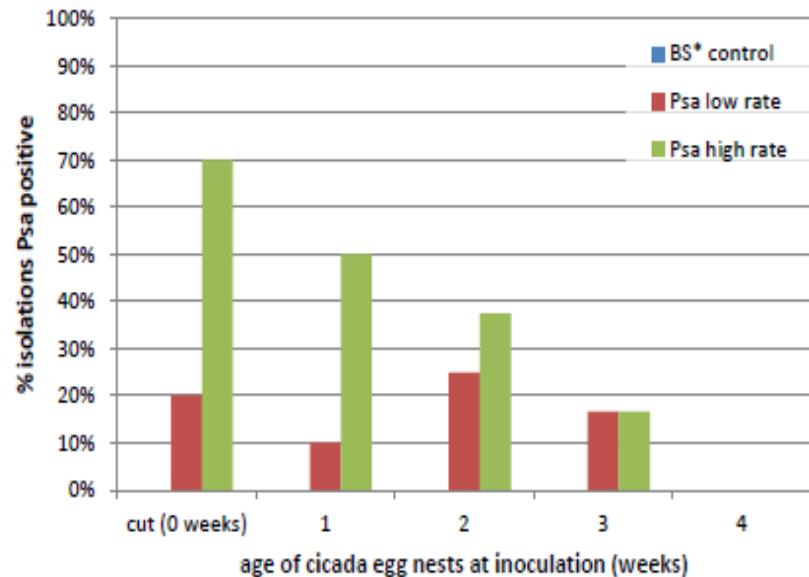


- Psa can enter canes through cicada egg nests

Results

- High inoculum > low inoculum
- Cuts > egg-nests

'Hayward'



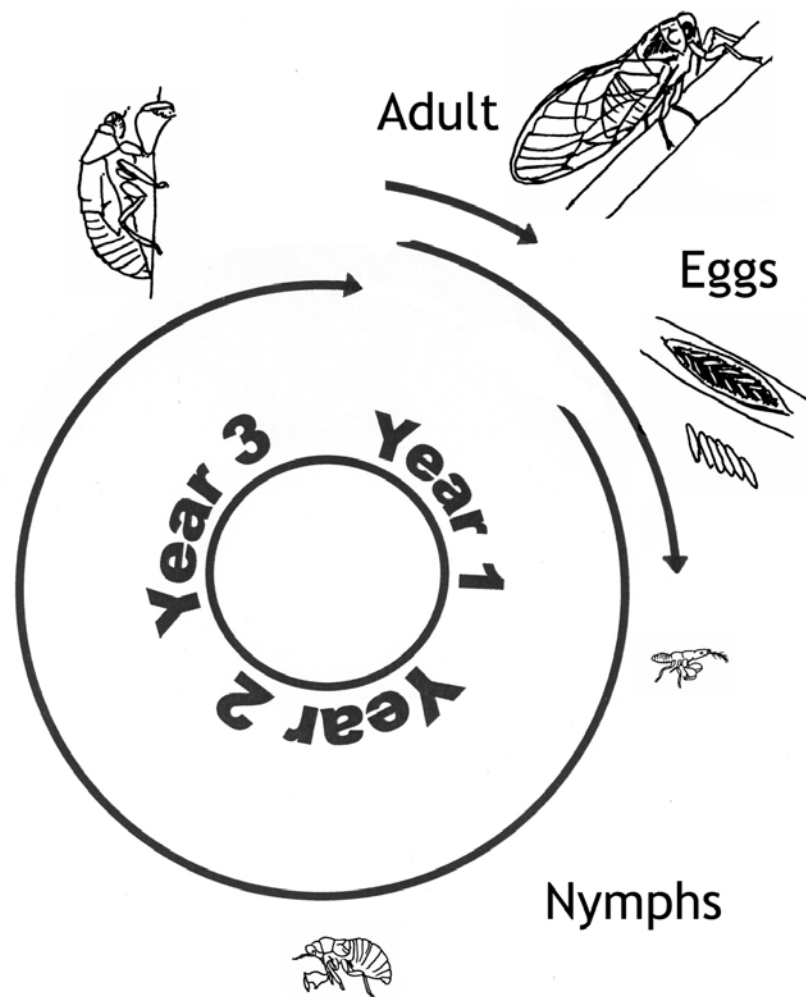
Experiment 2: Natural Psa-V infestation of canes with and without cicada egg-nests

- 25 sections of cane with an egg-nest and 25 sections on a separate similar-looking adjacent cane with no egg-nest were removed from each of 6 orchards (3 Hort16A and 3 Hayward).
- internal tissue sampled for presence of Psa

➤ Results:

cultivar	Nest	no nest
Hort16A	28%	24%
Hort16A	44%	20%
Hort16A	8%	0%
Hayward	20%	0%
Hayward	4%	0%
Hayward	0%	0%

What can we do?





SFF: Talstar Vs Cicadas



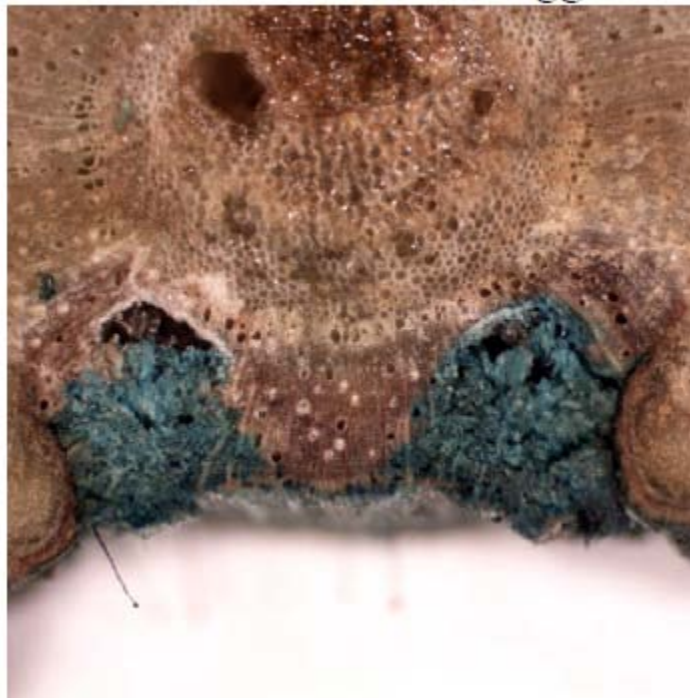
- Dormant canopy -1 August 2011
- Summer soil application

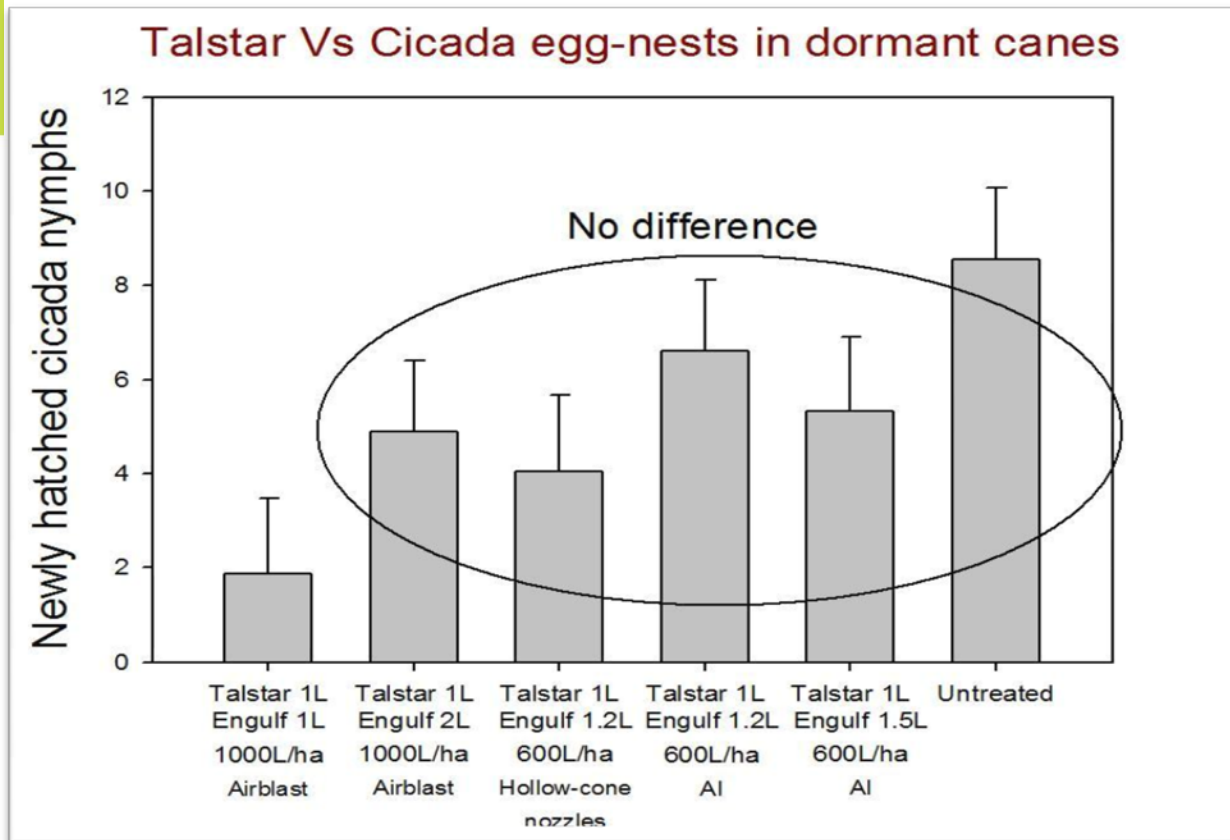


SFF: Talstar Vs Cicadas

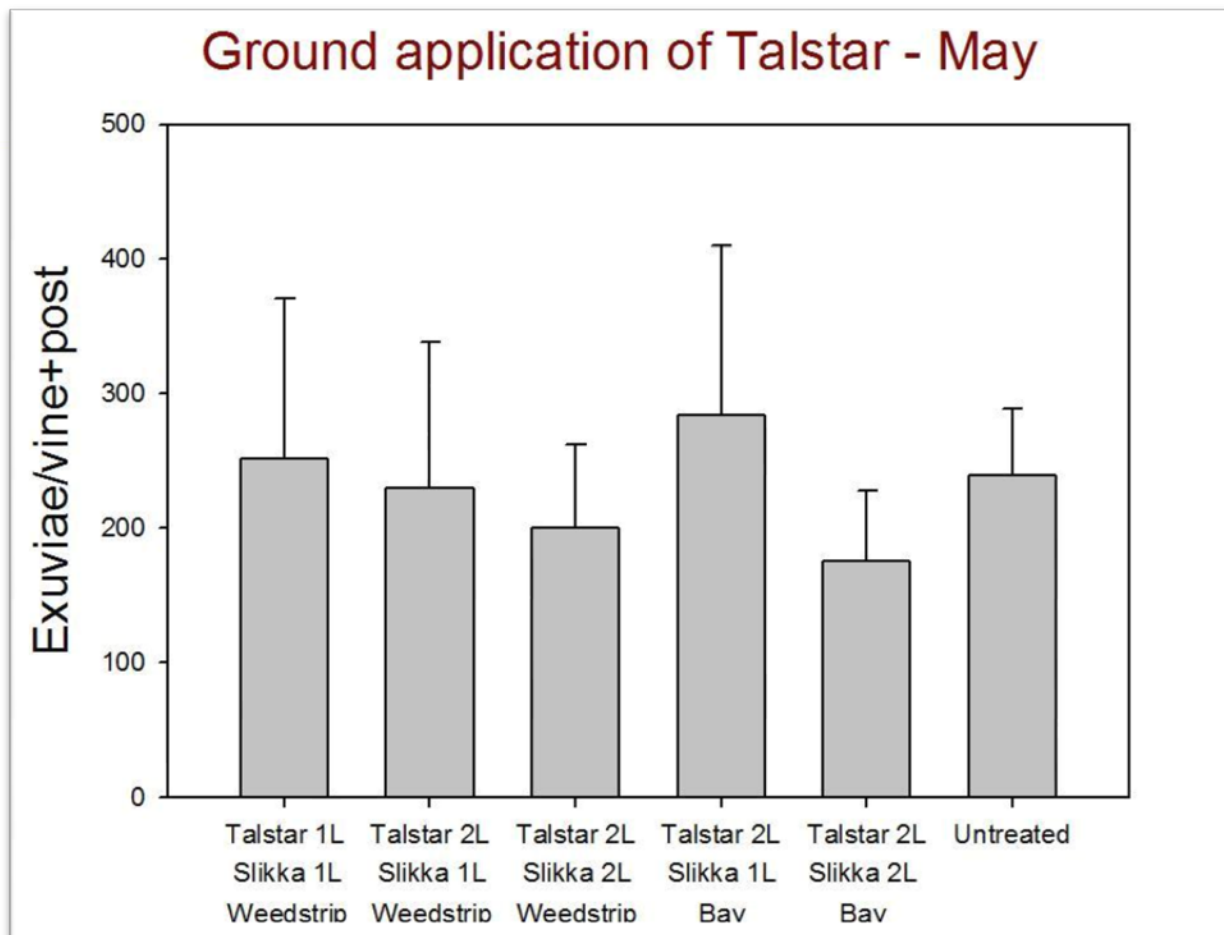


- The use of Engulf in airblast sprays allowed the sprays to penetrate into cicada egg nests in dormant canes.





- The most promising application was a high volume (1000 L/ha) spray through Article 58 nozzles, containing a high rate (1 L/ha) of Engulf.



- No soil treatments impacted cicada numbers emerging from the soil

Conclusions to date

- Cicada nests are potential entry sites for Psa-V into the vine.
- The most promising treatment for reducing cicada populations within the orchard appear to be aerial applications of Talstar combined with the penetrant Engulf during the bare cane winter period.



Acknowledgments



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