Remedy® Ultra for Citrus Stump Sprout Control

Steve Futch, Ph.D.
Extension Agent, Multi-County
University of Florida
Citrus Research & Education Center
Lake Alfred, Florida
shf@ufl.edu
The Issue of Sprouts and the Label

- Sprouts can be a significant threat to the Florida citrus industry as sources of HLB (greening)*
- Limited recommendations for sprout control in Florida citrus
  - Glyphosate, Pest Management Guide, 2002- present
  - Remedy® Ultra approved as Section 24(c),
    - EPA SLN NO. FL080004, August 2008

* Citrus Industry Magazine:
  - Sprout Control for Clipped Trees, December 2008, pgs 16-17
  - Detection of Greening in Sprouts from Citrus Tree Stumps, March 2009, pgs 28-30

HortTechnology

Florida State Horticultural Society
The Solution
Sprout Control Study

Objectives

1) To determine the effectiveness of Remedy® Ultra at various rates on the control of citrus sprouts

2) Provide data to support label modifications and Florida SLN label
Study Site

• Trial was established in April 2008 in a DeSoto County citrus grove
• Prior to tree removal, trees were diagnosed positive for HLB based upon visual symptoms in various parts of the tree canopy
• Tests were not conducted to prove HLB diagnosis
• Although symptomatic, trees were otherwise healthy
• Trees ranged from 7 to 15 years old
Plot Design & Treatments

• Randomized complete block design was used in the study
• Trees randomly selected received one of four treatments
  – Untreated control (no herbicides)
  – 25% Remedy Ultra + 75% diesel
  – 50% Remedy Ultra + 50% diesel
  – 75% Remedy Ultra + 25% diesel
• Treatments were applied using a 1-gallon compression sprayer
• Solution was applied to the outer cambium area of the cut stump in a volume to minimize runoff
• Each stump received 1 to 2 oz of spray solution within 5 minutes of clipping the tree
• Trees were removed with a standard tree shear
Study Period

- Stumps were rated every 30 days to determine regrowth
- As soon as any vegetative growth was observed, trees were enclosed within a screen enclosure to prohibit psyllid feeding on stump regrowth
- Screen material is approved for green house structures
12 of 15 (80%) of the untreated stumps sprouted, as compared to zero of the 45 treated stumps.
Percentage of Stumps Sprouting From the Untreated Control

15 stumps were untreated in this study
Number of Sprouts per Stump

Average - 7.6 sprouts per stump
Sprouts Positive for Greening

• 80% of the stumps that were tested had one or more sprouts that tested positive for HLB using PCR testing methods.

• Of the sprouts tested, 30 of the 43 sprouts (70%) tested positive for HLB.
Conclusions

• Remedy Ultra is very effective in controlling sprouts at a rate of 25% Remedy when mixed with diesel fuel
• Sprouts from stumps of trees removed due to HLB can serve as a source of the HLB bacterium
• Stump sprouts are highly attractive for psyllids
• The control of sprouts is essential in combating HLB
• Be sure to have a SLN label at time of application and read and follow labeled directions
Acknowledgements

• Orange Co for supplying test site with special thanks to:
  – Jerry Newlin, Shawron Weingarten, Buddy Strickland

• Dr. Ron Brlansky for PCR testing of sprouts