Florida Citrus Advanced Technology Program

QUARTERLY & FINAL REPORTS: Control of Citrus Greening, Canker & Emerging Diseases of Citrus

Instructions Complete the fields based on your project specs. When finished, save the form to your local disk using a unique name. Then, go to **http://research.fcprac.com**, and log in with your user name and password using Researcher Login in the lower left. Find this project title and click on **Submit a Report**. Update your profile information if needed, then upload this report as directed.

2009-2010 REPORT	CATEGORY (drop-down)	TODAY'S DATE (m/d/yr)
(●) *Quarterly Report* ( ) *Annual Report* ( ) *Final*	Management	4/12/10

WHAT IS THE "HEADLINE" FOR THIS REPORT (e.g. a one-sentence "newspaper headline" describing what you accomplished)

Herbicide stump treatment provides control of sprouts.

TITLE and CONTACT INFORMATION

Proposal Title Treatment of Citrus Stumps with Herbicide to Minimize Sprout Formation

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Phone 863-956-1151	*Project Duration (years)* 1 *Year of Project* 1
Organization University of Florida	*Total Direct Funds (current year)* $16,000

REPORT UPDATE (650 words; provide details about your headline)

The control of citrus sprouts from stumps or remaining roots after tree removal has been a major concern for years within the Florida citrus industry and now more important since the arrival of huanglongbing (HLB) or citrus greening. Sprouts from stumps of clipped trees that are HLB positive can harbor the greening bacterium.

This study is conducted to determine effectiveness of Remedy Ultra on the control citrus stump sprouting. This study is examining the impact of delaying application of Remedy on the control of sprout formation. Observations were made on 30-day intervals over an 8-month period after clipping or shearing the tree as the removal method.

Studies are being conducted at Lake Placid and Arcadia. Treatments of Remedy Ultra were applied at 25 or 50% solution mixed with diesel fuel at time of clipping, 24, 48 and 72 hours later. At the Lake Placid site, 2, 2, 1, 1, and 1 of the 7 (100%) stumps sprouting at 30, 60, 90, 120 and 150 days after tree removal, respectively. At this site, 4 stumps within the 56 treated stumps had root sprouts but not on the treated stump. All of the root sprouts occurred on trees originally grown on rough lemon rootstock, whereas none of the other rootstocks sprouted at this site. Remedy Ultra was slightly less effective in controlling sprouts when applied at the 25% Remedy/75% diesel than at the 50% rate especially on rough lemon stumps. Delaying application using the lower rate also had a slight negative impact on sprout control. At the Arcadia site, 5 of the 7 untreated stumps sprouted at 60 days after removal with one additional stump sprouting by 90 days. At this site, 86% of the untreated stumps sprouted within 90 days of clipping. Only one stump exhibited root sprouts which occurred within 60 days after treatment regardless of the time of application of the herbicide. The number of sprouts per stump ranged from 1 to 8.

Rootstock and trunk diameter have an impact on root or stump sprouting. Larger trunk diameter supports greater sprouting frequency as compared to smaller trunks. Additionally, rootstocks such as rough lemon and Cleopatra mandarin are more prone to sprouting than other rootstocks like sour orange.

Historically, some herbicides used for stump treatment have caused injury to adjacent healthy trees by translocation of materials via root grafting to the healthy trees. Resets planted nearby treated citrus stumps were damaged when excessive materials were applied to the soil surface or moved off treated stumps by rain or irrigation. In these studies, no problems were associated with Remedy Ultra damaging adjacent trees.