

(D8)

ORANGE: *Citrus sinensis* (L.) Osbeck, ‘Valencia’**BROAD-SPECTRUM FOLIAR SPRAYS FOR CONTROL OF ASIAN CITRUS PSYLLID AND CITRUS LEAFMINER IN ORANGES: SPRING, 2011****Philip A. Stansly**

University of Florida/ IFAS
 Southwest Florida Res. and Ed. Center
 2685 State Road 29 North
 Immokalee, FL 34142-9515
 Phone: (239) 658-3427
 Fax: (239) 658-3469
 Email: pstansly@ufl.edu

Jawwad A. Qureshi

Email: jawwadq@ufl.edu

Barry C. Kostyk

Email: bkostyk@ufl.edu

Asian citrus psyllid (ACP): *Diaphorina citri* Kuwayama

Citrus leafminer (CLM): *Phyllocnistis citrella* Stainton

ACP and CLM are two economically important pests of citrus due in large part to their role in the spread of greening disease or “huanglongbing” and citrus canker caused by *Xanthomonas axonopodis* pv. *Citri* respectively. Effective control measures are needed upon which to develop integrated management strategies against these pests and the associated diseases in Florida citrus. The experimental block at the Southwest Florida Research and Education Center (SWFREC), Immokalee, Florida consisted of 16-yr-old sweet orange ‘Valencia’ trees planted on double-row raised beds at a density of 132 trees/acre. Trees were irrigated by micro-sprinklers and subjected to conventional cultural practices. Eleven treatments and an untreated check were randomly distributed across 3 replicates in 4 rows separated by a buffer row. Each replicate (row) contained 12 five-tree plots. Treatments were applied on 14 Mar 2011 using a Durand Wayland AF100-32 air blast speed sprayer operating at 1.9 mph and 400 psi with four #4, #4, #3 and #3 Jim Bean ceramics nozzles delivering 120 gpa. Evaluations were made at 3, 10, 17, 24, 31 and 38 days after treatment (DAT). Fifteen randomly selected shoots per plot were collected and examined under a stereomicroscope in the laboratory to count ACP nymphs. Five of the 15 shoots were examined for CLM larvae by checking three fully expanded leaves on each shoot under the microscope. Density of ACP adults was assessed from three of the five trees in each plot by counting adult insects falling on a white clipboard placed under randomly chosen branches which were then struck 3 times with short length PVC pipe to make a count for one “tap” sample. Four tap samples were conducted per tree. Data were subjected to ANOVA and means separated using LSD ($P = 0.05$) are presented.

Number of nymphs did not differ significantly between treated and untreated trees at 3 DAT. However, significant reduction of nymphs was observed at 10 DAT for all treatments compared to the untreated check although less so on trees treated with Nexter 75 WP compared to other treatments. At 17 and 24 DAT, all treatments except Nexter 75 WP 9.9 oz/ac at 17 DAT provided significant reduction in nymphs compared to untreated check. A trend of increasing nymphal reduction with rate for Imidan 70 W was observed through 24 DAT. At 38 DAT, Imidan at 0.5 and 1.5 oz/ac and Lorsban Advanced at 1.5 and 2 pints/ac + 435 oil were the only treatments providing significant reduction in nymphs compared to untreated check. Adults averaged 0.01 and 0.16 per tap sample at 3 and 38 DAT, respectively. Significant treatment effects were observed only at 24 DAT at which time Nexter 75 WP 6.6 oz/ac, Lorsban Advanced 1.5, 2, 3 pints/ac + 435 oil and Stallion 11.75 fl oz/oz + 435 oil were providing significant reduction of adults compared to the untreated check. CLM larvae averaged 0.4 and 0.7 per three leaves per shoot at 17 and 24 DAT, respectively, but none of the treatments provided significant reduction compared to the untreated check.

Treatment/ formulation	Rate amt product/ acre or % v/v	ACP nymphs/shoot					ACP Adults/tap sample
		3 DAT	10 DAT	17 DAT	24 DAT	38 DAT	24 DAT
Untreated check		1.42bc	19.87a	16.07a	16.95a	8.87ab	0.14ab
435 oil	2%	2.22b	3.44cd	6.02bcd	11.13b	3.60bc	0.03bc
Imidan 70 W	0.5 lbs	0.55c	1.78d	8.09bc	5.56cdef	0.53c	0.08abc
Imidan 70 W	1.0 lbs	0.44c	2.27d	3.98bcd	1.91ef	8.57ab	0.06abc
Imidan 70 W	1.5 lbs	0.22c	1.00d	1.13d	1.67f	0.73c	0.06abc
Nexter 75 WP	6.6 oz	0.58c	6.38bc	9.20b	3.91efd	4.63bc	0.00c
Nexter 75 WP	9.9 oz	3.89a	9.13b	14.60a	8.44bcd	12.67a	0.17a
Lorsban Advanced	1.5 pints + 2%	0.16c	1.42d	6.53bc	6.98bcde	1.96c	0.00c
Lorsban Advanced	2.0 pints + 2%	0.36c	1.18d	5.22bcd	4.96cdef	0.57c	0.00c
Lorsban Advanced	2.5 pints + 2%	0.18c	1.56d	4.31bcd	9.38bc	11.67a	0.03bc
Lorsban Advanced	3.0 pints + 2%	0.36c	0.02d	4.09bcd	8.07bcd	8.57ab	0.00c
Stallion	11.75 fl oz + 2%	0.92bc	2.07d	3.24cd	2.51ef	8.23ab	0.00c

Means in a column followed by the same letter are not significantly different ($P > 0.05$, LSD)