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(D12)

ORANGE: *Citrus sinensis* (L.) Osbeck, 'Valencia'

EVALUATION OF FOLIAR INSECTICIDES TO CONTROL FLOWER THRIPS ON VALENCIA ORANGES: 2011

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Flower thrips: *Frankliniella bispinosa* (Morgan)

Frankliniella bispinosa is not usually considered a pest species on citrus, but can cause injury to developing flowers and reduce fruit set if populations are very high. The experimental block at the Southwest Florida Research and Education Center (SWFREC), Immokalee, Florida consisted of 15-yr-old sweet orange 'Valencia' trees planted on double-row raised beds at a density of 132 trees/acre. Trees had been hedged in 2010 to a height of 7ft, irrigated by micro-sprinklers and subjected to conventional cultural practices. Three treatment plots of 5 trees were randomly distributed across 4 replicates in an RCB design, with each treated row separated by a buffer row. Products were applied on 3 Mar 2011 with a Durand Wayland AF100-32 air blast speed sprayer operating at 1.9 mph and 400 psi to deliver 100 gpa through four John Bean Ceramic nozzles: #4, #3, # 2.5 and #2.5, top to bottom.

Ten flowers were randomly collected 4, 7, 11 and 16 Mar from each of the three central trees in each plot and placed in a 40 dram plastic vial containing 100 mls of 70% alcohol. Vials were shaken by hand for 60 seconds to dislodge the trips and the contents poured through a coarse wire mesh placed over a 9 x 6 x 3 inch clear plastic container. Each flower was then held with a forceps and rinsed individually over the mesh with a stream of 70% alcohol from a squeeze bottle. The rinsate was poured into a petri dish inscribed on the bottom with 1 inch square grids and all thrips counted under a 10 x magnifier lamp (model 8064). A pretreatment evaluation of 2 samples per plot on 2 Mar averaged 94.8 ±6.52 (Mean ± SE) thrips per 10 flowers with no significant differences among blocks or plots ($P > 0.05$).

Delegate and BYI02960 both significantly reduced the number of thrips found when compared to the untreated control through 8 DAT but no significant treatment effect was seen at 13 DAT. Fewer thrips were extracted from flowers taken from Delegate-treated trees compared to BYI02960 on each of the first three sample dates.

		Thrips per 10 flowers			
Treatment/ formulation	Rate (oz product/acre)	4-Mar (1 DAT)	7-Mar (4 DAT)	11-Mar (8-DAT)	16-Mar (13 DAT)
Untreated		116.5a	206.7a	99.2a	87.5a
Delegate 25 WG	6.0	21.9c	41.4c	38.7c	96.8a
BYI02960 200 SI	14.0	43.3b	112.7b	65.9b	78.3a

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