

treatments which are primarily experimental acaricides (Table 4). However, chlorpyrifos, which showed promise in 1979, failed to prevent chaff scale settling on the fruit in 1982.

Experiment V. This experiment, also conducted in 1982 at Babson Park, Florida, was designed to compare times of application of methadathion. These data indicate that a combination of spring plus summer applications was superior to a summer plus fall program but not sprays applied in spring plus fall (Table 5). However, even the summer plus fall applications had less than 0.5 scale per fruit, again illustrating the effectiveness of methadathion against chaff scale.

Results of experiments conducted in 1979 and 1982 indicate that methadathion, ethion plus 0.5% oil and 1% oil spray were effective in preventing chaff scale from infesting 'Dancy' tangerine fruit. One material, chlorpyrifos provided effective control in 1979 but was ineffective in 1982. Carbosulfan when combined with 0.5% oil was effective but much less effective when used alone. Applications of methadathion

Table 4. Chaff scale control on 'Dancy' tangerin fruit, Babson Park, Florida 1982.

Treatment ^z and formulation	Rate/100 gal of:		No. chaff scale/ 25 fruit ^v
	Formulation	Active ingredient	
Methadathion 2E	16 oz	4 oz	4.4 a
Ethion 4E + Oil 0.5% FC-414	12 oz	6 oz	28.3 a
Oil FC-414	1 gal	1%	51.6 a
Carbosulfan 2.5E	12.8 oz	4 oz	117.8 b
Micromite 50WP	1.2 oz	0.6 oz	130.4 b
Tranid 4E	6 oz	3 oz	143.2 bc
Chlorpyrifos	8 oz	4 oz	203.4 cd
No treatment	—	—	224.5 d

^zTreatments applied May 5 and June 29, 1982.

^vMean separation by Duncan's multiple range test, 5% level.

Table 5. Control of chaff scale with methadathion applied on different dates.

Treatment ^z and formulation	Rate/100 gal of:		Time of applica- tion ^z	No. chaff scale/ 25 fruit ^v
	Formu- lation	Active in- gredient		
Methadathion 2E	16 oz	4 oz	spring & summer	4.4 a
Methadathion 2E	16 oz	4 oz	spring & fall	8.8 ab
Methadathion 2E	16 oz	4 oz	summer & fall	11.7 b
No treatment	—	—	—	224.5 c

^zApplication date for spring spray—May 5, 1982; application date for summer spray—June 29, 1982; application date for fall spray—September 8, 1982.

^vMean separation by Duncan's multiple range test, 5% level.

made in the spring plus the summer or spring plus the fall were more effective than summer plus fall.

Literature Cited

- Brooks, R. F. and W. L. Thompson. 1963. Investigations of new scalcicides for Florida. Fla. Entomol. 46:279-284.
- Ebeling, W. 1959. Subtropical Fruit Pests. Univ. Calif. 436 pp.
- Griffiths, J. T. and W. L. Thompson. 1957. Insects and mites found on Florida citrus. Univ. Florida, Agr. Expt. Sta. Bul. 591. 96 p.
- Hubbard, H. G. 1885. Insect affecting the orange. U.S. Dept. Agr. Authors Edition. 227 p.
- Pratt, R. M. 1958. Florida guide to citrus insects, diseases and nutritional disorders in color. Univ. Florida, Agr. Expt. Sta. 191 p.
- Riehl, L. A., R. F. Brooks, C. W. McCoy, T. W. Fisher, and H. A. Dean. 1980. Accomplishments toward improving integrated pest management for citrus. pp. 319-363 *In*: C. B. Huffaker (ed.), *New Technology of Pest Control*. John Wiley & Sons.
- Thompson, W. L., R. F. Brooks, and M. F. Oberbacher. 1961. Results of spray programs on tangerines in relation to scale control and fruit color. Proc. Fla. State Hort. Soc. 74:58-61.
- U.S. Dept. Agr. 1973. U.S. Department of Agriculture Official Visual Aids for Florida Citrus. The John Henry Co., Lansing, Mich.

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ISRAELI AND EGYPTIAN CITRUS PROCESSING OBSERVATIONS¹

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Abstract. Visits to citrus processing plants, research organizations and governmental control agencies during a 3-

week trip in April-May 1983 are described. Annual citrus production, fresh and processing fruit distribution, products and processing methods will be discussed from slides taken during the visits. Facilities of research organizations visited will be presented. Maturity and product quality control parameters will be presented.