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Frequent Low Volume Sprays of Horticultural Mineral Oil (HMO) for Psyllid and Leafminer Control

Jones, M.M. and Stansly, P.A.

UF-SWFREC/IFAS, 2685 SR 29 N, Immokalee, FL 34142

Low volume (LV) aerial and ground sprays have become an important method of application in Florida citrus. During Feb 2011, we started a trial in a 10.9 acre plot of 'Valencia' orange in Lee County comparing LV spray of 435 HMO with the Grower Standard (GS) and an Untreated check (UC) in 3x3 Latin square design. A Proptec rotary atomizer P400D spray machine was used for all treatments. HMO was applied every 2 weeks at 2 gpa. Significantly fewer ACP were seen on during May 2011 on GS trees than HMO trees, but during June these differences disappeared. Between Aug – Oct 2011, mean adult ACP populations were lowest for GS, followed by HMO and UC. Thus, LV oil treatments suppressed ACP, though not as effectively as the GS. However during winter 2011 HMO treatments were as effective as GS. Also, highest pound solids were seen from trees receiving HMO followed by UC and GS. Citrus leafminer (CLM) damage assessments (May/July 2011) using a modified Horsfall-Barratt scale showed less damage with GS compared with Oil which in turn was less than UC. However, CLM trap catches in Nov were significantly lower with HMO compared to GS and UC even though highest flush density was present on HMO-treated trees. Canker ratings (2012) for HMO and GS have been significantly less than UC. Thus, LV application of 435 horticultural mineral oil (HMO) for control of ACP and CLM have shown promising results the last 2 years.