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Metalized Polyethylene Mulch to Reduce Incidence of Huanglongbing and Improve Growth of New Citrus Plantings

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Polyethylene mulch was evaluated for deterring colonization by Asian citrus psyllid (ACP) *Diaphorina citri*, reducing incidence of huanglongbing (HLB) or citrus greening disease and accelerating growth of young citrus. UV reflective low density polyethylene mulch metalized with aluminum, low density whitefaced polyethylene mulch and bare ground all using drip irrigation in a randomized complete block design were tested and compared to the current grower standard using micro-sprinkler irrigation with four replications located at the Southwest Florida Research and Education Center in Immokalee, FL. Populations of ACP and other arthropods were monitored on new flush while ACP movement was monitored using yellow sticky cards. Incidence of HLB was evaluated twice during the 20 month study period using qPCR. Trunk cross sectional area, soil moisture, and surrounding weed biomass were also monitored. Metalized mulch reduced pest populations and HLB incidence compared to all tested alternatives. In addition, metalized mulch increased tree growth and soil moisture while reducing weed pressure. Results of this study present a good case for the use of metalized plastic mulch for young citrus plantings.