



Treatment area recommendation around a single psyllid find

The DATOC expert panel feels strongly that the find of a single Asian citrus psyllid (ACP) in an area which is not generally infested and eradication is still being attempted should trigger a treatment area around the detection that is never less than a 400 m radius.

There are two aspects of this recommendation to be considered; the first is that the find of a single individual should trigger treatment. The HLB/ACP Program should not wait to find more than 1 psyllid by any means, whether by trapping or by tap or visual survey, before undertaking treatment wherever eradication is still possible. Although yellow sticky traps are a time- and cost-effective way to monitor for ACP, they provide an imprecise measure of absolute insect abundance. These traps, lacking a lure, are not inherently attractive to the insect except by visual cues at relatively short distances. While their use over time and in sufficient density can help indicate presence or absence in an area, it cannot indicate absolute abundance. Data shows that density prediction from sticky trap counts must be made with low confidence, and that trap catches are affected by extraneous factors, such as sunlight and temperature (Aubert and Hua, 1990; Hall, 2009). Sticky traps may detect a single insect while neighboring trees are completely infested (B. Grafton-Cardwell, personal communication, September 28, 2018), indicating the weakness of the trap. Therefore, an ACP single detection is likely, but not always, an indication of a nearby population and should trigger aggressive treatment measures.

The second aspect of this recommendation is the treatment area. In the absence of high-confidence trapping data, the treatment area should be based on what is known about the biology of the Asian citrus psyllid, and there is abundant evidence detailing the movement of adult psyllids over 100 m (Boina et al., 2009). Numerous studies indicate ACP travel occurring up to 2 km (Lewis-Rosenblum et al., 2015; Stelinski et al. 2013; Thomas et al, 2017). In addition, ground work completed by the CPDPC program has proven that limiting the treatment area to 50 m would unequivocally have left psyllids unfound and untreated.

For these reasons, DATOC suggests a minimum treatment radius of 400 m in all situations where eradication is still being attempted.



References

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