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Authors

Bassanezi, R. B.
Montesino, L. H.
Bergamin Filho, A.

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Huanglongbing management on bearing groves based on favorable periods for symptomatic-trees removal and vector control

Bassanezi, R.B.[1], Montesino, L.H.[1], and Bergamin Filho, A.[2]

[1]Fundecitrus, Araraquara, Brazil
[2]ESALQ/Universidade de São Paulo, Piracicaba, Brazil

In Brazil, Huanglongbing (HLB) has been managed by removal of symptomatic-trees and Asian citrus psyllid (ACP) control. Although new HLB-affected trees and ACP can be detected all year long, visual detection of HLB-affected trees has been more pronounced from March to August while ACP population densities are higher from September to February. Therefore, the aim of this work was to compare the efficiency of applying the control strategies only during the higher occurrence periods of new HLB affected trees and ACP adults with the control application during all year long. The experiment was carried out in a 4-yr old sweet orange Valencia/Rangpur lime grove and had a 2 by 3factorial design with 3 replications (1.4 ha plots). The factor "HLB-tree elimination" had 2 treatments: monthly elimination all year long; and monthly elimination from March to August, both based on visual inspection. The factor "Vector control" had 3 treatments: monthly ACP control all year long; monthly ACP control from September to February; and ACP control when 10% of 48 yellow sticky traps (YST) placed in the center of plots had at least one adult psyllid. All Treatments of ACP control were done alternating foliar sprays of Provado®, Dimetoato®, Trebon® and Marshal®+Micromite®. After 5 years, no significant differences were detected among different treatments for the variables mean cumulative HLB incidence and disease progress rate estimated by linear regression of the last 4 years cumulative disease incidence. The mean cumulative HLB incidence increased from 0.4% to 14.2% (Yr1 4.9%, Yr2 1.9%, Yr3 2.3%, Yr4 1.7%, and Yr5 3.0%). The number of caught ACP per YST per assessment and the area under the curve of percentage of YST with ACP were significantly higher for monthly ACP control from September to February (total of 34 sprays), but did not differed between monthly ACP control all year long (total of 65 sprays) and control based on ACP monitoring with YST (total of 21 sprays). We believe that HLB management wasn't better because there was a significant amount of new HLB-symptomatic trees (25.2%) found from December to February, and 12.3% of ACP caught in August. In conclusion, with some adjusts the management of HLB could be optimized according to the favorable periods for HLB-symptomatic trees detection and ACP populations.