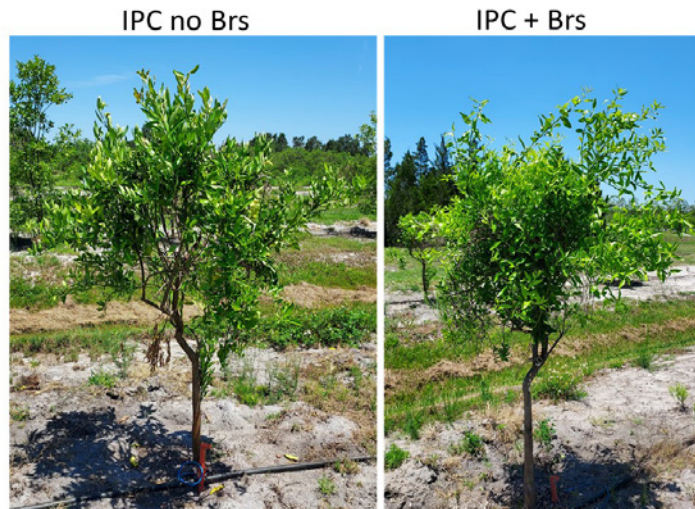


Combining Individual Protective Covers and Brassinosteroids to Prolong Young Citrus Tree Health

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Summary: Individual protective covers (IPC), a type of psyllid exclusion mesh bag, are increasingly being adopted to efficiently protect newly planted citrus trees from huanglongbing (HLB) infection. However, IPCs typically must be removed after 2-3 years due to tree growth. Early evidence indicates that brassinosteroids (Brs), a relatively new class of plant hormones, delay HLB progression. With the aim of prolonging tree health after IPC removal, we are investigating the

efficacy of Brs in protecting and/or preventing trees from Asian citrus psyllids (ACP) and *Candidatus Liberibacter asiaticus* (CLAs) infection once they are left exposed. Brs have been approved for commercial use in Florida citrus. Treatment with Brs prevented CLAs infection six months after IPC removal. In contrast, 80% of the trees grown in IPCs without subsequent Brs treatments were HLB-affected at this time. After Brs treatment, trees flushed earlier and more synchronized and fruit set was

30% increased. In addition, we found less psyllids per flush. Canopy volume and tree height were significantly increased with Brs treatment after IPC removal.

Take Home Message:

- Brassinosteroids delay HLB progression after IPC removal.
- Trees flush more profusely after Brs treatment once IPCs are removed.
- Psyllid population is reduced by Brs treatment.

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