

Hibiscus Mealybug and ACP Management

Mealybugs become an issue if...

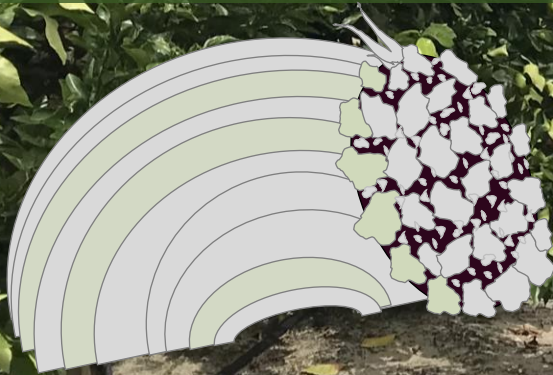
Plants are in enclosed spaces

Insecticides used frequently

Natural enemies not present

← IPCs and CUPS

← Constant use of insecticides



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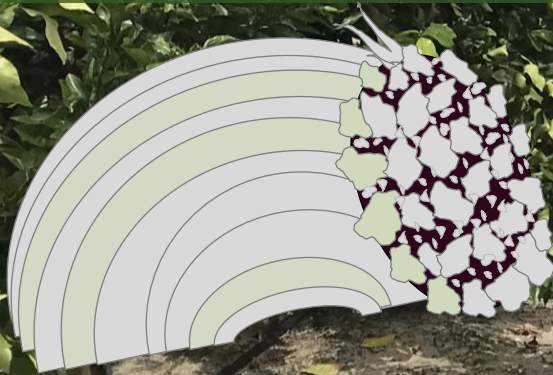
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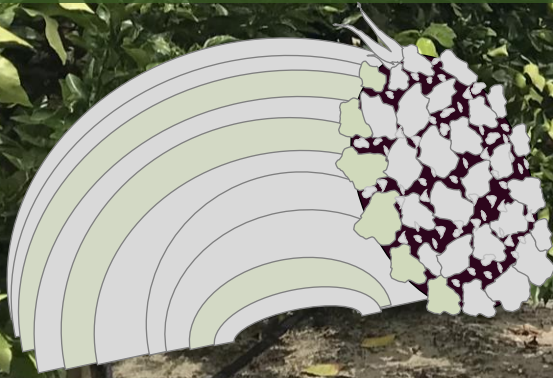
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Direct line between ACP/HLB and hibiscus mealybug

Hibiscus Mealybug Management



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Sanitation and prevention
Keep mealybugs from spreading



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Sanitation and prevention
Keep mealybugs from spreading

Promote and use predators

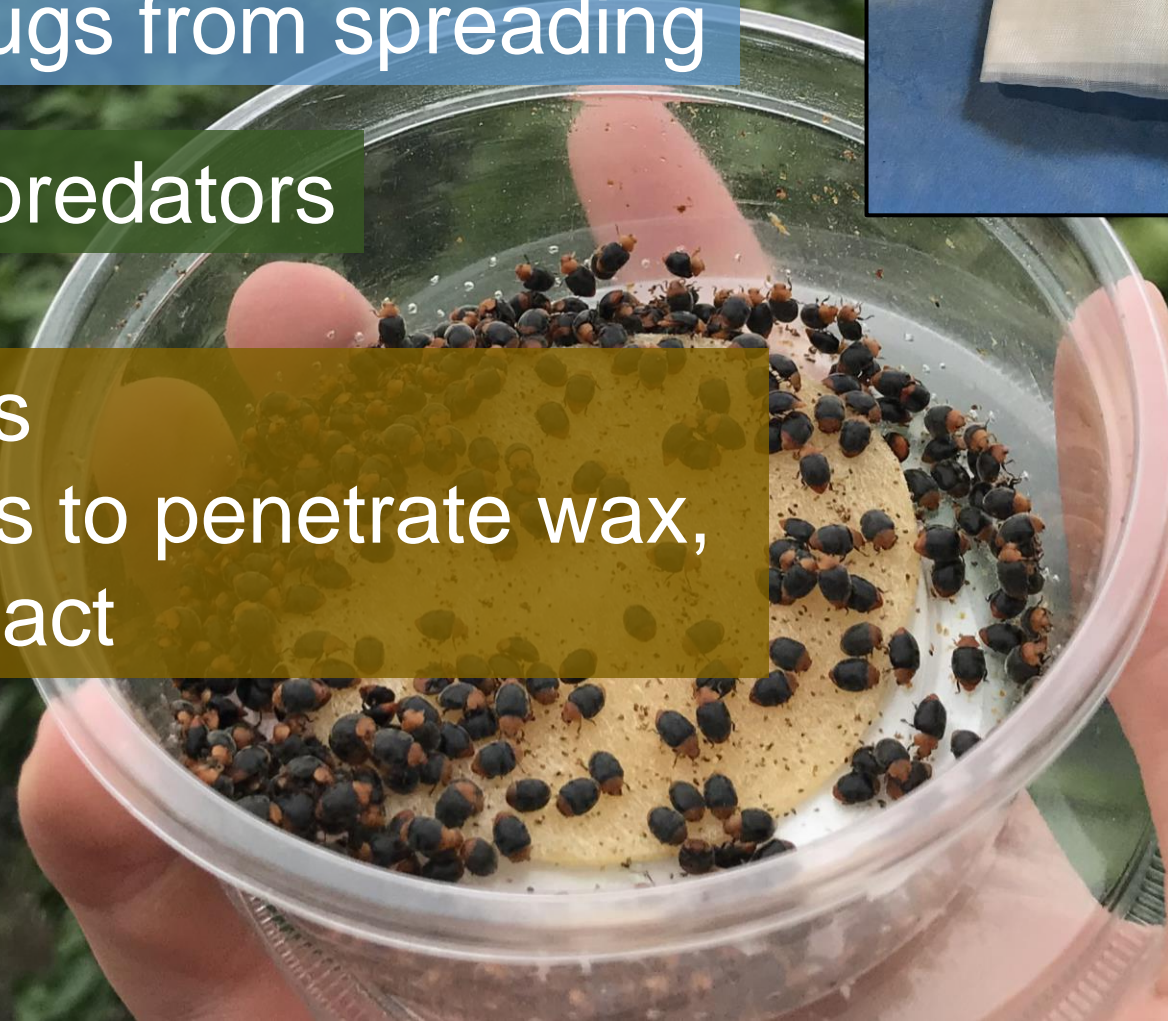


Hibiscus Mealybug Management

Sanitation and prevention
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Promote and use predators

Effective pesticides
Use adjuvants to penetrate wax,
increase contact



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Manage ants (Imported Red Fire Ant)
Protect and even move mealybugs



Hibiscus Mealybug Management

Sanitation and prevention

Keep mealybugs from overwintering

Promote a

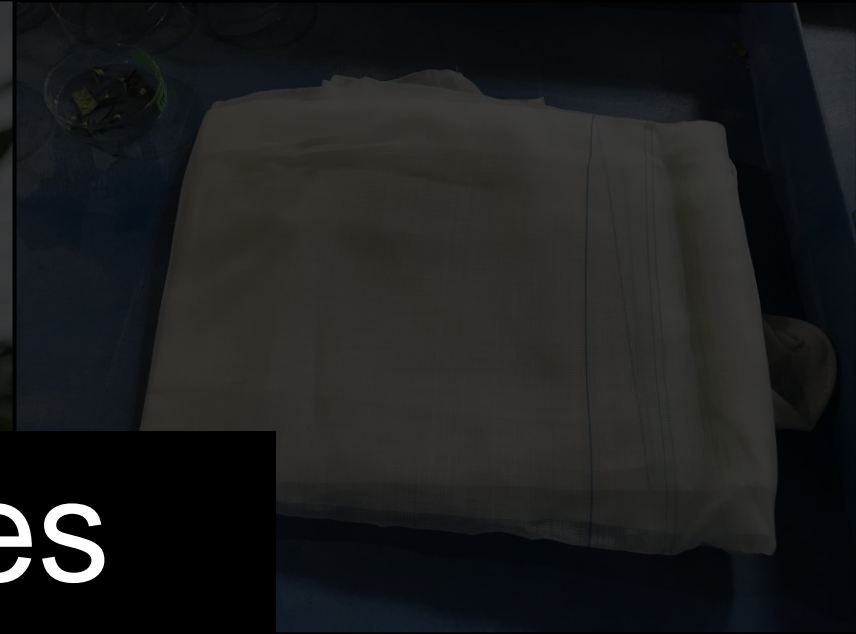
**ACP/HLB causes
many other problems**

Effective pesticides

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Hibiscus Mealybug Management

Sanitation and prevention

Keep mealybugs from overwintering

Promote a

**ACP/HLB causes
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Effective pesticides

U
in

**There will always be many
unintended consequences**

Manag

Protect and even move mealybugs

What Should We Learn from Florida?



Florida



California



Florida

ACP found in 1998

HLB found in 2005

Rapidly became widespread

Highly damaging to citrus industry

Prevention did not happen



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HLB found in 2012



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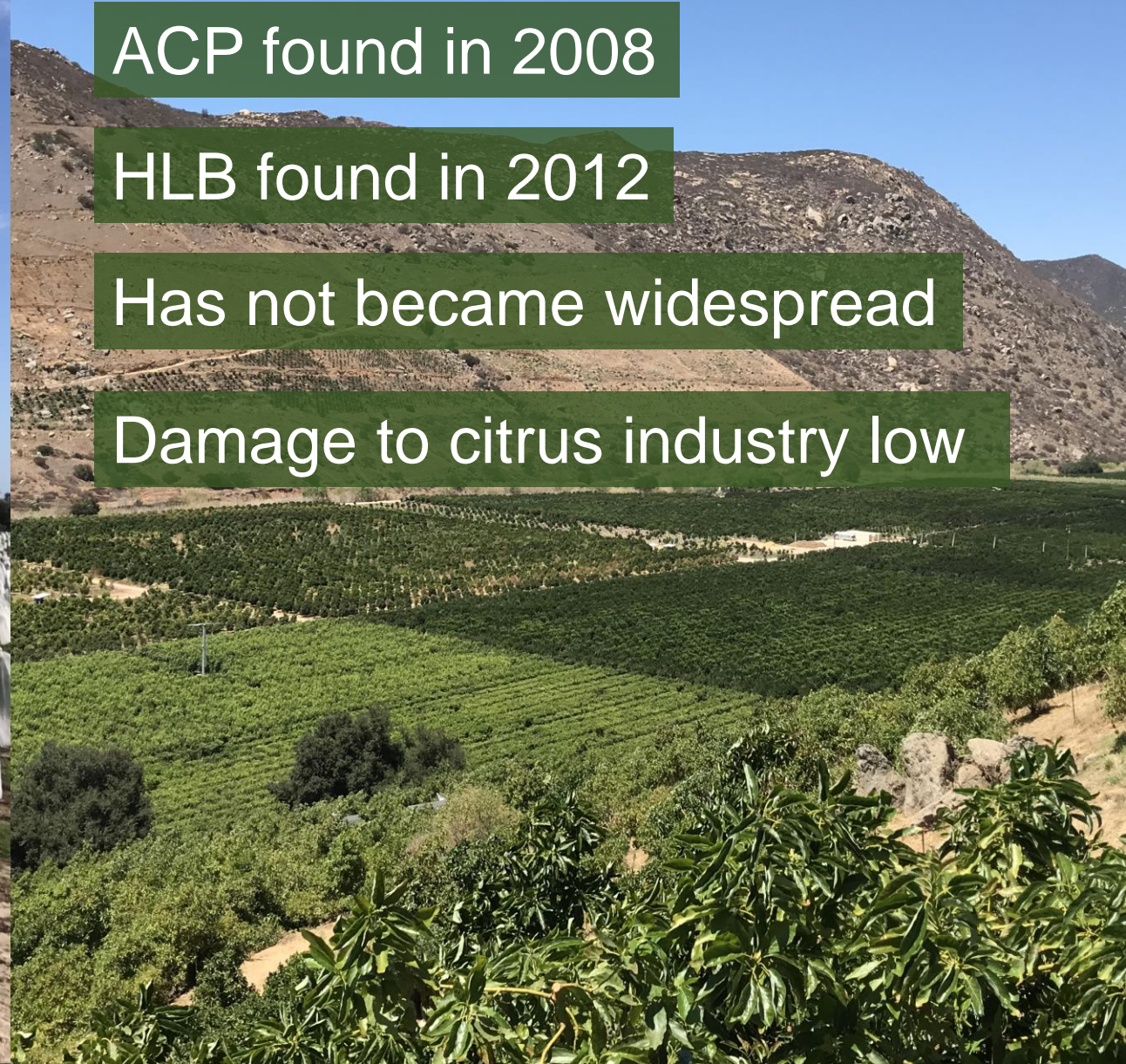
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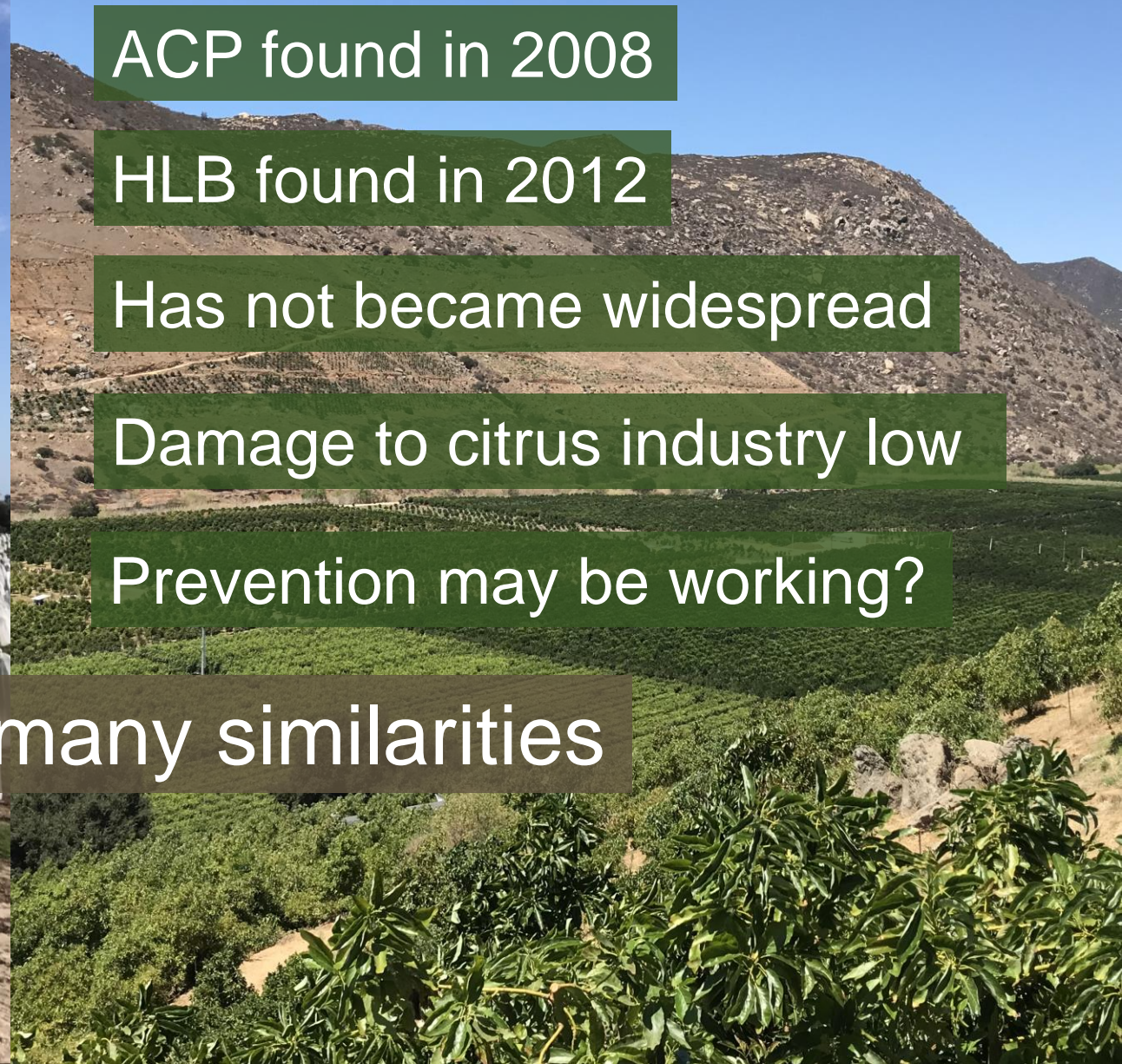
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Prevention may be working?



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Florida is juice, CA is fresh

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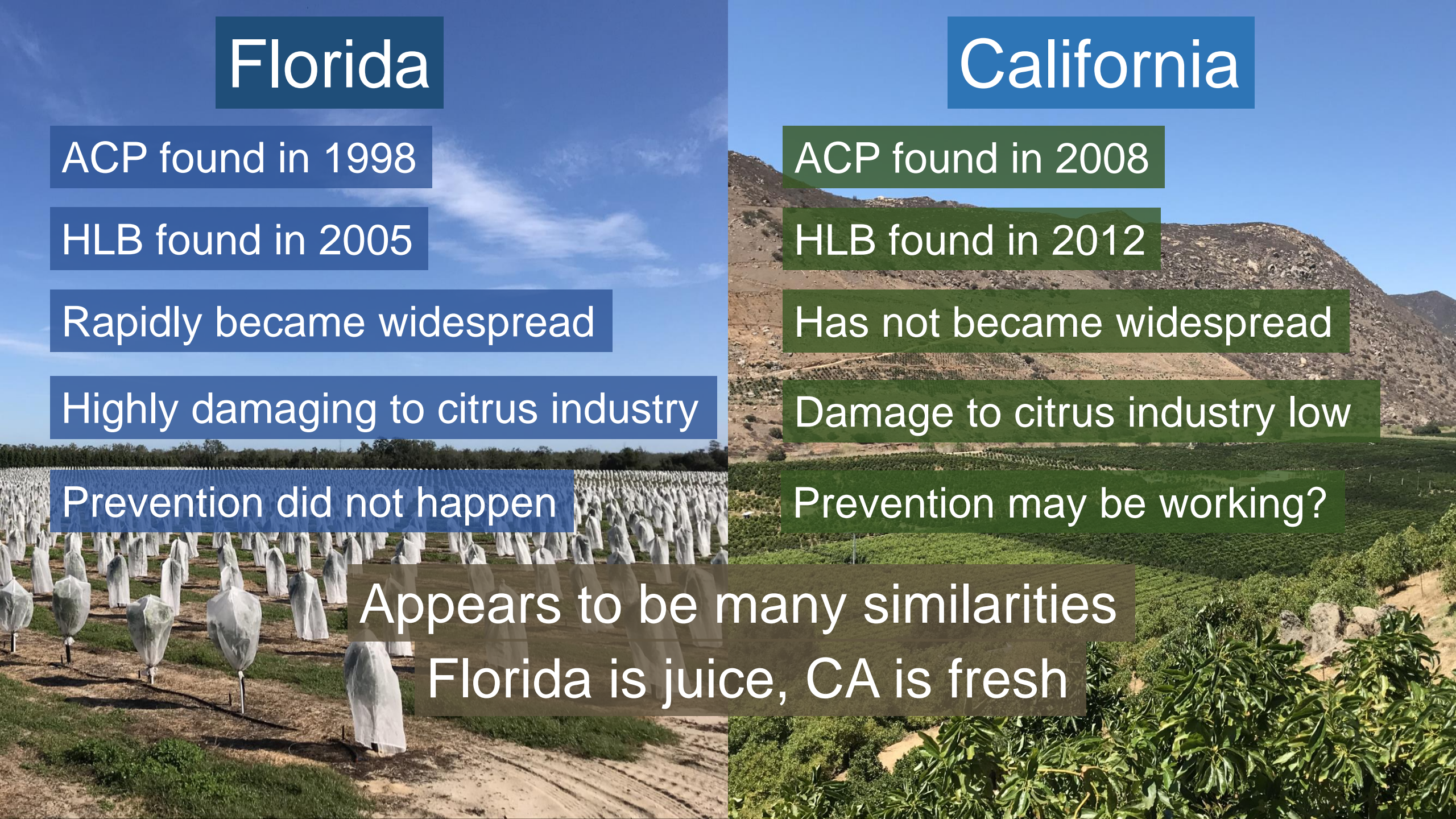
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Florida is juice, CA is fresh

Situation in Florida obviously to be avoided

California

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What Should We Learn from Florida?



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Don't become Florida



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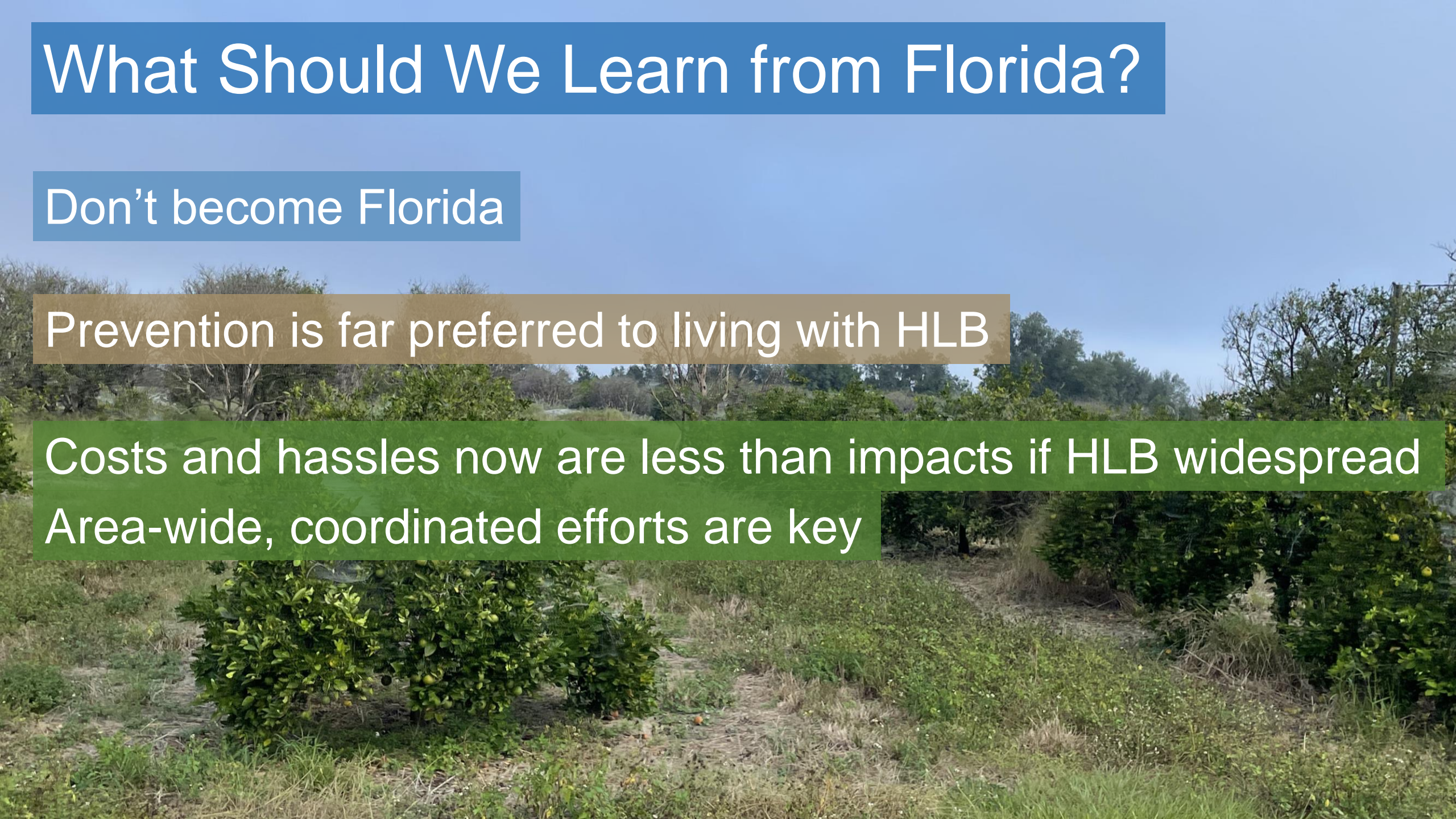


What Should We Learn from Florida?

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Prevention is far preferred to living with HLB

Costs and hassles now are less than impacts if HLB widespread
Area-wide, coordinated efforts are key



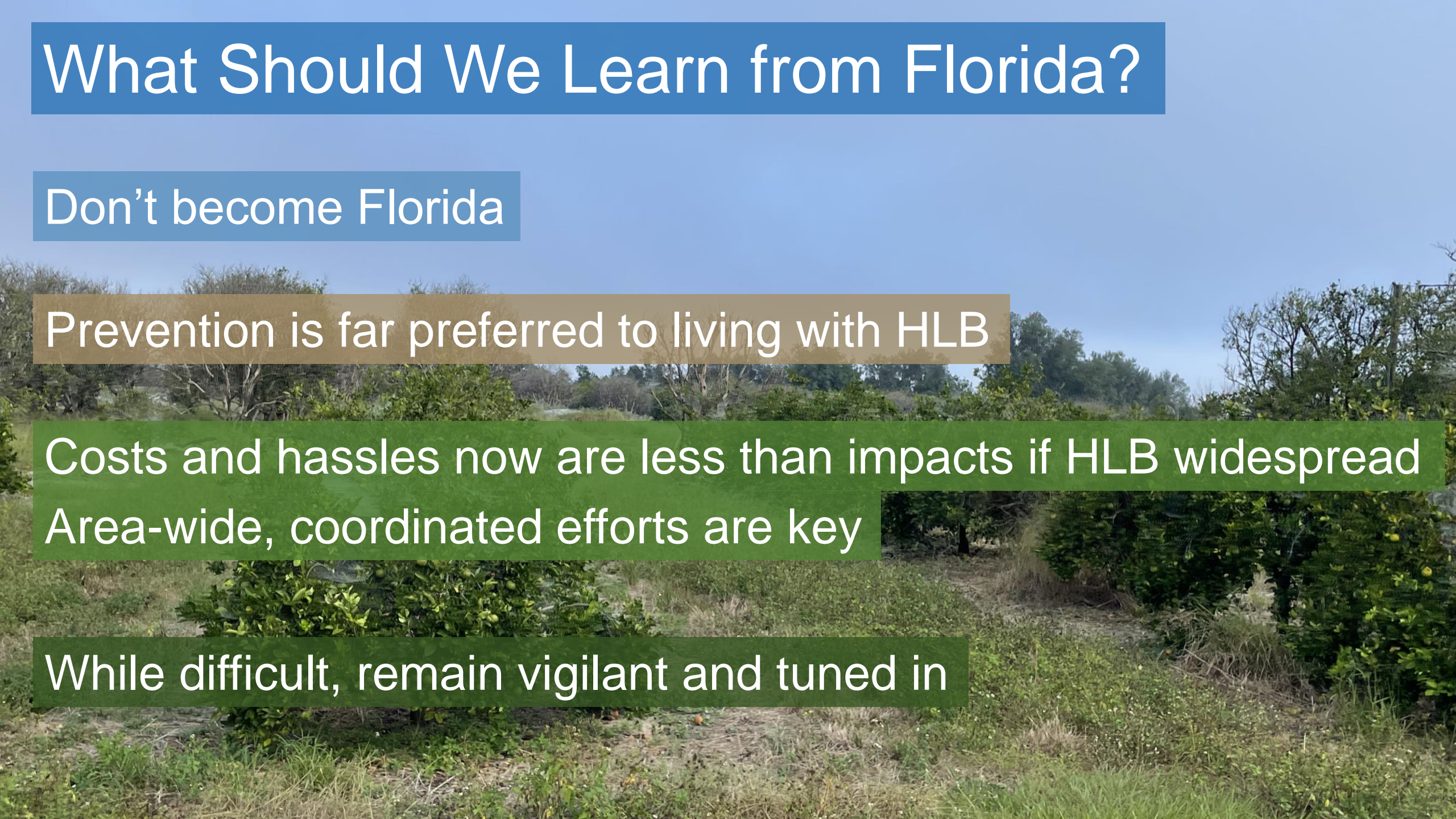
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While difficult, remain vigilant and tuned in



California is not Florida



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Better prevention efforts in CA
Learned lessons from Florida



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Able to quarantine, remove infected trees



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Biocontrol with *Tamarixia* may be more effective



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Conditions may be worse for ACP/HLB here...



ACP and HLB Limited in California?

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ACP ideal egg laying temperature: 77-86° F

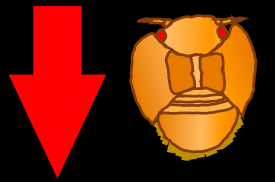


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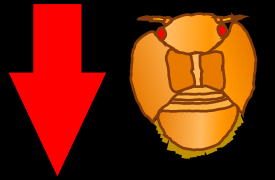
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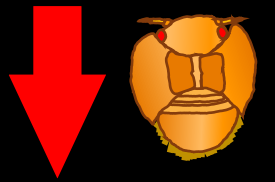
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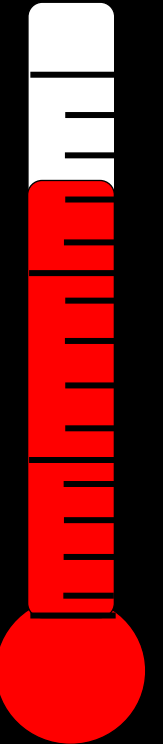
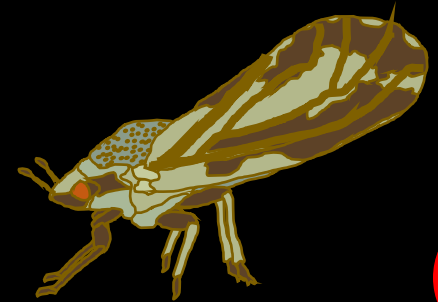


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HLB does best in constant warm, but not hot weather



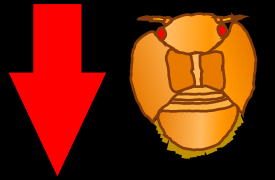
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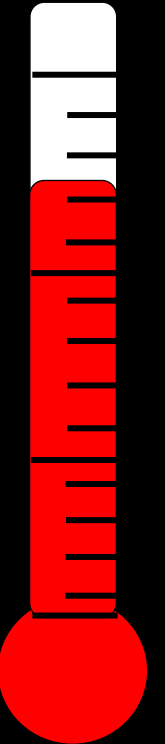
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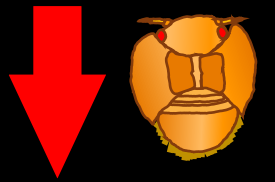
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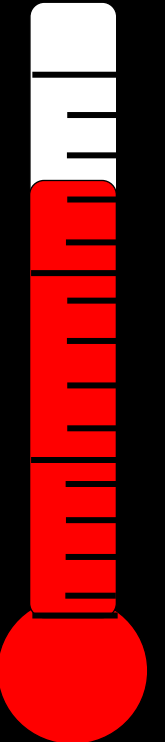
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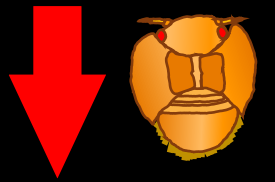
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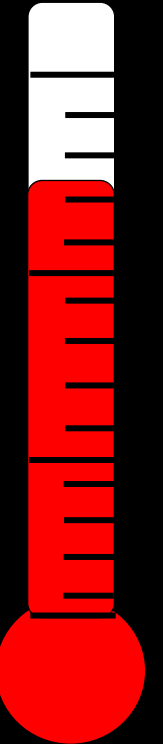


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Hints that ACP/HLB does worse in CA than in FL



Overview



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Florida citrus defined by ACP/HLB



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It affects everything, and makes production far harder

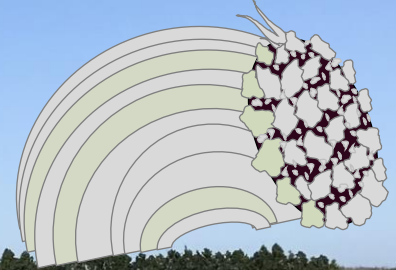


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Downstream effects compound the issue



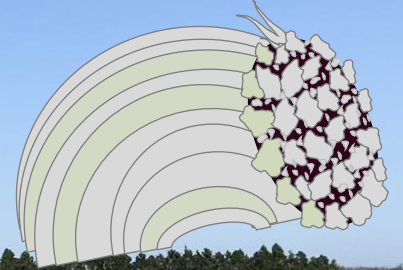
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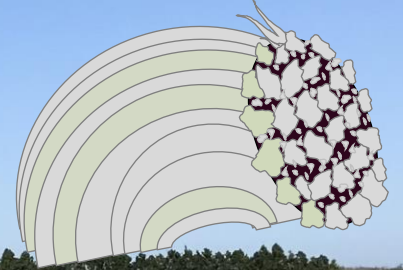
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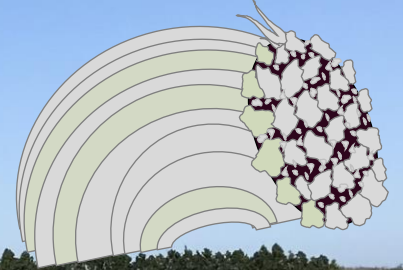
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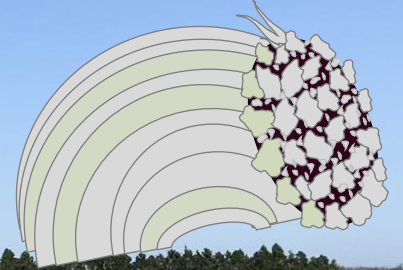
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Remain cautious and proactive



A wide-angle photograph of a large-scale agricultural field. The field is covered with a white plastic mulch, and rows of young plants are visible. A high tunnel structure, made of wooden posts and plastic covering, spans the field. The sky is overcast. The text "Questions?" is overlaid in a white box in the upper center.

Questions?

egmittleton@ucanr.edu