Food and Agriculture Organization of the United Nations

International Plant Protection Convention

Department for Environment Food & Rural Affairs

PROJECT HLB BioMath

Sentinel Routes and ARMs (Areas of Regional Management)

A surveillance system for Citrus Greening (HLB) in Brazil

London, 21 – 23 September 2022

International Plant Health Conference

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Sentinel routes are an effective way of detecting HLB invasions

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Areas of Regional Management (ARMs) can be used and improved to monitor vector dynamics and inform its control

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Both SRs and ARMs could and should be used as tools for strengthening the farmer knowledge to support the implementation of IPM technology regarding HLB

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Preventing HLB invasion protects the way of life of thousands of families and avoids losses ~US$ 40 million per year, only in the state of Bahia

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The pathosystem

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Huanglongbing

- The yellow shoot disease
- Eradication of millions of trees

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Mottling

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Fruit drop

- Small and bitter fruits
- Up to 100% of crop losses

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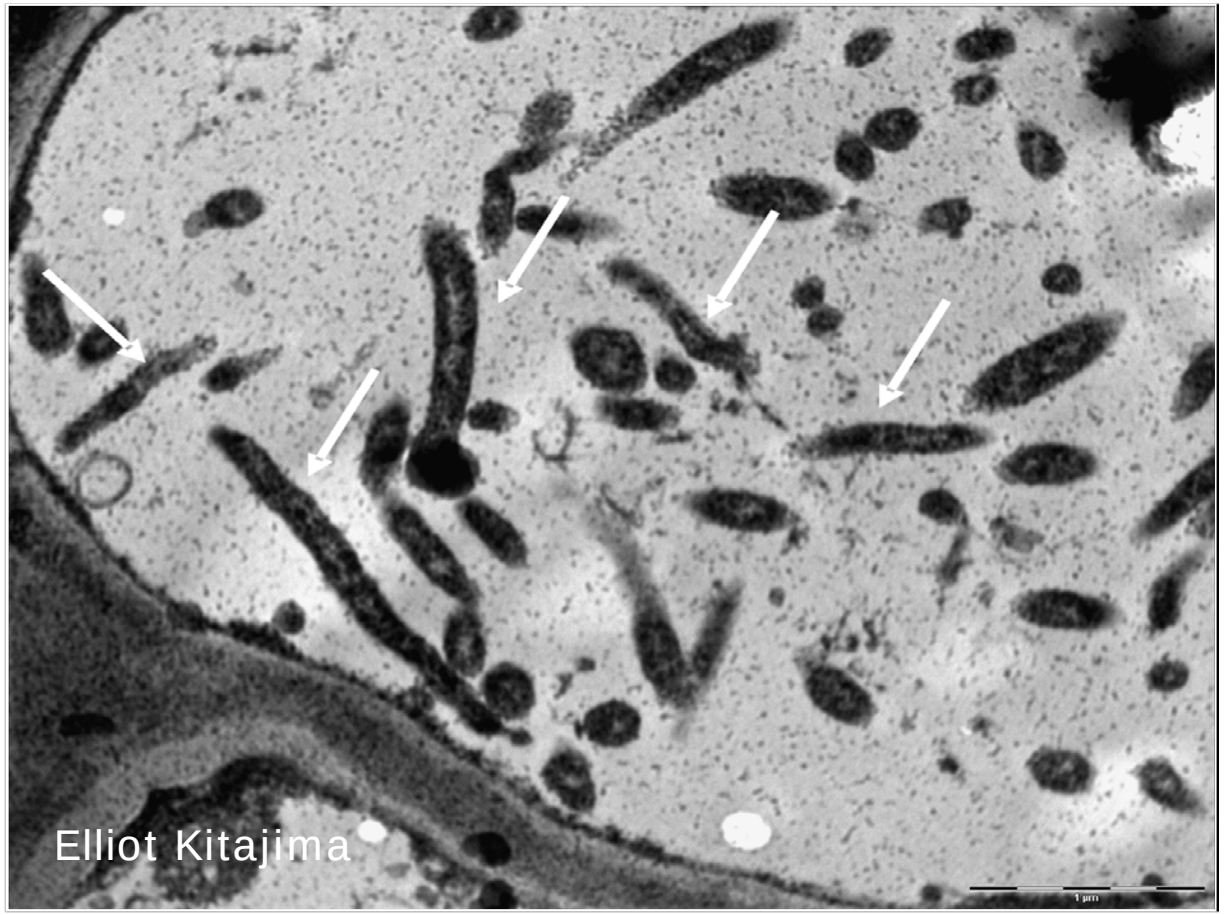
Candidatus Liberibacter spp

Phloem-limited bacteria

- *Ca.* Liberibacter asiaticus is prevalent in Brazil



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Diaphorina citri

Widespread in Brazil

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The context

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Americas: almost all citrus regions

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Since 2004 in Brazil...

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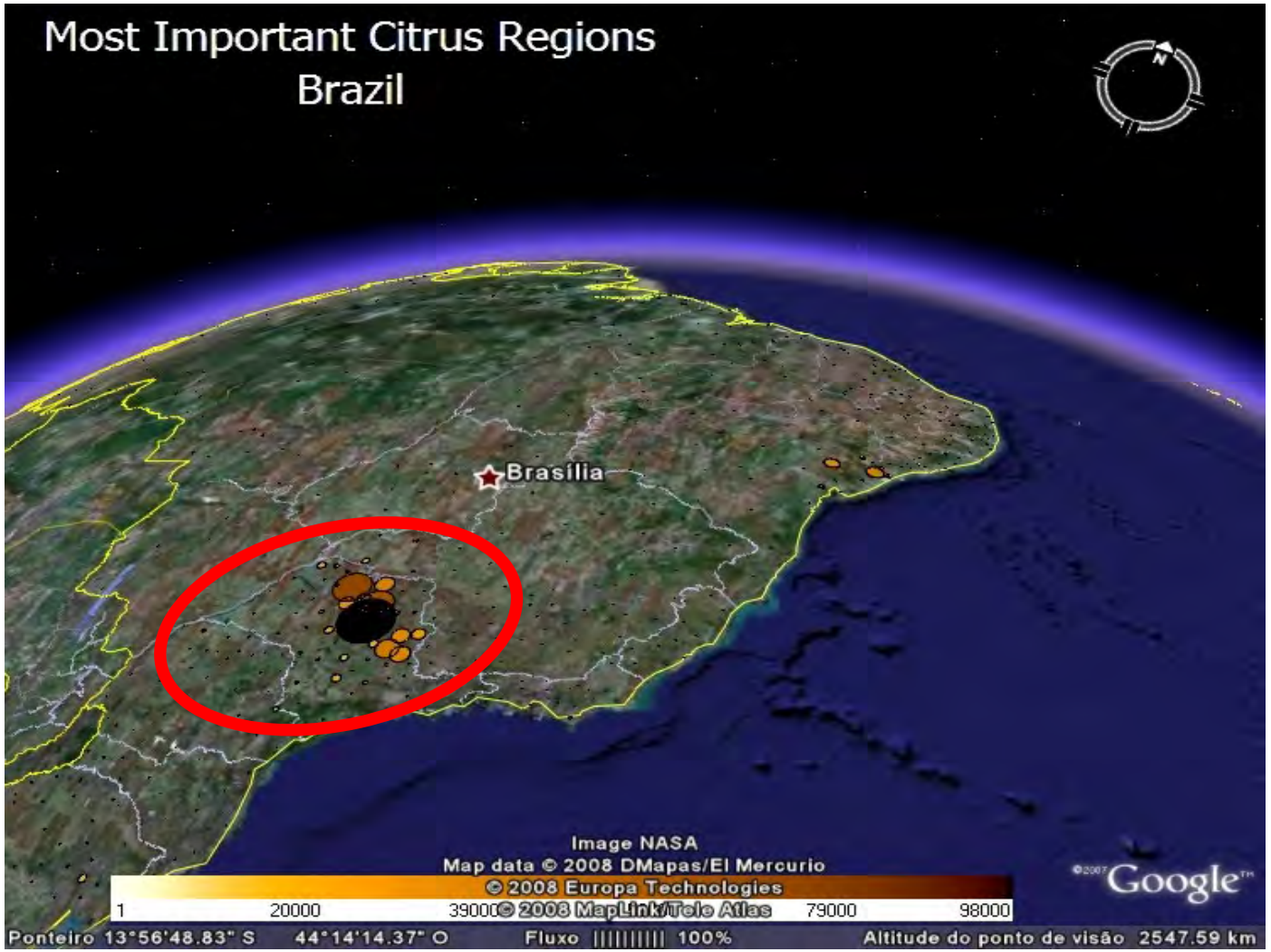
...but still restricted to the Center-South

Due to strict control policies



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Citrus all over Brazil

88% of its microregions have commercially grown citrus

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