Researchers expect the imminent arrival of the disease vector or the bacteria, aiming to emulate Brazil’s HLB strategies through a new HLB action plan for South Africa

HLB in South Africa: “It’s not if, but when”

The South African industry should be very concerned about Asian greening disease, Dr Vaughan Hattingh, CEO of Citrus Research International, told delegates of the recent citrus summit in Port Elizabeth (*right*). The South African arrival of the disease, also called huanglongbing (HLB), is not a case of if, but rather when.

“When you get the Asian citrus psyllid, the writing’s on the wall. HLB will follow and there is no remedy for HLB and none on the near horizon. There is no sustainable management strategy. HLB will change the citrus landscape in South Africa, without a doubt.”

His sang-froid is based on the Brazilian, Californian and Texan experience of Asian greening disease. The psyllid had been present in Brazil for 62 years when the first incidence of the disease was reported in 2004. The country pulled back on what was set to follow the gloomy Florida narrative and has since managed, despite a loss of over 52 million trees and a quarter of its citrus hectares, to keep HLB under check through hypervigilance applied in a collective manner – something with which the South African citrus industry is well acquainted.

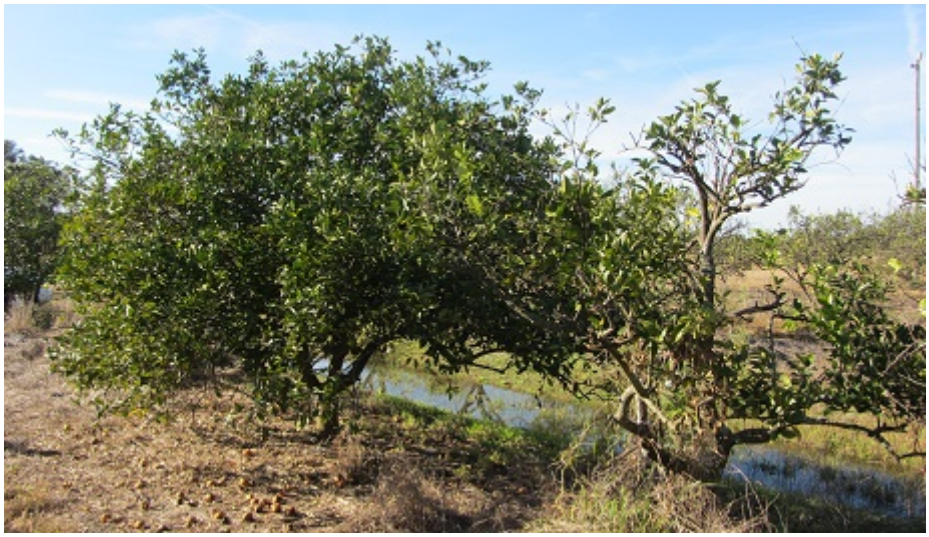
How much time do we have?

What the citrus industries in the US (specifically California) and Brazil are doing, and the tack that South Africa ought to follow says Dr Hattingh, is to buy time.

The vector of the disease, the Asian citrus psyllid (*Diaphorina citri*), was in 2015 detected in Tanzania, the following year in Kenya and is known to occur in Réunion and Mauritius. However, in Kenya and Tanzania the psyllids were free of the bacteria *Candidatus* Liberibacter asiaticus. The bacteria itself has been detected in Ethiopia nine years ago and again in 2014.

The dreaded huanglongbing disease, fatal to citrus trees and citrus industries, is the combination of the bacteria and the vector (a so-called ‘hot vector’).

“What’s worrying is that there is a red dot indicating a detection of the psyllid just north of Mozambique. That’s a report of a detection from a couple of weeks back. The expectation is that ACP [Asian citrus psyllid] is on the move, it’ll come down the east coast of Africa and through Mozambique and enter South Africa at some point in time.”



A Florida orchard infected with Asian greening disease (Photo: Dr Paul Fourie)

South Africa needs to emulate the Brazil experience

“You can detect the presence of the bacteria in the vector considerably before the tree starts showing up symptoms. In some cases up to six years prior to trees

becoming symptomatic, the hot vectors were detected in the trees. You simply do not detect the bacteria in the tree in the initial infection stages.”

Early detection of the vector (hot or not) and the bacteria is essential, followed by positive tree removal without delay. The movement of infected propagation material is a critical factor. The CRI is in consultation with South African nurseries – not just citrus nurseries but ornamental nurseries too – to develop an HLB action plan, which is at the point of roll-out.

“If you are able to effectively organise into regional, area-wide coordinated control strategies, you can emulate the Brazil experience. If you cannot do that, you’re in trouble.”

HLB is an unusual pathogen

Huanglongbing is an unusual combination and, scientists think, a recent association between the bacteria and the plant and therefore there has been little co-evolution and the result is that the pathogen kills its host, the plant. Researchers have never been able to cultivate the bacteria in medium and it is not a conventional pathogen.

HLB differs from African greening disease in its higher heat tolerance and its fatality to trees. It is a lot more severe than African greening disease which is present in South Africa, and traps are not very attractive for monitoring of the vector.

For more information:

Dr Vaughan Hattingh
Citrus Research International
Tel: +27 13 759 8000
Email: vh@cri.co.za
https://www.citrusres.com/ (https://www.citrusres.com/)

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Author: Carolize Jansen