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Greening advances in Brazil, cuts citrus crop and increases pressure for new control technologies

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Brazilâ??s citrus industry is facing one of the most critical moments in its recent history as greening (HLB â?? Huanglongbing), currently considered the worldâ??s most serious phytosanitary threat to citrus orchards, continues to spread. The growing pressure from the disease is already compromising productivity, fruit quality, orchard longevity, and sharply increasing production costs across the countryâ??s citrus value chain.

The impacts of HLB became evident in the new forecast for the 2026/27 citrus crop in the SÃ£o Paulo and TriÃ¢ngulo/Southwest Minas Gerais citrus belt â?? the worldâ??s leading orange juice-producing region. According to an announcement by Fundecitrus, production is expected to reach 255.20 million 40.8-kg boxes, a volume 12.9 per cent lower than the previous crop, which totaled 292.94 million boxes, and also 14.7 per cent below the average of the past decade.

According to Fundecitrus Executive Director Juliano Ayres, the combination of adverse weather conditions and increasing greening pressure has further worsened orchard conditions. â??This crop has been impacted by climate variability and higher greening pressure, affecting fruit set, yield, and fruit drop. Despite improvements in average fruit weight and the technological level of orchards, the situation requires strict management and continuous monitoring,â? he stated.

These figures and analyses were presented during Expocitros 2026 and Citrus Week 2026, which began this week at the Sylvio Moreira Citrus Center of the Agronomic Institute in CordeirÃ³polis, SÃ£o Paulo state. The events bring together agribusiness leaders, researchers, growers, companies, and government representatives to discuss innovation, sustainability, biological inputs, technology, energy, and the main challenges facing Brazilian citriculture.

Incidence Near 50 per cent Raises Alarm Across Citrus Belt

According to industry specialists, HLB has reached alarming levels. Citrus consultant Gilberto Tozatti, who has more than 40 years of experience in the sector and is founder of GCONCI (Citrus Consultants Group), says the average incidence of symptomatic trees in Brazilâ??s main citrus belt has already reached 47.6 per cent, while average disease severity stands at 22.7 per cent.

According to him, the problem goes beyond geographic spread. â??Severity represents the level of plant impairment and is directly related to reduced production and increased fruit losses,â? Tozatti explains. He also notes that greening has been gradually expanding into other citrus-producing regions throughout the country.

Consultant Hamilton Rocha recalls that HLB was first detected in the citrus belt in 2004 and has continued to spread ever since. â??Today it is present in nearly 50 per cent of citrus trees in the citrus belt and has already spread to Minas Gerais, ParanÃ¡, and other states,â? he observes.

The economic consequences are severe. Tozatti estimates that more than 50 per cent of premature fruit drop is currently associated with HLB. In addition, the disease significantly reduces industrial yields and compromises juice quality, directly impacting the competitiveness of Brazilâ??s citrus industry.

Hamilton Rocha emphasizes that losses have been accumulating for more than two decades. â??Fruit production and quality have declined dramatically throughout these more than 20 years,â? he says.

Integrated Management Remains the Main Strategy

With no definitive cure available on the market, greening control continues to rely on integrated management, intensive monitoring, and strict control of the psyllid Diaphorina citri, the insect vector responsible for transmitting the bacteria associated with HLB.

In regions with lower incidence levels, Tozatti highlights the importance of rapidly eradicating infected trees and maintaining rigorous vector control to prevent disease spread. In the most heavily affected areas, growers have concentrated efforts on preserving orchard productivity and longevity.

â??In these regions, the focus has been on improving soil fertility, balanced nutrition, and preservation of the root system, one of the plant structures most severely affected by HLB,â? the consultant says.

Hamilton Rocha points out that there is still no effective reversal of the disease in symptomatic plants. â??What we can currently do is reduce the speed at which the disease advances within the orchard,â? he explains.

Agronomist and PhD AndrÃ© Luis Teixeira Creste describes the situation as alarming. According to him, some regions already show symptomatic tree incidence levels above 70 per cent, potentially leading to even greater losses depending on weather conditions.

Despite the disease pressure, Creste says Agro SÃ£o JosÃ© orchards have adopted rigorous management protocols based on Fundecitrus recommendations, including chemical and biological control, plant revitalization, and sustainable soil management practices.

â??There is no silver bullet for disease control. Different tools must be combined, including soil management, vector control, chemical crop protection products, and biologicals,â? he states.

He also highlights the use of solar reflectors as a complementary tool and points to new technologies currently under evaluation in the market as promising alternatives to reduce HLB-related damage.

New Technology Aims to Slow Disease Progression

Among the technologies attracting industry attention is the Trecise system, developed by Invaio Sciences. The solution uses a localized trunk injection system that allows the precise delivery of active ingredients, including bactericides such as oxytetracycline. The product is currently undergoing registration for commercial use in Brazil.

According to the company, because it is a high-precision application system in which the product is delivered directly into the plantâ??s vascular system, it is possible to reduce application rates by up to 90 per cent compared to other methods, while also minimizing worker exposure and environmental impacts.

For Gilberto Tozatti, the solution represents â??an extremely promising alternativeâ? for the sector. â??It brings hope for more efficient control of the bacteria inside the plant, reducing HLB-related losses and helping maintain orchards in production,â?• he says.

Hamilton Rocha also views the system positively. â??The use of bactericides is one of the strategies that may help combat greening. Invaioâ??s technology is very effective because it performs localized application, avoiding exposure outside the citrus plant, and the results are highly promising,â?• he notes.

In trials conducted in partnership with Invaio, AndrÃ© Creste reports significant productivity gains. â??We have observed recovery in trees with disease severity up to level 2 and productivity gains of up to 35 per cent compared to untreated areas,â?• he states.

Citrus grower Tiago Davoglio considers HLB â??the main problem in Brazilian citricultureâ? and says the sector has spent nearly 20 years attempting to control the disease without achieving a definitive solution.

â??The losses are well established: fruit drop, poor flowering set, plant mortality, and compromised industrial yields,â? he says. According to Davoglio, technology based on OTC application could represent an important shift in greening management strategies.

â??Invaioâ??s technology directly attacks the disease within the HLB â??tripod.â?? We will continue controlling the vector, but with the possibility of reducing contaminated vectors spreading the bacteria to healthy plants,â? he observes.

According to Alexandre Chaves, the Trecise technology, once commercially available, will represent a new strategic tool for Brazilian citrus growers. â??The combination of an innovative application technology capable of delivering the product directly into the plantâ??s vascular system, together with a highly effective active ingredient for bacterial control, will bring an unprecedented and complementary approach to disease management. As a company, we are committed to expanding the arsenal of solutions available to Brazilian citrus growers in addressing what is currently the greatest challenge facing citriculture.â?•