

# Regulated citrus fruit pests

In Mexico there are 589,758 hectares of citrus fruits distributed in 24 States, with an estimated production of 8.2 million tons, whose value is about 23,924 million pesos (SIAP, 2017). This places the country as the fourth largest producer of citrus fruits in the world. Among the main phytosanitary problems affecting the crop, Huanglongbing (HLB), Leprosis (CiLV) and Citrus Tristeza Virus (CTV), which gradually decrease the quality and yield, stand out for their devastating effects on world production and they can even cause death of trees; such diseases may cause restrictions in the movement and commercialization of propagative material and fresh fruit.

Due to the fact that Mexican citrus production is threatened by diverse phytosanitary problems, during 2008 the Campaign to prevent the introduction of quarantine pests of citrus fruits began, its purpose was to preserve the phytosanitary status and to carry out exploration activities for searching symptoms of Huanglongbing, leprosis, canker and variegated chlorosis, as well as the detection of the brown citrus aphid and the Asian citrus psyllid.

Huanglongbing, or HLB, is a disease caused by the bacterium *Candidatus Liberibacter* spp., and it is considered the most devastating worldwide, because there is no known cure for

infected trees. This disease is transmitted by the Asian citrus psyllid (*Diaphorina citri*). In Mexico it was first detected in 2009 and it is currently present in different regions of the 24 producing States. It is estimated that the commercial area with the presence of the disease is 23% in relation to the national area.

On the other hand, Leprosis is a viral disease transmitted by mites of the genus *Brevipalpus* spp. It causes loss of the commercial value of the fruit for fresh consumption. In Mexico it was first detected during 2004, initiating the operation of the phytosanitary campaign. Currently, it is present in 19 States.

Citrus Tristeza Virus (CTV) is an aphid transmitted disease, among which the brown citrus aphid (*Toxoptera citricida*) stands out for its efficiency in the transmission of this pathogen. Derived from detections of severe CTV breeds during 2016 and 2017 in the State of Veracruz, as of 2018, actions were implemented focused on regional control of the vector insect and to sensitize producers to eliminate sick trees and use plants produced in nurseries certified by SENASICA, which are characterized by being free of this and other pathogens, as well as being grafted into tolerant rootstocks.