



Agdia Launches Rapid Molecular Test Kit & Service for Citrus Greening Disease

Agdia, Inc. is happy to announce the commercial launch of a [field-deployable rapid molecular test kit](#) on their AmplifyRP® XRT platform for onsite detection of Citrus greening disease (also known as Huanglongbing or HLB).

For growers interested in sending plant samples to Agdia, this product will also be used by their [Testing Services diagnostic laboratory](#), where customers receive expert guidance on crop screening and rapid turnaround time of test results.

Citrus greening has caused severe disruption in the citrus industry. In the United States, citrus production in Florida alone has decreased by 75% since 2005, in large part due to the disease, along with a doubling of production costs. This has resulted in economic losses estimated to be over \$1 billion.

While Agdia has offered an [end-point molecular test](#) used by citrus growers for detecting *Candidatus Liberibacter asiaticus* (Las) for years, the new test kit detects all three causal agents of citrus greening in a real-time format:

- ***Candidatus Liberibacter asiaticus* (Las)** is currently the most widespread and impactful species. It is present in Asia, the Americas, the Middle East and various other oceanic islands.
- ***Candidatus Liberibacter americanus* (Lam)** has been detected in Brazil.
- ***Candidatus Liberibacter africanus* (Laf)** is present in Africa, several Indian ocean islands and parts of the Middle East.

Citrus greening is transmitted primarily from one tree to another by the Asian citrus psyllid (*Diaphorina citri*) and the African citrus psyllid (*Trioza erythrae*), although some reports indicate it can also be transmitted through the grafting process.



Figure 1. Pair the new test with Agdia's AmpliFire® Pro portable isothermal fluorometer (coming soon!)



Figure 2. Citrus greening foliar symptoms caused by 'Candidatus Liberibacter asiaticus'. Courtesy of Florida Division of Plant Industry, Florida Department of Agriculture and Consumer Services, Bugwood.org.



Symptoms of infection (see **Figures 2 and 3**) include blotchy mottling, chlorosis (yellowing) in new leaf growth, twig dieback, green fruit, bitter fruit and reduced fruit yield.

Each bacterium associated with citrus greening is phloem-limited, making accurate sampling technique crucial for accurate diagnosis.

About AmplifyRP®

Agdia's new [AmplifyRP® XRT assay for the detection of HLB](#) is based on recombinase polymerase amplification (RPA). This technology promotes the rapid amplification and detection of nucleic acid targets, DNA or RNA, while maintaining a single operating temperature of 39–42 °C. AmplifyRP® products achieve sensitivity and specificity comparable to PCR, while having clear advantages over the lab-based technology. AmplifyRP® products do not require a nucleic acid purification step; crude sample extracts are prepared using a simple extraction buffer and tested directly. When paired with Agdia's AmpliFire® Pro isothermal fluorometer (**Figure 1**, coming soon!), the AmplifyRP® system is a user-friendly tool that can be implemented in the field or the lab by personnel with limited experience in molecular diagnostics. Total assay time is less than 30 minutes when used with the AmpliFire® as a real-time assay.



Figure 3. Citrus greening symptoms on leaves & fruit. Courtesy of Jeffrey W. Lotz, Florida Department of Agriculture and Consumer Services, Bugwood.org.

About Agdia

A leading provider of diagnostic solutions for agriculture, Agdia, Inc. has been serving plant breeders, propagators, growers, universities, and private testing laboratories since 1981. The company offers a comprehensive portfolio of validated, easy-to-use diagnostics for identifying plant pathogens, hormones, and transgenic traits. In addition, Agdia operates an ISO accredited, in-house, testing services laboratory. Agdia's quality management system is ISO 9001:2015 certified and their Testing Services Laboratory is ISO/IEC 17025:2017 accredited by ANAB. Visit the company's website at www.agdia.com, e-mail info@agdia.com, phone 1-574-264-2615 (toll-free 800-622-4342) or fax 1-574-264-2153.

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