



Agdia Launches Rapid Molecular Test Kit for *Cucumber green mottle mosaic virus (CGMMV)*

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 *Cucumber green mottle mosaic virus (CGMMV)*.

Cucumber green mottle mosaic virus is a plant pathogenic virus that primarily infects cucurbits and causes significant economic losses in fruit production. First described in the UK in 1935, CGMMV has since spread to nearly every region of the globe.

As a member of the *Tobamovirus* genus, CGMMV is related to many other major plant virus species such as *Tobacco mosaic virus (TMV)*, *Tomato brown rugose fruit virus (ToBRFV)* and others.

Unlike *Tobacco mosaic virus*, which has a very broad host range, CGMMV almost exclusively infects cucurbit species such as cucumber, melon, watermelon, winter squash, zucchini & pumpkin. While other known hosts are of limited economic importance, they include common weed species which could act as viral reservoirs when located near cucurbit production sites.

Foliar symptoms of CGMMV infection include uneven mottling, leaf distortion (such as blistering) and discoloration (**Figures 1 & 2**). These symptoms mimic those caused by other pathogens, particularly Potyviruses such as *Watermelon mosaic virus (WMV)*, *Zucchini yellow mosaic virus (ZYMV)* and *Papaya ringspot virus (PRSV)*. While Potyvirus management typically focuses on controlling aphid vectors, Tobamoviruses like CGMMV are primarily managed by using certified seeds and employing strict hygiene practices to prevent mechanical transmission (e.g., pruning and plant-to-plant contact). As a result, accurate diagnostic confirmation is essential for effective plant health management.

Symptoms of CGMMV infection can also appear on fruit and include discoloration, deformation, mottling and soft/spongy flesh. These quality issues, in addition to lower overall fruit yield, result in significant economic losses. [Click here for recent insights about CGMMV](#) and practical management information for growers.



Figure 1. Mottling & leaf distortion symptoms on cucurbit leaf. Courtesy of Helena Piñar and Carlos Caceres, Nakama SCA, Almeria, Spain.



Figure 2. CGMMV symptoms on cucurbit leaf. Courtesy of Helena Piñar and Carlos Caceres, Nakama SCA, Almeria, Spain.



Extensive validation studies for this new test were conducted to demonstrate fitness for purpose. No cross reactivity was observed with other pathogens tested during product validation. Diagnostic specificity of this test is 100% (62 out of 62 true negatives detected). The new assay successfully detected 91 out of 91 positive samples, resulting in a diagnostic sensitivity of 100%.

This test has been validated for use in the following hosts: cucumber, bitter melon, pepino, squash, watermelon, pumpkin, melon, watermelon & zucchini. See the [full validation report](#) for more details.

About AmplifyRP®

Agdia's new [AmplifyRP® XRT assay for the detection of CGMMV](#) 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 3**, 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. Pair the new test with Agdia's AmpliFire® Pro portable isothermal fluorometer (coming soon!)

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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