Agdia Releases ImmunoStrip® for Detection of *Tomato Aspermy Virus*

Agdia, Inc. (Elkhart, IN), a leading provider of plant pathogen diagnostic products and services, is happy to announce the commercialization of a rapid, user-friendly product for detection of *Tomato aspermy virus* on their popular ImmunoStrip® platform.

Tomato aspermy virus (TAV) is a member of the *Cucumovirus* genus and infects a wide range of economically important hosts, including *Canna*, *Chrysanthemum*, several species of *Lilium*, pepper, tobacco and tomato. This virus was first described in 1949 infecting tomato, causing severe leaf distortion and seedless fruit. Nevertheless, TAV outbreaks are uncommon on this member of Solanaceae, and it is not considered an important virus infecting tomato. *Tomato aspermy virus* is widespread in cultivated chrysanthemums, and outbreaks are common throughout regions where they are grown extensively, including Asia, Australia, Europe, New Zealand and North America.

Symptomology of TAV infection on *Chrysanthemum* varies by cultivar but typically includes plant stunting, chlorotic leaf mottling and severe flower break, dwarfing and distortion. These symptoms lead to reduction in yield and render plants unmarketable for floral and landscape purposes. Furthermore, many cultivars are asymptomatic, functioning as latent reservoirs of infected propagative materials. And, it is through international movement of infected propagative materials, including vegetative cuttings, that long-distance dispersal of TAV is accomplished. This dissemination paradigm is applicable to all ornamental hosts of this virus.

Tomato aspermy virus is spread locally in fields and greenhouses by several species of aphids (Order Hemiptera). It is spread in a non-persistent manner, meaning the virus can be acquired from an infected plant via feeding within seconds of stylet insertion. Shortly thereafter, the virus can be transmitted by the vector to healthy plants, and high populations can lead to local epidemics. Managing vector populations is important to management of TAV in nursery and greenhouse operations. Nevertheless, the most effective step in virus management is exclusion of viruses altogether, and introducing healthy propagative material is paramount to an effective management program. Once infected, plants remain infected for life as no curative therapies are available for viruses. Diagnostic testing is the primary means of identifying viruses and excluding infected plants before introduction.

Agdia states their new *Tomato aspermy virus* ImmunoStrip was evaluated against a diverse panel of TAV isolates from multiple geographic regions, including Asia, Europe and North America. The assay detected all true positives. Furthermore, Agdia states no cross-reactivity was observed for several potential cross-reactors, including *Alfalfa mosaic virus*, *Chrysanthemum virus B*, *Impatiens necrotic spot virus*, *Lily symptomless virus*, *Tobacco etch virus*, *Tobacco mosaic virus*, *Tobacco ringspot virus*, *Tobacco streak virus*, *Tomato bushy stunt virus*, *Tomato ringspot virus* and *Tomato spotted wilt virus*. This assay does exhibit mild cross reactivity with *Cucumber mosaic virus* and *Peanut stunt virus*. This assay was developed to be used with leaf and stem material.

Agdia's ImmunoStrip® platform provides end-users with unparalleled utility; samples can be tested in the field or lab by those having no previous diagnostic experience, and results are visualized within no more than 30 minutes. Furthermore, these products include everything necessary to perform a test and do not require special equipment. Test protocol is simple and includes **1)** Sample collection and extraction in Agdia buffer bags, **2)** Exposing the ImmunoStrip®

to the sample extract, and **3)** Allowing results to develop. Test results are visualized as a single control line or a control and test line for negative or positive results, respectively.

The *Tomato aspermy virus* ImmunoStrip® is sold in kits of 5 or 25 strips, and kits include everything necessary to perform a test. Agdia provides a one-year warranty on purchased kits. A diagnostic assay for the detection of the TAV is also available in an enzyme linked immunosorbent assay (ELISA) format. For more information on these products, in addition to Agdia's full catalog of pathogen detection products, 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.

ImmunoStrip® is a registered trademark of Agdia, Inc.