

## Now You Can Test for Virus in Your Garden!

As part of its ongoing efforts to understand and control virus in dahlias, Professor Hanu Pappu at Washington State University (WSU) is in the process of implementing a testing program that will serve to determine the presence or absence of all of the known, naturally occurring viruses in our dahlias. That service will be made available to all interested dahlia growers. Foliage will be tested for each of the following six viruses: Cucumber Mosaic Virus (CMV), Dahlia Common Mosaic Virus (DCMV), Dahlia Mosaic Virus (DMV), Impatiens Necrotic Spot Virus (INSV), Tobacco Streak Virus (TSV), and Tomato Spotted Wilt Virus (TSWV). These are the viruses that are important to our home dahlia gardens.

The March, 2016, ADS Bulletin contained an article summarizing a set of about 200 such tests carried out on foliage taken from dahlias in 5 different gardens in northeast Ohio. A more detailed description of that work is available on the ADS website at <http://www.dahlia.org>. The website article includes a listing of the tests performed and the results determined for each sample. One of the important results of the testing was that different gardens tended to have different types of virus, suggesting that there is no simple 'average' virus condition in our gardens and that it is important to do the testing in individual gardens and in various growing regions.

The testing program outlined below will provide the opportunity to further assess the relationship between the appearance of the foliage and the presence of virus, help us to understand the distribution and the extent of the penetration of virus in plants around the country, and provide the opportunity to substantially increase the number of valuable tubers that are known to be free of virus for the 2017 growing season. A much larger data set could also help identify virus resistant cultivars

**Perhaps the best news from the initial virus testing in Ohio was that most of the dahlias tested proved to be free of virus!** The test results made it possible for the growers involved in the testing to be confident that they would also have stock to produce virus-free plants in 2016. Work at WSU has shown that plants that are free of virus will yield tubers that are also free of virus. Starting with clean material is the most effective way to reduce the viruses plants both in the near and long terms.

A pilot project is planned for this upcoming growing season to test the premise that the virus condition from the 2015 growing season will carry over into the 2016 season. Tubers from 'positive' plants will be isolated and planted for examination and testing in 2016. Of course, we will grow all of the tubers from the plants that were free of virus. We will keep you posted.

It is our expectation that there will be increasing interest in virus-free tubers among our dahlia growing enthusiasts. The 2016 Ohio tubers are being labeled as "G1 tubers," indicating that the leaves of their parent generation was tested and found to be free of virus. Growers of those G1 plants will report their performance this season. Of course, those growers will need to exercise the best cleanliness practices in taking cuttings and managing the plants. The results will be gathered by email at [virus-info@dahlia.org](mailto:virus-info@dahlia.org).

We also anticipate that there will be substantial and growing interest in obtaining tubers from a commercial supplier who can specify that a certain selection of their tubers came from virus free stock. Who among us has not been highly disappointed to find that an expensive tuber produced a very unhealthy plant? We hope that some of our commercial suppliers will take advantage of the opportunity to have at least a portion of their stock tested. We also encourage the various conferences within ADS to invest in testing a group of plants in order to provide clean stock (G1) that would be available in the spring of 2017 through an auction or sale. We will make a beginning on that approach at our Midwest Conference meeting and auction in June. We encourage all clubs and Conferences to cooperate

in generating a similar objective for clean G1 tubers in 2017.

Professor Pappu has agreed to provide the testing services at a cost of \$10 per leaf sample for a minimum of 30 samples based on the fact that our friend and colleague, Mr. Jim Chuey, through the Scheetz-Chuey Foundation, will be subsidizing the cost of the labor for the testing. Jim is anxious to encourage broader availability of virus-free stock. The test results from the 2016 virus analyses will be integrated with last year's Ohio data to help us to understand the nature and the distribution of the various viruses in different cultivars and growing regions. The source of the samples will remain confidential but the growing region will be part of the data to be analyzed. If you prefer not to have your sample results included in the study, the lab may be able to do the testing at the non-subsidized rate of \$70 per sample.

More details and instructions for shipping the samples to Professor Pappu's laboratory are posted on the ADS website, [dahlia.org](http://dahlia.org).