



## Coming and Goings

The changing seasons. Sowing and reaping. These are the rhythms of agriculture. And in this issue we also witness the comings and goings of those who we rely upon to keep us moving forward with our mission. We are saying goodbye to some of our fiercest advocates and welcoming some brilliant new faces. Change seems more bittersweet this year, when we are seemingly on the verge of renewing long-time acquaintances, perhaps meeting in person again after our forced separation. But we've learned we can sustain our relationships and our network with a bit of creativity and a whole lot of flexibility. So with our newly honed adaptability, we will soldier on and wish everyone the very best in their new endeavors!

## Erich Rudyj, Leader of the NCPN Management Team, Retires



As summer 2021 comes to a close, so too does an era for the National Clean Plant Network. Practically since its inception, Erich Rudyj has guided, inspired, and nurtured the growth of NCPN from early concept to a permanent program funded by USDA. When Erich retires at the end of August, he leaves NCPN in a position of growth and sustainability, with a network of dedicated leaders to carry on the legacy of an organization built on vision and collaboration. As the very definition of a *people person*, Erich befriended many folks along the way, and always had a funny story to share, whether he was meeting a scientist from the Pacific Northwest, a Midwest farmer, or a policymaker on "The Hill."

One of the hallmarks of Erich's leadership is his commitment to an efficiently run program, which kept overhead to a minimum and ensured that at least 95% of funding went directly to the support the networked Clean Plant Centers.

In addition to his dedication to responsible fiscal management, Erich is passionate about horticulture and the end products of healthy agriculture. Retirement will allow Erich and his wife Pimpa to indulge in their shared love of travel while exploring the food, culture, and history of international locales. First stop will likely be Thailand to visit family, but don't be surprised if we hear of this adventurous couple making new friends around the globe.

*"Erich has been a driving force in building the National Clean Plant Network and bringing together clean plant centers, regulators, and industry partners in a variety of crops for a common goal. The NCPN is what it is today because of his vision and ability to build coalitions with diverse stakeholders. Since 2008, the network has grown to 35 centers representing 7 specialty crop groups, preventing disease losses by providing producers and industry with clean propagative materials."*

—Dr. Wendy Jin, Executive Director for PPQ's Science and Technology.



**Dave Prokrym and Erich Rudyj  
retiring from NCPN management  
Read more on page 2.**

## David Prokrym Signs Off with “Back to You, Network!”

Those of us who have had the pleasure of working with Dave Prokrym the last few years can attest to his belief that “we are all in this together.” And as he follows his long-time collaborator, Erich Rudyj, into retirement, those of us left to carry on the NCPN mission are stronger because of his encouragement to try new approaches and look at problems as opportunities. Dave kept a steadfast focus on enhancing and improving processes through discussion and debate. He always strove to connect people and foster a true network of engagement and collaboration.

Dave and Erich share more than a commitment to NCPN—they share a love for tinkering (Dave with his Aurora HO slot cars, Erich with clocks and watches), and an appreciation for finely crafted beverages and the people who make them. Dave reflects that attending NCPN-Hop meetings was the only time they were “required to drink on the job” as they learned, first-hand, the importance of a quality hop harvest! Before becoming teammates in NCPN, Erich and Dave worked together on PPQ biocontrol activities in the 1990s. So apparently, Dave began and ended his career working with Erich.

We trust that Dave and his wife, Tanya, will find occasions to continue the dialogue with Erich and Pimpa, likely over a hoppy beer in Thailand, Germany, or perhaps Russia, where Dave and Tanya met while studying in Leningrad as students at Georgetown University. Happy trails to all of you—and stay in touch with us working stiffs. We’ll buy you a beer next time you are in town!



*“David Prokrym brought to NCPN a crucial awareness of planning and the role that this concept has on advancing the program and in strengthening the Network to embrace future opportunities. His vision and perspectives for action-oriented decision-making improved the basis upon which NCPN stands and served to guide the Network forward. NCPN is much the better for David’s visionary leadership.”*

— Erich Rudyj, NCPN Coordinator

## CPCNW to Guide Hop Importers Through Quarantine Process to Protect Against HSVd

Effective July 2<sup>nd</sup> 2021, USDA-APHIS added Hop stunt viroid (HSVd) in *Humulus* sp. as a quarantine pest to the ‘Not Authorized Pending Pest Risk Analysis’ (NAPPRA) list. This means that U.S. hop breeders, propagators, and growers can no longer import any hop propagules, with the exception of seeds, from any country, unless they have a valid P588 Controlled Import Permit.



The effect of HSVd on juvenile hop plants (right), against uninfected plants of the same age (left)

The Clean Plant Center Northwest (CPCNW) has, for nearly two decades, been leading the fight against HSVd in hops, receiving, conducting diagnostics, and cleaning up important public and proprietary germplasm, including many of the USDA breeding program’s new lines. HSVd is a particular problem for young hop cultivars, as it can severely restrict their growth and productivity.

In response to this regulatory change, the CPCNW, as the lead hop Clean Plant Center within the National Clean Plant network, is establishing a hop quarantine import program to support the hop industry’s need to access to new and important germplasm from around the world. Working with our industry partners at USAHops, the CPCNW will guide hop importers through the quarantine process and ensure that the U.S. hop industry is protected against the import of harmful hop viroids like HSVd or CBCVd.



## Dimitre Mollov Takes the Lead at the Clean Plant Center in Corvallis, Oregon

Dr. Dimitre Mollov has accepted the small fruit virologist position at the Horticultural Crops Research Unit in Corvallis, Oregon and officially started in late May. With this assignment, Dr. Mollov is now the Director of the Clean Plant Center at Corvallis. In his previous position at the USDA National Germplasm Resources Laboratory in Beltsville, MD, Dr. Mollov's research utilized highly sensitive techniques to detect virus-specific nucleic acids, including high throughput sequencing coupled with biological and molecular studies to characterize poorly described viruses of quarantine significance. Prior to joining USDA, Dimitre was the Plant Disease Clinic Director at the University of Minnesota from where he holds his advanced degree.

Dr. Mollov actively collaborates with colleagues from the U.S., Africa, Australia, Europe, and South America. For his services the USDA ARS awarded him the Early Career Scientist in 2017. In 2019, Dr. Mollov received the Outstanding Service Award from the National Plant Diagnostic Network. In 2020, he was the recipient of the APS Virology Schroth Faces of the Future Award.



In addition to being the NCPN Center Director at the HCRU, Dr. Mollov will focus on many aspects of virus research of blueberries, caneberries, grapes, and strawberries. Some of these aspects will be on virus biology and etiology, molecular and genomic diversity, virus taxonomy, virus co-infections, virus transmission, etc. The goals of the virology program are to determine the causal agents of virus diseases of small fruit crops and the impact of virus infection on fruit quality and yield. Developing robust and reliable diagnostics methods and utilizing high throughput sequencing technology for virus detection will be a strong direction of the fruit virology program.

Dimitre is well respected amongst his NCPN Berries Center Directors and is a welcome addition to the Tier 2 Berry Team. You can contact Dr. Dimitre Mollov via email at [dimitre.mollov@usda.gov](mailto:dimitre.mollov@usda.gov).

## Sweet Potato Industry Representatives Gather in Starkville

Representatives from across the nation's sweet potato industry gathered in July 2021 in Starkville, MS on the campus of Mississippi State University to discuss how they could work together to strengthen the industry and build a sustainable future for generations to come. Many members from NCPN-Sweetpotatoes participated in the meeting. Discussions ranged from very



broad to the primary focus on improving sweet potato foundation seed programs through research and extension efforts. The meeting was part of a larger project the industry has prioritized to stimulate industry growth by improving foundation seed programs, the cornerstone of achieving a more sustainable future.



**Mississippi sweet potato meeting participants tour the facilities at E3 Foundations, a Certified Seed Producer in Woodland, MS and N&W Farms, a producer/packer/shipper of sweet potatoes in Vardaman, MS.**

## Deborah Golino, FPS Director and NCPN-Grape Chair, Retires

After 27 years of service, Foundation Plant Services' (FPS) Director and NCPN-Grapes Chair, Dr. Deborah Golino has retired. Since 1994, Dr. Golino has been the Director of FPS, a clean plant center at University of California, Davis. FPS is dedicated to the distribution of disease-tested, true-to-identity plant materials with programs for grapes, strawberries, fruit trees, nut trees, sweetpotatoes, and roses. The research and service programs Deborah has managed at FPS have played a key national and international role in improved methods of pathogen detection, streamlining virus elimination techniques for clean stock and quarantine programs, and distributing new crop varieties and healthy planting stocks.

Deborah was instrumental in the formation of the NCPN and served as Chair of the NCPN-Grapes Committee from its inception. FPS has served as an important contact point for outreach efforts to provide information about our crops and has maintained regular contact with nurseries, growers, consultants, and regulatory stakeholders. FPS and NCPN thank Deborah for her many years of dedication to the crop industries that she has helped advance through her research, outreach, and service. FPS staff is especially grateful to Deborah for her guidance, leadership, and thoughtful expansion of FPS programs over the years.



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## Economic Impacts of Rose Mosaic Disease

[Excerpt from publication by Luis A. Ribera, Marco A. Palma, Brent H. Pemberton, Charlie R. Hall, Daniel Hanselka and David H. Byrne]

For decades, rose mosaic disease (RMD) has been an issue in garden rose production in the US. In the 1960s, a virus-tested collection of roses was established at the University of California at Davis. In recent years, this collection that is maintained by Foundation Plant Services (FPS) has been rejuvenated and expanded with support from the National Clean Plant Network. In addition to these efforts, assessment of the economic effects of establishing and maintaining the virus-tested collection of roses has been deemed desirable as part of understanding the value to and the impact of the availability of virus-tested rose material on the garden rose production industry. A survey to industry members was implemented to obtain information regarding the economic losses due to RMD. The respondents represented sales of \$71.5 million or around 35% of the rosebush industry value of \$203.5 million (U.S.

Department of Agriculture, National Agricultural Statistics Service [USDANASS], 2018a).

Based on the survey responses, baseline economic impacts were estimated using the rosebush industry value of \$203.5 million with losses estimated at 5%, 10% and 15%. For more information:

[Economic Impacts of Rose Mosaic...](#)

*(funding provided by a NCPN grant initiative)*



Pictured at left: symptoms of rose mosaic disease on rose plant

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## FPS Announces New Director, Maher Al Rwahnih

Foundation Plant Services (FPS) at the University of California (UC) Davis is pleased to announce Dr. Maher Al Rwahnih as the next FPS Director. Maher's extensive work with clean stock programs and viral diseases of woody plants, along with his development of advanced diagnostic tools, make him uniquely suited to advance the mission of FPS. Maher joined FPS in 2004 as a Postdoctoral Research Fellow before becoming an Academic Administrator. In 2016, Maher was promoted to Director of FPS Diagnostics and Research Laboratory. Maher has developed an expertise in the diagnosis and control of infectious diseases of fruit trees and grapevines, specializing in the etiology, molecular characterization, and molecular diagnostics of virus diseases in those crops. He has more than twenty years' experience developing diagnostic tools for the detection and identification of agents of those virus diseases. He pioneered the characterization of plant viruses through high-throughput sequencing (HTS) and bioinformatics and is working to advance the adoption of HTS technologies in routine plant diagnostic testing. These advances have translated into improvements in clean stock programs for the management and eventual elimination of diseases in vineyards, orchards and fields. Maher is excited for the opportunity to guide FPS in meeting future challenges and advancing the FPS mission. He expects to advance the role of FPS as a global leader in the production, maintenance and distribution of elite, disease-tested plant propagation materials for commercial specialty crop industries in California and across the United States. Maher also looks forward to strengthening the research and regulatory collaborations already developed and exploring additional opportunities to improve plant health and enhance resource availability at the local, national and global levels.



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## High-Throughput Sequencing Study Validates Use of HTS in Grapevine Diagnostics



Laboratory preparation of samples for HTS testing.

High-throughput sequencing (HTS) was validated as a routine plant diagnostic tool for grapevine viruses in a recently published study supported by the NCPN HTS Special Initiative. HTS outperforms bioassays and molecular diagnostic assays in screening domestic and quarantine grapevine materials in data throughput, cost, scalability, and detection of novel and highly variant virus species. However, before HTS-based assays can be routinely used for plant virus diagnostics, performance specifications need to be developed and assessed. This work helps standardize HTS for quality assurance and accreditation purposes in plant quarantine or certification programs and provides a mechanism for the evaluation of validation results for faster HTS protocol acceptance. In the published study, virus-infected grapevines were used to measure performance characteristics of an HTS-based diagnostic assay. Sensitivity, repeatability, and reproducibility of the HTS assay were assessed and the assay consistently performed well. These results will increase stakeholder's confidence in HTS use for regulated pathogen detection by minimizing the risk of false negatives; provide regulators with increased confidence in the reliability of HTS in certification programs; and will result in the expedited release of propagative plant material to stakeholders. [Click here to read the full paper.](#)

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## NCPN-Fruit Tree Field Trip

Traveling from the scorching Pacific Northwest, it was refreshing to be greeted by the ready-to-pick peach orchards and temperatures in the mid-eighties when Tanner Hunt, NCPN-FT Coordinator, touched down in Clemson, South Carolina.

The Clemson Clean Plant team was ready to show off their freshly sequenced southeast-focused foundation in the screen house and field blocks planted at Musser Farms.

Dr. Cieniewicz and her team were eager to work over the next couple of days to discuss opportunities and strategies to raise awareness in the surrounding states on the Clemson Clean Plant Center, Southeast Budwood Program, and the National Clean Plant Network.

Tours of Titan Farms packing facility and production fields were facilitated by Matthew Howle, NCPN-FT crop committee member, and representatives for Chalmers Carr, Titan Farms CEO. The trip was an opportunity to cement relationships and shared objectives for “healthy agriculture through clean plants” for region-specific fruit tree varieties.



Clemson Clean Plant Center's Director  
Dr. Cieniewicz and Field Technician  
Brodie Cox evaluating foundation blocks  
at Musser Farms.

## National Clean Plant Network WEBSITE & SOCIAL MEDIA



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