



NCPN-Roses Shares Best Management Practices to “Stay Clean”

As Rose Rosette Disease (RRD) threatens to decimate the rose production industry, rose field-production centers struggle with the best protocols for either maintaining ‘clean’ fields or how to respond once the disease is detected within the production area.

Nurseries have developed protocols for mitigating the probability of introducing unwanted diseases (such as Rose Rosette Disease) into rose production blocks. Dan Waterhouse, co-owner of NeuHouse Farms, has agreed to share their RRD prevention protocols with the NCPN.

Rose Rosette Disease Best Management Practices from NeuHouse Farms

Plants/budwood from U.S. sources are only accepted from those known to have ‘clean’ stock.

- Known ‘clean’ stocks are not mixed with imported stock.
- Imported plants/budwood are kept in a quarantine block.

Management of visitors and employees in the fields is crucial.

- Entry is not allowed if an individual has visited any landscapes or other rose production fields during the day.
- Fields may only be entered in a certain order and in one direction only: Post Entry Quarantine Block, then Virus Index Block, then Research Block, then Production Fields.

Employees have been trained to look for unusual growth types and/or insect activity.

- When employees suspect RRD, plants are flagged and are immediately reported.

Fields inspections are performed on a regular basis.

- Samples are randomly checked both internally (in-house lab) and by an outside service for the presence of disease/insects.

Field instruments are sanitized daily.

Miticides/insecticides are used in accordance with established protocols.

- Chemical usage is rotated to prevent resistance buildup.

Other items that are considered:

- Know the risks. Is the disease in the area?
- How close is a disease source?

Prevention is the first and best defense against any plant disease. Sourcing clean plants or propagation material from a reputable supplier is essential. The rose nursery industry sources virus-tested rose scion budwood and understock canes from Foundation Plant Services, a National Clean Plant Network Clean Plant Center, to establish healthy sources of propagation materials at the production level which are then carefully managed to produce healthy plants for retail sale.



Left to right: Nancy Neufeld, Jacques Ferare, and Dan Waterhouse. Neufeld and Waterhouse are co-owners of NeuHouse Farms, Ferare is a retired executive of Star Roses and Plants.

[Learn more about the Foundation Plant Services Rose Program](#)

Dr. Chris Clark Leaves an Indelible Mark on Sweet Potato World

To say that Dr. Chris Clark has had a successful career is an understatement. For over 45 years, Chris has made contributions to the sweet potato industry both nationally and internationally. As an exceptional scholar, researcher, extension professional, mentor and teacher, he has played a pivotal role in the advancement of virus-tested clean seed programs and served as Chair of the NCPN-Sweetpotato Tier 2 group since its inception.



Dr. Chris Clark retires in August 2022.

In 1999, Dr. Clark spearheaded the decision to transition the foundation seed program at the Louisiana State University AgCenter Sweet Potato Research Station (one of seven National Clean Plant Centers for Sweetpotato) to a virus-tested foundation seed program. The program has since processed over 80 different sweet potato cultivars and breeding lines through meristem-tip culture and virus indexing and has also maintained by nodal propagation in tissue culture, virus-tested plantlets of each cultivar. Dr. Clark has published over 100 refereed publications, compendiums, and book chapters. He has contributed to the training of graduate students, many of which remain involved with sweet potatoes today.

Dr. Clark's soft-spoken humility belies the expanse of accolades he has garnered throughout his career. He has been recognized with numerous national awards from his peers, including the National Sweet Potato Collaborators Group National Impact Award and the Outstanding Plant Pathologist by the American Phytopathological Society. He was selected as *Mr. Yam* by the Louisiana Sweet Potato Industry in 1990 and received the Distinguished Service Award from the Louisiana Sweet Potato Association in 1997.

It takes unique talent and a special personality to successfully bridge the scientific and academic world and the real world of production agriculture. Dr. Clark has done just that. As a go-to resource for both scientists and growers, Chris' legacy as an authority on sweet potato diseases will follow him well beyond his retirement in August 2022. With heartfelt gratitude for all you have done, The National Clean Plant Network family salutes you Mr. Yam, and wishes you all the best in the next evolution of your life!

Hop Cultivar 'Vista' and Hop Tissue Culture Starter Material Available This Season



The latest hop line from the USDA-ARS breeding program, 'Vista', is now available at the Clean Plant Center Northwest (CPCNW). Vista, along with the earlier 'Triumph' hop, are examples of the public breeding program partnership between the USDA-ARS and the National Clean Plant Network, making virus-tested U.S.-developed cultivars available to U.S. growers. For those who are interested, Vista is suitable for use in dry hopping, exhibiting aromas of gooseberry, white wine, white peach, honeydew and papaya, and when mixed with Cascade, Centennial, or Chinook, displays strong grapefruit aromas.

Also new for this season, CPCNW announced it will be offering unrooted and rooted tissue culture hop plantlets commencing with the 2022 summer sales.

This option will only be available for sale to U.S. customers. Tissue culture products will give propagators an additional option for virus-tested source material, straight from the CPCNW foundation, for rapidly amplifying their operations. Pricing and product delivery timeframes will be announced soon. Please follow our website and social media platforms for more details. [NCPN-Hops](#)

Tim Martinson Retires, but is Not Bugging Out Any Time Soon

You know that age-old ice-breaker question, “Who would you most want to be stranded with in a New York vineyard?” Yeah, that one. A popular answer in viticulture circles is “Dr. Tim Martinson!” But lest you think he’ll have time for such shenanigans now that he has retired, think again. Tim remains virus-vigilant doing sustainable viticulture inspections for the New York Wine and Grape Foundation pilot certification program (watch for more on that nascent program in the next newsletter). His dedication should surprise no one.

Martinson began his career at Cornell University in 1991 after three years working for the Peace Corps in Central America. He completed both his Master’s and Ph.D. degrees in entomology at Cornell and initially was research associate with the grape entomology program at the university’s New York State Agricultural Experiment Station in Geneva. As an Extension Specialist, Tim has dedicated his career to sustainable viticulture practices. He has worked closely with faculty, regional extension educators, and industry groups in enology and viticulture to provide growers and wineries with educational programs, workshops, newsletters, and applied on-farm research to support profitable production of grapes, grape products and wine in New York.

As co-editor of two Cornell publications—the weekly *Veraison to Harvest* newsletter and *Appellation Cornell*, a quarterly online publication, Tim has kept a broad readership informed about viticulture and enology research, extension and teaching programs at Cornell.



[Dr. Tim Martinson, leading the type of learning sessions that resulted in him being honored with an Outstanding Achievement Award.](#)

Dr. Martinson has been involved with NCPN from the beginning, even as stakeholders began discussing the formation of a collaborative approach to support the production of clean propagative plant material. Tim’s expertise in communications helped inform and improve the products and services of the NCPN Education & Outreach Committee, and inspired members through his own professional achievements. So, should you find yourself stranded in a vineyard anytime soon, you’d be fortunate to have Tim by your side, guaranteeing you’d be well informed and have a healthy source for wine to sustain you. And those Peace Corps skills would undoubtedly come in handy too.

Harmonization of Grape Certification and Quarantine Regulations is a Team Effort

In 2021, the states of Idaho, Oregon, and Washington completed the process of harmonizing their grape certification and quarantine programs to allow the unimpeded flow of clean, virus-tested material from state to state. This was a result of a lengthy effort, beginning in 2015, that involved growers, nurseries, university researchers, and regulators from all three states, led by the Washington Wine Industry Foundation. The partners involved met repeatedly over the course of the ensuing years, identifying and agreeing on pests and pathogens of concern to the Pacific Northwest grapevine industry.



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The Making of a Third Full-Service Clean Plant Center for NCPN-Berries

Based on increased industry demand, the NCPN-Berries Tier 2 board concluded that there was a need for a third full-service Clean Plant Center for Berries. With the University of Arkansas supporting the infrastructure needs, the project to expand the existing program in Fayetteville, Arkansas is underway. While the consideration of bricks-and-mortar facilities and essential equipment and supplies are critical, the true key to a successful center is recruiting and retaining qualified personnel. Center Director Ioannis Tzanetakis appears to have pulled this off with recruiting and hiring the following individuals.

Dr. Punsasi Rajakaruna joined the University of Arkansas Division in August 2021. Her main role in the berry Clean Plant Center at UADA is to perform virus diagnostics. She obtained her BS and MS in Biochemistry and Molecular Biology at the

Oklahoma State University, Stillwater, Oklahoma. Punsasi studied the competition between Tobacco mosaic virus, Turnip vein clearing virus and their chimeras during her Master's degree. Her Ph.D. obtained from the Medical College of Toledo involved identification and characterization of a novel comovirus. Her passion for learning and teaching led her to pursue a graduate degree in engineering after completing her Ph.D. Dr. Rajakaruna's research was funded by the Department of Transportation (DOT) as a result of identifying the microbial attack on concrete. Her future research endeavors include novel approaches to diagnostic testing and identification of new berry viruses.

Dr. Shivani Singh completed her PhD (Biotechnology) on Seed Conservation Biology of Wild Species of Indian *Musa* and Development of Cryopreservation Protocols from Amity University, India. Her broad area of research is in vitro conservation and cryopreservation of tropical/temperate plants, seed and embryo storage biology and their conservation, plant biotechnology and molecular biology. Shivani's association with the Arkansas berry Clean Plant Center started from November 2021. Her responsibilities include in vitro conservation, micro-propagation and maintenance of virus free plants of different berries, as well as developing protocols to eliminate viruses from berries such as blueberry, blackberry, raspberry and strawberry.

Dr. Dan Edward Villamor received both his undergraduate and Master's degrees at the University of the Philippines Los Baños. His work on viruses infecting *Musa* spp. (banana and abaca), inspired him to pursue a career in plant virology. Dan received his PhD degree (Plant Pathology) at Washington State University and continued his postdoc work at WSU, working at the Clean Plant Center Northwest (CPCNW). He subsequently joined Dr. Ioannis Tzanetakis laboratory to work primarily on an HTS project for berry crops, a study that was finished and published recently. Dr. Villamor's current research interests include characterization of novel viruses and development and use of infectious clones to study virus molecular biology, particularly interactions in virus disease complexes. He is also the manager of the Plant virology laboratory and the Arkansas berry clean plant center at UADA.

With the staffing of the key personnel in place the Center looks forward to final touches of construction and the equipment necessary to fulfil the needs of a growing berry industry and its desire for clean plants.

[Learn more about NCPN-Berries](#)



Dr. Shivani Singh and Dr. Dan Villamor of the NCPN-Berries Clean Plant Center at the University of Arkansas

The Clemson Clean Plant Center Gets a New Look

The Clemson Clean Plant Center (CCPC) recently unveiled a new logo and website. The CCPC, located in Clemson South Carolina, is part of the NCPN-Fruit Trees network. The Center maintains a Prunus Foundation, primarily for peach cultivars with low chilling hour requirements that are suitable for the southeastern U.S. In addition to improving molecular diagnostics for graft-transmissible pathogens of peach, they are also developing virus elimination capabilities for domestic fruit tree selections. Additionally, the CCPC works with southeastern peach growers and nurseries to conduct virus testing for the Southeastern Budwood Program, which ensures the supply of peach budwood is negative for three viruses of high regional concern: Prunus necrotic ringspot virus, prune dwarf virus, and plum pox virus. Collaborative efforts with stakeholders and harmonization efforts with the other NCPN-Fruit Trees Centers are fueling program growth in pursuit of the mission to ensure the supply of clean plants for the fruit tree industry.

For more information: [Clemson Clean Plant Center](#)



Harmonizing Grape Certification (continued from page 3)

Then each individual state underwent a rulemaking or legislative process to bring any conflicting regulations into harmony. Key to success was the recognition that all parties needed to work together to develop a system that, while safeguarding the grapevine industry of the Pacific Northwest, was not arbitrarily restrictive or protectionist. Throughout, the team focused on the role of G1 planting stock availability to nurseries, and the role of certification programs to safeguard G2 to G4 nursery stock against pests such as phylloxera, Pierce's disease, and Grapevine red blotch virus, which are endemic in other grapevine growing regions of the country. Resulting rule changes went into effect in 2021 and reduce the chances a harmful pest will be imported into these states on infested grape planting stock, and as well as reducing the risk of spread within these states. The new rules also require that propagators and producers have a pest management plan (PMP) and assess their pest status before moving equipment or grape planting stock from a potentially infested site, further reducing the risk of spread. This holistic, system-wide approach, and the collaborative, consultative process that developed it in the Pacific Northwest is a model for further harmonization between other major grapevine growing regions of the country.



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