



National Clean Plant Network for Roses

David Byrne¹, Deborah Golino², Natalie Anderson¹, Sue Sim², Kevin Ong³, and Brent Pemberton⁴

¹Department of Horticultural Sciences, Texas A&M University, College Station, TX, ²Foundation Plant Services, University of California, Davis, California, ³ Department of Plant Pathology & Microbiology, Texas A&M University, (TPDDL) Texas A&M AgriLife Extension, ⁴Texas A&M AgriLife Research and Extension Center, Texas A&M System, Overton, TX.



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Abstract

At the urging of the grape and fruit tree industries, the National Clean Plant Network (NCPN) was established to provide high quality asexually propagated plant material free of targeted plant pathogens and pests for growers in the United States. In 2008, the NCPN was initiated with grapes and fruit tree crops. This was followed by the addition of citrus, berries and hops in 2010 and roses and sweet potatoes in 2015. Each specialty crop has its own commodity network composed of representatives from industry, academia, extension, state government and other interested experts. This program supports translational research, education and extension initiatives to maintain the network's high quality collections and strengthen its services. Since being established in 2015, the National Clean Plant Network for Roses (NCPNR) has been working to augment, renovate and improve the current rose collection at the Foundation Plant Services (Davis, CA), to assess the frequency of viruses in roses in the USA, to develop educational materials, and to establish the best protocols for determining the pathogen status of a rose.

NCPN Mission:
The NCPN provides high quality asexually propagated plant material free of targeted plant pathogens and pests that cause economic loss to protect the environment and ensure the global competitiveness of specialty crop producers.

What is the NCPN?

The National Clean Plant Network (NCPN) is an association of Clean Plant Centers, growers, nursery and industry representatives, scientists, educators, and state and federal regulators concerned with the health of specialty crop planting stock. This group has joined together to produce, provide and promote the use of pathogen-tested, healthy plant material in the United States. The NCPN operates under the auspices of three agencies within the United States Department of Agriculture - Animal and Plant Health Inspection Service (APHIS), Agricultural Research Service (ARS) and the National Institute of Food and Agriculture (NIFA). NCPN programs include grapes & tree fruit (2008), citrus, berries and hops (2010), sweet potatoes & roses (2015).

Benefits of the Clean Plant Programs

Healthy planting stock is key to the cost-effective production of horticultural crops. The most efficient approach to producing healthy planting stock is through programs which screen valuable plant selections for viruses and other diseases that can be spread by contaminated plant stock. Quarantine services provided by clean stock programs reduce chances of the introduction of exotic pests and pathogens that can be difficult and costly to control.

Healthy planting stock :

- Is easier to propagate
- Requires fewer chemical inputs
- Is necessary for U.S. agriculture to remain internationally competitive and economically viable

What is the NCPN-Roses?

NCPN Roses is a collaboration of clean plant centers, scientists, educators, state and federal regulators, large and small nurseries, rosarians, growers and industry and public garden associations that act together to ensure that rose budwood, cuttings and rootstock are clean and available. It was established in 2015 and is part of the NCPN specialty crops network.



Virus diseases in roses can cause unsightly foliage, decreased vigor, and smaller and/or fewer flowers, even death of plant. Nursery plant producers may face rejection of interstate shipments and eventual destruction of large numbers of plants as unsaleable.

NCPN-Roses clean plant centers improve the health and productivity of rose budwood, cuttings and rootstock in the U.S. through the following:

The NCPN-Roses Plant Centers



Foundation Plant Services, University of California, Davis

FPS maintains the foundation collection of over 700 virus-tested rose accessions, including 9 rootstocks. FPS has also been a leader in the development of new technologies for pathogen testing of rose material and of tissue culture techniques for disease elimination. Outreach programs to extend awareness of clean plants are conducted by FPS.

Texas A & M University – College Station

Texas A&M boasts the largest public rose breeding program in North America. This program houses an extensive rose germplasm collection with species, Robert Basye and Ralph Moore roses including those with high disease resistance, heat tolerance, unique horticultural traits and plant growth habits. Various testing programs include the Earth-Kind® program which was developed to identify and promote rose cultivars well adapted to southern and northern climates. Outreach programs are aimed at diagnostics and includes rose rosette disease awareness.

THERAPEUTICS:
elimination of viruses via microshoot tip culture



PLANT COLLECTION:
establishment and maintenance of the Foundation Collection



DIAGNOSTICS:
Developing and utilizing state of the art techniques for pathogen detection



CLEAN SUPPLY: provide clean, tested propagation material to rose nurseries and growers throughout the United States.

