

Creating G1 Grapevine Material



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“What’s a ‘Clean’ Plant?”





What are clean plants?

‘Clean’ plants are propagative material that has:

- Been tested (repeatedly) for pathogens.
- Found to be free of economically important diseases.
- Maintained to prevent reinfection.



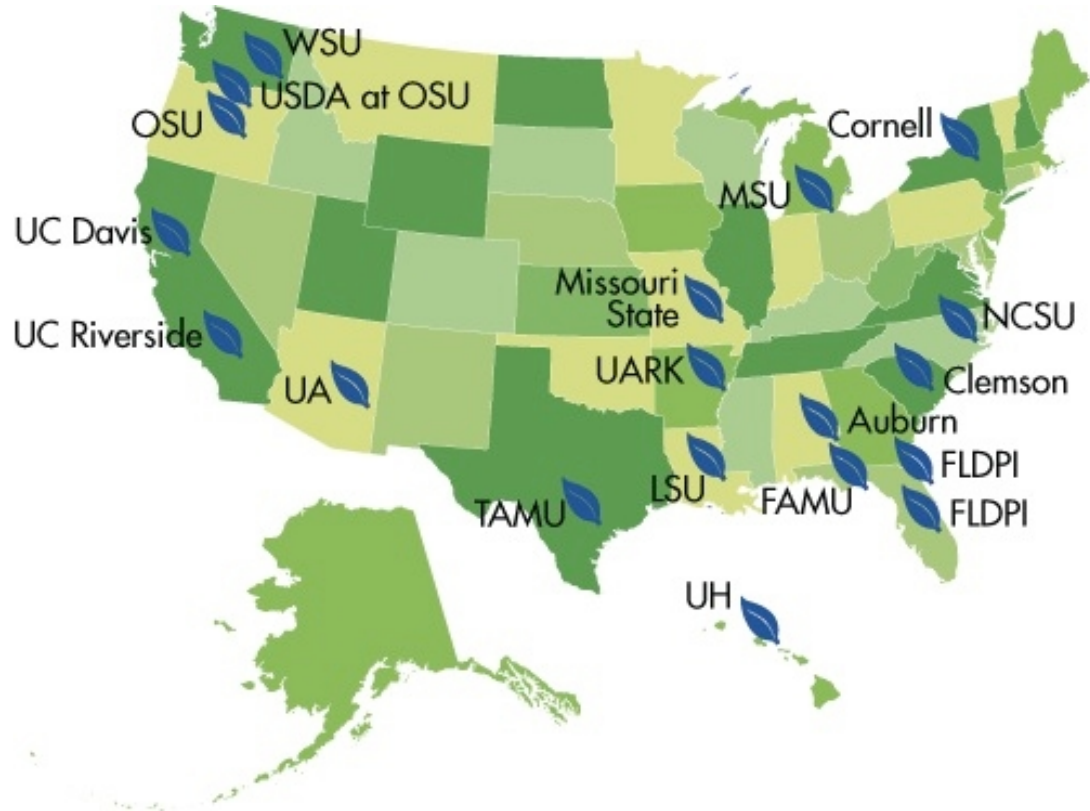
What are clean plants?

- ‘Clean’ plants are the product of a process, and a chain-of-custody.
- This starts with the clean plant centers around the country producing G1 plants and distributing those to nurseries for multiplication.

“Who makes them?”



The National Clean Plant Network





The National Clean Plant Network

National Clean Plant Network-Grapes

- An association of clean plant centers, scientists, state and federal regulators, nurseries and growers from the wine, table, raisin and juice grape industries that ensure that clean grapevine budwood and rootstock is available.

The grapevine NCPN centers:

- UC Davis
- WSU Prosser
- Missouri State
- Cornell Univ.
- Florida A&M





CPCNW @ WSU Prosser

The Clean Plant Center Northwest (CPCNW) is based at the WSU Irrigated Agriculture Research and Extension Center (IAREC) in Prosser, WA





The CPCNW:

- Tests, cleans, and distributes G1 grapevine material
- Maintains a collection of 350 wine, table, and juice grape cultivars/clones.
- Also has a foundation vineyard for budwood & rootstock production.



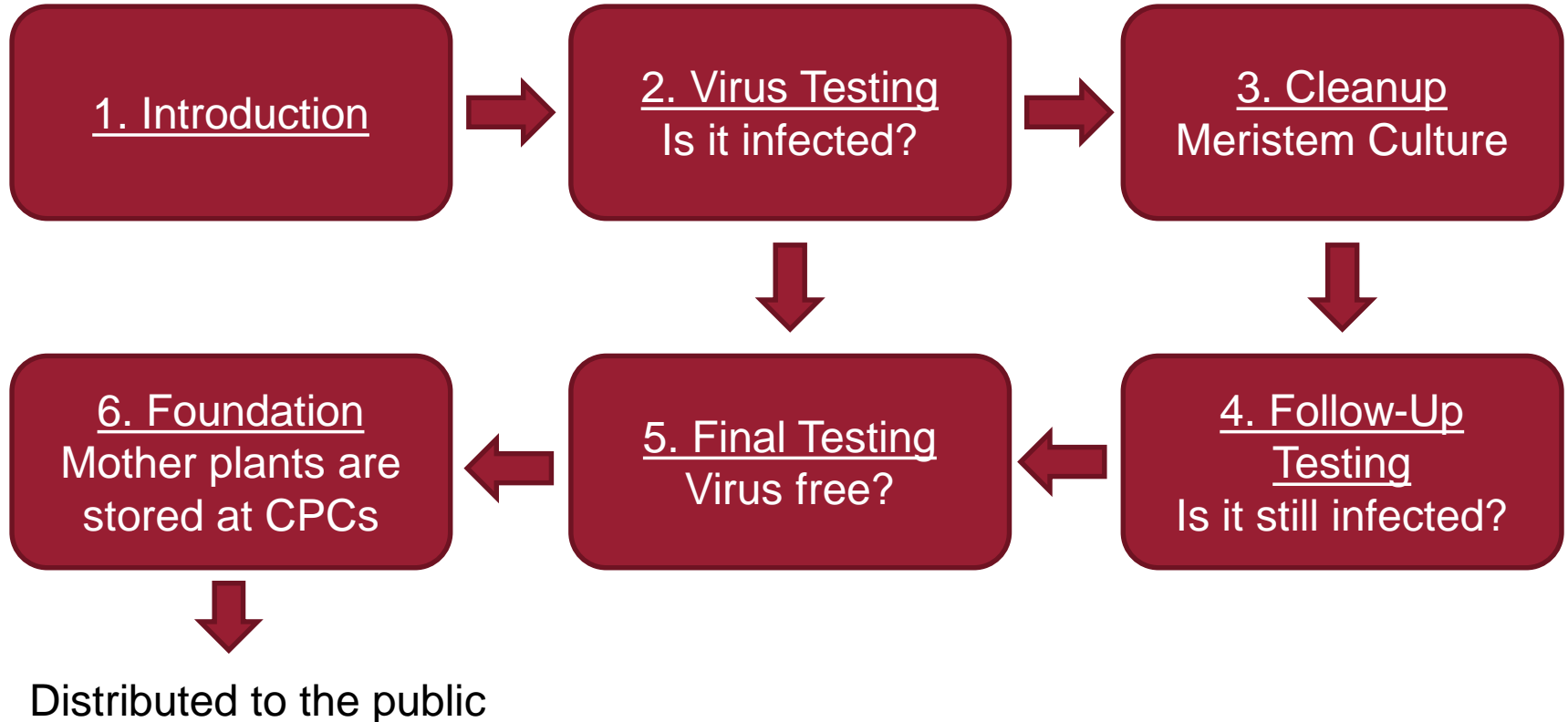
CPCNW @ WSU Prosser

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“How do we make a ‘clean’ plant?”



The clean plant process





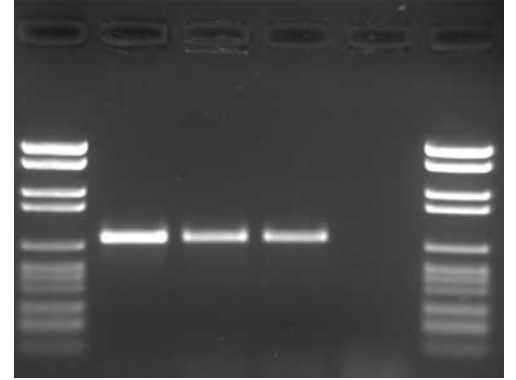
The clean plant process

1. Introduction

- Plant material received
- Mother plants generated for testing

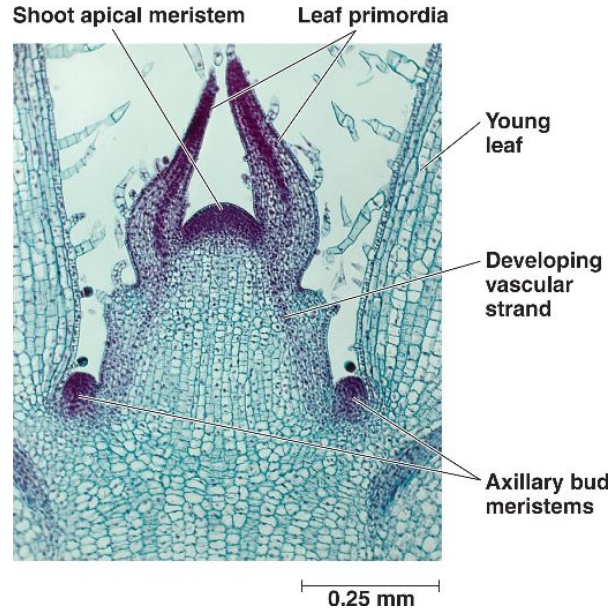
2. Virus Testing:

- PCR testing for specific pathogens
- High-Throughput Sequencing
- Biological Indexing



3. Virus Elimination:

- Meristem Tissue culture



The clean plant process

4. Follow-up Testing:



5. Final Testing:

- PCR Panel for 17 viruses and other pathogens of concern.



6. Foundation Collections: Screenhouses



6. Foundation Collections: Vineyards



7. Distribution

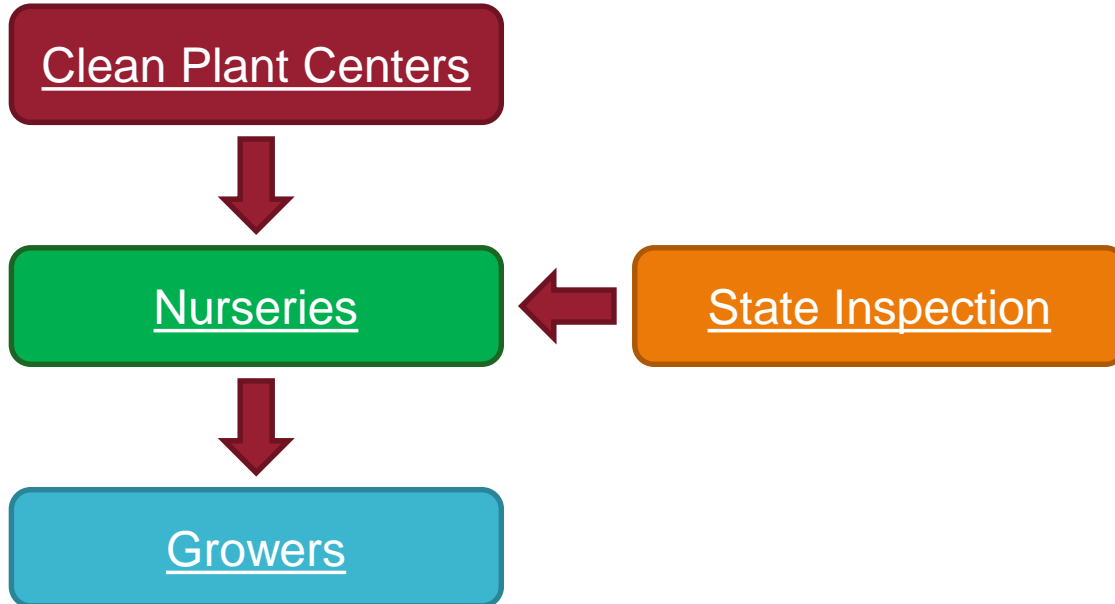
- Budwood
- Green cuttings
- Mist propagated plants
- Tissue culture vials
- Plugs



“Where can I get Clean plants?”



Certification is a state-run scheme for maintaining plant cleanliness



Thank you!

