

For all the introduced selections, source plants are established and maintained at the quarantine greenhouse.

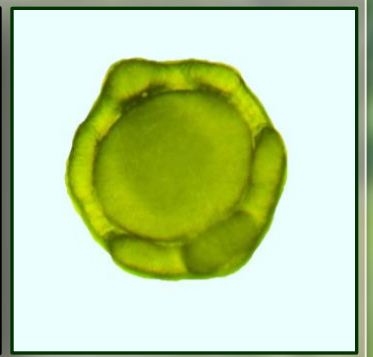
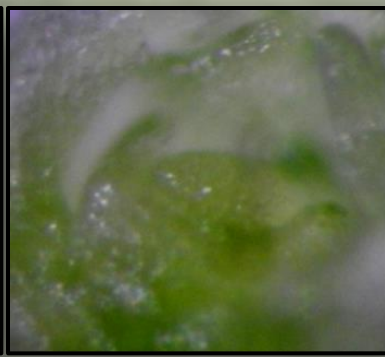
DNA from these plants are extracted and stored for genetic stability analysis of the progenies.

2



1

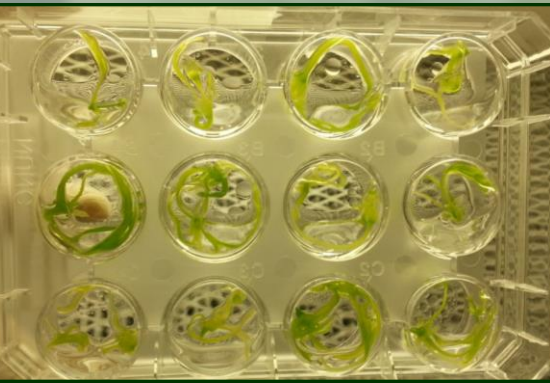
Selections nominated by the industry representatives are acquired from National Clonal Germplasm Repository, Corvallis, Oregon and other sources as needed.



3

Source plants are subjected to initial pathogen screening involving all major viruses and viroids. Therapy is initiated by collecting actively growing shoot tips from source plants.

Meristems are excised with 33 gauge lancet needles and transferred to the liquid growing medium under sterile conditions. The excised meristem size is less than 0.2 mm.



4

Meristems are allowed to grow in the liquid medium for at least 20 days. After that, they are transferred to the agar containing rooting medium for proper root development and plantlet formation. This process requires 45-60 days, depending on the cultivars.



5

Fully developed plantlets are hardened and acclimatized under controlled environmental conditions and gradually transferred to the greenhouse for pathogen screening.

6

Plants are allowed to grow in the greenhouse for a period of not less than six months while multiple rounds of virus and viroid tests are performed to select the mother plant.



7

Selected mother plants are shifted to the screen house and propagated further to support the clean planting material requirement of the hop growers.

All the mother plants maintained in the foundation plant collection are tested annually for the major pathogens regulated in the United States.