Propagation of Rose Rootstock 'Doctor Huey' from Hardwood Cuttings

Bruce Frost
Bear Creek Production Co., P.O. Box 280, Wasco, California 93280

Bear Creek grows Jackson & Perkins and Armstrong brand cultivars of roses. We are located 20 miles north of Bakersfield, CA, near the southern end of the San Joaquin Valley. Most of our plants are budded onto one rootstock which we grow from hardwood cuttings. We plant approximately 17,000,000 hardwood cuttings each year and average 97% live cuttings stands. Our main rootstock is 'Doctor Huey', and we bud the selected cultivars onto that.

We start by fumigating our fields with methyl bromide in July or August and then prepare them for planting. The cuttings are collected from the 180 acres of stool blocks we maintain for cuttings source. We select cuttings that are mature enough that they won't bend easily, and are 1/4 to 7/16 in. in diameter. Five crews made up of 10 people each, who follow a tractor and trailer through the stool block, gather canes 30 in. long and place them on the trailer where they are grouped into bunches of 50 and placed in a tube that has slots that allow for installing three rubber bands on each bundle. The location of the rubber bands is located to fit the saw operation so that when the bundle is cut into three sections, 9 in. long, there is a rubber band around each bundle. Once the rubber bands are in place, the long bundle is removed from the tube and placed in a water barrel to get it wet, then stacked under wet burlap on pallet racks until they have a load ready to truck into the saw shed.

When they arrive at the shed the pallets are set into a water dip tank for 5 min to get thoroughly wet. They are then placed into a 0.5% solution of Bactichlor and water for 5 min to surface sterilize the canes.

The canes are then taken to the saw, where the bundles are placed on a conveyor that has semicircular trays that hold the long bundle as it goes into the saw and holds the 3 shorter bundles as it comes out of the saw. The saw has 4 circular blades that cut both ends of the 3 sections. Once through the saw, the 9-in. bundles are placed on a conveyor that runs in a long loop to the crew that "de-eyes" them (removal of lower buds).

These "de-eyers" cut the buds off the bottom 6 in. of the 9-in. cutting, leaving 1 or 2 buds on the top, to leaf out and grow. By removing the lower buds we decrease the problem of sucker growth. Once de-eyed the cuttings are bundled in 50s with a rubber band and then their bases are powdered with 0.3% (3000 ppm) Hormodin powder by tapping them into ˚ in. of powder in the bottom of shallow tub.

The cuttings are then placed in a plastic bag, 5 bundles per bag, and stored in a cool place for 1 to 2 days, until they are taken to the field for planting.

We plant the cuttings in a water furrow on a spacing of 6 in. with a row spacing of 42 in. The cuttings are stuck into the ground 3 in., and watered within a few hours. The plants are watered 3 times a week for the first week, and then twice a week until the foggy season begins. Then we water once a week until they are well rooted and ready for budding.

When the weather is warm in November we'll have a ring of callus on the base of the cutting within 14 days of planting. Roots usually start in late December. By late

January leaves appear and by the first week in April the plants are ready for budding.

We handle the long cane Tree Roses in a similar fashion with a few exceptions. One exception is that the canes are longer, i.e. 27 in., 33 in., and 47 in. We also put an opaque white plastic sleeve over the cane and we tie the canes to a bamboo stake. The plastic sleeve is 2 in. wide, perforated on 2 sides, and 3 in. longer than the cane when stuck into the soil. This keeps the cane from drying by acting as a miniature greenhouse keeping the cane warmer and more moist. Once the leaves emerge we open the top part of the sleeve to help keep the leaves dry and prevent *Botrytis*. When the plant is rooted well enough to hold the cane (early March), we remove the sleeve and tie the cane securely to the bamboo stake.

"Nursery Propagation by Hardwood Cuttings" Question-Answer Period

No recording.