
Hot Callus Grafting®

Cynthia Hobby

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Hot callus grafting is a technique where the graft union is resting on or against hot pipes or heating cables to help increase the take of a union. We started using this technique 2 years ago to help improve the grafting take on certain varieties.

A trough-like structure was made from 1 × 6 inch-boards and 1 × 1 inch-strips, nailed to the edge.

Recycled carpet padding was then used to line the inside and top of the trough.

Three-quarter-inch copper pipe was soldered together and placed inside the trough on top of the carpet padding. Grafted plants were then laid down across the copper pipes and covered with more carpet padding. One inch x six inch-boards were then placed on top to hold the padding in place and to retain heat.

The carpet padding helped to insulate the copper pipes and kept them at a constant temperature. Hot water was provided by a small 1000-watt heating element, inside a 5-gal bucket and a submersible fountain pump, pumps the water through the copper pipe and back into the bucket. A thermostat was used to keep the water between 80 to 85 °F. The heating element ran on 110 volts.

Thermometers were placed along the length of the structure to monitor the temperature which stayed fairly constant at around 80 °F.

The plants were left on the callusing tubes for approximately 2 weeks and then moved to a heated greenhouse.

Hand Planting Versus Mechanical Planting®

Tom Burchell

The Burchell Nursery, Inc., 12,000 Highway 120, Oakdale, California 95361

After planting seed by hand for 5 weeks at a 5-inch spacing one starts to ponder the statement, “there must be a better way.” That was the statement that led to the pursuit of finding a faster and more efficient way to plant seeds in a commercial nursery.

INTRODUCTION

Field-grown commercial nursery stock mainly starts from seed. The Burchell Nursery located in Oakdale, California, is no exception. With an annual production of over 2 million fruit and nut trees for commercial orchards the Burchell Nursery is one of the largest deciduous bare-root tree nurseries in California.

Like many other field-grown nursery crops, trees are started from seeds that are planted in the fall. It takes over 3 million seeds to plant 120 acres of nursery stock. After that seed is planted, it germinates in the spring and is later grafted in June to the desired variety.