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Lagerstedt Hot Callusing Pipe

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Hot callusing is a method used in grafting to expose the graft union to a higher temperature for a period of time to speed cell division in the graft union.

Aesculus glabra 'Homestead' grafts were made on 16 January 1992.

The callusing pipe was placed in a cold greenhouse on a sand bed. A central-heat pipe produces a constant temperature of 70F. Grafts were placed into the pipe slots (Fig. 1) with the graft union in the pipe slot. The rootstock roots are placed on sand and covered with a slightly moist sphagnum moss to prevent drying of the rootstocks.

The scions of the finished grafts are placed on sand and covered with burlap—this is to keep scion buds from swelling. Fourteen to 21 days were allowed for heat treatment. During this time, callusing begins but no bud swelling occurs.

By 14 February, 94% of the grafts were callused. At this time they are removed and placed in boxes and covered with slightly moist sawdust. One month later the grafts were planted into containers. Six weeks after potting we had a 91% success rate.

An evaluation of *Aesculus glabra* grafting over three seasons has shown that success overall is dependent more on root system quality and the timing of season than on the hot callusing pipe. We have found by experience that the period between early January and mid February is the better time to graft (Table 1).

Table 1. Hot callusing of *Aesculus* in 1993.

Grafts made	Off heat pipe	Success (%)
Jan. 11	Feb. 6	81
Feb. 10	Mar. 4	51
Mar. 6	Mar. 30	6

LITERATURE CITED

Lagerstedt H.B. 1969. Comb. Proc. Intl. Plant Prop. Soc. 19:91-96.



Figure 1. Grafts unions placed into the pipe slots (A) before covering the rootstock roots, (B) after covering the rootstock roots.