

produce healthy roots during the active growth period. Stems did not root during the months of December, January, and February corresponding with the dormant growth period in these trees.

Layers attempted on the newer growth with 1-cm stem diameters were more successful than those attempted with previous year's stem growth.

Rooted layers were successfully transplanted to larger containers and trees attained heights of 6-8 ft in 6 months.

LITERATURE CITED

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- Skolmen, R.G., 1977. Ph.D. Thesis. Dept. Agronomy and Soil Science, University of Hawaii.

Timing for Top Grafting *Cercis* and *Cercidiphyllum* Cultivars[®]

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In years past top grafting was a simple operation at J. Frank Schmidt and Son. Everything we top grafted, primarily weeping cherry cultivars, fit into the same production cycle. Grow a rootstock stem to the required height in the field, wait for a lovely dry sunny week in late February or early March, dash out and top graft everything and then run back to our greenhouses before the rain returned. Other plants came along, various willows, *Syringa*, and *Fraxinus pennsylvanica* 'Johnson', Leprechaun™ green ash and they all conveniently fit into the same production cycle.

Then we started to get a few plants that didn't fit into our system, the first of these was *Cercidiphyllum japonicum* 'Morioka Weeping' (syn. *C. magnificum* 'Pendulum'). The first time we top grafted these in the field we got about 20% take, results were equally poor the following year. By Year 3 we had lost our enthusiasm for *Cercidiphyllum* grafting and kept putting it off. Finally we went out and grafted them at the end of April. By this time the rootstocks were pushing new shoots from the stems. The take jumped from about 20% to 90%. We have duplicated this every year since and now do not field graft our *Cercidiphyllum* until we see new shoots about 1-3 inches long on the rootstock stems.

Another plant that was giving us some trouble was the weeping *Cercis canadensis* 'Covey', Lavender Twist™ red bud as a top graft on *C. canadensis*. Even in a greenhouse we could not get a consistently good take. Based on what we had seen with *Cercidiphyllum* we began delaying grafting until we found a better "window". For us this turned out to be early to mid May in an unheated greenhouse when the rootstocks had new shoots about 1-3 inches long. As yet we still cannot get a reliable good take when field grafting this plant.

We have also observed similar results with other crops such as *Acer palmatum*. In summary I would suggest that if you are having problems with a particular crop that you need to spring graft trying waiting until the rootstock is active but do keep your scion wood dormant in cold storage.