Rooting Possibilities of *Fraxinus chinensis*©

H. William Barnes
Lorax Farms, 2319 Evegreen Ave., Warrington, Pennsylvania 18976 U.S.A.
Email: "Bill Barnes" <loraxfarms@verizon.net>

INTRODUCTION

Fraxinus chinesis Roxb is found in the more northern areas of China and Korea. Griffiths (1994) gives it a Zone 6 rating, and trees growing in and around Philadelphia, Pennsylvania, a Zone 6 climate, have shown no climate-related difficulties. Since there has been no damage to temperatures as low as -10 °F there, a suggestion can be made that perhaps it is more cold hardy considering the natural origin of the species. It would be worth testing in Zones 5 and 4.

METHODS OF PRODUCTION

When most plants are brought to the North America from Asia the propagation material of choice is seed. With respect to *F. chinenis* Roxb., seedling production is not difficult following the traditional methods for *F. pennsylvanica.* Dirr and Heuser (1987) do not list *F. chinensis* but a protocol for *F. pennsylvanica* specifies 2–3 months moist cold stratification, which under most circumstances should also work for *F. chinensis* considering its natural origin.

Other methods such as budding or grafting might be worthwhile but to do so would undoubtably call for *F. pennsylvanica* as the appropriate rootstock. Since little or no information exists for this particular cross species graft it would be inadvisable to produce many without checking for graft incompatibilities. It would be worthwhile to pursue this course.

Work at Lorax Farms found that unlike most other *Fraxinus*, *F. chinensis* can be rooted.

In July terminal shoots were selected that did not have a fully formed terminal bud or a fully expanded terminal set of leaves. Cuttings selected were four nodes long, about 4–6 inches long and had four sets of leaves, all the leaves were retained. The cuttings were wounded on two sides and dipped in 5000 ppm IBA liquid [ethanol and water (1 : 1, v/v) mixture). The cuttings were stuck in 2¼-inch pots with a substrate of peat, sand, and perlite (1 : 3 : 1, by volume). Upon sticking the filled trays were placed under mist with bottom heat set at 70 °F and given supplemental lighting of 4 h from 10 PM to 2 AM.

After 6 weeks the cutting were evaluated with 100% rooting.

This contrasts with work by Barnes (1988) on *F. pennsylvanica* 'Summit' with a rooting percentage of 24%. Undoubtedly not all *Fraxinus* are created equal, and the ability to root is species specific. Not much work has been done with the genus *Fraxinus* probably due to the poor rooting response of the more common forms but freely rooting forms might be of significant importance to the nursery industry, especially with the development of new cultivars.

LITERATURE CITED

Barnes, H.W. 1988. Rooting responses and possibilities of *Fraxinus*, *Osmanthus,* and *Chionanthus*. North Amer. Plant Prop., Vol II, No. 1.

Dirr, M.A., and **C.W. Heuser.** 1987. The reference manual of woody plant propagation: From seed to tissue culture. From seed to tissue culture. Varsity Press, Athens, Gerogia.

Griffiths, M. 1994. Index of garden plants. Timber Press. Portland, Oregon.