

Literature Cited

1. Coutts, M. P. 1982. *Water relations of Sitka spruce seedlings after root damage*. Ann. Bot. 49:661-668.
2. Day, R. J., and G. R. MacGillivray. 1975. *Root regeneration of fall-lifted white spruce nursery stock in relation to soil moisture content*. For. Chron. 51:196-199.
3. Flemer, W. III. 1967. *Is bare-root transplanting a dying art?* Amer. Nurs. 126(1):24-25, 185-193.
4. Larson, M. M., and F. W. Whitmore. 1970. *Moisture stress affects root regeneration and early growth of red oak seedlings*. For. Sci. 16:495-498.
5. Litzow, M., and H. Pellet. 1982. *Establishment rates for different bareroot grades of trees*. J. Arboric. 8:264-266.
6. Mullin, R. E. 1978. *Root exposure, root dipping, and extended spring planting of white pine seedlings*. For. Chron. 54:84-87.
7. Pickering, J. R., and R. G. Perkins. 1982. *Planting frequencies and trends of street trees in southern Ontario municipalities*. J. Arboric. 8:189-192.
8. Rice, P. F., and R. Hall. 1979. *Stem cankers in Tilia cordata nursery stock*. Landscape Ontario 7(4):14-17.
9. Ruark, G. A., D. L. Mader, and T. A. Tattar. 1982. *The influence of soil moisture and temperature on the root growth and vigour of trees—a literature review. Part II*. Arboric. J. 7:39-51.
10. Russell, R. S. 1977. *Plant Root Systems: Their Function and Interaction With the Soil*. McGraw-Hill. London.
11. Watson, G. W., and E. B. Himelick. 1982. *Root distribution of nursery trees and its relationship to transplanting success*. J. Arboric. 8:225-229.

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Abstract

ROSNER, H. and D. SWEETNAM. 1985. **Big tree care at the Morris Arboretum**. PNA News (14):26-29.

The care and maintenance of a collection of mature trees is both a challenge and an opportunity to learn effective techniques of preservation and conservation. Three years ago we developed a conservation program to insure the best care possible. This approach is applicable to residential properties, as well as parks and arboreta. The key to the Morris tree care program is the use of priority tree lists. Each tree is assigned to a maintenance category. Only ten are included on our top priority list. These are routinely inspected, fertilized, pruned, watered during drought, and sprayed when insects or diseases threaten. Our secondary tree list includes approximately 130 trees that receive annual inspection, fine pruning, and other care as required. They are fertilized every three years, or more frequently if they require. The tertiary list is divided into thirds receiving regular care every three years. Trees on this list receive medium pruning and are fertilized less frequently. All other trees get major dead-wood removal and rudimentary corrective pruning. Our program of preventative tree maintenance seeks to maintain a high level of vigor and avoid unnecessary injuries and wounding. Reinforcing weak tree crotches with steel cables and preventing or limiting construction damage to trunks and root systems are examples of protecting trees from physical damage. However, the major emphasis of our tree care program is the maintenance of tree health. It has been demonstrated many times that a healthy tree is better able to withstand the attack of insects and disease. Watering during drought, planting in good soil, mulching, fertilizing, and avoidance of trunk injuries are all tree health maintenance practices that encourage good health and avoid attack by pests.