1. Brown, C.W., R.G. McAlpine, and P.P. Kormank. 1967. *Apical dominance and form in woody plants: A reappraisal.* Amer. Jour. of Bot. 54:153-162.
2. Harris, R.W., A.T. Leiser, and W.B. Davis. 1976. Staking landscape trees. Univ. of Calif. Lflt. 2576.
3. _____, W.D. Hamilton, W.B. Davis, and A.T. Leiser. 1978. Pruning landscape trees. Univ. of Calif. Lflt. 2574.
4. Leiser, A.T. and J.D. Kemper. 1973. *Analysis of stress distribution in the sapling tree trunk.* Jour. Amer. Soc. Hort. Sci. 98(2):164-170.
5. _____, R.W. Harris, P.L. Neel, D. Long, N.W. Stice, and R.G. Maire. 1972. *Staking and pruning influence trunk development of young trees.* Jour. Amer. Soc. Hort. Sci. 97(4):498-503.
6. Neel, P.L. 1971. Factors influencing trunk growth. Proc. 45th Intl'. Shade Tree Conf. pp. 115-138.

Department of Environmental Horticulture
University of California
Davis, California

ABSTRACTS

VAN DE WERKEN, HENDRIK. 1979. **How shade tree research can help you increase the growth rate of your trees.** Landscape Industry 24(4): 26-28.

The Tennessee Agricultural Experiment Station, University of Tennessee, Knoxville, started shade tree nutrition research in 1960 and a shade tree transplanting study in 1964. In 1969 research on shade tree grove development was begun. In 1973 a project was developed to investigate shade tree cultivar performance and their response to slow and fast release fertilizers and methods of fertilizer application. Trees which received only additional nitrogen each year for 10 years were 20 to 40 percent taller than those not fertilized. The trunk volume and crown canopy area increases of nitrogen fertilized trees were relatively greater than height increase. Laboratory tests also indicated that the wood quality of the trunk of the fast-growing fertilized trees was not affected, i.e., there was no detectable change in either wood density or wood fiber length. Based upon these results, it may be concluded that broadcast application of nitrogen alone, to shade trees in lawns, greatly accelerated growth and resulted in taller trees with relatively heavier trunks and broader crowns. In general, nitrogen fertilization, mulching, and close spacing of shade trees increased both trunk size and height without affecting proportionate development and wood quality.

BANKER, H.J. 1979. **A national arbor day — the solution to indifference?** Am. Nurseryman 149(8): 58, 60, 62, 66.

We need to take a long, hard look at the price progress has placed on the future of America's trees. Although Arbor Day has been with us for more than 100 years, its influence on the public has been quite varied, ranging from outspoken enthusiasm to actual disappointment and failure. However, the establishment of Arbor Day did initiate many shade tree laws and ordinances over a wide area of the U.S. These laws were enacted to preserve and protect our nation's trees. It was Ed Scanlon's firm belief that establishment of a national Arbor Day — the last Friday in April — would be the strong force that would generate the ideas and action to promote reforms of our outmoded practices and to protect and conserve America's trees. He also felt that massive public education, via publicity on a uniform Arbor Day date, would reawaken their needed interest in the value of trees.