

nually, at a time when such space was physically unavailable in Toledo. Even though such space is now available it would be environmentally unconscionable for us to recommend a 100% return to that method. In many cities this is, in fact, a physical impossibility. We feel very strongly that the profession that sells its main product on the basis of its environmental benefits must be the leader in eliminating any aspect of pollution from its operations.

We know our by-products are useable; it is our challenge to devise the most efficient and economical method possible to assure that use.

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ABSTRACTS

Crist, Carey R. and D.F. Schoenweiss. 1975. **The influence of controlled stresses on susceptibility of European white birch stems to attack by *Botryosphaeria dothidea*.** *Phytopathology* 65(4): 369-373.

European white birch, *Betula alba* L., is a popular tree species for landscape plantings in Illinois. In recent years, however, extensive damage due to stem cankers has appeared on this species in the central and southern portions of the state. Seedlings of *Betula alba* inoculated with *Botryosphaeria dothidea* were exposed to controlled water stress, freezing stress, and defoliation stress. Susceptibility to canker formation, and to colonization of wood and bark by the pathogen, increased with decreasing water potentials, beginning at approximately the -12 bar level as measured by the pressure bomb method. Disease susceptibility induced by water stress was reversible; the rate of canker expansion declined and callus tissue formed at canker margins after seedling turgidity was restored by watering. Canker formation and bark colonization occurred following exposure of partially cold-hardened seedlings to a rapid drop in ambient air temperature from 5 C to -30 C. The extent of colonization of wood increased proportionally with exposure to minimum temperatures of -10 C, -20 C, and -30 C, respectively. Susceptibility of seedlings in a more advanced stage of cold hardiness was not affected by freezing in these tests. Canker formation, and colonization of bark and wood, occurred following 4 weeks of exposure of inoculated seedlings to defoliation stress, and increased with length of exposure. Wounding was found to be a prerequisite for invasion of stems by the pathogen in seedlings exposed to defoliation stress.

Anonymous. 1975. **Do antitranspirants improve transplant success?** *Weeds, Trees, and Turf* 14(10): 39-40.

Nurserymen didn't write the last word on transplanting when they developed balling and burlapping tree roots. T.T. Kozlowski, University of Wisconsin forestry researcher and some associates have just concluded research that reinforces common transplant practices in some cases but bursts other common transplant beliefs. "Trees undergo large water deficits even if they are not moved," explains Kozlowski. "But if they are moved . . . the danger of desiccation (drying out) and death is very great." Transplanted trees have a better chance to survive and maintain healthy growth if transpiration can be reduced, water absorption increased, or both. Water absorption can be improved by proper transplant timing, handling, root preparation, and site preparation. Transpiration can be reduced through antitranspirants, chemical agents that hinder water release by treating the stomata of the leaves. These treatments reduce the tree's water needs by limiting water loss during the stressful transplant period.