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Circle No. 130 on Reader Inquiry Card

VEGETATION MANAGEMENT

By Roger Funk, Ph.D., Davey Tree Expert Co., Kent, Ohio

Q: Why do trees in waterlogged soils show signs of wilting as if they are not getting enough water?

A: Excess water replaces oxygen in the soil and the resultant poor aeration impedes water absorption by roots. It also reduces photosynthesis.

Many trees produce adventitious roots until they reach maturity, which may help explain why older trees are more apt to die back in waterlogged, compacted or construction-altered soils.

Q: For the past two years the pine trees we had planted along a highway were severely injured by salt applied in the winter. Could you recommend some evergreen trees that would not be injured? (Michigan)

A: All trees are probably injured, but some are more tolerant than others. Evergreen trees listed as salt-tolerant include Austrian pine, Japanese black pine and pitch pine. Evergreen trees listed as salt-intolerant that should not be planted, include Eastern white pine, hemlock and red pine.

Q: What would you recommend for lawns that are growing in high sodium soils?

A: Aside from the possible effects of excess salts which impair the absorption of water and nutrients, a high sodium content causes deaggregation of soil particles, resulting in compaction and a severe reduction in soil aeration and water infiltration. In addition, the availability of certain nutrients such as iron and manganese may be limited, whereas other micronutrients such as boron may become available in concentrations high enough to be toxic.

Sodic soils are usually corrected by amending with sulfur or gypsum (calcium sulfate) which replaces the exchangeable sodium on soil colloids. However, these materials are relatively slow-acting and repeated applications over a period of years may be necessary.

Ideally, the soil should be drenched prior to adding the soil amendment unless the soil is waterlogged and does not drain properly. If the materials are not incorporated, the soil should be watered after the application to move the materials downward into the root zone. After a period of several months, the soil should again be drenched to leach the soluble sodium salts.

Core cultivation will improve the exchange of air and water between the atmosphere and soil and improve the penetration of fertilizers, pesticides and materials being used for the correction of sodic soils. The net effect is to encourage deeper, more extensive rooting less susceptible to environmental stresses.

Until the sodium problem is corrected, particular attention should be given to fertilization since many of the nutrients will be "fixed" as a result of the high sodium content. Soil tests and field plot studies will help determine the special requirements of turf growing in sodic soils.

Q: What can you tell me about the rust disease that is affecting ash trees in the Philadelphia area?

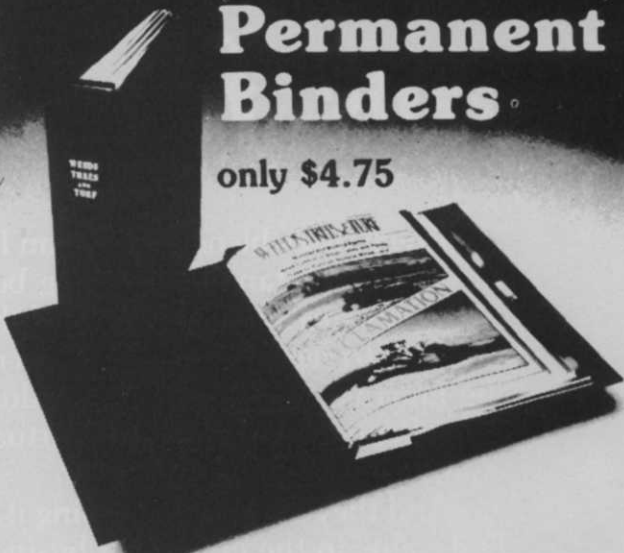
A: Ash leaf rust is caused by the fungus *Puccinia peridermiospora*. The fungus overwinters on the

leaves of salt marsh and cord grasses. In midspring, wind-borne spores are carried as far as 100 miles to ash trees and infect leaves, petioles and shoots. Symptoms of ash leaf rust appear in late spring as yellow-orange spots on the upper surface of ash leaves and on petioles and shoots. After about two weeks, yellow-orange cups appear beneath the spots on the under surface of leaves and on other infected tissue. Heavy infestations cause leaf distortion and girdling of petioles and shoots. Early leaf drop is common, often resulting in complete defoliation by midsummer on severely infected trees.

Ash rust is seldom destructive enough to warrant either prevention or control measures. Sulfur sprays are sometimes recommended when trees have been infected for successive years or to protect ash for aesthetic reasons. Contact your local extension service to determine the status of sulfur sprays in your area.

Send your questions or comments to: Vegetation Management c/o WEEDS TREES & TURF, 757 Third Avenue, New York, NY 10017. Leave at least two months for Roger Funk's response in this column.

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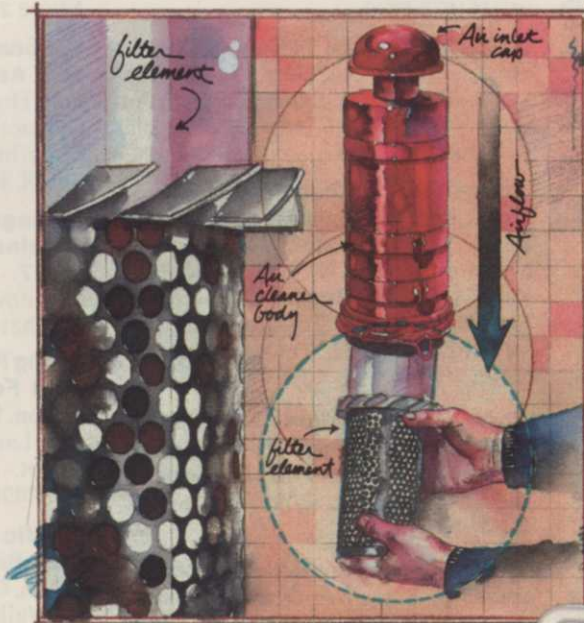
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SEPTEMBER 1981/WEEDS TREES & TURF 113

EVENTS

The current issue of **WEEDS TREES & TURF** carries meeting dates beginning with the following month. To insure that your event is included, please forward it, 90 days in advance, to: **WEEDS TREES & TURF Events**, 757 Third Ave., New York, NY 10017.

Tennessee Nurserymen's Association Annual Meeting and Show, Opryland Hotel, Nashville, TN, **Sept. 13-15**. Contact Tennessee Nurserymen's Association, P.O. Box 57, McMinnville, TN 37110, 615/473-3951.

Turf and Landscape Day, OARDC, Wooster, OH, **Sept. 15**. Contact Fred Buscher, Area Extension Agent, Landscape Horticulture, OARDC, Wooster, OH 44691.

Northern Michigan Turf Managers Association meeting, Acme, MI, **Sept. 15**. Contact C. E. "Tuck" Tate, President, NMTMA, 1147 Santo, Traverse City, MI 49684, 616/947-9274.

Tree Care-Urban Forestry Foreman Training, Kent, OH, **Sept. 14-25**. Con-

tact Richard E. Abbott, Davey Environmental Services, 117 South Water Street, Kent, OH 44240, 800/321-7572 or 216/673-9511.

Alabama's Annual Turfgrass Conference, Auburn, AL, **Sept. 14-15**. Contact K. M. Sheffer, Extension Hall, Auburn University, AL 36849, 205/826-4985.

International Garden Trade Fair, Cologne, Federal Republic of Germany, **Sept. 13-15**. Contact Koln Messe, Messeplatz, Postfach 21 07 60, 5000 Koln 21, Federal Republic of Germany, Telex: 8 873 426, Telegram Address: INTERMESS Koln, Telephone: (0221) 821-1.

Virginia Tech Turfgrass Field Days, Blacksburg, VA, **Sept. 15-17**. Contact Dr. John Hall, 421 Smyth Hall, Virginia Tech, Blacksburg, VA 24061, 703/961-5797.

International Exhibition of Groundsmanship, Royal Windsor Racecourse, Windsor, Berkshire, England, **Sept.**

15-17. Contact Institute of Groundsmanship, P O Box 243 (Wolverton), Milton Keynes, Buckinghamshire MK12 2YG England.

National Lawn and Garden Distributors Association Convention, Opryland Hotel, Nashville, TN, **Sept. 15-18**. Contact National Lawn and Garden Distributors Association, 1900 Arch Street, Philadelphia, PA 19103.

Management Information System Seminar, Los Angeles, CA, **Sept. 16-17**. Contact ALCA, 1750 Old Meadow Road, McLean, VA 22102, 703/821-8611.

Living Plant Growers Association Annual Foliage Seminar, Queensway Hilton, Long Beach, CA, **Sept. 22**. Contact Lanny Walker, LPGA, 1419 21st Street, Sacramento, CA 95814, 916/448-2898.

Pacific Horticultural Trade Show, Long Beach Convention Center, Long Beach, CA, **Sept. 23-25**. Contact Lanny E. Walker, California Association of Nurserymen, 1419 - 21st Street, Sacramento, CA 95814, 916/448-2881.

Michigan State Florists' Association Annual Fall Convention, Hyatt Regency, Dearborn, MI, **Sept. 26-27**. Contact Richard Northrup, Michigan Florists' Association, 2420 Science Parkway, Okemos, MI 48864, 517/349-5754.

American Mining Congress 1981 Mining Convention, Denver, CO, **Sept. 27-30**. Contact American Mining Congress, Suite 300, 1920 N Street, NW, Washington, D.C. 20036.

Northwest Turfgrass Conference, Olympia, WA, **Sept. 28-Oct. 1**. Contact Dr. Roy L. Goss, Northwest Turfgrass Association, Western Washington Research and Extension Center, Puyallup, WA 98371, 206/593-8513.

Horticultural/Archaeological Tour to China, 24 days, **Oct.** Contact Thomas R. Driscoll, 718 Swedesford Rd., Ambler, PA 19002.

Central Coast Turf Day, California Polytechnic State University, San Luis Obispo, CA, **Oct. 1**. Contact Ronald D. Regan, Head, Ornamental Horticulture Department, CPSU, San Luis Obispo, CA 93407, 805/546-0111.

Ohio Forestry Association Paul Bunyan Show, Hocking Technical College, Nelsonville, OH, **Oct. 2-4**. Contact Ohio Forestry Association, Inc., 665

Continues on page 116

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Events from page 114

East Dublin Road, Columbus, OH 43329, 614/846-9456.

International Bedding Plant Conference and Trade Show, Red Lion Inn/Seatac, Seattle, WA, **Oct. 4-8**. Contact Bedding Plants, Inc., P.O. Box 286, Okemos, MI 48864, 515/349-3924.

Horticultural Tour to China, Oct. 5-18. Contact Lanny E. Walker, Public Relations Director, California Association of Nurserymen, 1419 21st Street, Sacramento, CA 95814, 916/448-2881.

Northern Michigan Turf Managers Association meeting, Pinconning, MI, **Oct. 6**. Contact C. E. "Tuck" Tate, President, NMTMA, 1147 Santo, Traverse City, MI 49684, 616/947-9274.

Central Plains Turf Foundation/Kansas State University Turf Conference, Manhattan, KS, **Oct. 6-8**. Contact Dr. Robert Carrow, Kansas State University, Dept. of Horticulture, Waters Hall, Manhattan, KS 66506, 913/532-6170.

Texas Surface Mine Reclamation Workshop, Holiday Inn Airport, San Antonio, TX, **Oct. 13-14**. Contact Dr. A. Edwin Colburn, Soil and Crop Sciences Department, Texas A & M University, College Station, TX 77843, 713/845-2935.

Symposium on Turfgrass Weeds-1981, Sheraton-Columbus Hotel, Columbus, OH, **Oct. 14-15**. Contact Dr. B.G. Joyner, Plant Diagnostic Labs, ChemLawn Corp., 6969 Worthington-Galena Road, Suite L, Worthington, OH 43085, 614/885-9588.

Southern California Turfgrass/Landscape Equipment & Material Educational Exposition, Costa Mesa, CA, **Oct. 14-15**. Contact Ed McNeill, Southern California Turfgrass Council, 1000 Concha Street, Altadena, CA 91001, 213/798-1715.

Southwest Turfgrass Association Annual Conference, Albuquerque, NM, **Oct. 15-16**. Contact Arden Balten-sperger, Southwest Turfgrass Association, New Mexico State University, Agronomy Dept., Box 3-Q, Las Cruces, NM 88003, 505/646-3138.

International Society of Arboriculture, New England Chapter, Annual Meeting, Sheraton-Wayfarer Inn, Bedford, NH, **Oct. 18-20**. Contact Oscar Stone, Editor, 84 Daniel Drive, New Haven, CT 06513.

Florida Turf-Grass Association 29th Annual Conference and Show, Orlando, FL, **Oct. 18-22**. Contact Beth Eyman, FTGA, 1520 Edgewater Drive, Suite E, Orlando, FL 32804.

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In early spring, 5 to 7 ounces of Furadan 10 G should be applied to each one inch of basal diameter in young southern pine plantations. Furadan 10 G should be applied to the soil under the drip-line of the trees and incorpo-

rated with a suitable device. Pines planted for Christmas trees should be treated two times per year, once in early spring and once in early summer, using 5 grams in the tree's first year, 10 grams in the tree's second year, 15 grams in its third year, and 20 grams in its fourth year. Five grams equals about one-half of a teaspoon.

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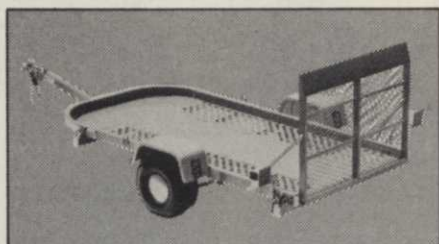
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Continued on page 121

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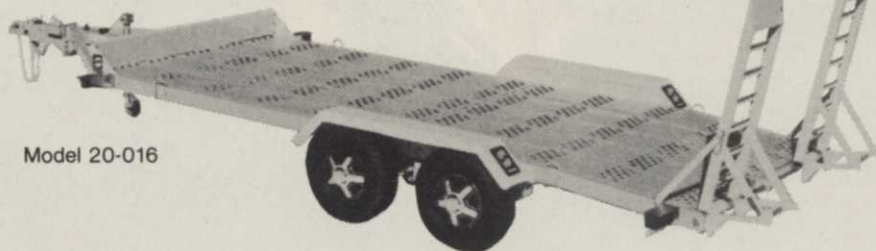
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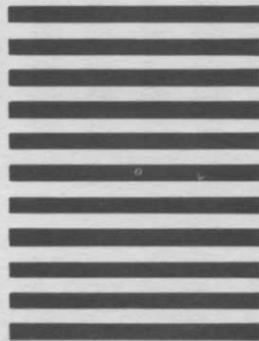
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