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BULLETIN

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Correction of Wood Preservative Problem

This spring we have had at least two inquiries as to what can be done after greenhouse wood has been painted with pentachlorophenol wood preservative.

1. The first thing to do is to keep the vents open enough to circulate the air and hopefully keep the toxic vapors in a low enough concentration to avoid plant injury until further steps are taken.
2. The next step is to coat the pentachlorophenol-treated wood with materials reported to have been successful.

What to use to correct the problem:

1. **B-I-N® primer sealer**—The following information is reprinted from the Ohio Florists' Association Bulletin 504, October, 1971.

COVERING PENTACHLOROPHENOL WITH B-I-N® PAINT

Pentachlorophenol is a material that, when applied to wood, prevents it from rotting. Unfortunately, the fumes of pentachlorophenol are very toxic to plant material and it, or any wood preservative that has creosote in it, should never—repeat never—be used to treat wood used in construction of greenhouses or benches, flats, refrigerators, etc.

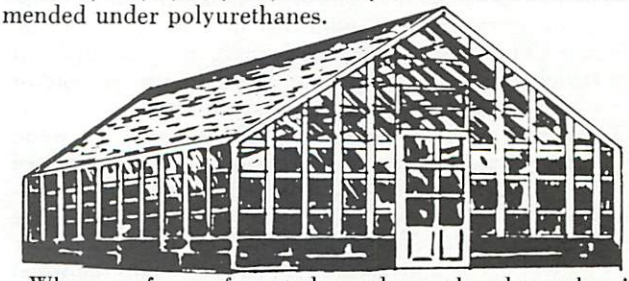
Each year we get several inquiries about mysterious leaf burns on plants, and often pentachlorophenol is the culprit. During the summer, when the greenhouse ventilators are wide open, the fumes readily escape and little or no damage may be observed. However, in fall, winter, and spring when ventilation is reduced or fewer exhaust fans are used, the fumes accumulate and the damage is soon very noticeable.

Side posts for plastic houses, bench lumber, flats, and wooden walls in retail shops are the most usual objects that are treated with pentachlorophenol. Typically, a call is made to the local hardware for a wood preservative and invariably pentachlorophenol is furnished as the material to treat the wood to keep it from rotting. That it will do, but the side effect—phytotoxicity—is not common knowledge of hardware store employees. Strangely enough, many florists do not know of it either despite the fact that the dangers of this material have appeared in many publications for years.

Once wood has been treated, what can be done? Some florists have waited for the material to volatilize to the point where the fumes no longer cause harm. This, of course, may take several years and is obviously not the answer. Others have replaced the treated members with new lumber. If the material has been spilled on the ground during application, the soil should be removed to a depth of several inches to bodily carry out the toxic material.

There is a paint that can be applied to treated lumber, and it will seal the fumes of pentachlorophenol so that they will not cause damage. The paint is B-I-N made by the William Zinsser and Company, Inc., 516 West 59th Street, New York, New York 10019, and it can be obtained at any paint store. It is a flat white, primer-sealer, and two coats on treated wood are effective in preventing problems from pentachlorophenol fumes.

B-I-N can be applied over treated wood, providing oil or wax has not been spilled on it. If so, these materials will have to be removed. B-I-N paint may be brushed, sprayed, or rolled on a surface to be treated, whether it is wood, plaster, wallboard, etc. Thorough coverage is imperative. One gallon covers about 500 square feet, and 1 hour should be allowed for the first coat to dry. Should the paint be too thick or be spilled, alcohol is the solvent to use. Interior surfaces treated with B-I-N can be painted with any kind of paint—flat, semi-gloss, gloss, styrenebutadienes, vinyls, acrylics, and alkyds—but it is not recommended under polyurethanes.



Where surfaces of treated wood are placed together in such a way that they cannot be covered with the paint, such as crosswise bench bottom boards on lengthwise stringers, it may be necessary to dismantle the bench in order to cover all treated surface unless the paint can be applied to seal off the surface area that cannot be covered. Tongue and groove lumber used in walls can be covered satisfactorily if liberal application of B-I-N paint is made at the joints.

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New Product to Subdue Root Rots and Damping-Off Disease

After several years of eager anticipation, the ornamentals industry has been presented with a new systemic fungicide which has excellent activity against many of the common *Pythium* and *Phytopthora* root and stem problems.

The material, Subdue 2E, is being marketed by Ciba-Geigy in a formulation which has two pounds of the active ingredient (metalaxyl) per gallon. It has been labeled for use on turf, as well as for many greenhouse and nursery uses. A very little Subdue will go a long way: when treating bedding plants for damping-off at time of seeding, for example, the label recommendation is to mix ¼ to ½ fluid ounce with 100 gal. water, to be applied to 800 ft^2 at 1 pint per square foot. Subdue also gives long-term disease control; frequent application is unnecessary and may be harmful.

In general, Subdue shows very little phytotoxicity at labeled rates. The label does specify that the material should not be applied to Euonymus, however, and gives precautions for rate or frequency of application to azalea, pothos and philodendron. Growers should read the information printed on the package label for use, and follow directions and precautions to the letter.

The label mentions the possibility that resistance to Subdue may arise within the pathogen population. Fortunately, the most important ornamentals diseases which this material will control are not diseases spread by windborne spores. This fact should help to limit any development of resistance to localized areas, so that Subdue will be of great usefulness in the control of soilborne diseases for the foreseeable future.

Subdue will be an important new tool for nurserymen wishing to control *Phytophthora* root rot and wilt on rhododendron and azalea, as well as for greenhouse operators combatting root rot on poinsettias or certain of the damping-off fungi affecting bedding plants.

Subdue cannot be considered a substitute for sound cultural practices. Use it with caution, and enjoy the benefits!

Margery Daughtrey

Wood Preservative Problem (continued)

2. **Two-phase epoxy paint**—In an article by Dr. David S. Ross of Agricultural Engineering Extension of the University of Maryland and published in 1981 in the Pennsylvania Flower Growers Bulletin 330, it is pointed out that toxicity to plants from wood treated with creosote or pentachlorophenol lasts 4 to 5 years and longer.

To correct pentachlorophenol problems, seal the wood with a two-phase epoxy paint. This material is purchased in two separate containers and is mixed just prior to application. (The so-called single phase epoxy paints are **not** recommended.) Two coats should be applied because the first will act as a primer, as it penetrates into the wood like water. The surface, next to the glass or some portion of the wood structure, should not be painted to allow the wood to breathe and to avoid dry rot.

One complaint is that the treatment is costly. That only emphasizes the importance of using **only** recommended wood preservatives such as copper naphthenate or some of the commercial lumber pressure-treated with copper chromate or copper arsenate or similar materials (wolmanized wood is an example).

John Seeley

Horticulture Society Names Cornell Scientist As Its Fellow

Robert W. Langhans, a nationally known plant scientist at Cornell University, has been elected a Fellow of the American Society for Horticultural Sciences (ASHS).

He was recognized for his "outstanding contributions to horticultural science, and for his meritorious service in furthering the organization's objectives."

The announcement came during the awards banquet (Aug. 14) that highlighted the Society's 78th annual meeting, held at the Atlanta Marriott Hotel, August 9-14. Langhans was one of nine distinguished scientists so honored this year by ASHS.

Dedicated to the advancement of horticultural science, ASHS has more than 4,400 members, including research scientists, educators, and professional horticulturists, in the United States and 74 other countries.

Langhans is a professor of floriculture and ornamental horticulture in the New York State College of Agriculture and Life Sciences at Cornell. A member of the Cornell faculty since 1956, he has been involved in a number of innovative research projects that have had a major impact on the floriculture and horticulture industries here and abroad.

Outstanding among his research accomplishments are mist propagation that revamped the conventional methods of plant propagation in the 1950s, and techniques of controlling flower formation and timing of production of several important commercial flower crops such as lily, snapdragon, chrysanthemum, and carnation.

Langhans was one of the first scientists to reproduce whole chrysanthemums and carnations from meristem cells taken from the growing tip of the plant; this test-tube method is known as "tissue culture." In recent years, he has succeeded in doubling the yield of greenhouse roses in winter by using high intensity discharge (HID) lamps. He collaborated in an energy project that led to development of a night cover system capable of reducing the need for nighttime greenhouse heating by as much as 80 percent.

In recognition of his ability as an outstanding teacher, ASHS honored him with the 1979 M.A. Blake Award for Distinguished Graduate Teaching. In 1972, he shared the ASHS Alex Laurie Award with his former student L.H. Cheng Ho for their research paper.

In addition to more than 200 scientific papers, Langhans has written a book titled "Greenhouse Management—A Guide to Structure, Environmental Control, Materials Handling, Crop Programming and Business Analysis" (1980). He is the editor of another volume: "A Growth Chamber—Environmental Control for Plants" (1979).

Born in Flushing, New York, Langhans received the bachelor of science degree from Rutgers University and the master's and the doctoral degrees from Cornell.