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# Finally, a scientific look at chemicals by U.S. students?

**BERKELEY, Calif.**—Mr. Professional Applicator, you're not the only person troubled about how grade school students view the role of chemicals in today's society.

Many others, it turns out, are similarly concerned judging by the growth of the Chemical Education for Public Understanding Program (CEPUP).

CEPUP, headquartered at the University of California, Berkeley, develops and offers supplemental science programs for grade school students. One of its primary focuses is to educate students about chemicals.

Last year it reached almost 600,000 students in 40 states, says its director Herbert Thier, Ed.D.

"Citizenship requires an understanding of science," says Thier. "It is absolutely a requirement to participate in a democratic society in an effective way."

Thier explains that CEPUP, presented in hands-on packages of information, hammers away at the process of scientific inquiry. Ultimately, it presents the concepts of risks and benefits.

"An understanding about chemicals and how chemicals interact with people and the environment is essential to an informed citizenship in our society," adds Thier. "It is not productive to have people react only on an emotional basis."

So far, CEPUP has developed supplemental science programs for students from the fifth to the ninth grades. It also sponsors several community education programs dealing with chemicals

and chemical use.

Funding for CEPUP is provided by the National Science Foundation and private industry.

"You (professional applicators) are seen by some people in your communities as someone who wants to spread poison," adds Thier. "Obviously, there is an educational problem here."

For more information contact: CEPUP, Lawrence Hall of Science, Univ. of California, Berkeley, CA 94720; (510) 642-8718.



**Herbert Thier says students can't become good citizens without a basic knowledge of science.**

## Dry California lawns contribute to fire losses, say Beard and Fender

**ROLLING MEADOWS, Ill.**—Reduced outdoor watering and smaller sized lawns contributed to the overall devastation caused by the fires in Oakland and Berkeley, Calif., according to Dr. James Beard of Texas A&M University.

"When the fires began, they were fueled by dry landscape plants, many of which replaced turfgrass because they were viewed as water-saving," says Beard.

"Turfgrasses are about 70 to 80 percent water by weight, and even a moderately maintained lawn can serve as a fire barrier. The loss of lives and property is tragic, but it should now be obvious that Californians and others need to take a close and careful look at the benefits turfgrass can provide," Beard observes.

Douglas Fender, executive director of the American Sod Producers Association here, adds:

"Too often, turfgrass is viewed as an aesthetic feature of the landscape, not as the practical environmental tool it really is. The benefits of grass far outweigh their water requirements, especially when people learn how to properly care for their lawns."

Beard is a turfgrass researcher with nearly 30 years experience. "(Turfgrasses) aren't the useless, wasteful water-hogs some people say they are," he concludes. "They can, in fact, save lives, with minimal amounts of supplemental water."

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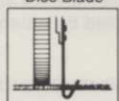
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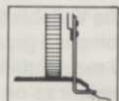
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### NEXT MONTH:

**LM Reports: Irrigation equipment  
Preparing golf courses for special events  
Selecting hand sprayers  
Spring fertilization tactics  
Renovating athletic fields  
Dealing with the public and media  
Soil testing and its benefits**



## Fescue, blue, *Poa trivialis* make news

**PACIFIC NORTHWEST**—Seed experts in Idaho, Oregon and Washington predict a sizeable cutback in 1992's turf-type tall fescue production, to remedy a glut in the species.

Gayle Jacklin, director of marketing for the Jacklin Seed Co., says inventories of turf-type tall fescue might not reach "acceptable levels" until 1993.

Dave Nelson of the Oregon Fine Fescue Commission estimates that about 30,000 to 50,000 tall fescue acres will be converted to wheat production, which represents a decrease of 10 to 15 percent.

"We overproduced it," admits Dr. Jerry Pepin of Pickseed West.

"Five years ago there weren't even 25,000 acres in production," says Pepin. He agrees that it will take at least one season to correct the situation.

"We concentrated so heavily for the last 10 years on turf-type tall fescue, and it grew to more than 80,000 acres," says Nelson.

At the other end of the spectrum, Nelson says bluegrass prices have risen in price due to inadequate supply.

"The dryland areas in southeastern Washington did not yield what was hoped for," says Nelson, resulting in a price increase at season's end.

"(The price of) common Kentucky bluegrass has gone up about 25 to 30 percent," says Doug Toews, director of marketing for International Seeds. "And as far as name brand proprietary varieties, they're stable and/or going up."

Compounding the problem is the increased price of wheat.

"When wheat prices jump up like they did—from between \$2.75 and \$4 a bushel—it gives farmers an alternative to back some ground out of grass seed production," Nelson explains.



Dave Nelson



Dr. Jerry Pepin

## HOT STUFF

### Group to certify hort pros

**DENVER**—A group with the acronym ARCPACS will soon be the official certification board for horticultural professionals, according to its chairperson.

ARCPACS stands for the American Registry of Certified Professionals in Agronomy, Crops and Soils. It has been in existence for more than 14 years.

In preparation for its new duties, ARCPACS added a six-member sub-board of horticulturists during its annual meeting here in October. The board now has sub-boards in horticulture, agronomy, crop and soil science.

The six new board members, according to ARCPACS chairman Dr. Ricks Pluenneke, are: Dr. J. Benton Storey of Texas A&M University, Dr. William L. Hagan of San Leandro, Calif.; Dr. Cyntia D. Fellman of Frank's Nursery and Crafts, Detroit, Mich.; Dr. George Fitzpatrick of the University of Florida; Dr. Terry G. I Ferriss of the University of Wisconsin/River Falls; and Dr. James S. Kamas of the Cornell University Cooperative Extension Service.

### Another neem on market in 1992

**NEW YORK**—Another natural insecticide will be on the market by the 1992 growing season, according to a recent report in the *New York Times*.

The product is an extract of seeds from the neem tree, a tropical mahogany.

W.R. Grace, which developed the product, will sell a patented concentrate as "Margosan-O" to the professional horticulture market, the *Times* reports.

"Greenhouse and field tests have shown that (the) liquid spray, applied to plant leaves, controls about 170 types of insect pests, including beetles, caterpillars, fruit flies, crickets, locusts, aphids, weevils, gypsy moths and mosquitoes," the *Times* article notes.

There may be turf and forestry applications, the article also says. A relatively short residual, though, may mean several applications during the growing season.

### Jacklins might acquire Medalist

**POST FALLS, Idaho**—The Jacklin brothers—Don, Doyle and Duane—have issued a letter of intent to acquire the Medalist Turf Seed Division of Northrup King Lawn & Garden Company. The buy would be made independent of the Jacklin Seed Co., and includes Medalist's varieties, sales staff, and its Oregon and Nevada branch operations.

The Medalist Division would be renamed Medalist America and would operate independently, supplying grass seed to its existing professional and dealer network.

The purchase would give the Jacklins an entry into the consumer market with smaller, retail packaging. Northrup would benefit from the Jacklins' reputation as leaders in seed research.

Andrea Mackin, Jacklin spokesperson, says Medalist America would retain a separate sales and marketing staff, and its center of operations would remain in Minneapolis.

Jacklin would also acquire use of Medalist's Oregon research facility.

Nelson says the bluegrass price increase should raise the price of other varieties.

In other seed news, *Poa trivialis* overseeding is becoming more popular on southern golf greens.

"This gives us an opportunity to diversify the production base," says Nelson.

"It's going to be a hot one, but in limited supply for the next two or three years," says Toews of *Poa trivialis*'s growing popularity, which is reportedly due to better shade tolerance, and because the poa is easier to transition out in the spring than a straight perennial ryegrass overseed.

—Terry McIver

## GREEN INDUSTRY EVENTS

### JANUARY

**13-16:** Virginia Turf and Landscape Conference, Richmond Centre. Contact: Virginia Turfgrass Council, P.O. Box 9528, Virginia Beach, VA 23450; (804) 340-3473.

**16-18:** Mid-Am Horticultural Trade Show, Hyatt Regency Hotel, Chicago, Ill. Contact: The Mid-Am Trade Show, 1000 N. Rand Rd., Suite 214, Wauconda, IL 60084; (708) 526-2010.

**17:** Western Tree Management Symposium, Los Angeles State & County Arboretum, Arcadia, Calif. Contact: Al Epperson, 7072 Thomas St., Buena Park, CA 90621; (714) 836-8989 or Tommy Caldwell, (213) 666-6157.

**19-21:** Empire State Tree Conference, Holiday Inn, Albany, N.Y. Contact: New York State Arborists, ISA Chapter, P.O. Box 58, Latham, NY 12110; (518) 783-1322.

**20-22:** Michigan Turfgrass Conference; Holiday Inn (formerly Clarion) Convention Center, Lansing, Mich. Contact: MSU Cooperative Extension Service, Plant and Soil Sciences Building, East Lansing, MI 48824-1325.

**23-25:** Tropical Plant Industry

Exposition (TPIE), Ft. Lauderdale Convention Center. Contact: Florida Nurserymen and Growers Assn., 5401 Kirkman Rd., Suite 650, Orlando, FL 32819; (407) 345-8137.

**26-29:** Associated Landscape Contractors of America Executive Forum, Naples, Fla. Contact: ALCA, 405 N. Washington St., Suite 104, Falls Church, VA 22046; (800) 395-2522; in Virginia, call (703) 241-4004.

**27-28:** Arkansas Turfgrass Association Conference and Trade Show, Arkansas Statehouse Convention Center. Contact: Angie McSwain, (501) 663-8810; or Arkansas Turfgrass Association, Penthouse Suite, 1123 S. University, Little Rock, AR 72204.

**27-31:** Virginia Tech's Turfgrass Ecology and Management Short Course, Donaldson Brown Center for Continuing Ed., Virginia Tech campus. Contact: Conference Registrar, Donaldson Brown Center, Virginia Tech, Blacksburg, VA 24061; (703) 231-5182.

**28:** Landscape Irrigation System Design, University of California at Davis. Contact: (800) 752-0881.

**29-30:** Northern California Turf and Landscape Exposition, Santa Clara

Convention Center. Contact: NCTC, 425 Oak St., Brentwood, CA 94513; (415) 516-0146.

**29-30:** Interstate Pest Control Conference, University of Maryland, College Park, Md. Contact: N.L. Breisch, Symons Hall, College Park, MD 20742-5575; (301) 405-3913.

**30:** Connecticut Tree Protective Association annual meeting, Aqua-Turf, Plantsville, Conn. Contact: CTPA, 18 Washington St., Rocky Hill, CT 06067-1527; (203) 257-8971.

### FEBRUARY

**3-5:** Mid-America Green Industry Convention, Hilton Plaza Inn, Kansas City, Mo. Contact: Olivia Golden, executive director, PLCAMA, P.O. Box 35184, Kansas City, MO 64134; (816) 765-7616.

**4-14:** Target Specialty Products seminars, Fresno, Calif.; San Jose, Calif.; Phoenix, Ariz.; Buena Park, Calif. Contact Target for specific dates and locations: (310) 865-9541.

**5-7:** American Sod Producers Association Midwinter Conference and Exposition, Bally's Casino & Resort, Las Vegas, Nev. Contact: ASPA, 1855 Hicks Rd., Rolling Meadows, IL 60008. (708) 705-9898.

## CUSTOMER SERVICE TIPS

by Ed Wandtke

■ Feedback on the effectiveness of your company's customer service is essential to maintain or improve service quality. Some companies provide each of their employees with a pocket diary for the year. Employees are asked to write daily answers to the following three questions:

1. What customer service did I perform today?
2. What were the results of the cus-

tomers service I performed?

3. What customer service idea or observation do I have for this day?

Start with a weekly meeting, then switch to monthly diary reviews with your office assistants, technicians and supervisors. The results of the meetings should provide you with insight into problems and revelations about employee and lawn service customer trends, patterns and preferences.

Asking employees to keep a diary can

be used in delegating responsibility and in developing their ability to solve problems on their own.

It also serves as a source of information on how an individual handled an out-of-the-ordinary lawn service customer problem. Compiling problems and solutions each month for unique occurrences is a way to recognize individual creativity and develop problem solving skills. Negative solutions or decisions should not be published.



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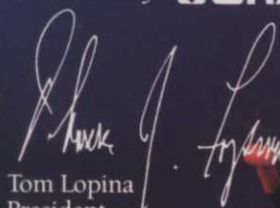
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Useful literature and videos offered to LM readers

## STORAGE REGULATIONS—

An informative videotape describing significant codes and standards which regulate the storage of hazardous materials is available from the Haz-Stor Co. Based on a paper presented by

the company at the 1991 NFPA Conference, the video is an easy-to-understand summary of the interaction between federal, state and local regulations. For more information, contact Haz-Stor at 2454 Dempster St., Des Plaines,

IL 60016; (708) 294-1000.

**CHAIN SAW VIDEOS—**Two videos, "Chain Saw Use and Safety" and "Chain Saw Selection and Maintenance," are being offered by the National

Arborist Association. For more info, contact the NAA at P.O. Box 1094, Amherst, NH 03031; (800) 733-2622.

**ON LAWN AERATION—**Prego Press offers a 200-page, large format book "Lawn Aeration: Turn Hard Soil into Cold Cash," on sale until March 1 for \$25. At that time, the price becomes \$35. Author Robin Pedrotti has his own lawn aeration business. To order, send the money to Prego Press, Dept. R, P.O. Box 23945, San Diego, CA 92193. For overnight delivery, include an additional \$10 per book.

**ARCHITECTS LISTED—**The American Society of Golf Course Architects has published a 120-page directory featuring valuable information on each of its 111 associate and regular members. To receive a copy, send a check for \$5 to: ASGCA, 221 N. LaSalle St., Chicago, IL 60601.

**LITERATURE FROM PPGA—**The Professional Plant Growers Association has two publications and one video of interest to the green industry. If you are on the look-out for new suppliers of bedding and pot plants for landscape design, you'll want the free PPGA's Buyer's Guide. "Success with Bedding Plants" is a 20-minute video ideal for landscapers, park directors, golf course supers, etc. Topics include soil preparation, plant selection and installation, and care and maintenance. Price is \$132.50 for non-members, \$102 for PPGA members. Also, a "Professional Guide to Flowering Annuals" is available for \$2.60 each. It is a full-color, 28-page booklet with a list and photos of 63 popular flowering annuals. To order, or for more information, write P.O. Box 27517, Lansing, MI 48909 or phone (517) 694-7700.

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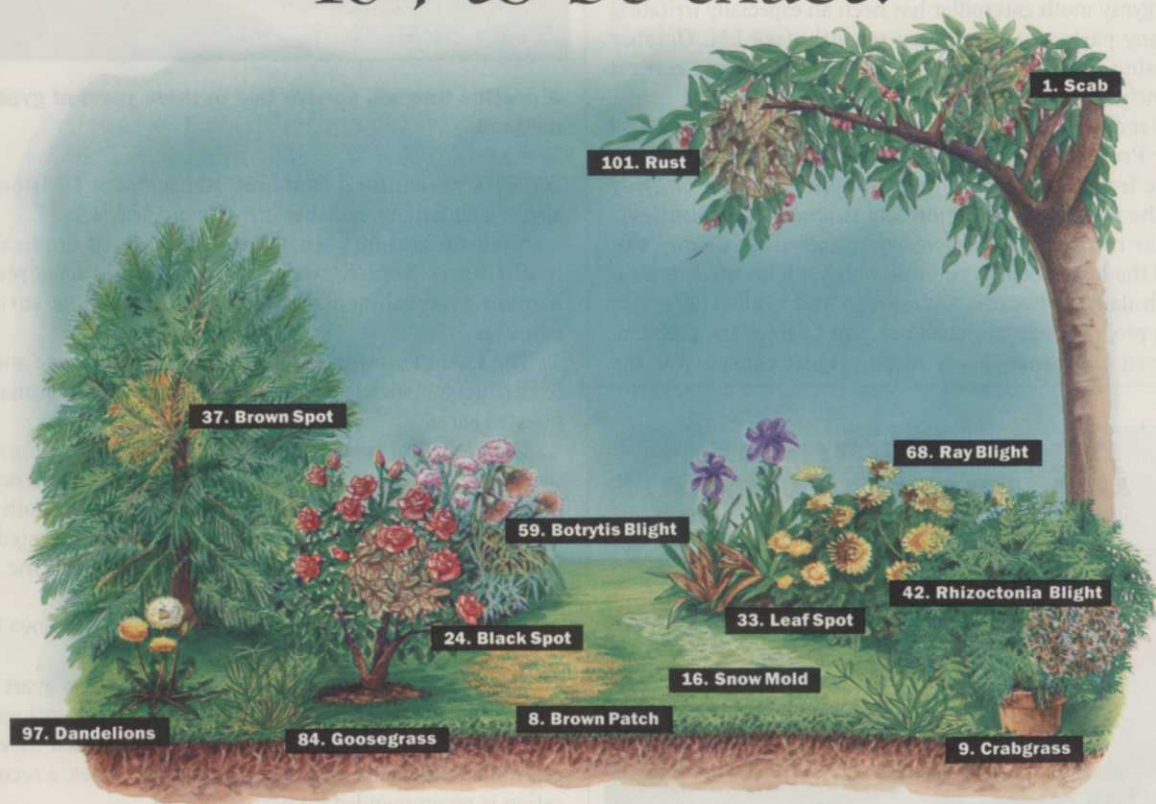
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# JOB TALK

## Aerial bio-attack slays gypsy moth

■ The gypsy moth caterpillar has been an especially irritating pest in many parts of the country recently (see LM, October 1991), causing horticulturists to experiment with new control methods, including biological pesticides.

The Wisconsin Department of Agriculture, Trade and Consumer Protection (DATCP) reacted quickly when a 1988 pheromone trapping program indicated the presence of gypsy moths in the Door County region and surrounding counties.

A popular recreational and forestry region, Door County officials feared the loss of tourist revenue which it felt would result if gypsy moth damage became widespread and evident. A major eradication program was launched last year to solve the problem, led by Steven C. Krause, gypsy moth project coordinator the



**A healthy tree will survive two to three years of gypsy moth damage.**

DATCP's Agricultural Resource Management Division. Krause says the situation nearly became unmanageable.

"Had no action been taken this year to eradicate gypsy moths," says Krause, "we most likely would have seen a permanent establishment in Door County and the surrounding counties."

The USDA Forestry Service teamed with the state and decided to conduct a biopesticide spraying program on an estimated 6,000 infested acres.

The biological pesticide chosen was the *Bacillus thuringiensis var. kurstaki* (B.t.k.), a biological stomach poison that only affects certain lepidopteran larvae, which include gypsy moth caterpillars. The spores and crystals of the agent are ingested by lepidopteran caterpillars, which results in paralysis of the gut wall, and death within hours.

State officials chose the Foray 48B product, by Novo Nordisk's Plant Protection Division in Danbury, Conn.

The 6,000 acres were treated twice, three days apart by aerial application from two twin-engine aircraft. Treatments were timed to hit just after eggs had hatched, to be ingested by emerging caterpillars. (Because eggs hatch at different rates, a second application is recommended for best results.)

The aerial application firm, Duflo Spray-Chemical, Inc., of New Bremen, N.Y., was awarded the application contract. Owner Jeffrey Duflo was on site to manage the spraying efforts, and manufacturer's personnel were on hand to provide field support to Duflo's team.

Observers from DATCP and the USDA Forest Service insured adherence to project specifications and environmental regulations.

Krause says he is confident in the efficacy of the B.t.k. pesticides to eradicate the gypsy moth, "in this economically vital region of Wisconsin."

The state ag department continues its program to monitor other areas of Wisconsin to determine if there will be a need to conduct eradication programs in untreated regions next year.

State officials say they have learned from this experience that gypsy moth is a pest to be dealt with in a swift and firm manner. Gypsy moth is spread through the movement of household goods and forest products, as well as by campers and others who travel from infested to non-infested areas.

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