Don't let insects make your turf a jungle.

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For less money than any other major turf insecticide, DURSBAN® brand insecticides can keep more than a dozen insect pests from turning healthy turf into a teeming insect jungle. Chinch bugs, sod webworms, you name it. If it's a major turf insect problem, DURSBAN 2E or more concentrated DURSBAN 4E probably controls it. Economically. Just one application of either product provides several weeks of effective residual insect control. Simply mix with water and spray.

Or call one of our selected custom formulators, and apply a DURSBAN granular formulation straight or in a dry fertilizer mixture. Life is a big enough jungle without insects tearing up your turf. So for broad-spectrum insect pest control at a very low cost, make DURSBAN insecticides part of your turf program. Just read and follow all label directions and precautions. Agricultural Products Department, Midland, Michigan 48640.

Trademark of The Dow Chemical Company
10 Independence National Park — Massive Lawns for Massive Crowds — Park officials successfully maintained 30 acres of turfgrass during the Bicentennial tourist invasion. Here’s how they did it.

12 Understanding Slow-Release Nitrogen — Dr. James Wilkinson explains how slow-release nitrogen functions and reports test results on some of the more popular sources.

22 The Long, Thin Line at Holden — With limited staff and funds, this world famous Ohio arboretum is kept in peak condition.

26 Maintaining California’s Gemstone — Bel Air Country Club — Meticulous attention to both equipment and procedures is the key to the magnificent grounds of this exclusive golf course.

36 Granular Application — The Lawn-A-Mat Story — Daniel Dorfman, president of this franchise giant, tells how granular application can be a successful alternative for lawn care service companies.
With delight and enthusiasm, we announce the birth of a new publication, hatched by WEEDS TREES & TURF. LAWN CARE INDUSTRY begins publication in July. This new venture is, perhaps, the most exciting news in the lawn maintenance segment of the vegetation management market.

The editorial program for LAWN CARE INDUSTRY will be directed to top management in chemical lawn care and maintenance programs. Readership will include presidents, owners, and managers concerned with this mushrooming billion dollar business serving the residential lawn care market.

I am personally grateful for the opportunity to participate in the creation of such a promising new publication. My associates and I are committed to doing everything we can to see that Lawn Care Industry serves its readers well. We look forward to hearing from you concerning any comments, questions, or suggestions you may have about LAWN CARE INDUSTRY and, as always, about WEEDS TREES & TURF.

This month we take a close look at that most important facet of our business, grounds maintenance. Because of the time of year, we planned to feature recreation areas.

Before choosing a golf course, we contacted the editors of GOLF BUSINESS for their suggestions. Chief Editor Dave Slaybaugh said there was no question as to the outstanding maintenance at Bel Air Country Club in Los Angeles. He also noted that GOLF BUSINESS had published an article on Bel Air’s irrigation system. We immediately dispatched free lance writer Harold LeSieur to talk with Art Twombly, Bel Air’s articulate superintendent. The results of the interview, on page 26, give some insight into how this lush course is kept that way.

For parks, we feature Independence National Historical Park in Philadelphia. Besieged by thousands of tourists during the Bicentennial, the park was kept in fine condition with careful attention to maintenance practices. And, a year later, the turfgrass is thriving. See page 10.

For arboretums, I chose the beautiful Holden, in Kirtland, Ohio. My husband introduced me to this marvelous experience several years ago, and today, we try to visit Holden at least twice a month for the incredible sense of peace the natural setting brings. Superintendent Marty Martin has done a fine job of maintaining the grounds, despite the fact that the maintenance budget has not increased proportionately with the phenomenal growth of the arboretum. See page 22.

Turfgrass expert Dr. James Wilkinson explains slow-release nitrogen on page 12. Dr. Wilkinson prepared this article exclusively for WEEDS TREES & TURF and has spent considerable time researching the subject.

Last month, in our Lawn Care Industry column, we printed a letter from Lawn-A-Mat president and founder Daniel Dorfman criticizing us for over-emphasizing liquid application for chemical lawn care in our March supplement. We invited Mr. Dorfman to tell us his story, granular application, which you will find on page 36. He makes a good case for this alternative.

WEEDS TREES & TURF appreciates all comments, pro or con. As Dr. Roger Funk of the Davey Tree Expert Company said, recently, “Criticisms or compliments — at least your readers are talking about your magazine and that’s definitely a plus.”
When you compare a Victa Kentucky bluegrass plant to another improved Kentucky bluegrass, the difference might not be readily apparent. Even in side-by-side turf plots, it's often difficult (sometimes impossible) to make a visual distinction on a given day.

Research studies at Scotts show that the most important differences between Victa and other improved bluegrasses appear in the seasons following establishment. These are the years when you have to live with your choice and you will find Victa makes maintaining showcase quality turf easier and less expensive. Fewer herbicides are needed because Victa's dense, vigorous growth habit means less weed encroachment. Victa's outstanding disease resistance results in reduced fungicide costs. And you should be especially pleased with the fact that Victa is a low growing (decumbent) variety. As such, it's likely to require fewer costly mowings, particularly in the always busy spring.

One last thought – blended or standing alone. Victa Kentucky bluegrass is a versatile performer that can handle your toughest turf assignments with unique good looks. And when your turf looks good, you do too.
Certain deviations from strict compliance with data requirements in the Section 3 registration guidelines have been ordered by Edwin L. Johnson, deputy assistant administrator for pesticide programs, EPA. Johnson has directed all Office of Pesticide Programs employees to use their own scientific judgment in determining whether deviations from the data requirements in the registration guidelines should be allowed.

Johnson has ordered the OPP employees to review old tests aside from the guidelines to determine whether health and safety determinations could be made without redoing studies under the new protocols in the guidelines; acceptance of studies from universities, foreign groups, etc. not sponsored by manufacturers, which do not meet exact specifications of protocols in the guidelines, but which "meet the basic statistical parameters of reliability," case-by-case application of scientific judgment on allowing deviations from the guidelines' data requirements to formulated products.

EPA Administrator Douglas Costle said "no thanks" to increased funding for the Toxic Substances Control Act during testimony in early May. Costle said President Carter's revised budget request for TSCA of $29 million for fiscal 1978 respresents a "more than fourfold increase" and, "taking into account the practical limitations on how quickly an organization can be expanded and still remain effective, it seems to me that the $29 million request is quite adequate for fiscal year 1978."

The House Agriculture Committee's Subcommittee on Department Investigations, Oversight, and Research voted to extend FIFRA without amendments to March 31, 1978. Essentially, it is a six months extension, providing $43,500,000 for the period beginning October 1, 1976 and ending September 30, 1977, and $27,500,000 for the period beginning October 1, 1977 and ending March 31, 1978.

The House Subcommittee and the Senate Agriculture Committee removed FIFRA from the farm bill. In early June, concurrent hearings on FIFRA amendments are planned by the House Subcommittee and the Senate Agriculture Committee. Amendments beyond those proposed by the Environmental Protection Agency are certain to be considered during the June hearings.

EPA is reviewing registration of Lindane. If you have need for the chemical and your state extension entomologist confirms you have no equal or superior registered substitute, both you and he should file comments before June 17. Send information in triplicate to: Federal Register Section, Technical Services Division (WH-569), Office of Pesticide Programs, Room 401, East Tower, 401 M Street, S.W., Washington, D.C. 20460.
There's never been a herbicide like this before.

Roundup® herbicide by Monsanto is powerful enough to control many of the toughest annual and perennial weeds in one application. Once, several different herbicides and frequent repeat treatments were needed. Now, one man with a backpack or tank sprayer can handle many of your weed cleanup chores in one treatment with Roundup.

Roundup has more applications than you can imagine. For golf courses, schools, corporate and industrial parks. Wherever spot treatments are called for, Roundup makes sense. Especially when you consider what it can save you in time, labor and herbicide inventory.

"Translocation" is the key. Roundup is applied to the weed foliage, absorbed through the leaf surface, and "translocated" throughout the entire plant. In this way, Roundup effectively destroys most weeds—roots, rhizomes and all.

Roundup destroys most emerged annual and perennial grasses and weeds. Including bluegrass, bermudagrass, quackgrass, bindweed, johnsongrass, fescues, and vaseygrass.

Roundup has no residual soil activity. And you know what that can mean for your landscaping program. However, for seedling weed control, simply follow your Roundup treatment with an effective residual herbicide.

Roundup. A herbicide that gets to the root of the problem.

To find out how to put Roundup at the root of your weed problems, write: Roundup, Monsanto Agricultural Products Company, C3NJ, 800 North Lindbergh Blvd., St. Louis, Mo. 63166.

Always read and carefully follow the Roundup label directions. RI 2/7

Monsanto

Circle 102 on free information card
Perlite usage up 25 percent

According to U.S. Bureau of Mines Reports for 1975, the most recent year for which data is available, horticultural perlite usage climbed 25 percent over 1974. In 1971, 11,500 tons (approximately 808,500 cubic feet) were consumed by this market. In 1975 this rose to 31,520 tons (approximately 2,206,400 cubic feet) — an increase in four years of 173 percent.

Robert Milanese, managing director for the Perlite Institute, said the impressive growth in use of horticultural perlite may be attributed to several factors including: increased awareness on the part of the home gardener and commercial grower of the benefits of proper soil aeration and drainage, the need to reclaim marginal soils for crop growth, more intensive gardening on existing land to increase productivity, the ‘green boom’ in the U.S., and a desire for more use of ‘natural’ materials.”

AAN asks Congress for research $$$

In testimony before the House and Senate subcommittees for agricultural appropriations, the American Association of Nurserymen strongly urged Congress to appropriate adequate funds for horticultural research at Agricultural Research Service Laboratories, the National Arboretum, and state experiment stations.

"Horticulture is the second largest commodity classified as agriculture," AAN Executive Vice President Robert F. Lederer pointed out, "and our industry’s product will play an increasingly important role in conserving and adding to our nation’s resources. The drought in the West and increasing reports of dust storms in the Great Plains create an urgent need for an erosion control program.

"These programs will depend on plant material to conserve energy; aid in air and pollution improvement, noise abatement; serve as sight barriers; beautify our surroundings and bring us peace of mind."

Hopkins to sell elm fungicide

Correx, a fungicidal aid for the control of Dutch Elm disease, formerly sold by DuPont under the trade name of Lignasan BLP, will be available from Hopkins Agricultural Chemical Co., Madison, Wisc. in 1977.

Correx is not the ultimate in control of Dutch Elm disease, but researchers and Hasel, executive director of the Elm Research Institute, Harrisville, N.H., believe that Correx is an aid for the control of Dutch Elm disease.

Lawn and garden tractor sales up

Lawn and garden tractor sales will climb about eight percent this year, according to R. E. Drennan, Massey-Ferguson’s vice president sales. He attributed the expected jump to resurgence in home construction and to the continuing spread of home gardening. He also said the increase level of the consumer’s confidence in the economy was a factor.

300 turf experts attend Va. meeting

More than 300 turf professionals from Virginia and four neighboring states recently attended the 17th annual Virginia Turfgrass Conference at the Sheraton Motor Inn.

Theme of the two-day conference, sponsored by Virginia Tech’s Extension Division and Virginia Turfgrass Council, was “From Seed to Success.”

J. F. Shoulders, Tech Extension turf specialist, said the meeting was “most successful. It brought research, extension, management, and industry together.”

Dr. W. R. Van Dresser, dean of Extension at Tech, chaired the conference’s opening session on successful seedings. The session featured W. W. Huffine, professor of agronomy at Oklahoma State University at Stillwater, and Robert J. Peterson, sales representative for E. F. Burlington & Sons of Forest Grove, Ore.

New canker strain found in New York

A new virulent strain of Scleroderris canker has been identified for the first time in the United States. The outbreak has been identified in nine counties in New York’s Adirondack Mountain area, covering 34,000 acres. Tree mortality has exceeded 90 percent on 2300 acres. Seriological work has shown that the new strain is identical to one present in Norway and Finland that has extensively damaged conifers in those countries.

A mild strain of the canker — caused by the fungus Scleroderris lagerberii — has been present in northeastern and lake states conifer nurseries, Christmas tree plantings and conifer forest plantations for the past 20 years. Chemical and cultural controls are available for these strains but not for the newly discovered one.

The American Association of Nurserymen has asked the Senate Appropriates Subcommittee on Interior and Related Agencies for a $200,000 for research aimed at the control, and if possible, eradication of the new strain.

New York State is anticipating promulgating an interior quarantine and expanded inspection to protect the non-infested areas of New York and the states to which N.Y. Christmas trees and conifer nursery stock is normally shipped.
Recreational lakes are meant to be fun places. Swimming. Boating. Fishing. Not choked with unwanted water weeds. Aquathol K aquatic herbicide cleans up these problems—fast, effectively and efficiently. In fact, you can swim in lakes treated with Aquathol K 24 hours after application. And treated water can be used immediately for golf course irrigation without harm to turf. Whether you're a professional applicator, recreational lake supervisor, or private land owner, get Aquathol K liquid or Aquathol granular. And clean up your water weed problems.

For more information, contact AGCHEM DIVISION, PENNWALT CORPORATION, 1630 E. SHAW AVE., FRESNO, CALIFORNIA 93710 (209) 226-8400.

All pesticides are harmful. Read the label carefully and use only as directed.

Aquathol K Aquatic Herbicide.
Independence National Park—Massive lawns for massive crowds

In anticipation of massive crowds visiting historic Independence National Historical Park in Philadelphia, during the Bicentennial, National Park Service officials were concerned over being able to maintain the quality and appearance of the approximately 30 acres of lawn in the park.

Pennfine Perennial Ryegrass, in a mixture with Kentucky bluegrass, was selected for use in the park for the Bicentennial. Pennfine was not new to the park. Various areas within the park were first seeded with it in the spring and fall of 1975 with good results. It was used alone in the area behind Carpenter's Hall at the same time another area was seeded with a Kentucky bluegrass mixture.

According to Howard Jeffries, horticulturist for the National Park Service, watering, fertilization, overseeding and pest control programs are the main concerns of the maintenance program for the lawns at Independence National Historical Park.

Watering of the grounds is done automatically by an irrigation system on a time clock basis. The system operates every third day for a 15-minute interval, and, depending on the amount of natural rainfall, it can be set for more or less frequent watering. The park is currently revising its irrigation system to standardize all the sprinkler heads and to achieve more uniform water distribution.

The fertilization program consists of applying, by mechanical spreader, two pounds of actual nitrogen in granular form per 1,000 square feet of lawn in mid-May, mid-July and again in late September.

Aeration of the ground areas that receive a lot of traffic and are heavily compacted is done in late March. The area is dragged to help