

# New Toro® controllers combine simplicity with total control



## Toro's 8+1 and 12+1 electromechanical controllers handle drip irrigation, too!

Here's the latest advance in controllers, solving many of the problems you've reported from the field. For example, we think you'll appreciate that the key to our 8+1 and 12+1 controllers is *simplicity*, yet with all the control you need. They're simple to install, and that saves you time and money! Simple to *program*, too. And simple to *service*. All the advantages you've been looking for. The

" + 1" part of our name? That stands for the one extra, *independent* system that controls drip irrigation *simultaneously* with any of the 8 or 12 stations. As far as we know, these new Toro electromechanical controllers are the only ones of their kind available today. As always, a step ahead of the rest . . . TORO!



**The Toro Company**, Irrigation Division  
Dept. WT-684, P.O. Box 489, Riverside, CA 92502

**EXCELLENCE IN IRRIGATION**

Circle No. 142 on Reader Inquiry Card

# PROBLEM SOLVERS

by Balakrishna Rao, Ph.D., and Thomas P. Mog, Ph.D.

## Summer fertilizer safety

**Problem:** Our lawns are dethatched, limed (50 lbs./1,000 sq. ft.) and fertilized (10-6-4, 50% fertilizer) each spring and fall. The lawns consist mainly of Kentucky bluegrass and creeping and tall fescue with very little ryegrass, and all the clippings are picked up after mowing. Our summer fertilizer is 20-4-10, 40%. If this is applied before July (mandatory) would it be too strong for summer? (New Jersey)

**Solution:** Not knowing the exact amount (lbs./1,000 sq. ft.) of different fertilizers being used during different times of the year, it is difficult to respond to your question. However, if you are using these fertilizer formulations to provide no more than 1 lb. of actual nitrogen per 1,000 sq. ft. per treatment, then it should be safe enough to use in summer.

## Sandburr control in Texas

**Problem:** What will eliminate sandburrs in the east Texas area between Dallas and Shreveport? (Texas)

**Solution:** You can use the preemergent materials like diphenamid, trifluralin or EPTC for sandburr weed control on turf and ornamentals in Texas. Although results may vary, you can expect some level of control from the use of these products.

You can expect better results using arsenical materials such as DSMA or MSMA as postemergent herbicides. These arsenical materials, however, may have phototoxic effects and produce temporary discoloration of the treated area. Treat the area when weeds are young and actively growing which would be during late spring and early fall.

## Needle drop on Douglas fir

**Problem:** One of my account's Douglas fir trees are turning color and dropping their needles. What's really strange is that two trees may be right next to each other; one will be healthy and the other appears to be dying. Do you know what is causing this? (New York)

**Solution:** There are two possibilities; 1) a needle disease and 2) natural shedding of the older needles. So-called "evergreens", like the pines, spruces and firs, shed their foliage just as the broadleaved or deciduous trees do. Most conifers hold their needles for two or more years, after which they are shed.

Needle drop usually occurs in the fall and is a natural process which normally takes several weeks. Sometimes adverse environmental conditions trigger color change and shedding of the older needles at times other than fall. When this happens, the trees' appearance may change from normal to abnormal in a period of days. In both instances the newest needles are still on the tree.

Several different fungi can cause somewhat similar symptoms. The fungi responsible for a diseased condition that results in premature shedding of the foliage are collectively known as needlecast fungi.

With needlecast, one tree may be diseased and a nearby tree of the same species can be free of symptoms. This phenomenon is often attributed to differences in genetic makeup and is called host resistance.

If all firs were showing similar patterns of injury involving only the older needles, then one would suspect natural or environmentally induced shedding of the foliage and not disease.

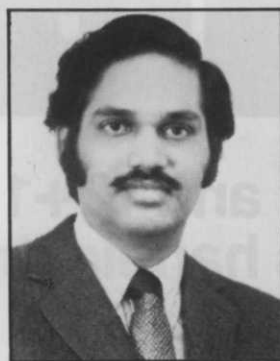
## Wood ashes as fertilizer

**Problem:** What kind of nutrient value is there in wood ashes from fireplaces? Some of our clients are thinking of using these around trees. I would appreciate your comments in this regard. (New York)

**Solution:** Recently, there has been increased interest in the use of wood ashes produced from fireplace burning as a fertilizer source. The wood ashes from fireplaces contain about 5% k<sub>2</sub>o (potassium) and 25% Ca (Calcium). Many people use these ashes as fertilizer in their gardens. Hardwood ashes are frequently used as fertilizer for tobacco growing. From this information, I would imagine that the ashes from fireplaces could be used as fertilizer to supply the above nutrients.

## Fruit or shade, rates differ

**Problem:** I plan on using Benlate to control scab. The label says use four to six ounces per 100 gallons on apples. For shade trees the rate is one pound per 100



Balakrishna Rao is plant pathologist and Thomas Mog is pest management specialist for Davey Tree Expert Co., Kent, OH.

Questions should be mailed to Problem Solver, Weeds Trees & Turf, 7500 Old Oak Boulevard, Cleveland, Ohio 44130. Please allow 2-3 months for an answer to appear in the magazine.

# Now ~~All~~ ~~8~~ of the top 10 golf courses in America have Toro® irrigation



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Toro irrigates all of America's top 10 golf courses...17 of the top 20 ...34 of the top 50. That's because irrigation probably is the most important single factor in turfgrass management, and most of those responsible realize that Toro offers them a hard-to-beat combination of expert knowledge and advanced-design equipment. Whether you're planning a new course, replacing your existing system, or trying to solve specific problem areas, a good partner to team up with is the man from Toro!



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gallons. The apple rate would be cheaper. Why the big difference? (Pennsylvania)

**Solution:** The "apple rate" is for apples as a food crop. Tolerance levels have been set for pesticide residues on food crops. At the shade tree rate the fungicide residue on apples might exceed permissible levels. Finally, most commercial fruit growers spray their trees weekly or bi-weekly thus reducing the need for a long-lasting residual.

Satisfactory control of scab on shade trees can be achieved with two or three applications of Benlate at the rate of one pound per 100 gallons. Follow the label instructions as to timing and possible use of wetting agents.

### Multi-use spray tanks

**Problem:** If washed, can a spray tank which is used for weed control be used for fungicide spraying of trees and shrubs? (New Jersey)

**Solution:** It is difficult to remove some herbicides after they have been used in a sprayer. This is particularly true of the phenoxy herbicides that are used for broadleaf weed control.

The following suggestions are from the Ohio Cooperative Extension Service publication, Chemical Weed Control In Commercial Nursery and Landscape Plantings.

1. 2,4D - It is difficult to remove 2,4D compounds from sprayers. It is advised that sprayers used for

applying these materials NOT be used for any purpose other than applying herbicides.

The 2,4D type materials can be removed if the following recommendations are followed immediately after use (as soon as spraying is completed).

a. Flush out the entire system with water detergent solution immediately after the solution (1 gallon of household ammonia in 10 gallons of water) and let stand for 12 to 24 hours. Disassemble the nozzles and soak the caps, screen, etc. in the ammonia solution.

b. Rinse thoroughly with water and let circulate through the sprayer.

c. Test spray a few plants which you know to be susceptible four to five days before using sprayer on larger areas.

2. PRINCEP - Rinse thoroughly with a detergent immediately after use. Check screens for clogging and, if present, soak in ammonia solution for 12 to 24 hours.

3. OTHER HERBICIDES - Any sprayer used to apply herbicides should be cleaned immediately after use. Special instructions for particularly troublesome herbicides have been previously outlined. If the procedures for cleaning out other herbicides are not specifically outlined,

a. Flush the sprayer system with clean water.

b. Rinse thoroughly with a detergent solution.

c. Rinse again with clear water.

The herbicide label may carry cleaning instructions. If so, follow the manufacturer's recommendation.

### A Warren's Turf PRO report...

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Jim Walsh

Roger Bossard

# EVENTS

## JUNE

**Harvard University Design Workshop, apply June 22 through August 16.** Harvard University, Cambridge, MA. Summer advanced continuing education in the Graduate School of Design. Topics include Advanced Farden Design, Microcomputers in Landscape Architecture, Street Trees, Fountains and Pools, and Starting and Maintaining Your Own Firm. Tuition ranges from \$400 to \$1,150 and housing is available. Contact Continuing Education, 48 Quincy St., Cambridge, MA 02138 or call 617-495-9340.

**Athletic Field Maintenance Seminar and Field Day, June 28.** From 9:00 a.m. to 4:00 p.m. at Terry Park in Fort Myers, FL. Sponsored by the University of Florida Institute of Food and Agricultural Sciences. Contact Charlie Lowery, Court Plaza, D-103, 2663 Airport Rd. South, Naples, FL 33962.

## JULY

**American Association of Nurserymen Annual Conference, July 14-18.** San

Antonio, TX. The 109th Annual Conference will be addressed by Lady Bird Johnson. Includes meetings of National Landscape Association, Garden Centers of America, and Wholesale Nursery Growers. Contact AAN, 1250 I St., NW, Suite 500, Washington, D.C., 20005. (202) 789-2900.

**Aquatic Plant Management Society Annual Meeting, July 15-18.** Richmond Hyatt House, Richmond, VA. Contact William Rushing, P.O. Box 16, Vicksburg, MS 39180. (601) 634-3542.

**American Sod Producers Association Summer Convention and Field Days, July 24-26.** Olympia Spa and Resort, Oconomowoc, WI. Includes outdoor equipment demonstration. Contact Doug Fender, ASPA, 4415 W. Harrison St., Hillside, IL 60162. (312) 449-2844.

## AUGUST

**Landscape Technology Courses, Cal Poly University, August 14-16.** Pomona campus offers three programs; Arboriculture/Urban Forestry, Nursery Operations, and Dry

Climate Landscaping. Contact Wayne Smith, Cal Poly, Pomona, (714) 835-5550.

**International Society of Arboriculture Conference, Quebec City, August 18-23.** The 60th annual conference of ISA will be held at the Le Chateau Frontenac, Quebec City, Quebec, Canada. There will be educational sessions and commercial exhibits for all types of arborists. Contact Cal Bundy, ISA, P.O. Box 71, Urbana, IL 61801. (217) 328-2032.

**Wisconsin Turfgrass Association Field Day, August 27.** Oconomowoc Country Club, Oconomowoc, WI. Complete, "hands-on" display of outdoor power equipment. Contact Ed Devinger, Reinders Brothers, Inc., P.O. Box 57, Elm Grove, WI 53122. (414) 786-3300.

To insure that your event is included, please forward it, 90 days in advance, to: WEEDS TREES & TURF Events, 7500 Old Oak Boulevard, Cleveland, OH 44130.

## Park has to be a first day of the season."

"Sometimes when we need sod, we need it fast... and there's no margin for error in delivery or quality. A good example was the night the White Sox clinched the division title last year. Fans flooded onto the field looking for victory 'souvenirs.' Many of them took home huge chunks of our outfield turf.

"With another home game just three days away, we needed fast service if the outfield was going to be playable by game time.

"A call to Jim Walsh at Warren's Turf Chicago operation had Jim and his people out before dawn cutting hundreds

of yards of new replacement sod for us to put down early the next day.

"The sod we use at Comiskey Park has to stand up under heavy traffic, make maximum use of the fertilizers we put down, be aggressive in its growth so that it chokes out weeds, take up to 65% shade and be mowed to a half an inch on the infield. That's a tall order for any turf.

"Over the last ten years, we've tried dozens of turf and seed formulations. We have never found a bluegrass that comes anywhere close to Warren's A-34 for maximum root strength and best blade resilience."

"Our management demands top performance from all of us...and our suppliers have to be just as professional as we are." Roger Bossard, Head Groundskeeper for Comiskey Park—home of the Chicago White Sox—reports on the backup he gets from Jim Walsh and his team of Warren's Turf Professionals.

"Wherever you put down roots, go with the PROs."

# Warren's

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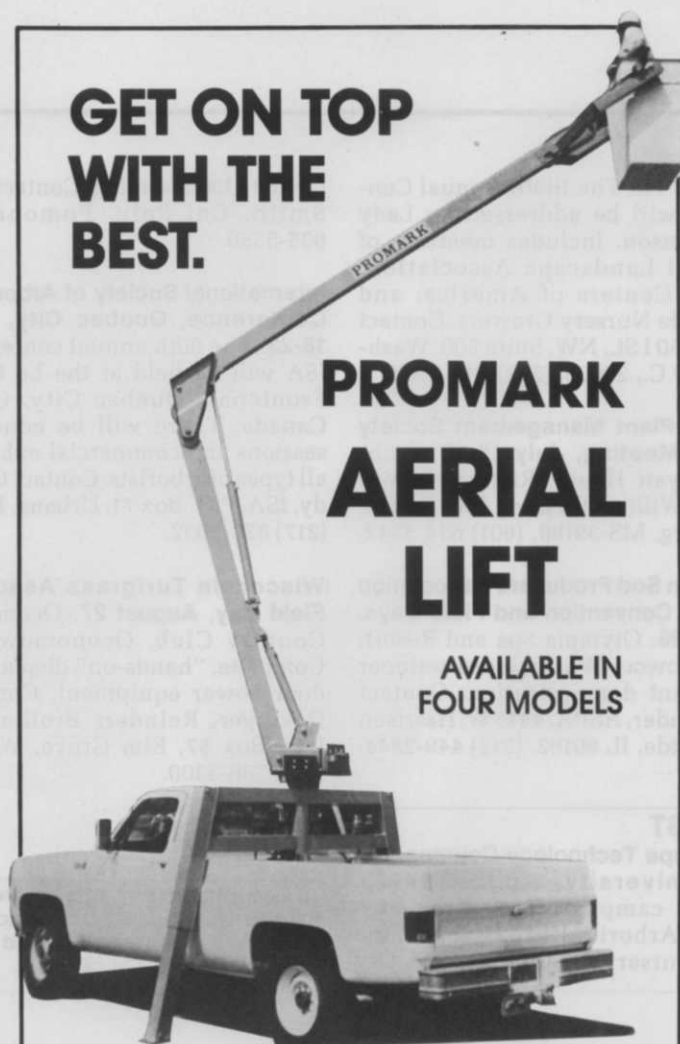
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## **LETTERS**

### **Rose kills in Missouri**

I was very interested in Michael Dirr's April article entitled Winter Damage.

In my area of southeast Missouri (zone 6) people are now observing widespread rose kills and plant damage. Although 1983 began as a wet spring, the rains stopped in May and did not resume until October. We apparently received adequate fall rains, but our roses did not face any cold weather until mid-December when temperatures dropped drastically to about -16° for a couple of weeks with wind chill factors of -60° occasionally.

I believe that my area of Missouri does not get cold enough in the fall to harden plants properly for the cold arctic blasts that come in December and January. However, since we get frequent fall and winter rains instead of snow, should roses be protected with heavy mulches of straw and sawdust which might be damaging by holding too much moisture? Would it be better to cut roses back about two-thirds and cover them when conditions moderate?

Also, I have observed several roses which are alive at the crown that were on their own roots. I am not sure if this means anything or not since I need more observations.

**Larry Hanning**

Area Entomologist  
State of Missouri Agriculture  
Department, RR1, Box 312,  
Burfordville, MO 63739

*Thank you for sharing your observations. We ask other readers to share their observations about winter kill as you have. Your letter is being forwarded to Michael Dirr for a reply.*

### **Exotic or native, adaptable trees needed**

Douglas Chapman's article on street trees in the April issue was informative, as always. I agree that an effort should be made to find adaptable species for urban growing conditions, but I think Chapman puts too much emphasis on the use of natives.

Many desirable native trees are unsuitable in street tree planting programs. In Missouri, natives accustomed to poor growing conditions such as post oak, hickories, sassafras and others are commercially available.

Almost half the trees mentioned in

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Chapman's list of species for planting on adverse sites are imports. None of these should be rejected just because they are exotics. Using the criteria of native vs. non-native to select trees needlessly narrows the number of choices and restricts diversity.

What difference does it make if ninety percent of the trees in an urban area are exotic if they are the best trees available for the job?

**Tim Frevert**  
Landscape architect  
Missouri Department of

Conservation, P.O. Box 180, Jefferson City, MO 65102-0180

## University of Georgia swims upstream

I agree with Dave Pinkus in general (Trends, April, Colleges Care More About Grants Than Students), but some of us are swimming upstream. I enclose our program for the Ornamental Horticulture program at the

University of Georgia, Athens. It has a good smattering of management and economics. If you know of some firms who want to hire interns or graduates of our program, please let me know.

**Jake Tinga**  
Professor of Ornamental Horticulture  
University of Georgia, College of Agriculture, Athens, GA 30602

## Thanks for the memories

The Man of the Year trophy adorns my living room and is greatly admired. So far, we haven't filled it with suds or bubbly.

Thank you for giving me the exposure in select company—it was a thrill.

**Fred V. Grau**  
President  
The Musser International Turfgrass Foundation  
College Park, MD

Fred V. Grau was presented the third annual Man of the Year trophy during a meeting of the Board of Directors of the Musser International Turfgrass Foundation at the GCSAA Show in Las Vegas. The Board consists of hand-picked contributors to the turf industry. Editor.

## Forsythia poor indicator of crabgrass germ

I have just read Landscape Log in February *Weeds Trees & Turf*. A common mistake made and that has been circulated is the idea that crabgrass germinates around Forsythia bloom. I have been watching this occurrence for the last three years in the Salt Lake City area and have noticed that crabgrass typically is much later than Forsythia bloom.

Forsythia can bloom four to six weeks before crabgrass germination. Crabgrass germination has been so regular in our area that it seems like it is tied into photoperiodic response in some way. Germination in our area has been around May 23 each year for the last three years in heavy as well as light soils!

If I were to tie it into some sort of landscape phenology, I would probably use Radiant crabapple bloom, apple or pear bloom.

In our area, I've suggested that pre-emergents should be applied no later than the first week of May.

**Robert L. Morris**  
Ornamental Horticulture Specialist  
Utah State University  
Salt Lake City, UT



**They do. It's their job to know things first and then pass that information on to you fast. Things like new turf management techniques, effective methods of insect and weed control, what really works... and what won't.**

### LOOK FAMILIAR?

They should. You've seen them often at turf shows, seminars, conventions, wherever industry news is in the making. They're the editorial and sales management team of **WEEDS TREES & TURF**. Please meet (seated l. to r.) Ron Kempner, Bruce Shank, Dick Gore, and Maureen Hrehocik; (back row l. to r.) Bob Mierow, Kevin Cooney, Joe Kosempa, and Bob Earley.

### THERE'S NO GRASS GROWING UNDER THEIR FEET.

They apologize for not always being in when you call, but great stories are found in the field, not in the office. These pros know the only way to really cover the green industry is to get out and be a part of it. From turf test plots in Oregon to the corridors of our Nation's Capital, they're following leads, surveying markets and interviewing the

landscape professionals who make our industry hum. Then, they use their years of experience to pull it all together, analyze it and present it to you in a crisp, easy-to-read and easy-to-use style. That way, you have the information you need to do your job better, faster and more effectively.

The next time you want to know something in the green industry, give them a call. If you can't reach them at the office, don't worry. They'll reach you in the pages of **WEEDS TREES & TURF**.

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**HOW TO AVOID SLEEPLESS NIGHTS  
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**SUBDUE**

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# Scientific Guide To Pest Control Operations

by Dr. L.C. Truman  
Dr. G.W. Bennett and  
Dr. W.L. Butts



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## SURVEY from page 16

in Ontario, has generated some of the first data on turf expenditures in the Province. The data show the value of producing and maintaining turfgrass in Ontario ranks third considering all agricultural products, after corn and tobacco.

The value of expenditures on turfgrass maintenance by all user groups was conservatively estimated at \$275 million, with \$75 million spent on turf equipment and \$26 million on pesticides, sod, and seed. Commercial lawn service sales were pegged at \$45 million, although a few lawn care operators told *Weeds Trees and Turf* this figure is low.

Golf courses spend more on maintaining turf than any other user group, followed by residential lawn care and sod farms.

Government turf managers surveyed indicated extension specialists could not help them with their most serious problems of labor and equipment shortages. Private turf managers were more supportive of extension services in problem solving.

Copies of the survey results are available from the Ontario Turfgrass Research Foundation, 54 Hernshaw Crescent, Etobicoke, Ontario, Canada, M9C 3M4.

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## GOLF

### China plans prime golf resort complex

Construction is expected to begin by the end of 1984 on a major golf resort complex in the city of Guilin, People's Republic of China.

The Ronald Fream Design Group, golf course architects in Santa Rosa, CA, has been commissioned to prepare the master plan. The Fream Group, along with Hong Kong-based architects and engineers, will prepare the plans for three eventual sites in the scenic area.

The Beijing Government intends to develop the Guilin region with international standard tourists facilities, of which the golf resorts will be a part.

The initial site will include 18 holes of championship calibre golf, golf school practice area, and clubhouse. A 60-room luxury lodge and an additional 18 holes are planned for the site, which has exotic limestone pinnacles, rolling land, and pine trees. A second site near the Lijiang River gorge will have 36 holes of international standard competition golf, a teaching and practice school, and several other recreational facilities.