Now, a clog-resistant valve that handles any flow rate.

Another way J-M Buckner® Waterscaping helps you keep things green.

The J-M Buckner 930 Series Electric Valves. A new three-way solenoid eliminates continuous internal flow through tiny orifices and greatly reduces the chance of clogging. And there is no minimum flow rate requirement. This valve will operate efficiently and open fully under all flow conditions. More sprinklers can be installed on each valve to reduce system costs. And clog-resistant performance means fewer callbacks.

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With increasingly elaborate landscape designs and constant changes in the weather, irrigation is no longer a mechanical function. Johns-Manville takes the next step...Waterscaping. It's more than controllers, valves and sprinklers that simply move water. It's the total scope of uniform irrigation as it's needed...from research to product design to field performance. Waterscaping is everything you need.

Behind It All: Experience, Research and Testing.
At our computerized testing facility in Fresno, we research, test and refine all the parts of Buckner systems to develop components that will provide uniform water application and perform according to our published performance data. The components we test come directly off the assembly line.

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Working with our nationwide network of trained distributors, J-M Buckner has a broad range of products and services to meet virtually any irrigation need. To learn more about Waterscaping (technical information, planning assistance or quality irrigation system components), contact your J-M Buckner Distributor or Vince Nolletti, P.O. Box 232, Fresno, CA 93708, (209) 442-8511.

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Johns-Manville
JULY 1979/VOL. 18, NO. 7

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GREEN INDUSTRY NEWS

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Management of Zoysia Key to Growth as Fine Turf
Dr. John Dunn, professor of horticulture at the University of Missouri, Columbia, provides insight to the growth of zoysia on fine lawns and fairways.

Engine Failure Analysis
Paul Sholten of Kohler provides the second part of the Summer Equipment Series. Exterior engine diagnosis this month will be followed by interior engine diagnosis in August.

Grasses and Legumes for Reclamation
Dr. Richard Hurley, vice president of research for Lofts Pedigreed Seed Co., reports results of a joint project by Lofts and Jacklin about reclamation grasses and their availability.

Sod Producers to Visit Scotts, Princeton
The 13th Annual Sod Producers Association Summer Meeting and Field Days are set for Columbus, Ohio, this month. Two of their largest suppliers will conduct tours.

Wetting Agents and Their Role in Water Conservation
A speech by Robert Moore of Aquatrol to the Arizona Turf Conference explains current technology of wetting agents.

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Cover: Tommy Stone, superintendent of the Country Club of Missouri, Columbia, Mo., (on left) shows a line of zoysia growth on a fairway to University of Missouri Turfgrass Specialist George Hubbell.
In a Rut

Though the article entitled "Geochemical Factors Affecting Plant Growth in Reclamation," in your April issue, was interesting, one basic error did appear as the caption to the photo on page 43. The photograph shows short linear clumps of vegetation growing in a pattern suggesting that the area was walked, prior to seeding, by equipment with grouser present. The caption states that the vegetative pattern indicated that "compacted earth was a better growing medium than the uncompacted." While this statement is generally inappropriate in regard to surface mine reclamation, compaction is not the variable responsible for the growth of the vegetation in the grouser marks.

When an area is tracked and then seeded, the distribution of the seed is initially uniform. During the first moderate rain, however, the distribution is radically altered. The lightweight seeds are washed downhill from each high between the grouser marks and into the adjacent local depression (grouser mark). During this process fines are also transported. These settle out in the still water accumulating in the depression and cover the seeds, generally preventing their further movement. The vegetation grows in the grouser marks, and not on the relative high spaces between, merely because that is where most of the seeds are located when they germinate. It should also be noted that the grouser marks catch water aiding the germination process and that tracking should always be conducted parallel to the slope.

Don Davison Jr.
Chief Engineering Geologist
Barnette Contractors
Wise, Virginia

The Total Picture

I read with interest your editorial in your May issue of WT&T. First, we do appreciate the compliment you paid our magazine ASPA “Turf News” and the strides we have made with it.

In contemplating your other comments, I realize that what you say is true in that we sometimes get so deeply involved in our own association activities and its publications that we do forget the other elements of the press which over the years have been extremely valuable and interested in the “total picture” where those of us in our own special interest associations obviously are concentrating on our specialties. You have a valid point and we pledge that we'll make a conscientious effort at this end to try to funnel more information to you that might be of general interest to the total spectrum of the Green Industry.

Thanks for your interest and while we are proud of the growth of organizations such as ASPA, we likewise recognize the contribution that publications such as yours have made and are making industry wide.

Bob Carey, Executive Director
American Sod Producers Association

Right On to Education Articles

Thank you for running my article on our training programs at Lake City Community College.

Articles explaining horticulture training programs at various schools across the country provide an excellent means of informing employers in the horticulture industry where they can go for qualified employees. Such articles also help young people who are interested in horticulture to select the program that best meets their needs. As a result of the article, we have already received several requests from potential students and employers about our programs.

"Weeds Trees and Turf" is doing an excellent job of covering the various aspects of the green industry. I appreciate your sincere concern for environmental horticulture education.

John Piersol, Instructor
Landscape Design and Sales
Lake City Community College
Lake City, Florida

In the May issue of Weeds Trees and Turf you ran a feature article on technical education programs in horticulture. The Ornamental Nursery Management program at Penn State University trains technicians to serve the nursery industry principally in the mid-Atlantic region. Founded in 1937, this is a well established, highly respected program. Although it does not offer a degree, it does utilize the facilities and faculty associated with our baccalaureate program. If you feel information about this would be appropriate for your magazine, I would be happy to further describe it for possible publication in Weeds Trees and Turf.

David J. Beattie
Assistant Professor of Ornamental Horticulture
Penn State University
Lake City, Florida

The tradition and respect for programs from Penn State University almost speak for themselves. Both turf and tree research has strong roots in Pennsylvania. We'd be proud to feature your program in an upcoming issue. The Editor.

Covering the turf

It was brought to my attention by my Extension Agent for Oakland County, Greg Patchan, that your magazine is of fine quality and that one of your latest issues (I believe May or June '79) addressed itself to many varieties of ground covers. This is an area of extreme interest to me, and I would appreciate your sending me this back issue. I would be more than happy to pay either prior to delivery or upon delivery. Also, please enclose an application for subscription.

Joe Halfmann
Landscape Contractor
Michigan Dept. of Agriculture
DIESELS FROM BOLENS.

POWER YOU NEED FROM PEOPLE YOU KNOW.

24 hp. loader backhoe.

Match the work that you need done with the right Bolens Diesel, and you'll have a tractor that works when and where you need it.

To get the right Bolens Diesel, see your Bolens dealer. He'll suggest one that has the maneuverability and versatility that you need to get the job done. Day after day. Year after year. And if after all that dependable service something should go wrong, just give him a call. He's been factory-trained so he knows what makes a Bolens Diesel tick. And the parts are in-stock. Or available within 24-hours. And that minimizes downtime.

There are 4 Bolens Diesels ranging from 15 to 24 hp. All with proven technology from Iseki, Japan's largest maker of farm equipment. Each is water-cooled, has multi-speed PTO, a 3-point hitch, and a choice of 2 or 4-wheel drive. Plus a variety of custom-matched, quick-change attachments, from mowers to snowthrowers and backhoes to front-end loaders. Or anything in-between.


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Page two as Paul Harvey would say. Last month I talked about a predicament with agricultural extension services, the reduction of these services, and a lack of representation for turf and tree interests in a board chosen to advise the President and the Secretary of Agriculture on budget cuts.

This subject is worthy of every inch of space I can give it in this magazine until something is done about it.

To review last month’s Viewpoint: extension services are being steadily trimmed each year with further cuts likely under fiscal 1980’s budget; a board named the National Agricultural Research and Extension Users Advisory Board has been created to advise the President and Secretary of Agriculture on priorities for extension services to help budget cutting; no one from a turf or tree organization represents our interests in these vital discussions; and we have only until July 10th to make an impact.

To show you who is represented, here is a list of the 21 members of the board:

— **Four members representing producers of agricultural commodities, forest products, and aquacultural products**
  
  Mr. William Henry Anthony, Sr.
  
  Alice Sidney Farms, Arkansas
  
  Mrs. Margaret Bucher Eklund
  
  Montana
  
  Mr. Gilbert L. Oswald
  
  Simpson Timber Company, Washington
  
  Robert Lee Scarborough
  
  Center State Farms, Inc.
  
  South Carolina

— **Four members representing consumer interests**
  
  Ms. Harriet Barlow
  
  Institute of Local Self-Reliance
  
  Washington, D.C.
  
  Ms. Barbara Friedlander
  
  Office of School Food Services
  
  New York
  
  Ms. Shirley Goldinger
  
  Department of Consumer Affairs
  
  County of Los Angeles, California
  
  Ms. Ellen Haas
  
  Consumer Federation of America
  
  Washington, D.C.

— **Two members representing farm suppliers and food and fiber processors**
  
  Mr. J. G. Tvedt
  
  Farmers Union Central Exchange, Minnesota
  
  Raymond T. Floate
  
  Michigan Fruit Canners, Michigan

— **Two members representing food and marketing interests**
  
  Robert Archer
  
  Illinois Department of Agriculture
  
  Illinois
  
  J. M. Bowers
  
  Jersey Fruit Cooperative Association, Inc.
  
  New Jersey

— **Two members representing environmental interests**
  
  Wayne R. Z. Willey
  
  Environmental Defense Fund
  
  California

— **One member engaged in rural development work**
  
  Vacant at present

— **Two members engaged in human nutrition work**
  
  Ralph S. Abascal (Chairman)
  
  California Rural Legal Assistance
  
  California
  
  Janet B. Schwartz (Vice-Chairman)
  
  Massachusetts Department of Public Health
  
  Massachusetts

— **One member representing animal health**
  
  John A. Ragan
  
  Tennessee Department of Agriculture
  
  Tennessee

— **One member engaged in transportation of food and agricultural products to domestic and foreign markets**
  
  Stoney M. Stubbs
  
  Frozen Food Express, Inc.
  
  Texas

— **One member representing labor organizations primarily concerned with the production, processing, distribution, or transportation of food and agricultural products**
  
  Joan M. Schroeder
  
  Retail Clerks International Union
  
  Washington, D.C.

Recognize anyone who can help us? I sure don’t.

The mandated purpose of the board is to represent the interests and views of the users of agricultural research and extension in Federal policy and planning processes at the highest level. It was created as a result of the 1977 Farm Bill.

Somehow, forestry and orchard farmers are the only two recognized industries that relate to the Green Industry at all! How did we get overlooked and are we going to let this continue until every extension service to the turf and tree industries is cut from the budget?

The board must submit two reports, one in March and one in October. The March report goes to Congress and the President, The October report goes to the Secretary of Agriculture. The first report is out and without turf and tree input. The second will be the subject of a meeting in July. We can’t miss both.

Make your own decision. What have extension personnel done for you? What part do they play in regional organizations? Who better represents and recommends landscape and arborist services than the extension agent? Would you miss their service and would you like to see them out of work?

Think about it, but don’t take long. Board input can be made immediately to:

James Meyers, Executive Secretary
National Agricultural Research and Extension Users Advisory Board
Science and Education Administration
USDA
Room 349-A, Administration Building
Washington, D.C. 20250
On the greens, the fairways...all around the links, inside the clubhouse and under all the sinks

DURSBAN 2E is the one insecticide that works. DURSBAN* 2E Insecticide is ideal for broad spectrum, multi-purpose insect control everywhere around the club. Outside, DURSBAN 2E gives you unsurpassed control of turf pests like chinch bugs, sod webworms and cutworms, plus ticks, chiggers and mosquitoes. It even wipes out bagworms and many other ornamental plant pests. Inside, it cleans up the toughest roach problems, and keeps working to rid your buildings and restaurant areas of insect pests. Ask your supplier about the one insecticide that really works, DURSBAN 2E. Just be sure to follow all the directions and precautions on the label. Agricultural Products Department, Midland, Michigan 48640.

Circle 152 on free information card
Meeting held to form national lawn care association

The lawn care industry got a shot in the arm last month when 42 persons representing 25 lawn care companies across the country met at a Holiday Inn in Fort Mitchell, Kentucky and took the first steps towards organizing a national lawn care association.

The companies in attendance collectively kicked in a total of $15,000 of seed money to get the association off the ground.

Jerry Faulring, of Hydro Lawn, Gaithersburg, Md., was unanimously elected president by those lawn care businessmen in attendance. Doug Baker, of Leisure Lawn, Inc., West Carrollton, Ohio, was elected vice president. John Latting, of Lawn Groomer, Bloomington, Ill. was elected secretary-treasurer.

Four major committees were formed and consist of members of the board of directors and other volunteers from among those who attended the meeting. The committees formed are: Membership/Dues — to decide on classifications of members and a dues structure; Bylaws — to draft a proposed set of bylaws for the organization; Name and Incorporation — to decide on a name and to go through legal stages of incorporation; and Management — to decide on how the organization will be managed on a day-to-day basis.

Those in attendance hired a Chicago association management firm — Bostrom & Associates — on a 90-day basis to aid the organization in legal incorporation and other start-up tasks. Although no final name for the organization has been chosen, all preliminary work will done under the name of the Professional Lawn Care Association.

Broad goals discussed by those in attendance include: serving as a liaison between the lawn care industry and federal, state and local governments; organization of training programs for staff and management of lawn care companies across the country; drafting a code of lawn care standards/ethics; work together with other green industry associations for mutual benefit; institute an annual national lawn care conference and trade show.

EQUIPMENT
Toro to build own engines in future

The Toro Co. plans to spend more than $15 million over the next two years to build two new plants and expand a third, which will also get them into the engine making business.

The company will begin production of its own two-cycle engine, build a new plant for the assembly of consumer products, and add much-needed production capacity to its fast-growing irrigation operation. Toro will continue to buy as many engines as it has from the U.S. manufacturers who supply them.

Toro will gain design flexibility by making its own engines. The new engines are being developed with the idea that their design will closely integrate with the products they run, McLaughlin says.

Toro plans to invest approximately $8 million in Willmar, Minn., to begin manufacturing gasoline engines for snowthrowers, flexible line trimmers, and other yard care equipment. Production is expected to begin at the Willmar plant no later than December 1980.

Expansion has already begun at Toro's Irrigation plant in Riverside, Calif., where the company plans to spend $3.4 million on additional factory, office, and warehouse space.

Toro has grown very rapidly in recent years with sales in fiscal 1978 advancing 41 percent to $227 million. McLaughlin says sales in fiscal 1979 are expected to surpass $350 million.

EDUCATION
Research may probe water needs for grass

The Toro Co. is contemplating a research program through the University of California at Riverside to study the water requirements of the various types of turf grasses.

According to Thomas J. Schlitz, director of education and technical services for The Irrigation Assoc., there are no reliable figures available on the requirements of turf grasses, and this information would probably save millions of gallons of water in the state of California each year.
The elite bluegrass growing in the sun is Glade. The elite bluegrass growing in the shade is Glade. That makes it the natural choice for all lawns. It performs well in up to 60% shade with a higher resistance to powdery mildew. Additionally, Glade has better-than-average resistance to Fusarium blight. It's now used as a prime ingredient for fortification in many professional turf grass mixes. A Rutgers selection, Glade has outstanding medium to deep green color. Low-growing Glade germinates and establishes fast, developing a thick rhizome and root system for close-knit sod.

Most lawn areas have both sun and shade naturally. That's why Glade Kentucky bluegrass is the natural choice. Specify Glade for your next turf grass mix. It's available at your local wholesale seed distributor.

Another fine, quality-controlled product of Jacklin Seed Company.
“Why am I so strong on service? Because Jacobsen customers say they expect it.”