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BENT GRASS from page 78

Poa annua, watering, and stress.

At one-fourth to one-third of the above rates, bentgrasses can be among the most hardy of manicured grasses.

The basic rule in successful long-term management of turf is to maintain the foliar canopy as close to the ground surface as possible. This is especially true of creeping bent for all purposes.

Practices leading to excessive thatching should be avoided as thatch is the greatest single limiting factor in successful turf culture. Those adhering to modest fertility programs and thatch prevention have discovered that water needs can be reduced by up to 75%!

The single limitation of low fertility programs on bent is the prevalence of dollarspot diseases. Fungicides for this problem are much more economical than the alternatives. The author advocates the precise use of herbicides for weeds rather than the over-stated maxim that "the best weed control is a dense turf".

The greatest single threat facing putting green bent is the increasing season-long practice of excessive close mowing to maintain fast putting

green speeds. Varieties have yet to be developed that can perpetuate themselves at constant mowing heights of approximately $\frac{1}{8}$ -inch. This is particularly true of greens with inadequate soils, play in excess of 20,000 rounds, and the ravages of open or icy winters.

The use of water to provide optimum resiliency serves to compound all problems, especially *Poa annua* invasion. The author has seen more algae and moss on greens in the last two years than in the previous 20 years combined.

Conversely, most greens can tolerate a gradual height reduction for a short period. Our research has shown that firm greens surfaces, lower overall fertility, double mowings, and even rolling can serve as adequate substitutes to lower mowing.

Poa annua dominance of close-cut, irrigated fairways has been a major problem faced by golf superintendents. The rationale of using colonial bents has generally been unsuccessful. Triplex mowing of approaches, especially with clipping removal, has long been observed to result in bentgrass dominance. Most dramatic improvements are now being achieved on fairways with the

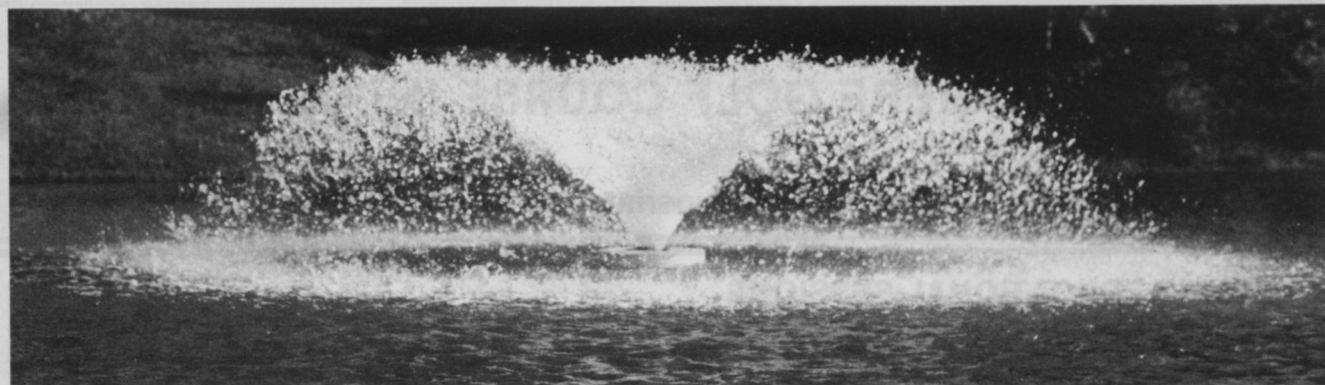
presence or reseeding of creeping bents.

Triplex mowing without the explanatory benefit of prior research is becoming the most innovative management approach in years. Modest fertility and irrigation, effective aerification and use of creeping bent are keys to the rapid demise of *Poa annua*.

Reseeding effectiveness requires a timing of approximately one month prior to the cool weather germination of *Poa* in the fall. Timing is most important regardless of whether chemicals such as Roundup are used.

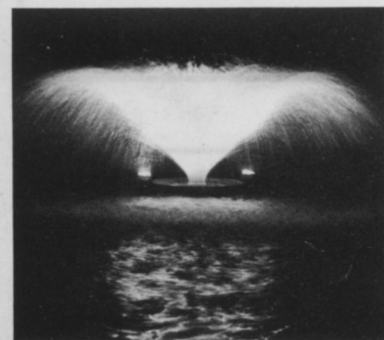
Sulfur for acidification, new growth regulators and retardants, and preemergence and postemergence chemicals for *Poa* are proving effective. Above all else, drainage is basic, and remains the first step in species conversion and culture.

In summary, one must recognize that of all the major grass species, we have had the fewest number of varietal improvements with the bents. Proper use and management of what we have is proving creeping bent to be the most effective grass available for close-cut turf culture. The *T Poa annua* era shows signs of diminishing. **WT&T**



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PRODUCTS

Micro Backhoe solves tight access problems

Sarna's Sales of Gardena, CA, offers the Powerfab 125/WT self-trailer Micro Backhoe.

It is designed to solve the problems of tight access, narrow widths and confined areas.

The one-man operated machine reduces costly labor and subcontract costs. It will eliminate most hand-digging operations.

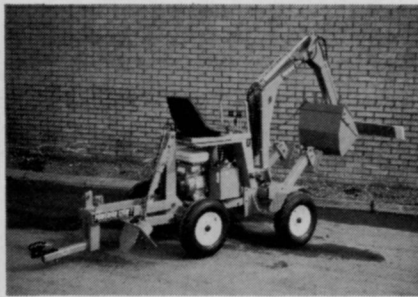
Three models are available with 5 hp and 10 hp Honda engine configurations. It has a tearout/ripping force of

1.72 and 2.0 tons, digging depths of up to 7.5 feet.

Another unique feature allows the Powerfab to go through gateways, restricted pathways and other openings down to 28 inches wide.

Digging buckets are from 8 to 24 inches wide; the backfill blade is 4 feet wide. Comes with street pads and a specially-fitted unit with hydraulic power take-off to run concrete breakers, chain saws, limb-loppers, post hole auger, soil tamper, sign post driver, winches and many other hydraulic tools.

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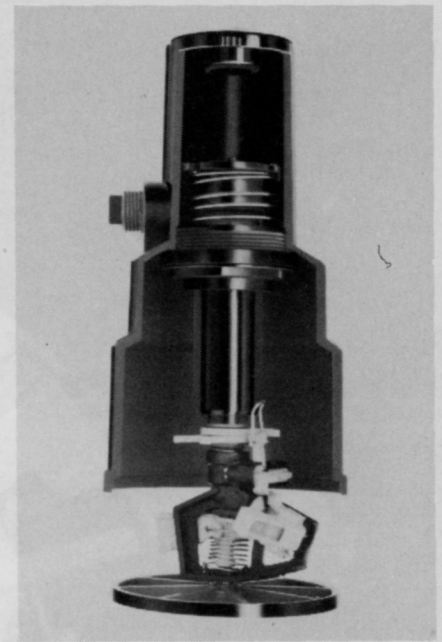


Economical rotary sprinkler introduced

Weather-matic's new 3100 Series rotary sprinkler offers a variety of standard features at an economical price.

Constructed of durable plastic, these medium range sprinklers are suitable for residential, light commercial and other similar turf areas.

Low pressure operation makes the 3100 Series ideal for energy efficient systems or problem areas, in which water pressure fluctuates with heavy use.



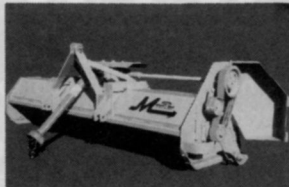
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Enough experience has been gained with Vorlan by now — on golf courses and in university trials — to confirm that it establishes new standards of performance. Against Leaf Spot, Red Thread, Dollar Spot (even resistant strains!), and Pink Snow Mold, Vorlan delivers more effective control than any other fungicide available.

Vorlan's effectiveness — because it takes so little and lasts so long — also makes it economical, too.

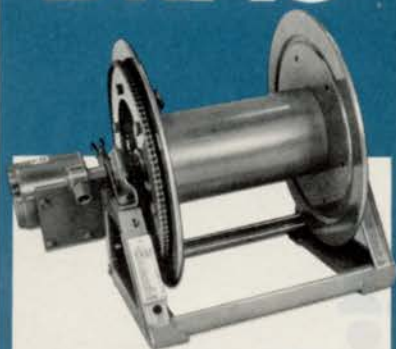
If you haven't yet tried Vorlan, you should. Call Mallinckrodt toll-free, or contact your Mallinckrodt Turf Products distributor. No prescription is needed!

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A side splash control arm minimizes wasted water by restricting water spray only to areas in which coverage is desired. The 4-1/4-inch compact cover reduces the chance of breakage and pedestrian hazard.

Design flexibility is built-in with a trip lever that instantly converts sprinkler from full to part circle, and easy-adjust collars that allow an arc selection from 20 degrees to 340 degrees. A choice of three nozzle sizes also increases design versatility.

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Bunton Multi-Trac is versatile machine

Bunton Co. has introduced its new Multi-Trac, a multi-use tractor that is equally suitable for professional grass-cutting, snow clearing, brushing and use as a forklift.

It is easily changed from one use to another without tools. Both five and seven gang reel mowers are available, as well as three gang flail mowers and three gang rotary



mowers. Additional attachments include side mounted flail cutters, forklift, bucket, sweeper, dozer blade and snow blower.

The cutting height of the reels is adjusted from inside the tractor cab,

and because of the advanced hydraulics employed, weight distribution is easily transferred to and from the drive wheels to increase traction for hillside work.

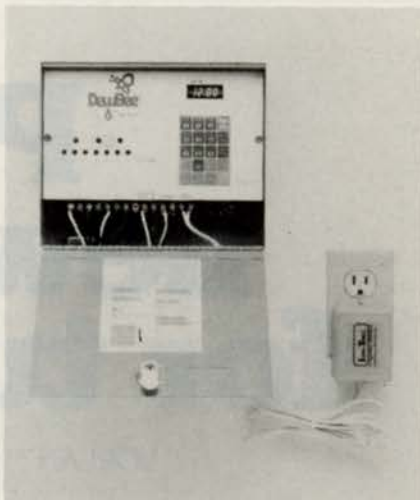
The Multi-Trac is powered by a 52 hp diesel engine and is especially suited to facilities requiring year-round maintenance such as golf courses, schools, parks, airports and sports complexes.

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Irri-Trol adds residential controllers

Irri-Trol Mfg., Inc., Valencia, CA, has added six and seven station models to its DewBee automatic residential sprinkler controller line.

Joining the popular four-station



DewBee, the new DewBee 6 and DewBee 7 both feature true dual programming where two programs can run simultaneously, 14-day schedules for each program, master valve stations and LED "Station On"

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indicator lights.

Water time of the Dew Bee 6 may be set as follows: Program 1, from one minute to nine hours, 59 minutes; Program 2, from one minute to 59 minutes. Both DewBee 7 programs may be set from one minute to 59 minutes.

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Rubigan EC gets experimental permit

A new fungicide for roses and ornamentals, liquid Rubigan EC in pints, is now being evaluated under an experi-



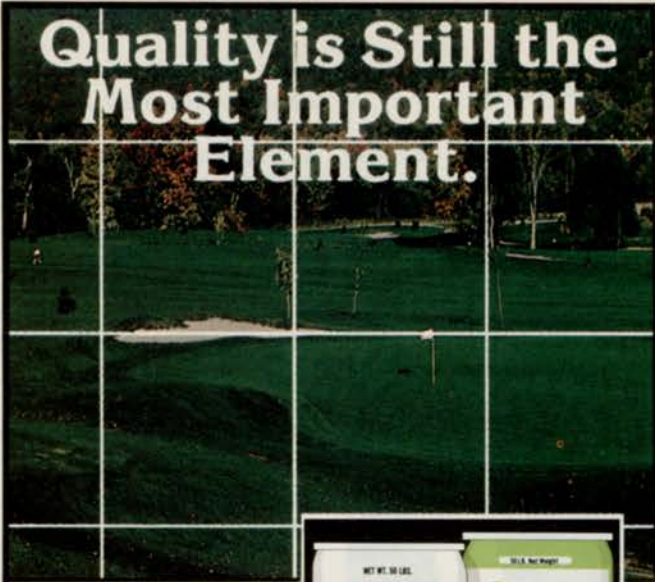
mental use permit. Rubigan allows rose growers to produce roses free of powdery mildew damage by providing excellent preventative action with therapeutic control.

In roses and ornamentals, Rubigan is absorbed rapidly upon foliar application and moves with locally systemic action. The highly concentrated liquid EC formulation does not leave residue on leaves and can be tank mixed for control of black spot and other diseases. Rubigan alleviates worry about buildup of disease resistance because of its multi-site inhibiting action on disease organisms. Rubigan offers reduced storage and handling costs. Because it is highly active, very low rates allow less exposure to the user and the environment in comparison with other fungicides.

Rubigan is available under an experimental use permit for use on turf in treating the five major turf diseases and for the management of poa annua. For this purpose it is formulated as a 50 percent wettable powder.

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Quality is Still the Most Important Element.



EVERY PROFESSIONAL KNOWS THAT QUALITY IS STILL THE MOST IMPORTANT ELEMENT IN ANY COMPLETE TURF CARE PROGRAM. Let's face it - low price is no substitute for poor product.

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P.O. Box 647, Danville, IL 61832

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Expand-It converts to five tools

One of the newest multi-purpose grounds management tools is The Green Machine's Expand-It system.

It quickly converts from a power blower to a weeder-cultivator to a string trimmer, brush cutter and tree pruner. A single, lightweight, gasoline-powered motor (Model 2300) drives all three attachable tools. The exceptionally long shaft (47.8 inches)



with its adjustable, tilted handle, offers the operator greater reach and comfort without stooping or causing other body strain.

The Model 2370 weeder-cultivator attachment in The Green Machine's Expand-It system performs both

chores with ease and no physical strain. Unique twin reciprocating spring-steel blades dig almost five inches into the soil churning it up at more than 2,000 cycles per minute, allowing deep penetration of air, water and fertilizer. Unlike traditional rotary blade cultivators, it won't skate or dance to the side.

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COOT adds refinements to 1985 models

The COOT all-terrain vehicle is sporting new features for 1985.

The twin articulating hulls on the 1985 model are made of heavier 14-gauge steel with baked enamel finish available in a variety of colors.

Twin high-powered, high-intensity headlamps provide more power for greater and better siteing down the trail.

The new cast-iron counter-balance 18 hp engine runs quieter and smoother, eliminating extensive vibration.



Deeper tread tires has increased COOT traction on land or in water. The new self-cleaning tire designs are available in 7-1/2, 12 inch and 15 inch widths.

Thick foam-padded seats, front and back, reduce shock when climbing over rocks and pot holes.

The basic COOT is available in 4-wheel drive, 4-wheel steering. The unobstructed undercarriage on the articulating hulls allows drive-over of seedlings and shrubs without damage. The continuous form hulls make COOT waterproof. It can enter water without modification.

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New truck for landscape maintenance

Arbortech introduces a unique, multi-purpose truck designed specifically to serve the many needs of the lawn care professional. The bed can function as a dump bed, a stake bed, a flat bed, and as a tool storage compartment. The combination transverse and underbody box has 68 cubic feet of storage space.

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