# SPECIAL REPORT: THE DELUGE

From mid-June of 1972 when Hurricane Agnes rampaged up the East Coast and threw a final paralyzing punch at the Harrisburg-Wilkes Barre region until this spring when the Mississippi River swelled beyond its banks from somewhere north of St. Louis all the way down to the Gulf, the idea has grown that for the last 10 months or so the Eastern half of the United States has been continuously under water. That's what all those pictures in the newspapers and on TV have shown.

If it had started with Agnes and ended with the spring floods, with nothing in between, perhaps conditions wouldn't have been so bad. But late last August and steadily through the fall, the Midwest got plastered with rains such as it may have never seen before. And a little later on and lasting until April of this year, the Southeast was continually drenched. Even the Pacific Coast, which is usually arid in its southern portion, wasn't spared. In the last year, the Los Angeles-San Diego area has had 25 inches of rain compared to a normal 12, and from San Francisco north there has been from 30 to 50 per cent more rain than expected.

Golf, like every other business that is vulnerable to the weather's whims, has been hurt in the last year. But far from irreparably. On the whole, damage to courses has been minimal. Economically, though, it's a different story. Professionals from Richmond, Va., to the Poconos in Pennsylvania, in the belt where Agnes did the most damage, have had to write off the last half of the 1972 season. In the Midwest, business never really took off, due to a rather long succession of cancelled weekends in May and June and late season rains, which knocked out many tournaments and greatly cut down on fall play. In the Southeast, the rounds played were sharply reduced by poor weather that came on late in November and didn't ease off until April. In the Far West, business was poor in the first three months of this year. Palm Springs was cold, and Los Angeles-San Severe flooding has inundated many courses, but physical damage has been minimal. Economically, it's another story: play is down and *Poa an*nua is up by JOE DOAN

Diego was wet and foggy.

The 1973 season, sad to report, hasn't started out to be a banner vear. The Southeast and Pacific Coast, as noted, were limping in the early months. Many courses in the Mississippi area, in lower Louisiana and from around Memphis to Davenport, Iowa, were cleaning up after being partially or entirely flooded. Farther north, superintendents were faced with the touch and go problem of getting mowers and spray rigs out. May was a tough month, but then it usually is. Or, at least, it has been for the last five or more years. The Memorial Day weekend may have been washed out in the entire eastern portion of the United States. The weather map was slashed with rain symbols from the central states eastward.

Even though the miserable weather has caused so much disruption to the golf business in the last year, with the exception of Hurricane Agnes, it hasn't been violent. Along the Mississippi this spring, for example, great ice jams, which are usually responsible for quick cresting and flash flooding, were absent. Rather, steady day-in, day-out rains slowly built up to the worst conditions in more than 20 years from around St. Louis southward. Golf courses along the river that were affected weren't eroded or washed out, merely inundated.

A nine hole course north of Greenville, Miss., located on the delta, was flooded entirely to the height of the flagsticks, and a few other courses in the area and on down into Louisiana suffered similar flooding. It takes several weeks before the water abates at these places,

but according to Charles Wilson, Milwaukee Sewerage Commission agronomist, they don't suffer irreversible damage. Silt from the river is poured on silt, which is tolerable. It is when the silt is washed in on sandy soil that the soil's rejection mechanism starts working. The reason that courses in the Scranton-Wilkes Barre region are going to be slow in recovering, if they were flooded last summer by the Susquehanna, is due to the silt-on-sand condition. In a few cases, it was possible for superintendents to wash the silt off the greens within a few days and prevent extensive turf damage, but at some places it was impossible to start cleanup operations in time to save the greens.

Presently, the hardest hit courses in the country are located in the flood plain of the Mississippi and in the Northeastern Pennsylvania area. In the latter section, clean up and restoration work was hampered by a lack of funds. According to reports at this spring's Penn State turf meeting, some of the public courses in the area were able to get low-cost emergency loans to finance restoration. but the loans weren't available to private clubs. In addition, some clubs were practically shut down through the summer months, revenue was cut off, and before restoration of the grounds could begin, financing had to be arranged.

To confound matters, weather in northeastern Pennsylvania was poor this spring. Ray Gettles, pro-superintendent at the Iran Temple Club in Wilkes Barre, said that it was impossible to get equipment out on the course during April, and May wasn't much better, with rain holding up maintenance and play seven times in the first 22 days. At Saucon Valley, 80 miles to the southeast, it rained every other day through the first three weeks of May. Mowing was irregular, but, fortunately, cool nights retarded growth, and superintendent Dave Miller and his crew never got so far in the hole that they couldn't catch up. Saucon Valley is no place to fall behind. It has 63 holes.

continues

Along the Mississippi and especially in the Memphis-St. Louis region, many courses were afflicted with spring deadspot, a disease that attacks bermudagrass and is similar to snow mold. It is not an aftermath of rain or flooding, but is aggravated by excessive water. According to Marion Johnson, superintendent at the Country Club of Jackson, Miss., deadspot started to form in the fall and bloom in the spring. No control for it has been discovered. To get rid of it, it is necessary to aerate, pour on fungicides and re-plug, but it is usually the end of May at the earliest before it clears up. Johnson was able to keep it out of his greens by covering them with wheat straw during January and February.

Jim Moncrief, the United States Golf Assn. agronomist who covers the Southeast, says there was more evidence of deadspot throughout his territory than has been seen in several years. The Southeast was quite hard hit this winter, Moncrief reports, by heavy, even excessive, rains and unusually cold weather. He was somewhat discouraged with over-all turf conditions until the end of April, but May brought a fairly definite turnabout in the weather and by the end of the month things were getting back to normal.

The cold, wet spring, preceded by an equally cold, wet 1972 autumn, produced a lot of Poa annua in the Southeast, especially in Georgia. Poa goes out early in the South—in May in Florida, early June in Georgia and a few weeks later on farther north. Southern superintendents are combatting its early fadeout by generous overseeding, especially of greens, with Seaside bent being preferred for the latter. Marion Johnson, working with Dr. Euell Coats, Mississippi State agronomist, has been able to effectively eradicate Poa annua at the Country Club of Jackson in the last three years, mainly with the use of KERB, a preemergent herbicide, generously combined with a wetting agent.

In recent years, superintendents in the South have become vastly more aware of the need for better drainage. Along with this, new courses are being built with more elevated and better drained tees and greens. The USGA has been advocating this for many years, and Moncrief feels that the way in which most courses have

withstood the near super-abundance of rain in recent months is proof that the idea is paying off.

Hardest hit of the Southeastern courses, besides those in Louisiana and Mississippi, were the layouts in and around Chattanooga. Six or seven inches of rain in one day in April put five feet of water in the Brainerd CC clubhouse and flooded several holes. Several other clubs were almost as hard hit. Among them were Creek's Bend and Battlefield, which have fairways in the flood plains of rivers or creeks and were extensively flooded. Some of the greens at these clubs were under water for four or five days, but all came back in good shape. Moncrief is surprised they did. Play in the Chattanooga area, as in so many cities in the South, is year-around. Courses never get a rest and compaction is never alleviated. When a course is flooded, at least one good runoff avenue is blocked until the water can start worming its way downward. One of the marvels of the golf business, in Moncrief's estimation, is how quickly some superintendents can bring their courses back, with little turf loss, after they have been inundated. The USGA green section specialist, for one, would like to see Southern courses taken out of play for at least a couple of months at the height of the dormant season. This would give superintendents a clear shot at aerating fairways and relieving some of the compaction problem and do repair work, if necessary, on drainage systems.

That these measures are necessary, critically so, is evidenced by the over-all condition of bermuda fairways, not only in Georgia, Tennessee and the Southeastern states, but those, farther west in Oklahoma and Texas. As of mid-May, fairways in the South were in perhaps as poor condition as Moncrief had seen them in 15 or more years of visiting courses in the region. The combination of heavy rains and a cool spring, especially the latter, greatly retarded growth of the bermudagrass.

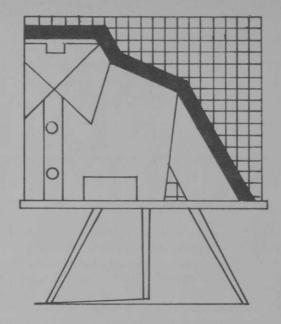
Year-around play, one of the burdens of the South as far as agronomists and superintendents are concerned, has its counterpart in early play that is demanded in the North. Lee Record, the USGA's green section man who covers 15 states in the

Midwest, feels that Northern players shouldn't start thinking about starting to play until at least May 1. Cold winters and cool springs preclude it, or should, because normally the turf isn't ready for traffic much earlier than this date. It's not so much that the bluegrass fairways can't take it—it's that the bentgrass greens aren't ready until the temperatures get up to and stay in the 60s during the daytime. At courses where there are both bentgrass fairways and greens, the season's opener probably should come later than May 1. But like everyone else, Record recognizes that the current pattern isn't likely to be changed. The superintendent can keep the course closed so long, but the pressure from players wanting to get out and get swinging becomes relentless, and everyone knows who has to give in.

In spite of all the rain that fell late last summer and during the fall, Record's 15-state domain was in good shape this spring. That is, barring that stretch of land from around Davenport, Iowa, to St. Louis. A few low lying holes at the Quincy (Ill.) CC were knocked out, and at Arsenal GC, below Davenport, the drainage gates at this island course had to be closed as the Mississippi neared its crest stage. The course became flooded or semi-flooded for about two weeks, which encouraged a heavy crop of Poa annua and a fairly strong outbreak of leaf spot. At Milan, Ill., the back nine at Mill Creek, also an island course located in the Mississippi, was flooded. So were some holes on courses in the Alton, Ill., and St. Louis area.

There was plenty of rain, especially from mid-March until mid-April. Coming in the wake of last fall's monsoons, the spring rains brought thousands of Midwest rivers and streams up to around flood stage and caused apprehension among many superintendents. But eventually their biggest complaint was to be that they couldn't put mowers, spray rigs and other heavy equipment out on the grounds. That is common in the spring. Leaf spot wasn't overwhelming, but it was more in evidence around May 1 than it had been for many years. This was due, Record points out, to the overall succulence of the turf following all the rain that had fallen in the previous year.

What undoubtedly saved the Mid-



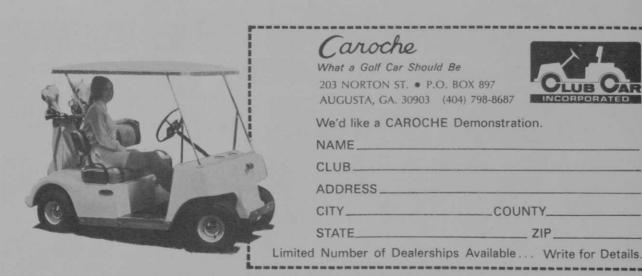
# WE LOST OUR SHIRT ON REPLACEMENT PARTS LAST YEAR

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# IRRIGATION TAILORED FOR ECONOMY

Irrigation consultant Don
Burns designed an
automatic irrigation
system at Fountain Hills
GC that would overcome
specific soil and terrrain
problems from the outset,
thereby avoiding costly
maintenance programs
year after year

At a new golf course in Arizona, automation is the key to economical irrigation. The course, which is almost completed, is located at Fountain Hills, a planned community east of Phoenix. McCulloch Properties, Inc., the developer, is the same outfit that purchased London Bridge for reconstruction at Lake Havasu City, Ariz.

Because the Fountain Hills GC was laid into the foothills on the western perimeter of the community, McCulloch called in experts to design and install an irrigation system that could provide automated, precise watering on all sections of the course.

Don Burns, an irrigation consultant, was contracted to tackle the problems involved in watering the desert terrain course. The system that he designed and that was installed by Siemens Environmental, Inc., of Scottsdale, promises to be efficient and economical.

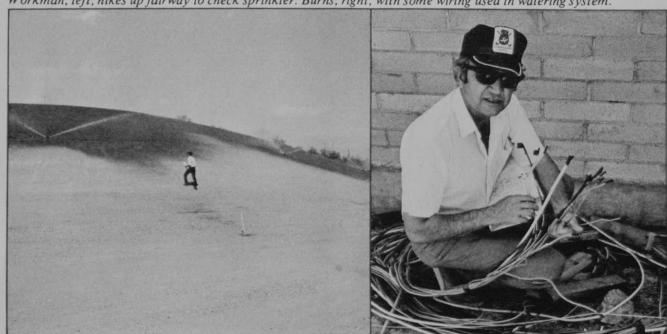
"The major problem on this course was the elevation changes," says Burns. "Between tee and green on the 150-yard number 16 fairway, there is an elevation drop of more than 100 feet. Of course, to a lesser degree, this is a constant problem on most of the fairways.

"Because of the clay content of the soil and the elevation changes, drainage became a major problem in designing an irrigation system. This course in the hot, dry summer will require up to 2¼ inches of precipitation each week. When applying that much water you must have control."

Burns claims that it will be possible to give Fountain Hills superintendent Glen Anderson the same control with this automatic sprinkler system that usually is only obtainable on a manual quick coupling system.

"Proper staking and programming of an irrigation system is es-

Workman, left, hikes up fairway to check sprinkler. Burns, right, with some wiring used in watering system.



sential," stresses Burns. "It's not the equipment used or the design that makes a system good. A good system comes from the proper mix of equipment, design and spacing of heads. Plus it's vital that the programming is set up to accommodate the controls of unlike areas with the proper amount of water."

A Buckner Central Programming automatic system was selected for the Fountain Hills course. The system incorporates 1,400 sprinklers heads controlled by 580 stations (or areas of control). No more than six heads on the fairways stations and only one or two heads on the tee and green areas operate at one time. Each tee and green has its own 10-station controller to allow precise control of water in the critical areas where the drainage and contour problems exist.

All field controllers are operated from four master panels located in the superintendent's office. This allows the 58 field controllers to be started, repeated, omitted or operated on a syringe cycle from one location.

The syringe cycle, notes Burns, allows the entire course to be cleared of dew or frost within 30 minutes. The special cycle gives the superintendent the ability to override from his master control panels the individual field controller time settings. The superintendent, when operating the syringe cycle, can place just enough water on each area of the course to wash away dew droplets or melt frost deposits on the grass.

"However, the superintendent must maintain the proper time settings on the field controllers to provide each area with the correct amount of water. Without this attention, all the advantages incorporated into the system is of little advantage," Burns says.

"A system of this type, with 140,000 feet of pipe and 50 miles of wire, if programmed correctly to take advantage of pipe size, is no more expensive than a stock automatic system that can't offer the kind of precise control that we have



on this job," he adds.

Burns, who had just completed designing the irrigation system for a course in Hawaii, says that Fountain Hills presented him with a problem rarely faced on a tropical course: a rough that can't be watered. The Fountain Hills rough areas include a variety of desert vegetation, including the towering saguaro cactus.

"The saguaro cacti will not survive if given too much water," he says. "I've given special attention to maintaining dry areas where this cactus can enjoy its natural environment."

Although the golf course will not play long (5,800 yards, par 71), it will be challenging, beautiful and enjoyable to play. The view of the community and of its famous 560foot fountain from some of the tees and from the clubhouse is spectacular. The multi level clubhouse will be built next year.

Nick Siemens, president of Siemens Environmental Developers, course general contractor, says that clearing rock and preparing topsoil was a major part of his contract.

"The course is truly in a beautiful desert site," Siemens says. "It has sculptured contours that blend with the natural terrain and it has 50 sand traps that will require golfers to make well-placed shots from every tee."

Burns, above, left, shows superintendent Glen Anderson how to program system; below, he inspects fairway heads.



# **POA ANNUA:** TO ENCOURAGE OR CONTRO

Before the golf course superintendent can decide whether to encourage or control annual bluegrass (Poa annua L.), he must determine how much Poa is present in a specific turfgrass area and be able to identify the type. Usually, the superintendent determines only the amount of annual bluegrass evident during the spring seed forming stage. This method is not necessarily reliable, because he may underestimate the actual amount. (Four vegetative characteristics commonly used to identify annual bluegrass are sumnarized in Table 1.)

HOW TO IDENTIFY POA ANNUA

Annual bluegrass originally was native to Europe, but now is widely disseminated throughout the world. Generally classified as a turfgrass weed, it frequently dominates other turfgrasses on a golf course unless the superintendent initiates control practices; these practices will be discussed later in this article.

Annual bluegrass forms a very finely textured, high density, uniform, quality turf under proper cultural and environmental conditions. Moreover, it tends to be more diminutive in growth, softer and somewhat lighter green in color than most Kentucky bluegrasses and bentgrasses. Yet its rooting depth is quite similar to that of Kentucky bluegrass and bentgrass.

It propagates and disseminates primarily by seed and is a prolific seed producer even at a daily cutting height of 0.25 inches. (A single annual bluegrass plant, researchers reported, produced 360 viable seeds between May and August in western British Columbia.)

In additional to being prolific, it has the unique capability to ripen viable seeds in the seed head within one to two days after pollination. Counts made by researchers of viable annual bluegrass seeds in the surface inch of soil on a green showed that there were 72 seeds present; approximately 50 per cent of them were within the first quar-

There are many types of annual bluegrass (Table 2). One extreme is the classical annual type, which has an upright, bunch-type growth habit and prolific production of dormant seeds. This type contrasts with the other extreme, a perennial type, which has creeping stolons and a limited production of non-dormant seeds. (Figure 1). The golf course superintendent should not only ascertain the total quantity of annual bluegrass present in a turf, but also whether it is predominantly of the annual or the perennial type, because these two factors determine the method of control.

For example, experiments with certain herbicides reveal that the perennial type is more difficult to control than the annual type and is more dominant on turfs that have been intensely irrigated for many years. The perennial type is less prone to injury from environmental stresses. Most likely, there will be an intergradation of many types of annual bluegrass growing on one golf course rather than only an annual or perennial type. This means that the superintendent must check a number of different locations to assess the quantity and type of annual bluegrass in a turf. This approach is similar to that used in collecting soil samples for soil testing.

UNDESIRABLE CHARACTERISTICS

Whether to encourage annual blue grass or to control it will depend on the specific environmental and soil conditions in a given locality. These criteria must then be balanced against the advantages and disadvantages of this turfgrass as a golf

One of the country's leading agronomists puts this continuing, but important, controversy into perspective by DR. JAMES B. BEARD

course turf.

These disadvantages are:

1. Lacks adequate tolerance to environmental stress (cold, heat, drought, wilt, submersion, salinity, ozone, smog or PAN and wear);

2. Objectional degree of seedhead formation;

3. Susceptible to numerous diseases (dollar spot, brown patch, Pythium blight, Fusarium patch, Typhula blight, red thread, Helminthosporium spp. and stripe smut.

Do the soil and environmental conditions on the golf course under evaluation present particularly favorable conditions for the stress and diseases to which annual bluegrass is susceptible? How significant have these problems been in the past? These are the assessments the superintendent must make.

DESIRABLE CHARACTERISTICS

The disadvantages of annual blue grass must then be balanced against its advantages as a golf course turf: 1. Well adapted to a) close, frequent mowing (0.25 to one inch); b) intense irrigation (moist soils); c) high fertility levels (0.5 to 1.0 pound of N/1,000 square feet per growth month); d) compacted soils compared to other species; e) near neutral soils (pH of six to seven), and f) shade;

- 2. Capable of forming a high quality, dense, finely textured turf;
- 3. Good recuperative potential resulting from the extensive production of dormant seed even at close, frequent mowings.

This summary shows that annual bluegrass is one of the best turfgrass species available for a golf course because it is adaptable to the cultural conditions under which most courses are maintained. It forms a very attractive, quality surface for greens and fairways under close, frequent mowings, intense irrigation, high fertility and compacted soils. Its extensive production of dormant seed permits it also to readily invade other turfs weakened by divots or ball marks.

## THREE APPROACHES TO THE POA PROBLEM

The superintendent can choose one of three basic approaches to the annual bluegrass problem: He can 1) encourage it, 2) partially control it by cultural methods or 3) control it chemically with herbicides.

Encouraging annual bluegrass. This turfgrass is most aggressive and competitive at a) a cutting height of one inch, b) high fertility levels, particularly a nitrogen rate of 0.5 to one pound of nitrogen per 1,000 square feet per growing month, c) intense irrigation that maintains moist to wet soil conditions at all times, and d) soils that have a high phosphorus level and a soil reaction in the neutral to slightly alkaline range. It also is able to persist and compete more successfully than Kentucky bluegrass or bentgrass on compacted soils that have restricted soil aeration. Annual bluegrass will perform better on well-aerated coarsely textured soils, but is capable of persisting and competing more effectively than the other species on finely textured, compacted soils.

It is also important that the superintendent protect the annual bluegrass or utilize cultural practices that will protect it against loss should environmental stresses occur. Of the above mentioned cultural practices, irrigation is the key practice used to encourage annual bluegrass in golf course turfs.

Cultural control of annual bluegrass. The type of surface needed for playing golf dictates cultural practices that tend to favor annual bluegrass invasion and persistence. Those practices that encourage



Figure 1. A single annual bluegrass plant exhibiting a strong stoloniferous growth habit.

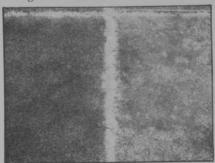


Figure 2. A comparison of the degree of annual bluegrass invasion into two 10-year-old creeping bentgrass turfs: (left)-a vigorous, highly competitive cultivar with no annual bluegrass and (right) a much weaker cultivar that has permitted extensive annual bluegrass invasion.

and/or restrict its invasion and growth are:

- 1. Judicious, infrequent irrigation that permits the soil to dry occasionally;
- 2. Ensure adequate nitrogen nutrition in the early spring;
- 3. Provide soil aeration by cultivation and/or soil modification;
- 4. Avoid excessive phosphorus levels and alkaline soils;
- 5. Adjust the cultural practices for optimum, competitive growth of the desired species (bermudagrass, creeping bentgrass or Kentucky bluegrass).

Irrigation usually is the most critical factor affecting annual bluegrass invasion. The author recognizes that it is much easier to talk about limiting irrigation and permitting the turf to wilt occasionally during midsummer than to actually accomplish this on a golf course where the membership demands a green, always succulent-appearing turf. This is a very difficult decision for the superintendent to make. Restricting annual bluegrass by cutting down on irrigation should be initiated only with the knowledge and support of the green committee and general membership.

Other key practices include keeping an adequate level of nitrogen available in the early spring in the case of cool season turfgrasses. The existing Kentucky bluegrass and bentgrass plants in the turf begin growing much earlier in the spring than does annual bluegrass; thus the likelihood of crowding out and restricting annual bluegrass invasion is increased, providing no nutrient

Continued on page 60

#### **HOW TO IDENTIFY POA**

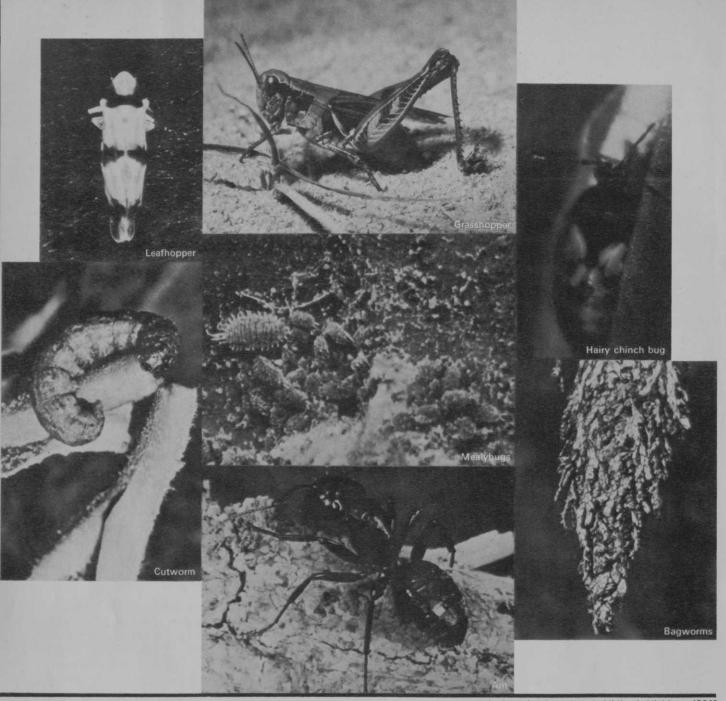
TURFGRASS SPECIES	BUD SHOOT	LIGULE	LEAF APEX	LEAF BLADE CROSS-SECTION
Annual bluegrass	Folded	Large	Boat-shaped	V-shaped
Bermudagrass	Folded	Pubescent	Pointed	V-shaped
Creeping bentgrass	Rolled	Large	Pointed	Flat
Kentucky bluegrass	Rolled	Minute	Boat-shaped	V-shaped

Table 1. Vegetative characteristics utilized to distinguish annual bluegrass (Poa annua L.) from bermudagrass, creeping bentgrass and Kentucky bluegrass.

### CHARACTERISTICS: ANNUAL VS. PERENNIAL BLUEGRASS

POA ANNUA VAR. ANNUA	POA ANNUA VAR. REPTANS	
(a) annual (b) upright, bunch type growth (c) few adventitious roots (d) prolific seed producer (e) seeds have dormancy	(a) perennial (b) creeping, stolon type growth (c) many adventitious roots (d) minimal seed producer (e) seeds lack dormancy	

Table 2. Comparative characteristics of the annual and perennial type annual bluegrasses.



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**controls.** If we had more space, we could show you another seven. Like sod webworms, brown dog ticks, earwigs and Hyperodes weevils in turf. Or ornamental plant pests like mites, spittlebugs, exposed thrips, white flies and many more. But our point is, Dursban\* insecticide is the choice of professional lawn spraymen when they need to get the job done. Dursban insecticide is effective on a wide variety of insects—including resistant strains. And it's effective in a wide variety of applications. It's economical because a little goes a long way. It's non-phytotoxic, and it is biodegradable. So, if you haven't tried it yet, it's about time you did. Just remember to read the directions for use and follow the precautions for safe handling on the product label.

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**NEWS** from page 17

age does not extend to violations wilfully committed with the acquiescense of the insured or to violations for which the insured has been previously cited.

It is hoped that more comprehensive insurance will become available in the future, but until it does, this coverage appears to be the best available insurance against possible financial loss due to an OSHA citation and the accompanying rectification costs.

# TORO SALES, EARNINGS SHOW HEALTHY GAIN

MINNEAPOLIS—The Toro Company reports a 16 per cent increase in earnings from continuing operations for the nine-month period ended April 30, 1973, and a 24 per cent rise in sales, compared with the same period of the preceding year.

David T. McLaughlin, Toro president, said that sales increases were registered in every area of operations. The Consumer and Turf Products Divisions, he continued, contributed strong gains, but the greatest sales growth occurred in the International and Irrigation Divisions.

Net sales for the nine months of the current fiscal year were \$75,029,000. Those for the similar period of the preceding year were \$60,516,000. McLaughlin pointed out that, using the trailing 12 months comparison, Toro sales topped the \$100-million mark for the first time in the corporation's history.

# VICTOR SALES REACH ALL-TIME HIGH

CHICAGO—During the first quarter of 1973, sales of *Victor Comptometer Corp.*, the parent firm of PGA-Victor Golf Company, rose nearly 15 per cent over the previous year to an all-time high, while net earnings per common share were up 100 per cent, A.C. Buehler Jr., chairman and president, announced today.

Sales totaled \$50,548,660 this year versus \$44,046,209 in the same period of 1972. Net earnings in 1973 were \$943,210, or 16 cents per common share, compared with \$526,731, or 8 cents a common

share in the 1972 period. This increase in earnings includes the effect of the sale of Victor's computer division, which had operated at a substantial loss.

Both major product categories—business products and services and recreation—contributed to the increase in sales.

## I-H PREPARES PURCHASING AID

CHICAGO—Prepared especially for purchasing agents, quantity buyers and firms using industrial tractors and equipment is the new 80-page "International Industrial Equipment Buyer's Guide for 1973" just released by *International Harvester Company*.

The guide contains details, specifications and illustrations of the company's complete line of two-and four-wheel drive integral loaders and backhoe loaders, compact loader and crawler tractors, wheel tractors, forklifts, hydraulic excavators, pay loggers, mowers blade scarifiers and scrapers, as well as the new truck-mounted backhoe.

Additional information is offered on rentals, special-duty equipment; new IH No. 1 engine oil, safety and backhoe features, and sales locations and financing.

# "DISCIPLINE—A MATTER OF JUDGMENT"

SHERMAN OAKS, CALIF.—National Educational Media, Inc., announces the release of "Discipline—A Matter of Judgment," the newest in its series of training motion pictures for food service and hotel/motel managers and supervisors.

This 12-minute, color and sound motion picture uses a courtroom setting to dramatize the trial of a supervisor for having taken disciplinary action against three employees. The film emphasizes the paramount need for objectivity and impartial judgment on all levels of discipline, from issuing a reprimand to terminating an employee.

"Discipline—A Matter Of Judgment" is available on 16mm reels or in the newest super 8mm cartridges and is accompanied with printed study materials and Lead-

er's Guide to reinforce content and encourage discussion.

This film is part of NEM's growing system of training motion pictures and printed publications to help food service and hotel/motel operators. Other films available deal with waiter-waitress-busboy training, food preparation, safety and sanitation, waste prevention, room maids, front desk operations and supervision.

## PRINTED BAG WITH CUSTOM LOOK

SKOKIE, ILL.—Howard Decorative Packaging, Inc., now offers an attractive line of custom-printed bags for retailers. The new program makes available a wide selection of over 300 pieces of free artwork including emblems, borders, cartouches, toys, and men's, women's and children's illustrations. There is artwork suitable for almost any kind of retail category.

The economy-minded retailer can select from 15 attractive tints of colored papers and a range of inks to further enhance the madeto-order look.

If a special design is desired, Howard's art department can develop a custom design or all over pattern, that will exactly reflect the store's image and up-grade the quality of its merchandise.

#### FIRST HALL OF FAME DIVOT

PINEHURST, N.C.—When it came time for the official ground breaking ceremony at the World Golf Hall of Fame, the first earth was moved with a spade instead of a niblick. Present were Donald C. Collett, president of Pinehurst, Inc., and the World Golf Hall of Fame, North Carolina's Governor James Holshouser, and William H. Maurer, president of the Diamondhead Corp., who performed the ritual.

The new multi-million dollar shrine, to be located on Midland Road, on U.S. 501, near the traffic circle between Pinehurst and Southern Pines, is under construction and is expected to be completed in late 1974. Earlier in the day Governor Holshouser had toured the No. 2 course during a break in the ceremonies.



Since 1955, Par Aide's products have been serving the needs of golf course superintendents throughout the United States and abroad. Because these products have been functionally designed and are built to stand up under rugged use, it is just natural to find Par Aide equipment "wherever golf is played."



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