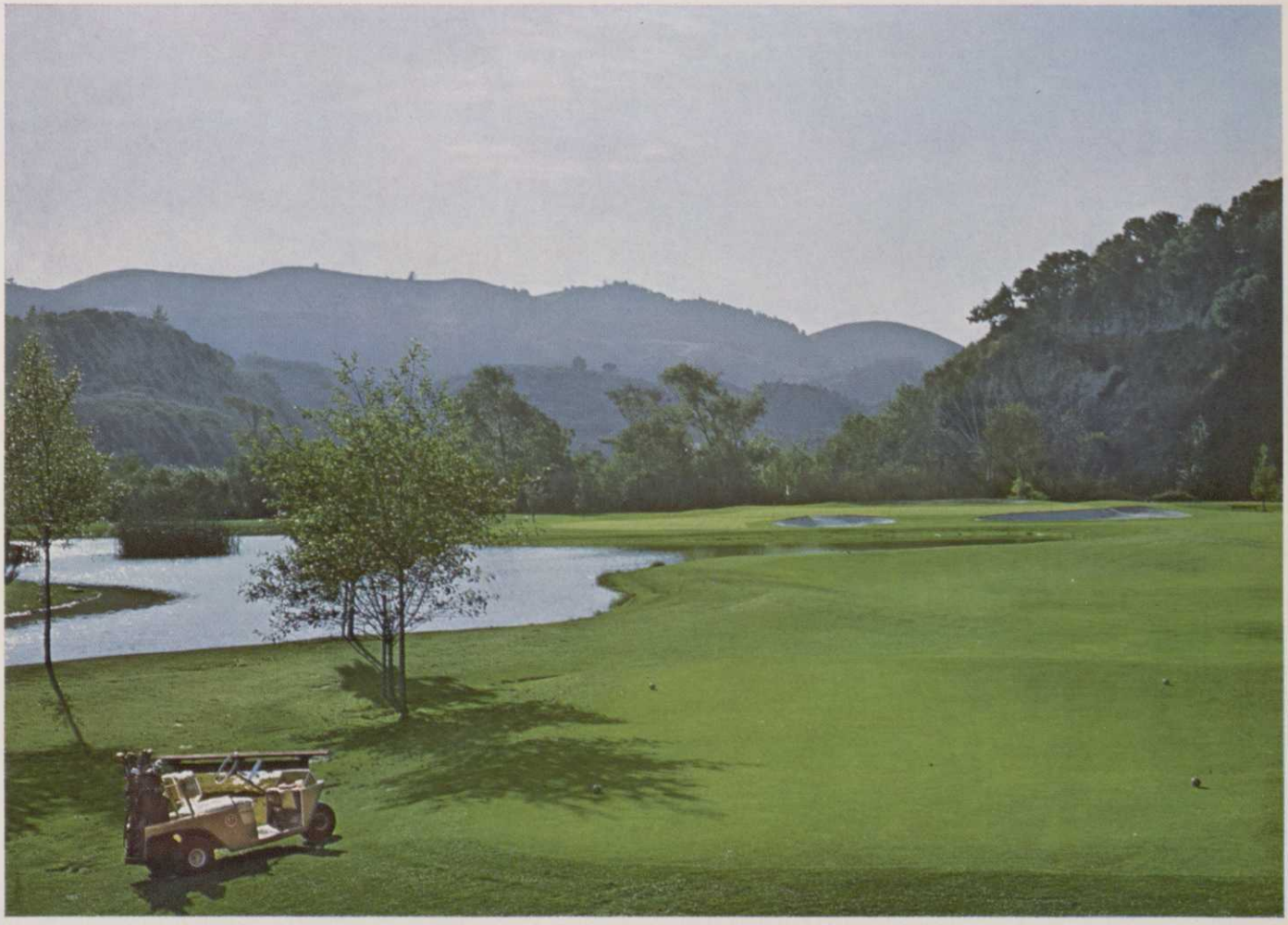
AT CARMEL VALLEY GOLF AND COUNTRY CLUB
Carmel, California
Supt. ROY KING says:

"Tersan® OM is the finest turf fungicide I have ever used. We find that a single application at the time large brown patch and dollar spot first appear gives us good control."



Effective disease control with "Tersan" OM helps keep your course in this kind of excellent condition. And "Tersan" OM does not stain or discolor clothing, golf balls, or other equipment.

"On our Carmel Valley Golf Course," continues Superintendent King, "it is unnecessary to maintain a regular preventive program. However, when disease threatens we use 'Tersan' OM and get excellent control."

Golf course superintendents in all sections of the country know from experience that they can rely on Du Pont "Tersan" OM turf fungicide for an effective preventive disease program. A thiram-organic mercury combination, "Tersan" OM, not only offers time-proven prevention and control of large brown patch and dollar spot, but also of copper spot, snow mold, and other major turf diseases. It has a large safety factor on turf... even under adverse conditions.

For full information on "Tersan" OM and other dependable Du Pont Turf Products, just call your golf course supplier... your service agency.

With any chemical, follow labeling instructions and warnings carefully.

DU PONT Better things for better living...through chemistry

This year, half the fun of golf is the new Westinghouse electric car.

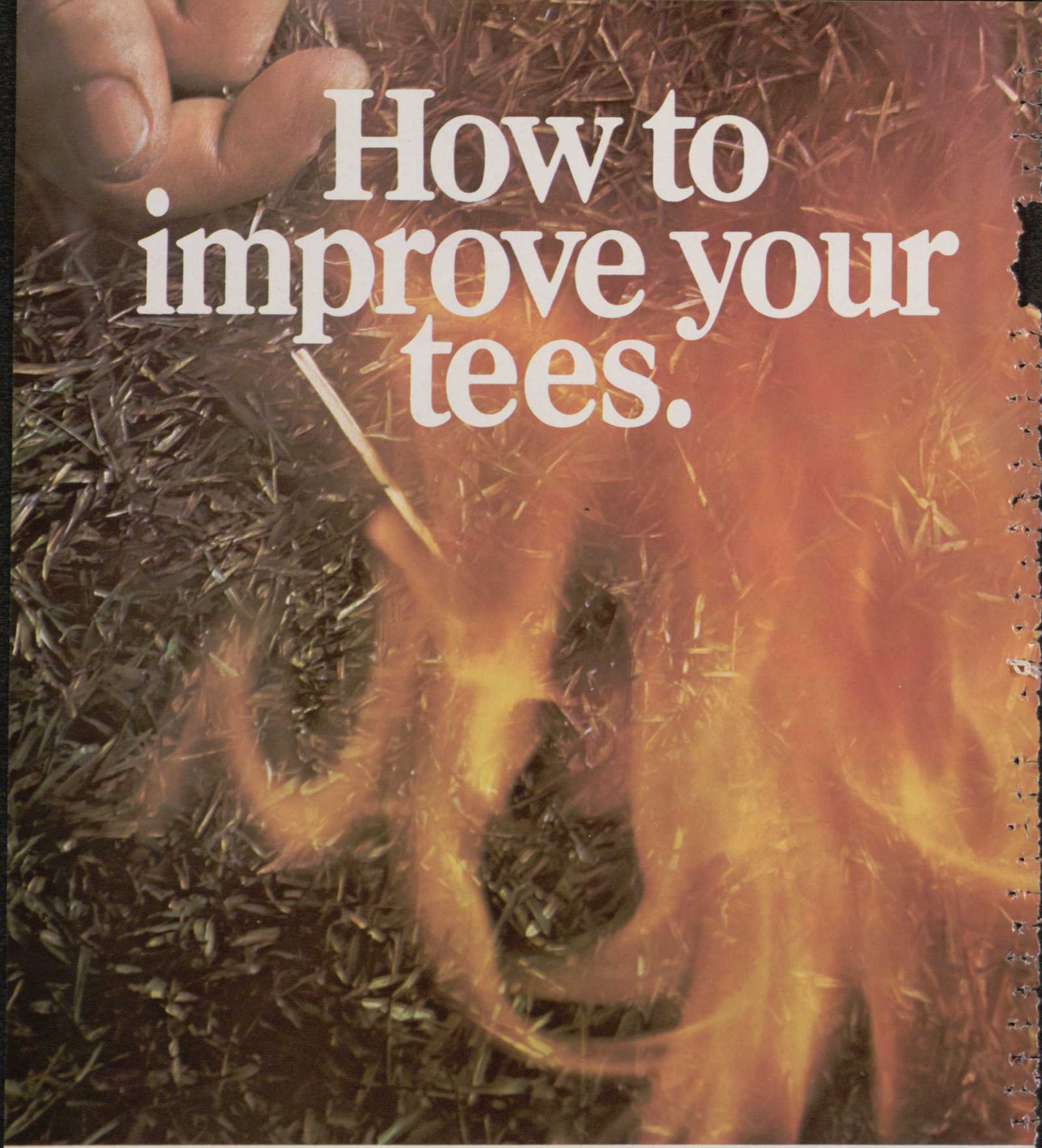
Every game's a joyride, because this beauty is all car. Big tires that smooth out the rough spots. Foam-cushioned seat that adjusts to every rider's comfort. Four wheels for ground-hugging stability. Automotive differential. Powerful 4½-hp Westinghouse motor that purrs over the slopes without slowing down. And motor efficiency stretches battery life.

The new Westinghouse four-wheeler is as easy to maintain as it is fun on the fairway. It takes no more space than ordinary three-wheelers. Bolt-on steel body panels make maintenance or replacement a snap.

Send for details today. Write Westinghouse Electric Corporation, Electric Vehicles Dept. 7824, Box 868, Pittsburgh, Pa. 15230. J-95020

You can be sure...if it's Westinghouse

For more information circle number 266 on card



How to improve your tees.

Remove the grass.

You probably have too much grass to take care of as it is. So if you can get rid of it on tees, you can spend more time taking care of it on fairways and greens.

"Well, that's great," you're probably saying. "But what do I use instead, linoleum?"

Don't be silly. Linoleum doesn't even look like grass. What you use instead is something that does look like grass. Something called AstroTurf®.

AstroTurf is made from nylon. So you don't have to seed it, fertilize it, water it, roll it, or mow it. In fact, once it's installed a normal rainfall keeps it clean. So you really don't have to do anything to it.

AstroTurf is also ideal for practice tees and gets rid of the need for temporary tees.

It never shows any divots, mudholes, dry spots or tee marks. And it lets the golfer hit from the center of the tee every time. So that he won't be able to blame a bad shot on the tee any more.

But there is one disadvantage to AstroTurf. You'll no longer be able to say, "If I didn't have to spend time on the tees, I could spend more time taking care of the greens."

Sorry.

For more information, write to AstroTurf Recreational Surfaces, Monsanto Company, 800 N. Lindbergh Boulevard, St. Louis, Missouri 63166.

AstroTurf®
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Graffis

Continued from page 10

player is responsible for his score . . . Then why not have him record his score instead of having another player do it? . . . Why not have him go into the press room and be interviewed by reporters who can tell the difference between 4 and 3 on a card instead of rushing a close contender for a golf championship past a scoring table for a TV show . . . Smart TV direction, it seems to me, would have had a close-up of the de Vicenzo and *Goalby* scorecards, as "unofficial," of course, before tournament officials had checked the cards.

The unfortunate and avoidable part of the deal was that the *Aaron* scorecard was in error and de Vicenzo paid the penalty . . . To believe that Tommy Aaron didn't have enough to think about playing his own game without having the responsibility of keeping another's score is not giving young Mr. Aaron credit for being a normal, real smart mortal . . . I have kept score for a "fellow-competitor" and have asked "Pardon me, wasn't that a 10 instead of a 9?" and have the fellow-competitor call me names that would pucker the ears of the Rules of Golf committees of the USGA & the R&A . . . I never have had to ask, "Wasn't that a 3 instead of a 4?"

A very tough part of the affair at the Masters is that golfers years from now will be asking "Who won the Masters when that South American was ruled out?" just as some lately asked, "Who won the Women's Open the year that *Jackie Pung* was ruled out by being handed a wrong scorecard . . . *Betsy Rawls* is the answer and Betsy also won the Women's Open in 1951, 1953, 1960.

We have seen the nature of the game altered by the legalized ball lifting and laundry jobs on greens . . . I have a recollection of another British Open champion, *Peter Thomson*, being disqualified by signing an erroneous scorecard handed to him at a Masters tournament . . . And of the man who kept the card being one of the most careful fellows in pro golf.

Continued on page 68

GOOD AS GOLD—WHEN THE GREEN'S BY AGRICO

You can count on AGRICO'S Custom Tailored Greens and Fairways for a lot of thrilling "birdies" and "eagles"—and delighted members!

Is it any wonder that two out of three professional turf men prefer AGRICO.

AGRICO® Country Club Fertilizers ...
at the roots of the best turf in America!

For more information circle number 243 on card

Turfgrass research review

by Dr. James B. Beard

There are a number of new turfgrass varieties which have recently been released or will be released in the near future. The purpose of this article is to bring together a summarization of the origin, development, adaptation, characteristics and management requirements of many of these newly developed turfgrass varieties.

This information was obtained from the originating institution or company. Some of the varieties have not been widely tested throughout the United States; therefore, it is suggested that the reader confer with his own state agriculture experiment station concerning the performance of a specific variety which he is interested in under the soil and environmental conditions of his area.

There is a trend toward developing individual turfgrass varieties for a particular environment or soil condition of a specific region. Thus, a particular variety may not have wide adaptation and use. This is an important concern to an individual considering the use of a new variety.

Name:
EXETER COLONIAL BENTGRASS
(Agrostis tenuis Sibth.)

Development: Selection made by the personnel of the Department of Agronomy, University of Rhode Island from an old pasture in southern Rhode Island near the town of Exeter. The variety was released in 1963 and was commercially available in 1964. It has been under evaluation since 1940 at numerous locations across the United States as well as in Europe.

Adaptation: Exeter is adapted to the northern cool, humid region in the usual areas of colonial bentgrass adaptation. It posesses excellent winter hardiness; good heat tolerance being better than Astoria; drought tolerance comparable to Astoria; and poor shade tolerance comparable to Astoria.

Characteristics: Exeter posesses an erect growth habit with short stolons. Its density is excellent, being better than Astoria during the summer months. It has a bright, apple green color and a leaf texture which are both similar to Astoria. The rate of establishment is rapid. The thatching tendency and wear tolerance of Exeter are similar to Astoria. The disease resistance of Exeter is comparable to Astoria except that Exeter has slightly less resistance to *Typhula* snowmold. During the winter, Exeter becomes very brown and dormant.

Use and Management Requirements: Exeter is an erect growing type of colonial bentgrass with unusally good summer quality. It is recommended for uses similar to other colonial bentgrasses. Also, the management requirements are comparable to colonial bentgrass with a suggested mowing height of between ½ and ¾ inch and a fertilization frequency of between one and three times per season. The mowing quality is excellent.

Name:
SANTA ANA BERMUDAGRASS
(Cynodon hybrid)

Development: Selection made by V.B. Youngner of the California Agricultural Experiment Station. It is a selected hybrid of *Cynodon dactylon* and *Cynodon transvalensis*. The variety was released in 1967 and was commercially available in 1968. It has been under evaluation for ten years in many California locations and at the University of Arizona.

Adaptation: Santa Ana is well adapted to California and the Pacific southwest. At present it is not recommended for other areas because of insufficent testing. It posesses excellent drought tolerance similar to Tifway, excellent heat tolerance and is highly tolerant of salinity. The shade tolerance is poor. The winter hardiness of Santa Ana is about the same as Tifway and not as good as U-3. Santa Ana has good winter color retention in mild areas.

Characteristics: Santa Ana has a rapid establishment rate which is greater than Tifway. It forms a very dense, semi-prostrate turf similar to Tifway. The leaf texture is fine, comparable to Tifgreen. It has a dark blue-green color. Santa Ana has excellent rhizome and stolon vigor which causes it to heal rapidly following injury with the rate being faster than Tifway. The thatching tendency is less than that of Tifway. To date, Santa Ana has not shown any disease problems in California and is highly resistant to the Eriophyid mite of bermudagrass. Santa Ana has a high tolerance to smog injury and is also one of the most wear tolerant bermudagrasses.

Use and Management Requirements: Santa Ana was introduced specifically for heavy duty turf uses such as playgrounds, athletic fields, tees, etc. Management requirements are similar to any of the other bermudagrass varieties. The mowing quality is similar to Tifway.

Name:
MANHATTAN PERENNIAL RYEGRASS *(Lolium perenne L.)*

Development: Selection made by C.R. Funk and R.E. Engel of the New Jersey Agricultural Experiment Station. Origin of the selec-

Continued on next page

Beard

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tion was from a collection of plants from old turfgrass areas in Central Park, Manhattan Island, New York City. The variety is presently available in very limited quantities with production being increased.

Adaptation: Manhattan performs best in cool, moist marine type climate or during the cool moist growing weather of spring and fall in temperate zones. It has been outstanding in tests in the northeastern states and the Pacific northwest. It has also been promising in the north central states, but further testing is needed in this area. The cold, heat and drought tolerance of Manhattan has been slightly better than most other ryegrass varieties. It retains good color longer into the early winter and greens up early in the spring.

Characteristics: Manhattan exhibits good density with significantly more shoots and leaves per square inch than other ryegrass varieties. It has an attractive, dark green color and blends better with the Kentucky bluegrasses than most other ryegrasses. The growth habit is a leafy, moderately low growing type with a slower rate of vertical growth than any other currently available ryegrass variety. The leaf texture is somewhat finer than other available ryegrass varieties. Manhattan exhibits profuse tillering under favorable conditions with moderate spreading ability. The decumbent stems may root at the nodes. Its rate of establishment is excellent, comparable to other ryegrass varieties. Manhattan exhibits less injury to snow mold than most ryegrasses. It is moderately susceptible to rust and has above average resistance to large brown patch and *Fusarium* compared with the other ryegrass varieties. Thatching has been no problem in tests to date. The wear tolerance of Manhattan is excellent during the cool periods of fall and spring.

Use and Management Requirements: Manhattan is valuable for use on sports turfs receiving heavy traffic during the spring and fall where rapid reestablishment of good turf is important. A cutting height of one and one-half to two inches appears optimum. However, plots being mowed at 3/4 to one inch are doing well. Manhattan will tolerate moderately acid, sandy or poor soils but does best where properly limed and fertilized. It will also tolerate moderate summer droughts without irrigation if not fertilized excessively.

Name: COUGAR KENTUCKY BLUEGRASS (*Poa pratensis* L.)

Development: Selection made by A.G. Law and J.L. Schwendiman of the Washington Agricultural Experiment Station. The original selection was made from a Denmark plant introduction. The variety was released in 1965 and became commercially available in 1966. It has been under evaluation for eight years in locations throughout the United States, Canada and Europe.

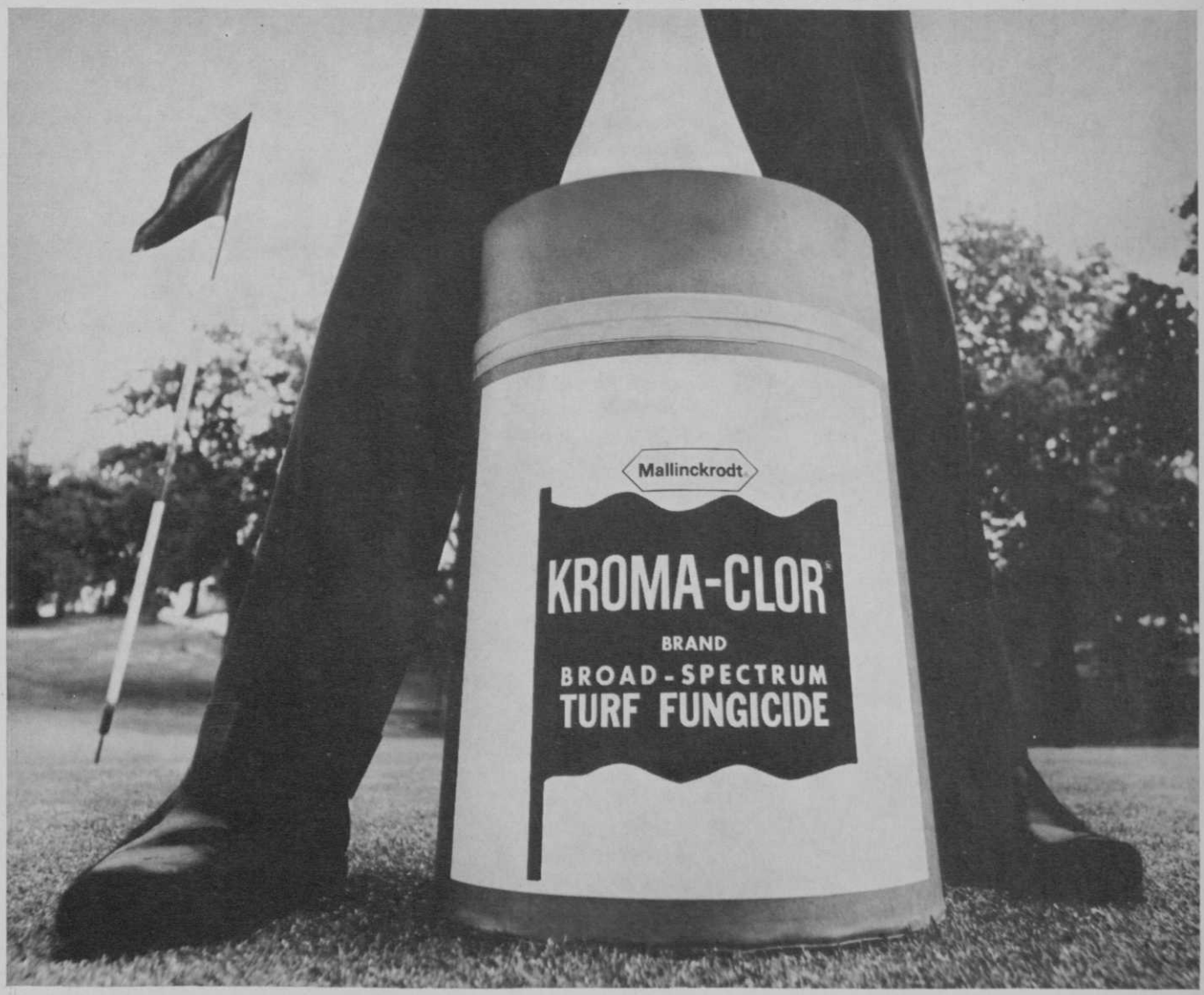
Adaptation: Cougar is well adapted to the inland empire region of the Pacific northwest and to Kansas, Iowa and Missouri. The cold, heat, drought and shade tolerance of Cougar are comparable to Merion.

Characteristics: Cougar has a very rapid establishment rate with emergence occurring in four to seven days in comparison to 10 to 14 with Merion. Under high fertility it possesses a superior density in comparison with Merion. Cougar has a dark green color and will remain dark green for two to three weeks later in the fall than Merion. Its growth habit is a low growing, strongly rhizomatous type possessing many tillers. Cougar has a comparatively high rate of thatch formation. It is resistant to powdery mildew and leaf rust but is quite susceptible to leafspot. The wear tolerance is similar to Merion.

Use and Management Requirements: Cougar is used for recreational areas which receive heavy use including tees, fairways, athlectic fields and parks. Cougar forms an excellent turf at cutting heights of one-half to one inch. It responds to high nitrogen fertility levels of from six to eight pounds of nitrogen per 1,000 square feet per year. Also, it responds to higher irrigation levels.

This is the first of a three part series on new grass developments. □

Your strongest stand against summer turf diseases!



Why experiment? Mallinckrodt Kroma-Clor® has proven tops in tough competitive tests . . . at universities, experiment stations and on fine greens everywhere. It's the super broad-spectrum fungicide that gives surer, safer control of dollar spot, copper spot, red thread, helminthosporium, leaf blight and fast-spreading brown patch. It's the *one* fungicide that does it all!

That's good, because a Kroma-Clor preventive program is effective . . . and economical. Three ounces per 1,000 square feet per week protects you even in hot, wet "brown patch" weather. And, unlike other fungicides, Kroma-Clor contains iron and urea for hardier growth . . . plus natural turf-tint for a healthy, "tournament quality look" all summer.

So don't let disease cost you a lot of money and grief. Spray with Kroma-Clor. Your Mallinckrodt distributor can deliver it tomorrow.

Or use Ultra-Clor® . . . same fine product but without turf-tint.
And always spray Turf Chemicals with the Spray-Hawk™ mobile turf sprayer.

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Accent on management

by Ken Emerson

Educational seminars for club officers and directors is a field that is currently being explored by the National Club Association.

Although representatives of clubs in a single geographical area have often met informally to compare notes on mutual problems and while local and state golf associations have made it possible to share even more information on a wider level, only recently has any attempt been made to bring club officers together in a purely educational atmosphere in order to make them more proficient administrators.

It is, however, a natural and logical function of the industry's trade association to do so and such a program will soon be launched.

As pioneered by the Vancouver Golf Club, which hosted its second successive director's seminar in February of this year, the program will make use of the talents of the professional club manager, reinforced by the golf course superintendent, the golf professional and experts in insurance and club financing.

A similar endeavor has just been concluded at the Meridian Hills Country Club, which was the host club at a symposium attended by two club officers and the club manager of seven clubs in the Indianapolis area.

The purpose of the Vancouver seminars has been to acquaint its own club officers with the specific problems they face during their administrations and to indoctrinate and direct *potential* club directors and officers in the duties and obligations that go with club service.

The Indianapolis symposium was more specific; it reviewed the problems and areas of mutual interest where discussion would lead to solutions that would be of immediate benefit to the participants.

Because the National Club Association's seminars, which will begin next year, will combine many of the methods and goals of both, it is appropriate to take a closer look at the programs and some of their conclusions.

Because it is the older program and represents a continuing and evolving plan, the Vancouver seminar is the more sophisticated of the two.

Club manager J.H. Thompson has divided the study session into five general areas of interest, with about equal time being given to each. These are:

1. Club Management
2. The Clubhouse
3. The Pro Shop
4. The Golf Course
5. Finance and Insurance

The last of these, finance and insurance, was handled by two speakers in 1967 and by three in 1968. This year, one speaker was used to review the source and application of funds, income and expense trends over the last three years, and budget control and interpretation of the financial statement.

Another covered the annual audit, while a third discussed insurance, appraisal of property, and coverage for fire, theft, liability, etc.

The club's golf course superintendent reviewed the conditioning and care of the course, turf management, personnel and services and the problems facing a superintendent.

The golf professional discussed his relationship with the members, pro shop operations and services, tournament policy and reviewed golf cart regulations.

The clubhouse portion of the program was centered on general statistics, catering, accounting and custodial and staff services and responsibilities.

Club manager Thompson presented a management program which included the theory and practice of club administration and the relationship of the board, committees, staff and consultants.

At Meridian Hills the program was confined to golf, finance, and house. The meeting broke into three groups to discuss these simultaneously.

In their review of house problems, the officers and managers shared information on member-reaction to—and the success of minimum house charges and menu selections and presentation. Also in the spotlight were the problems, dangers, and advantages of permitting cash sales and the affect of the most recent interpretations of the Fair Labor Standards Act on the private club industry. (It was noted that many clubs in other areas have gone to a five day week in their efforts to maintain an economical operation.)

Interest was also expressed in the obligations of private clubs in supporting liquor regulations and legislation.

The golf group compared experiences with the center cup watering on greens (all favorable) and the advantages of Poa, Merion Blue, and Kentucky Blue Grass on their fairways. Considerable time was spent discussing caddy programs and the increasing difficulty of insuring the availability of competent caddies.

From these three individual meetings the group reconvened for a general discussion, with Meridian Hills president Richard Petticrew, as moderator. The chairman of each group spoke for 15 minutes, high-

Continued on page 22