

Editor: ROGER LA ROCHELLE
1818 — 177th Street
Hammond, Ind. 46324

OFFICERS

President — Joe Canale
First Vice-President — Paul Voykin
Second Vice-President — Denis Straus
Secretary-Treasurer — John West

DIRECTORS

Michael Bavier
Robert Breen
Harold Michels

Joe Grenko
Albert Staudt
Dick Trevarthan

A newly developed seminar program, entitled "Herbicides, Fungicides and Pesticides," will be offered by the Continuing Education Center, Harper College, Algonquin and Roselle Roads, Palatine, Illinois 60067.

The seminar will be offered for an eight-week period, starting September 15, and continuing through November 3, 1971. Classes will be held each Wednesday from 7:00 p.m. until 9:00 p.m.

Registration fees have been set as follows:

\$10.00 for residents of the northwest suburbs
\$32.54 for all others

Complete details, including determination of registration fees, can be obtained by contacting:

Dr. James Fuller, Coordinator
Continuing Education Center
Harper College
Palatine, Illinois 60067
Telephone: 312 / 359-4200, Ext. 301

Dear Sir:

The Wisconsin Golf Turf Symposium dates are changed from the first week in December to November 4 and 5, 1971. This move is to reduce conflict with neighboring organizations and eliminate the hazard of blizzards. In 1972, we begin permanent meeting dates during the last week in October. The meetings will be held in the Pfister Hotel, Milwaukee.

Since this is a major departure from our established December dates, we will appreciate special mention in your publication to inform those who have attended past Symposia and those who are making plans to attend this year.

Sincerely,
James M. Latham, Jr., Chairman
Symposium Committee



Norman W. Kramer, who has been golf course superintendent of the prestigious Point O'Woods Golf and Country Club in Benton Harbor, Michigan, since 1959, died suddenly June 3rd of a heart attack at the age of 44.

Mr. Kramer had just completed a one-year tenure as president of the Golf Course Superintendents Association of America, an international organization of leading golf course superintendents.

During the past 13 years, Mr. Kramer shaped Point O'Woods into peak championship condition for the 1963 and 1965 Western Golf Association Amateur championship tournaments. He was in the midst of preparing for the 1971 Western Amateur, which is being held on July 28 through August 1.

In addition to these events, Mr. Kramer has prepared the course for numerous local and regional competitions during his tenure. Prior to that time he was superintendent of Silver Lake Golf Course in Orland Park, Illinois. His most important assignment there was the preparation of the course for the 1958 USGA Public Links Golf Tournament.

Mr. Kramer has been active as a member and leader in many local and regional turf and superintendents' organizations. When he left Illinois for the Point O'Woods assignment in 1959, he was vice president of the Midwest Golf Course Superintendents Association. Since his move to Michigan, he has served as director, vice president and president of the Western Michigan GCSA and the Michiana GCSA. He is past president of the Midwest Turf Foundation at Michigan State University.

Kramer has been a Class A member of the national association since 1951. He made several appearances on the Association's annual conference educational program as speaker. He became a member of the GCSAA Executive Committee in 1966 and was elected vice president in 1969. He was elected president of the GCSAA at the group's annual meeting in Houston, Texas, on February 11, 1970, and served in that ca-

capacity until February, 1971, when he was appointed president emeritus.

Also active in numerous community activities, Mr. Kramer served on the St. Matthews Lutheran School Board in Benton Harbor for four years (two of them as board chairman).

Survivors include his wife, Peggy, and two teenage daughters, Lauri and Lynn, who reside in Benton Harbor, Michigan.

CHEMICAL BAN PUTS 'BLACK HAT' ON GOLF'S GREENSKEEPERS

By John Husar
(Chicago Tribune Press Service)

DENVER, Feb 9—For the first time in their quiet, contemplative lives, the nation's greenskeepers are wearing black hats.

Because of their position on the use of pesticides and other chemical agents, they are among the "bad guys" in the environmental battle against pollution.

Naturally, as people who have spent lifetimes practicing the element of conservation, they do not like their new image. The corridors and back rooms at the Golf Course Superintendents Association convention fairly ring with hurt, defensive talk. Their leaders have vowed to hammer out some type of guidelines by the end of the week.

Basically, the men who care for the grass, trees, and shrubbery around the golf courses do not believe that certain potentially harmful chemicals should be banned. Controlled, yes — just as society limits the prescription of some drugs to doctors and pharmacists — but not denied to proven experts, which the greenskeepers rate themselves.

Responding to the pressure of the times, they will agree to undergo strict governmental testing and licensing if only they can have the freedom to apply chemicals as they see fit.

In Massachusetts and Ontario, such testing is underway. "You'd be surprised how many boys have to take a course and go back a second time," said a Canadian. "We feel this is upgrading the profession."

The prime fear of superintendents is that severe chemical suppression will downgrade their work. "We'll probably revert to 1940 turf conditions," said Norman Kramer, president of the association.

Lee Record, midwestern agronomist for the United States Golf Association said there may be no way to control weeds and plant diseases sizably, according to today's standards.

"It will separate the men from the boys in our business," he said. "An awful lot of the younger men have never had to work without these chemicals."

Already, Illinois has banned four major agents — DDT, a foe of insects; deildrin and aldrin, which are hydrocarbons lethal to grubworms; and a weed defoliant canned 2,4,5-T, which has been successful in Viet Nam. All four leave residues that appear in animals and streams.

Other states have gone even further. New York, for example, has rigid controls on 50 chemicals and has banned 10 others — notably mercuries and arsenates. While these chemicals are used throughout agriculture, they are of particular importance to the golf course superintendents.

"People will not have the groomed courses they have gotten used to," Record said. "And I wonder what will happen to the memberships of some shaky

private clubs, where people have been paying so much for this extra grooming."

To a man, the greenskeepers believe that overzealous, emotional crusaders have blown concern for the chemicals out of proportion. They insist they know of no instances where humans have been hurt by chemical use, especially on golf courses.

"Why, everytime you go to the dentist and get a filling, you'll have more metallic mercury in that filling than you'll have in five lifetimes with these chemicals," said Ben Chlevin, the association's executive director. "We're evolving into a society of unthinking people."

Allied with spokesmen for the chemical companies, the greenskeepers are arguing that these chemicals have helped lessen disease (in the case of DDT, Typhus and Malaria) while contributing an abundance of foodstuffs.

"Some of these people want us to hand the planet back to nature," Chlevin said, "instead of continuing as we have for thousands of years — battling to overcome nature."

While the superintendents talk of developing a belligerent attitude and plan ways of gathering public support for their chemicals, other elements of the campaign are being mounted.

One industry speaker suggests using the term "crop protection agents" instead of the lethal-sounding "pesticides, fungicides, and herbicides."

Nevertheless, there are signs that the industry is coming around. Grumbling about complex processes, high costs, and so-so results, company spokesmen are telling of products that break apart chemically instead of seeping into the environment.

Reluctantly, they are issuing lists of substitutes that appear to do the job — maybe less satisfactorily, and sometimes not at all. But they're trying.

According to Record, better cultural practices probably will evolve as a result of the controversy.

"I think you'll find a lot of the guys are going to have to be more observant about their chemicals from now on," he said.

ONCE AGAIN BY POPULAR DEMAND BRIARWOOD'S FABULOUS ANNUAL EARLY SUMMER SALE — Best price will take all, whole, or part of any piece of equipment.

- Two — Ransome pushy green mowers.
 - One — West Point Fairway spoon Airifier.
 - Two — 18" one year old rotaries.
 - One — 1970 Cushman scooter fertilizer spreader, with P.T.O.
 - One hundred aluminum sand trap rakes with teeth.
 - One hundred garden type sand trap rakes with handles.
 - One — 36" fertilizer spreader.
 - One — Water barrel and stand cabinet.
 - One — Fairway fertilizer spreader minus motor, good tires.
 - One — antique flat steel tired chariot type trailer with tip box. (perfect for short trips and visits to area supts., keep off pavement.)
 - One — gas fired charcoal broiler, stainless steel hood with fan (manager's special).
 - A few rare and uncensored copies of "A perfect lawn the easy Way" — autographed by living author.
- ALL EQUIPMENT GUARANTEED TO START (for a short time) Plus Kosher lunch with Living Supt. Paul N.

Voykin and tour of famous rare strain poa fairways followed by tour of famous north side taverns and speakeasies. Our promise this year, which we hope to keep, is not to sell (unlike past years) the equipment more than ONCE.

We would appreciate only serious inquiries to this important sales announcement and would prefer very much not hearing from crank superintendents making crank offers about a truly great buy offered to outstanding superintendents and golf courses in this area and nation.

Paul



FOR THE PROFESSIONAL TURF MANAGER

- WALTER FUCHS
- 1106 N. Scott Street
- Wheaton, Illinois 60187
- Telephone 668-5537

TURF PRODUCTS, LTD.

TURF PRODUCTS, LTD.

FOR THE FINEST IN IRRIGATION !

MILLER SPRINKLING SYSTEMS

DIVISION OF A. J. MILLER, INC.
Since 1925

1738 Armitage Court
Addison, Illinois 60101
312 - 629-7730

1320 N. Campbell Road
Royal Oak, Michigan 48067
313 - 398-2233

CLEARY PRODUCTS FOR BETTER TURF

PMAS — Disease and Crabgrass Control

CADDY — Liquid Cadmium Chloride Fungicide

SPOTRETE — 75% Thiram Fungicide

THIMER — Broad Spectrum (Phenyl Mercury-Thiram) Fungicide

METHAR — DSMA and AMA Crabgrass Killers (Liquids and Powders)

MCPP — Control Chickweeds, Knotweeds, Clover, etc. in Bents, Bluegrasses, etc.

MCPP+2-4D

ALL WET — 100% Non-Ionic Wetting Agent

TRU-GREEN — Liquid Chelating Agent Contains Iron, Magnesium, etc. (Apply with Fungicides)

CLEAR SPRAY — Liquid Protective Sticker for Grass and Plantings. Extends the Life of Fungicides Summer and winter.

W. A. CLEARY CORPORATION

NEW BRUNSWICK, N. J. 08403

Nels J. Johnson, Tree Experts, Inc.

SINCE 1930

Complete, economical tree service for Private Estates, Parks, Municipalities, Golf Courses Cemeteries, Schools, Industrial Areas.

All phases of Arboriculture, Diagnosing, Pruning, Treating, Transplanting, Fertilization, Hydraulic and Mist Spraying, Removals, Stump Routing, Municipal Forestry.

— FULLY INSURED —


GRADUATE FORESTERS • LICENSED ARBORISTS

MAIN OFFICE: 912 Pitner Avenue, Evanston, Illinois
Phones: GR eenleaf 5-1877 — GR 5-5255
Hinsdale, Illinois — FA 5-0970

BURDETT'S, INC.

Seeds • Fertilizers • Golf Course Supplies

Swift Road at North Avenue
P. O. Box 186 Lombard, Ill. 60148
Phone 312-629-1123



The "Tersan" Program

Uramite and NuGreen

Nelson
Sprinklers and Valves

Myers Sprayers and Pumps

All Insecticides and Fungicides

Weed Killers —
Soil Sterilents

PROMPT SERVICE

TORONTO C-15 BENT SOD & STOLONS

"PURE TO STRAIN"

NEW!

FYLKING BLUEGRASS SOD
DISEASE RESISTANT
SCOTT'S WINDSOR SOD

ALSO —

- MERION and DELTA SOD
- BLUEGRASS BLEND SOD

PENNCROSS BENT SOD



H & E Sod Nursery, Inc.
4301 W. Flossmoor Rd.
Tinley Park, Illinois
312 798-2210



LARRY RON BOB
DAVE WAYNE PETE



FROM

**ILLINOIS LAWN
EQUIPMENT, INC.**

**14750 La Grange Rd.
Orland Park, Ill.
60462**

(312) 349-8484

This group represents 66 years of experience in professional turfgrass maintenance. Weekly we answer dozens of questions for you in person and over the phone—technical, turf, mechanical and even many personal—that's our job. We like it. Some of us have been doing it for 17 years. When you need to know something, think of us. When we don't know, we'll find out.

ASPHALT DRIVEWAYS — PARKING LOTS — ETC.
"Golf Course Work a Specialty"
LEMONT PAVING CO.
SAND & STONE
115th & Archer Ave. (Rt. 171) — Lemont, Illinois
RAY MURPHY 257-6701

FOR THE FINEST IN SOD
THORNTON'S TURF NURSERY
312 - 742-5030
Rt. 2 Box 72 Elgin, Ill.

Pesticides and the Fantasy Formula

By R. G. Van Buskirk

Recently I overheard the following statement: "My neighbor sprayed his garden and I wouldn't let the kids or the dog go into our backyard during the whole weekend."

The man on the street was saying what he believed: That pesticides were a menace to him.

Dozens of facts flitted through my mind, many responses rushed to my lips. I wanted to assure the man that pesticides, properly used, have never hurt man. My source — the American Medical Association. I wanted to tell him of the dread diseases we once had which have all but disappeared from the U.S. — principally because of the good work of pesticides and medicines. I wanted to remind him that the clean, abundant food he takes for granted gets to his table that way because of pesticides.

I wanted to be able to enter his house, look around and show him the common items of his household which cause more deaths or illnesses than do pesticides. Items such as iodine, table salt, aspirin, cleaning fluids, paint thinners would surely be there.

But you can't confront every man on the street with your facts. And, if you do, it's probably a good way to get your nose broken! Instead, I asked myself: "How prevalent is this thinking?"

And the disquieting answer I gave myself was: "Probably, quite prevalent."

How and when did this anti-pesticide movement start? What kind of people are spearheading this drive against a proven ally of man? How did they manage to operate so effectively in conditioning the public to have an utter belief in so many false, incomplete and, often, irrelevant facts concerning pesticides?

While some people have always opposed pesticides, I think we can establish the beginning of the movement. It was during the year 1962. In that year, a book written by a talented, proficient writer came out. It was called "The Silent Spring."

After reading this book several times, I have to believe that its author was sincere in her beliefs but subjective in her thinking. She was skillful and artful in the techniques she used to make her points — but she was no toxicologist. Many prominent doctors and toxicologists have said the same.

But her book was a success and was the big factor in giving rise to the anti-pesticide critic.

This group began to form immediately after the book was published. Now, in 1970, it flourishes.

What kind of people are these critics who now have an army of cultists following them?

They all have two things in common: Mass communication systems are readily available to them — and they are extremely articulate. The group includes free-lance professional writers, college professors, newspaper men and women, prominent figures in radio and TV, politicians and members of societies and clubs devoted to the outdoors as a hobby.

Who knows what their respective motives are? We can only speculate — which is what **they** do in all of their writing and speeches.

The free-lance writers secure income from their books or articles.

The professors receive public recognition — something they can never get by writing to professional journals.

The newspaper men find the subject of pesticides a way to fill their daily columns.

The politicians get their names in front of their constituents.

The radio and TV personalities are practicing good public relations by jumping on the bandwagon created by the others.

And the nature groups are reacting honestly to their sincere feelings. Their perspective is questionable, since it is not readily apparent as to where they stand on the sufferings of man, but their true love of the **other** plants and animals in our kingdom is real and evident.

The Critic's Formula

More important than who the critics are, or why they react as they do, is **how** they go about their work.

They all use "The Silent Spring" as their model. And they should — because it was a document containing a masterful technique that very few could improve upon.

The formula, and it has now become a formula, is a well-written introduction which uses numerous contrasting adjectives and nouns. There is a subtle transition made from wildlife, flowers and trees to "mysterious" ailments, "evil" spells, "strange" happenings and "nuclear" explosions.

A foreboding atmosphere is established. Then follows an interesting dissertation on some subject. Fascinating, accurate but irrelevant discussions of such items as bacteria, algae, fungi, a stretch of road, a conference of scientists, Greek mythology — and life cycles of organisms take place. In these discussions facts are used and the word "may" never appears.

With an aura of authenticity established, pesticides are injected into the picture. Then the word "may" suddenly sprouts like weeds. We are told that we "may" alter human germ plasm by use of chemicals. We are told that we "may" alter our future by choosing a chemical spray.

One writer implied that pregnant women "might" have deformed children if they sprayed with a certain fungicide.

Many writers have stated that pesticides "may" be causing cancer in man.

All this and much, much more in spite of statements to the contrary made by responsible men of science. The American Medical Association, a House Investigating Sub-Committee and prominent toxicologists have all stated that there are no known instances of pesticides injuring man when they have been properly used.

Pesticides are a poison. Accidents have happened. Again, accidents happen with innumerable chemicals, even with table salt and aspirin. But no one passes laws to get rid of salt or aspirin!

As the anti-pesticide article unfolds, all sorts of interesting words are placed before the reader. These include "insidious," "lethal," "biocide," "strange," "mutation," "notorious," "weird," "fearful."

One part of the formula is to seek out the exceptions. There are over 200,000,000 people in the U.S. alone and about 3-1/2 billion in the world. Some of these people have accidents. They burn to death; they fall off cliffs; they slip in the bathtub and break their necks. And a few of them die from the **accidental** ingestion of pesticides.

The writers search for these isolated cases and describe them. Their facile pens leave the reader with the impression that such accidents are commonplace.

Irrelevant statistics are part of the formula. For example, one writer tells us that ocean water contains 5-100,000 thousands of **one** part of DDT for every **million parts of water**. He then states that the average human has about seven parts per million of DDT in his body. Having thrown these figures at us, he exultantly states that man has over a million times the amount of DDT found in water!

These figures really only tell us two things: We have sophisticated equipment available which can measure **traces** of anything. And — there isn't very much DDT in a cup, a bucket or a whole ocean of ocean water!

These figures **do not** tell us what our scientists know! Seven parts per million of DDT is far, far below man's tolerance for DDT. Volunteers have been tested, scientifically, after eating a dietary intake of DDT 200 times the normal traces found in food. And, years later, they were found to be completely healthy. Workers in a DDT factory have been found to have 600 parts per million of DDT in their fatty tissue. And scientists, including M.D.'s, found these men to be perfectly healthy after 19 years of steady exposure to DDT. This is over 80 times the normal parts per million found in the average man!

But our writer-statistician doesn't tell us about these facts. He gets more impact out of his article by scaring us to death.

Fantasy Replaces Fact

Because the writer has few facts to use in making his case, he resorts to **fantasy**. This was a prominent part of the introduction to "The Silent Spring" wherein the **mythical** town was introduced.

It was recently used again by a professor turned writer when the major part of his article was based upon the "end of the ocean." To reach this dreadful situation, the writer dreamed up a fictitious chlorinated hydrocarbon discovered by the Russians. Naturally, this new product did us all in—Russians included!

Fantasy is always helped along by another element found in the writing formula: A small fact is grotesquely blown up. Capabilities never found in the laboratory by serious scientists are attributed to the chemical.

Speculation, a part of the formula, is then injected. The writer can then, if he chooses, and he usually does, come to the wildest of conclusions.

Example: All the phytoplankton of the sea are destroyed, all the zooplankton are destroyed, all the fish disappear.

The results are effective. The lay reader gets fearful and the true scientists get demands to show **negative proof**.

Negative proof is another part of the anti-pesticide writer's formula. It means that the scientists must show that a given chemical will never, under any circumstance,—taken in any quantity — and over an infinite period of time — do damage to us.

Negative proof can't be established for anything — including water and bread. After all, we've only been eating bread for a few thousand years. How do we know what it **might** do to us 100,000 years from now?

Sophistry runs through the writer's work. It's a big part of the formula. Sophistry is the use of a misleading, unsound, but clever, plausible and subtle method of reasoning. For example:

"Most people don't know the difference between a chlorinated hydrocarbon, a group of the most deadly pesticides, including DDT, and water."

This is a three-pronged example of the anti-pesticide writer's formula: It contains a truth, a misstatement of fact — and the example, overall, qualifies for the definition of sophistry.

The truth? Most people probably can't identify a chlorinated hydrocarbon — perhaps even from water.

The misstatement of fact? Chlorinated hydrocarbons may have deficiencies but they **are not** a group of the most deadly pesticides.

Many of the old inorganic chemicals such as lead, zinc and arsenic are much more deadly. Most of the organo-phosphates are decidedly more deadly.

The sophistry? The whole passage. Injecting a truth prior to the punch phrase is part of the technique. Getting across the idea of deadliness establishes the reasoning that will follow from a false premise.

Slanting reports to the mood created is a favorite technique: One reporter covered a meeting of scientists several years ago and then wrote an article called "The Lethal Spring?" (Note how the writer called upon help from the master in using this title!)

She summed up the meeting with this quotation:

"None of the scientists at the four-day conference indicated that their findings had alarmed them to a point where they were ready to picket companies or petition Congress to ban one or more pesticides."

Note the subtle, negative conclusion used! Reading between the lines of this negatively slanted passage, I get the following:

"Scientists expressed no alarm at the use of pesticides — when properly applied."

I'll grant the writer one point, some pesticides are being banned now...but it's not due to the picketing of scientists — it's the work of the politicians.

So you see how we got to where we are today. Reams of print, most of it following the formula, has appeared during the past seven or eight years. Most of the articles and books have been well and cleverly written. While this was going on, the public has, fortunately, become aware of the fact that we do have environmental problems.

Ignoring the Costs

Unfortunately, no one likes facing up to the costs which must be paid to correct our sewer systems, clean up our factories and automobiles, secure proper garbage disposal procedures and embrace numerous other anti-pollution practices.

Meanwhile, pesticides, which are poisons, lend themselves to horror stories that might have been written by Edgar Allen Poe. They have been swept into the ecological storm as a No. 1 whipping boy.

What has been accomplished by all this anti-pesticide literature? Plenty!

In 1969, a group of prominent scientists from Indiana, Wisconsin, Illinois, Michigan and Minnesota prepared a report titled: "Lake States Agriculture Committee Pesticide Report."

The report was compiled because many restrictions are being placed on these states right now—restrictions pushed zealously by politicians from the area.

Some of the conclusions: With chlorinated hydrocarbons eliminated, the loss in value of production will be \$160,000,000 per year and the added cost of substitute materials will be another \$23,000,000.

If all chemical pesticides are eliminated, the loss will be \$1-1/2 billion per year!

And this estimate only covers a five-state area.

These estimates don't include such an item as termite control. The committee says that: "Chemical treatment for termites have provided \$4.6 billion in savings from damage to dwellings alone during the period of their existence." Chlorinated hydrocarbons are used for termite control.

This, again, involves only a five-state area.

Do your own projecting to 50 states and you can see what is involved!

"We Can Do Something"

Can we do anything about this onslaught of negative, vicious anti-pesticide publicity? Yes, we can do something. But it will be a long, uphill struggle.

Remember, we are all involved. Growers, packers and, most definitely, consumers are involved. So, first, read the article or book straight through. Next, and this is extremely important, reread it with a pencil in your hand. Look for the formula — it's there! Circle the speculative words — they are there in profusion. Circle the passages with a false premise. They are there too — especially in the early part of the article. Circle, too, the colorful, descriptive and fearful adjectives used. Then review this second reading and know the writing for what it is: A poison much more poisonous to our well being than pesticides ever have or ever will be.

Then interpret this article to your neighbor, your minister, your priest, your fellow club member, your child's biology teacher.

And write. Write your politician, the editor of the magazine, the author, the actor, the newspaper editor and writer involved, the college professor who wrote an article and the radio and TV star who is getting a free publicity ride.

But don't bother to write the "nature" clubs. I'll explain.

Tell the politician he's thinking of votes instead of the public good.

Tell the editor of the magazine and the author that they have a tremendous responsibility to be objective. These are troubled times and we need help, not more confusion.

Tell the college professor that he shouldn't ride on the prestige of his degree while writing science fiction. He should revert to his training as a man of science.

But leave the nature clubs alone. They do act from the heart. They are sincere. They even want green forests, clear water, wildlife and fresh air as much as we do!

They will be equally horrified if they are suddenly confronted by a world inhabited by billions of starlings, oodles of flies and mosquitoes, myriads of reptiles, worms and bugs. And they, too, appreciate a beautiful fresh apple.

So leave them alone. Their heart is in the right place.

Even if you do nothing, it will all, ultimately, turn out all right. This is because pesticides, and the need for them, are basically very sound. Of course, you may have to wait 10 or 15 years for it all to become apparent. This means it will be your children who have nothing to worry about.

Meanwhile, we only pass through here once.

MALLINCKRODT

The Complete Line...The Quality Line

TURF PRODUCTS



CADMINATE®

Economical -- effective -- for dollar spot, copper spot, red thread. Even for fairways.

CALO-CLOR®

Great mercurial fungicide for brown patch, dollar spot and snow mold control.

CALOCURE®

Mercurial fungicide with extra safety tolerance.

KOBAN™

Absolute "tops" for Pythium control.

KROMAD®

Broad spectrum fungicide controls five major turf diseases plus minor ones.

PRE-SAN®

Pre-emergence herbicide for crabgrass, goosegrass, poa-annua control.

VITALON™

Turf colorant -- instant life-like color for dormant or off-color grass and foliage.

AURAGREEN®

Fungicidal dye to "touch-up" off-color grass or as spray "indicator".

CALO-GRAN®

The dry granular mercurial fungicide for snow mold control.

KROMA-CLOR®

Super broad-spectrum turf fungicide, with a color-indicator to control five major turf diseases and many minor ones.

TOBAZ™

The *SYSTEMIC* turf fungicide that controls dollar spot (even "resistant" varieties) brown patch, copper spot and gray leaf spot.

PHENMAD®

PMA fungicide for brown patch, dollar spot, snow mold and leaf spot control.

THIRAMAD®

75% Thiram fungicide.

SPRING-BAK®

Only fungicide to control spring dead spot of bermuda-grass.

TREX-SAN™

Broad-spectrum broadleaf herbicide—controls/eliminates more than 35 broadleaf weeds.

PO-SAN™

Unique growth retardant for *post-emergence* fairways poa-annua control.

SPRAY-HAWK®

Calibrated mobile turf sprayer for accurate, uniform, fast turfgrass spraying.



Mallinckrodt

MALLINCKRODT CHEMICAL WORKS
ST. LOUIS
Jersey City • Los Angeles • Montreal

the **Vertagreen** people meet you on your own ground with a professional turf program.



The **VERTAGREEN** People from **USS Agri-Chemicals** offer a complete fertilizer and pesticide program designed especially for golf turf.

It can help you, the professional superintendent, achieve your objectives for a superior playing, more beautiful and lasting turf.

Your local **VERTAGREEN** representative brings you the finest line of golf course fertilizers and turf protection products in the business.

Tune in on the **VERTAGREEN** Turf Program. It's made for professionals and it works.



Turf Fertilizers and Pesticides from
USS Agri-Chemicals
 Division of United States Steel
 P.O. Box 1885, Atlanta, Georgia 30301

**Milwaukee Must Be in
 Ireland - 'Cause the
 Green Grass Comes
 From There!**



DISTRIBUTED BY
GEORGE A. DAVIS, INC.
 Chicago, Illinois 60630

C. E. STEWART

Civil Engineer

Irrigation, Drainage, Water Supply, Pumping Plants
 Design — Reports — Consultation — Supervision
 18357 Homewood Ave. Homewood, Illinois

AQUA-GRO QUALITY BLENDED WETTING AGENT
AQUA-T LOW COST BLENDED WETTING AGENT
STOMA-SEAL CHEMICAL CONTROL OF WILT

AQUA-GRO GRANULAR CONVENIENCE OF APPLICATION

GOLFERS PLAY

... while we install your
 irrigation system

one fairway at a time!

Free literature and list of installations on request.

Kirchdorfer
 Irrigation, Inc

P. O. Box 4124 • Louisville, Ky. 40204
 Phone 585-4305 • Area Code 502

Ask the man with the greenest greens.

You'll probably find a man who uses IMC Gold Cup® or Premium Thrive® fertilizers, specially formulated for top professional courses. Gold Cup and Thrive are a balanced combination of nutrients based on thousands of soil and tissue tests — including your own — to produce the healthiest greens, tees and fairways.



Contact your IMC Distributor
Or call IMC L&G Headquarters, A.C. 312-757-5800
INTERNATIONAL MINERALS & CHEMICAL CORPORATION
Skokie, Illinois 60076

PRECISION BLENDED TOP DRESSING

Custom blended to your specifications
by our modern equipment.

*Buy when you need —
Eliminate costly storage*

We sell an air dried, uniform and
free flowing top dressing.

ASK THE MAN WHO HAS USED IT.

HUMUS — BLACK SOIL

HENRY FRENZER

Area Code 312
658-5303

620 Webster St.
Algonquin, Ill.
60102

The Oldest and Largest Tree Service in the World
— COMPLETE TREE CARE —

Pruning
Spraying
Feeding

Tree Planting
Tree Removals
Inspections

DAVEY TREE EXPERT CO.

O. S. SIMPKINS — PAUL MALLORY
District Mgrs.

1901 W. Algonquin Rd., Mt. Prospect, Ill. 60056
437-4080

TURF PRODUCTS, LTD.

- 1106 N. Scott Street
- Wheaton, Illinois 60187
- Telephone 668-5537



TURF PRODUCTS, LTD.



for PROFESSIONAL TURF MAINTENANCE

- Fumigants
- Insecticides
- Fungicides
- Herbicides
- Plant Foods
- Soil Conditioners
- Soil Structure Builders

Swift Agricultural Chemicals Corp.

1919 Swift Drive
Oak Brook, Ill. Phone 312-325-4330

FOR TEES, FAIRWAYS AND COLLARS

USE **WARREN'S® A-20 BLUEGRASS
SOD or PLUGS**

UPRIGHT GROWTH — TAKES SHORT MOWING —
DISEASE RESISTANT — GREENS UP EARLIER —
STAYS GREEN LATER

FOR GREENS

**CREEPING BENT SOD & STOLONS
PENNPART — TORONTO**

WARREN'S TURF NURSERIES

8400 West 111th Street Phone (312) 974-3000
PALOS PARK, ILLINOIS 60464