

ring up another new pro shop record with . .



Seated, left to right: Sammy Sigh, Johnny Burt, Sales Manager, C. L. Wilcox, Executive V.P., Field & Flint Co., Ed. P. Rankin, General Manager, Ben Hogan Co., Ben Hogan, Ernie Sabayrac, Eugene Saunders, Flip-It Hat Co., Grant Robbins, Chester Kubik. Standing, left to right: Harold Whittington, Guy Farina, Jack Murphy, Michael Long, Max Baker, Andrew Augaitis, Bruce Hamilton, Danny Parrilli, Les Roberts, warehouse salesman, Bob Haggerty, Jr., James Burt, Daniel Labadie, Les DeFino.

# THE TOPS FOR PRO SHOPS

This has been, far and away, the biggest year for the hundreds of professionals who have featured our nationally advertised "The Tops For Pro Shops" brands . . a year of amazing growth in added professional customers and in the volume of business with which they favored us. And, to add to the record, a year in which your orders jumped our sales over the \$3,000,000 mark, and then some.

So, as you plan ahead for sure winners in your new selling season, keep in mind the reasons for this sales performance record — The famous brand names shown on this page are already known and respected by your customers for their top quality. With their active, nation-wide customer acceptance these famous brands provide you with the most popular and profitable salesmen in your pro shop. We are constantly expanding our sales force and facilities to service you better. Our Golf, Inc. ware-house space has been doubled to handle your increased patronage.

Our plans are gauged to a much bigger and successful season in 1957. Our salesmen are now on the road with the many new items and ideas that will help you make 1957 the most prosperous seasson you ever had.

Ernie Sabayrac, President ERNIE SABAYRAC, INC. GOLF, INC. • FAIRWAY ENTERPRISES, INC. Mailing address: Box 1177, Hialeah, Fla. Office and Warehouse: 1045 E. 16th St., Hialeah, Fla.



#### Insurance Protection

(Continued from page 63)

#### Vandalism & Malicious Mischief

A n o t h e r endorsement, also inexpensive, should be a part of fire policies. It's called "V & MM" meaning Vandalism and Malicious Mischief. This is a type

of damage to which golf clubhouses and greens and fairways are particularly susceptible because of their usually isolated location, or because often they are unattended during the cold weather months. The recent wave of teen-age hoodlumism makes the need for this coverage especially apparent.

> Sprinkler Leakage

If your clubhouse is equipped with automatic sprinklers, don't forget Sprinkler Leakage insurance. A defective

sprinkler head, or damage to heads or piping, could result in serious water damage to the building as well as furnishings.

It's possible you have a steam pressure boiler on the premises. If so, boiler insurance, which includes public liability coverage for it, is a "must." If a steam boiler lets go, the consequential damage can be catastrophic. This insurance also provides competent and regular boiler inspection service which, in itself, is worth the price of the policy.

Every golf course has a chunk of cash tied up in equipment — tractors, mowers, sprinkling devices and so on. These, of course, can be insured as contents of buildings under your policies covering Fire, Extended Coverage and V & M M. But there is even broader insurance available for this kind of property known in insurance parlance as a "Floater." Your insurance agent can tell you about it as space doesn't permit an explanation of this coverage.

### Automobile & Truck

If you have automobiles and trucks, and most golf courses do, you shouldn't overlook insurance for them.

This includes, in the order of importance, the following coverages: Public Liability (insurance mentioned above specifically excludes cars and trucks.) Comprehensive (insures theft and all damage to the car or truck itself except collision.) Collision (with a \$50.00 or \$100.00 deductible clause.)

#### Burglary & Embezzlement

There is one other important kind of insurance. It covers dishonest acts such as burglary of your safe or embezzle-

ment by employees. Burglary, robbery and forgery insurance as well as fidelity bonds for employees may be purchased in separate policies. It usually is more advantageous, however, to take out a "3D" (Dishonesty, Disappearance and Destruction) policy. This may even be extended to cover burglary of goods in the pro shop or bar liquor. Your agent can advise you what is best and least inexpensive in your individual case.

We've talked about the various insurance policies necessary to protect your investment, if you're a golf course owner, or to fulfill your trust if you are a private club officer. There are many additional types of insurance that could be mentioned, but there is only space to outline this basic program. You shouldn't gamble with anything less.

### MULCH-VAC IS THE CLEANER FOR ALL OUTDOORS!

Vacuums up, cuts into fine mulch, blows leaves back to ground as finest fertilizer, wet or dry, cleans up to 30 acres in 8 hr. day.



25 H. P. UNIT SHOWN HERE---SMALLER MODELS ALSO MADE



New LO-BLO, the Air Broom for tidy greens and grounds. WRITE FOR LIST OF USERS

ATWATER-STRONG CO. Atwater, Ohio Phone 7-2344

Golfdom

# WORTHINGTON

Mowing Equipment for

Large Area Grass Maintenance



Model "F" Tractor

The Model "F" Tractor, a new concept in design with front-wheel drive and rearwheel steering, is a great gang-mower power unit. Articulated mowers are mounted ahead of all tractor wheels, allowing operators to see where they're cutting. Grass is cut before the wheels mat it down without streaking or "over again" mowing. Fairway and Blitzer units with convertible frames are available in 3-, 5-, and 7-gang.

Model "G" Tractor

The exceptionally low-center of gravity found in this tractor gives it the ability to cut side hills and slopes as steep as 35° without danger of upset. A rugged, dependable, heavy-duty industrial engine provides the Model "G" with power to spare on mowing and power-take-off work. Fast 40 mph. road speed reduces travel time betwen jobs. Short 5½-foot turning radius means greater maneuverability in close quarter work. The Model "G" combines utility with low-cost performance.



ENGINE: Heavy-duty industrial, 4-cylinder. FUEL: Gasoline—11 gallons, total capacity. IGNITION: Weather-proofed. Distributor tightly sealed.

TRANSMISSION: Heavy-Duty. 4 Speeds forward, 1 reverse. Speed range from 2 to 25 mph.

DRIVING AXLE: Timken-Detroit one-ton truck type. STEERING AXLE: Heavy-duty, pivotally mounted. STEERING: Automotive type with adjustable column, Turning radius, 7 ft.

BRAKES: Foot hydraulic and parking mechanical on drive wheels.

DRAWBAR: Ball coupler type, convertible to pin type.

ACCESSORIES AVAILABLE: Snow Plow, Front End Loader, Cab.



ENGINE: Heavy-duty industrial, 4-cylinder. FUEL: Gasoline—11 gallons total capacity. IGNITION: Weather-proofed. Distributor tightly

sealed.

TRANSMISSION: Heavy-duty. 4 Speeds forward, 1 reverse. Speeds from 3 to 40 mph.

DRIVING AXLE: Timken-Detroit one-ton truck type. STEERING AXLE: Heavy-duty, pivotally mounted. STEERING: Automotive-type, adjustable steering column. Turning radius, 51/2 ft.

BRAKES: Foot hydraulic and parking mechanical on drive wheels.

DRAWBAR: Ball type coupler, convertible to pin type.

ACCESSORIES AVAILABLE: Snow Plow, Front End Loader, Cab, Mechanical Sickle Bar, Hydraulic Sickle Bar.

# MOWER COMPANY

64 7

STROUDSBURG. PENNSYLVANIA

# WORTHINGTON

## **Tractor Attachments**

The use of attachments with both the Model "F" and Model "G" Tractors makes these units versatile, all-season workhorses. When equipped with front-end loaders, the tractors can handle sand, coal, gravel, and loose dirt. The bucket can be replaced with a plow blade for snow removal. A cab is also available for foul weather work. Other accessories include power-take-offs, light graders, and utility carts.



with Mechanical Sickle Bar.

When the Sickle Bar Attachment is used with the dual wheel Model "G" Tractor, irregular terrain and slopes as steep as 35° can be mowed with complete safety. Extreme low center-of-gravity of the "G," plus extra-big, dual, low-pressure tires for maximum flotation makes this possible. Sickle Bar is mounted ahead of driver, making it possible to avoid obstructions. Special safety features minimize Bar damage.





GENERAL: Attachments and accessories for both the Model "F" and Model "G" tractors can be installed either at the factory or in the field. Further information and complete sepcifications can be obtained from your Worthington franchised dealer.

#### MODEL 'F' AVAILABLE WITH:

	Fairway cut	Blitzer cut	
3-gang 5-gang 7-gang	6' 10" 11' 2" 15' 6"	6' 10" 11' 3" 16' 6"	
MODEL 'G' AVAILABLE	WITH: Fairway cut	Blitzer cut	
3-gang 5-gang 7-gang 9-gang	6' 10" 11' 2" 15' 6"	7' 2" 11' 10" 16' 6" 21' 10"	

CUTTER BAR: Heavy-duty Highway Detroit Harvester. 5 ft. (3" knife sections).

DRIVE: From rear power-take-off through V-belts. CUTTING ANGLE: 90° above horizontal, 45° below.

LIFT & CONTROLS: Power, Hydraulic, Levers easily accessible.

SAFETY DEVICES: V-belt drive and spring tension swing back.

TILT: Hand lever and notched quadrant permit blade tilt.

SPEED: First and second gear transmission offer wide range of cutting speeds to meet varying cutting conditions. Cutting speeds range from 1.5 to 6.5 mph.

INNER SHOE REGULATION: From ground to 8".

Worthington Mows it...Better...Faster...Cheaper

The Big Name in Big Area Grass Maintenance

# Model "G" Tractor with S.A.E. Power-Take-Off.

The S.A.E. Rear Power-Take-Off Drive Assembly was specially engineered for operating Worthington Power-Take-Off Rotaries, sprayers, shredders, and other types of equipment. The unit was designed so that the Model "G" Tractor can be operated in second gear at speeds up to 10 miles per hour and still transmit adequate power to the rotary mower blades. This means double cutting capacity.

## Fairway Gang Mowers

A broad expanse of carpet-smooth turf is the trade mark of Worthington Fairway Gang Mowers. Articulated frame design permits mowers to follow ground contours. Units can be telescoped in width for passing through narrow openings. A patented spring supplies a 50 pound downward pressure on the roller, preventing skipping and bouncing. Lever regulates pressure to suit cutting conditions. Available in 3-, 5-, and 7-gang units.



MAIN DRIVE: From heavy-duty Detroit Harvester Power-Take-Off at tractor transmission through 1" shaft to driving sheaves.

DRIVE SHAFT: 6 spline, S.A.E., regulation size. Guarded for safety.

**BEARINGS**: Heavy-duty, pre-lubricated, sealed ball type.

SHEAVES: Two 4-groove. Keyed to shaft.

V-BELTS: Four B-section, nylon cord, matched belts. FINGER TOUCH CONTROL: Easy-to-reach lever engages and disengages power-take-off.



CUTTING WIDTH: 30 inches (each unit). OVERALL CUTTING SWATH: 3-gang, 6' 10''; 5-gang, 11' 2''; 7-gang, 15' 6''.

WHEELS: Pressed steel discs with demountable rims. Pneumatic-tired wheel optional.

GEARS: Machine-cut, heat-treated.

**REVOLVING KNIVES:** 8" diameter reel, 6-blade standard, 5-blade optional. Blades of specially heat-treated alloy attached to shaft by five steel discs.

BED KNIFE: Oil-hardened, special alloy steel.

DRIVE: Separate gear train for each ground wheel. BEARINGS: Roller for ground wheel and intermediate gear. Shielded ball for fly-knife reel

intermediate gear. Shielded ball for fly-knife reel and rear roller.

HEIGHT OF CUT: Steel wheels, 11/32" to 23/4". ADJUSTMENTS: Done entirely by hand.

Worthington Mows it...Better...Faster...Cheaper



# WORTHINGTON

Mowing Equipment for

#### Large Area Grass Maintenance

## Blitzer Gang Mowers

Blitzer Gang Mowers are built to take abuse and mow rough grass areas with increased speed and decreased cost per acre. Blitzer gangs are capable of cutting rough areas at speeds up to 20 mph. Articulated frame design permits each unit to conform to ground contours. Large diameter reel with extra space between knives allows Blitzers to gather in and clip tall grass. Available in 3-, 5-, 7-, and 9-gang units.

## **Triplex Mower**

The Triplex Mower with its 85" swath can easily mow up to 30 acres per day. The Triplex has three 30" Fairway type mowers that cut the grass ahead of the wheels and prevent streaking. The unit, with automotive type steering is powered by an 8.4 hp. 4-cycle air-cooled engine. Mower has cutting speeds up to 8 mph. and can climb grades up to 36%.

When equipped with a snow plow, the Triplex has all season utility. The unit has power to spare for plowing snow on sidewalks, driveways, parking areas, etc.



CUTTING WIDTH: 30 inches (each unit). OVERALL CUTING SWATH: 3-gang, 7' 2"; 5-gang, 11' 10"; 7-gang, 16' 6'; 9-gang, 21' 2". WHEELS: 4.00 x 12 pneumatic tires (4.00 x 18 optional) mounted on drop center rims.

GEARS: Machine-cut, heat-treated.

**REVOLVING KNIVES:** 10" diameter reels, 4-blade standard, 5-blade optional. Blades of specially heat-treated alloy attached to shaft by 5 steel disc.

BED KNIFE: Oil-hardened special alloy steel. BED KNIFE PROTECTIVE SKID: 1/4" steel.

DRIVE: Separate gear train for each ground wheel. BEARINGS: Roller for ground wheel and intermediate gear. Shielded ball for fly-knife reel. HEIGHT OF CUT: 4.00 x 12 tires, 11/2'' to 31/2''. ADJUSTMENTS: Done entirely by hand.



ENGINE: 8.4 hp. SPEEDS: 3-Forward; 1-Reverse. MOWING SPEEDS: Up to 8 mph. STEERING: Automotive wheel. TURNING RADIUS: Approximately 18". LENGTH OVERALL: 421/4". WIDTH OVERALL: 421/4". WIDTH OVERALL: 461/2" Wing units raised. 89-5/16" Wing units lowered. HEIGHT OF CUT: 3/6" to 23/6". CUTTING SWATH: 85". REEL: 8" diameter, 5-blade. CUTTING ANGLE OF SIDE UNITS: 45° Above or below horizontal. BRAKES: Automotive type.

# **WORTHINGTON** MOWER COMPANY

STROUDSBURG, PENNSYLVANIA



Insurance, as you may have found out, is a pretty complex subject. Setting up a sound insurance program is not a do-ityourself job. By all means find a competent, independent local agent or broker and give him the responsibility of protecting your property properly. We repeat this because it's very important. Don't make the mistake of parceling out policies to a number of different agents if you can help it. This can lead to dangerous gaps in coverage for which no one agent is responsible.

Be sure, too, that the agent or broker you select represents quality insurance companies. If he says you should patronize him because his companies write at less than standard rates, you'd better look around a bit more. Insurance rates are based on actual statistics. When a company or an agent offers you a "wholesale" price, look out! A company selling insurance for less than the established rate usually can't get its business any other way.

#### Weed Control Features So. California Meeting

Weed control was the most widely discussed topic at the So. Calif. Turfgrass Conference and Field Day held in the Burbank area in October. Several hundred weed specimens, gathered by the LA City Park Dept., County Dept. of Parks and Recreation, LA State and County Arboretum and many individuals, were on display. William Johnson, LA Parks golf course mgr., headed the committee which made arrangements for the conference.

#### Tell Them You Saw It Advertised in GOLFDOM!

#### PGA's Annual Meeting to Start Dec. 2 at Clearwater

Annual meeting of the PGA will begin Sunday, Dec. 2 at Ft. Harrison hotel, Clearwater, Fla., and run through Dec. 7.

The first day will have a few committee preliminaries. The Educational committee's program will be presented Dec. 3 and 4. Details of the program are to be an-nounced later. It is certain that the increase in number of golfers has stirred up a lot more retailing competition for professionals and rising costs of club operation in all departments of club operation have brought problems that call for studious attention and action by capable pros.

#### Speakers Lined Up

Emil Beck, chmn., Dunedin Educational committee, which is planning a short course for assistants to be presented at the PGA National course Jan. 7-11, advises that among subjects and instructors at the school will be Joe Devaney speaking on qualifications and conduct that make an assistant highly desirable to a pro and the club; George Aulbach on pro shop merchandising; Arthur B. St. Pierre on pro department public relations; and Bill Hardy on club fitting and repairing. Almost 100 applications from assistants

already have been received.

#### **Refresher** Course

A number of experienced and highly successful Class A professionals have expressed desire to take the course as a refresher and to get some useful new ideas. Beck says beginning Dec. 15 applications will be accepted from master pros. Total enrollment is limited to 300.

#### Swinging Around Golf

#### (Continued from page 28)

affair for the first time . . . After he'd been advised the award was to be presented to him he asked that it be given to Babe Zaharias, then getting close to the finish . . . Fred acceded to Chick's request, sending the award to Babe and giving a Chick companion trophy. D. Scott Chisholm had another birthday Oct. 20 . . This makes his umptieth and he's in lively mental and physical condition for his mileage . . . He is living at 127 Marine St., Ocean Park, Calif. . . . He's a bunch of calendars, the senior of all golf writers . . . The merry and beloved Scotty is a bright exhibit proving that milk from wild Scotch cows is not a deadly drink.

Divot replacement doesn't seem to be worth while on a course that has fairway watering . . . Replaced divots are much slower in healing than the repairs made by application of soil, seed and fertilizer . . . Herbert Kronish, Beverly Hills, Calif., contractor; Johnny Dawson of Thunderbird and Silverado; and golf architect, Lawrence Hughes, at work on 18-hole Reno (Nev.) CC project which is central feature of development of 2,650 acres by Truckee river.

Complete new clubhouse at 9-hole course of Madera (Calif.) G&CC . . . Rudy Adams, pro at Table Mountain GC, Oroville, Calif., speaking before Oroville Lions Club says that since the club opened Mar. 11 it has been played by 5,400 golfers . . . Each month the 9-hole course uses 2,850,000 gal. water in its complete watering system . . . Adams has 85 youngsters in his weekly junior classes.

Expect early completion of 9-hole Bonita GC, near Chula Vista, Calif. . . . It's owned by Ray G. Koenig and Fred Sherman . . . Ed De Alva, San Gabriel (Calif.) CC caddymaster, told Don Johnson, Pasadena (Calif.) Star-News sportswriter, that the number of golfers seemed to increase 125 per cent while he was doing his Army hitch overseas.

Start building 9-hole course at Grand Ledge, Mich., for Stephen Lipkowitz . . . Construction under way on 9-hole course of Midwest City (Okla.) Elks G&CC to plans of Floyd Farley . . W. P. Atkinson donated land . . Course, with watering system, will cost \$36,000.

Ted Maged signed as gen. mgr. and pro of Loch Alpine CC, Ann Arbor, Mich. . . . Club now being rehabilitated after having been closed since start of World War II . . . Expect to open first 9 next summer and 18 by 1958 . . . Midvale G&CC, Rochester, N.Y., buys its land from realty holding company composed of 15 of its members . . . Midvale completing \$200,000 remodeling program.

Wm. Whitlock and wife operating Powell (Wyo.) CC . . . Willie Low returning to Phoenix (Ariz.) CC from summer job as pro at Saratoga (Wyo.) Inn CC . . . Roy Pixler now pro at Porterville (Calif.) muny course . . . Harry Rainville, golf architect and builder who started with Lawrence Hughes, now has Yorba Linda Ranch & CC in Orange County, El Rancho Verde CC in San Bernardino county and Indian Wells CC near Palm Springs, being built in California to his plans.

Lack of harmony between pros, supts. and mgrs. more outspoken than we've heard it for years . . . Disagreements generally can be traced to increasing costs of operation and uninformed officials . One fact arguments are bringing out is that general management to be successful must be based on a whole lot more than desire to get first bite at the club salary money . . .

J. E. Mc Auliffe, chmn., National Mixed Foursome Two Ball amateur championship which will be played at Boca Raton (Fla) Club Feb. 12 to 16, visited men's and women's USGA Amateur championships discussing plans with leading amateurs . . . Competition has been transferred from Everglade at Palm Beach where it has been an annual fixture of growing popularity . . . Pros forecast that the event, the U.S. counterpart of the highly successful Worplesdon mixed foursomes, a British golf annual highlight started in 1921, will become a top feature of the amateur golf calendar with Jack Mc Auliffe as its engineer.

John Handwerg wants to sell his 27-hole Empire State CC near Nyack, N. Y. . . . Club opened with deluxe clubhouse and pool and on membership basis, Oct. 18, 1955 . . . Handwerg says companies interested in buying a club for their employees have inquired about buying Empire State . . .

Jimmy Johnson, New Farmington (Mich.) CC, won Michigan PGA using a putter he brought back into play after a long rest... Jimmy had played the putter 19 years ago as an amateur when he won the Detroit District championship... Bill Stoll now is supt, at Ann Arbor Golf & Outing Club, succeeding his dad, Albert, who has been there 46 years ... At one time he devised and operated an outfit that generated electricity lighting clubhouse for dances ... Ann Arbor G&O gets a substantial income each fall renting parking space to spectators attending football games at U of Michigan stadium across the street from the club.

Willie Raeburn now supt. at Brae Burn CC, near Plymouth, Mich. . . Michigan will have among new courses opening next spring the Michigan State university course at Lan sing, Warwick Hills CC at Flint and Hidden Valley CC at Gaylord . . Carlings Open to be played at Flint (Mich.) CC next year.

After a long, painful and sublimely valiant fight rest came to The Babe . . . She was one of golf's own family although many sports previously claimed her . . . Some maintain she was the greatest of all women golfers . . . She had beaten all other good ones of her era in winning her 82 title events . . . Others, while admitting Babe's

# months of decision 25 26 27 28 29 30

NOVEMBER

#### OCTOBER

1	2	3	4	5	6
8	9	10	11	12	13
15	16	17	18	19	20
22	23	24	25	26	27
	30	31			

2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 7, 71 25 26 27 28 29

DECEMBER

SNOW MOLD DAMAGE . . . OR PREVENTION WITH CALO-CLOR

CALO-CLOR

SERDET CHEMIDAL WERE

These are critical months when the appearance and health of your greens next spring may be decided! Will you chance an attack of turf-destroying snow mold... or give your greens the positive protection of effective CALO-CLOR treatments?

Keep this in mind: With CALO-CLOR's proved effectiveness—it often costs far less to protect eighteen greens than to repair a few spots of snow mold damage.

In many cases, one application of 3 ozs. per 1,000 sq. ft. provides all-winter protection. A second application during a mid-winter thaw is helpful.

#### ORDER AND APPLY CALO-CLOR BEFORE THE FIRST FREEZE!



#### MALLINCKRODT CHEMICAL WORKS

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Manufacturers of Medicinal, Photographic, Analytical and Industrial Fine Chemicals

#### Supt's Managerial Role to be Emphasized at GCSA Meeting

The superintendent's role as a manager will be given equal emphasis with the technical side of his profession when GCSA holds its 28th annual Turfgrass Conference and Show at the Kentucky Hotel, Louisville, Ky., Feb. 10-15.

This was brought out at a program planning session held in Chicago on Sept. 17 when Robert M. Williams, supt. Beverly CC, Chicago and GCSA education chmn., met with a seven-man advisory group to plan the conference schedule.

Greater emphasis than ever before will be put on subjects covering clubsupts. relations and the understanding of maintenance budgets and their place in the club financial picture, Williams said. In addition, a thorough study of "job description" will be pres-

greatness, rank Glenna Collett, Joyce Wethered, Pam Barton, Virginia Van Wie and Patty Berg ahead of The Babe... There's no argument at all about The Babe's top rating in gallery magnetism ... To her own gifts of marvelous physical strength and adeptness, Babe added a tremendous amount of pro expert tutoring.

Marlene Stewart, 22 year old Canadian lass, who became the first foreign-born winner of the USGA Women's Amateur since Pam Barton won it in 1936, is expected to remain in the amateur ranks for some years . . . She's won the British Women's Amateur, the Canadian Women's Open four times and the U.S. Intercollegiate, among other major events . . . She's a good-looking, pleasant kid with a game that's steadily improving . . . At one time during the finals at Meridian Hills CC, Indianapolis, Miss Stewart was 4 down to 17-year-old Joanne Gunderson of Kirkland, Wash., and I down after the first 18 then fired up to win 2 and I . . . Joanne defeated the defending champion, Pat Lesser.

After 17 years at Chicago, PGA headquarters were moved in September to Broadway and Main, Dunedin, Fla. . . . Lower rent reason given for move . . . Key personnel headed by Executive Sec. Tom Crane, moved to Dunedin . . Other employees are Dunedin and Clearwater residents.

Delegates to PGA annual meeting at FL Harrison hotel, Clearwater, Nov. 29-Dec. 7 will have time for inspecting the PGA's new air-conditioned headquarters and playing the PGA National course . . . The annual meeting dates aren't favorable for showing PGA course or any other course in that part of the country in best condition . . . ented at the conference along with a program for the training of new men. For the first time problems connected with small club maintenance will be thoroughly aired, Williams added.

Although the above subjects cover, for the most part, the managerial aspects of the supt's job, new developments in research will not be neglected. A special effort will be made this year to show how new chemicals and other tools designed for better turf management can be practically applied.

Attending the conference with Williams were: Agar Brown, executive secy., GCSA; Charles Wilson, Milwaukee Sewerage Commission; Oscar Borgmeier, George A. Davis, Inc., and the following supts: Bert Rost, Ray Gerber, Gordon Brinkworth, Ted Wehrle.

PGA course has been steadily improving in condition for past four years or so.

New clubhouse of Commonwealth CC, Newton, Mass., opened with exhibition of paintings by Boston Arts Festival winners as a feature . . . Among features of clubhouse are complete health club facilities for men and women . . . Club also has ski-tow and artificial snow-making machinery . . . Commonwealth is country club allied with Boston Club which is a city club.

Lindo (Butch) Bernardini, supt., Knollwood club, highly complimented by players in National Amateur, many of whom rated Knollwood greens as finest they'd ever putted . . . Knollwood experiment with changing outline of rough bordering fairways and greens for the Amateur decidedly successful . . . Idea was proposed by Joe Dev.

cessful . . . Idea was proposed by Joé Dey. Sam Snead Schools of Golf, Inc., with Sam as chmn. of the board, has been organized and plans to open first school in Dallas and build a chain of golf schools on general idea of Arthur Murray and Fred Astaire dancing schools . . Harvey Raynor, acting tournament supervisor for PGA, succeeding Ray O'Brien . . Bad condition of Old Course at St. Andrews has some saying the Old course never had good turf since sheep were evicted . . . Heavy play of Old course should be relieved by putting the Jubilee course in better condition so it would get some of the local competitions.

Louisville figuring on \$50,000 tournament ending the Sunday before the Derby . . . Interlachen members and other Minneapolis golfers stage big party for Patty Berg at the club and give Patty a diamond ring . . . (Continued on page 98)



# RENTAL CART

Wherever you see the genuine Kaddie Kart you know the club has the best and finest for its players. Truly a mark of distinction.



#### DETAILS

Fourteen inch wire spoke, ball bearing wheels, factory grease packed. Semi-pneumatic, puncture proof tires. Long or short axles. Long handle. Beautifully finished.

DETAILS

#### NEW FEATURES

Basket shaped lower brackets with no straps required can be furnished without extra charge on new Karts. Write for information about basket type lower brackets for old Kaddie Karts.

# FOR SALE or FOR LEASE FLEETS FINANCED

FOR



# PATENTED AUTOMATIC FOLDING ACTION

LIFT HANDLE IT OPENS

1956 SPECIAL PRO MODELS

> WRITE FOR FREE CAT.

AMERICA'S MOST GLAMOROUS GOLF CAR.

### EASIEST PULLING CART BY ACTUAL TEST

The strongest and hardiest golf cart ever built. No wing nuts, no wheels to push, no sliding sleeves. America's Luxury cart!

## FOURTEEN INCH WHEELS

Models with 14 inch wire spoke wheels and with eleven inch disc wheels.

SEND FOR CATALOGUE WITH PRICES DIS-COUNTS and DEALERS and PRO ARRANGEMENTS

Chamberlin Metal Produ 2226 Wabansia Chicago 47, III	
Please send complete info Automatic Kolapsi Kart for vate use). Name	
Address	
City	State
Club	Position

WRITE

Fungicides Rated for Persistence, Longevity in Three Year Study of

# Snowmold Control

#### By J. R. WATSON, Jr. & J. L. KOLB\*

**S**NOWMOLD probably causes more damage to golf course turfgrass than any other disease in the snow belt — northern United States and Canada. The disease is most serious on the green proper, aprons, approaches and shoulders. Bentgrass tees and fairways are likewise attacked, but in general, damage is less severe than on greens. Under extreme environment heavy and persistent snow packs with temperatures around freezing — snowmold may cause damage on tees and fairways.

Two organisms – Typhula itoana, the "gray snowmold," and Fusarium nivale, the "pink snowmold," are responsible for this disease. These organisms are active between 28 deg. and 42 deg F. when excessive moisture is present. This environment exists as the snow pack melts in late winter and early spring. The common name, snowmold, has developed because of this association with melting snow. It should be pointed out, however, that the disease will develop whenever temperature and moisture are favorable irrespective of snow coverage.

Several fungicides have been reported and are known to be effective against snowmold organisms. The list includes Calo-Clor, Phenyl Mercury (Liquaphene, PMAS, etc.), Teresan, Semesan, Cadminate and straight corrosive sublimate. The latter material has proved especially effective against the virulent strain of snowmold found in the Prairie provinces of Canada.

The major problem associated with control of the disease is one of longevity and persistence of the applied chemical. This develops from the necessity of applying the fungicide in late fall or early winter after



Fig. 1—Plot (left foreground) treated with Milorganite and Calo Clor. Plot at right treated with topdressing alone. Note color and freedom of disease on treated plot. Note also color of the diseasefree grass of topdressing plot in contrast to that beyond test area, and on the spray plot located immediately behind topdressing plot.



Fig. 2—Plots treated with Calo Clor and PMAS as indicated. Milorganite was used as carrier for both chemicals. Note development of disease along plot borders. Second plot in rear of PMAS plots (toward shed) is a check — no treatment. Note severity of snowmold infestation.



Fig. 3—Plots in immediate foreground treated with Calo Clor. That to the left was sprayed; to right, Milorganite was used as carrier. Note contrast in color and freedom from disease. Check plot located three plots in rear of spray plot. Plot treated with topdressing alone — without chemical — located two plots to rear and one to right of Milorganite plot.

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# INTRODUCING

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Fig. 4—Green at Somerset CC topdressed in fall and treated in late November with four ozs. of Calo Clor and 10 lbs. of Milorganite per 1000 sq. ft. Note development of disease along areas where spreader did not lap. Note also severity of disease on untreated apron and shoulder.

the soil is frozen and prior to the first snowfall which will remain. Another problem is that of holding the fungicide in place when thaws occur in late winter and early spring. Often snow may melt, partially or completely, thus washing out or dissipating the material.

In an effort to find a material which would prolong the effectiveness and persistence of the fungicide, a snowmold test was located on an experimental green at the Toro Research and Development Center in the fall of 1953. This study was continued in 1954, 1955 and 1956. The results of the 1953 and 1954 tests (readings made in the spring of 1954 and 1955) were reported in the May, 1956 issue of GOLF-DOM.

#### Materials and Methods

Certain revisions were made in the 1955-56 study. They were as follows:

Fig. 5—Small area of bentgrass in fairway at Somerset CC treated with four ozs. of Calo Clor and 10 lbs. of Milorganite per 1000 sq. ft. Note development of disease and lack of color in center swath where spreader was exhausted of material midway through run.



(1) Chemicals – only one rate of each chemical was used – PMAS at three ozs. of 10 percent material per 1,000 sq. ft.; Calo Clor at three ozs. per 1,000 sq. ft. In earlier tests, PMAS was used at  $1\frac{1}{2}$  and 3 ozs. per 1,000 sq. ft. and Calo Clor at two and four ozs. per 1,000 sq. ft. (2) Carriers – Processed sewage sludge

(2) Carriers – Processed sewage sludge – Milorganite at the rate of 50 and 100 lbs. per 1,000 sq. ft., topdressing at a volume equal to 100 lbs. of Milorganite, a mixture of topdressing and Milorganite at a volume equal to 50 and 100 lbs. of Milorganite, and water as a spray, were used as carriers.

Sand was omitted from the test in 1955-56. Earlier studies had shown the sand to be of little value, other than providing additional bulk for spreading the chemical.

(3) Milorganite, topdressing and a combination of the two materials were used without chemical.

(4) A series of plots received soluble nitrogen from an inorganic carrier (ammonium sulfate) at a rate to equal the amount of nitrogen contained in 100 lbs. of the organic carrier, Milorganite.

The treatments were replicated three times. They were applied in late November only.

Effectiveness of the various chemicals and carriers was measured by recording the actual number of snowmold spots which developed during late winter and early spring. Color ratings were also recorded during this period. Two or three thaws and subsequent snows occurred, thus providing excellent conditions for evaluating longevity and persistence of the various chemicals and carriers.

The 1955 snowmold control program at the Somerset CC, St. Paul, Minn., although not an integral part of these experiments, serves to illustrate practical application and to support validity of the test results. Following a fall topdressing, the greens were treated in late November-early December, with four ozs. of Calo Clor mixed with 10 lbs. of Milorganite per 1000 sq. ft. The results of this program are presented in the discussion phase of this paper.

#### Results

Results of the 1955-56 test at the Toro R. & D. Center show:

(1) Three ozs. of Calo Clor per 1000 sq. ft. produced effective control of snowmold, irrespective of carrier.

(2) The three oz. rate of PMAS was effective against snowmold under normal environmental conditions. Under heavy and persistent snow pack and in low areas