

tional Seniors winner.

There are 984 members among the PGA's 3500 Class A members who have the 50-year-or-older qualification for the PGA Seniors.

Discuss New Division

There's talk of another and smaller division of PGA Seniors, for 65 and older and possibly to be known as the Pioneers, to be formed for social and limited competitive play within the overall PGA Seniors' organization.

A program of entertainment for the Seniors' wives had its high point in a big luncheon and fashion show at the Ft. Harrison hotel, Clearwater.

Officers of the PGA Seniors' Ladies Auxiliary elected for the ensuing year:

Hon. Pres., Mrs. Ralph Beach; Pres., Mrs. Wm. Entwistle; 1st VP, Mrs. Randolph Huber; 2d vp, Mrs. Carmen Bill; Corres. Sec., Mrs. Carroll MacMaster; Recording Sec., Mrs. Fred Moore, and Treas., Mrs. Marty Cromb.

Manufacturers exhibiting during Seniors' Week didn't find the facilities and traffic on the Ft. Harrison mezzanine as satisfactory and as mutually profitable with pros as the previous arrangement at the PGA National course. Overtures were conducted for providing exhibit space at the course during Seniors' Week, 1957.

A Manufacturers' committee was formed to discuss the details with the PGA. On the committee are Ernie Saybarac, Lou Barberi, Jack Lust, Jack Russell, Frank Mitchell and Bob Howell.

Nine Tournaments in Ladies PGA Winter Tour

Bob Renner, newly appointed Tournament director for the Ladies PGA says that the girls have nine tournaments on their winter schedule and \$38,500 in prize money. Their winter tour opened in Sea Island, Ga., Jan. 14-15, and closes with the annual Titleholders at Augusta, Ga., March 8-11.

The winter schedule is the most lucrative in the history of the LPGA and that practically every tournament player, plus several new pros, will compete.

Two New Faces

The two new faces on the circuit this year are Gloria Fecht, a former professional ice skater, and Jo Ann Prentice, 22-year-old Birmingham, Ala., aspirant.

Shirley Spork, now a teaching profes-

First Prize for Gordon



Harrington (Tony) Harlow presents Bill Gordon the Bob Harlow memorial trophy as 1955 Golf Pro of the Year. The award, made at the PGA annual president's dinner, is historic as the first nationwide recognition of the home club pros' service to golfers and their respective communities. Tony is the late Bob Harlow's youngest son.

sional at Tamarisk CC, has returned to the circuit.

The remainder of the PGA schedule for 1956 is nearly completed. Renner has been working on the schedule at his Fort Wayne, Ind., office, at 3302 Addison Ave.

He has also completed two projects for the LPGA, a "Sponsors' Manual" and a publicity brochure with up-to-date stories on every girl and pictures of all pros. The "Sponsors' Manual" is available to all sponsors and prospective sponsors.

Southern Turfgrass Meet

Southern Turfgrass Assn. will hold its annual conference Feb. 27 and 28 at Ridgeway CC, Memphis, Tenn. The program includes several of the top practical authorities and demonstrations of equipment and methods. E. E. Johnson, Blue Grass CC, Hendersonville, Tenn., is STA pres., and Reg Perry, PO Box 2057 De Soto Stn., Memphis, is sec.-treas.

IMPORTANT NOTICE

Turn to page 94 — and make sure your active operating heads receive GOLFDOM in 1956.

Experts Exchange IDEAS For Maintenance Progress

Sectional organizations of Superintendents and regional offices of the USGA Green Section conduct immensely valuable exchanges of practical information on golf course management.

Some ideas, representative of those appearing in sectional bulletins, are presented here. This is the sort of help that superintendents, green section directors and other turf experts give each other in improving the condition of golf courses without a corresponding increase in the cost of maintenance.

Greens Base Drainage

Frank Murray, who has been building courses in the Mid-Atlantic area since 1949, says:

It long has been taken for granted that a green base should be contoured exactly the same as the desired finished surface. In the last year or so we have been accentuating the drainage areas of the base of

the new greens so when they are finished the prepared top dressing in these swales might be as much as 24 inches deep and extend well off the edges. This, we have found, insures faster run-off of surface and sub-surface water.

At least one contour of a new tee should blend into existing terrain. Soil for tees should be prepared with the same care as soil for greens and should be mixed off the site.

—Mid-Atlantic Assn. of
Golf Course Supts.

Sees Drought-Resistant Grass

Turfgrass management in the future will be centered around those grasses which can give a full measure of satisfaction with the least water. True, grass needs water to survive but some grasses need much less water than others. Breeding programs will include desert grasses to bring the genes of drought tolerance into play. Dry grass seldom is diseased, and we have often heard

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CHILEAN NITRATE of SODA

O. J. Noer say, "Only fresh moist bread gets moldy, never dry stale bread."

—Fred Grau, Central Plains Turfgrass Foundation

Merion Collars Improvement

At this time of the year (July) it becomes a scramble to "hold" the poa annua, and this applies especially around greens on the approaches and "collars." It is a well known fact that the continuous turning of mowers just off the edge of the green bruises the grass, which in a great number of cases is almost straight poa annua. Just as soon as we get some hot, humid weather after about the 10th of July in the Chicago area, anyway, the poa starts to wilt and right away becomes a headache, for it seems when it starts to go no matter what we do, it thins out and looks bad.

Several superintendents in the Chicago district have resodded the collars of greens with Merion bluegrass and results, in our humble opinion, have been spectacular. The Merion has a deep green color and even during drought periods, still retains its color when ordinary Kentucky bluegrass has turned brown. This dark green color sets off the lighter green of the bent on the green and gives a very pleasing effect, but even more important to the superintendent, it is very tough and does not easily bruise with traffic and the turning of mowers. Many times this collar of the green becomes the neglected area on the course due to insufficient watering because perhaps the sprinkler doesn't reach far enough.

In our experience Merion, closely clipped, has thrived and seems to be an ideal answer to one of our maintenance jobs — watering approaches and collars of greens — which is one of our important jobs during July and August.

We measured the amount of sod needed to go around a medium sized green, and only a narrow strip at that, and it took 100 sq. yds. of sod. So if you are interested, make your nursery big enough to service several greens.

—Midwest Assn.
of Golf Course Supts.

Traffic Increases Wet Wilt Ruin

A condition of wet wilt exists where the soil is saturated with water, yet the grass is dying from lack of moisture.

Continued rain last July kept greens in Greater Cincinnati saturated for over five days. This condition continued thru the

Service Club Tourney



Plans for a Kern county all Service Club golf tournament to be held Mar. 8-9 were recently completed in Bakersfield, Calif. Shown (l to r) are the men who handled preliminary arrangements for the meet: Bob Johnson, chmn; Vern Wickham, National Golf Foundation Los Angeles representative; Herbert J. Evans, Kern county director of parks and recreation; and Herman W. Riece, county recreation supt.

weekend of July 9 with most golf courses crowded with heavy play. The following Monday was a clear hot day. Greens, although still saturated with water, were starting to wilt badly, especially around previous cup areas and too often traveled routes leading off the green. This was "wet wilt."

The soil in our greens was saturated or deprived of oxygen for a period of about six days. We might ask why does grass need oxygen. Plants carry on a process of respiration similar to that of animals. If an animal is deprived of oxygen, death is certain within a few minutes. Some plants, including grass, can survive for a short time (2 or 3 days) without atmospheric oxygen.

Reduction of available oxygen reduces the rate of respiration of the roots. When the roots stop breathing they cease to function properly. There is a drastic reduction in the rate of absorption of water by the roots. So we had wet greens that were wilting.

This condition exists in particular where players have walked on saturated greens. In fact many individual footprints from previous days can be detected. Apparently even a saturated soil contains some oxygen, but where the golfer has tramped, he has helped squeeze the very last bubble of air out of the soil.

—Don Likes, Supt., Hyde Park G&CC,
Greater Cincinnati Greenkeepers Assn.

Stolon Planting Method

The method of stolon planting used at Juniper Hill is as follows: Prepare soil and surface as you would for seeding a green. Incorporate in the soil 15-20 lbs. per 1,000 of complete fertilizer (we use 8-6-4). It is highly recommended that aro cyanamid be used for weed seed control, this being the last operation. Apply 50 lbs. per 1,000; two-thirds of which should be harrowed in 2-3 in. and the remaining third applied to the surface and raked in. (The cyanamid, by the way, will push along the growth all through the spring and into the summer.)

Then leave untouched for one month making sure the soil is moist for complete and satisfactory action of the cyanamid.

When ready to plant the stolons the surface should be roughed up and leveled by raking in order to make a soft surface receiving bed for the stolons. Men doing the planting should start at a convenient end of the area working side by side each with a basket of stolons, planting in front of them and working backwards parallel with one another. Bend over and scatter stolons close together over entire surface keeping working hand near the ground, (to avoid wind disturbance). When one section has been completed another man or men should follow up with a top soil application, using a spreader loaded lightly and go two ways with just enough soil to anchor plants. (Soil required approx. $\frac{3}{4}$ yds. to 5,000 sq. ft.) Roll lightly.

If windy it may be advisable to roll lightly just as soon as stolons are dropped.

Watering is all important, using a fine nozzle spray to start with. Keep surface moist at all times.

Don't drag hose over surface. It will disturb stolons.

Grass should be growing well in 2-3 weeks and should be ready for first mowing in 4-5 weeks. Al Radko suggests mowing height should start at approx. $\frac{3}{8}$ in. leaving clippings on the ground. Two to three topdressings will be required after this to true-up green surface.

—Golf Course Supts.' Assn.
of New England

Moisture Factor in Arsonate Use

The new disodium methyl arsonate compounds were used on 20 plots. The first spray was applied July 19, and a second, a week later. In all plots the crabgrass was killed 100 per cent. The only crabgrass in plots which was not killed were escapes due to faulty spray coverage. Unfortunate-

Plan Miller Open



Negotiations for holding the \$35,000 Miller Open at the Tripoli Country Club next Aug. 16-19 have been completed by Norman R. Klug, president of the sponsoring Miller Brewing Co., and George Kroening, Tripoli president. Par for the 6,380 yard Tripoli layout will be changed from 71 to 70 for the Open. Cary Middlecoff won the 1955 Miller event, held at Milwaukee's Blue Mound CC.

ly the top growth of the bluegrass was severely burned. This injury proved to be only temporary. The bluegrass greened up rapidly following a rain.

Take your choice — use pre-emergence treatments and have a small percentage of crabgrass survival and keep a green lawn; or use one of the arsonate compounds and kill all the crabgrass and injure the bluegrass top growth. All of the arsonates were applied at the minimum rate suggested by the manufacturer.

There is little doubt but that with moist soil the injury to the bluegrass might have been less severe. Since the root and rhizome system of the bluegrass were uninjured, it appears to your editor that the injury to the bluegrass is of small consequence. The chief objective is to kill the crabgrass. The bluegrass will fill in later.

H. L. Lantz, Iowa Golf
Course Supts. Assn.

Four Kinds of Drainage

There are four kinds of drainage you must consider:

1. *Air drainage:* Make sure that air circulation over the green is provided for. If surrounded by brush and trees, cut a path in the direction of the prevailing wind and clear away all brush possible.

2. *Soil drainage:* A good soil is made up of approximately 50 per cent solids, 25 per cent air space, and 25 per cent water space.

In order to obtain such a ratio, a good percentage of coarse materials is required. An ideal ratio of ingredients would be approximately 60 per cent coarse, sharp sand; 25 per cent sterile soil; and 15 per cent organic matter. How do you obtain this ratio? Take a sample of your present soil and send it to your agricultural experiment station for mechanical analysis. Request recommendations also on the amounts of coarse, sharp sand and organic matter required to give you the 60-25-15 ratio.

For a description of the type of coarse sharp sand required see page 123 of the USGA's book, "Turf Management," by H. B. Musser. We realize that sand to fit these specifications may not be available everywhere but if you will bring these specifications to your supplier he will be able to tell you whether he has sand which closely approximates it. If you merely ask for a coarse, sharp sand you may wind up with an undesirable product. The description, "coarse, sharp sand" means different things to people engaged in different fields.

3. *Surface drainage:* Allow for good surface drainage by sloping the green from two or three directions. Approximately a grade of 1 to 3 per cent is most desirable. In grading the green allow for adequate cupping space — keep slopes gradual.

4. *Tile drainages:* Install tile to remove surplus or excess water. Keep the soil "breathing," and the turfgrasses above will be better for it.

*Al Radko, Northeastern
Director, USGA Green Section*

Keeps Bermuda From Greens

It is quite impressive how Tom Dawson has stopped Bermudagrass infestations around the edges of the James River greens. This has been accomplished through the use of a power edger regularly twice a week. One man covers the 18 holes with the machine in about seven and one-half hours.

*—Mid-Atlantic Assn. of
Golf Course Supts.*

List Rainy Day Jobs

Have a list of inside jobs for your men to do on rainy days so they won't have to be sent home and lose time. If a job can be done inside and can wait, then save it. The men will appreciate it and perhaps you can get more done outside.

*Mid-Atlantic Assn. of
Golf Course Supts.*

USGA Asks Member Clubs to Help Ban Gambling

USGA, at its annual meeting in January, amended its rules to withhold amateur status from those whose activities in connection with golf gambling are considered to be contrary to the best interests of golf. Entry to the association's championships will be refused such persons.

Isaac B. Grainger, retiring pres., asked member clubs, golf associations and other sponsors of competitions to prohibit gambling in connection with tournaments. His stand was seconded by Richard S. Tufts, Pinehurst, N. C., the association's new pres. Both Grainger's and Tufts' motions were dictated by the Calcutta pool scandal which came to light last fall.

Grainger explained that USGA cannot control the affairs of member clubs or affiliated associations by ordering them not to run Calcuttas. He added, however, that it is within the power of the association to punish participants in the pools by withdrawing their names from amateur rolls.

The one day meeting, held in New York's Vanderbilt Hotel, was attended by delegates representing nearly 2,000 member clubs. During the proceedings, Bill Campbell, Huntington, W. Va., captain of the 1955 U. S. Walker Cup team was presented the Jones Award for sportsmanship.

Name Curtis Cup Team

The Curtis Cup team that will meet the British in Sandwich, Eng., June 8-9 was announced. Mrs. Harrison Flippin is the non-playing captain. The team will include Pat Lesser, Jane Nelson, Mary Ann Downey, Mrs. Scott Probasco, Polly Riley, Barbara Romack and Wiffy Smith. Alternates are Mrs. Philip Cudone, Jacqueline Yales and Ann Quast.

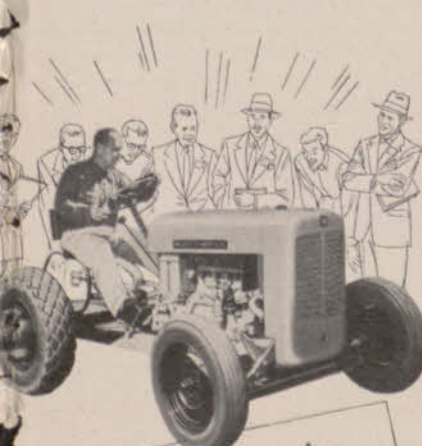
Committee chairmen named by Tufts are: Rules of Golf, John M. Winters, Tulsa, Okla.; Championship, John D. Ames, Chicago; Amateur Status, John W. Fischer, Cincinnati; Membership, Gordon E. Kummer, Milwaukee, Wis.; Handicap, William O. Blaney, Boston; Green Section, T. R. Garlington, Atlanta.

Women's, Mrs. Harrison Flippin; Sectional Affairs, F. Warren Munro, Portland, Ore.; Public Links, Edward E. Lowery, San Francisco; Junior Championship, J. Frederic Byers, Jr., Pittsburgh; Girls' Junior, Mr. John Pennington, Buffalo; Senior Championship, John G. Clock, Long Beach,

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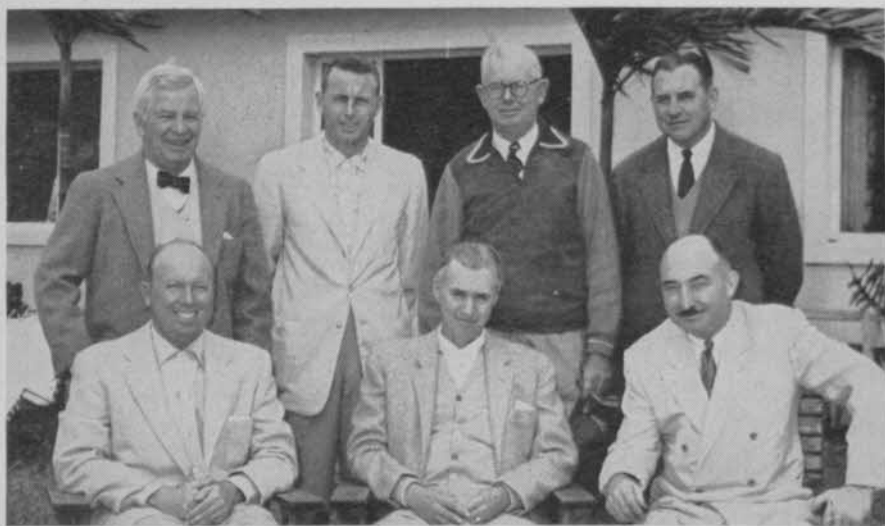
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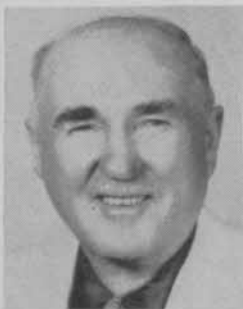
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Lawrence Elected to Head Golf Course Architects



Robert F. Lawrence (1), Miami Beach, Fla., is the new pres. of the American Society of GC Architects which recently held its annual meeting at the Emerald Beach Hotel, Nassau, the Bahamas. 1956 directors of the organization are pictured above. They are: Top Row (l to r): William H. Diddel, Ormond Beach, Fla.; David W. Gordon, William H. Gordon, Doylestown, Pa.; and Robert Bruce Harris, Chicago. Front Row: William F. Bell, Pasadena, Calif.; James G. Harrison, Turtle Creek, Pa.; and Howard Watson, Quebec, Can. Bell is also vp and Watson, secy-treas. of the Society. Ralph Plummer, Dallas, Tex., was elected to membership in the ASGCA during the Bahamas convention.

Calif.; Museum, Thomas H. Choate, New York; Bob Jones Award, Totten P. Hefflinger, Minneapolis; and Finance, Byers.

John W. Fischer, amateur status chairman, said that companies have been granted permission to pay expenses of teams competing in major business and industrial tournaments. The ruling was made in deference to the growing field of industrial golf.

Minnesota GCSA Meeting

Minnesota's Golf Course Supts. Assn. will hold its 28th annual meeting at the Curtis Hotel, Minneapolis, Feb. 29-Mar. 2. David M. Lilly, pres., Toro Co., will be MC and conference sessions will be directed by Michael Weinhandl, Ernest Lindgren, Robert Feser and Henry Bohks.

USE BUYER'S SERVICE—PAGE 93

Golf Car Makers Organize Trade Association

Golf car manufacturers have organized a new trade association known as "Electric Car Manufacturers Assn."

The organization was established at a recent exploratory meeting of manufacturers held at Camel Back Inn., Phoenix, Ariz.

An interim set of officers was named at the Phoenix meeting. They include W. C. Coleman, Mid Empire Corp., Milwaukee; Wis., President; J. H. Carrier, Cushman Motor Works, Inc., Lincoln, Neb., V. P.; N. A. Saigh, Electric Carrier Corp., San Antonio, Tex., V. P.; M. J. Zurowski, Mid Empire Corp., Sec.; and A. C. Buehler, Jr., Victor Adding Machine Co., Electric-Car Division, Chicago, Ill., Treas.

The next business meeting of the new association will be held early in 1956 at a mid-west location.

Grau Answers Turfgrass Questions

From many courses Dr. Fred V. Grau gets and answers the problems handled in this monthly department of GOLFDOM. Superintendents and club officials can avail themselves of this service without charge or obligation. Address your question to Grau Queries, GOLFDOM, 407 S. Dearborn, Chicago 5, Ill.

MANY books which you have read start out thus: *Principles of Chemistry, Principles of Biology, Principles of Soil Physics* and so on. Even before you open the book you know you will be reading basic laws of a subject, enabling you to build a firm foundation with which to understand more detailed information which will come later.

Many supts., architects and builders are deeply concerned with the principles of putting green construction. A suitable foundation is needed for successful future maintenance. What are the basic laws upon which architect and builder can draw so that, when they turn the finished green over to the supt., it will be the best that can be produced, the easiest to maintain and in harmony with nature? We need to consider principles underlying several natural or mechanical functions among which are:

1. Principles of Drainage, wherein we are concerned with three essential phases:

a. Subsurface drainage, with a stone base, porous subsoil or tile in various patterns;

b. Internal drainage, accomplished by providing porous, well-aerated soil allowing excess water to move rapidly through it, but enabling the soil to retain sufficient moisture to grow grass for maximum periods between irrigations;

c. Surface drainage, *without pockets*, to quickly remove excess water from the playing surface, allowing a high degree of control over the quantity of water which enters the soil.

More than anything else, the architect and builder need to know:

2. Principles of Plant Growth. A fundamental principle is that **grass roots absorb oxygen**. Without adequate supplies of oxygen in the soil, roots cannot absorb nutrients, neither can they use the available

water. Failing to observe this basic law in construction will result in a green that is less than satisfactory.

The above facts are associated with:

3. Principles of Soil Physics. For some unexplainable reason this phase of construction has received scant attention. "Rule of thumb" and "guesswork" describe most attempts at providing the most desirable mixture of available materials for creating the best green. Soils labs have scientists and equipment for evaluating porosity of mixtures of materials. More complete utilization of facts known about soil physics should ease the lot of those responsible for green maintenance and who will have to live with the problems that arise before maintenance begins.

Q — What's the best way to drain a green at the bottom. Some say tile, some, stone. Others say all of this is "bunk." (Tenn.)

A — The best way to accomplish sub-drainage is to provide a system that will remove excess water quickly. If the subsoil is gravel or sand that is well-drained you need spend no money for a drainage system — nature has provided it for you. If subsoil is heavy with a high percentage of clay, a drainage system is essential. The herringbone pattern with tile is expensive but highly effective. With ample local supplies of cheap crushed stone, a stone blanket would be cheaper and reasonably effective. In extreme cases a dry well (or several) filled with stone or gravel may be needed. Water can be pumped out when it is full. "The best way is the way that gets rid of water the quickest."

Q — What is likely to happen when you mix about 20 per cent of sand with a heavy clay soil to try to "lighten" it? (Tex.)

A — You probably will get a fair grade of concrete. Heavy clay soil requires "enor-

mous quantities" of sand to materially affect its porosity. There must be enough sand so that sand particles are continuous and completely surround the clay particles. Yet, it may take only 8 to 10 per cent. of a heavy clay soil to completely change the characteristics of a sand.

Q — When we speak of "sand" what do we mean? Isn't there a big difference in sands? (Ohio)

A — There is a very great difference among "sands." To understand sand consult a book on soils where official sizes of sand particles are designated. Musser's *Turf Management* discusses this subject thoroughly. A very fine sand (i.e. "blow sand") can be more difficult to handle than a clay soil. "Coarse sand" usually is specified in mixtures for putting green construction.

Percentages of sand to produce a "sandy loam" are well outlined and illustrated in textbooks on soils. Write to your Agricultural Experiment Station Soils dept. and ask for publications that apply to your problem of creating a desirable porous loamy mixture for putting green construction, using available local materials.

Q — We have three "saucer" greens which will not drain. Can you suggest any way to improve the situation? (Ind.)

A — You might try drilling holes 6 to 8-ft. deep with a post-hole auger and back-fill with fine gravel to provide drainage wells. This has worked very well in a number of cases. Frequent aerifying and topdressing with sandy material will aid drainage. By all means, reduce watering to a minimum, consistent with good grass growth. Hand watering is recommended "only as needed."

Q — Overseeding common bermuda with ryegrass on our athletic fields is not alto-

gether satisfactory in keeping green color. Would we do better to dye the bermuda green? (Ala.)

A — Common seeded bermuda is not a grass I would recommend because of its loose open structure and rapid loss of color. I would hesitate to advise use of dye on it until we have better dyes that last longer and do not turn a sickly yellow in the hot sun. Improved strains of bermuda which produce denser, finer turf and keep color longer might be the answer. Also, you might try overseeding with Kentucky 31. It's deeper-rooted and less slippery than ryegrass.

Q — Goosegrass in our Seaside bent greens is a recurring problem. Can you suggest any way to eliminate it? (Ill.)

A — Start sterilizing topdressing material at once. Thoroughly mix 13 lbs. of granular calcium cyanamide with each cu. yd. of mixed topdressing. (There are 21 bu. in each cu. yd.). Have topdressing moist but not wet. Pile it in bin and let stand for 2 to 3 months. Weed seeds will be killed. Unsterilized topdressing often is a cause of weed infestation.

Seaside bent is about the poorest creeping bent. I would recommend changing to a better grass. Arlington and Congressional mixed are good. Pennlu is rated even better. Goosegrass has difficulty getting a foothold in vigorous, aggressive grass.

Aerify only during the active growing season when grass is growing vigorously, so it can heal holes quickly. Vertical mowing every Monday morning, to nip off goosegrass leaves and stems and the runners of the bent, will help.

When you see goosegrass starting (probably late June or early July) try di-sodium methyl arsonate, according to manufacturer's instructions. Young plants will be easier to control than mature ones. Fertilize generously during spring and early summer. Dense, vigorous turf is good insurance against weeds. Keep insects and disease completely under control.

If goosegrass does return, don't waste time and ruin the putting surface by digging with knives. Chemicals and vertical mowing will maintain a smooth putting surface.

Q — We plan to fertilize and seed fairways this spring. How much fertilizer should we use and what type of seed do you recommend? (Mo.)

A — The best grass for fairways in your poor, gravelly soils is a good strain of bermudagrass which should be planted in

Club Manufacturers Report 3,941,206 Sold Last Year

Henry P. Cowen, pres., The National Association of Golf Club Manufacturers, advises that the organization's members reported 3,941,206 clubs sold from Nov. 1, 1954 to Oct. 31, 1955. Of the total, 2,746,591 were irons and 1,194,615 were woods.

The 1954-55 total surpassed 1953-54 figures by three per cent. Totals for the latter 12-month period were 3,826,580 clubs sold. These included 2,658,262 irons and 1,168,318 woods.