

Aulbach Sifts Suggestions for PGA Study Course

GOLF IN THE near future will produce more different types of professionals than we have ever known before. They will come from all walks of life; some from the field of caddies, from department stores, ex-service men, college athletes, top grade amateur players and just punk kids seeking easy money. Some however, will be smart and aggressive enough to successfully establish permanent places for themselves in professional golf. This all leads to one thing; that the present crop of pros must get on their toes, shake the dust off themselves and begin thinking where they are going to stand after the sudden invasion of "overnight" professionals into their ranks. This will present a serious problem to the home pros of today, a problem that calls for positive and practical thinking plus quick action to avoid a breakdown in the present system of professional business.

The PGA is trying to help its members meet this challenge of the golden golf era of tomorrow by offering them a pro-business course so they can be of more value to their clubs and offer better service to their members. The old established pro who pioneered golf through world wars, depressions and prosperity did quite a satisfactory job. But his work is not finished, he must continue to promote golf with new life, new ideas and new ideals to match the march of time. He must now apply proven ways and means to do a better job than has even been done before. Those who fail to heed the warning will be left behind in the survival-of-the-fittest competition with hundreds of new young ambitious men, many of whom will have what it takes to reach their goal.

For years pros have been asking for a sales training course. Not a complete academic course but enough extra knowledge to assist them in their daily problems. Nearly everyone will agree that such a program would be a grand thing for the game, the pros and the members they serve. The PGA has now gone into action to establish this program in 1946. George Aulbach, Texas PGA president, was named to direct the successful accomplishment of this activity. It's a whale of a job for any pro to tackle but Aulbach accepted the responsibility with the feeling that he could depend upon the cooperation of the golf industry and all PGA members.

Three Major Problems

Immediately three major problems present themselves before any active work can begin on the program. They are: What is the best method of presenting this program, what subjects will be studied, and who will be the instructors. Definite decisions must be reached on these important factors before further thought can be given to the working details of the program. Aulbach has asked for opinions and suggestions from each member of the PGA Executive Committee, from all sectional PGA officers, from golf manufacturers and from several national sales promotion executives.

The first return of ideas on this subject shows a wide difference of opinion as to exactly how the program should be presented. Johnny Bass, Clifton Park pro in Baltimore, is in favor of the program because he says the exchange of ideas from other pros will help increase his income. He favors a yearly pro-business hand-book and a monthly business letter to each pro. An outstanding national sales executive and specialist in sales training courses said, "The PGA needs a good business correspondence course. Through such a course you can reach the greatest number of members in the most convenient and the most economical way. Statistics prove that at least one third more people will accept some form of higher education if you bring it to their homes. The small town pro, the new pro and the assistant pro, are the men who probably need this training the most. These men do not have the time, money or desire to attend a university short course in some distant city. However, many would accept the program if delivered to them regularly at frequent intervals. Most all national organizations successfully instruct their salesmen by this method. An expensive university course would only attract the better business pros who need it the least."

Many PGA members have said that any educational program would be a wasted effort because the average professional is not going to let anyone tell him how to operate his business. George Hall, Cornell University pro, disagrees with this opinion. He says we now have enough smart pros who will influence others to accept and support this program. He admits, though, that no one can help those who will not help themselves. In this fast

whirl of ever-changing economic conditions, no one stands still. We all go forward or backward. Hall says those who take this course will be the top progressive pros of tomorrow.

Ed Rankin of the L. A. Young Co. recommends the establishment of many sectional clinics under the direct supervision of college faculties. He further suggests the PGA give serious consideration to clinics similar to those held by baseball teams in the south during the winter. He points out that the new PGA National Golf Club in Florida would be an ideal location for such a venture.

George S. May suggests that the course be presented in pamphlet form to the pros in the rural districts and through class instruction in the larger cities. From his wide experience in club management surveys and close association with professionals he recommends the following five point study program.

1. Proper presentation of merchandise.
2. Need of careful observance of business principles as applicable to general selling and extension of credit.
3. A genuine spirit of helpfulness to the prospective customer, the club member.
4. A price range competitive with general trade.
5. A business-like appearance in dress, attitude and conversation.

PGA Vice President Bill Wotherspoon of Tulsa says display, sales and pro teaching should be the three major subjects for discussion. He also believes the fundamentals of greenkeeping should be on the program. Another member of the PGA Executive Committee, C. V. Anderson of Waterloo, Ia., feels that the course should be held at some large university and should include both greenkeeping and teaching. George Corcoran, Carolina PGA president, is in favor of the course including a national standardization of pro prices covering lessons, repair work, club cleaning and a national blue book on club trade-in prices.

Another top sales executive says the PGA should create a Traveling University, a group of instructors to hold business courses in every PGA section every year. "In any event," he said "You must bring the program to them because the average man is not going to the inconvenience of getting higher education that holds no guarantee of a higher income."

Joe Dahlman of Tulsa has presented the Educational Committee with an excellent course in shop management, covering the subject in a most complete and comprehensive manner. For years Dahlman has been an enthusiastic advocate of a pro sales training course and has offered his personal assistance in this important work. Willie Ogg, a dean of business pros says, "If all members have the same op-

portunity of sharing in the results of this educational work and the program is carried to a complete finish, it will be the best step forward in 20 years for the business development of the home pro. Les Freeburg of Wilson's Kansas City Division has offered some of the soundest advice and material for a program ever received on the type of business training the most needed by the average professional. He suggests the course be conducted through the mailing of a series of bulletins, pamphlets and letters to all PGA members followed by a general business meeting in some large city.

Several small club pros have advanced the theory that the course should be mailed monthly to every PGA member with a 90 day examination paper and with a reward for all who pass the tests. They think all members should have the advantage of this course and the opportunity of checking the material before they decide whether they care to follow it. They agree that a large percentage of this material would be wasted through this method, but they also believe more members would receive the benefits of the course through this method of reaching the membership. They argue, that many pros who think they are not interested now, may read a line or two that would appeal to them and become regular followers of the course each month.

Stanley Davies, Omaha (Neb.) Field Club pro, and J. Victor East of Wilson's advisory staff, have made specific suggestions based on their own study in educating themselves as outstanding pro businessmen. Both brought out the point that the proposed educational plan would be of great value in showing the younger pro what mistakes can easily be made in pro business. Protected by warnings and knowledge against the common errors the younger man could devote his time and energy to constructive phases of his work.

Attention is being given by Aulbach to the excellent educational programs conducted by greenkeepers' organizations in association with state agricultural college authorities. A highly successful pro business short course was run at the University of Minnesota by the Minnesota PGA and the university athletic department some years ago. Although the sessions were rated by pros enrolled as the most practical and profitable meetings they'd ever attended there was no follow-up on the program.

The pros' Mondays off in the season generally are devoted to shopping or sectional events. The playing events include pro-amateur, pro-senior, pro-women's, pro-juniors and other affairs that have great public relations value, hence they cannot and should not be removed from the pro calendar for class sessions. Whether the

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Revise Events Program to Increase Members' Play

WHAT are you doing about planning your club competitive schedule for this season? It's been repeatedly proved there's nothing that increases golf play at a club like a lively competitive calendar will do the job.

The regular tournaments and sweepstakes often get so their appeal becomes limited to a comparatively small group of members. In the case of the class championships the players who are eliminated early sometimes lose interest in coming out to the club.

Many club competitive calendars are practically the same year after year, with only the dates changed. Now, with enlarged memberships a drastic revision of events for men, women and children would be good salesmanship at a lot of clubs. Club officials, pros and managers can work together in coordinating the golf program so it'll fit in with the house entertainment program and house facilities for handling meal and bar business attracted by an attractive schedule of golf competitive events.

Prize requirements of a good and extensive golf competitive program often baffle committees that have tight financial restrictions. Women committees generally can teach men plenty about how to stretch money in buying attractive prizes.

Experience of most successful club tournament committees is that it's the inscription on the prize rather than the prize itself which makes it a treasure for the winner to display.

Especially in the case of a pro going onto a new job is a pepped-up club tournament schedule important. It shows all the members the pro is interested and busy in providing them with more golf entertainment and more opportunities to win events despite the uncertain character of their performances.

A compilation of events prepared by Jack Fulton, Jr., for GOLFDOM, is reprinted for the help it'll give every club planning introduction of novel events in its 1946 events schedule.

ONE-DAY EVENTS

Individual Play

(A)—*Medal play* (generally full handicap). On 18 holes; on odd numbered

holes; on even numbered holes; on even holes first-9, odd holes second-9; on 3-par holes; on 4-par holes.

(B)—*Match play vs. par* ($\frac{3}{4}$ handicap or full handicap). On full 18-holes; on odd holes; on even holes; on even holes first-9, odd holes second-9, or vice versa; on 3-par holes, on 4-par holes.

(C)—*Blind bogey event*. Players estimate their own net scores before leaving first tee. Player closest to "blind" bogey figures selected by committee (generally between 70 and 80) is winner.

(D)—*Kickers tournament*. Contestants may re-play one shot on each hole, putts excepted. A variation is the *Alibi event*, in which the player may replay as many shots as the size of his handicap. Replays permitted anywhere during round.

(E)—*One-club event*. Players carry only one club (a midiron, mashie, or the like) and must use it for all shots on the round.

(F)—*Tombstone event* (sometimes known as a flag event). Each player is given a small marker, such as a flag, and continues to play until he has taken as many strokes as par of course, plus his handicap. The player leaves his marker wherever his ball lies after this last stroke and contestant going the farthest around course is winner.

(G)—*Fewest putts*. On this event shots from outside the clipped surface of the putting greens are not considered putts.

(H)—*Most 3's, 4's or 5's on the round*.

(I)—*Sweepstakes*. Players entering event sign up for one golf ball each. Player with best net score wins half the balls, runner-up wins one-third the balls, and third place wins one-sixth the balls.

(J)—*Point Tourney*. Players awarded 3 points for each birdie scored, 2 points for each par, 1 point for each hole played in one stroke over par. Player under full handicap; winner is player with most points at end of round.

(K)—*Miniature Tourney*. Contestants, under $\frac{3}{4}$ handicap, play nine holes in morning to qualify. Are then divided into flights of 8 players each; three match-play rounds of nine holes each determine winner and runner-up of each flight.

(L)—*Obstacle Tourney*. Played with or without handicap. Each hole presents some

obstacle, (such as a stake to one side of fairway that must be played around, or a barrel just short of the green that must be played through).

(M)—*Mystery event*. Send players out without telling them what type of contest they are entering, other than informing them whether it is medal or match play. After all scores are in, release news of what the event was, and figure up the winner.

(N)—*Par Tourney*. Played under full handicap. On 10 holes of the course award 5 points for each par or better. On three other holes award 10 points for par or better. On three other holes there is a 5-point penalty for players who do not shoot par or better. On the remaining two holes make the penalty 10 points. Winner is player with most points.

(O)—*Replay Tourney*. Any ordinary type of event, with this added feature: each player has privilege of making opponent play over any four shots during round.

(P) — *Cross-Country Tournament*. Eleven holes are played, no hole in the usual route of playing the course. Tournament directions supplied each player read along these lines:

TOURNAMENT DIRECTIONS

One	From 1st Tee to 3rd Green
Two	From 2nd Tee to 10th Green
Three	From 11th Tee to 16th Green
Four	From 3rd Tee to 12th Green
Five	From 13th Tee to 4th Green
etc.	

(Q) — *Never-Was-Er, or Consolation*. May be any type of event committee selects, but open only to those players who have not won an event during the season, or ever in their golf career.

(R)—*Get-Acquainted Tourney*. 18-hole medal play with handicaps. Each entrant must play with a partner with whom he has never before been teamed.

(S) — *Syndicate Tourney*. Full handicap. After scores are posted, low net man of entire field on each hole wins a syndicate. Ties carried forward to next win hole and cumulate. Suggested entry: 90c (5c per hole.)

(T)—*Throw Out Tourney*. Medal play, handicap. Each player may throw out his three worst holes; i. e., only 15 holes counted.

(U)—*36-Hole Selected Score*. 36 holes medal play. From two cards, player selects best score each hole, then applies handicap.

Twosome Play

Many of the events listed above, under *Individual Play*, will apply equally well to twosomes and therefore will not be listed

here. In addition there are the following special events for twosomes:

(A) — *Choice score*. On 18 holes, odd numbered holes, even numbered holes, or blind holes (generally half the holes of the course, but unknown to the players). In a twosome best-ball contest the score of the player taking the fewer shots, handicap considered, on a given hole, is used.

(B)—More interesting twosome events are where one ball is used, the two players stroking alternately. In such one-ball events all of the contests listed under *Individual Play* may be used. The pairings for twosome play may be limited by special requirements. Among the more common combinations are father and son, pro and amateur, husband and wife, member and caddie. This last event is particularly recommended to clubs interested in fostering the good-will of their caddies. A spirit of friendliness and co-operation cannot be more easily secured.

(C)—*Average Score*. 18-holes, medal play. Partners average their scores on each hole. Half strokes count. Half combined handicap allowed.

(D) — *Script Tourney*. Furnish each player with \$10,000 of stage money. Each player has a partner; play in foursomes. Pair with the most script after play is over wins. Wins and losses settled whenever incurred as play proceeds. Awards are such matters as: low ball each hole, \$100; low aggregate each hole, \$200; birdies, \$300; eagles, \$500; first ball on green, \$200; first putt sunk, \$200; etc., as the ingenuity of the committee decides. Penalties include: ball in rough, \$100; ball in wrong fairway, \$200; ball hitting tree and rebounding into fairway being played, \$500; fanning, \$300; swearing, \$200; swearing at caddie, \$400, etc.

Foursome Play

(A) — Foursomes can compete, one against another, in a number of the events listed above for individual and twosome play.

(B)—*Monkey Foursome*. In this event each member of the foursome carries only a single club. One ball is played. Each member of the foursome, in rotation, plays the ball from wherever it happens to lie, and with whatever club he has chosen to carry with him on the round. Thus a player may be forced to putt with a mashie or drive with a putter. The four clubs generally carried are brassie, mid-iron, mashie and putter.

(C)—*Blind low-net foursome*. Contestants play 18 holes with whom they please. At conclusion of play, names are drawn from hat and grouped into foursomes; net

scores are added to determine winning foursome.

Larger Groups

(A)—*Team matches* of any number of players are always interesting competitions. These matches may be against teams from other clubs or may be one end of the locker-room against the other. Frequently the doctors, dentists, and lawyers in a club challenge the laymen to a team competition. Other combinations will readily suggest themselves.

Scoring is best done by the Nassau system—awarding 1 point for winner of first nine, 1 point for winner of second nine, and 1 point for winner whole round. Ties earn $\frac{1}{2}$ point for each player.

(B)—*Scorefest*. Teams formed by dividing locker-room into two or more sections. Losing team is the one that scores least points on following scoring system:

Net scores over 100.....	2 points
Net scores 90 to 100.....	5 points
Net scores 85 to 89.....	10 points
Net scores 80 to 84.....	15 points
Net scores 75 to 79.....	30 points
Net scores 70 to 74.....	50 points
Net scores under 70.....	75 points

Novelty Events

(A)—*Driving Contest*. Pick a flat, wide fairway; erect yardage flags every 25 yards from 125 yards to 300 yards. Each contestant gets 5 drives, the best three counting, but only shots in fairways are eligible. A variation: 3 drives only, with 10 per cent of distance deducted for shots off fairway.

(B)—*Target Contest*. Mark 4 circles around cup, largest 35 feet radius; next one 25 feet radius; next 15 feet radius; and smallest 5 feet radius. Establish 3 tees at 50, 75 and 100 yards distance from cup. Contestants play one shot from each tee, using any club. Scoring: Ball in 35 foot circle, 1 point; 25 foot circle, 2 points; 15 foot circle, 3 points; 5 foot circle, 5 points; hole-in-one, 25 points.

(C)—*Putting Tourney*. An 18-hole event on your practice putting green. Winner determined by total putts. In event of ties, all tying contestants play extra holes at "sudden death"; i. e., player is out on first extra hole he fails to have.

If club has no practice putting green, use the "clock" method on one of regular greens near clubhouse by marking off 9 "tees" around edges of green; each player putts from these 9 "tees" to cup.

(D)—*Approach and Putt Event*. Contestants play 3 balls each from 50, 75 and

100 yards, using any club they please, then putt out. Play to hole should be from different directions for each distance.

(E)—*Swatfest*. Entire field starts off first tee together. High man and all ties drop out each hole. Eventually there will be but one survivor. Be sure players mark balls before starting to simplify identification.

EVENTS REQUIRING SEVERAL DAYS OF PLAY

(A)—*Match play events*. Under this head fall such tournaments as the club championships, the "southpaw" (or left-handers) championship, the junior championship, the women's championship and the caddie championship. In addition many clubs hold what are known as *class tournaments*, wherein the playing members are divided into classes according to handicap, and regular match play events are then played within each class.

(B)—*Electric (or Ringer) Competition*. Contestants post next ensuing 18-hole score. Whenever a player in subsequent rounds betters his score on any hole, the old score is erased and new score substituted. This procedure kept up throughout season. Actual scores are posted; at end of season, each player's final handicap is deducted where strokes fall on card. Player with lowest net ringer score is winner.

(C)—*Round robin*. Each player plays every other player once at match play. The contestant with the highest percentage of wins is the victor.

(D)—*Ladder event*. Contestants listed on a score sheet, one under the other, by lot or according to handicap. Any contestant is entitled to challenge any one of the three listed above him to a match. If he wins, he and the man he has beaten exchange places. If he loses, he cannot rechallenge until he has beaten a player of lower status. Thus players, as they play their matches, are constantly shifting up and down as though on rungs of a ladder, whence name for event. At end of season, player whose name is at top of "ladder" is the winner.

(E)—*Two-man team event*. Best 16 players in club are paired so that their total handicap is approximately equal. This is done by tournament committee, generally near end of season. These teams are then arranged as for a regular match play event and points are scored as in a Scotch foursome (one point for low ball, one point for total strokes on each hole). Winners are the two-man team champions of the club.

New Era in Greenkeeping Forecast at GSA Meeting

By JOE GRAFFIS

Marshall E. Farnham, supt. of the Philadelphia CC's two 18-hole courses, was elected to head the Greenkeeping Supts. Assn. at the organization's 17th annual turf conference and exhibition, held at Hotel Carter, Cleveland, Jan. 29-Feb. 1. More than 500 greenkeepers, green chairmen and manufacturers from most sections of the country attended the convention which was featured by an intensely practical program of addresses.

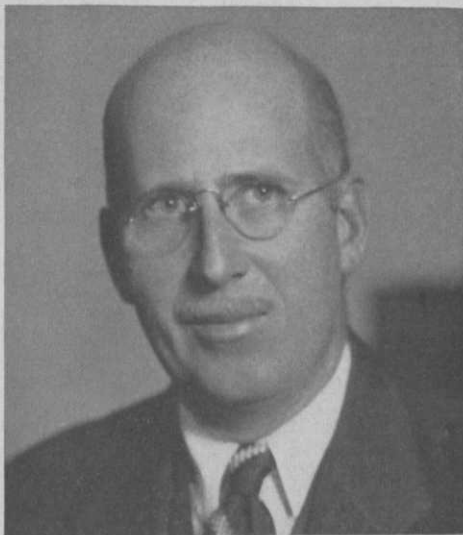
In spite of the handicaps under which manufacturers are trying to meet the huge postwar demand for golf course equipment and supplies, there were 32 exhibits at the show.

Farnham's administration will include John Darrah, Beverly CC, Chicago, as VP; re-elected executive sec. and treas., A. L. Brandon, St. Charles, Ill.; as new directors, Edward J. Casey of Baltusrol CC, Springfield, N. J., Stan Graves of Indianapolis (Ind.) municipal courses, and W. Bruce Matthews of Green Ridge CC, Grand Rapids, Mich.; and as hold-over directors, Chet Mendelhall, of Mission Hills CC, Kansas City, Mo.; J. L. Haines of Denver (Col.) CC and Lawrence Huber of Brookside CC, Columbus, O.

Retiring from the executive board were Pres. Harold Stodola and directors Wm. H. Johnson and T. T. Taylor.

Indication of considerable changes in golf course maintenance were numerous in the convention papers. Extensive mechanization of course operations naturally were headlined as imminent. The paper of T. T. Taylor was devoted entirely to this subject but in many more of the addresses reference was made to substitution of mechanical for manual methods in raising the standards of course maintenance without an accompanying increase in costs.

Along with the accent on mechanics there was emphasis on chemistry's increasing importance in course maintenance, especially in weed and pest control. Papers by Dr. Fred Grau on "New Horizons in Turf" and "The Turf Factor in Weed Control"—and others by Joe Ryan on "Maintenance and Improvement of Existing Turf"; by Dr. Harry L. Keil on "Preview of New Materials for Control of Turf Diseases"; by Dr. George Decker on "Control of Turf Depredating Rodents and Insects"; by Horace Purdy on "The Arsenicals for Curbing Clover and Weeds"; by Dr. Frank S. Filmer on "Sabadilla and DDT Dusts"; by Dr. Paul C. Marth on



MARSHALL E. FARNHAM
Newly elected GSA president.

"New Developments in Weed Control", and by Dr. F. F. Davis on "Two Years' Trial with 2, 4-D"—all pointed to the expanding role for chemicals in course maintenance work.

Other complex scientific phases of the greenkeepers' work were handled by Dr. H. L. Lantz in speaking on "The Prospects for Improved Strains of Turf Grasses." From the successful greenkeepers' viewpoint these highly technical points were applied in such papers as that of Frank Dinelli on "Topdressing and Mat Formation on Putting Greens," and the talk of Harvey Bicknell on "Trees and Shrubs."

The GSA convention papers made it perfectly plain that the present and future requirements in greenkeeping called for a breadth of book, laboratory and applied science demanding an educational program having no counterpart in any other field of sport. Although the greenkeepers in their sectional and national meetings and their close tie-ups with state agricultural colleges have made amazing progress in educating themselves to cope with the problems of improved maintenance standards they are by no means content.

There was strong emphasis on the edu-
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HOW TO IMPROVE POSTWAR TURF MAINTENANCE

By O. J. NOER

This is the last of three articles dealing with postwar turf maintenance. One on greens appeared in October, 1945, issue and another on tees in January, 1946, issue of *Golfdom*.

FAIRWAYS have become the chief concern of golf clubs everywhere. Even before the war their improvement was a live topic. There has been further deterioration of turf since Pearl Harbor and the weed and clover population has increased because of inevitable wartime neglect.

Responsible club officials and greenkeepers are groping for a quick and sure method of improvement. The acreage requiring treatments such as seeding, liming or fertilization is large, so the outlay of money may be considerable. Any plan of procedure should be scrutinized from every angle. It is important to do the job well, and have each step follow in an orderly sequence. Otherwise failure may result.

The fairways on an 18 hole golf course represent an area of 40 to 60 acres. For practical purposes, there is an acre for each 100 yards of fairway length when the average width is 50 yards. The area in front of tees, up to 100 or 150 yards is generally considered as rough and treated as such; the short holes may or may not have an approach of well-kept turf.

There is an easy and quick way to compute the fairway acreage for determining the amount of seed, lime, or fertilizer needed. Simply take the total yardage of the course and deduct the yardage of the roughs in front of the tees, and the yardage of the short holes. This figure, divided by 100 for fairways of 50 yards average width, or by 80 for fairways which are 60 yards wide, is a very close approximation of the area to be treated.

Agitation for fairway watering is general and many irrigation systems will be installed. Golfers think it is the sole answer to good fairways. They clamor for water to make walking less arduous, and because they like to see green fairways all season. Watering actually complicates rather than simplifies fairway maintenance, especially in the bad crabgrass region from Philadelphia and Washington across to Cincinnati, Louisville, St. Louis,

and Kansas City. Heavy watering and close cutting without adequate fertilization has ruined the turf on many fairways. The blue grass and fescue disappear and their place is taken by poa annua, knotweed, chickweed, and clover. Turf is good in spring and fall when poa annua is at its best, but when it disappears in early summer, clover and knotweed, or crab grass, become so bad that golfers complain bitterly.

Fairway watering will not become general and accepted practice until the relationship between water usage and feeding is clearly understood by club officials and playing members. It is best to forget about watering unless the club is prepared and able to carry the extra financial burden of more generous fertilization and extra mowing, in addition to the cost of water and its application.

Make Grass Survey

A careful survey should be made before watering starts to see that fairways contain suitable grasses. If fescue predominates, it is sure to disappear within a year or two. Then poa annua, clover and weeds will overrun the fairways even though fertilization is adequate. Such fairways should be reseeded to introduce better grasses before watering starts. A combination of Kentucky blue grass and colonial bent seems best, although some advocate using bent seed only. When the mixture is used it seldom need contain more than 5 to 15 percent of bent grass seed.

The trend seems to be towards more bent grass in watered fairways. The use of bent grass is natural and logical, because it increases of its own accord on watered courses, and can not be eliminated or kept out of the turf. The colonial types are preferred, yet creeping bents seem to come, but nobody knows how. A mixed turf of blue grass and bent would seem ideal, but it is hard to grow them together. Close cutting is imperative when the amount of creeping bent is large. Then blue grass suffers and is apt to fare badly

from leaf spot in cool wet seasons. Chinch bugs have been the biggest drawback to the use of bent grasses. Sabadilla and DDT dusts promise to solve this menace.

Sidehill Slopes A Grass Problem

The sidehill slopes on some of the hilly watered courses in St. Louis and elsewhere seem to resist all attempts to establish playable turf. The surface soil is a light colored silt loam, and the subsoil is a silty clay in texture. The plant population is largely clover, knotweed, crab grass in the summer, and poa annua in the cooler parts of the growing season. Reseeding does not seem to help. The new grass germinates and makes a good start in the fall, but is gone by the next summer. The trouble may be due to damage caused by excessive seepage in the early spring. Should this assumption be correct, tile drainage would solve the problem. The lines of tile should run crosswise of the slope and the trenches should be backfilled with gravel, or other coarse material to trap the water and conduct it down to the tile. The best thing to do is to make a test on one hillside and install enough lines to eliminate seepage in the spring and do the other fairways after the initial experimental installation proves its worth. Aside from any effect on turf, the tile will permit earlier play in the spring by two to three weeks. Growth of turf in the spring will start earlier because surplus water keeps the soil cold.

Weed Control Incomplete Answer

Clubs must realize that weed control with chemicals is only a part of the problem. Those who do nothing else than use chemical herbicides will end with more weeds than before. The ultimate aim and the important thing is to grow grass. This can and has been done by fertilization alone. The weed control chemicals speed the process. They kill the weeds so the fertilizer is not wasted on them, but expends all its energy on the turf grasses.

Chemical weed control is going to have a big play. The enthusiasm is keener now than ever before, due principally to the new hormone 2,4-D. Some of the results obtained with it have been spectacular. The kill of dandelion, plantain, and buckhorn has been especially good. It has no effect on crabgrass or poa annua, and one application checks but does not eliminate clover and chickweed. There have been several cases of bad damage to bent grasses, especially the creeping type. Extensive use on fairways containing a large proportion of bent grass, or on greens, should await additional information based on further trials. But the spot treatment of broadleaved weeds in localized areas of bent grass on fairways or in neglected greens with a small power sprayer is en-

tirely feasible. 2,4-D is another useful tool, but is not likely to eliminate the arsenicals completely. They will kill crabgrass and the existing crop of poa annua, as well as clover, plantain, buckhorn, etc. The arsenicals have a distinct place in the renovation of overwatered and underfertilized fairways which consist of clover, poa annua and knotweed. Besides their effect on weeds, the arsenicals help control worm casts and white grubs.

On fairways where broadleaved weeds predominate, and there is some permanent grass which is more or less uniformly distributed, a treatment with 2,4-D followed by adequate fertilization will produce good turf quickly. Programs can begin during spring in the sections where crabgrass is not bad. Liberal fertilization should precede or accompany the 2,4-D treatments to encourage the grass to spread and form turf. Farther south, where crabgrass is a serious menace, it would seem best to use the herbicide in late summer or early fall and fertilize liberally in addition.

On fairways where there is much clover and poa annua with little or no permanent grass, several treatments with sodium arsenite, or arsenic acid, accompanied by fertilization, and followed by reseeding, is the more logical procedure. The arsenical treatments should start during the summer so reseeding can be done in late summer or early fall. From three to four treatments spaced two to three weeks apart, are needed. The fairways can be reseeded immediately before the last arsenical treatment because neither sodium arsenite or arsenic acid prevent the germination of grass seed. A good seed bed can be prepared with a fairway disc spiker, and a Thompson or Cyclone seeder can be used for seeding. A light rolling after seeding is advisable to press the seed into the soil.

When using any chemical herbicide on weeds, uniform coverage is the important thing. That applies to the dry as well as the wet method. Not over 100 gallons of water is needed for spraying and good kill has been obtained with half that quantity even with 2,4-D.

Weedy roughs are a constant menace and the main source of broad leaf weed infestation of fairways. The elimination of weeds in the rough should accompany or precede the treatment of fairways.

Watch Soil Acidity

It is now conceded by everybody that soils can become too acid even for acid tolerant grasses, such as bent and fescue. Soils which are moderate to strongly acid definitely need lime, irrespective of the grass species. With borderline soils, no harm will result from delay until the actual need is established by test strips

(Continued on Page 59)

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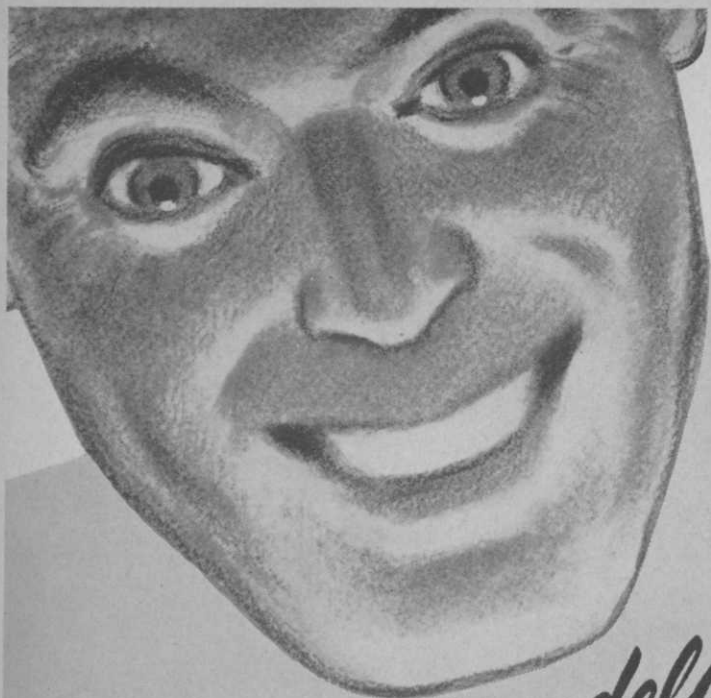
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