

The Southeastern Turf Foundation advisory committee composed of Crawford Rainwater, Pensacola, Florida; T. M. Baumgardner, Sea Island, Georgia; M. K. Jeffords, Jr., Orangeburg, South Carolina; Howard (Pop) Beckett, Capitol City Country Club, Atlanta, Georgia; Dr. Fred V. Grau, O. J. Noer and Dr. Glenn W. Burton submitted a budget and future plans for the research center which was very favorably received by all in attendance. Since the continuation of the program now underway at Tifton depends entirely upon the contributions of clubs in the Southeast under the direct supervision of the U. S. Golf Association and in the Southern Golf Association the proposed budget and future plans, thus, becomes the life-line of "Better Turf" for the Southeast.

The budget proposed for 1951-1952 will require raising \$8,300, which everybody present thought possible. Mr. B. R. Robinson will be on a full-time basis and will be available for consultation. Clubs requesting his services for consultation are to pay his expenses plus \$25.00 per day.

It was agreed that the Southern Golf Association continue as the promoting and collecting agency for the project, with Mr. Crawford Rainwater as the responsible agent. All contributions to be made payable to the Southern Turf Foundation, the name of the receiving organization for the Southern Golf Association. A bank balance of \$3,594.87 was reported as of September 5, 1950. This included \$1,000 from the Southern Golf Association, and gifts of like amounts from Augusta National and Capital City Country Club. On the following day Mr. Charles Danner presented the Foundation with a check for \$200.00 from the Southern Turf Association in Tennessee. In making a verbal report to the group at that time, Mr. M. K. Jeffords, Jr. urged the support of everybody, and announced the decision to issue an informative bulletin on turf based upon findings from the work at Tifton. It will be published quarterly at the start.

## ELEMENTS THAT MAKE

(Continued from page 62)

greenkeeping superintendent and his men so goes your golf course. I will take men first and try to give a general idea what I expect of them. As much as possible, men doing golf course work should be taught to do as many of the types of work necessary that they can pick up and do efficiently. It is wonderful to have men who can cover up and fill in on jobs when someone wasn't able to turn up for a day or two. A good idea is to train your men in the spring and try to develop initiative in them so that they will go to and through their work in a routine manner and with confidence. Many a man has unjustly been accused

Created to  
fit the needs  
of every  
green or  
fairway!



Now goes 1/3 further. Supplies  
all the food elements needed  
by any grass in any soil!

Soils may vary from one green or fairway to another. But even half-starved soils can be brought up to par with Vigoro. For Vigoro supplies in ample amounts, all the vital food elements any grass must get from any soil — to grow and thrive.

Order Vigoro today — feed it regularly for rich, thick, play-attracting turf.

\*VIGORO is the trade-mark for  
Swift & Company's complete,  
balanced plant food.

SWIFT & COMPANY  
Plant Food Division  
U. S. Yards  
Chicago 9, Illinois



when all the trouble lay in poor planning and poor judgment in giving men instructions to carry out. A man very seldom says he does not understand and will try to bluff his way through a job. This will result in some mess as a rule that will require more time to straighten up. So I say a good sound system of upkeep which is understood by the men is essential.

#### The Superintendent's Job

The superintendent responsible for the management of the course is the most important man on your roster of help as far as your golf course is concerned. His job is thankless. When things are good and going smooth he is praised to the sky, but let something go wrong and every one is on him like a ton of bricks. One of my chief complaints as a greenkeeper and superintendent—and you will find I am not alone in voicing this complaint—is the fact that there is often too little cooperation between greenkeeper and committee. I think that a greenkeeper should know all about his club and how it stands. There is no better way of keeping him posted than to invite him in to your meetings and giving him a first-class view of your financial position, and letting him know what is expected of him. Your letting him know what is expected of him is just as important as him letting his men know what is expected of them.

The USGA Green Section, GOLFDOM and a number of universities are doing a grand job of keeping a greenkeeper posted on new developments in upkeep of grasses. Club officials can help the man in charge of their course by seeing that he gets his subscription to GOLFDOM, paying his expenses to the nearest turf short course and to the national convention. This would be money well spent.

#### Pro-Greenkeeper Co-operation

There are jobs where a man acts in the capacity of a pro and greenkeeper. My version of this is that a pro to be a pro-greenkeeper today has to have an able specialist in turf work with him, a foreman who is a greenkeeper in his own right. Golf is in a terrific boom and in order to do an efficient job of running a good shop, giving lessons and keeping members' equipment stored and in good shape, plus overseeing tournaments, caddies and starters, I think a pro has his hands full. So I would say that a pro's help to a greenkeeper should be in a suggestive rather than advisory capacity. I would like to see more greenkeepers trained if it were possible. There are too few taking it up.

There are more and more things that can be talked about concerning the perfect course but I think I have covered what I think are essential.

**Cut**  
**WATERING**  
**COSTS**

with

**THOMPSON**  
**ROTORS**

**FOUR, FIXED**  
**SPRINKLER HEADS**  
**COVER AN ACRE.**



The unmatched performance of Rotors is the Greenkeeper's assurance of even spray coverage and uniform texture of fairway turf. Layouts furnished for projected installations.

**THOMPSON MFG. CO.**  
SINCE 1907  
2252 E. 7th STREET • LOS ANGELES, CALIF.

## EXPERT REPORTS

(Continued from page 49)

was the plan. All was to be completed and ready for play by 1951. Olin Dutra has been engaged as professional. Dutra now has an enclosed driving range in the city. The entrance to his range is striking, being planted with an abundance of colorful flowers.

After returning from Mexico to Texas, the stops included courses at San Antonio, Dallas and Fort Worth.

At San Antonio Country Club, John Scalzo is in charge of the course. He had his training under Loeffler at Oakmont, Pittsburgh, but gave up golf course work when he moved to Texas. When the golf folks in San Antonio learned of his qualifications in greenkeeping it was not long before he was back into the turf game. The Country Club course would catch the eye of any golfer, both because of its layout and the excellent condition of the turf.

The trip to Dallas and Fort Worth was especially to see the transition areas where turf on greens has been changed from bermuda to bent in recent years. At Lakewood Country Club, Dallas, R. L. Bowman is using tar paper twelve inches wide, buried around the greens to keep the bermuda from getting into the bent. The greens were of good color in February, while the bermuda fairways were off color due to the freezing weather. The putting surface was good, but it was evident that it takes real management to keep the bent turf good when the temperatures reach those Texas highs.

At River Crest CC, Fort Worth, an ice storm in late January had hurt a number of the trees on the course. The course itself was in top playing condition. Greens are interestingly constructed and the close mowing followed there gave a true putting surface.

### Unity of Purpose in Texas

Here again Goldthwaite's Texas Toro was in evidence. Frank Goldthwaite and his associates are anxious to find out every turf maintenance practice that is being used by other sections. They want the facts to pass on to the turf men they are serving in this area. One was impressed by the unity of purpose in that section—that if better turf for the golfers was possible, it would be given to them.

Moving on West from Fort Worth we visited Odessa. Here Shorty Hornbuckle has greens mowed at 3/16 of an inch and a perfect putting surface. There was not much color in the turf; the impression being that the Texas wind blew it out. Hornbuckle was looking for a new G-L Aerifier and was sure when he used it,

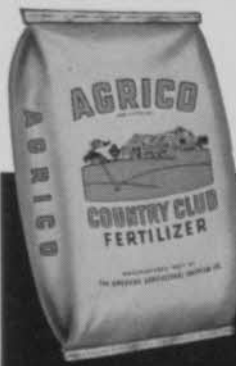
## "AGRICO-FED GREENS Really Stand Up"



ROBERT W. SMITH, Assistant Greenkeeper,  
Country Club of Maryland, Towson, Md.

"I GAVE our greens a liberal feeding of AGRICO COUNTRY CLUB Fertilizer in the fall to insure good winter carry-over," writes Robert W. Smith, assistant greenkeeper, Country Club of Maryland, Towson, Md. "In the spring I found that Agrico gave me the deep, well-placed root system I have been trying to secure for the last few years. This shows the carry-over effect of Agrico in producing dense, healthy turf and in providing resistance to fungi attack. Agrico gives my greens the sturdy growth to stand up under hard play and hot weather."

Order Agrico now—it's America's premier Golf Course Fertilizer. Ask your regular supplier, phone nearest A.A.C. Sales Office, or write to The AMERICAN AGRICULTURAL CHEMICAL Co., 50 Church Street, New York 7, N. Y.



**AGRICO**  
COUNTRY CLUB  
FERTILIZER

his turf problems in the summer would be reduced.

It was at Tuscon (Arizona) Country Club that there were nine new greens of Seaside bent — this was a departure from common practice. Architect Billy Bell of Pasadena, California, had convinced the folks at Tuscon they could have bent instead of bermuda, and for the second season this promise was coming through. They were indeed proud of their accomplishments.

At Phoenix, Arizona, the Country Club was staging an invitation tournament following Washington's Birthday. They were looking for better strains of bermuda grass and, no doubt, by now are using U-3 and some of the Tifton bermudagrass. Preston E. Childers, Superintendent of the Municipal golf course in Phoenix showed us good bermuda greens on very level topography. He reported nine new holes would be built, all with Seaside bent greens.

#### Growing Merion Bluegrass Seed

June found us again visiting golf courses and special turf areas as we traveled north and west after leaving Southern California. A side stop was made at Klamath Falls, Oregon, to see Merion bluegrass seed being grown by Ed Geary. The plants forming seedheads were as different from Kentucky bluegrass as the turfs are different. There are problems in growing turf, but the seed producer has his problems, too. This phase of the business takes good management, and one at the head who has keen judgment. Mr. and Mrs. Geary meet the requirements, and it was a good day for the turf people when they decided to grow Merion bluegrass seed.

Alta fescue is a "sure" turf grass on the West Coast. It is deep-rooted, able to absorb rough usage and adapts itself to variable soil and moisture conditions. For athletic fields and golf course roughs it appears to be a natural. The turf on the athletic fields in the West will be better as more Alta fescue is used. It was worth the stop at Corvallis to hear Harry Schoth and H. H. Rampton, the representatives of the United States Department of Agriculture at Oregon State College, sing the praises of Alta fescue.

Golf courses in the Seattle district all have good turf. The greens are mostly Astoria bent. One wondered if they would not have better turf if a creeping bent strain such as Toronto or Congressional was used. The even temperatures and not too much sunshine indicate their problems are not too severe. Algae on the greens perhaps is the one problem that causes the most concern. Here leaders in the turf program were the top men of

the Bentley-Milorganite Company.

Banff Springs, Alberta, Canada, has the perfect setting for a golf course and for nearly 25 years there has been a golf course in conjunction with the Banff Springs Hotel. With fairways and greens at the foot of the Rockies, adjacent to the Bow River, they must work to keep the turf free of snowmold. A program that would provide for more air and less water in the soil prior to the heavy freezing might reduce the snowmold. On May 1st work was started to get the turf in good condition by the Fourth of July, and there was evidence the work had been tedious and painstaking. Most all the golf is played in July and August. By October 1st every effort is made to prepare the turf for the severe winter weather. Selection of turf adapted to the conditions and a method of improving the soil is what Casper McCullough, Manager of Banff Springs, is seeking. Driving east through Montana, North Dakota, Minnesota and Wisconsin much bluegrass turf was in evidence. At Great Falls, Montana, and nearby towns there was bluegrass that would get the championship award in any contest for good turf.

#### Turf in Milwaukee Good

The turf in Milwaukee was as expected — all good. Fairways are bent where irrigation has been provided and bluegrass where rainfall supplies the moisture. Either one of these grasses please the golfers. The water and additional fertilizer on the bent fairways does produce a superior turf that pays off for that extra expense. We were impressed with the excellent turf in parks and on lawns in Milwaukee.

On to Chicago where we had a glimpse at a few courses in the Evanston section and a good look at Old Elm where Elmer Bertucci has the turf that pleases those members with a critical eye.

Next stop was Cleveland and a visit to Oakwood Country Club where Mal McLaren is in charge. The improvement he had made and is making is remarkable. His leadership is a great contribution to the turf folks in Cleveland. At nearby Shaker Heights Country Club, Colin Smith showed us plots of Toronto, U-3 bermuda and Merion bluegrass — all apparently adaptable to this area. The championship Canterbury Course was in excellent condition under Jack Way's capable handling. In Cleveland, Colonial bent predominates in all turf. Fairways and lawns are good due to this type of bentgrass. Those Cleveland superintendents really tear into their problems — maybe it is the air from the lake, but there is a determination to have the best. One cannot imagine any course ever having any poor turf in the Cleveland area, and if

some turf problem should arise it surely will be met and solved.

In visiting golf courses in so many different areas, one naturally expects to find a considerable variety of soil and climatic conditions. But actually, the problems which confront the superintendent are basically similar. In regard to soil, good drainage, proper fertilization, increased organic matter content and reduction of compaction, all these are fundamental to growing good turf in any locality.

The selection of adapted grasses likewise is an essential, regardless of whether turf is being produced in the north, south, east or west. Naturally, the most suitable grasses differ in different localities, but the problem of finding the "right" grass is universal. As we learn to handle the different grasses, we discover that they are more cosmopolitan than we believed previously. We find bent growing in the south, and bermuda gaining a place in the north. As new strains are developed and greater knowledge of managing them is acquired, turf men everywhere will have a greater choice when selecting the grasses best adapted for their particular areas.

Another important problem is the human one—better turf for better golf is an objective that requires the cooperation of all those concerned with achieving it. Club officials, green committees, superintendents and professionals, all

have a common objective. As has already been cited, distributors of materials and golf course equipment can contribute a fine service by providing facts as well as the tools for course maintenance.

Turf research has a national viewpoint as the work in the different Agricultural Experiment Stations is being coordinated by the Green Section of the United States Golf Association. All the research work proceeds best by the guidance of turf advisory committees.

### Central Plains Turf Meet At Kansas State, Oct. 25-27

Kansas State College and the Central Plains Turf foundation will conduct a three-day conference dealing with turf problems, at Manhattan, Kansas, October 25-27.

Prof. William F. Pickett of the college and Chester Mendenhall, Mission Hills CC, Kansas City, Mo., are in charge of the meeting.

First-day speakers include Dean R. I. Throckmorton, K-State; J. G. Firsching, park department, Wichita; Sam Shannon, cemetery superintendent, Manhattan; L. R. Quinlan, K-State; Ross McCausland, seedsman, Wichita; L. E. Lambert, golf courses, Dodson, Mo.; Chester Billings, Nebraska Univ.; Franklin Rose, Kansas

## GOLF SPIKES are dependable outside... *destructive* inside.



Don't wait for golf spikes to destroy your floors . . . Get real protection with PNEU-MAT-RUNNERS—proven by leading clubs from Coast to Coast. They resist rough treatment from the sharpest spikes, last for years, and cost is negligible compared to upkeep on your floors.

Remember, PNEU-MATS are **not** ordinary rubber runners. They are woven from heavy rubber and fabric strips. Write for complete information today:

**SUPERIOR RUBBER MFG. CO., Inc.**

122 EAST 25th ST. NEW YORK, N.Y.

Boston • Chicago



highway commission, Topeka. Dr. H. E. Meyers, K-State; Raymond V. Olson, K-State; F. W. Smith, K-State.

October 26 speakers are to be Fred V. Grau, USGA; F. D. Keim, agronomist, Nebraska Univ.; H. L. Lantz, Iowa State college, Ames; G. Brinkworth, Minneapolis, Minn.; P. Carson, Stroudsburg, Pa.; J. W. Funk, K-State; O. J. Noer, Milwaukee Sewage Commission and R. A. Keen, K-State.

The conference is to close at noon October 27. Speakers that morning are to be H. R. Bryson and J. W. Zahnley of K-State and G. L. McCall of the DuPont Company.

## TURF ROUND-UP FOR 1950

*(Continued from page 35)*

bluegrass, fescue and bent. Either Astoria or Highland bent (or a mixture of the two) is more satisfactory as a nurse crop and "quick-greening" is obtained to satisfy the "in-a-hurry" customer. Meadow fescue, up to 15%, is popular on the West Coast and in the northern part of the Midwest.

Manilagrass (*Zoysia matrella*) slowly is gaining headway in the deep South but its occasional failure as far north as Washington, D. C. limits it. Its very slowness to establish is against it.

The Z-52 strain of zoysia is gaining new friends and admirers rapidly. It is nearly as fine as manilagrass but completely winter-hardy and spreads much faster to form a crabgrass-resistant turf. Z-52 seems to blend well with the better cool-season grasses to form nearly the "foolproof" year-round turf. A fairway of Z-52 with Merion bluegrass would be so perfect that golfers wouldn't believe it. Seed can be produced in club nurseries after two years in solid turf. Turf from the seed looks good, too!

Near-perfect fairway (and lawn) turf has been maintained for three years at the Beltsville Turf under the Green Section's maintenance, using the coarse common *Zoysia japonica* as the base grass overseeded with cool-season grasses. The best combination turf with the fewest weeds under a system of no water and very little fertilizer and  $\frac{1}{2}$ -inch to  $\frac{3}{4}$ -inch mowing are the plots where Merion bluegrass has been overseeded (3 years ago). The bluegrass-fescue-bent mixture isn't far behind. From this "hunch" five years ago we have come to regard a zoysia-cool-season mixture as nearly the ultimate in fairway and lawn turf wherever crabgrass is a serious pest. It may be the future athletic field turf, too, except that bermuda will stand more punishment.

The new C-115 bent still shows no evidence of turf diseases after four years

with no fungicides. It is being tested at various places for performance under a wide range of conditions. Plots with a mixture of C-1, C-19, C-115 show promise but it is too soon to tell how it will work out. Our meager stock at Beltsville is under increase but don't call on us now for stolons—see your own experiment station first. Our Jap-bettle quarantine makes it very expensive to ship vegetative material.

U-3 bermuda slowed down in 1950 because of low temperatures. Even so, it provided the very best in tee-and-fairway-playing quality. Cool-season grasses are doing well in U-3 this fall. Some of the skeptics are saying, "See, I told you it wouldn't work," but it is still in the picture for those who want the toughest in tee turf or athletic turf. We wouldn't trade our U-3 lawn in College Park for any bluegrass lawn I've seen—it suits our family perfectly. But it never should be planted on a lazy man's lawn because it responds only to good treatment and close, frequent mowing.

Southern California has welcomed the Green Section's U-3 bermuda as the bermuda grass they would most like to have. It stays green long after common strains are brown. To be convinced read C. K. Hallowell's report on his visit to Southern California. They also seem to like the improved strains of creeping bent (C-1, C-19, C-52, C-15) which are out-performing turf from Seaside seed month in and month out. Merion bluegrass got a fine reception in California, outranking common pasture bluegrass on every count.

The Southeastern States gingerly are trying Tifton 57 bermuda for their putting greens but they can't seem to believe that it is so good that it will crowd out the common cotton-patch bermuda. It does, though! But, after they have a Tifton 57 green they still have bermuda which doesn't putt like bent. We have to face the fact squarely—soon all the important golf courses in the South will be required to have bent-like putting surfaces. The pros and the players—all are mentioning it. Players in the USGA's Golden Anniversary Open at Merion and the Amateur at Minneapolis Golf Club remarked on the "perfect putting surfaces" and on what a contrast (shock) it was when they got back to their bermuda greens. Please not that we do not advocate bent for the South—we are reporting demands that are being heard for greens that putt like bent which is the highest standard known to golf.

Few will question today the value of a mixture of grasses, provided the grasses selected are suitable performers. Here are some top-grade mixtures which have stood the test for 10 years:

**BETTER PRO SHOPS PROVIDE LEWIS GOLF CLUB CLEANERS**

**BETTER COURSES PROVIDE WASHERS at every fee!**



1. Arlington (C-1) with Congressional (C-19). Bill Glover at Fairfax, Virginia, suggests that you use 60% C-1 and 40% C-19 because C-19 is a faster starter.

2. No. 1 (above) with Collins (C-27) added. Collins can't be obtained easily so that it often is omitted from the mixture.

3. The No. 1 mixture with Toronto (C-115) added. Toronto is susceptible to dollarspot but produces a splendid putting surface.

4. Zoysia with Merion bluegrass for fairways and lawns.

5. U-3 bermuda with Arlington bent for the hardest wear on the toughest tees. Several experimental putting greens have been planted to this unorthodox mixture of N-S grasses. So far it looks good, but don't take our word for it—try some yourself.

#### Insecticides

Since Chlodane, DDT, Aldrin, and Dieldrin arrived there have been virtually no requests for assistance on insect problems. This can be explained principally on the basis that state experiment stations are doing a better job of advising on insect control in turf as well as in raspberries and currants. The new insecticides are so very effective that it would seem that again a major milestone has been passed. Even the tropical earthworm has been quiet in 950 (too cool, perhaps). The terribly dangerous Parathion largely

has been avoided on turf projects in favor of safer Chlordane and DDT.

Remember that an insect control program is basic to a weed control program, and to the whole turf program. There is no use controlling weeds if you allow the bugs to eat the grass.

#### Fungicides

The American Phytopathological Society has assumed responsibility for testing turf fungicides on a national coordinated basis and a number of reports of the 1949 tests have been published. The data is incomplete but important conclusions have been reached. Since recommendations may be different in various climatic regions we suggest that you consult your own state pathologist first. It must be noted with interest that one of the most successful golf course superintendents in the Washington-Virginia area always adds calomel at  $\frac{1}{2}$ -ounce to 1,000 square feet with each treatment of Cadmium fungicides or with Tersan. There seems to be, as yet unexplained, an effect of "activation."

While we are writing about fungicides it is proper to report that Arlington (C-1) bent untreated with fungicides for 10 years at Rhode Island still is virtually perfect putting turf with no disease scars and no mat formation. This record has been approached at other places over the country. It is our prediction that, within

## DOW METAL Range Driver

*Continuous repeat orders throughout the season confirmed its outstanding durability and play.*

**Outstanding Range Club**  
"Buy" — Here's Why:

**Saves Repairs and Replacements** — because its tough, one-piece construction of famous Dow Metal takes the most abusive punishment.

**Saves Balls** — because the hardest wear will not develop damaging contours, protruding heel plates or chipping.

**Improves Play** — because its perfect balance is free from weather and temperature effects and its Golf Pride Grip affords firm but relaxed gripping for tensionless swinging.

All Weather Grips also available.

Men's and women's right and left hand drivers and brassies.

For literature and prices write:

**WITTEK GOLF RANGE SUPPLY CO.**

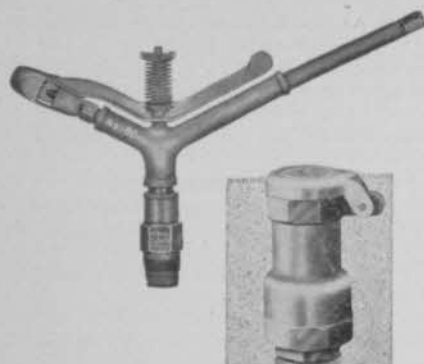
5128 W. North Ave., Chicago 39, Ill.

**Not one broken neck or caved-in face in all the thousands we sold.**



*Its Special True Temper stepdown shaft is double wall thickness 14 inches up from the head.*





## MORE COVERAGE PER DOLLAR

With  
**NELSON  
SILVER TOP  
VALVES**

These quick coupling Silver Top valves speed work and save labor. Available in capacities up to 125 gallons per minute.

and  
**RAIN BIRD  
No. 80 Special  
SPRINKLERS**

Rain Birds are simple, rugged and trouble-free. Full or part circles. Available in capacities up to 125 gallons per minute.

For Information Contact

East of Denver

**L. R. NELSON MFG. CO., INC., PEORIA, ILL.**

Denver West

**RAIN BIRD SPRINKLER MFG. CORP., GLENDORA, CALIF.**

our time, we will learn how to maintain good putting greens without resorting to weekly dosing with mercury, chromium, cadmium, tetramethylthiuram disulfide, and other strong chemicals. We have tended to lose sight of the fundamentals of plant growth, starting with disease-resistant grasses. In a squeeze we will be glad to accept any grass which will give us turf without chemical treatments.

### Water Use and Abuse

Since we wrote the Turf Roundup of 1949 two top-grade students have attained their Ph. D. degrees on problems relating to the irrigation of golf (and other) turf. The USGA Journal has carried abstracts of these research studies. It has been shown conclusively that the abuse of water is far more prevalent than the proper use of it. It is odd, but true, that both studies (in Pennsylvania and in Michigan) were conducted on porous, well-drained soils that are difficult to mismanage. Even so, the use of more water than was needed resulted in deterioration of fairway turf. Best turf was that which was watered as needed—that is, when a soil-moisture gauge and appearances showed that the turf was beginning to suffer. We will hear much more on this subject in the winter conferences ahead. More research projects are being set up to study this important subject.

It is significant that none of the turf under investigation at Beltsville receives artificial irrigation or sprinkling—only natural rainfall! It has proven beyond a doubt that acceptable putting greens can be developed with far less water than most courses normally use.

One of the great factors in the better use of water has been the cultivation of the soil below the turfed surface on greens, tees, fairways, athletic fields, lawns, playgrounds, etc. In most cases water usage had to be cut in half to keep from over-watering severely. The answer lies in quicker and better absorption and deepening of the root systems. The curved "spoon" type of aerating tool (exemplified by the West Point Aerifier) actually loosens and shatters the soil below the surface, leaving a loose-walled cavity which is highly absorptive. It remains to be seen if the hollowtine machines (as exemplified by Nite-Crawler, Soilaire, Otis Airator), which produce a straight-in straight-out action will be as effective in increasing the infiltration rate of compacted soils. By the time we have had the broad experience with these newer machines that we have had with the Aerifier we can answer that question more directly.

We seldom hear 2,4-D discussed any more—it is now one of the necessities of

# PERMA-MATS

Constructed of Tire Casings  
for Heavy Duty—Longer Wear

ONLY  
**90c**  
PER SQ. FT.  
PREPAID

### 1 THE BEST MAT FOR DRIVING TEES!

Designed to specifications of well-known pros, these mats are functionally ideal, reversible and virtually everlasting. The finest tee mat at the lowest cost to you.

### 2 BEST IN LOCKER ROOM, ENTRANCE & SHOWER

Perma-Mats pay for themselves by saving floors, spikes and preventing accidents. Lays flat (no kinks), thicker cushion, closely woven for firmer footing.

Immediate delivery on popular sizes, send specifications.

**MERCHANTS TIRE CO. 2710 WASHINGTON AVE. ST. LOUIS 3, MO.**



## NEW ALPS GOLFWEAR --- STYLED BY SCOGGINS

DESIGNED ESPECIALLY FOR PROS AND GOLFERS



Style: North Berwick

No. 268. North Berwick. Specially constructed Rayon Twill back, cotton face fabric. Knitted bottoms and cuffs for snug comfort. This garment features two generous sized, knitted side panels for free swinging comfort. Tailored round point collar. Full zipper front. Two slash pockets.

COLOR: Putty or Cocoa.

Exclusively through

**HOWARD SCOGGINS GOLF CO.**

DUNEDIN, FLORIDA

modern turf management for the control of many broadleaf weeds. It has become a much more useful tool since we have learned that it is no good for some weeds. There is no sense in trying to claim that a certain chemical is a "cure" for something that it isn't!

Mechanical crabgrass control slowly is catching on, especially for fairways. Where the flexible combs have been used on the fairway units all season, crabgrass virtually has been prevented from seeding. The crabgrass plants have been confined to tiny rosettes which actually serve to help a thin turf from the standpoint of the lie of the ball. Flexible combs for fairway units should be installed at the start of the crabgrass season and should be left on the mowers all season. Proper depth adjustment will prevent scar damage during hot weather when cool-season grasses are weakest and crabgrass is strongest. My first recollection of seeing crabgrass rakes on fairway mowers was at Merion. Congratulations again, Joe!

Crabgrass in some areas was the sickest weed that we have seen in many a year. Leafspot disease damaged this weed very severely in Washington, Cincinnati, and other "hot-spots." A good gen-

erous application of complete inorganic fertilizer (400 pounds on 15,000 square feet) killed crabgrass in September on a lawn in Washington and failed to damage the good turf grasses.

Biggest news in the crabgrass control field is that sodium arsenite (the old reliable) sprayed at one to two pounds to the acre with a wetting agent at a material cost of about 25c an acre did a job superior to some highly-advertised materials which cost 1,000 times that figure.

Best and cheapest crabgrass control anywhere in the United States has been achieved with adapted blends of superior turf grasses adequately managed. The highest ranking blend in the Washington-Cincinnati-Louisville areas has been zoysia (preferably Z-52) with bluegrass (preferably Merion when you can get it). Other mixtures are nearly equal. This is the most fruitful field for research in the entire turf picture. Chemical crabgrass control has received such a severe setback in 1950 that it may recover only for the purpose of using only the most economical materials to reduce crabgrass competition so that the superior turf grasses can become established. Today nearly everyone can get a small start of the highly desirable turf grasses which literally can

**PROS**

Specify this immeasurably improved Grip on your 1951 factory order.

IT'S A HONEY

**NEW PARK  
ALL WEATHER  
REGULAR Golf Grip**

Black or Red

**NEW PARK  
ALL WEATHER  
INDICATOR Golf Grip**

Black or Red

RAIN or SHINE  
The ALL WEATHER is FINE

Order from your supplier or write

**LAMB RUBBER CORP.**

**801 Milford St.**

**Glendale 3, Calif.**

choke the crabgrass to death. These grasses can do it without the help of chemicals but, with the right chemical, they will do it quicker and easier.

Phenyl mercuriacetate preparations continue to do a good job when applied in proper dilution and particularly when treating seedling plants. Mature crabgrass is controlled to better advantage with potassium cyanate preparations which also is excellent for chickweed control during the cool months. Mixtures of potassium cyanate, 2,4-D, and sodium arsenite are receiving attention for low-cost, across-the-board weed control. Economy of maintenance will guide the destinies of the crabgrass killers as well as many other things.

Maleic Hydrazide for growth control of turf has been over popularized and overpublicized. We know very little about its effect on our better turf grasses. Tests at Beltsville clearly indicate caution!! The non-scientific writers of popular articles often do great harm to the reputation of a material that may be of great value if it is thoroughly tested first. Our evaluation is that this growth regulator could do untold damage if used as suggested in some recent articles.

#### Fertilizers

Fertilizers still are one of the most important features of a weed control program. This is especially true of the high-fertility grasses such as bermuda, bluegrass, bent. Too many clubs still try to use water in place of fertilizer. Then they spend their money for herbicides and they still don't have enough to buy the fertilizer they should have had in the first place.

Natural organics are still preferred fertilizers for turf, supplemented with P and K and inorganic N where needed. The new Ureaform nitrogen fertilizer still is not available but it looks hopeful. Tests on turf still are going on so that we can give accurate information when the material becomes available.

Liquid fertilizers may have a hard time when economy-minded superintendents and chairmen begin to examine the costs of plant food applied. A 6-10-4 fertilizer contains 400 pounds of actual plant food in a ton which costs—we'll say \$80—for easy figuring. In some liquid fertilizers 400 pounds of actual plant food may cost over \$1,000. We can not subscribe to the thesis that this added cost for material is balanced by the saving in labor.

#### The Chairman—Greenkeeper Team

Did you ever have a favorite team of horses that got better as the years went by—the kind of team where the off-horse instinctively followed the lead of the near horse—sometimes even anticipated the action? Some chairman-greenkeeper teams

are like that—through the years. By contrast, consider the team where the off-horse is changed every spring just at planting time. Who could drive a straight row with a green horse? It puts most of the strain on the old lead horse and even then the old-timer gets the blame for the antics of the newcomer. We are trying to say in a new way that it is easier for us to work with a club on a turf-improvement program where the chairman-superintendent team is constant over a period of years—and it is much easier on the superintendent—and the chairman—and the club—and us.

#### USGA's New Book "Turf Management"

McGraw-Hill Book Company of New York has announced the price of \$6.00 for the USGA-financed book entitled "Turf Management," by H. B. Musser. Fresh off the press, parts of the book even now need to be revised in the light of new facts from research. This first authentic book on Turf since 1923 should find wide appeal to a wide range of turf lovers.

#### USGA's New Policy on Visits

As announced in the June 1950 issue of the USGA Journal, special visits on any turf problem will be made by Green Section agronomists on the basis of all traveling and living expenses plus a service fee of \$50 a day to member clubs and to Green Section Service Subscribers. For all non-member golf clubs and non-subscribers it is all expenses plus \$100 a day.

It is the stated policy of the USGA to assist local and regional groups in every way possible to develop their own integrated program, including advisory service. This policy has been exemplified in the developments in every major turf center in the United States.

Many clubs are requesting two visits a year regularly from the Green Section just like the slogan suggests—"See your d-n-t twice a year." A periodic checkup in many cases is welcomed by chairmen and superintendent alike.

#### In Summary

Always it is an inspiration to write Golfdom's "Turf Roundup." It is par-

### Outstanding Turf Authorities

will show and tell your greenkeeper how to make the most of the latest in golf maintenance . . . and prepare for the possible problems of 1951, at the

**22nd NGSA Turf Conference**

**Chicago - Jan. 29 - Feb. 1, 1951**

**Have your Greenkeeper there!**