ing habit undoubtedly also is a contributing factor.

Since Merion is no poorer than common Kentucky blue in other characters and is significantly better in the important items noted it deserves recognition as an improved type. The fact that it is making a good quality turf under such a wide range of conditions where common Kentucky blue has failed justifies this conclusion.

The list of new fescues for which seed is available is just as limited as for Kentucky bluegrass. It is confined to two named strains of creeping red—Illahee and Trinity, and one strain of Chewings, which, although never named or officially released, has come to be called Penn State Chewings.

Are any of these types materially better than the common Chewings and Creeping Red? Results of comparisons in areas where it is relatively easy to grow fescue show that all three of these new types will make a slightly better quality turf than the common. Apparently, this is because they have a little better density and slightly greater recovery powers when injured by disease and summer heat. There is no good evidence of greater disease tolerance or less injury from close clipping for any of them.

In areas where high temperatures and humidities are a controlling factor these new strains are no better than the parent types. There is so little difference in the relative ability of all to withstand the unfavorable conditions that none will maintain a satisfactory turf.

Creeping Bents are Temperamental

It would be impossible to examine in detail the many vegetative strains of creeping bent that have been selected during the last 30 years. We have grown over 100 of these in the test plots at the Pennsylvania Agricultural Experiment Station and we have over 200 in the nursery at the present time. Most of these are known only locally. A few have received more widespread attention and



March, 1953



some have been named. Best known of the latter, are the old Washington and Metropolitan strains, and the newer Congressional, Arlington, Cohansey, Old Orchard and Collins. When we strike a balance on the performance of all of them, several facts begin to emerge which deserve consideration. First, the evidence shows that the average turf quality of the better vegetative strains is materially higher than that of Seaside, the only creeper for which any appreciable quantity of seed is available commercially. Disappointingly, it is not always the same vegetative strain or group of strains that is responsible for this better performance. Strains which may be exceptionally good in one location in one year, may be just average or even mediocre at another place, or in another year. A strain that may show a high degree of resistance to a disease under one set of conditions may be severely injured by the same disease a year later. One that maintains excellent quality at a given rate of nitrogen in one season may mat and thatch badly the next. Many other characters fluctuate in the same way.

This general inconsistency in performance is the second fact that emerges when we total the records. It emphasizes the fact that we should approach the selection of a vegetative strain for our greens with a great deal of caution. Results will depend upon how carefully we have evaluated the things that are available, in the light of the local conditions to which they will be subjected. Perhaps, after we have had these grasses for a longer period, we can reach more definite conclusions about their individual value. At present, their use must still be largely on a trial and and error basis.

In the Offing

The third class of cool season grasses consists of the new things that are "in the offing". Considering the widespread need for better grasses, they are pitifully few in number. I shall limit the list to those types for which sufficient records are available to indicate that they may have possibilities. They deserve watching and as seed becomes available they should be tried on a small scale. It is only as we accumulate evidence of their performance under a wide range of practical conditions that we can reach a fair estimate of their value.

One of the new grasses that may be further along, from an experimental standpoint, than most of the others is the synthetic or polycross creeping bent. This has resulted from selection and breeding work at the Pennsylvania Experiment Station. Seed of the polycross is produced by planting 3 selected parents vegetatively in alternate rows and permitting them to cross at random. The parents used are strains that have shown a high disease tolerance and exceptionally good turf quality in tests over the 5 year period 1947-1951. Tests include both vegetatively planted and seeded plots.

The polycross has been in our turf quality test plots for the last 3 years. During this time it has been compared with 99 of our best vegetative and seeded strains of creeping, colonial, and velvet bents. It has been as good as the best of them in good years and outstanding in bad seasons. During the past 2 years it has been used on a small scale by a number of Golf Course Superintendents over a quite wide range of conditions.

Performance reports received to date have been very encouraging. If they continue to be as good we shall give the strain a name and release it as an improved type. We believe there is a definite need for seed of a good creeping bent. Seeding is much simpler and less expensive than vegetating. Certainly it is more desirable where an unsatisfactory type of grass needs to be replaced or turf density increased on a green, without taking it out of play. Since it takes two years to bring plantings into full seed production only very limited amounts of polycross seed will be available until 1954.

A better creeping red fescue is also a definite possibility. It is hard to evaluate fescues. They are highly variable in disease tolerance and are extremely sensitive to temperature and humidity. We made several hundred selections of creeping red in 1938 from various sources. World War II interfered with this work, but finally enough seed was produced to establish turf quality tests of 40 selections at State College in 1947 and at Beltsville in 1949. These locations probably represent extremes in growing conditions. It is comparatively easy to grow good fescue turf at State College. It is difficult at Beltsville. It has been encouraging to find that the same strains have led at both locations throughout the entire testing period.

The three strains that gave the best average performance in both series of tests have been combined. Seed of this cross has been distributed to a number of experiment stations for testing. Records are being secured on it in such widely



The famous Buckner Turf King Sprinklers—the stand-ard since 1912 for economical, dependable and trou-ble-free turf watering.

Economical, Trouble-free **Golf Course Watering**

No golf course watering problem is too tough for Buckner sprinklers. A wide range of performance to choose from. Each item developed to do particular jobs efficiently. Buckner's Perfect Curtain of Water is your assurance of uniform distribution without waste.





Worth A Second Look!

You will want to know more of how FER-MEL can help YOU make your fertilizing easier, have superior turf and do it with a minimum of experienced help.

Get these Free FER-MEL Bulletins:

- ★ Summer Feeding Bent Greens. ★ Growth Control What Is It? ★ Fertilizer Cost Analyses. ★ Chemical Calculations in Turf Management.

See your FER-MEL Distributor or write your name and address on a post card, simply say "Send FER-MEL Bulletins". Send it to

THE MAMLON COMPANY 1091 Whalley Ave. New Haven 15, Conn.

TURF AND TREE FOOD

separated locations as Ohio, Indiana, New Jersey, Oregon, South Dakota, Saskatchewan, and at several locations in Pennsylvania. Reports to date have been so encouraging that we have started to increase seed and we hope to have some available to plant commercial seed fields next season. If reports continue to be good it will be named and released as an improved variety.

One other development must be added to the list of improved grasses that are in the offing. There is a good possibility that we may have a better Colonial bent within a reasonable time. This may come from either or both of two sources. Many of you are aware that Dr. Jes DeFrance of the Rhode Island Experiment Station has been working with this species for some time. Originally, he collected over 5,000 individual plants from many locations in the North East. His first study of these indicated that 352 might have possibilities. These were put into turf quality tests where they were kept at a height of 1 inch under minimum maintenance. He has found eight strains that show superior performance for disease resistance, upright habit of growth, and density. Sufficient seed will be available next season from 5 of these to permit distribution to other stations for further testing.

The Oregon Experiment Station has been making new Colonial selections for some years. In 1950 they were kind enough to forward to me small quantities of seed of about 15 strains. These were planted in small plots and we now have two full years of records on their disease resistance, growth characters and general turf quality. Two of these strains have been exceptionally good under our conditions at State College. We have sent these records out to Oregon and are advised that they will increase enough seed to permit more comprehensive tests at Eastern stations.

This is the report of what is around the corner. The development of a really superior strain of grass is a slow process. It requires just as much patience on the part of those who are doing the work as of those who are waiting for it. I assure you that by far the easiest way would be to jump to conclusions and "jump the gun". And the result would be the usual one — just another specimen, about which nobody knows much of anything, to add to the confusion and increase our suspicion that there is no such things as a truly better grass.

GREATEST PROGRAM

(Continued from page 41) data in golf course records is accurate measurement of areas.

Reports and recommendations on clover control by Dr. John F. Cornman of N.Y. State College of Agriculture, and on weed control by Prof. B. H. Grigsby of Michigan State College, brought superintendents up to date on important operating procedure. Cornman and Grigsby gave answers that paid convention expenses of at least a quarter of those present.

A roundup on the first day's program was conducted by Charles K. Hallowell, Pennsylvania extension representative.

Paul F. Leix, supt., Allegheny CC, Sewickley, Pa., introduced Joe Dey, Jr., USGA Executive director in opening the Thursday sessions. Dey said the topic to which he'd been assigned, "What the Superintendent Has Done for Golf Courses," might well be switched around to ask, "What Have the Golf Courses Done for the Superintendents?" in bringing the superintendents' responsibilities



Jim Watson, Agronomist, Toro Mfg. Co., inspecting combination warm-season cool-season grass plots during tour of Pine Valley CC at GCSA Annual Meeting.

and performance into correct perspective. Dey cited records in Golf House as showing Old Tom Morris at St. Andrews having as his top position that of "Custodian of the Links." Old Tom's budget and salary by today's standards weren't much but then, as now, his job was rated by the players as of primary importance.

Dey said there was a sidelight on the superintendents' work in the story of the vicar who observed a parishioner at work in a garden.

"The Lord and you are doing very well with that garden," said the vicar.

"That we are," agreed the gardener;



WINCHARGER CORP., 2141 E. 7th St., Sioux City, Iowa

A wholly owned subsidiary of Zenith Radio Corp.



THE TED BISHOP CO. 101 Tremont St., BOSTON 8, MASS. "but you should have seen the bad shape it was in when the Lord was alone on the job."

Annual Reports Guideposts

There was a light touch also in the talk of Dr. Spencer H. Davis of Rutgers, who spoke on diseases of turf grasses and 1952 fungicide trials. Davis explained the factors in fungicide trials and told why the annual reports are of value as guideposts rather than the gospel applicable to all situations at all times. He said that he and the scientists at work on the fungicide trials didn't recommend that their experiences and reports should overrule a superintendent's own experience with fungicide treatments that had been repeatedly successful under conditions at their own courses. Following some deep



Demonstration of West Point Products new thatch removing machine for group during Pine Valley Tour.

stuff Davis remarked that at least one of the superintendents' problems had been answered; the problem being that of thinking of a retort when somebody asks, "Who's keeping this course; a plumber?" At the wages plumbers get now Davis says nobody dares ask that question of a course superintendent.

Dr. Frank L. Howard of the University of Rhode Island, illustrating his address with slides, gave a most informative talk on helminthosporium-curvularia blights of turf and their care. Failures to properly identify the troubles accounted for numerous cases of extensive damage, Howard said. His address will appear in GOLFDOM.

Dr. H. L. Starkey and Dr. Ralph Engel of Rutgers together with Paul Weiss, supt. of Lehigh Valley CC, Allentown, Pa., spoke on control of thatch in turf. Starkey and Engel went at the problem from the scientific base and Weiss tackled it from the operating end. Weiss warned that with so many fairways being bent, the thatch problem on fairways was due to become a much worse and more expensive headache than thatch on greens and probably is an inevitable aftermath of the demand for closecut fairways.

Bill Beresford, Los Angeles CC supt., got the final session started with a talk by F. S. LaBar, Stroudsburg, Pa., nurseryman on landscaping that gives the course added values for players without unduly increasing maintenance operations.

Summaries of the reports of turf experiences in 1952 as observed by O. J. Noer, Milwaukee Sewerage Commission, and Arthur E. Anderson, supt., Brae Burn CC, West Newton, Mass., on northern courses and on southern courses by James L. Watson, Toro Mfg. Co. and James L. Jennings, supt., River Oaks CC, Houston, Tex., are appearing in GOLFDOM. The four expert observers accented the lessons of a generally troublesome year in turf rather than merely relating the troubles or their absence.

The conference finale was a symposium in which three chairmen who know the superintendent's problems and are in the middle between the members and the course maintenance men made it plain that the superintendent didn't have any monopoly on course headaches. V. J. (Pat) Pazzetti, Jr., former green chmn., Saucon Valley CC, Bethlehem, Pa., and George Hurd, the club's present chmn., together with Adm. Jack Phillips, chmn., Army-Navy CC, Arlington, Va., and rated by superintendents as one of the most valuable men in turf maintenance at Mid-Atlantic courses, told the officials' and players' side of the story and debated the issues with superintendents. A summary of this frank discussion will appear in April GOLFDOM. This program feature, in the opinion of those whose departure schedules permitted them to hear it, was the best educational material on operating and officials-relations policies ever presented before superintendents and should be spotlighted earlier in future conferences.

WHAT SUPT. HAS DONE

(Continued from page 53)

probably are opportunities crying to be recognized.

And incidentally, gentlemen, developments like these we have named are news, and you individually should see to it that the appropriate news agencies are



PHONE We will accept collect wires or phone calls Quantity Discounts

WRITE --- WIRE

18 x 24 x 42 Many Other Sizes Available

Steel Country

Club Lockers

Both New and Used

24 x 21 x 72

15 x 18 x 72

22 x 21 x 72 12 x 12 x 60 12 x 18 x 60

15 x 18 x 24

12 x 18 x 36

ALL MAKES EQUIPMENT CO.

1918 Farnam St., OMAHA, NEBR., Phone Atlantic 2413

informed of them.

Down through the years the standards of play have been vastly affected by improvements in course maintenance. Here are some statistics pertaining to the USGA Open Championship: The first time the Open was played at 72 holes was in 1898 at the Myopia Hunt Club, South Hamilton, Mass. Fred Herd, using a gutta ball, won with a score of 328 — an average of 82 per round.

Today, 55 years later, the scoring record for the Open is 276, made by Ben Hogan at Riveria in Los Angeles in 1948. He averaged 69 per round. Hogan took 52 strokes less than Herd for the 72 holes an average of 13 strokes per round less. This improvement of the standard has been caused by a combination of factors increased competition, the rubber ball, better clubs - but probably no other single factor has been more influential than the improvement of golf course maintenance. This progress has helped tremendously in attracting new players to the game. Now that has been good for the game, but it has been even better for those players themselves. For golf, played in the proper spirit, is a restorative - a real re-creator. The superintendent has made a profound contribution to the well-being of those of his fellow-men who have come to our game seeking the tonic of healthy play. That sort of contribution should be the most gratifying to vou all.

Yes, despite the drawbacks, it must be mighty gratifying to work hand in hand with the Source of all life, in helping to bring about better and better growing things upon the face of the earth.

The position of the superintendent is not unlike that of a certain Englishman who had a little garden plot outside London several years ago. The authorities had turned over certain land to some of the poorer folk for subsistence gardens. The land was not very fruitful, or else the people who worked it were not very diligent, because none of them had real success except this certain individual. He, however, worked hard at it, and produced wonderful crops in his little plot.

One day the vicar of the parish happened along and saw the diligent gardener hard at work. The vicar stopped to praise him, and in a rather pontifical manner said:

"Well, my good man, it certainly is wonderful to see what you and the Lord



REAL Act fast to get those long stretches of fair-

way, greens, and clubhouse grounds in shape the easy way. The CON-SOL 1953 Power Roller has been completely redesigned for increased strength, longer life, improved performance and greater ease of handling - still at its same low price.

Weight is easily adjustable from 300-1200 lbs. to suit soil conditions. A caster-type roller, which may be used in place of the rear roller, is ideal for use around shrubbery plantings, or for use when the ground is very soft-available at nominal extra cost.

Write for literature, Dept G-3

CONSOLIDATED INDUSTRIES, INC. West Cheshire, Conn., U.S.A.

have done together." - and he emphasized "and the Lord."

"Yes," replied the perspiring gardener, "but ye should've seen it when the Lord had it by Himself."

You, gentlemen, you and your predecessors, going back even beyond Old Tom Morris-you, together with the Senior Partner of us all-have literally taken a cow pasture and transformed it into a lovely garden. You have, in the words of Isaiah, made the desert blossom as the rose. You have thereby helped to enrich your fellow-man in body and spirit.

For this you have the profound thanks of the world of golf.

INVITATION TOURNAMENT

(Continued from page 64)

exception of the championship flight all flight and consolation prizes are identical.

After the championship final match has teed off we set up a table with white cloth on the first tee and put the medalist and championship flight prizes on it. The Northland President makes a little speech at the conclusion of the match and awards the boys their prizes. This adds dignity to the thing and winds it up in good style.

The regular flight prizes are picked up at the golf shop.

Of course a lot of this operation costs money and perhaps some clubs could not afford all of it but many of the ideas here could be carried out in a smaller way with home-made signs, etc.

The instructions to committee chairmen and members and to key men and women of the club staff set forth every detail of operation and definitely place responsibilities.

Arrangements are outlined, points that were not completely satisfactory in previous Northland Invitation tournament operations are noted and methods to avoid recurrence of such mistakes are presented.

All points have been thoroughly discussed in committee meetings and coordinated before the letter of instructions is prepared and mailed. Operations and facilities in the clubhouse and on the course are described in detail. Special house rules are given for the event.

The details pertaining to actual play





LEVINGS-VELVET TOUCH PUTTERS

Fastest selling and most profitable line of putters in the Nation. Buy a complete set of one each of the above and get one additional FREE. Write for Price List of Golf Equipment and Accessories. Choice territory open for Reps. calling on Pros.

ACME GOLF & TACKLE CO.

A new Pro profit on what golfers want WAR-MUP

The WEIGHTED Golf Hood The only weighted hood on the market



Just "Snap it on" any wood in the bag and you have the handiest, neatest, heavy-headed practice club.

One of a set of 4, matched head covers, it's already serving as a head cover for one of the woods. "Snap the Strap" and its ready for practice swings before or during the round. With pros, instructors and leading amateurs stressing the use of weighted heads for stronger wrists, better gripping and smoother swinging the WAR-MUP Weighted Hood is selling big as fast as the pros display them.

> Many men and women pros are using the new WAR-MUP. Because of their reports—all WAR-MUP Hoods are sold on a MONEY BACK GUARANTEE. Matched sets of WAR-MUP hoods (including the patented weighted hood) retail for \$7.50; the WAR-MUP weighted hood alone retails for \$3. Usual pro discounts. COD, or on open accounts.

Our national advertising says — See Your Pro. Feature WAR-MUPs this spring when your players are anxious to tune-up.

HOODSWING, CORP. P. O. Box 1497 South Miami, Fla.



Fulname Golf Ball Marking service provides the best in ball marking today. Prepare now for early sales.

GET THE BEST! GET FULNAME! THE FULNAME CO. CINCINNATI 6, OHIO 1031 N. Alvarado Street Los Angeles 26, California

and scoring are given as my responsibility, and I've described the main features of these arrangements in this article.

The house committee, the entertainment committee, the hospitality committee, the ninth hole refreshment committee (which also has the job of seeing that caddies get a bottle of milk free after the ninth hole), a liaison team of two members to pick up the loose ends that may show up during the tournament, the caddie committee, the Green committee and Art Asplund, course superintendent, all have their respective special jobs assigned in the letter which is signed by our president, John L. Bero.

Manager Joe Bida, with many house operating problems due to the large number of guests, gets the understanding cooperation necessary to fine operation, from the instructions issued.

This is a three page letter, too detailed to be given with this article. It leaves nothing to chance.

"OPERATION ZOYSIA"

(Continued from page 70)

of golf course supts. as professional men has surged forward. Green chairmen have evidenced great interest in the project and have given much credit to the organizations which fostered it.

Projects such as this one offer a new medium in which the golf course supts. and every person interested in turf has an equal stake. This project has drawn the members of the Mid-Atlantic Assn. much closer together because it gave every member an opportunity to take part in its establishment and will hold his close interest from year to year as he is called upon to give his opinion based on his observations of the progress. He will be asked for suggestions. This provides a