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# '38, YEAR OF THE "BIG RAINS"

By JOHN MONTEITH, Jr.

A S OUR northern courses are receiving their season's finishing touches before being put away for winter storage many a greenkeeper will give a sigh of relief as he realizes the past summer's worries are over. In many

sections of the country the damage to turf on golf courses has been more severe and more generally distributed than has been experienced for many years.

The entire story of greenkeeping experience during the season is by no means one of lost turf and general calamity, as many individuals have summarized it. From a constructive viewpoint the summer very effectively brought out several important weaknesses in greenkeeping practices and it is to be hoped that measures will be taken before the late experiences are forgotten. Advances were also made in the general knowledge of greenkeeping which, as usual, are difficult to evaluate until time furnishes further proof of their merit.

In summarizing greenkeeping difficulties for a season it is usually extremely difficult to designate any one factor as the principal cause of turf injuries in the several regions where extreme damage occured. The cause of the most extensive damage in 1938 can easily be summarized in one word—"rain." Many golf club officials throughout the East and Middle West learned, as they had perhaps never learned before, that the expression, "when it rains it pours," was no mere collection of words for advertising a table salt.

Excessive rains in the cooler seasons may do little or no damage to turf but during hot weather the results are usually disastrous. This year summer floods covered many fairways and putting greens with several feet of water which, in some cases, remained there for several days. Even without a deposit of silt, turf which was flooded was damaged to some extent, and in some cases practically all killed. Annual bluegrass appeared to suffer most, but Kentucky bluegrass also was badly injured. The bent grasses, particularly creeping bent, withstood the long immersion better than most of the other turf grasses. The performance of bent on fairways this summer in several sections of the country has aroused more interest in it for fairways. No doubt there will be a much more general use of bent seed for replanting fairways than in the past. This Golf course greenkeeping got a backhanded, though sincere, tribute because of one man's tough luck. Condition of the Germantown (Pa.) grass courts during the Davis Cup tennis matches was so bad that newspaper sports writers drew comparisions with golf greens and wondered why tennis couldn't employ the genius of men responsible for the fine grass on golf courses.

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is especially likely to be the case in low fairways subjected to flooding.

The recent hurricane resulted in much injury to turf on golf courses along the New Jersey and New England coast. This was primarily due to flooding or to the salt water spray. How much permanent damage has been done to turf by this means can not yet be estimated. Certainly the damage would have been much greater had it occurred in mid-summer. It is also safe to predict that the permanent damage to turf from the salt water will not be anywhere near as severe as many golfers have feared it would be.

#### Water-Soaked Soil Discouraged Root Growth

The damage to turf by excessive rainfall was by no means confined to areas that were flooded. Heavy and continuous rains kept soil saturated throughout most of the East and Middle West. Watersoaked soil discourages root growth, especially where it is packed hard by trampling or machines. Therefore, the turf on golf courses invariably had shallow root systems this season. Frequent rains with accompanying high humidity resulted in a soft, succulent growth of grass which was more sensitive to injury by diseases, chemicals, and the wear and tear of play. The shallow root systems and generally weakened condition of turf made it slow to recover from any type of injury.

In a season of heavy rain the defects of soil and air drainage are most noticeable. Even with the best of drainage in such a season there is likely to be damage from excessive moisture. However, where drainage is poor the harmful effects of too much water are exaggerated.

One of the outstanding developments of the season has been the extensive use of chemicals for the control of weeds. For a number of years there has been an increasing interest in tests with sodium arsenite, arsenic acid and sodium chlorate for the control of various weeds in turf. An article published in September, 1937, GOLFDOM summarized the observations of these chemicals up to that time. This

article apparently served to stimulate further interest in the methods of eradicating weeds with chemicals, with the result that during the fall of 1937 and this year there has been a surprisingly increased number of golf courses on which chemical weed killers have been used either in small test areas or on a large There have been many instances where a large acreage in fairway turf has been sprayed with chemicals. In many instances the putting greens also have been subjected to these treatments. The results obtained with these chemicals, in general, have been decidedly satisfactory. In many cases, as naturally could be expected, the results did not come up to expectations. In these latter instances the failures have been due to insufficient information on how to use them, while in many cases they have been attributed to expectation of something in the nature of a miracle which failed to materialize.

There are a number of cases on record where whole fairways have been sprayed with these chemicals with the result that such weeds as chickweed, speedwell, plantain and clover have been controlled or at least greatly checked without any loss of the permanent grasses. The discoloration of the fairways with these chemicals has been somewhat alarming to club members, but fortunately thus far no casualties have been reported among greenkeepers and green-chairmen resulting from the abuses to which they were subjected by club members who insisted on drawing their own conclusions as to what these "new-fangled" chemicals would do to golf courses.

#### Sprayed Fairway Slow to Show Results

To cite one case, the chairman and the greenkeeper conspired to spray one entire fairway which was considered by far the weediest fairway on the course. The treatment was made a little too late in the fall, with the result that the grass did not have a chance to recover from the treatment and was extremely slow in regaining its color in the spring. By early April in the locker-room of that club it would have been suicidal to even mention any possibility of again using chemical weed killers on that course. In a few weeks, however, the tide turned as this treated fairway gradually took the lead as the best fairway on the course. In the fall the chairman of the committee obtained considerable amusement from the numerous requests of club members for extensive spraying operations on the other 17 fairways.

The experience of the chairman mentioned was no doubt duplicated on many golf courses. Such experiences this season in various districts have given further concrete evidence that these chemicals have distinct merit in golf course maintenance. They also serve to indicate that the rank and file of golf members, abusive though they be at the time, are fundamentally interested in course improvement and are willing to tolerate (though not without comments) a temporary discoloration of turf in the interest of permanent turf improvements in the way of weed removal with the consequent thickening of the grass.

In the fall of 1937, in cooperation with the USGA Green Section, the Atlanta (Ga.) Athletic Club established a small turf garden on the East Lake course. In this garden several combinations of materials for improving the physical condition of the soil were put under test; also a number of the best of the northern putting green grasses were put on trial. The garden was well cared for and every effort was made to give these grasses a fair chance.

The prolonged rainy period during midsummer gave the turf garden a severe test but in spite of adverse conditions some of the bent strains continued to grow remarkably well. The results were sufficiently encouraging to justify planting a bent green in the fall of this year. In this green five of the most promising varieties of bent were used to try to determine which would be the most practical in that climate. The results obtained at the Atlanta garden can by no means be interpreted as proving that bent is practical for that district. The tests have clearly indicated, however, that bent is by no means as impractical there as has previously been supposed to be the case. Whether it will survive the more difficult tests remains to be seen but it must be admitted that it has given a good account of itself in the qualifying round.

If bent or any of the "year-'round" grasses should prove practical in the Atlanta district it would eliminate the need for the double greens for winter and summer play. At the same time it would provide a more desirable putting surface than has been provided by Bermuda grass. The continued success of the Atlanta experiments would no doubt have an important bearing on greenkeeping methods on

many Southern golf courses.

# COAST COSTS AT ALL-TIME LOW

## By ARTHUR LANGTON

Pacific greenkeeping ranks. Golf doubtedly better than they ever hav of grass cost in history, due to the demands of golfers for a finer golfing medium coupled with their reluctance to unloosen purse strings. As one greenkeeper pointedly remarked on the current situation, "Recession?" Say, we haven't got over the first depression yet!"

Definite progress has been made in turf technology during the past year, chiefly because of the necessity of providing better golf, even with cramped budgets, rather than as a result of research. For this reason, trends rather than developments are the order of the day.

California learned a bitter lesson from the unprecedented floods which swept

MORE golf course for the money seems to be the continued trend in Pacific greenkeeping ranks. Golf courses on the western shores are undoubtedly better than they ever have been, but at the smallest per-blade-

down from the mountains to valleys and the sea early in the year. But whether residents of the state will refrain from building golf courses, houses, or even towns on former waterways, no matter how innocent appearing or long unused, remains to be seen; but in the light of past performance an influx of new residents will build its homes and clubs in natural channels and hastily-filled waterways.

Even so, golf courses proved, that because of their widely-grassed areas, they could take a flood and protect the surrounding country from damage better than anything else. As a result a new



California terrain permits the laying out of spectacular holes, such as this beauty at famed Cypress Point, which uses the Pacific Ocean as a hazard on the right.

concept has sprung up as to the value of a golf course to a community in this district where sudden heavy rainfall is an annual threat. There was no damaging run-off from fairways and other heavily grassed-over areas. An example was a Bermuda-grassed, 120-acre golf course near Los Angeles which had an average grade of 5 per cent. After days of storm, 7 inches of rain were dumped on this course in 24 hours. While houses and lives were lost in the surrounding area, no damage was done either to the golf course or the property immediately below it.

The value of such a course to the community is tremendous and should be kept in mind by the local council when tax assessments are in the wind. So successful has grass been in counteracting the destructive force of floods that there is a possibility of large areas being grassed over in particularly dangerous spots for the purpose of making the water "walk down grade instead of run," to quote Henry Wallace. In which case the services of greenkeepers should be at a premium.

John Morley, a dean of American greenkeepers, was presented with a watch by the Ohio PGA at the Ohio Open championship. Morley celebrated his 71st birthday at the tournament, which was held at his home club, Youngstown (O.) CC.

Morley founded the National Association of Greenkeepers, now known as the Greenkeeping Superintendents Assn. John has spent more than a quarter of a century in golf course maintenance work and was one of the pioneer greenkeepers in promoting the coordination of science and practical work in greenkeeping.

The application of water during dry seasons has received considerable attention on the Pacific Coast from where many innovations in irrigation have come. Contending that the application of a small amount of water over a wide area over a long period of time will do more good to grass than a lot of water dumped on the turf in a short period of time, a manufacturer of sprinklers is developing a spray which will cover a wide area with a minimum volume. This system has the added advantage of not requiring large pipes and a series of laterals scattered around underground. This development is believed to have strong possibilities of adoption in the East on courses which have not gone to the expense of putting in a costly pipe system for the few months of the year when irrigation is needed, and where soils are such that a uniform watering system can be applied.

# Be Treated Differently

In California, however, it is difficult to prescribe a uniform method of treating even one fairway, let alone one golf course. The nature of the land is such that sands, loams, adobes, and clays are scattered around in glorious abandon in various combinations. Some courses have as many as 5 distinctly different types of soils to contend with, which demand different kinds of watering to obtain approximately uniform grass coverage. Nevertheless, the application of water more slowly and more evenly than has been the practice in the past may be the means of conserving water and growing more suitable grass. There is much

study that has yet to be given to this matter.

Manufacturers are beginning to do something about a situation of which the greenkeeper has been painfully aware for many years: that sprinkler parts are subject to a tremendous amount of hard usage and that unsuitable metals soon make an addition to the scrap heap. One company is using a bronze alloy which was designed as oil field tool metal which would not yield a spark. Chisels and hammers have been manufactured from it. which would indicate that a sufficiently tough sprinkler metal had been found. Non-corrosive steel has also been used in some sprinklers. Another improvement is the use of a metallic bearing to take the place of leather washers.

Another development which is casting its shadow before is the advent of a practical traveling sprinkler, one which will move in a straight line with a minimum of complications. The principal objection to this type of apparatus has been that it is too cumbersome to move readily. Advocates of the traveler maintain that this objection will be overcome by the fact that once the new machine is set it will move forward in a straight line without any further attention during the irrigation period. The outstanding advantage of the traveling sprinkler, of course, is that in moving in a straight line, it will water a fairway with a minimum of overlap, covering a stretch 400 ft, long by 150 to 250 ft. wide. This would demand fewer outlets and more simplified water mains than are now in use.

#### Seeding Becoming Most Popular

Concerning the seeding of bent greens, stolons are losing in popularity and seeding is gaining. A better textured green is claimed by the advocates of seeds. Furthermore, a seed green on the Coast can be made ready for play in just about the same length of time as a stolonized green. And, although the stolons do not require the elaborate soil preparations as for seeds, the seeds require only a fraction of the topdressing and care required by stolons.

As a tribute to the grass growers of Oregon and Washington, seed dealers report that more and more domestic bent is being purchased compared with the purchase of imported bent. They also report that the Czechoslovakian crisis has resulted in considerable doubt as to de-

liveries of seed from central Europe.

Fertilizing practices are far from standardized on the Pacific Coast, each green-keeper having his own pet ideas of turf feeding. However, most of them are agreed that high unit strength fertilizers are injurious in making over-developed grass plants which are more subject to the ravages of diseases. They also concur in the belief that it is better to err on the side of under-feeding than over-feeding.

#### Science and Golf Courses Work Together

Research which may have far-reaching effects on golf courses throughout the nation as well as affecting all forms of plant life is being conducted at Pasadena's famed California Institute of Technology. While this research as yet is far from complete and it is too early to make any definite announcements in regard to it, the principle being studied is the development of root systems by the application of vitamins. Working in conjunction with the Cal-Tech savants is a Southern California greenkeeper who is examining the possibility of using the vitamin substance to develop a healthy enough grass to resist the attack of brown-patch and other grass diseases.

Regardless of the results which may be achieved—and there is every reason to believe that they will be of far-reaching importance—this example of cooperation between science and the golf course is of significance that cannot be over-emphasized. A distinct movement toward larger and faster cutting units is also apparent. Power cutting green mowers are also becoming more popular.

The fight of greenkeepers against rodents and pests continues unabated, with honors just about even. The use of gas to control gophers and squirrels is being adopted more widely, as a more efficient gas is used for the purpose. Traps are still widely used because with them concrete evidence of their effectiveness may be obtained. And there is a certain sense of satisfaction to be obtained from seeing the troublesome critters caught. Various state and county bodies have adopted the use of thallium with wheat as a squirrel poison in eliminating the rodent over extensive areas. The highly effective procedure is to send a gang of men to fill in the entrances of all squirrel holes with dirt. A few days later when the "live" holes have been reopened, the poisoned wheat is placed at the entrances. This prevents wasting the wheat on "dead" holes, or those not being used at present.

The sod webworm has increased its inroads on California golf courses, probably because the life cycle of the insect has been increased by warm weather and irrigation, thus making for several crops a year of the pest. Local greenkeepers owe much to Roy Campbell, entomologist for the Department of Agriculture, for his introduction of the dichloro-ethyl ether treatment, and also to Prof. Ralph H. Smith for his work in outlining the life history of the bug and methods of eradicating it. Golf course superintendents have been in considerable demand by owners of fine lawns who have been seeking advice on how to get crambus leachella out of their turf.

As for the greenkeepers themselves, a few are finally begining to impress the golfing public with their importance because they have taken the first and most important step in this direction: they have come to realize their own importance. This has given them a new confidence and a new esteem in the eyes of the golfing public.

Annual Massachusetts State College Greens Course to Open Jan. 3

MASSACHUSETTS State college's 13th annual school for greenkeepers will open January 3, 1939, and conclude with an exhibition on March 10-12.

This course, the oldest of its kind in the country, was established by the short course dept. of the college in January, 1927. Professor Lawrence S. Dickinson was the founder and is the director. That the school has been successful is seen from the fact it lists among its graduates many now in charge of nationally known golf courses. Students have enrolled from 19 states, 3 provinces of Canada, and Bermuda.

As the full course requires 10 weeks, it has generally been found a certain number are unable to get away for the full time and therefore cannot take the course. To accommodate these men, the course this year will be divided into two terms of five weeks each. A student can take the first term in 1939 and the second in 1940 or later, but no certificate will be awarded until work is completed in both terms. No student will be admitted to the second term who has not completed the work in the first.

It is hoped that this division of courses will enable many more clubs to pay their greenkeeper's expenses, and by so doing make an investment that will pay high interest in better management of the golf course and better golfing conditions.

Enrollment in the course is limited, and preference is given to greenkeepers and their assistants. No one not familiar with the game of golf or not having knowledge of greenkeeping will be admitted.

Botany, entomology, water systems, drainage, equipment, grasses and turf culture, cost-keeping and analysis, managerial problems, soils, and fertilizers are subjects studied. There is also a daily forum or summary hour.

In addition to the resident staff of the college, Prof. Dickinson will be assisted by Carleton E. Treat, greenkeeper, Montclair CC, Upper Montclair, N. J. This will be Treat's fourth year at the school.

Tuition is \$5.00 a term, registration fee, \$2.50, and health fee, \$1.50 a term. Good board and room can be obtained from \$10 per week and up. Further information and application blanks can be obtained from the Director of Short Courses, or by writing Prof. L. S. Dickinson, M. S. C., Amherst, Mass.

Rutgers Short Course, Feb. 13-18—Annual short course in turf management at Rutgers university College of Agriculture, New Brunswick, N. J., will be held Feb. 13-18. This course is one of the older ones on the winter school schedule and is highly endorsed by greenkeepers who have attended it.

For complete details of the course write Prof. Frank Helyar, Rutgers U., New Brunswick, N. J.

SHACKAMAXON CC has an inside organization known as the Chickadees, who play throughout the winter. The Chicks become active two or three weeks after the regular tournament schedule ends.

Each week during the Chick schedule there are two prizes for low net scores and players are permitted to play as many times as they desire during the week. Winners each week are disqualified from winning additional weekly prizes although they are eligible for numerous season prizes. There also is a handicap championship tournament to determine No. 1 Chick.

# WHY APPRAISALS?

By FRED A. BEILMAN\*

IT WAS not until 1927 that country club managements generally became cognizant of the many benefits that accrue from a certified appraisal, and it has only been in the last several years that appraisers have been engaged

very extensively for making appraisals of country clubs. A certified appraisal is an accurate, authentic, impartial itemized statement of the value of all physical assets based on replacement costs less actual accrued depreciation, as of the date of the report. It is put in book form and so classified, indexed and arranged that instant reference can be made to any one item or totals by floor or building, as may be desired.

The report is generally prepared in triplicate, the appraisal company retaining the triplicate copy together with all original field notes and sketches in its vault for the further protection of its client in case the two copies delivered become lost, destroyed or mislaid. A map of the properties is furnished with the report if buildings are included in the appraisal. This map is drawn to an appropriate scale showing type of construction, height, kind of roof, size and location of the various buildings, fences, walks, parking lots, stand tanks, platforms, etc. Such an appraisal provides the client with authoritative values and drawings and insures a safe and sure basis for the correct placing of fire insurance in compliance with coinsurance or other specific clause requirements and prevents over-insurance as well as under-insurance.

In the event of fire or other insurable catastrophe, it provides the client with an accurate proof of loss to be submitted to the adjuster, and assures prompt and satisfactory settlement to both the insured and insurer.

Capable adjusters of today will not accept any appraisal, regardless of the standing of the company that made it, without first checking and satisfying themselves that the report was prepared by an appraiser or appraisers thoroughly experienced in their profession. An ap-

\*Sec'y-Treas., Smith, Beilman & Gutgsell, Inc., Engineers and Appraisers. praisal is only as good as the experience of the men that made it.

Country club appraisals, consisting of numerous classifications as clubhouse furnishings, linens, china, silverware, glassware, uniforms, etc., require appraisers who are thoroughly experienced and who have specialized in this type of report.

For instance, there are certain classifications in a manufacturing plant that are set up under the heading of Equipment, (mechanical), whereas these same classifications in an appraisal of a country club are shown as building appurtenances under the head of Buildings; thereby effecting a saving in insurance premiums, because policy requirements for clubs are different than for industrial properties. Also, an experienced appraiser of country clubs will show an accurate, detailed description on every piece of furniture, linen, rug, china, silverware, etc., which, in the event of being totally destroyed by fire, proves to the insurance adjuster that the value shown in the appraisal is correct for the items as described.

If an appraiser lists, "One 6-ft. upholstered sofa, value \$225," the adjuster would question this value because he could buy any number of 6-ft. upholstered sofas for considerably less than \$225. However, if the sofa was described correctly in detail, giving the kind of covering such as mulberry glazed percale, the kind of cushions stating if they were reversible, and had coil springs, whether the arms had coil springs, kind and style

At last there's a golf course where you're bound to be in Luck with every shot. Luck, a village of 700 inhabitants in northwestern Wisconsin, has opened a 9-hole course, W.P.A.-built. The course is laid out on 72 acres bordering Big Butternut lake from which the green and tee water supply is secured. Tom Vardon designed the course. It is interestingly trapped. Kenneth Graves, formerly at Hillcrest and Keller courses in St. Paul, is supt. A municipal recreation ground and tourist camp adioins the Luck course.

of frame, etc., the adjuster would know immediately that the item was valued correctly; and that the report was no doubt compiled by one who knew his business. After some further examination he would undoubtedly accept the complete appraisal without further delay.

On the other hand, if he found meager descriptions that did not permit a fair judgment of the values shown, he would be justified in assuming that the information furnished was inadequate to support the values shown and reject the appraisal, requesting the insured to get up a correct and detailed proof of loss. This would cause considerable delay, dispute and expense.

## Quick Payment for Loss Is Advantage

It is not only the amount of insurance you collect, but the promptness in securing settlement that measures the actual cost of a fire. There is no single thing that could work such a hardship as an inadequately covered insurable loss or a long, drawn-out arbitration of such loss in the absence of indisputable proof and itemized records.

It is very important that the club officers and directors know the exact value of the club's physical assets as they are responsible for the safe and economic management of the club properties during their tenure of office. They should be able to show at any time a complete list of all permanent items of furniture, linens, dishes, silverware, golf course equipment, etc., not only for insurance purposes but also to submit to the incoming administration for its examination and for its record. A certified appraisal not only furnishes this information, but it also shows the worth of the property, establishing net insurable values in accordance with co-insurance or other specific requirements of existing insurance policies, segregating or dividing values in different locations and groups which take various insurance rates, in order to obtain the maximum amount of insurance for the minimum premium.

The most difficult part of an appraisal, one that requires intelligence and experience, is the determination of the actual amount of accrued depreciation. The factors entering into this depreciation are so many and varied that ordinary bookkeeping is inadequate to depict conditions accurately and fairly. The life of every

Less liquor is consumed at country clubs since repeal, according to observation of W. C. Poertner, general mgr. of Winged Foot. However, bar sales at Winged Foot this year are about 1/2% ahead of 1937. Food sales are about 9% higher.

Switch of liquor supply from the bootlegger to the purveying authority responsible for country club selection of liquor stocks has had an effect in reviving the attention of members to fine cuisine, Poertner says.

Intoxication of members and quests, a serious problem for managers during prohibition, now has been reduced to a minimum.

item of physical assets (buildings, furniture, and other equipment) is dependent upon one or all of the following factors: wear and tear; deferred maintenance (neglected repairs); age; inadequacy; and obsolescence. Before arriving at the amount of actual accrued depreciation, consideration must also be given to the amount spent for maintenance and repairs, the construction, nature and present condition of the buildings and equipment, production rate, excessive and peculiar use of certain equipment, idle periods of the property in question, etc.

### Importance of the Co-Insurance Clause

Many executives buy fire insurance without knowing just what their obligations are in connection with the co-insurance clause. The most important danger in co-insurance lies in ignorance of the value of the property destroyed.

After a fire occurs, it is not the friendly insurance agent, to whom you have been paying the insurance premiums, that settles or estimates the amount of your damage; but an adjuster who possibly you have never seen before, who is only interested in arriving at the value of the property in strict accordance with their policy provisions.

Do not mistake these remarks to infer that the insurance companies have any desire to avoid paying for losses that can be clearly proved. Their business is the payment of losses in accordance with their contract.

As an illustration of how the co-insurance clause operates, let us assume that the book accounts show a net insurable value of \$200,000 and under an 80 per cent co-insurance clause insurance is placed for \$160,000. A partial loss of \$90,000 occurs. If the insured can prove that the \$200,000 net insurable book value is ac-