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The British Golf Greenkeeper

HON. EDITOR: F. W. HAWTREE
No. 345 New Series FEBRUARY 1974

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Front Cover Picture

Photograph of A. F. Trenchers ‘G’ Series Scoop Trencher fitted with soil conveyor excavating 2” wide trench and loading soil onto Tractor Trailer.
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A Public Enquiry in Torquay last week produced 1,547 signatures in favour of a new site for the Churston Golf Clubhouse. The present Clubhouse is on the edge of the main road between Paignton and Brixham and widening will remove more than half of it.

The new site will be magnificently situated with glorious views over Torbay but has to be approached through a conservation area. Hence the enquiry.

The Executive Committee will be meeting in Birmingham on March 23rd. One of the subjects under discussion will be the replacement for Mr. Dix who expressed his desire to retire over a year ago. In view of the resistance in certain Sections to subscription increases last year, it is difficult to see how the job can be made attractive to anybody lacking the dedication and public spirit of our present Hon. Secretary.

Talking to Donald Harradine from Switzerland the other day we gather that his European Greenkeepers’ Association’s visit to St. Andrews this year is well supported and he anticipates a plane load of 100 or more.

The Editor is going to the American Golf Course Superintendents’ Association Conference and Exhibition at Anaheim and hopes to have discussions on international co-operation to the mutual benefit of Greenkeepers’ Associations. He will be going on to Australia and New Zealand and meeting Greenkeepers in both these countries for further discussions. He is looking particularly for new ideas on training.

Recent articles by golf correspondents in the press have taken up this Association’s plaintive cry over the last four or five years and it seems likely that money and help will be forthcoming at last.

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February
INTRODUCTION TO AUTOMATIC WATERING

R. W. SITWELL

Watermation

(Continued from February issue)

To control when and for how long the sprinklers are to operate, some form of automatic valve and control system is required. There are automatic valves available that operate either electrically or hydraulically. Both these are controlled from a programmer which has the following features:

1. A clock easily adjusted for cycling the system daily, or every other day as required, over a weekly or 2 weekly period at any time during the day or night.

2. Sufficient number of stations so that the valves used need not be ganged together and can be operated independently of one another.

3. A sequence timer with a variable time that can easily be adjusted from a minimum of 5 minutes to a maximum of 60 minutes per station. The sequence time to be so arranged that each station can be timed independently.

4. A semi-automatic performance so that the watering cycle can be started without disturbing the clock setting, thence progress through each station in sequence with automatic shut off at the end of the cycle.

5. Switch or other form of selector for manual operation of each circuit at random or in sequence independent of the automatic valves.

And

6. In the case of hydraulically operated valves which are normally open, a safety device to shut off the system in the event of a power failure.

Generally the operation of an automatic valve which is electrically operated is similar to a valve which is hydraulically operated. The disadvantage of the latter is that it is expensive to install as a small bore tube has to be laid between each valve and the controller. With an electrically operated valve a pair of cables is all that is necessary. A further possible problem is that the controller for an hydraulically operated valve contains water and electricity in one cabinet and in the event of a major leak in the hydraulic system a potentially dangerous situation can arise.

The valves used in these systems need to be carefully selected. With any valve a very quick closing action should be avoided as this is likely to cause stress in the pipelines due to surge pressures. A majority of automatic valves are of the diaphragm...
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type and here again care in selection is imperative as in certain cases the flexible portion of the diaphragm is subjected to the full system pressure. Although it will have been designed for this condition, the additional stress to which it is subjected in cases of surge may cause the diaphragm to rupture in which case water is continuously leaked from the system.

With electrically operated valves it is imperative to ensure that the solenoid is designed for underground operation where it may be buried in wet or damp soil. Its coil winding must therefore be watertight and to achieve this they are usually impregnated and potted in epoxy resin.

System Design

Before commencing on the design of any system it is essential that a survey should first be carried out. Assuming only greens and tees, or just greens, are to be watered then it is necessary to measure each area to determine the number and size of sprinklers required. Most sprinklers are available with different nozzle sets which given different ranges and precipitation rates. It is therefore suggested that when examining the areas to be watered one should decide the maximum as well as the minimum requirements in respect of each so that should the conditions vary when the installation is carried out the system allows sufficient margin to cater accordingly. Although the size and shape of each green or tee will to some extent determine the sprinkler requirements there are cases where slope will play an important part, for example, if a green has a distinct slope it may be necessary to deliver a different quantity of water to one side than the other. In this case the sprinklers on one side of the green should be controlled from a separate valve to the sprinklers on the other. Alternatively if it is decided that the green can be successfully watered by running three or more sprinklers simultaneously then differing nozzle sets may be necessary to overcome the different contours.

Pipe work

Having determined the sprinkler requirements at each area it is then necessary to design a suitable network of pipelines. Although these will be determined to some extent by the nature of the ground, density of wooded areas, etc., it is essential that the sprinkler flow and pressure requirements at each green and tee be the paramount factor in finalising pipe routes. An accurate drawing of the course is therefore essential as very few systems can be designed by just walking round the course and taking a few measurements. A normal approach is to mark on a course drawing the sprinkler requirements as well as the height of each area above mean sea level, i.e. the OD level.

Pumping

As it is not permitted to install a pop-up system in this country which is directly connected to the Water Board supply it is necessary, assuming no natural sources are available, for the water to pass through a break tank and then be boosted through the system. The site of the break tank and pumping equipment on many installations is governed by the availability of water and electricity supplies. This should not however be allowed to be the paramount consideration as in many cases both services can be supplied to a site which will offer ideal hydraulic conditions for the system. To achieve this the tank and pumping equipment should either be placed at the centre of the pipework network or at the highest point on the course. By adopting this procedure the system losses can be kept to a minimum which will result in the pump power requirements being kept down; thus saving capital as well as running costs.
Having decided upon the site for the pump and break tank and therefore normally the control equipment it is a straightforward matter to calculate the losses in the system until one is left in the position where it is known that a pump that will deliver \( x \) gpm against \( y \) feet head will meet the system requirements. Knowledge of pumping equipment and what is available from which manufacturer is now essential as the success or failure of the system can hang on the correct selection of the pumping plant. The final procedure in the design of a water system is the signal cable layout which involves following the pipelines, the cable and pipe being laid simultaneously. However, in a similar way to water flowing through pipes, there is a loss as electricity flows through cables. In order to ensure that there is sufficient voltage available at each solenoid it is often necessary to make adjustments to the cable network.

If the system is to include approach watering then allowance must be made for one or more sprinklers which can either be run concurrently with the sprinklers around the green or can be operated from their own control valve.

If fairway watering is also necessary then the fairways should be shown accurately on the drawing and then depending upon the width and degree of watering required, the number of sprinkler rows on each fairway must be settled. In this country a single row should be quite satisfactory but in hot and tropical climates two, three or even four rows may be required.

In designing any system the fewer the number of sprinklers operated at one time the greater the degree of control which can be obtained. The designer in deciding how many sprinklers can be operated simultaneously has to weigh up the relative merits of separately valved sprinklers to meet the watering requirements against the capital cost involved. A system with each head separately valved, whilst offering precise control, would cost up to twice that of a system which is conventionally valved, i.e. 3, 4, or 5 sprinklers operating simultaneously. When analysing cost against efficiency it becomes quickly apparent that on a financial basis such an arrangement could not be justified.

**INSTALLATION**

**Method of Pipe Laying**

Until fairly recently all pipes were layed in open trenches. In the very early days these were all dug by hand but in recent years more advanced techniques have been developed.

The most common machine being the J.C.B. or heavy tractor with front or back digging machine. These machines have the disadvantage of being slow and untidy, the narrowest practical trench width being about 12".

More recently chain diggers have been developed which will cut a neat 4 to 8" wide trench to a depth of up to 3 feet. These are either self driven on tracks or wheels, or contain a built in winch from which traction is obtained. These machines will handle most ground conditions including chalk and gravel, but when it is required to trench in rocky ground a heavier type chain is required. This chain has the digging teeth replaced by small percussion hammers. This type of machine has been successfully used in ground which contains rocks which easily shatter. When it comes to hard work such as Bath stone and the like, it has been found that this can be neatly trenched by using a very recent development which is the earth saw. This was originally designed for cutting narrow trenches quickly and neatly across motorways and the like.
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It has a large wheel which revolves at high speed and has a large number of small percussion hammers, which are similar to those used on the rock chain. The only disadvantage of using any of these machines is the relatively high maintenance costs. In addition, after cutting the trenches the bottom must be levelled and any sharp objects removed. If the pipes are to be laid in very rocky ground it is essential to ensure that at least 2” of sand or graded soil is laid under and over the pipes. To safeguard the pipe and control cable it is advisable to allow the back fill to settle over a period of several weeks. Whilst it is appreciated that the ground staff will want to effect reinstatement and re-seeding as quickly as possible, the tendency to roll and ram down trenches should be avoided as any unevenness in the trench bottom will result in fractured pipes.

Moling in
Understandably the cleanest and quickest method of laying pipes is by mole plough. There are a number of sophisticated machines on the market which employ a four wheeled drive vehicle with a vibrating plough mounted on the rear. The only disadvantage with this method is that on wet or soft ground the vehicles may develop wheel spin and tend to slough about. This is particularly noticeable when this machine is called upon to lay pipes of 2” or larger diameter at depths in excess of 2 feet. The alternative, particularly on hard or heavy ground, is the mole ploughing technique of using a heavy tractor fitted with a winch and a separate mole plough which is simply pulled through the ground. Mole draining has been practiced for a number of years and the mole plough used is straight adaption. To pull in the pipe an expander, of larger diameter that the pipe, is attached behind the mole with the pipe clamped behind the expander and then pulled in behind the plough.

The control cable should always be fed in from the top, down a cable shoot so that it is laid. If pulled in behind the pipe the resulting tension in the cable can cause breakages as the cable expands and contracts with variations in temperature. This will particularly apply if cable is laid when the ambient temperature is extremely high, for once winter sets in and the ground freezes the cable will start to shrink. If the cable is laid taut in the ground there is a likelihood of fractures resulting.

Materials and Joining Methods
Water pipes can be categorised into three main groups, namely metal, cement and plastic.
In the metal group are:
- galvanised steel
- cast iron
- stainless steel
- copper
Of these 4 galvanised steel is the most commonly used today. Its great disadvantage is its almost unpredictable life expectancy which varies according to soil conditions and water hardness. The latter being the predominate hazard due to the build up of deposits which restrict the flow and after a number of years can result in the system pressure being insufficient to operate the sprinkler system. An acid soil will attack the outside of the pipe and the corrosive effect can cause failure after only two years in service. Generally, however, a life of up to 25 years can be anticipated. The handling of this type of material is very often difficult because of its weight, particularly in the larger sizes. Jointing is achieved by threading and it is of course where the pipe is threaded that the protective galvanised coat is destroyed and corrosive attack occurs.
Cast iron pipes are now very much out of fashion because of their weight and difficulty to joint, as well as of
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course the expense of casting. Jointing is achieved by either flanges or collars which are leaded on site. The latter being a technique which requires a great deal of skill only practiced today by a limited number of plumbers.

Stainless steel and copper, whilst having extremely good corrosion resisting properties can be virtually discounted due to their extremely high cost.

The second group is cement, which is a pipe manufactured from cement, asbestos and silica. The smallest diameter available being 4" and thus it is not frequently used. It is joined by using compression couplings with rubber ‘O’ rings, alternatively it is supplied with spigots and sockets which are cemented together. The latter material necessitates the pipe being held rigidly in the trench and thus on sizes below 6" it is not recommended. The compression fitting will allow a deflection of 3 to 5 degrees which will provide ample flexibility for soil movement, also contraction and expansion. Of course with the cement joints expansion and contraction has to be allowed for.

The final group is the plastics, which comprise the most common in use today. There are three types in this group, namely polythene. Acrylonitrile-Butadiene-Styrene (ABS) and Polyvinyl Chloride (P.V.C.).

Polythene was until recently commonly used as it is extremely flexible, being supplied in coils of varying lengths, thus requiring a minimum of jointing and being easy to mole plough. Its other great advantage is excellent impact strength and a great immunity to rupture from freezing. The disadvantage is however the difficulty to obtain sound jointing as a compression fitting is required with insert. The problems arise when the pipe is put under pressure because any deflection in the pipe will tend to pull the joint apart. A further disadvantage when used on turf watering systems is that its flexibility makes it difficult if not impossible to do a workmanlike job when fitting sprinklers, as its tendency to move results in the sprinkler leaning or rising in the ground so that it fouls the mower.

ABS is finding popularity in the plumbing and ventilating industries as being manufactured from materials used in the production of synthetic rubber it has excellent chemical and physical properties. Namely it is heat resistant to a low extent and has a fairly high resistance to chemical attack. Jointing is by solvent weld, or in the case of thick walled pipe, threading.

The final and most commonly used type is P.V.C. This is derived from coke, lime and salt. It is undoubtedly one of the toughest and most durable thermoplastic pipe made, primarily because of its higher strength and resistance to a greater variety of chemicals. It has been in use since 1940 in various forms, particularly when a plasticizer is used, which results in a flexible end product such as hose. When manufactured as pipe an unplasticized compound is added resulting in a semi-rigid end product. Jointing is achieved by solvent weld or in the case of thick walled pipe, threading.

The solvent weld should always be done when the pipe is both dry and clean. If necessary, the pipe and fitting should be cleaned with a thinner, or rubbed thoroughly with an abrasive cloth. The solvent should then be applied to the pipe spigot, then the fitting and finally to the spigot for a second time. The two should then be pushed together firmly and held for at least 3 minutes. The solvent should be applied evenly and with a thin coat. Too thick a coat will weaken the pipe. Any surplus solvent should be wiped from the pipe. The pipe should then be left to lie undisturbed for at least 30 minutes and in the case of 2" and above, pressure should not be placed on it for at least 24

Continued on page 19
Significant savings in labour and water consumption have resulted from the installation of a fully automatic irrigation system at Aspley Guise and Woburn Sands Golf Club. The installation was designed and installed by Robert Sandow (Calf Glade Ltd), using Rainbird equipment supplied by Plastic Tube & Conduit Company Limited.

The course at Aspley Guise has considerable variety in height and soil types ranging from sand to clay. These differences have meant that in the past staff have had to work virtually during the night during the summer to ensure that the correct amount of water has been applied to each green, without disturbing play.

Now the system can be set to operate daily or as infrequently as once a fortnight and left to carry out irrigation completely automatically. This is achieved by the use of a RainClox 8 controller, which can handle eight stations, switching on when required, for a pre-set period, on the days which have been chosen over a 14-day cycle.

Each station is completely independent so that the requirements of each area can be catered for separately. The automatic control can be overridden if necessary, should there be a significant change in the weather.

The water is distributed through a uPVC pipe system from a reservoir at the highest point on the course by a 25 h.p. motor which ensures delivery of the correct amount of water at the required pressure to each green. Each green has four RainBird pop-up impulse sprinklers pre-set to oper-
ate only over the sector of the circle which covers the green. Each sprinkler can apply up to 5 gal/min, with a throw of 50 ft.

Cooper, Pegler & Co. Ltd., announce that because of increased demand for the “C.P.3” 4-gallon Knapsack Sprayer it has become necessary to expand their production facilities, and offices, warehouse and works are now being extended to enlarge the premises by about 80%. It is hoped that this extension can be brought into use early in April 1974.

Chelwood Tool Company design and manufacture Rakes for specific purposes. A Greenkeeper’s Bunker Rake, for Golf Courses is designed to give the correct depth of loose sand in the Bunker. It is 28” wide, has eighteen teeth and it catalogued as No. 18S.

The Rake listed as 27L is suitable for cleaning the Bunkers and drawing the loose sand up the sides of the Bunkers.

The No. 6M. Rakee is a one handed free standing Member’s Rake which received an award for the Best Introduction at Motspur Park 1973.

Richmond Gibson Ltd., of Grantham, Lincs. have added two towed Driftmaster units to the original three hand models they manufacture. The smaller TD 36 is based on the M 36, and has a three foot roller and a tank capacity of 5 gallons. The TD 100 has a 22 gallon tank and the rollers are adjustable between 81” and 105”. The TD 100 can be towed by both mini tractors and agricultural type units. As an optional extra a set of road wheels is offered for ease of transportation between locations.
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Eire – ICI (Ireland) Ltd., 5/9 South Frederick Street, Dublin 2.
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The British Golf Greenkeeper
hours. After joining it is advisable to leave the pipe in the air to dry for at least 4 hours, as burying too soon has on occasions resulted in the pipe failing after a year or two in service.

The solvent when applied correctly attacks the pipe and causes it to melt. When two 'melted' areas come into contact and are allowed to set, the resulting weld should be the strongest section in the pipe as it has double wall thickness.

Control Cable Installation

The control cable is normally installed with the pipe, either by mole ploughing or by trenching. Due to the high coefficient of expansion of copper it is essential that the cable is not pulled tight, but is left with expansion and contraction coils. When jointing the cables, care must be exercised to ensure that the joints are watertight and that there are no leakages to earth.

Although solenoids used on irrigation systems are rated at 24 volts and require a current varying between ¼ and ½ amp, it is advisable to check and recheck the joints to ensure that the resistance is minimal.

Control Installation

Following on from the cable installation comes the installation of the control equipment.

In addition to the irrigation programmer the installation also requires a pump starter, which is controlled from a signal put out by the irrigation programmer. It is also essential that a mains fused switch is incorporated in the circuit so that all the control equipment can be isolated for maintenance.

Finally it is essential to bear in mind that in any pump house, there is an abundance of water and that this coupled with electricity can be lethal; thus always ensure that each component is properly earthed.

COMMISSIONING

After the system has been installed and before the sprinklers are set in operation it is essential that all the pipelines are thoroughly flushed of all stones and other matter. The more thorough the flushing the less trouble with blocked sprinklers will result during the commissioning period.

In general the commissioning should be carried out in close collaboration with the Green Keeper who will be responsible for running the system as it is during this period that invaluable experience can be obtained. Commissioning should not just mean running the system to ensure that it works, but also checking the coverage and precipitation on each irrigated area because although nozzle settings to meet the original survey notes may have been installed, a final adjustment is often called for. Commissioning may therefore need to extend over a period of one or two weeks, so that an accurate assessment of precipitation patterns can be made prior to the system being handed over.

SERVICING

In general the system should require a minimum of service.

The Green Keeper should ensure that the grass around each head is kept well trimmed to avoid interference with the jets.

On a new installation the turf may settle after the installation has been completed and if necessary the level should be made up to ensure that the sprinkler head will not foul the mowing machine.

With sprinklers of the impact type a regular check should be made to ensure that there is not a build up of sand, etc., in the casing which can damage the bearings.
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The British Golf Greenkeeper
If pumps are fitted with packed glands and grease nipples then maintenance instructions as issued by the pump manufacturer should be complied with. Generally, attention at the beginning of each season should be all that is required.

To ensure correct watering times are set for the system it is often a good idea to examine core samples taken from the irrigated area at regular intervals to ensure that the field capacity is being maintained and good root depth is being maintained.

At the commencement of each watering season it is recommended that the system should be started manually and set to run for 3—6 minutes per green. The sprinklers should then be observed to ensure that they operate correctly.

Any malfunction of the sprinklers can normally be attended to by the Greenkeeper, assuming suitable spares are held in stock.

Any malfunction of electrical equipment should be reported to the installer for attention.

Appendix

In order to limit sprinkler overlap and therefore avoid saturating the centre of a golf green, a long range sprinkler will be an advantage as fewer sprinklers can be used to obtain total coverage. 4 or 5 sprinklers each arcing over the same area will inevitably result in higher precipitation at the centre of the green than will be obtained from 3. The other areas of the green being covered by the arcs of 2 sprinklers only.

---

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Take your power with you. An Andrews generator gives you instant, economical power at the pull of a cord. These portable generators come in no less than 7 different sizes to answer your power needs. Every unit is built to the same sturdy specification for trouble-free performance anywhere, anytime.

‘CYCLONE’ SPREADING POWER
The most powerful spreader on turf now comes in three sizes. The ‘Standard’ covers 120 sq yards in one minute. The ‘Compact’ is ideal for larger lawns. Designed for easy towing behind any ride-on mower. The ‘Major’ is the really big one. Its giant 10 ft. swath gives you a two acre per hour performance!

FLAIL-SAFE WITH BLUEBIRD
‘Bluebird’ is the most powerful scarifier on turf. Its strong, almost maintenance-free, 5 h.p. engine flails out grass cuttings, twigs, leaves and lawn-stifling thatch. The result—an immaculate sward. It’s certain to be our ‘Best Buy’ in ’74.

BILLY GOAT EATS RUBBISH PROBLEMS
‘Billy Goat’ has an insatiable appetite for rubbish. No special diet, this machine picks up leaves and grass cuttings, plastic cups, newspapers, cans and even bottles—then reduces all to a mere fraction of its original size and holds it in a huge dust-free bag ready for disposal!

The “Yazoo” Master Mower is being added to the Norlett Professional range of mowers, ride-ons, and cultivators. The “Yazoo” is a one man, one mower machine, and is intended for use on golf courses, and anywhere there is a large expanse of grass to be cut.

One feature of the “Yazoo” is that it will mow round trees, poles and other protruding obstacles, mows cleanly under guard rails and hedges as well as overhanging trees. It can also deal with vegetation around lakes, ponds and rivers, due to the front mounted cutter unit.

The “Yazoo” has a front wheel drive with rear wheel steering, giving good manoeuvrability. It is available in four versions, namely the 42” and 48” with Briggs and Stratton 16 h.p. engines, and 60” with 12.5 h.p. and 18 h.p. Wisconsin engines respectively. This mower has been designed to cut time spent in mowing as well as reducing the cost of maintenance and repair and is fitted with heavy duty automotive type transaxle drive.

The recommended retail prices for the “Yazoo” are: The 42”, £1,035., the 48”, £1,130., the 60”, £1,310 and the 76”, £1,710.
NEW! This Toro 'pop-up' sprinkler disappears below ground after watering. Its fully retracting head protects against damage by mowers or vandals.

The 18th at 5:30 am!

(It could be St. Andrews, Troon, Sunningdale or your club...)

Toro 'pop-up' sprinklers water greens, tees and fairways through the night, automatically. Day time stoppages are eliminated, courses play consistently and of equal importance, greenkeepers can concentrate on other more demanding work around the course. Consider these benefits then ask Wright Rain to design a Toro 'pop-up' scheme for your club!

Write for details and the name of your nearest appointed installer now...
### CHESTERTON COUNTRY GOLF CLUB

#### HEAD GREENKEEPER

required for new Course opening in May 74. Must be able to take complete charge. All latest machinery Ransome Triplex etc. Pop-up Sprinklers to all Greens automatically controlled. Excellent wages and opportunity for man with ambition.

Please reply to: The Secretary, Chesterton C.G.C., Bicester, Oxon.

### ASSISTANT GREENKEEPER

required for Denham Golf Club. Unfurnished cottage provided. Rent, rates, lighting and heating free. Salary from £24.50 weekly. Apply, stating experience, to:

The Secretary, Denham Golf Club, Tilehouse Lane, Denham, Bucks. Tel: Denham 2022.

### ROYAL PORTHCAWL GOLF CLUB

#### THE CHAMPIONSHIP COURSE OF WALES URGENTLY REQUIRE

an enthusiastic energetic and capable replacement HEAD GREENKEEPER.

Experience in seaside LINKS maintenance Essential.

TO START AS SOON AS POSSIBLE

The man chosen need not necessarily be a HEAD Greenkeeper now.

Realistic wage and a house for the successful applicant.

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CAN TRANSFORM
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DEEP AERATION OF GREENS
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The British Golf Greenkeeper
Special Occasions

Mar. 4 North West Section Lecture Synchemicals (Mr. Fairhurst) Subject "Fungi" Place—Swinton Park G.C. Time 7.30 p.m.

6 Southern Section Lecture.

15 Midland Section Dinner/Dance Sutton Park, Sutton Coldfield.

19 East Midland Section—Film Show/Lecture.

22 South Section Annual Dinner/Dance.

April 3 Southern Section Lecture.

18 North East Section, Spring Competition Venue—Berwick (Goswick) G.C.

May 2 Midland Section—Annual Spring Tournament. Robin Hood G.C.

15 East Midland Section—Spring Tournament—Longcliff G.C.

15 Southern Section—Spring Tournament.

16 North West Section—Spring Tournament, Dean Wood G.C.

June 5 Southern Section Annual General Meeting.

Sept. 6 Southern Section, (Fri.) Dinner/Dance—West Essex G.C.

Southern Section


March Lecture
This will be a talk on the A34 Kentucky Bluegrass and Ben Warren, over on a short visit from the States, will be talking about the quality, performance and cultivation of this remarkable grass and he will be using slide projection to emphasise various points. 6th March at 6.30 p.m.

Bert Jennings of Flymo Ltd., who was to have been with us on that date will now be talking to the Section on Wednesday 3rd April. Bert is attending the G.C.S.A.A. Convention in California and has promised to extend our regards to all our friends over there and bring back some pictures which he will be showing as an added extra on the same evening.

Annual Dinner
The afternoon game will be 4-ball better-ball Stableford with members and their partners arranging their own fours. Score cards and other details from appointed official on arrival. Also on arrival, please notify Steward if lunch or sandwiches are required. Sweep 50p per competition.

Spring Tournament
The venue for the above is The Home Park Golf Club, Hampton Wick, Kingston-on-Thames, on Wednesday 15th May. There are no Entry Forms, Members to write in to me.
stating in BLOCK LETTERS, name, Club, H'cap and if requiring a late start.

New Members and Members who have not previously played in a Section 36 Medal will play in separate First Year Competition off Scratch and include with their entries three cards signed by their Artisan or Club Secretary. Closing date—Monday 29th April, and entries will be accepted from paid-up members only.

Bill and Mary Mason

Congratulations on your Diamond (60 years) Wedding Anniversary and best wishes for good health and many more happy years together, from all your friends in the Association. Bill was Secretary and Treasurer of the Southern Section for 33 years.

New Members

A warm welcome to the following:–

Midland v Southern Match

This is a 12-a-side match and has been arranged to take place at the Crews Hill Golf Club on Wednesday 3rd July. Anyone who would like to represent the Southern Section, please contact.

Subscriptions

There is still a large number of Members who have not yet paid their annual subscription for 1973-74. Last reminders have been sent out to all and if remittances have not been received by 30th April, it will be presumed that they wish their membership with the Association to be terminated.

Lecture by Toro U.K.

A most interesting talk and Film Show took place at Kidderminster Golf Club on Tuesday 15th January, when Mr. Ron Huntley and Bob Pilsbury presented the very wide range of TORO equipment now available to Golf Courses in this country.

A good turn-out, almost 40 came to Kidderminster for what turned out to be a most interesting afternoon. Our thanks to Mr. Huntley and Mr. Pilsbury and also to TORO for providing us with afternoon tea.

I would also like to thank the Captain and Members of Kidderminster Golf Club for allowing us the courtesy of the Club House throughout the afternoon.

Spring Tournament

Please let me have all entries for the Spring Tournament at Robin Hood Golf Club on Thursday 2nd May by 20th April 1974.

Summer Tournament and A.G.M.

The Captain and Members of the Habberley Golf Club have again granted us the courtesy of the Course and Club House for Monday 15th July.

Autumn Tournament

Another date for your diary is Wednesday 18th September, at the Handsworth Golf Club by kind permission of the Captain and Committee.

Geoff Bunting

I am sure all members will join me in wishing Geoff Bunting a lot of luck and all happiness in his new position as Course Superintendent at the Bally Hall Golf Club and Country Club, St. John, Newfoundland, Canada, which he took up on March 1st. Geoff
has spent the last 10 years as Head Greenkeeper at Finham Park, Coventry Golf Club, and it is with considerable regret that we now say “farewell” to one of Greenkeeping’s really nice guys.

**Congratulations to Trevor Morris**

Bert wishes also for a happy future to Trevor Morris, who has been appointed Head Greenkeeper at Whittington Barracks Golf Club, Staffordshire. Trevor joined the Green staff at Whittington on his 15th birthday and now at the age of 21 becomes one of the youngest Head Greenkeepers in the country at this very fine heath-land course. Good luck Trevor, I am pleased to have such a worthy successor.

**New Members**

Welcome to the Section to Arthur Davies from Trentham Park Golf Club and Alan Finney from Newcastle-under-Lyme.

**East-Midland Section**

**Chairman:** G. Darby  
**Hon. Secretary:** S. Fretter  
4 Queens Drive, Leicester Forest East, Leicester.

**Annual Spring Golf Tournament**
The Annual Spring Golf Tournament will be held at Longcliffe Golf Club on Wednesday 15th May 1974. First Tee 12.30 p.m. Would you please let me know by 30th April 1974 if you will be playing and also require a meal.

**Longcliffe Golf Club**

Longcliffe Golf Club, Snells-Nook Lane, Nanpanton is situated near the M1 junction 23, signposted Loughborough A512.

Set on forest ground between Longcliffe Wood and Hurst Farm, the Club was formed in 1906 when Squire de Lisle promised £1,000 to secure good links and club house for a while.

Alterations due to the motorway have not affected too much the natural beauty of the course, which still retains its Rhododendrons, Heathers and Woods. It now measures 6454 yards and is Par 71. This description was sent to us by the Head Greenkeeper, W. Coles.

**Bereavement**
Mr. J. L. White of Birstall passed away on the 18th January; he will be sadly missed by all of us at our tournaments. Our sympathy goes to his family.

**Knock out Cup**

Please do not forget to forward me your entry forms for this competition. Closing date is 31st March 1974. By now you will have received details direct.

**North East Section**

**Chairman:** Mr. J. Simpson  
**Hon. Secretary:** G. Jeffries  
55 Brackenfield Road, Framwell Gate Moor, Durham.

**Spring Competition**
Our Spring Competition will be held at Berwick (Goswick) Golf Club, on Thursday April 18th 1974. This will begin at 1 p.m. It will be an 18-hole event. High Tea will be available. There is a coach leaving The Cock of the North Hotel, Durham at 8 a.m., this being the first pick up point. The next point will be the Market Place, Chester-le-Street, Morden Street Car Park, City Newcastle Golf Club, and if members from Northumberland courses could contact me, we can arrange to pick them up too. Please bring your friends along if you wish. The fare will be around 75p. I would also like to know as soon as possible, as I must know how many to book for Teas.

**Subscriptions**
There are still a number of subs outstanding. I would like these in as soon as possible.
North West Section

Chairman: O. P. Jones
Hon. Secretary: H. M. Walsh
Bramhall Golf Club
Horrobin Cottage, Old Links Golf Club, Montserrat, Bolton, Lancs.

Lecture

Our thanks to Mr. Greenwood of “Sisis” Ltd., for the interesting talk he gave to the members of the Section and the slides shown of some of Sisis latest equipment.

The March talk will be given by Mr. Fairhurst of Synchemicals Ltd., Subject—“Fungi—Their identification and control” Venue—Swinton Park Golf Club, March 4th at 7.30 p.m.

Spring Tournament

This will be played over the Dean Wood G. C. course on Thursday 16th May. Will all members who intend to be there please let me know as soon as possible, to assist with catering arrangements.

Subscriptions

Our Treasurer informs me that some subscriptions are still unpaid. Will members concerned please rectify.

New Members

We welcome to the Section the following new members:

P. Lloyd, Hillside Golf Club, Southport, Lancs.
S. R. Edgerly, Hillside Golf Club, Southport, Lancs.

BOOK REVIEW

“I CAN HELP YOUR GAME”

—by Lee Trevino.
(published by Corgi Books at 65p)

Lee Trevino may have one of the most individual swings in top class golf today, but the basic fundamentals he outlines in his book “I can Help Your Game” are those common to any good golf swing, however individual, and should be referred back to at all times of golfing despair.

Trevino deals with the usual array of specialised shots, such as bunker play and putting, as well as explaining how to shape the ball in flight, especially in the wind (at which he is a proven master).

However, this well illustrated book goes beyond the usual instruction and emphasizes other aspects important to the golfer’s approach to the game and how the individual can make the most of his ability with a little thought.

One of the best chapters describes a particular golf course, hole by hole, explaining the best approach to each hole according to one’s ability, to gain the best results, emphasizing reward from placement of shots rather than length in saving precious shots.

He saves possibly the most humorous chapter (probably unintentionally) until near the end. This is devoted to Gamesmanship written from experience gained in his days as a self-confessed hustler. He tells us the way to deal with coughers and rattlers is to tell them that “if they do not cease and desist, you will bury a wedge in their damned skull”. Although not always quite so forthright, his expressions, whether describing a wayward big hitter playing “ricochet rhumba” in the trees, or the lateral movement of the hips in the downswing as the “hula shift” (times have changed since H. Cotton, Esq., called it a braced left side), throughout the book make it one of the few instructional books I have found easy to read, while it still contains a mine of information enabling all shape and size of golfers to improve their score.
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Go against the grain

'Grain' is a problem in fine turf maintenance, and if neglected rapidly leads to thatch. Conventional mowing only cuts erect grass blades, the flat laying blades are left to grow, and brushing before mowing doesn't really have much effect.

Where turf condition is a matter of importance and pride a Ransomes-Hahn Verti-cut is a versatile machine that will really pay its way. It's as easy to use a greensmower, the difference being in the vertical action of the blades. Blade spacing can be changed to suit various types of grass. Just look at the number of jobs you can tackle with the VCD-15: Precision verticutting golf greens, Verticutting aprons tees, etc., General purpose verticutting, Pulverising soil cores, Preparation for seeding, Renovation, Thatch removal for insect control,

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'Grain' has a pronounced effect on the run of golf ball.

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