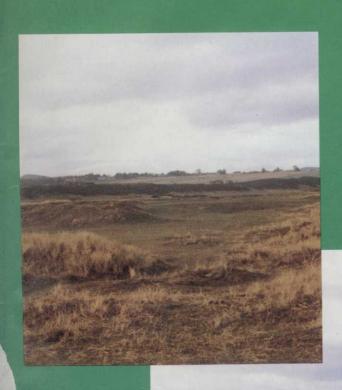
JANUARY/FEBRUARY 1985

Greenkeeper

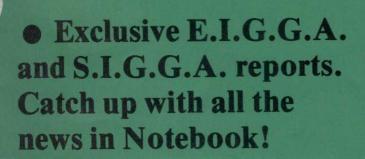


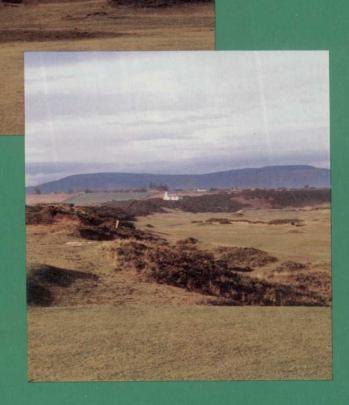
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• Inside... The diary of a greenkeeper. Company profile features Stewarts of Edinburgh.





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This issue

JANUARY/FEBRUARY 1985



Front cover: Royal Dornoch is on the south-east coast of Sutherland. The golf club was formed in 1877 and, soon after, Old Tom Morris was commissioned to lay out the first official nine holes—it is thought that various forms of golf were played on the same site as long ago as the mid-17th century. Today, Royal Dornoch still embraces all that is good in traditional links golf.

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Things ain't what they used to be!

I RECENTLY played a round of golf at a club in East Anglia. It was my first visit there for some ten years, but it had changed out of all recognition. To be fair, in early December it was not a mud bath but, although a sunny shirt and sweater day, the greens were soft and spongy, with thatch to a depth of four inches. The fairways were mown like fluffy motorways, straight down each side, and a collar of 'semi' surrounded each green, even between the putting surface and greenside bunkers.

Bunkers were only partially raked; all the greens were the same oval shape with a second hole cut in the front of each, as well as signs of the temporaries to come. This was definitely not the course I had enjoyed before and, with the customary reaction of someone who likes to think he has a little knowledge of the subject (a highly dangerous state), I dismissed the greenkeeper as being less than perfect.

A greater shock awaited me when I walked into the bar, where a prize-giving ceremony was in progress. The captain, after complimenting himself on the weather, went on to say how marvellous the course was and asked that the chairman of the greens committee pass on the club's thanks for the course's condition to those responsible. I could not believe my ears—he must have played a different 18 holes.

I was so appalled I did a little digging and asked my host his opinion. "Well," he said, "golf really boomed here in the early 1970s and, while this is a club with traditions, nearing its centenary, equally there was an influx in our membership of mainly middle-aged men, who had not played the game before.

"Although the majority are as keen as mustard, they have not been brought up on golf and they do not have a feel for the game or course. They rarely play away from home, apart from trying some of the overplayed 'hotel' courses, and would certainly never venture on to any of the 'championship' courses."

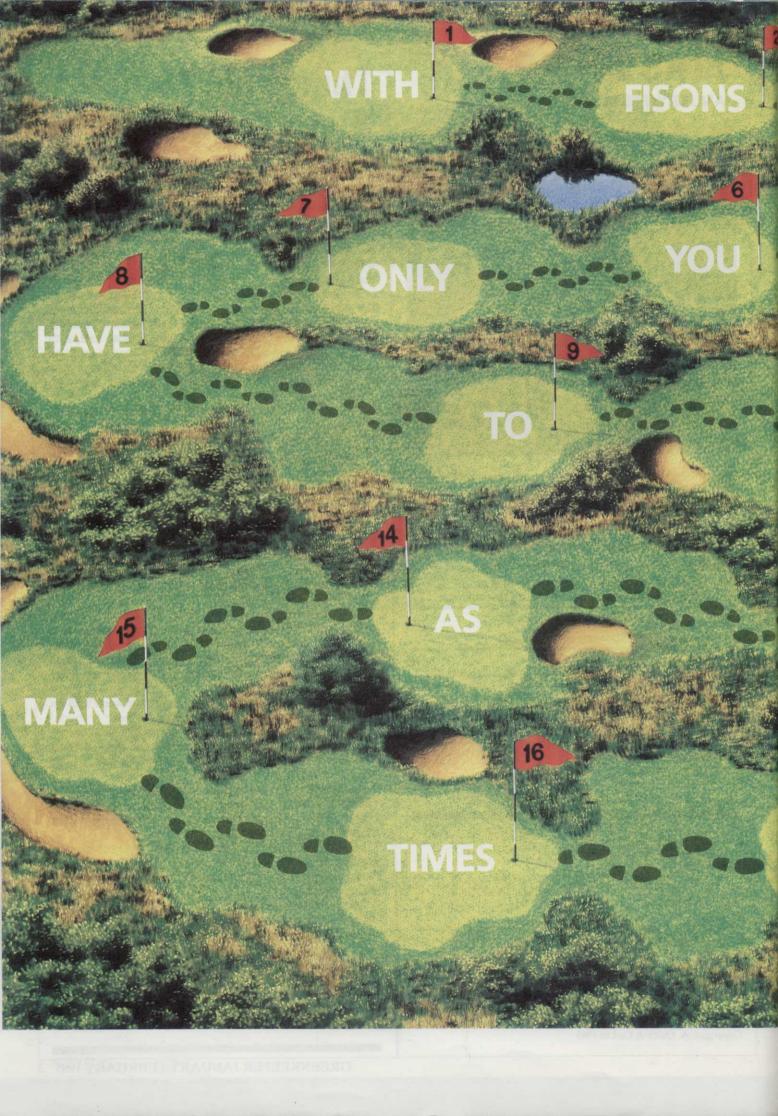
With a sigh, my friend added: "They have seen it all on TV and listened to the commentators—now a medal round takes four hours and if the captain (18 handicap) can't stop his four-wood in the middle of the green in August, questions are asked! God forbid if a green ever turns brown."

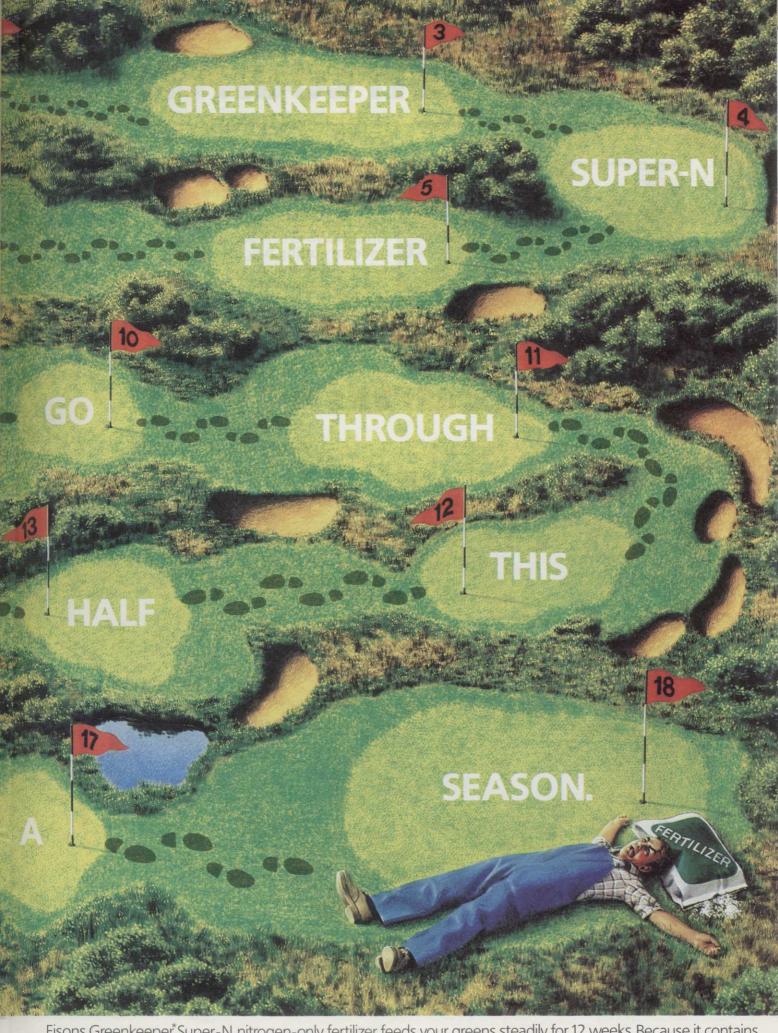
Apparently, few members complain and view the clubhouse being decorated annually as a priority. The better golfers hibernate to other courses during the winter months if the going gets heavy.

I asked about the head greenkeeper—a nice chap, who has been there ages and doesn't want to move and equally doesn't want to lose his job, preferring to give the majority what is wanted.

Sadly, I have come to the conclusion that there must be many such clubs and I pity the poor greenkeepers who have to work at such places. Maybe what this magazine strives for is not applicable to some clubs, but I pray that *Greenkeeper* devotees are still in the majority. For the life of me, I fail to see the logic of golfers who pay for and demand playing conditions that will not, in most years, give them golf all the year round.

The Editor





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Diary of a greenkeeper

IN the flaming June of 1976, I arrived at Ipswich Golf Club to take up my new post as course manager. Ipswich GC, or Purdis Heath as it is known locally, is one of the premier clubs in East Anglia—a 27-hole golf course set in heathland that has to be seen to be appreciated.

When I arrived, one of the first things I remember was walking with the club professional across the 18th green. He asked me: "How can people be expected to play good golf on such soft, slow greens?" In fact, the green was so soft that I could see my footprints in the turf behind me and this was in the middle of a severe drought!

Mind you, the members loved the greens. They could hold a ball on them, never mind how it was struck or, for that matter, with what. So, as a newcomer, this was no time to upset the natives! However, I did risk turning the watering system controller down from an application time of 30-40 minutes per green, per night, to six minutes. (Besides, I hadn't yet unpacked my wellies!)

My thoughts on greenkeeping were, at that time, somewhat different to what they are now. I think it fair to say that I was a three times a year NPK man, with the usual higher phosphate feed for the winter applied in late October.

Jim Arthur was, to me, some lunatic who had lost his marbles and had run away from Bingley with the crazy notion that if you starved your lovely greens of all water and fertiliser and slit-tined them as deep as possible once a week, they would be better to play on. Worse still, he was making a living because some people believed it!

No wonder, I thought, some greenkeepers hated having this man inflicted upon them and their courses by committees. How my thoughts have changed!

The next two years were spent trying to show my new employers that I could keep their course in the manner to which they were accustomed and, judging from the comments of members and visitors alike, my staff and I seemed to be doing OK. But, deep down, I felt things were not all they should be. The thatch layer was still there, the greens were not draining as quickly as you would expect of a heathland course and it was still necessary to use frost holes in the winter because of greens holding so

By David Jones

much water. Was I over fertilising? Perhaps I ought to try cutting back on phosphates to see what happened?

Over the next two to three years, we used a phosphate-free fertiliser on the greens and tees and stopped using anything at all on the fairways, except the aerator and gang mowers. The results were remarkable—the deterioration was becoming an embarrassment. I continued with this policy until the autumn of 1981 with no apparent reduction in the thatch levels that was present in the greens. Winter frost holes were still the norm, despite the change in direction.

During the first couple of months of 1982, I attended a lecture given by Jim Arthur, on behalf of the PGA European Tour, at Wentworth. The title was Course Preparation For An Open Championship and I soon realised that this man wasn't a lunatic. He wasn't saying, "don't water, don't use fertiliser." He was saying, "do so in moderation, with the minimum amounts required to sustain the grass species that are required to enable the game to be played 365 days a year."

With regard to phosphate, tests were proving that most golf course greens already had far too much. At last, all the pieces seemed to come together and I realised that I had been going in the right direction, but had been trying to build the jigsaw without all the parts and that I was walking the wrong way, too slowly up the escalator to achieve my goal, which was to return Purdis Heath to the heathland character members had not seen for some 20 years or more.

The first obvious step in getting such a policy adopted by a club is to approach your committee for its support. Without their backing and confidence, make no mistake, you will be out on your proverbial ear! Memories are painfully short and it's no use saying that the course was alright last year. It's now that interests most members. To obtain my committee's support, I decided to put my thoughts down on paper and the finished document was then circulated to the captain and committee. The reportdated March 13, 1982—went as follows:

TO ACHIEVE FINER GREENS AT PURDIS

What Is A Good Golf Green?

It must surely be one that when a ball is struck on it towards the hole, the ball moves quickly across its surface hugging the grass cover, following its contours, finally dropping into the cup with the nice rattle that some people hear in less shots from the tee by one player than others-that is, if the green has been read correctly in the first place. This same fast green must also be capable of allowing a correctly struck ball to pitch and stop on its surface without causing a large crater. On the other hand, it must allow a badly struck shot to remain a bad shot. by letting it skid through the back.

Our Present Situation

Annual meadow grass is in the majority of golf greens throughout the British Isles and is known as a weed grass. On our course, it dominates our greens by some 85 per cent. The remaining 15 per cent is made up of some of the desirable species and other weed grasses such as Yorkshire Fog, etc.

Our other enemy, which goes hand in hand with poa annua, is thatch. Thatch can be briefly described as a layer of dead and living grass stems and roots between the soil and the green surface. The thatch at Purdis is approximately two inches thick. Unfortunately, these two problems have been brought about by a lack of understanding concerning the kind of management required to encourage the right type of grasses. In our experience, if the records are looked into, how often have our fairways been covered with chalk on instruction from well-meaning advisors because the soil ph level had, on analysis, been too acid? Too acid for what? Not too acid to sustain the fescue and agrostis grasses, as they are capable of tolerating wide variations in ph values, but perhaps the intention was to cause the heather to decline. because that was its main achieve-

Getting back to the greens, which I would guess have been given a healthy coat of chalk now and then in the past 20 years, after the testing of soil samples revealed a soil condition unsuitable to grow grass for agricultural

Continued overleaf...



The short 10th before bracken removal.

standards, what else has brought about the invasion of meadow grass? Undoubtedly, over generous fertilisation, greater compaction of the surface from an increase of play and, lastly, over enthusiastic watering to give the greens the expected 'green' appearance, which are the three prime ingredients for poa annua to thrive over all-comers and to encourage the accumulation of thatch. The species known as fescue and bent grass provide the best turf for an allyear-round putting surface—their requirements for survival being uncompacted, well-drained soil and poverty with regard to nutritional value.

Before going on to explain how the survival of these two species can be encouraged, I think we should examine the reason why poa annua is an undesirable species. Poa has a short life span, its process of germinating, growing, flowering to seed and dying taking just a few weeks. Poa's shallow root system makes it capable of surviving on compact or fibrous surfaces and survival during drought conditions is assisted by being able to rapidly set down seed, which will germinate when the drought ends. Its colour is normally very good in the summer, as long as it is kept well-supplied with fertiliser and water but, during the winter months, it becomes a sickly yellow, prone to fungal attack. As the dying off and seeding process continues, the putting surface is often bumpy.

The average club golfer wanting, or should I say, expecting, his thin, badly struck shot to stop on impact with the green cries out for the greens to receive more water, the addition of which helps close any space within the surface, which normally would contain air and bacteria. The bacteria is required to break down cut leaves and dead vegetation just below the surface (thatch). Without aerobic activity, we build up more thatch. This thatch acts like a sponge in wet weather, oozing out water around the feet and causing footprints and deep pitch marks to disturb the surface. When the weather becomes dry, it hardens like cork, leaving a bumpy, uneven surface. The recognised solution? Water to soften it again! This situation has gone on for years, not just at Purdis, but on the majority of golf courses and sports turf all over the country and now people more or less accept it as a cross to be borne.

The Remedy

Some greenkeepers, like myself, believe this situation need not be. To achieve the goal, which must be to regain fescue and agrostis domination on the greens, we have to replace the correct environment for these species to thrive. One important and encouraging factor in our favour is that we are a heathland course, which favours fine grasses as its indigenous species.

With thatch, introduction of air through deep-slitting at weekly intervals will soon ease water retaining areas and assist with the entry of bacteria to break the layer down, effectively, improving soil structure. This is what would be known as The Initial Period Of Pain!

It would be a pain for the members, because to have a deep-slitting machine pass over their greens on a weekly basis would seem like the end of the world and their golf course as they know it, but this weekly aeration is important to drain the surface, to

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begin and continue to break down the thatch layer and improve the soil structure, as well as stated earlier, to allow bacteria into it. To improve surface levels, frequent top dressings of a suitable mixture will be applied at 2-3lb per sg vard during the growing season—these disappearing very quickly and being fairly light in quantity.

As we are looking for soils that would be classed as impoverished, it will not be necessary to use phosphates in any fertilisers, (phosphates being an encouragement for poa annua) the prime ingredient being nitrogen, which will replace that leached out by rainfall and, if the soil becomes more acid, it will assist in locking up any available phosphate remaining in the soil. The surface of the green will also be improved by regular verticutting on at least a fortnightly basis, the blade being set just to flick through the top growth of the sward. Water should be applied in small amounts, sufficient to keep the grass alive.

It is most important that, if a policy for a return to heathland greens is to succeed, members of the greens committee should be familiar with what is happening and why, as it will have to be explained frequently to many irate members! Once the programme has begun, it must be continued and not abandoned in order to follow the wishes of amateurs. After all, if 85 per cent of our putting surface is poa, they have to be told that the intention is to kill off 85 per cent of the grass and replace it with something better over at least a two-year period, possibly longer. I think it fair to say that, after two years, there should be a great improvement in the water-shedding capability.

It is a well-known fact that the request for 'green' greens and soft pitching surfaces has brought about the situation we are facing today. Soft pitching greens in a dry summer will be bogs in winter. The final result of a determined policy of deep regular aeration, more frequent top dressing and verticutting, with a decrease in water and fertilisation, will lead to finer-grassed greens, which allow a gently tapped putt to roll on and on, as opposed to a hard-hit ball, which bobbles along as if on coconut matting and screeches to a halt two yards short of the hole!

The final point to consider is how the aeration programme could be carried out. With the machinery available within the club at present, to slit all 27 greens once a week would take one man approximately one week and that only being to a depth of two and a half inches-a long way short of the six to eight inches I believe to be necessary to achieve the required results.

One thing I have always been fortunate with at Ipswich is a clear-sighted committee open to suggestion. Unlike one of my previous clubs where, during a drought, the captain requested that more water be put on the greens "to fill 'em up" in case a restruction was imposed!

After due consideration, the Purdis Heath committee supported my policy plan and we bought the machinery to make regular top dressing and, most important, regular aeration possible.

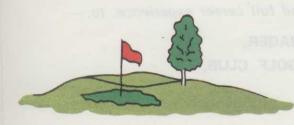
In the follow-up article, which will cover the results, trials and tribulations of going through a period of 'Arthuritus' for some two and a half years. I will attempt to give those of you who are thinking of taking The Step some examples of what system we operated at Purdis Heath and what to expect from your turf and, worse still, your dear members!



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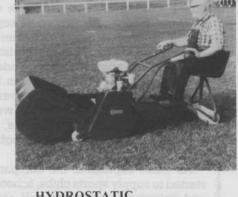
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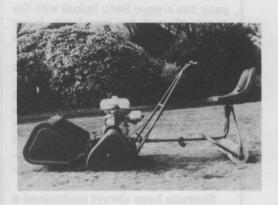
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COMPANY PROFILE

Stewarts of Edinburgh

Still going strong

THE name of Stewart & Co, Edinburgh has long been respected by golf club officials and greenkeepers in the UK and overseas. The company was founded in the autumn of 1894 when premises were established close to Edinburgh Castle, which became the company's trademark with the motto Stronghold. In those days, much of Stewarts' business consisted of supplying seeds and plants to farmers, estate gardens and horticulturists. The company originally traded under the name of Low & Stewart, then in 1899 Low left the firm and J.C. Stewart, son of an East Lothian farmer was joined by John Lockhart Forbes, a keen golfer and international rugby player.

As trade expanded, the company started to supply sports clubs, schools and universities. The first golf club customer was Luffness, situated in the heart of East Lothian—Scotland's 'holy land' of golf. Subsequently, the company has always been linked with the game of golf by supplying many course requisites to all the famous clubs.

Stronghold Grass Manure and Grass Seed Mixtures became household names among turf experts and the greenkeeping fraternity. Mention of these popular mixtures appears in the golf historian Horace Hutchinson's book *Golf Greens And Greenkeeping*, which was published at the beginning of the century.

Stewarts have always maintained a genuine interest in the lot of the greenkeeper and, in 1902, they helped to organise the first outing of the Scottish Golf Greenkeepers, the acting secretary of which was J.L. Forbes. As the interest in golf increased, so did the reputation of Stewarts and their first customer south of the border was Royal Mid-Surrey Golf Club in 1904. The same year also marked the start of a long connection



A vintage view of Royal Dornoch—'Sown with Stewarts' Stronghold grasses—an early sales brochure declared.

with the courses at St Andrews, which has continued ever since, and exhibiting at the Open Golf Championship. The 1904 Open was at Royal St George's—another customer. By this time, Stewarts' reputation had extended to France and the Continent, where they were involved in a number of new golf courses.

Eventually, the firm moved to South Saint Andrew Street, where it remained for 65 years. A construction department was also set up by Stewarts and they began building golf courses, such as the East Course, North Berwick, and playing fields for Glasgow Academicals, near Anniesland on the outskirts of Glasgow, but all this finished in August 1914 as war loomed.

Stewarts signed their last pre-war contract in July with Granton Golf Club to build a new course by the sea on the north side of Edinburgh. A month later, the club secretary optimistically wrote to delay the start until 1915, "when the war was bound to be over." The course was never built and is now the site of a housing estate.

The outbreak of the First World

War brought all Stewarts Sportsturf activities to a halt and the firm had to rely on its farm, market garden and private estate connections to keep going. Unfortunately, many of the company's records of this period were lost when the top floor of their premises was requisitioned between 1939-45 as a fire service post.

When the First World War was over, Stewarts resumed their Sportsturf business and, soon after, they had built up an extensive connection with virtually every Open Championship venue and most of the major clubs, as well as a host of bowling greens, cricket and sports clubs.

In 1939, Stewarts formed a limited company and John Macadam joined the board. Once again, their Sportsturf business came to a standstill at the beginning of World War Two. In spite of staff and material shortages, the firm survived. When the war was over, they were back in business, although the difficulties of obtaining supplies of seed, fertiliser and other items through restrictions lasted for some time.

Stewarts were one of the first com-



Stewarts' new premises at Dalkeith.

panies to offer a contract spraying service of selective weedkillers on golf courses and playing fields, which was much in demand. They designed special machines constructed like gang mowers to be towed by tractors and carry out this work on undulating ground.

The company also established a turf nursery at Archerfield, East Lothian on light sandy soil where they grew special turf from seed, a project which the firm carried on for a number of years. Stewarts are now distributors of Rolawn Turf in Scotland.

Stewarts have also given tremendous service to the sportsturf industry in voluntary and honorary capacities. The company has provided two presidents of the Royal Caledonian Horticultural Society and also two vicepresidents, and two vice-presidents of SIGGA. For many years, five of their staff have given lectures to greenkeepers' and groundsmen's associations, as well as horticultural societies. Two personnel have regularly taken part in BBC radio programmes and one has appeared on TV. Stewarts also provided a lecturer for the Edinburgh Royal Botanic Garden training course on turfculture. And two members of the staff have been awarded the Scottish Horticultural Medal.

In 1958, Bill Pender, one of the company's most popular representatives, joined Stewarts as technical representative and, in 1973, J.I. Stewart, son of the founder, retired from the company and so ended the connection with the family that had lasted for almost 80 years.

In addition to fertilisers and grass seed mixtures, Stewarts introduced many products for the benefit of greenkeepers and groundsmen. Among the most popular were nylon golf flags, fibreglass flagpins and the St Andrews Turf Switch. In addition to



Graeme Forbes.

this, they had the manufacturing rights for the Comb-It grass comb and the Stronghold electric shoe cleaner.

With the enlargement of the company's activities and the influence of the changing conditions of business, Stewarts decided to move from the centre of Edinburgh to an industrial site at Dalkeith on the boundaries of Mid and East Lothian, where a new factory and warehouse of 20,000 square feet was built. In addition,



Ian Forbes.

there are large areas for material storage required in manufacturing and space for expansion.

The move prompted a major expansion of the sales force. In 1976, Neil Macdonald joined the company. Neil is responsible for the north/east of Scotland and also carries on Stewarts' traditional advisory service. At present, he is acting as consultant to a construction project in Spain.

The death of Bill Pender in 1978 was a great loss to the company and to his many friends in greenkeeping. The company also lost their London agent the following year, but Mr Bithray has proved an excellent successor. In 1978, they also commenced the construction of a new compost plant and the conversion of the company's offices to a computerised system.

In 1981, Ken Waddell became field sales manager with special responsibilities for public authorities. Robert Bruce joined the firm and is now technical sales rep in the west and Alan Miller has taken over the south east of Scotland and north of England. The logistics are capably handled by Robin Davidson, who is a familiar face to most greenkeepers and groundsmen.

Stewarts have proudly completed 90 years of service to sport with major emphasis on turfculture for recreation and amenity purposes. At the moment, they are developing some new projects for the supply and installation of artificial surfaces.

The chairman is Ian Forbes, son of J.L. Forbes, and Graeme D.Forbes as managing director is the third generation to serve the company. Appropriately, the founders' original motto has proved a successful trademark, for Stewarts have maintained a 'Stronghold' in the grass roots of the sports and recreation industry and will hopefully continue to do so well into the next century.

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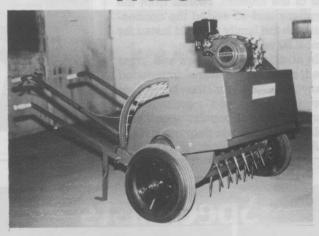
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News & Views

Chairman's message

As my year of EIGGA chairmanship draws to a close, I would like to make some observations about our industry in general and EIGGA in particular.

First, I should like to say what an honour it has been for me to have served as chairman since my election at Cambridge. I have greatly enjoyed meeting people from this and other countries who share the same interests and ideals.

EIGGA has, in its first two years, come a long way—perhaps not as far as some would have liked, but things take time.

Looking at education, EIGGA is now represented on the GTC (Green-keeper Training Committee) along with SIGGA, the BGGA, the secretaries' association, national golf unions, Bingley and Jim Arthur. The aims of the GTC are to check on the content of courses on offer, discussing with the tutors what greenkeepers feel is right or wrong and to ensure that they are run on the right lines.

The involvement of the golf unions is extremely important, as it has become obvious that, in many cases, golf clubs do not wish to educate their staff. The reasons behind this attitude are many but, with the support of the golf unions, we will have a stronger voice. After all, better education will have many benefits, most obviously the improved condition of the courses.

This brings me to the standing of greenkeepers in golf. EIGGA was formed to present a much more professional image, both in education and appearance. The latter has, undoubtedly, been achieved. The new blazers and ties mark our members as the smartest in the country and this has brought favourable comment from many quarters.

Education, as I have said, is moving along the lines we wish to see, coupled with the various diplomas offered by EIGGA. It should be noted that some colleges are offering a phase three City and Guilds course in management, covering all aspects of golf course management. However, I feel it must be said that greenkeepers can be, and frequently are, their own worst enemies. Many seeking more rewards from their chosen career are not prepared to help themselves.

How can we expect others to take us seriously when we do not take ourselves as such? There are several

Election Of National Officers

Nominations have been received for the undermentioned offices, which will be ratified at the association's AGM on Sunday March 24 during the annual conference at Warwick University.

President—Dennis Ayling (presently vice-president), nominated by Sussex.

Vice-president—David Jones, nominated by north west.

Trustee—Kevin Munt, nominated by the board of management.

thousand greenkeepers in this country today—how many belong to an association? Far and away the minority.

Apathy is our worst enemy. I'm not quite sure how we deal with this, but deal with it we must to achieve our

goals. Ask yourself: "What do I want from greenkeeping?" If you consider it a 40 hours a week job—and many do—and when you have finished work, you no longer want to think about golf courses, then changes in



Surrey

The recent turkey trot at Malden Golf Club was won by Mickey Connors. Thanks go to Alex and his staff for their part in organising a most enjoyable day.

The branch's next lecture—at Woking GC on February 11, 1.30pm—will be on course preparation and presentation and given by the PGA European Tour.

The annual dinner-dance takes place at the Drift Golf and Country Club on Saturday April 27.

Finally, congratulations go to Mickey Connors on his recent election as captain of the Drift.

Ken MacNiven.

North West

The last two lectures of 1984 proved to be very enjoyable—40 years experience went into Bob Janoskis' talk and all those present learned something.

Wrexham GC was the venue for the November seminar. Martyn Jones kept everyone interested, both inside the clubhouse and out on the course. Thanks go to the speakers and also to the club and secretary K. Fisher for all his help.

Forthcoming events include two evening talks—one by Nick Park and the other by Mike Harbridge, plus a full-day seminar by Watermation. Members will receive all the information for these by letter.

Finally, the branch would like to congratulate Eric Staniforth, managing director of SISIS, on receiving the MBE.

Bill Lawson.



EIGGA members and guests at the autumn meeting, which was staged at Wrexham GC.

status and salaries are a long way off.

Greenkeeping is a profession, make no mistake about it—a career that is with you 24 hours a day, seven days a week.

It is not that many years ago that professional golfers were looked down upon and it is only since the formation of the PGA that progress and status have zoomed. Strength is what we need. Every greenkeeper in this country should join EIGGA now. We already have more greenkeeper members than any other association in Britain, but we need more. If every head greenkeeper joined, we would have 2,000 members!

Progress must be maintained. Our most important aim is to employ a full-time administrator to visit clubs and check on such things as conditions of employment. This can only be achieved with money. All over the country there is a small hard core of dedicated people working to benefit your future. Give them the backing they deserve. Support your branch and if you don't have one, form one today!

I was interested to read a recent article questioning the role of agronomists in British greenkeeping. The author said they threatened the jobs of many greenkeepers and that if greenkeepers were more articulate, agronomists would be out of a job.

I do not agree with this view. On a well-run course, the course manager and the agronomist can work in harmony. It is extremely helpful to have a second opinion from a trained eye. As for being more articulate, we're back to education again, aren't we?

In a recent copy of the USGA Green Section Record, there was a letter from a top superintendent thanking agronomists for their contribution to raising the status of superintendents in America. The secretary, course manager and agronomist are all part of a team—they are not in competition.

I trust that as many members as possible will attend EIGGA's annual conference at Warwick University on March 22, 23 and 24. A full programme is planned by greenkeepers for greenkeepers.

I look forward to seeing EIGGA move ahead in 1985. Remember, your future is in your hands. Join now!

Peter Wisbey.



News & Views



Central

Sixteen members of the section paid a visit to Henry Sheach's of Kirkcaldy recently. After being welcomed by Alistair Sheach, we toured the workshops. After lunch, we were given a practical demonstration on how to choose, use and maintain a chain saw. This part of the afternoon talk was given by Mike Irons of Omark Industries. To finish, Grant Chalmers of Sachs Dolmar gave the history of his company and run-down of products.

There was an excellent turn-out of 45 at Muckhart Golf Club to hear a lecture by Walter Woods and Jimmy Kidd. Both were given a hearty vote of thanks. Walter spoke on the work required to bring the courses at St Andrews back into shape after the Open Championship. Jim then took as his theme classical British golf courses and the points that link them, such as how architects used the natural topography of the land and flora and fauna to create courses that blend into the surrounding landscape.

E.Small, Secretary and Treasurer.

East

The east section held its annual dinner-dance at Turnhouse Golf Club. Over 70 members and guests were present. Thanks go to Turnhouse for the hospitality and to club-master John Leeburn for the first-class meal. Turnhouse has been provisionally booked for 1985 and tickets are expected to go quickly, so start saving!

The section held its AGM by kind permission of Kingsknowe Golf Club. The important changes are that J.Paton has become chairman and J.Easton vice-chairman. Ronnie Bunting has stepped down as chairman after two years.

Our thanks go to Ronnie for his excellent service on the committee and to all the other committee members who give up their spare time to ensure that the section runs smoothly.

The majority of members fail to see just what goes on behind the scenes

and how much time and effort has to be put in by committee members. The easiest thing to do in this day and age is to criticise.

Congratulations go to Ronnie Blair, ex-foreman at Murrayfield, on his appointment as head greenkeeper at Thornton Golf Club in Fife. The section wishes him well in his post and he assures me that he will stay a member of the east section. Ronnie served his time under Jim Neilson and is the son of the east section secretary.

Congratulations also go to Stuart Greenwood and his wife Agnes on the birth of a daughter just before the New Year! I understand mother and child are well.

Negotiations are under way to hold the spring outing in the Borders. Our friends from Peebles, George Stavert and Jimmy McCulloch, who very seldom miss an outing no matter where it is, have given the invitation. Although we have still to negotiate this with the local authorities, there are high hopes.

I am sure George will do everything in his power to arrange this.

Subscriptions are now overdue, so if anyone hasn't paid yet, do so now before your name is taken off the mailing list for the magazine, etc. Subs this year are £14.

The section is on the look-out for some kind member of the trade to offer a trophy to be played for at the autumn tournament. At present, the section has only four trophies and they are played for in the spring.

If anyone knows a company that would like to donate a trophy, please get in touch with me.

I would also be glad to hear from any member who has relevant news for the magazine, as we are always short of material. It doesn't matter how brief the story is.

William Blair, Section Secretary.



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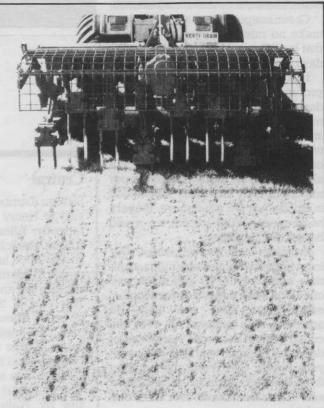
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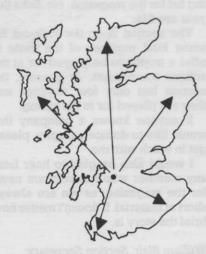
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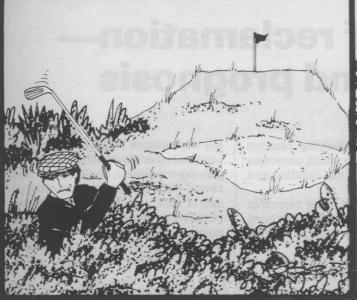
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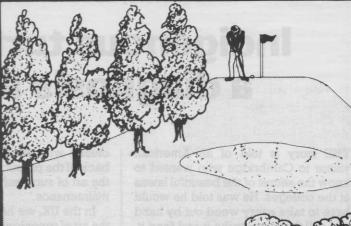
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GREENKEEPER JANUARY/FEBRUARY 1985 21

Eddie Park has spent many years in a quest for knowledge about fine turf as found on our traditional golf courses.

Here, he continues his chosen theme...

Indigenous turf reclamation a diagnosis and prognosis

THE story is told of an American visitor to Cambridge who wanted to know the secret of the beautiful lawns at the colleges. He was told he would have to take every weed out by hand and roll the lawn, spike it and feed it, rake out the moss and mow the turf three times a week from spring until autumn for 300 years!

Unfortunately, we do not have 300 years to recover sadly damaged golf courses. We must not waste time nor money on experiments or gimmicks and, as in every other field, we must go back to fundamentals.

Let us start with some definitions. I often turn to a book published 35 years ago by the United States' Golf Association, which has run a greens section since 1920. In the book, the basis of a management programme is set out. I quote: "The development of a sound management programme rests on (1) Knowing how to do the job and (2) Knowing the why of it. The first of these is the art of greenkeeping. It is founded upon experience and requires the knowledge of the mechanics of all the operations concerned with the growing of grass and the ability to perform them efficiently and in a timely manner.

"The second is the science of turf production. It is based on the fundamental principles of plant growth and development and is concerned chiefly with the underlying reasons back of the practices which constitute the art of successful turf building and maintenance.'

In the UK, we have many versed in the art of greenkeeping. We now have to provide those versed in the science of turf production.

The first step on a golf course is to make a full diagnosis, enabling a confident prognosis of what we can reasonably hope to achieve on the site and in how long. In medicine and surgery, everyone has it drummed into him as a student that no treatment of a problem can commence until a complete diagnosis is made. The classic procedure is (1) Case history, (2) Clinical examination and (3) Special tests. I am not suggesting that this can take the place of expert advice, but it helps everyone, including golfers, to understand the problems.

Case histories in greenkeeping can be gathered from committee minutes, reports of general meetings, articles in local newspaper files—perhaps a club history has been written, or perhaps there is mention of the course in an old handbook? Who was the architect? What was the original use of the land and who owned it?

When most clubs are first asked these questions, they invariably say there are no such records but, with a bit of active questioning, it is surprising what comes to light. Older members will have views about changes in playing conditions, an old ledger may reveal what fertilisers were ordered and at what cost, when watering was installed or pop-ups substituted. Of course, we must be careful, all memories are fallible but, with perseverence, a fairly full picture can be built up.

Such exercises should not be seen as a witch hunt to apportion blame. In fact, in most cases, just the reverse is the case as it can be discovered that a deterioration in recent years may have been started by policy changes of 50 or more years ago.

Now, what about examination of the site? First, take a look at reference books in the local library. A geological survey will reveal what the underlying parent rock is. The soil survey. which is published for most counties. tells us not only the type of soil, but its capability and best usage. This detailed description is invaluable and covers most areas of the country almost field by field. If you don't understand soil classification, find a simple book on soils. Don't believe that every boggy area has to be clay. It should be no surprise to find that the vast majority of golf courses were built on excellent sites and designated as such in the land-use section.

You will see that we are skipping all



subjective judgements such as slow greens, green greens, lush greens, soft greens, etc, as unreliable and looking at scientific analysis. Remember, also, that subjective judgements can be easily confused by the application of fertiliser and water and the use of the new generation of excellent mowing equipment.

The most important analysis is botanical. Either we have fescue/agrostis playing surfaces or we haven't. This subject is so important that I am going to digress for a while to consider grass identification in the cut sward. This isn't too difficult on the golf course, but there seem to be many mistakes. It is, of course, vitally important that you actually can see and most people will need to put on their reading spectacles and get down near to the ground!

The general habitat should be at the front of our minds. We know that on seaside links the acid and calcareous heaths and on moorland the natural grasses should be agrostis/fescue. There will be a few local extras, such as the brome grasses, Yorkshire Fog, etc, but we can be pretty certain 'our grasses' were there originally. That is why the courses were built there in the first place. If they are no longer to be found on the playing surfaces, look in the rough. If they are still there, we know that faulty management of playing surfaces has caused the problem. Things are a bit more difficult on more modern sites, too many of which were badly chosen.

You can probably get by if you know the ten most common grasses on any site. Many people have published systems or keys to enable identification of these grasses by elimination. The best known is probably the Pelican paperback by C.E.Hubbard, simplified versions have appeared in two STRI publications—a booklet by David Clouston and Turf Grass 1982. A booklet published by Messrs Sutton, Identification Of Grasses By The Foliage, is another essential reference. There are good pictorial representations in a Pan paperback by Roger Phillips, in the Observer Book Of Grasses and in a book by the Czech Jaromir Sikiela.

However, this year has seen the publication of the Collins Guide To Grasses, Sedges, Rushes and Ferns by Richard and Alastair Fitter, a companion to the same authors' excellent Guide To Wild Flowers in Europe. This features a rather different kind of key—the single access key, which works on the same principle as computer keys. You describe the grass by up to 12 simple botanical characters using letters and simply look down

the list to find the matching description. A second key extends this to habitats. It may sound complicated, but it isn't!

My feeling is that botanical analysis is the key to correct management. The only real confusion is between agrostis and poa.

If we stop trying to make the sward uniform with fertilisers and water, the different grasses soon show up—different densities, different texture and different colours.

Now let us do some simple tests. Dig a hole carefully with a sharp spade to examine the different soil horizons. You will find something like this: (a) Topsoil, usually dark with humus and living organisms, (b) Subsoil, pale and dead (c) Parent material formed from (d) Rock. Fill the hole with water and see if it drains away. If it does not, look at the drainage in some detail. Cut both ends off a can and embed one end on a green and fill the can with water. We are looking to see if we have good permeability or compaction.

Moisture

An agricultural soil moisture meter can be used to test the relative moisture of the soil at different levels and also to demonstrate the existence of a pan. A dry-looking green may have plenty of water six inches down. Or a soggy green may be quite dry six inches down—the water being held in a spongy thatch layer near the surface.

Next, take a careful look at a hole plug and see if there are deep, white, healthy roots or poor root depth or thatch. All soils consist of particles of differing size (sand, gravel, silt, clay, etc) and their varying proportions determine their texture. We might describe the resulting soil mix as sandy, loam or clay. A quick test is to shake up some soil in water in a test tube and see the different fractions settle out. A more satisfactory scheme is to ask a lab to do the fractions on a sample.

Just as important as soil texture is soil structure, which covers the way particles are held together and whether there is a good crumb structure with suitable air spaces between. Damage by compaction may lead us to think we have a clay soil when the real condition is poor structure and lack of air space.

In a normal topsoil, approximately half the volume consists of spaces—half of which will be filled with water and the other half with air. The pH of a soil helps explain the availability of some elements. There is an ever pre-

sent danger of over-reacting to seasonal variations and forgetting that, in this country, the seasons seem to balance out every year.

All these observations and tests are easy to do and we are slowly building up a complete and objective picture of our course. Let me repeat, have a good look at the rough, particularly the bottom grasses in the rough. This is the area least likely to have been damaged by chemicals, water or compaction. If, let us say, we can see that the course was originally built on moorland, the original moorland grasses, fescue and bent, will still be growing in the rough. And, if that is so, we can begin to see the first glimmerings of hope. With a change in management, we can gradually eliminate that which has invaded our playing surfaces and encourage our grasses to reinvade them.

It is really only when we have gone through this ritual of (1) Case history, (2) Examination and (3) Tests, that we can begin to form confident judgements on these important points.

- What have we got now and from what was it derived?
- What is its potential for higher standards?
- How long would it take to achieve them?

We are then in a position, probably with expert advice, to draw up a policy document, which embodies a statement of the potential of the course, a game plan for its implementation and a costing of any suggested course of action.

Just to get the full flavour of the real complications of the situation, let us throw in two more essential items. Clearly, so far I have been discussing mainly turf, but there is other vegetation on a golf course in the shape of the off-course environment or, as the Americans call it, the no-use areas.

Natural succession will have dictated that if these areas have been neglected (and they usually have), they will have continued to develop remorselessly towards the climax forest. So grass will have become coarse grass, herbs, gorse, broom, depending on the habitat. And, even worse, that will have developed an overstorey of hawthorn, birch, etc.

Within relatively few years, scrubland develops that is unsightly and encroaches on to golfing areas. People feel that if conservation of these areas requires cutting or pruning of trees, then it must be wrong. So, nothing is done and this neglect becomes expensive. A sober estimate of putting right the neglect on one

Continued overleaf...

Eddie Park Continued...

course (which had occurred over 40 years) was over £2m.

The other factor in a golf course besides vegetation is terrain and architecture. The lucky architect was given land with contours that made course construction a joy and a sinecure. On some courses there was the need to alter the terrain quite markedly. On others the architect was only able (or competent) to do a poor job. It is on these courses that committees have tried to remedy the deficiencies with 'instant architecture'—usually hundreds of tiny trees. All too often they are unsuitable species on unsuitable land and probably die or fail to grow to any height.

Trees surrounding greens and fairways in this country are usually bad news for turf culture. And as they are often tied to a philosophy of target golf, even if they succeeded they would pose problems for future generations. How much better to use a competent architect and constructor in the first place. There seems little point in trying to return to indigenous turf if, meanwhile, we are trying to destroy the terrain with unwanted trees. The return of many greens to fast and

firm conditions will often make the original architecture perfectly viable. Again, it is no good setting a different form of architecture simply because we are using the wrong golf balls or clubs for British conditions.

It is my hope that people will stop looking for instant, easy, magical solutions to problems. Where we have damaged turf, we must simply not reach for the obvious remedy. We must dig deep and look for the real reasons for the trouble. They may not be purely agronomic. There may be golfing reasons. architectural incorrect or inadequate reasons. greenkeeping procedures perhaps a failure in the implementation of advice.

Emotive

The word 'advice' seems an emotive one to some people. I have experienced steering a golf course through the daily problems of returning to indigenous grasses. I will take advice from anyone and everyone! Just as I taught young university students, I now teach young greenkeepers that advice means help and only the very lucky or very arrogant can do without help.

Money is now becoming available for research into the problems of British course maintenance. I have a shopping list of matters to which I feel answers are urgently required. We know little about the maintenance of fescue/agrostis swards. What is the optimum water requirement of the different grasses? What are the optimum conditions for these grasses? How much aeration is required once the soil structure is improved? I suspect there is a markedly different response between fescue and bent. We know little about the side effects of most chemicals. We need to know much more about the decomposers of unwanted organic matter-the fungi and bacteria. We might get nearer solving the thatch problems if we had such knowledge. We know little about the interactions between different chemicals and it seems likely that some chemicals act in opposition to each other, while some potentiate others. We must know.

I am as suspicious about greenkeeping with high inputs of energy, chemicals and water as I am about farming with high inputs. In farming, too, we are seeing a return to more natural, less costly methods. These are all matters that require urgent investigation in the conditions of the British climate.

Next time, I will look closely at the actual implementation of a change in management regimes aimed at reclaiming indigenous golf turf. The seventh veil?

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Notebook

Kubota Looks To Corner A Market Sector

Kubota Tractors (UK) is to introduce a new 45hp (DIN) tractor on to the UK market in spring. The company says that the L4150 (pictured above) will fill a market need that has been largely overlooked by other manufacturers. With two or four wheel drive, the tractor is to have a European 'Q' cab as standard—a roll bar will be optional. One of the key features is hydraulic shuttle transmission, giving eight forward and eight reverse speeds. A full range of equipment, including a purpose-designed loader and backhoe, is being developed. Full details from Kubota Tractors (UK), Dormer Road, Thame, Oxfordshire OX9 3UD. © 084 421 4500.



Stay As You Are

Paul Ridgeon, chairman and managing director of the Maxicrop International and Walkover companies, has announced that the proposed agreement between Maxicrop International and Rigby Taylor will not be ratified and, although formulas are being prepared for Rigby Taylor by Maxicrop especially for the amenity market, no sole distribution arrangements have been agreed, nor were intended and, therefore, all Maxicrop based products are available from the established amenity and horticultural outlets.

Similarly, a proposed agreement between Walkover spraying machines and Rigby Taylor to establish sole distribution arrangements, has not been finalised. Walkover machines are still available direct from the manufacturer or from existing distributors.

It's An Honour

Eric Staniforth, managing director of SISIS, was awarded an MBE in the New Year Honours list for services to industry and export. Eric completes 50 years with the company in June. The congratulations of *Greenkeeper's* staff and contributors go to him.



Terry Takes Trophy

Andrew Terry, a greenkeeper at the Welcombe Hotel, Stratford-on-Avon, received the Gleneagles Challenge Trophy for the best project work at Elmwood College.

Andrew defeated some 140 greenkeepers who attended various courses at Elmwood last year to win the trophy, which is presented annually.

He was one of 17 English students who felt it worthwhile crossing the border into Scotland to attend Elmwood's specialised courses for greenkeepers and groundsmen.



Andrew Terry.

Rolawn Gets Ready For Increased Demand

Rolawn of Elvington, York is to embark on a major expansion programme to provide an accelerated growth pattern over the next five years.

Castleforth Fund Managers and Stewart Fund Managers have combined, under the auspices of the Business Expansion Scheme, to subscribe over £300,000 as new equity to further strengthen Rolawn's capital base. Castleforth's managing director J.D.B. Workman will join the Rolawn board. This arrangement will enable Rolawn to capitalise on the optimum acreage necessary for increased turf production.

It is only nine years since the company anticipated the future demand for high-quality turf and sowed its first ten acres at Elvington. The company has since become the leading grower and supplier of cultivated turf in Europe with units in Scotland, Bedfordshire, the West Midlands and Surrey providing a total turf production area in excess of 1,100 acres.

Full details from Rolawn (Turf Growers), Elvington, York YO4 5AR. Ø 0904 85661.

Supaturf Depot Opens In Leeds

The new 5,500 sq ft depot on the Normanton Industrial Estate is part of Supaturf's continued expansion and, by centralising its northern distribution, the company hopes to provide an efficient service to customers in the region. The Leeds operation is managed by Frank Crookson. © 0924 891000.



Area manager Frank Crookson.

Supaturf was formed 20 years ago as part of the George A. Palmer group of companies based in Peterborough. David Palmer, the present joint managing director, is George's grandson.

Talking Grasshopper

A new parkland sprayer called the Grasshopper which 'talks' to its operator made its debut recently. The Grasshopper is one of two new sprayers from BP Oil. Made by Nomix Manufacturing, it is recommended by BP for spraying selectives and incorporates a computer to simplify operation and maintain a drift-free coverage at all times. The operator only needs to set the required doseage rate—the computer then adjusts the pumping rates to keep the dosage at a constant level regardless of the speed of travel.

The computer also enables the Grasshopper to speak to the operator. It will talk him through a pre-spray check, advise him when refilling is necessary and remind him of the need to clean the machine once spraying is complete.

Despite its 12ft boom spread with four controlled droplet application Nomix heads, the Grasshopper folds up and can be carried through narrow



The BP 4/18 sprayer in operation.

openings. It is light enough to be moved by hand, but can also be towed by any vehicle at speeds up to 7mph.

The other new sprayer is the BP 4/18, which has been developed in conjunction with Micron, pioneers of ultra low volume controlled droplet spraying techniques. It has been designed specifically to meet the needs of weed control in city and industrial areas and can spray a one foot wide strip over three miles long using only 2½ litres of BP weed control product. The swath can vary from 4in to 1½ feet, while the head throws out a strip of 250-300 micron droplets and ensures complete weed coverage without drift.

Further enquiries to Wendy Gadbury on 01-821 2198.

In 1984, Ransomes Sims & Jefferies exported some £3m worth of grass machinery to the United States, 82 per cent more than the previous year. Shipments from Ipswich included the company's new Motor 350D self-propelled hydraulic gang mower, costing over £20,000 in the USA.



Warehouseman Carl Redfearn and Lancashire rep Hilary Jones in the new Supaturf surroundings.



Monument Way E., Woking Surrey GU21 5LY Tel: Woking (04862) 70303 and

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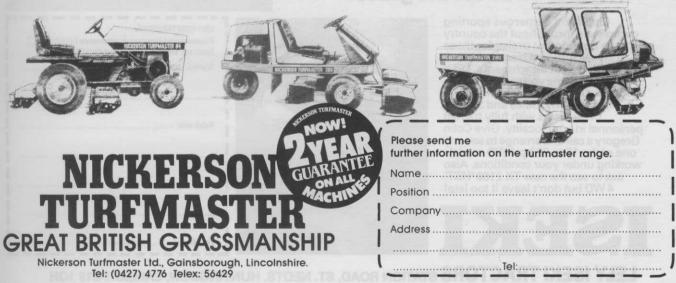
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Wessex Launches Two Versions Of Professional Rotary Mower



Suitable for tractors in the 30-50hp range, the Wessex P/18 professional rotary mower has a 6ft cutting width.

Wessex Farm Machinery Sales has added a new rear-mounted rotary mower-the P/18-to its range of grass and grounds maintenance machinery. The Wessex P/18 is a 6ft (1.80m) cut linkage mounted mower available in two versions.

The P/18/W, for professional and commercial users, has fully castoring rear wheels on puncture resistant cushion tyres and a flexible linkage configuration so the mower will follow ground contours accurately. Antiscalping rollers at the front and support chains to the tractor top link point ensure that the mower does not scalp on uneven ground. The P/18/S runs on side skids and is intended for more demanding applications, such as roadside verges, pasture toppings,

The P/18 is designed to work with 30-50hp tractors. The drive line comprises an oil-filled bevel gearbox with double vee belts driving the cutter heads. The cutter spindles are friction welded and have twin

bearings protected in a cast-iron housing. The three cutter heads are overlapping to ensure a full cut even when turning. High suction blades help to lift the grass to ensure a clean finish and clippings are discharged evenly at the rear of the mower. There is a steel safety shield that pivots and can be raised for better performance in long grass.

The Wessex P/18 has a minimal service requirement with all three lubrication points accessible above the deck. Both pairs of belts are easily adjusted by sliding the gearbox mounting bracket forward. Cutting height can be varied between 1/2in and 6in in 1/2in increments. On the P/18/W the rear wheels are moved. without the use of tools, on their sliding mounting brackets. On the P/18/S, the side skids are repositioned to alter the cutting height within the same limits.

Full details from Wessex Farm Machinery Sales, Newman Lane, Alton, Hampshire GU34 2PW.

More Power To These People

Heron Power Products of Crawley. West Sussex has experienced a strong trading year with its Echo chainsaws, brush-cutters, weed and grass trimmers, Suzuki generators, pumps and engines, Arkos pumps and Carlton replacement chains.

The Echo range includes the recently introduced GT-160AE weed and grass trimmer-a lightweight 16cc two stroke powered unit with single line nylon cutter head. Features include capacitor discharge ignition (CDI) for easy starting and loop handle for comfortable operation and a cutting head guard and 'dead man' action throttle trigger.

Another new product is the medium range CS-510EVL chainsaw, which features one of the highest power-to-weight ratios ever built into a 50cc saw. Step advanced CDI ignition is one of the many features of this saw and is also now included as standard on the CS 610 and CS 660 twin cylinder chainsaws.

Further information from Phil Duggan on 0293 51800.



From Heron Power Products, the Suzuki

Irrigati n Services Ltd

If you are thinking of having an Irrigation System installed, considering updating an old or partial system or simply require spare parts or service Turf Irrigation Services Limited are the company to speak to:

Betchton, Sandbach, Cheshire, CW11 0TS. Telephone: 04775 - 255

Telex: 367257 - TELSER, G. for TIS.



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Phone: ROBIN HUME on 04775 255.

People, Places, Products

At least two one-week courses on turf construction and management will be held in the spring by the Sports Turf Research Institute. The courses, from Monday morning to Friday afternoon, will cover soils, grasses, turf diseases and pests, drainage, watering, fertilisers and machinery. Starting on February 25 and March 11, the fees (exclusive of accommodation and meals) are £85 for members and £100 for others (plus VAT). A further course will be held if necessary during the week commencing March 4. Further details from The Secretary, Sports Turf Research Institute, Bingley, West Yorkshire. @ 0274 565131.

 The latest STRI Sports Turf Bulletin deals with Why Aerate? The Case Of Colf Courses, The Necessity For Suitable Sheds, Hard Weather On Turf and Turf Surface Standards.

The first branch of the IOG outside the UK has been formed in Dublin.

Officers are: acting chairman-lim Sergeant (head greenkeeper, Elm Park Sports and GC); vice-chairman-Joe Brennan (head greenkeeper, Limerick GC); treasurer-Sean Murphy (head greenkeeper, Stackstown GC); secretary-Liam O'Regan (head groundsman, The Bank of Ireland Sports Club); social secretary—Sean O'Brien (head groundsman, Leinster CC); members-Gerry Lennon (groundsman, Honiefarm FC) and David Walby (assistant greenkeeper, Bray GC).

Further information on the branch can be obtained from Jim Sergeant, 20 Adelaide, Strand Road, Sandymount, Dublin 4. © Dublin 692868 (evenings).

Neville Gay has been appointed sales manager for C.Taylor and Sons of Oxted, Surrey.

Turfworld '85—sponsored by Turf Management magazine and supported by the British Association of Landscape Industries (BALI)—which was to be Britain's first indoor turf and landscape exhibition, will not now take place.

"Support has not been translated into participation by a sufficient number of companies to make the exhibition fully representative," a spokesman for the organisers said. "Rather than disappoint visitors and those companies who were to exhibit by presenting an unworthy event, we prefer to cancel."

Brian's Building At Bashley

One of the latest projects for Brian D.Pierson (Contractors) is a nine-hole, par-three course at the Bashley Park

Brian Pierson talks to the animals.

Leisure Centre, New Milton, Hamp-shire.

Meanwhile, Brian found himself the centre of attention on the site of a proposed golf course at Porthleven, Cornwall. You can certainly meet some interesting animals in this business!



Sports turf culture and maintenance equipment suppliers Richard Aitken (Seedsmen) has John MacKay as its new technical rep responsible for the east of Scotland.



John Mackay.

Peter May who, for the past five years, has covered Herts, Bucks, Beds, Oxon and Northants for SISIS, has joined Nickerson Turfmaster as eastern area rep.

Jim O'Brien also joins the company as the rep for the south west, south Wales and the West Midlands. He has previously represented Sheen, Alpina and Ginge Mowers.

• All new Nickerson Turfmaster machines now carry a two-year warranty.

Donations by Ransomes Sims & Jefferies have enabled the IOG to establish a lending library at its Milton Keynes headquarters.

The company will provide all reference books and a joint IOG/Ransomes advisory committee has drawn up a

list of text books linked to each of the institute's four exam syllabuses. Some 100 volumes are being purchased and student members will be able to borrow them in preparation for this year's exams.

In a second initiative, the institute is to hold a $1\frac{1}{2}$ day training course for 16 Ransomes' sales reps.

Paul Arnfield, an assistant green-keeper at The Tea Tree Gully Golf Club, South Australia, is seeking employment in the UK from July. He wants to experience true British greenkeeping before returning to the semi-temperate climate of home and would also like to attend courses here. He is 19 and has completed his fourth (final) year of a greenkeeping apprenticeship. Any offers of help should be addressed to *Greenkeeper*, 121-123 High Street, Dovercourt, Harwich, Essex CO12 3AP.

Scottish Agricultural Industries has agreed a new sales and marketing policy with Chipman, which will now assume exclusive responsibility for the sales of SAI Turf Foods in England and Wales. All trade and user enquiries should be directed to Chipman's Horsham or Harrogate offices. This new agreement applies to the SAI Mini-Crum range of fertilisers, as well as to Longlife, Greengold and Fine Turf Nitrogen With Iron. It does not affect the distribution of SAI's other horticultural products. Arrangements for SAI Turf Foods in Scotland are also not affected.

Appointments

BOLTON GOLF CLUB LOSTOCK PARK, BOLTON

require

HEAD GREENKEEPER

In July our Head Greenkeeper will be retiring after 26 years service.

We are looking for a replacement to join us in June.

Accommodation is not provided, but assistance with removal expenses would be considered.

Please write giving full details of experience to:—

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Applicants must be fully experienced in all aspects of turf management, including the use and maintenance of modern greenkeeping machinery, and possess the ability to motivate and direct staff.

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Apply in writing giving details of age, qualifications and previous experience to:

The Secretary.
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East Sussex. BN20 8BP

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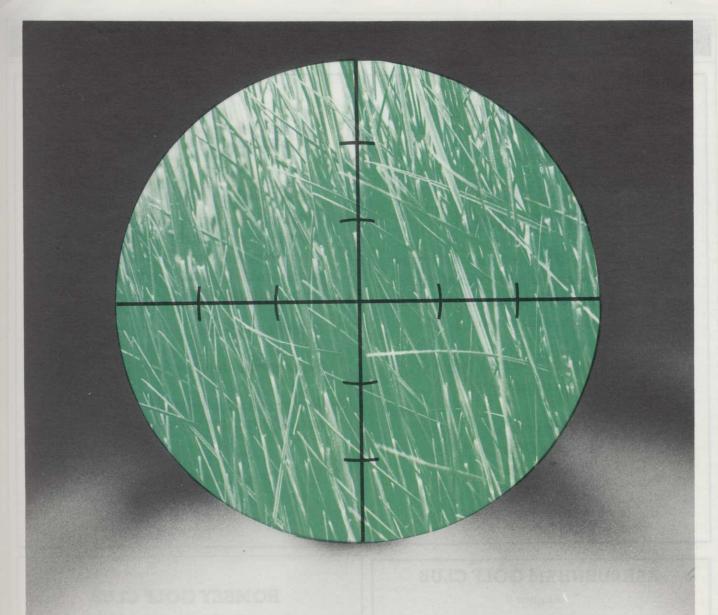
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Applicants should have two or three years experience of golf course maintenance, preferably taking an apprenticeship course in greenkeeping.

Applications in writing only, giving details, to:

J. Foster Esq.
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Netherton,
LANGBANK,
Renfrewshire.

HEAD GREENKEEPER

required by

ILFRACOMBE GOLF CLUB

Applications are invited for the above position vacant on April 1st, 1985, or as soon after as possible, from persons of proven ability and experience in golf course maintenance.

Salary negotiable.

No accommodation available.

Requests for further particulars (S.A.E.) and applications in writing to:

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require

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requires as quickly as possible an

ASSISTANT HEAD GREENKEEPER

and an experienced, qualified

GREENKEEPER

Experience is essential for both positions and machinery maintenance experience would be an advantage. Salary is negotiable according to age and experience in respect of both positions. There is no accommodation with either appointment.

Applicants should write to the Secretary stating age and experience to:

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Tel:(023):226981
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Land Unit Construction Ltd., Folly Farm, Hanslope, Milton Keynes, Bucks, MK19 7BX Tel: 0908 510414

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Contact: Sales Department

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SEMI MATURE TREE PLANTING Eastcote Nurseries (Solihull) Ltd., Wood Lane, Barston, Solihull, West Midlands, B92 0JL Tel: 06755 2033/4

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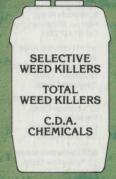
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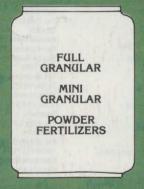


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