

every hole. In the past, we resorted to rubber mats, which were never popular. When we used the main tees during the dormant period, they generally took a lot of stick and were never really in a good shape for the start of the busy playing season. Good tees for winter play are a real bonus - they keep the golfers happy and allow us to present better conditions all year round.

"Not long ago, we had a serious thatch problem on the greens, due mainly to lack of aeration and infrequency of topdressing. It took about three years to get rid of the thatch accumulation by a concentrated programme of slitting and hollow-tining, combined with four to five annual topdressing applications.

"We cut back severely on irrigation and drastically reduced the amount of fertiliser, all of which made a marvellous transformation to the eventual quality of the putting surface. Last year, the greens only had one very light fertiliser application in the spring and they remained in pretty good shape for the rest of the year.

"Greenkeepers now are more aware of the treatment required to produce vigorous healthy turf capable of withstanding regular heavy punishment. Gone are the days when unlimited fertiliser was banged on to satisfy the whims of some influential club official without consideration for the long-term consequences.

"Automatic irrigation systems are regarded more as management tools now, to be used with great discretion. Many have learned their lessons the hard way and come to realise the quickest way to ruin turf can be brought about by the excessive



Tidy turf revetment in the face of a big bunker...

use of water and fertiliser high in phosphates and potash.

"As I said, everybody seems to think they can do the job better than those officially appointed by the club. When you are in the business of catering for the spor-



The bank of a ditch is improved for a smart appearance and to ease maintenance.

ting ambitions of all kinds of golfer, you can expect to be criticised occasionally. Golfers are very fickle at times. If they have a good game, they will sing the course's praises, but those who play badly may seek to justify their poor performance by finding something to complain about.

"I suppose it is the nature of the way golf is played that the greens attract the most comment, favourable or otherwise. We often hear golfers say: 'the greens are too hard, put more water on them!' They equate hard surfaces with dry greens and soft surfaces with wet greens.

"If they play their shot improperly with low trajectory and it fails to pull up on the putting surface, they immediately assume the green is too dry! Golfers don't appreciate that the maintenance of greens is not so much to make it a good landing area as a true putting surface and to do this we have to gear our efforts to keeping turf firm and the surface fast and true.

"Therefore, a good putting surface does not necessarily display the characteristics of a receptive landing area for a dropping golf ball. Regular aeration and topdressing does help to produce a good surface with the kind of resilience in the turf that will absorb the bounce and take the spin of a properly played golf ball.

"I have a deputy and three assistant greenkeepers, who are all good reliable workers with an enthusiastic interest in the operation and running of the course. We are fairly well-equipped, with a Cushman turf management system that includes a spiker,

Continued overleaf...



A lake comes into play on the 9th.

NO PROBLEMS!



SUPATURF SOLVES THEM ALL

Providing the best solutions to your problems is what Supaturf do best.

Supaturf supply a superb blend of fertilizers, grass seed and top dressings and are national distributors for the products of such companies as these.



BASF **M&B May & Baker** **AQUA-GRO**
TURFACE farmura

Like the familiar symbols of the companies featured here, the Supaturf sign is the mark of quality, reliability and value for money.

Wherever you work and whenever you need supplies there is always a Supaturf branch or a distributor of Supaturf products within easy reach.

Supaturf also offer a full laboratory tested soil advisory and analysis service as a further commitment towards raising technical standards in the industry.

Why not contact us today at one of our branches and let us supply your requirements.

With Supaturf solving your problems you can relax with the results!



Supaturf

For details of Supaturf distributors ring Head Office

Head Office
Oxney Road
Peterborough
Cambridgeshire
PE1 5YZ
Tel: (0733) 68384

South
Dromenagh Farm
Seven Hills Road
Iver Heath
Buckinghamshire
Tel: (0895) 832626/834198

Midlands & South Wales
Unit 104B
Hartlebury Trading Estate
Kidderminster
Worcestershire
Tel: (0299) 250087

North
Unit 2
Ripley Close
Normanton
Wakefield
West Yorkshire
WF6 1TB
Tel: (0924) 891000

South West
D.O. Hunt Limited
14 Fairfax Road
Heathfield
Newton Abbot
Devon
TQ12 6UD
Tel: (0626) 834499

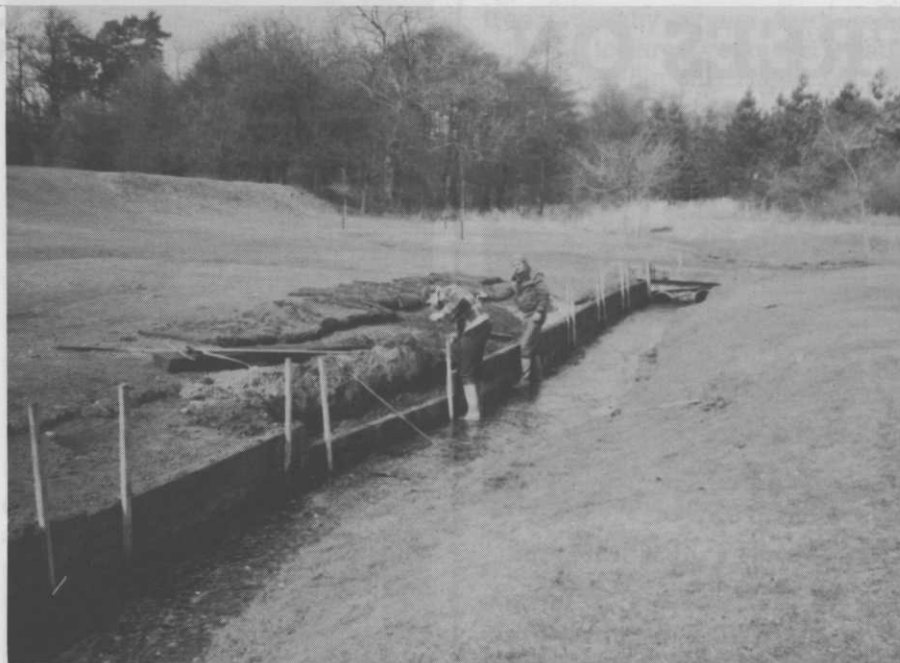


Eddie heads a jovial greenstaff at the Brocton Hall club.

hollow-tiner and topdresser; two Ransomes Triplex greens mowers; a Ransomes 180 with two sets of cutting units; three tractors, all fairly old; a set of Ransomes hydraulic five-gang mowers for the fairways and a set of trailed gangs for the semi-rough.

"We have a Sisis outfield spiker for the fairways, a Litamisa for leaf sweeping and collection, as well as an assortment of small machines, such as Flymos and trimmers. We recently purchased a Lawn Genie.

"We have spent some time this winter tidying up the banks of ditches intersecting the fairways. Traffic on these slopes has led to



Railway timbers were used on the bank of a ditch cutting across the 12th hole.

some deterioration in the turf's condition - there are ruts and other unplayable lies to frustrate golfers. We are in the process of building permanent retaining walls with railway timbers to present a neater appearance and reduce the amount of hand work required to maintain these drainage channels. We are also clearly defining the edge of the water hazard in compliance with the rules of golf, which will please all our golfers.

"A couple of alterations to our par-three 17th have also been carried out. The tee has been resited, bringing a lovely old stone tower dovecote building partly into play. An approach

bunker guarding the entrance to the green now has to be carefully negotiated. We have also altered the course of a winding stream and drained an old pond area to improve the aesthetic appearance of this area.

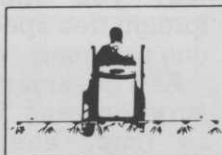
"Most greenkeepers would agree that the autumn and winter months are often the busiest period for the outdoor staff at every golf club. This is the only time we usually get to carry out important construction work and other necessary tasks to improve the course and facilitate more economical upkeep. Golfers who think we spend most of our time in the sheds through the winter months are mistaken!"

BLACK FEN TOPSOIL

Tel: G. J. Moyses
(0733) 69447

Spray Equipment for Compact Mini Tractors

Spray a 10ft width or, set vertically, negotiate greenhouse aisles or orchards. Suitable for use with all tractors, connecting to PTO. For full details contact:



**Frank Driver
Limited**

1 Jupiter House, Calleva Park, Aldermaston, Berks. RG7 4PW

TREES ON GOLF COURSES — PART 1



Trees can add a great deal to the attractiveness of a landscape.

IN this series, I'm going to explain how to select, buy, plant and maintain trees for golf courses. Some of my ideas you might find novel or controversial, but I make no apologies for this. If, by the end of the series, your awareness of the potential of trees on golf courses has been increased, then I'll have achieved my primary objective.

By Tony Gentil

Let me start by explaining what I see as the major benefits of planting trees on golf courses. On large areas of open space, trees can add a great deal to the attractiveness of the landscape. They provide scale, colour and interest. They are also useful for screening off eyesores and forming windbreaks to improve the micro-climate.

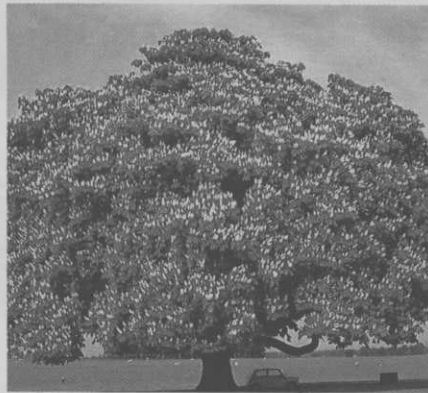
Trees will, to some degree, act as a barrier to noise and atmospheric pollution, important considerations where you have a course alongside a busy road.

Conservation of wildlife is uppermost in many people's minds and trees can offer a diversity of habitats that encourage and sustain many species of animal and plant under the threat of extinction.

Obviously, to the golfer, trees can feature as major elements to test skill. What isn't perhaps so obvious is that well-grown timber can find an eager market and trees could be considered as a potential source of income to the club.

So, having outlined the reasons for planting trees, let me tell you how to decide what to plant.

I must confess I envy the golf



Utilise open space by planting large growing trees.

course manager faced with the task of choosing trees. He hasn't got the problems of the town planter trying to grow trees in confined spaces. Complaints from town dwellers that trees are blocking light through windows, filling gutters with leaves, interfering with television reception and pushing buildings over all make you sometimes wonder if town planting is worth the effort.

When it comes to selecting trees for golf courses, I would say that you could choose any of the trees that are hardy in your area. Basically, if the land will grow grass, it will also grow trees. This means that you have a choice from several hundred different species and cultivars.

Conservationists argue that, if you wish to encourage wild life, then you should only plant native trees. I feel that this approach is a bit too restrictive. There are no more than a handful of tree species native to Britain and using them exclusively cuts down your choice drastically.

Furthermore, conservation is only one beneficial aspect of tree planting and there are other equally valid considerations. Even the most 'natural' looking golf course owes much to the hand of man and I see no reason why you shouldn't include foreign tree species in your planting scheme.

As a general rule, I would plant large growing forest trees, such as lime, beech, oak, horse chestnut and some conifers where there is ample room for them to spread unhindered. In formal areas, say near the clubhouse, I would use the



A standard tree.

smaller growing 'manmade' trees, such as cultivars of mountain ash and Japanese cherries.

On most courses, I would plant both conifers and deciduous trees. Conifers come into their own in winter, screening eyesores and acting as windbreaks. They also provide a superb backcloth to deciduous plantings, particularly when the latter are coming into leaf in the spring or having a final fling of colour in the autumn.

Tree planting costs a lot of money and, under certain circumstances, it is possible to obtain financial grants from bodies such as the Forestry Commission. If you are considering large-scale planting, it is certainly worthwhile finding out if your scheme is eligible for grant aid beforehand. Amenity societies and conservation groups might be prepared to help with financial or physical assistance.

The best method of obtaining trees for planting, without a shadow of doubt, is to visit several nurserymen and see the trees growing on their home ground. Nurserymen prefer this method of selling trees because it means that the reputable grower can show you the quality of his stock, which isn't easy for him to do if you are buying by mail order. A description in a nursery catalogue can never be a substitute for seeing the real thing. You wouldn't dream of buying a secondhand car without seeing it first and the same logic applies to buying trees.

Don't worry if you've never bought trees before, simply use your commonsense. Ring up a nurseryman, arrange an appoint-

TREES ON GOLF COURSES CONTINUED...

ment and then go along and keep your eyes open.

You'll find out most of what you need to know about the quality of his nursery stock even before you get out of the car. If the place looks a tip, with rusty machinery lying all over the place and debris thrown in corners, then you've a good idea of his attitude of mind. Have a look at his trees by all means, but I'll bet you find they are fighting for life among a tangle of weed.

By the same token, an immaculate nursery should be a guarantee of good-quality trees.

The nursery trade, like any other profession, has its own jargon and there are three main types of tree you could buy. First, there are 'forest transplants.' These are very small



Cultivars of mountain ash (above) and Japanese cherry (below).



trees, usually grown from seed and two to three years old - each will be 4in-6in tall. These are the cheapest and used in their millions for mass planting.

The second group are called 'whips.' These are small trees with a single whip-like stem hence their name. Whips vary in height from about 2ft 6in to 6ft. These cost about 50p each and are, for most situations, the best trees to buy. They are easy to plant, don't need staking, establish well and need the least maintenance of all the three groups.

Finally, there are 'standards.' These are the type of tree traditionally used for planting in streets. They have a trunk clear of branches up to a height of 6ft and, from there, the head develops, rather like a lollipop.

Standards are the dearest of all, costing between £10 and £20 each. They need staking for the first two to three years after planting. Although still popular, they never look as natural as whips and for large-scale planting can be horrendously expensive.

My next article will explain how to plant your trees.



The unequalled durability of genuine teak is combined with over 60 years of design and production experience to provide outdoor furniture that will outlast most other types whatever the weather.

A true investment in design and service.



BarlowTyrie

Barlow Tyrie Limited
Braintree, Essex CM7 7RN
Tel: (0376) 22505 Telex: 98173

Watermation

FOR GOLF COURSE IRRIGATION

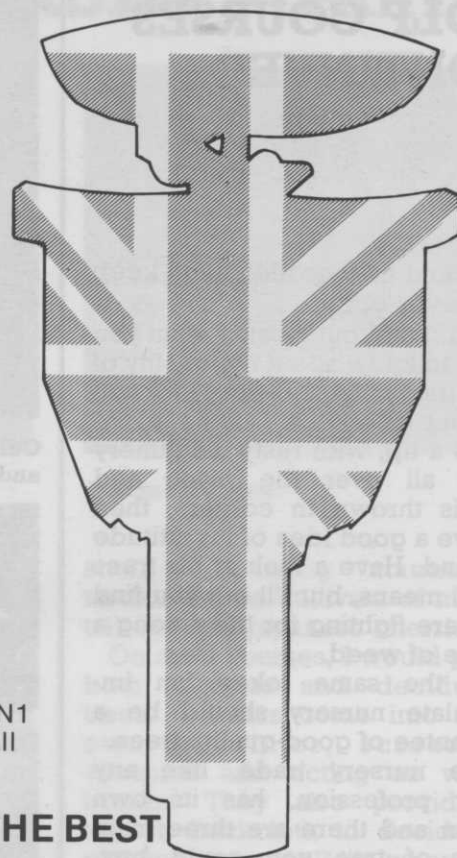
Rainbird sprinklers are made in California, so are Toro, so are Buckner. Weathermatic sprinklers are made in Texas, Perrot sprinklers are made in Germany and Roland are made in France... but

Watermation Sprinklers are made in Britain

Along with their unique TW1 and TW2 computer controllers and other specialist equipment, Watermation have now designed and built their own GN range of sprinklers. Apart from keeping their own people in work, there are other advantages to buying British. The prices won't be subject to increase with the dollar, deutschmark or franc and there are always spare parts quickly available.

We don't expect you to buy Watermation sprinklers just to be patriotic. They are high quality sprinklers made from brass, bronze and stainless steel in a heavy cast corrosion resistant body. The internal mechanism has a multi fit guide plate so that it can be used to refurbish the Rainbird 21-47 range or the Weathermatic K range — thus saving money.

All the GN sprinklers have thick moulded green rubber tops and have been specially designed for golf course irrigation — the GN1 for tees, the part circle GN2 for the greens and the long range full circle GN3 for fairways.



BUY BRITISH — BUY WATERMATION — BUY THE BEST

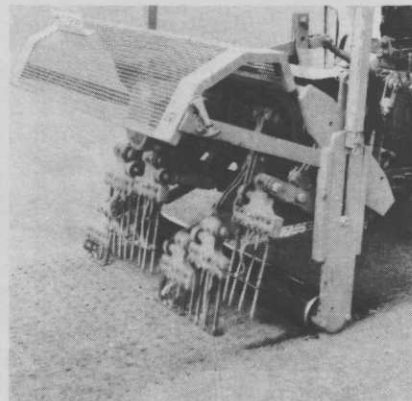
Watermation Ltd., Monument Way E., Woking, Surrey GU21 5LY.
Tel: Woking (04862) 70303 & Stirling (0786) 70252.

JOIN THE GROWING LIST OF THOSE WHO HAVE USED THE PROFESSIONALS



MAJOR

+



CAPTAIN

British Association
of Landscape Industries



Engage SCC's land army for all your maintenance, course improvements, construction, landscaping and hiring needs.

All types of turf care equipment for hire.

S|C|C Lands Maintenance Ltd

12 Foxburrow Close, Haverhill, Suffolk CB9 9JJ.

Tel.: Haverhill 62369



A name to play with *A machine to work with*



All good players need good clubs to play with, a variety of clubs to play different strokes, to play efficiently and successfully.

The greenkeepers are no different, looking for the best in machinery to undertake jobs around the course. Rough cut, short cut, spiking, or draining, preparation, or conservation.

More and more greenkeepers are looking to Iseki to provide the right machine for their course.

Sure in the knowledge that it's one of the most effective clubs in your bag, to help you play, and work more efficiently all round.

Par Excellence

ISEKI

To: Mr Colin Gregory, Iseki UK Limited, Bydand Lane, Little Paxton, Cambs.
PE19 4ES. Telephone (0480) 218100.

"Please send me details of how Iseki can help my course"

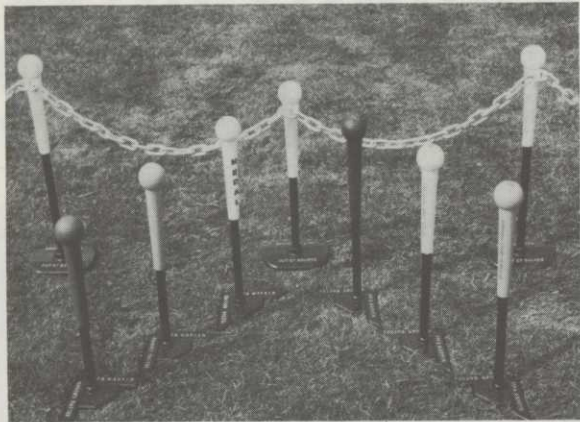
Name

Address

Application

GK/5/87

THE FINISHING TOUCH



- * Teeing Ground Area Markers
- * Custom made Out of Bounds Markers for around club house borders etc.
- * Also Lateral and Water Hazard Markers
- * Boundary Markers for tees and greens
- * Easily moved and replaced after tending borders or mowing. No ground sockets required. Any height made to order
- * Also special tees for that Company Golf Day.

TACIT—T—MARKERS, 3 Millers Lane,
Monks Kirby, Rugby CV23 0RJ
Tel: (0788) 832166

LETCHWORTH GOLF CLUB

requires

HEAD GREENKEEPER

with a proven ability in:

- * All aspects of golf course maintenance
- * Use and upkeep of modern machinery
- * The supervision of staff

For the right applicant there is:

- * an attractive salary
- * a pension scheme
- * a 3 bedroomed house in Letchworth, rent and rates free

Applications should be in writing and include a comprehensive curriculum vitae, including present salary, and sent to:

The Secretary
Letchworth Golf Club,
Letchworth Lane, Letchworth
Herts. SG6 3NQ

are you concerned with root development

Slow hard growth, a thick sward, drought resistance, soil conditioning, grass seed germination, tree planting, fine turf, land reclamation, indoor landscaping, a balanced management system, destructured soils, deep green colour, improving your soil ...

... then Farmura Environmental Products can help your management programme

Ask for details of the Farmura range of products or write for colour brochure to:

Farmura Environmental Products, Stone Hill, Egerton, Ashford, Kent. TN27 9DU. Tel: Egerton (023376) 241

farmura

ENVIRONMENTAL PRODUCTS

Caring for the environment naturally!



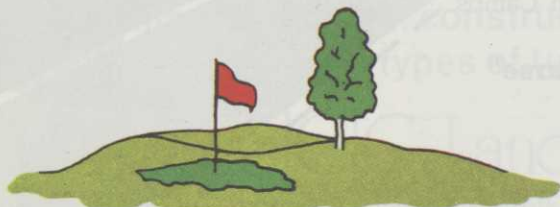
*We've built more courses than everyone else put together...
for new constructions, alterations or improvements on your course...*

GOLF LANDSCAPES LTD.

ASHWELLS ROAD
BENTLEY, BRENTWOOD
ESSEX. CM15 9SR

Telephone: (0277) 73720

Telex: 995215 GOLF LG



*The proven experience in the field
for construction, drainage and irrigation*

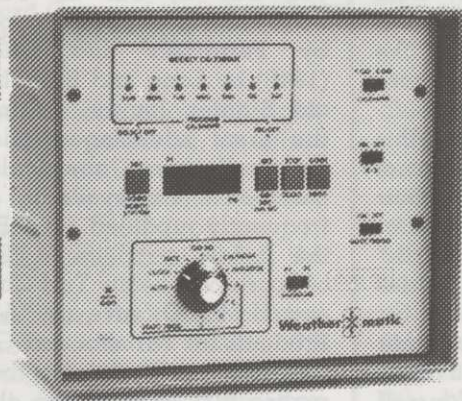
Don't
lose control

FIT A

Weather-matic
CONTROLLER

FROM
Prime

THE BEST IN PROFESSIONAL
IRRIGATION SYSTEMS



Whether you need a 6, 8, 12, 16 or 24 station irrigation controller, you can't beat the micro-computer Mark Series from Weather-matic. Available with three types of housings, they can fit every application.

Easy to programme with two watering schedules, four daily start times on each programme and 99 minutes timing at one minute increments.

For your Turf Irrigation requirements—

Prime Watermen Ltd

WANGFORD · BECCLES · SUFFOLK NR34 8AX
TELEPHONE (050 278) 481 · TELEX 975731 PRIME G

Weather  **matic.**
LAWN AND TURF IRRIGATION

**HAVE YOUR
SPRINKLERS LOST
THEIR IMPACT?**



**REPLACE THEM WITH
TORO, THE TOP
PEOPLE'S CHOICE!**

Ask your Head Greenkeeper if he's totally happy with the performance and reliability of the sprinklers around your course. If there are doubts, call your nearest Toro Distributor for helpful professional advice. He will show you the range of Toro gear-driven sprinklers designed especially for golf course watering. He will tell you just how technically superior they are - how they can improve watering efficiency and just how simple it is to improve your existing system.

Top people's choice? You'll find Toro Sprinklers watering the sacred turf of St. Andrews, Centre and No. 1 Courts, at Wimbledon and the pitch at Wembley Stadium...

P.S. Toro make sprinklers to water greens, approaches, fairways and tees - putting areas too!



TORO

Toro Irrigation Limited

Unit 7, Millstream Trading Estate, Ringwood, BH24 3SD, Hampshire. 04254-6261

Your Toro Distributors are:

Home Counties, East Anglia & South East

Golf Landscapes Irrigation, Brentwood. Tel: 0277-73720

South & South West Irrigation Slurry Services, Downton, Wilts. Tel: 0725-20377

Midlands, North, Scotland & Wales

Turf Irrigation Services, Sandbach. Tel: 04775-255

The top people's choice!

MORE BOOKS ON SCIENCE

BY EDDIE PARK

"Praised be, my Lord, for our sister, Mother Earth, which doth sustain and keep us, and bringeth forth divers fruits, and flowers of many colours, and grass". So said St. Francis of Assisi. In the more recent times men seem to have forgotten this simple fact — that the chief figure in all this is still Mother Earth, admittedly with increasing help from the human race. Unhappily, we seem to have rushed up the blind alley of thinking that Man is now the Master and that he has the ability with all his discoveries to dictate what he wants.

So, in our attempts to maintain (and in many cases recover) our golf courses, now is the time to re-learn the laws that Nature imposes on US.

It is necessary with Soil Science to curb the very natural enthusiasm that is engendered by a fascinating subject. A useful start is to look in the Public Library for a copy of the "Soil Survey Bulletin" for your own particular area. The Soil Survey has, until recently, been financed by MAFF and has produced detailed surveys for most non-urban areas. A brief outline of local Geology, Relief, Climate and Soil Formation is followed by detailed descriptions of soil profiles which are linked with maps identifying specific areas. Even more useful is the section on the suitability of each parcel of land for different purposes (including golf).

In my last article on old books I mentioned the splendid 'New Naturalist' series which I said could now be found in bookshops at very reasonable prices. Imagine my horror when the following week I visited a bookshop in York and found plenty of choice but all at about £25! Dark thoughts came to me that the BIGGA meetings were being held in York and someone had ruined the market — probably that new chap at Wentworth (another book collecting nut!) Fortunately, the following week I was in Holyhead and found one at £1 which all goes to show you just have to go far enough. This one was "The World of the Soil" by Sir E. John Russell (1957) still one of the best introductions to the subject. Russell followed Sir Dan Hall as Director of Rothamsted Research Institute and also wrote the classic "Soil Conditions and Plant Growth" (1961) and, less useful, "Soils and Manures" (1945).

Hall originally produced "The Soil" as long ago as 1902.

It is a matter of golfing history that in 1926 the R & A set up an expert panel to consider the dire state of British golf courses; this eventually became the Scientific Advisory Committee for the Board of Greenkeeping Research. Both Sir Dan Hall and Sir John Russell were members of it. Perhaps the authorities took things more seriously in those days?

Another prolific writer in this field was G. W. Robinson of Bangor. He wrote "Soils their Origin, Constitution and Classification" (1932) and "Mother Earth" (1937), this latter being a series of letters on soil addressed to Sir George Stapledon (yet another member of the Scientific Advisory Panel). In the Teach Yourself series there was some useful information in "Good Soil" (1944) by S. G. Brade-Birks of Wye College in Kent. Coming up to date a word of warning would be in order. Some of these subjects in the hands of the academics have become very detailed and full of theories and counter-theories — confusing for the student who simply wants to learn the basic principals. Two books available in paperback form which are established favourites are "An Introduction to Soil Science" (1974 reprinted 1980) by E. A. Fitzpatrick and "An Introduction to the Scientific Study of the Soil" (1927 reprinted 1980). Both these books enable the everyday processes in the soil to be studied in as much detail as the individual wishes. A really simple book is to be found in the Science for Everyman series. "Your Guide to the Soil" (1965) is probably aimed at the gardener or student farmer, but it is easy to read and fairly instructive.

It may seem a bit superfluous to talk about books on the use of chemicals on golf courses. Everyone who goes to the I.O.G. Trade Show at Windsor staggers home with carrier-bags stuffed with enough reading matter for a year. Perhaps the main thing is to get chemicals into perspective. Modern research confirms that we cannot afford to disturb the balance in Nature with the unnecessary over-use of chemicals.

Equally we cannot afford to return to the state of affairs on golf courses prewar. I don't suggest you buy it, but an out-of-date book called "Suppression of Weeds by Fertilizers and Chemicals" (1946) by Long and Brenchley plus old Bingley Journals, bring home the great advantages today of a few, well chosen chemicals. Good handbooks are available and are frequently updated. S.T.R.I. and the B.A.A. produce a "Directory of Sports & Amenity Turf Chemicals" and H.M.S.O. give us "Approved Products for Farmers and Growers" (the latter is useful for those who realise that some of the chemicals we need for large areas can be bought much more cheaply from farm suppliers). Herbicides are especially necessary to the greenkeeper and it is important to use the right chemicals for the target. Sutton's "Turf Weeds", the Weed Research Organisation's "Garden Weeds" by R. J. Chancellor and "Chemical Weed Control in Your Garden" by J. E. Y. Hardcastle are all most useful.

Now for a bit more history. R. B. Dawson, the first Director of the Board of Greenkeeping Research, had been trained at Rothamsted under Hall and Russell and one of his earliest tasks at Bingley was to write the leading article in the new Journal. As his subject he choose Plant Ecology and he went on to write a simple outline of the principals of that subject which, in spite of all subsequent discoveries, still makes good reading today. A very close look at that subject is essential next time.