YOU WON'T FIND A MORE VERSATILE RANGE ON COURSE.

The KUBOTA Challenge

MORE POWER. MORE CHOICE.

Kubota (UK) Limited, Dormer Road, Thame, Oxon OX9 3UN. Telephone: 084 421 4500.

Circulated to all members of the British & International Golf Greenkeepers' Association
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, Camb., PE19 4ES. Telephone (0480) 218100.

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

Name
Address

Application

ISI/5/87/GGCM
Another generation -
A brighter future

Looking around the golf scene, many of the Head Greenkeepers who returned from serving their country to fight another battle reclaiming their derelict courses from the ravages of sheep, potato fields and the training exploits of the 'Home Guard', will soon be gently moving into retirement.

They are part of the old school of greenkeeping, men who were denied the educational opportunities the youth of today claim as their right. Their 'know-how' came from discussing problems with neighbouring greenkeepers, reading every book and magazine on matters of agronomy and through visits from salesmen picking up the latest information on mechanical equipment.

Not only have they maintained and developed their courses for the past forty years, but latterly have seen a massive increase in play with the accumulative problems that have brought. Compaction, thatch, disease, drainage, are all conditions exacerbated by the increased wear caused by seven days a week golf, even during the winter months.

Their successors, who do not remember the days when golf was played mainly at weekends, will now need to strive for better management of their resources.

The opportunities for business education are available, both through Polytechnics, Evening Institutes and the local library. In time it is to be hoped the Greenkeeper Training Committee will encourage one of the Universities to produce a syllabus for a degree course in amenity turf management, but until that day arrives, the present generation of greenkeepers will need to follow in the footsteps of their predecessors and seek out every opportunity to improve their 'on course' knowledge and organisational abilities.

A change in government planning policy whereby poor agricultural land previously regarded as sacrosanct 'green belt' can now be released for both their 'on course' knowledge and organisational abilities.

A change in government planning policy whereby poor agricultural land previously regarded as sacrosanct 'green belt' can now be released for development could encourage a number of private golf course constructions, particularly if they are linked with a hotel complex and residential housing.

The opportunities for business education are available, both through Polytechnics, Evening Institutes and the local library. In time it is to be hoped the Greenkeeper Training Committee will encourage one of the Universities to produce a syllabus for a degree course in amenity turf management, but until that day arrives, the present generation of greenkeepers will need to follow in the footsteps of their predecessors and seek out every opportunity to improve both their 'on course' knowledge and organisational abilities.

A change in government planning policy whereby poor agricultural land previously regarded as sacrosanct 'green belt' can now be released for development could encourage a number of private golf course constructions, particularly if they are linked with a hotel complex and residential housing.

Such a move could only be a step in the right direction for greenkeepers as events have shown it is the commercial undertaking in golf that recognises the worth of the man who manages the course and rewards him accordingly.
Geoff Sadler, Head Groundsman, Talbooth Hotel & Restaurant, Essex.

Bill Matthews, Superintendent, Parks & Gardens, Thanet District Council, Kent.

David Jones, Superintendent, Parks & Gardens, City of London.

David Jones said, "Floranid cut leaching to a minimum so we needed fewer applications. We used it on a wide range of areas including raised shrub and flower beds."

Bill Matthews was looking for strong, even growth sustained throughout the season. "Floranid more than lived up to my expectations. It produced the hard wearing grass that I needed and also gave me vigorous, healthy shrubs with good colour and appearance."

Geoff Sadler considers that he has already saved money. "Our grass has to look good. Floranid gave us good colour and rapid recovery even after hard wear but without any excessive growth. Floranid has certainly worked well for us."

That's what these professionals think of Floranid slow release fertiliser. So whatever your requirements the Floranid range can work for you.

"From grass to shrubs, from flowers to trees Floranid gave us fast and long lasting results."

BASF Group. Floranid is a BASF trademark.

Effective slow release for quick results.
NEW PESTICIDES SAFETY TRAINING VIDEOS & SEMINARS

Following the introduction of new legislation governing the use of environmental chemicals, May & Baker Environmental Products and Burts & Harvey have produced a valuable new training 'package' for everyone involved in the use of amenity pesticides.

A 14 minutes video film featuring television journalist Howard Stableford, examines the statutory requirements and vividly demonstrates the "do's & don'ts" of handling chemicals.

A 16 page booklet detailing essential safety procedures contains a useful ten-point safety check list as a separate self-adhesive sticker.

Entitled "The Safe Use of Environmental Chemicals", the video cassettes are available for purchase (VHS and Beta format at £46 each or U-Matic at £62).

A copy of the safety booklet and check list is available free of charge on request from May & Baker Environmental Products.

Contact:
May & Baker,
Regent House, Hubert Road,
Brentwood, Essex CM14 4TZ.
Tel: (0277) 230522

A seminar entitled "Pesticide Legislation and the Groundsman" will take place at the Manor House, University of Birmingham, on Thursday 9th April, 1987.

Papers to be presented include 'Legislation and Codes of Practice' by Mrs. H. Hamilton of the Ministry of Agriculture; 'Legislation and the Manufacturer' by Mr. K. Cleverley, ICI 'Pesticides and the Environment' by Dr. M. Anderson, Lecturer in Zoology at the University of Birmingham.

Cost of attendance at the seminar organised by the IOG Birmingham Branch will be £3.00 for Members and £10.00 for non-members.

DO YOU HAVE YOUR WARNING NOTICES?

WHEN APPLYING TURF CHEMICALS IN LINE WITH HEALTH & SAFETY RECOMMENDATIONS

For these, and a CHEMICAL CONTROL LOG

Contact:
BILL HOLDSWORTH
P. O. Box 52
Stockton-on-Tees
CLEVELAND TS17 OSX
Tel: (0642) 762079
(Evenings)

NEW WEATHER-MATIC DISTRIBUTOR

Prime Waterman Limited are the newly appointed distributors of the well known Weather-matic range of turf irrigation equipment in East Anglia and South East England.

For further information on design, spares or installations contact:
Sonja Taylor on 0502 78 481.

RANSOMES SIMS & JEFFERIES PLC TEL. NO. CHANGE

Ransomes Sims & Jefferies PLC have a new telephone number with effect from 2nd January 1987 and the following will apply:
Tel No: (0473) 270000
Fax No: (0473) 270030
Telex: 98174
Cables: Ransomes Ipswich

Strike at John Deere's causes huge trading loss.

The slump in the western world's farm economy is reflected in the annual report of the John Deere Company who have just announced a massive net loss of 229 million dollars, on their world wide activities.

Part of the loss is attributed to a labour dispute with the United Auto Workers at eleven factory units in the USA, which, added to the reduced sales of farm equipment has produced the worst trading year in the company's 150 year history.

Shareholders are told John Deere intend to move further into 'grounds care equipment'. Last August they announced a new thrust into the golf and turf equipment market and introduced twelve new products especially designed for professional applications. They say they intend to introduce a wide range over the next two years and aim to make John Deere a major equipment supplier in an expanding market. It is stated that there are currently 14,000 golf courses in the USA and about 400 new ones are constructed each year.

John Deere have a sales division at Nottingham and it is from this base they have already commenced to nibble at the British golf course market.

Last year they introduced three new compact tractor models with considerable success at the Windsor Show. Will it be long before some or all the new products such as the hydraulic gangs are brought into the UK?

Despite the net loss suffered in 1986, a closer look at the balance sheet reveals cash and short term investments totalling over 180 million dollars. Surely enough to keep the 'wolf from the door' for another 12 months and perhaps a bit over for further investment in golf course business.

HUXLEYS GRASS MACHINERY ON TOP, ON TURF.

We'll give you the cutting edge in the rough and on the smooth.

Call us today for the full facts on Huxley Hydraulic Reelmowers for compact and smaller-sized tractors and the Cushman Front Line range of ride-on rotary mowers.

HUXLEYS GRASS MACHINERY THE DEAN, NEW ALRESFORD, HANTS SO24 9BL, ENGLAND.
Tel: 0962 73 3222 Telex: 894426
Fax: 0962 73 4702
As the rain lashes across the golf course turning the bunkers into ponds, the biting east wind howls in the eaves of the clubhouse roof, what would be your reaction if your partner said “How would you fancy a round at Pebble Beach or Spyglass Hill today rather than fight our way round this lot”, indicating with a pointed finger to the inhospitable cold, wet, fairways, outside the warmth of the lounge bar.

Probably you would think he had an option on two free seats for Concorde or senile dementure was contributing to flights of fancy.

But, incredibly, a new to Britain, golf simulator, Par-T-Golf, can provide a round of golf at either one of these famous courses. Using advanced microcomputer technology and a superior optical projection system, each hole of your chosen course is projected in colour onto the giant screen, approximately 20 feet away from the tee position.

**A ROUND AT PEBBLE BEACH**

...without leaving the Club-house!

A diagram of the first hole is projected onto the 12 foot by 8 foot screen. After studying the diagram, the first player (whose name will appear in the display panel) chooses whether he or she will tee off from the ladies’ mens’ or pro’s tee. This information is fed into the micro-computer which directs the projector to advance to the appropriate tee. Instantly a full colour picture of the view that would be seen from that tee is projected onto the huge screen. The distance to the flag is shown on the display panel along with the player’s name.

Using normal golf balls and clubs the player drives into the high-impact, heat-sealed screen. The distance the ball was hit, to the right or left and the amount of hook or slice is immediately shown on the display panel. Should the ball be lost, or go out of bounds or into the water it will be reported as such. The computer knows the precise location of every hazard.

After each player has played from the tee, PAR-T-GOLF’S computer determines which player’s ball is “away”. The projector is then advanced to the appropriate full-colour view of the hole and the players are informed, by name, of both the distance remaining to the flagstick as well as the type of area in which their ball lies (i.e. fairway, rough, sand, water, etc.). Should the ball land in the sand the player would play out of the simulated sand trap. If the ball should go into an unplayable area, water, hazard or lost then the projector is turned off and the display panel will inform the Golfer of the lie, the appropriate picture will be projected onto the screen and the computer will add the correct number of strokes. Even penalty strokes are calculated.

The computer also observes golf etiquette, the player who wins the hole will “tee up” first on the next hole. The simulated turf Putting Area provides a fast, undulating surface and the cup is connected to the computer so that a Hole-In-One score can be achieved.

**A Micro Computer**

Perhaps the most incredible feature of PAR-T-GOLF is its new microcomputer. PAR-T-GOLF’S three miniature single-scan television cameras read the speed of the ball, the angle of the trajectory and the hook or slice, sending this information to the micro-computer which enables it to calculate the ball’s position to the nearest yard.

When all players have reached the green, the micro-computer turns off the projector. Putting may be made from as far as 6 metres away on 21 different positions. The display panel will instruct the player “by name” of the appropriate spot to putt from. He then puts out and the display panel will ask for the “number of putts”, the player will then enter the number of putts he has taken and his score will be displayed on the panel. The display panel will then instruct the next player.

The Par-T-Golf simulator will fit easily into the space occupied by a squash court.

It has the advantage of being set up within the premises of the golf club, adjacent to the bar and usual comforts. A round of nine holes with four players takes about 75 minutes, which would compare favourably with three frames of snooker.

Two complete systems have already been sold privately to individuals who will no doubt be providing golfing parties for their friends, within the confines of their mansions.

Two more systems have been installed in Leisure Centres. The first at the John Murray Sports Centre in Glasgow, the second will open during the first week in March, at the Harrow Leisure Centre.

The complete cost of the system is around £30,000, but leasing arrangements are also possible.

It does not take too much of a mathematical brain to calculate what the income for a busy club or leisure centre would be at an hourly charge of £10.00. Or what the cost is to a four-ball. Certainly a mere fraction of travelling to California for the real thing.

Further details can be provided by contacting the Editor of,

GOLF GREENKEEPING,
P.O. Box 12,
Wetherby,
West Yorkshire
LS22 4SR.
MAJOR INVESTMENT BY VITAX

The Company bought out by a consortium headed by Trevor Martin, fertiliser specialists Vitax Limited, is to build a new £1.4 million multi-purpose headquarters at Southport on Merseyside.

The 20,000 square feet complex will contain a new manufacturing and production facility, packing plant, warehouse, laboratories, trials unit, offices and showrooms.

Trevor Martin has announced this major expansion programme to meet the increasing demand for Vitax products from their specialist users: the professional recreation and amenity market.

Two new extended release fertilisers for the sports and amenity market, Key N and SR 2, have been introduced and will be available shortly.

Key N is a nitrogenous fertiliser (20% N) for use where reserves of both phosphate and potash are high, or where there are two nutrients made either annually or bi-annually. The nitrogen is included in three forms to provide quick-, medium- and slow-release and to ensure the continuous supply of plant food needed by the turf. Key N also contains magnesium (2.7% MgO) to promote lush green turf.

Recommended application rate: 35g per sq. m. (1 oz. per sq. yd).

SR2 is a 10:7:20 compound for application in the autumn or earlier part of the year when soil temperatures are 10°C or below, holding the nitrogen content until growth commences in the spring.

For clay constructed areas SR2 should be applied in the autumn or the earlier part of the year before top dressing, and on sand and free-draining soils it should be applied in the earlier part of the year before mid-March.

Recommended application rate: 35g per sq. m. (10 oz. per sq. yd.).

Vitax have also announced that the third annual greenkeepers' golf tournament will take place this year at the Ferndown Golf Club in Dorset on Thursday 21st May 1987.

Six teams of greenkeepers representing the Midlands, Mid-Anglia, Wales, the South-West, Devon and Cornwall, and the South Coast are to take part. Details from the Section Secretaries.

HUXLEYS TO STAGE TURF EQUIPMENT DEMONSTRATION

Huxleys Grass Machinery will be staging an impressive working display of professional grass and turf maintenance equipment at Stratfield Saye House, near Basingstoke, on Thursday 21st May 1987, the splendid country home of the Duke and Duchess of Wellington.

The grounds around the house feature a wide variety of grassed areas on which the full range of professional equipment will be put through its paces.

Entry will be by personal invitation only. This should be obtained in advance from:

Michael Bird,
Huxleys Grass Machinery,
The Dean, New Ailesford,
Hants. SO24 9BL.
Telephone: 0962 70 3222.

NEW SMOOTH STALK MEADOW GRASS

British Seed Houses Ltd. have been appointed main distributors for the new Smooth Stalk Meadow Grass called JULIA.

The Sports Turf Research Institute at Bingley have made JULIA the highest rated poa pratensis in their latest 1987 Seed Guide. Independent trials carried out at the Institute showed that Julia is a compact hard wearing poa which withstands regular mowing down to 20mm and has a good resistance to fungal disease.

The Company intend to introduce JULIA in several of their fine turf mixtures for the forthcoming season.

Process rules of JULIA are for golf tees and fairways. A 20% addition is recommended for tees and 10% on fairways.

In their new 1987 Catalogue, BSH Ltd. have announced that they are launching a new low maintenance grass seed mixture called A22, which contains LOGRO Slender Creeping Red Fescue and LORINA Perennial Ryegrass.

In the early 1970's British Seed Houses started a research and development programme in an attempt to obtain some short growing, high quality grasses and as a result of this comprehensive work the Company are now able to offer two of the shortest growing grass varieties available within their respective species, showing a considerable saving on mowing costs.

A free revised leaflet has also been issued giving details of ten wild flora conservation mixtures. The leaflet gives clear and concise cultivation and management information which is so important when sowing wild flora.

Attention!

Landscape architects, parks managers, landscape contractors, golf greenkeepers, groundsmen and turf producers . . .

For high quality grass seed mixtures, wild flora conservation mixtures, tree and shrub seeds, fertilizer products and professional service and advice.

Look no further!

Our Amenity Seeds manager, Jeremy Howarth will be pleased to pass on the benefit of his wide experience and see that you receive a copy of our new comprehensive catalogue which details mixtures produced in the U.K. and includes many varieties bred by major plant breeders, D.S.V.

Why not contact him now?

© GOLF GREENKEEPING March 1987 7
I am sure they meant well but I have only just finished the book they gave me for Christmas - *A Walk with a White Bushman* by Sir Laurens van der Post. It is meaty stuff but I invented a new reading system to cope with the tough stretches and to forestall brain damage. I would open the book at random and beaver away until the mind boggled. Then I'd let it unboggle for a time before diving in somewhere else.

Eventually, I began to recognise familiar sections and finally string them together. This is unusual when I am dealing with heavy stuff because my memory tends to be flabby and, like the filling of a superior duvet, non-absorbent and easily washable.

But not only grit and invention drove me on finally to Page 318. I also became deeply anxious that in reminiscing about and easily washable duvet, fluffy and, like the filling of a superior duvet, non-absorbent and easily washable.

Eventually, I began to recognise familiar sections and finally string them together. This is unusual when I am dealing with heavy stuff because my memory tends to be flabby and, like the filling of a superior duvet, non-absorbent and easily washable.

At the time, I could not believe that I should ever make it through to any sort of conversation and, B.T.C. (British Theatre Company) had just commissioned from me a new Act IV for 'Cinderella' with Sergeant Argent in the title role. Weakly, I settled for the easy way out.

Sir Laurens obviously has no memory problems. For example, he once travelled widely through Russia* after waiting eight weeks for a visa in London. On his first flight out of Moscow, a Russian sitting next to him rattled off the following useful data, which I condense for convenience.

**RUSSIA**

- **Size of:**
  - 2½ times bigger than continental United States.
  - 1/3 smaller than Africa
  - 3 times bigger than Australia
  - 6,000 miles east to west
  - 3,000 miles north to south
  - 600 miles from southernmost point to the equator

- **Rivers:**
  - Volga: 2,300 miles long
  - Yenesei: 2,700 miles long

- **Tides:**
  - Baltic, difference between high and low: A few inches
  - Sea of Okhotsk, difference between high and low: 34 feet

- **Mountains:**
  - Mount Stalin, 24,390 feet
  - Narodnaya (Urals), 5,000 feet

- **Volcanoes:**
  - 200; 60 are active

- **Population:**
  - In millions:
    - Ukrainians, 160;
    - Byelo, 8;
    - Uzbekis, 6;
    - Tartars, 5;
    - Khazaks, 4;
    - Azerbaijanians, 3;
    - Armenians, 3;
    - Georgians, 3;
    - Jews, 2½;
    - Lithuanians, 2½;
    - Moldavians, 2½;
    - Volga Germans, 2;
    - Turkoman, 1;
    - Kirghiz, 1;
    - Chuwash, 1½;
    - plus two villages of Russian negroes.

See what I mean? Nothing fluffy there at all! The man who can memorise all that and a lot more in the middle of the night can call up several more megabytes than my home computer. He will also know exactly which pockets contain his tickets, passport, wallet, traveller's cheques and could reel off their serial numbers if put to it. I have never managed to do any of those things.

In the near future, Sir Laurens is off to Africa with Prince Charles who also sounds pretty sharp. I can imagine the conversation round the camp fire.

---

*Journey Into Russia*, Hogarth Press, London.1964

---

**Scene:** The Kalahari Desert

**The Biltong sandwiches and chips, washed down by a bottle of Tweejongezellen and followed by Kendal Mint Cake, have produced that pleasant sense of well-being after a day's march which obliges men to talk ruminatively of their inner selves before turning in.**

**Prince C:** Nice bit of biltong that.

**Sir L:** You can't beat the Takatokwane take-away. Looks like it might be fine tomorrow though, from the size of the Bushmen's bottoms. They're like camels' humps you know.

**Prince C:** (Wearily) Yes, you've mentioned it before. (Pause) Not too tired?

**Sir L:** Not a bit. Wouldn't mind a bit of fireside reminiscence as a matter of fact.

**Prince C:** That's good. (Then, remembering a Wogan interview long ago) Sir Laurens! You've had a long, happy and successful career. Have you any regrets?

**Sir L:** (After reviewing the past 50 years) Maybe, just two!

**Prince C:** And they are . . . . ?

**Sir L:** For starters, I reckon those Russians played me for a sucker way back in the Sixties.

**Prince C:** How come?

**Sir L:** It took me eight weeks to get a visa which I should have had in a fortnight. I now suspect they were making time for that chap on the aeroplane to mug up his facts in the Soviet Geographic. (Actually, I mugged them up as well when I got home). Then they let me in and put him in the next seat on my very first internal flight. I was being programmed.

**Prince C:** Could be right. Any other pointers?

**Sir L:** Yes. I was in and out of Tashkent Airport six times and each time, I met someone I knew - an Aussie ex-soldier, a fan of a TV series of mine, a West African envoy, a Cape Colour boy, a Japanese friend and an Indian official.

**Prince C:** Sounds a mixed bag, especially in Tashkent. Not exactly the hub of the universe is it? And rather a poor Duty-Free if I remember rightly. I bet they were set up to report back to the KGB. But what's the other regret?

**Sir L:** Well, there was young Hawtree in Java. Dropped out of my Japanese class when he had just got as far as saying 'Good morning' with the third degree of politeness. I've always felt I failed him somehow.

**Prince C:** You can't win 'em all. He's an ungrateful cuss in any case. We had him to tea at Buckingham Palace a while back; he never even dropped a line to thank us for the cucumber sandwiches. Come to think of it, neither did any of the other 2,499 punters we'd invited.
(He spots a lioness creeping up to a tin of Corned Eland and throws a branch from the fire to scare her off. Unfortunately it lands on a reporter’s note book and that sets light to all the sound recorder’s and T.V. cameras which are essential equipment on safari these days. Pretty soon the Kalahari, too, is no more than a smoking ruin).

** * * * *

A likely tale, I hear you saying; and what has all this got to do with golf greenkeeping? My lucky lads, you have been distracted by the coating on the pill. We have been talking about education, which today’s head greenkeeper has to consider with all this apprenticeship training and job experience grafted on to his other duties. The raw recruit should think about it too because if he is to progress in an increasingly competitive environment, he cannot learn too much. BIGGA will provide him with lectures and discussions, the Greenkeeper Training Committee will guide his progress, the STRI and some agricultural colleges will provide him with educational courses. But the influence of his head greenkeeper will be paramount in shaping his attitude to a potentially rewarding job.

You will have to wait impatiently until next month before I give you the low-down on education in Part II. Meanwhile you might like to think about how you are teaching your job or how you are learning it. You'll find a few clues in the preceding scenario.

There is a lot of greenkeeping lore which you will not find in the text-books. Watch this space next month to find out how to suck it to them and how to soak it up.

**Last month’s Word Power Test**

Robert Dickson from Wanstead has written to tell me that ‘Baffy’ is also a Northern Scot’s name for his slippers. Thank you Robert, that was news to me. Chambers’ Dictionary of Scots Dialect says “Baffy” (adj) = chubby: The Oxford (Shorter) Dictionary only gives Baffy - ‘short wooden club for lofting’ Chambers’ Etymological Dictionary doesn’t give it at all.

**Reach for it...**

with a Beaver P9 hydraulic flail cutter. Reach up banks, down ditches, over fences, under trees and shrubs to leave a smooth, even finish. Hooks up easily to any 13-30 hp compact diesel tractor. Cuts up to one years growth in areas inaccessible to ordinary mowers. Quick change flail or sicklebar heads keep the P9 proving its way on golf courses, parks, sports fields and general landscapes.

For the full story contact

Polymark Beaver Equipment Ltd.
Artex Avenue - Rustington
Littlehampton - West Sussex
ENGLAND BN16 3LN
Telephone: (0903) 783155
Telex: 87683 POLY G.
GOLF COURSE TRACTORS ARE IN THE VINTAGE CLASS

The majority of tractors used on British golf courses have been purchased second hand and many are over twenty years old according to a survey conducted with over a thousand greenkeepers by Golf Greenkeeping.

The trend is to replace the second hand agricultural tractor with one of the new generation of compacts, though the higher horse power models are still favoured for fairway mowing.

Few club committees appear to budget for the renewal of equipment, preferring to wait until the machinery breaks down and is non repairable before it is replaced.

The age of machinery is also reflected in a survey of implements to be used with the tractors. It is not uncommon to find golf courses cutting the fairways with Ransome 5 gangs over 20 years old. The best to date however is a set of Pennsylvania five gangs still cutting after over twenty years according to a survey conducted with over a thousand greenkeepers by Golf Greenkeeping.

The majority of tractors used on British golf courses have been purchased second hand and many are over twenty years old according to a survey conducted with over a thousand greenkeepers by Golf Greenkeeping.

The trend is to replace the second hand agricultural tractor with one of the new generation of compacts, though the higher horse power models are still favoured for fairway mowing.

Next month Golf Greenkeeping will be examining the current state of the tractor market as it affects golf clubs. As well as a detailed report on tractor use and buying trends for the future as supplied through the survey, we will also be publishing a list of the current models and prices, together with mechanical and technical details.

The Editor would like to thank all greenkeepers who completed the survey forms and supplied such valuable information. It is by such co-operation that we at Golf Greenkeeping are able in turn to give you that vital knowledge so you may make better buying decisions.

Two special Suzuki Santana models with exclusively designed body stripes and interiors for the British market are being introduced this month. The all white Santana and all black Santana "Sport". Both retain all the main characteristics of the outstanding SJ410 models and are powered by the same well proven 1 litre engine, but the newcomers boast a host of special features as standard.

These include a 5-speed gearbox, special colour co-ordinated deluxe cloth interior, split rear seats, servo-assisted brakes and softer suspension for improved on road ride. In addition, each of the two models have their own distinctive styling features:

The all white Suzuki Santana has colour co-ordinated white wheelarch trims and bumpers as well as coloured keyed headlights and indicator guards. The deluxe white hood is standard. Grey and yellow graphics on the car's exterior are complimented by a matching grey and yellow flocked cloth interior treatment.

On the all black Suzuki Santana "Sport", the wheelarch trims, bumpers and lightguards are colour-keyed black to match the body. The exterior graphics are grey and red, matching the grey and red pinstripe interior of the vehicle.

The Suzuki Santana is the Spanish built version of the "go-anywhere" rugged SJ410 series. It is the result of a joint venture between Suzuki Motor Company and the Land Rover Santana Factory at Linares - in which Suzuki now has a 20% holding - to build SJ models in Europe.

The 4 stroke 970cc engine runs on 2 star petrol from an 8.8 gallon tank. The price inclusive of VAT is £6,499.

Dear Sir,

With regard to your comment last month 'SNOW BOUND', page 8, I would like to let you know that apart from two days mid-week our course remained open all winter, and our Saturday and Sunday Winter League competitions have been completed to date.

Yours sincerely,
S. J. PHILLIPS,
Greenkeeper St. David's City G.C.
Haverfordwest, Dyfed.

LETTERS

Preamble . . .

by James A. Wyllie, C.G.C.S.

On a recent trip to Britain I visited with Mr. Fred Hawtree, a golf course architect of world renown. While we were at his home Fred showed me his incredible golf museum and library. It was one of the best private collections of golf memorabilia I have ever seen. During my perusal, I came across a copy of the National Association of Greenkeepers of America’s official magazine. It was the National Greenkeeper, Oct. 1931, and it cost 25 cents. It was a great surprise to open the book and lo and behold the headline staring at me said, “Toronto Hit by Hot Weather”, by Wm. J. Sansom, Greenkeeper, Toronto Golf Club, Toronto, Ontario.

Mr. Hawtree was kind enough to copy the article for me. It is an interesting article, especially as it talks about “scald” and Poa Annua. Interestingly, he was recommending a 12-2 fertilizer, a complete opposite of what is recommended today.

Fred Hawtree is a very interesting gentleman, and a superb host. He and his son Martin operate a very successful firm called Hawtree and Son, Golf Course Architects. They are located in Woodstock, a very beautiful town, quite close to Oxford. Fred is a regular and witty writer of articles for Golf Greenkeeping and Course Maintenance.

Spotted in the February edition of Greenmaster the magazine for the Canadian Superintendents
A round in one at St. Andrews

It takes a real professional to bring out the best in any championship course. That's why St Andrews, the home of golf, and many other Championship courses choose RANSOMES-grass machinery for the professional.

Take the RANSOMES MOTOR 180 for instance, it's ideal for tee and green surrounds with outstanding manoeuvrability and bank performance.

At St Andrews they've found that it also does a great job on the fairways too, where its floating head cutting units make a superb finish.

So from the first tee to the 18th green it's got to be RANSOMES—the best of British mowers.

Ransomes Sims & Jefferies plc Nacton Works, Ipswich, IP3 9QG.
Telephone: Ipswich (0473) 270000 Telex: 98174 Fax: 270030.
GOLF COURSE

Many a reputation has been won and lost on the tees and greens. Ours has grown and grown over the years with leading clubs throughout Britain proud of their Rolawn turf.

Rolawn turf is:

* weed-free
* quick and easy to lay
* mature
* locally-grown
* of uniform thickness
* always matchable

ROLAWN OF COURSE!

Enhance your reputation – make sure it’s Rolawn.

Rolawn Ltd., Dept. GG, Elvington, York Y04 5AR.
(24 hours): (0904 85) 661

TORO

does it so much better

... and that's a fact, from the smallest domestic rotary to the 'big boys' TORO are in a class of their own. Not only are they superbly engineered, but they achieve results that are envied by everyone. Take a look at the new models including the 216 and 450D REELMASTER plus AERATORS ... it's all happening at TORO so why not give us a call now!

UK DISTRIBUTORS: LELY (UK) LTD STATION ROAD, ST. NEOTS, HUNTINGDON, CAMBS PE19 1QH Tel: 0480 76971 Telex: 32523
Encouraging Wildlife on golf courses

POND CREATION and management is a relatively simple business as long as the following are borne in mind:

- do not allow water from fertilised areas to drain into the pond. This will create an imbalance in the nutrient levels in the water and will lead to excessive algal growth. The pond will soon look like pea-soup and will be of little value.

- do not allow trees to overshadow the pond. This prevents light reaching the pond and prevents water plants from producing the oxygen which is vital to the health of the water. Falling leaves are also a problem as they can cause serious silt ing.

- do remove tall trees from the south edge of the pond. This will allow light to reach the plants. Do leave trees, shrubs, and grass on the other edges. This provides cover for young amphibians and other creatures. It is best to leave an unmown area around the pond edge.

- do not spray chemicals nearby if the wind will carry the "drift" towards a pond. Wind blown chemicals can have a disastrous effect on the pond life.

- do remove excess silt from the pond but only in the autumn. At this time of year amphibians are not breeding or hibernating and so damage is minimised.

- do refer to the diagram of suitable plants. Planting of ponds must be planned to include various plants for different levels.

A great variety of insects live and breed in the pond: dragonflies, and damselflies spend their larval stage in the pond but also require emergent vegetation when they leave the pond to take to the air. These and other insects are snapped up by swooping housemartins and bats.

WETLANDS

Many golf courses exhibit some water feature, natural or artificial. This section will deal with the management of these features for wildlife.

PONDS need careful management to ensure the continuation of a balanced community. Older ponds are more likely to have established communities of amphibians: frogs, toads and newts. The Great Crested Newt is protected by law: advice on this creature can be obtained from local wildlife organisations or the Flora and Fauna Preservation Society, or British Herpetological Society.

Plants which are attractive to all types of wildlife are yellow and white waterlilies, water crowfoot in the pond, reedmace (generally known as bullrush) and bogbean, yellow flag, and water forget-me-not. In the marshy surrounds plants such as marsh marigold, bugle and meadowsweet will flourish. Dragonflies and damselflies will be attracted to a healthy pond and add a great deal to the visual interest.

DITCHES, STREAMS AND RIVERS support a different, more hardy vegetation as conditions fluctuate from season to season. Rushes, mosses, liverworts, ferns, and various flowering plants, frogs and toads, grass snakes and even eels are all common in these environments. Management of the vegetation should be planned to remove excessive growth but is best done by implementing a rotation, so that certain areas are left growing while others are cut back.

This extract from a report by the London Wildlife Trust is part of a survey aimed at encouraging wildlife on golf courses.

The Trust formed in 1981 is among the country's leading nature conservation groups.

The results of the work by Maureen Fordham and the Director of the London Wildlife Trust, Jeremy Iles is worthy of far greater distribution than confined to the areas around London.

Copies of the full report can be obtained price £1.25 from London Wildlife Trust, 80 York Way, London N19AG or by telephoning 01 278 6612.

Golf Greenkeeping are grateful to the Trust for their permission to print extracts from their survey. Golfers and Greenkeepers alike have a common interest in encouraging wildlife to their courses.

It is part of the pleasure in golf to see and hear Britain's indigenous birds and animals in their natural habitat.

This section of the report deals with ponds, ditches and streams. In later issues of the magazine other natural habitats will be examined.

The Editor would also like to hear from Greenkeepers about their own efforts to encourage wildlife on their courses.

Editor's note - The green construction article will be held over for a future date.
Why is it that a business trip abroad invariably produces the comment around the bar of the 19th - 'Have you had a good holiday?' The eight day trip to Phoenix to visit the GCSAA Annual Convention was certainly enjoyable, interesting, educational, informative, well worth the effort - but holiday!

Our party who included the Jacobsen Tournament winners, Peter Shaw from Preston and Adrian Stiff, Tracey Park, left Heathrow by TWA an hour late due to snow problems across the Atlantic. Despite an early arrival at Heathrow to book adjacent seats, on boarding the Jumbo 747, we found the aircraft already half full with passengers from a previous flight, whose plane had failed to arrive.

It seemed for a time it was to be either standing room only or those without a seat proceed to Gatwick.

The first leg to New York took about six hours where incoming passengers went through the usual immigration procedures. 'Stand on the white line and don't move until you are told'. However on this occasion the queue did move reasonably quickly.

Baggage was checked by customs and then it was a short walk through the John F. Kennedy airport to the domestic flight departure to Phoenix - Sky Harbor.

This flight was considerably more civilised, with a great deal more room to stretch out and curl up for a much needed sleep. There was also the opportunity to spot the odd familiar face, such as Christine Smith from the IOG, Jonathan Franks from British Seed Houses and Sunningdale's Jack McMillan.

On arrival at Phoenix, quite an exciting experience as one descends over the mountain ranges into the vast valleys alive with flickering lights, we telephoned to our chosen hotel for transport. Imagine our surprise when what should arrive but a shining white London Taxi-Cab!

Certainly a tight squeeze but we made it.

1. Setting off to explore the 'Wild West'.
2. What could be nicer than a dip in the heated hotel pool after a long tiring day at the Convention?
3. Tree like cacti dominate the new golf course at Troon Village.
4. Jacobsen had one of the biggest and busiest stands at the Show.
5. Ocotillo Golf Course abounded with lakes. The brown patches are dormant bermuda grass, not bear ground.
6. The vast indoor exhibition housed ever conceivable piece of equipment for use on the golf course.
The Ultimate in 'One Upmanship'  
Golf carts are very big business for American Golf Courses. A 27 hole complex would have around 180, many making two trips a day.

For the golfer looking for the touch extra this mini ‘Roller’ has colour T.V. above the driver, video camera for recording the putt that sinks, a built in bar with ice-box and mobile telephone to keep in touch with the office.

It is surprising how the tiredness lifts after such a trip and after an exploratory tour of the Westcourt in the Buttes hotel, certainly the best appointed most of us have ever seen, it was ‘down-town’ to an all-night diner to experience a real hamburger with all the trimmings. If one wants to eat well in clean, neat surroundings, with friendly helpful staff, the roadside diners take a great deal of beating.

Our main objective was to visit the American Golf Course Superintendents Convention and Exhibition, attend some of the seminars and if time permitted, see a few golf courses.

Outstanding Hospitality
It should be said from the outset, the GCSAA hospitality to the British contingent was outstanding. Through their newly appointed public relations man, Bob Still, they did everything possible to make our visit memorable. We congratulate him on his appointment and thank him for his kindness and concern.

As far as visiting golf courses was concerned we managed to go one better, through the good offices of Abe Hughes of the host section, the Cactus & Pine GCSA. He offered to arrange a round of golf for exhibition visitors at one of a number of courses in the Phoenix area. We were able to take advantage of this offer and play two courses, El Caro and Ocotillo. The first was a small privately owned par 60 where taking a golf cart or walking was optional. At Ocotillo the golf cart was mandatory, but with the temperatures in the mid 70's riding was certainly preferable to walking over the 6,600 yard course.

Another unexpected bonus visit was to the Karstang factory, the home of Ping golf clubs. We managed to join the small, twice weekly tour, to see the world famous clubs assembled and appreciate the precision and technical application required to produce a golf club developed by an engineer in aerodynamics. It is hard to believe the demand for golf clubs is such it keeps a workforce of around 1,500 fully occupied for six days a week. Even then there is a waiting period of around sixteen weeks for the new copper headed irons, despite the £1,000 price tag.

continued on p.20

TORO SPRINKLERS GIVE YOU AND YOUR CLUB TWICE THE PERFORMANCE!
Sprinklers, the sharp edge of a golf course watering system are vitally important to the economics, efficiency and long term viability of your club’s investment!

If your club is thinking of installing or improving an existing water system, now is the time to consider the types of sprinklers to be used...
Consider these important points:
1. CORROSION & DAMAGE
Unlike sprinklers containing corrosive metal working parts, Toro Sprinklers are engineered with hi-tech, plastics such as 'Cycolac®' and 'Delrin®'. This eliminates corrosion whilst making each sprinkler highly resistant to impact damage. (It also saves expensive mower blades from accidental damage!)
2. EFFECTIVE COVERAGE
Being gear driven each Toro Sprinkler provides a smooth, uninterrupted working action which enhances water distribution.
3. SELF PROTECTION
The gear drive assembly inside a Toro Sprinkler is lubricant sealed and, therefore, protected from water-borne materials such as particles of sand. This ensures the gears work smoothly and helps reduce maintenance.
4. WET SPOTS
Check Valves also eliminate the problems of 'low head drainage' and the need for gravel sumps on low lying areas.
5. INDIVIDUAL CONTROL
The valves also enable greens staff to use sprinklers individually - applying larger or smaller amounts of water on selected parts of the course.
6. EASE OF MAINTENANCE
Toro Sprinklers are designed to make servicing simple. Repairs can be carried out on the spot - no need to take the sprinkler away to a workbench!
7. IMPROVED WARRANTIES
Toro now offer increased Warranty protection for large size sprinklers - in some instances these have been given twice the length of validity - there's confidence!
8. WHO USES TORO SPRINKLERS?
St. Andrews, the All England Lawn Tennis & Croquet Club, Wimbledon and Wembley Stadium - three good examples!

Consider these points then ask your nearest Toro distributor for the facts. He will explain how £ for £ your club can enjoy twice the performance.

Toro Irrigation Limited
Unit 7, Millstream Trading Estate, Ringwood, BH24 3SD, Hampshire. 0402-38261
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: 0725-30377
Midlands, North, Scotland & Wales
Turf Irrigation Services, Sandbach. Tel: 0477-255

© GOLF GREENKEEPING March 1987 15
The 20" Zephyr from Greens of Arbroath is distributed by Claymore Grass Machinery. It has a 10 bladed cutting cylinder and a superfine bottom blade, giving 140 cuts per metre.

There is a choice of three engines, the Honda, Villiers and Briggs and Stratton and the cut can be adjusted from 1" down to 3/32".

A number of improvements have been made in the past year including powered transport wheels. Retailing at £898.00 plus VAT, it is one of the more competitively priced machines for cutting golf greens.

Lloyds of Letchworth manufacture the Paladin self propelled greens mower, still regarded by many greenkeepers as the machine to obtain the finest finish.

The 'Turf Groomer™', the green conditioner first introduced last year for the Greens King IV, has now been adapted to fit onto the Jacobsen pedestrian range of greensmowers.

The height of cut is adjusted by a single knob which calibrates in one thousandth of an inch. The cylinder is eight bladed operating at a faster speed than other pedestrian machines. The additional stress is overcome by fitting tapered roller bearings instead of the usual ball bearings. This prolongs the life of the machine.

Priced at well over £1,000 the Lloyds Paladin is not a cheap greens mower but it does have a reputation for reliability.

The Atco Club range starts at around £600 rising to £1,000 for the B20 Special. The top of the range has a 12 bladed cylinder giving 134 cuts per yard with an adjustment from 1/16" to 1/32" on cutting height. The cutting width is 20".

The Club B20 Special also has transport wheels and an adjustable comb attachment.

There is a trend for greenkeepers to return to the use of lighter pedestrian mowers for cutting greens. Many believe it reduces the problems of compaction and build-up of thatch.
Ransomes’ range of greens mowers are three basic machines. The new GT Greens Triple launched last year, the widely used Triplex 171 and an old favourite, the pedestrian controlled Auto Certes.

The GT Greens Triple with 127mm (5in.) diameter 9-knife cutting cylinders can also be supplied with cutting units for tees as well as verticut and vibra spiker units. Hydraulically driven, each unit is interchanged without the use of tools.

Powered by a 8.9kw (12hp) twin cylinder Kubota water cooled diesel engine mounted on rubber mounts to keep vibration to a minimum, the new GT Greens Triple has an uncut turning diameter of 1m (40in) with power steering.

GT Modifications
Power Steering Added
Since the prototype was demonstrated last August, modifications have taken place at Ransomes Nacton Works to improve the steering geometry. At the same time power steering has been added. This has improved the turning circle according to Brian Mitchell, the Ransomes Technical Manager.

The GT Greens Triple is now in production and the first batch due to be delivered to dealers by the end of February has already been sold out.

Priority for dealer delivery has been given to those outlets who have obtained firm sales from golf courses.

To maintain the same quality of finish on every green a digital readout, calibrated in cuts per metre, enables the required cutting ratio to be selected and then set for mowing speeds up to 8km/h (6mph). Transporting the mower between greens at speeds of up to 12km/h (7½mph) does not disturb the setting.

Interlock System
Incorporated
During prototype trials on golf courses the engine needed to be stopped and restarted every time the grass catchers needed emptying. To overcome this an interlock system has been incorporated. Provided the operator leaves the controls in the correct position to prevent the cylinders from revolving and the cutting units from either rising or lowering the engine will continue running when he dismounts. But as a safety measure if the foot pedal controlling ground speed is touched by anything, at any time, the engine stops automatically.

Still a firm favourite, the Auto Certes 10-knife cutting cylinder with a choice of 4 stroke engines gives 148 cuts per metre (135 cuts per yard). Height of cut is adjustable from 3 to 19mm (½" to ¾").

An important feature of the Ransomes Auto Certes is its two-part fully machined smooth cast aluminium landroll with tapered ends which incorporates a differential, to make for easy turning without marking the fine turf.

The operator’s platform on Ransomes new all-hydraulic GT Triple Greens Mower can be raised in seconds for easy access to the centre cutting unit and to empty the grasscatcher.

The Toro 300 Triplex is still one of the most popular greens machines world wide, but with their two main competitors, Jacobsen and Ransomes introducing the diesel engine it is surprising Toro have not followed along similar lines.

It was fully expected that Toro would have unveiled a diesel version of their Triplex at this year’s Phoenix Exhibition but instead, as far as greens machines are concerned they produced a prototype version of the ‘turf groomer’.

Naturally Jacobsen, who have patented the invention by a Californian Golf Course Superintendent were somewhat upset and it is understood some hard words were exchanged between the executives of the two companies. Threats of writs were in the air and unless Toro can show their groomer is not a violation of patent it is doubtful whether it will ever make the production lines.

The late Lawrence L. Lloyd, past member of the GCSCAA and inventor of the Turf Groomer™, was honoured at a reception in Phoenix by the Jacobsen Division of Textron Inc.

At the reception, John R. Dwyer, Jr. President of Jacobsen, presented Mrs. Barbara Lloyd with a plaque commemorating her husband’s contributions to modern turf care equipment design.

Lawrence Lloyd the Superintendent of a Californian Golf Course developed and tested the Turf Groomer™ over a period of two years. His primary goal was to combat fast thatch build-up on putting greens, but his invention proved to be beneficial in a number of ways. Improved green consistency, increased green speed without lowering cutting height, and improved control of broadleaf weeds and Bermuda creepage on green fringes were just a few of these additional benefits.

Lloyd who died tragically last year of a massive heart attack was vice president and superintendent at the Rancho Canada Golf Club in Carmel. Jacobsen purchased his patent in 1985. As part of the patent purchase agreement, the Lloyd estate receives income from the sale of each Turf Groomer™.

PRICE COMPARISON for pedestrian mowers

<table>
<thead>
<tr>
<th>Model</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atco Club B20 Special</td>
<td>£1,004</td>
</tr>
<tr>
<td>Bunton 22 inch Greensmower</td>
<td>£2,950</td>
</tr>
<tr>
<td>Greens Zephyrs Superfine 20 inch</td>
<td>£998.00</td>
</tr>
<tr>
<td>Jacobsen 22 inch Walk Behind</td>
<td>£1,490.00</td>
</tr>
<tr>
<td><strong>Turf Groomer Attachment</strong></td>
<td>£860.00</td>
</tr>
<tr>
<td>(including all optional extras)</td>
<td>£2,100.00</td>
</tr>
<tr>
<td>Lloyds Paladine 21 inch</td>
<td>£1,125.00</td>
</tr>
<tr>
<td>(optional extras add)</td>
<td>£139.00</td>
</tr>
<tr>
<td>Ransomes Auto Certes 20 inch Brigs &amp; Stratton</td>
<td>£1,062.00</td>
</tr>
<tr>
<td>Villiers Engine</td>
<td>£1,130.00</td>
</tr>
<tr>
<td>(optional extras add)</td>
<td>£146.00</td>
</tr>
</tbody>
</table>

All prices exclusive of VAT
John Lelean visits the new type of desert courses.

Arizona can almost be described as the State of ‘instant golf courses’. The homeland of the Navajo and Hopi Indians, has now been transformed from the stark desert terrain so familiar to viewers of western films by the engineering miracles of irrigation. First by the construction of the Roosevelt Dam and then, in 1936, by the building of the mammoth Hoover Dam on the Colorado River.

The raw inhospitable desert where only sage bushes and cacti flourish would seem to be about the last place to produce lush fairways and billiard table greens, but a combination of the right grass seed and an abundance of water has transformed Phoenix Valley into one of the fastest growing cities in the United States.

The climate in Arizona, hot in Summer, pleasantly warm in Winter, with a low humidity, is attracting vast numbers of people from all over the United States. Many come to escape the harsh winters further north, others to live and work in this developing and thriving tourist area.

There are currently over one hundred golf courses in the Valley with around twenty more under construction to cater for a population of about a million people. A fair proportion are municipal, but the majority have been developed by real estate property companies, where the financial return is achieved by selling and renting what is known in the USA as condominiums. Flats, houses and maisonettes adjacent to the course, which invariably includes the right to membership of the club.

Watermation

FOR ALL SPORTS TURF IRRIGATION

You can’t beat us when it comes to first class irrigation.
With over 15 years experience behind us, we have installed irrigation systems all over Britain, in all the best places, and our sprinklers pop-up in Ireland, in Europe and in Africa.

But you probably know about our past. In the future we will continue to offer the best automatic irrigation installations but now we are ALSO OFFERING A NEW RANGE OF SPRINKLERS, CONTROLLERS AND OTHER SPECIALIST EQUIPMENT, ALL DESIGNED AND BUILT BY WATERMATION IN ENGLAND.

It isn’t all “just grass” to us — sometimes it isn’t even grass at all. We also design sprinkler systems for artificial surfaces.

So if you have a golf course, tennis court, bowling green, running track, football pitch . . . or even a whole town to be irrigated and monitored in the Middle East, we can offer you irrigation equipment which is specially designed and suitable for the needs of those areas.

Naturally, we can still supply you with all our usual range of equipment and spares and in fact we now have the most comprehensive range of irrigation equipment in the Country. THE CHOICE IS YOURS.

WATERMATION LTD.
Monument Way E.,
Woking, Surrey. GU21 5LY.
Woking (04862) 70303

also at:
Stirling (0786) 70252
Dublin 760964
Two of Arizona's finest championship golf courses have been built 25 miles to the north of Phoenix at Scottsdale under the mountain known as Pinnacle Peak. Desert Highlands, the first to be constructed, was to a design by Jack Nicklaus, the second a few yards across the highway, the newest of the two, Troon Village designed by Tom Weiskopf and architect Jay Morrish.

"We didn't even use any drawings - it was already there".

The par three, fifteenth hole, 'Troon Mountain' was recently included in the 100 greatest holes on all American golf courses by the Golf magazine. This was confirmed on a visit to Troon Village by Superintendent Tom Weiskopf and architect Jay Morrish.

The greens at most courses are sown with Penncross, providing a firm true and fast putting surface. Certainly at the four courses already mentioned and another par 60 called El Caro all had firm greens despite the need for constant irrigation.

The drainage system under the sand construction destroyed the myth that all American golf courses have soggy, target type greens. To stop the ball on the green requires just as much golfing skill as it does on Britain's championship links.

Playing Ocotillo, what was believed to be a fine second shot to the green across the lake with a fairway wood failed to hold and bounced through. What is more the pitch mark was scarcely discernible.

Tees are mainly sown with Penncross Eagle and the fairways and rough, if one could insult the fairway collars as rough, are seeded with Bermuda grass.

Bermuda grass dies off during the winter months to show a two to three inch depth of thick dead light brown coloured matting. Not difficult to play from but requiring a firm wrist action to regain the cut grass area.

To provide the dense velvet fairways during the winter months the course is oversown with rye grass. This in turn dies out in the summer heat when the Bermuda grass grows through.

Several courses allowed the bunker surrounds to be framed by the dead Bermuda grass, which made them look as if the collars had been sprayed with a herbicide but it did bring the sand traps into focus and they were visually very attractive from the tee positions.

The small party of British Greenkeepers who visited the Troon Village and the T.P.C. at Scottsdale were made most welcome by the course management and were given every facility to walk the course and see the construction and maintenance techniques employed.

The seventh at Troon Village showing the differing shades of rye grass winter fairway and bermuda grass collars.

Much of the equipment is similar to that used in Britain. Greens are cut with a triplex, mainly Jacobsen and Toro; fairways with the 350D or similar machines.

At Troon Village we were all impressed with the ultra tidiness of the course. There was nothing out of place. Even the recent cut divots on the fairways had been freshly repaired with a sand and seed mixture.

Every two or three holes a large container of fresh water, with a column of paper cups was sited by the tee. This was a feature found at all the golf clubs visited. At Ocotillo they went one better when a caddy car with a rear mounted bar arrived driven by a blonde candidate for 'page 3' offering cold beers or something softer.

Staffing levels are considerably higher than in Britain. Again our party were noticeably green with envy while playing Ocotillo to see four Mexican green staff raking one bunker with wire sprung rakes. Nearby four more were taking weed from the lake surface using scoops on 20 feet poles. At least four others were seen cutting fairways and approaches with the Jacobsen HF5, a Toro 350 and a Ransomes 180.

Golf in the United States is big business and treated as such by the financiers. Wage rates reflect the importance given to those who manage the golf courses. Not only salaries but status as well is at a premium.

The Course Manager, Superintendent is regarded as the most important person at the club.

He ranks above the professional and often above the administrator of even the most prestigious club house complex. It is recognised that without his abilities to keep the course in perfect order, the other functions such as restaurant, professional's shop and sales of property would not exist.

'Kings within their own Kingdom'

The standard of the golf course has a direct bearing on the price that can be asked for the surrounding property. With competition so fierce to bring in new property given to those who manage the golf courses. Not only salaries but status as well is at a premium.

To become a member at Troon, one first has to buy a plot of land, currently selling at 250,000 dollars. Membership of the club then costs 25,000 dollars plus a subscription of about 175 dollars a month.

Potential members at these prices are hardly queuing to join so the standard of the golf is paramount.

We were told Troon has a current membership of 62, but they are hoping to entice some of the Desert Highland members to sell their property and cross the road!

The club rules state - no casual visitors -, but if you can find a member willing to pay a hundred dollars to take you round as a guest then the delights of this magnificent golf course are yours.
Among several invitations, including the GCSAA Banquet on the final day, a number of the UK visitors attended a reception by the Toro Organisation and the Jacobsen International Dinner. Jacobsen’s event, comprising six golf courses, was a truly cosmopolitan affair with representatives from every country where golf is played. What is more, despite the range of nationalities and many differing languages, there seemed to be no bar to communication.

The conference began with educational seminars - almost 400 hours were offered throughout the eight days of the conference - and ended with more educational seminars, sessions and special events. Among the highlights of the conference week activities were award presentations, personal appearances of famous speakers, a huge trade show, a gala banquet with big-name entertainment, allied golf association seminars and more educational programmes.

**Record Attendance**

The Trade Show opened on Saturday at the Phoenix Civic Plaza. Among the 331 exhibits were 81 new exhibitors. Last year in San Francisco, 317 companies exhibited their products - 74 for the first time - and in Washington, D.C., the year before, 292 exhibits were on display. The attendance record was also broken with 12,588 registrants throughout the week. Additional educational programs were also conducted by the USGA Green Section, the American Society of Golf Course Architects, the National Golf Foundation (NGF) and the Sports Turf Managers Association (STMA).

An international session was also held on the opening day of the Trade Show, with speakers from China, Sweden, Japan, Mexico, the Philippines and Britain.

The Association Vice-Chairman, Jack McMillan, explained the benefits of having the British greenkeepers through their various Associations and the fact that had been done to unite the profession under the BIGGA banner.

Howard Swan took the audience through the traditions of the starting point of golf on the Scottish Links and its initial development inland on the heathlands of the home country.

Our third representative, Jim Arthur, headed his presentation ‘Common Sense and Technology’, but rather like the Member of Parliament who fell foul to the lashing from the Rt. Hon. Winston Spencer Churchill he was somewhat ‘overcome by the exuberance of his own verbosity’ and incurred the wrath of at least two members of his audience.

The first, an old protagonist, Jim Wyllie, from the Bay View Golf and Country Club, Toronto and secondly from Richard Fry, a British Marketing Consultant, who at one time headed the Amenity Turf Chemical Sales Division of May & Baker. He took exception to the suggestion that the Agro-Chemical Industry since the banning of DDT had produced chemicals with an even greater degree of toxicity.

However, it was a lively session to end the proceedings, but perhaps unfortunate that the audience was somewhat sparse and dominated by a substantial representation from this side of the Atlantic.

**Award for Trent Jones Snr.**

The newly elected Association President Donald Hearn told a full house at the annual Banquet, "I am very honoured and humbled to assume the presidency of GCSAA. This is a great time for GCSAA and its membership to grow and expand its services".

Later in the programme, NBC golf commentator Jay Randolph presented GCSAA’s highest honour - the Old Tom Morris Award - to Robert Trent Jones, Snr.

He described "Trent Jones as the Beethoven of the golf world, designing one masterpiece after another". Of Ballybunion’s new course, also a creation of Trent Jones, Jay Randolph quoted Golf World’s writer, Peter Dobereiner in proclaiming this course "a masterpiece, the greatest links course in the world, and by a clear margin". Jones accepted the Old Tom Morris Award and then shared personal thoughts and concerns about the future of the game he loves so much. He believed the design of courses will be hurt tremendously if the authorities don’t do something about the ball. "It’s too hot (long) nowadays. These top guys are driving past the natural and designed obstacles that make skill part of golf".

Following the banquet and award presentation, Marie Osmond and the Osmond Brothers entertained the audience with a blend of pop and country and western tunes.

The next GCSAA’s International Golf Course Conference and Show will be held in Houston, Feb. 1-9, 1988.

---

**GCSAA SHOW**

A plaque picturing the Turf Groomer™ and commemorating its inventor, her late husband Larry, was presented to Mrs. Barbara Lloyd by Jacobsen’s President, John R. Dwyer, at a special ceremony in Phoenix.

An accomplished golf course superintendent, Larry Lloyd had identified a need for improvement in his greens, said Dwyer. "He turned this need into a concept for a product and then, through experimentation and hard work over a period of several years, he perfected the idea of the Turf Groomer™ greens conditioner.

Jacobsen have the exclusive manufacturing rights to Lloyd’s patented invention, with proceeds from the sale of each Turf Groomer™ going to the Lloyd estate. "It is only fitting and proper that a man’s family should benefit from his hard work and ingenuity in creating such a revolutionary new product as the Turf Groomer™", said John Dwyer.

---

**STOURBRIDGE GOLF CLUB**

*Invite applications for the post of *

**HEAD GREENKEEPER**

Applicants must be fully experienced in all aspects of modern greenkeeping, machinery maintenance, staff supervision and turf management techniques

Salary Negotiable

Accommodation available

*Please apply in writing giving age, course experience and qualifications to:-*

The Secretary,
STOURBRIDGE GOLF CLUB,
The Club House,
Worcester Lane, Stourbridge,
West Midlands DY8 2RB
SOUTH COAST

Hon. Sec: J. R. Dennis, Hampshire College of Agriculture, Sparsholt, Winchester, Hampshire SO21 2NF.
Telephone: (096) 272441 Ext. 288.

Our Winter Lecture Programme continued in February with a visit by Mr. Paul Watson of Ransomes.
Mr. Watson gave an illustrated talk on the firm's history, and brought us up to date with Ransomes new equipment aimed at the golf course market. This included Ransomes TMV 20, a three-wheeled dual truck maintenance power unit, and their new diesel GT Triple Greens Machine, first seen last year at the Windsor Show.

For information, full details on these machines were given in the Windsor Show review in the October Journal.
A full list of Section Tournaments for 1987 are listed below:-

**SOUTH COAST 1987 FIXTURES**

**Spring Tournament:**
- Stoneham Golf Club.
  - Thursday, May 20th, 1987
- Royal Winchester Golf Club.
  - Wednesday, May 22nd

**Mid Anglia v. Midlands**
- Berkhamsted G.C.
  - Thursday 9th July

**Summer Tournament:**
- Lee-on-the-Solent Golf Club.
  - Thursday, July 16th, 1987

**Annual Match:**
- South-West: High Post Golf Club.
  - Thursday, September 3rd, 1987
- Autumn Tournament:
  - Cowdray Park Golf Club.
  - Thursday, September 24th, 1987

**Turkey Trot:**
- Royal Winchester Golf Club.
  - Wednesday, December 9th, 1987

The position of Tournament Organiser, now vacant, should be resolved at the Section's A.G.M. in March. The name of our new organiser will be given in the April notes of the Section. The list of applications to play in our tournaments should be directed to the new organiser.

At a recent Committee Meeting, it was agreed that a handicap limit of 22 be placed on all members when playing in our Sectional Tournaments. Some of us, including your scribe, are still trying to maintain a handicap in excess of this figure!

**FOR SALE**

**NORTHERN**
Hon. Sec: D. C. Hannam, 12 Moorfield Avenue, Menston, W. Yorks.
Telephone: (0943) 72008

Winter is still with us but it seems a kind winter. Kind because in this neck of the woods construction is continuing outside virtually unabated, resulting in some good work being accomplished. Drainage work, which as a rule ends up with you being stuck up to the eyeballs in mud has progressed on a relatively clean level with heavy materials moving about without fuss.

A retrospective view of golf green construction was taken on January 22 when "8th green: Baidon - take two" was successfully screened. Apart from the nostalgia the compelling question was "How the hell did we do it?" All in a winter's work, of course.

On the early morning of St. Valentine's Day, 1987 60-plus people, some still drying tears of mirth from their eyes departed from Oakdale Golf Club after our Annual Dinner, joining us for the evening were our honoured guests, Mr. W. Coates, President of Oakdale G.C. and Mr. George Malcolm, current Chairman of the amalgamated BGGA, and his wife. The man responsible for the merriment was our guest speaker, Mr. Brian Bolus the former Yorks / Notts / Derby and England cricketer who succeeded in having most people in stitches throughout the night. All in all an excellent evening.

It is with sadness that we report the death, during January of Mr. A. R. Millar of Skegness. Mr. Millar was a Northern Section Life Member. Our deepest sympathies to his family.

In order to prevent a break in continuity if you feel like sending your subscription through it will be banked and held safe. Although it is not confirmed, it seems fairly certain that the sub-rate will be £15 for ALL classes. Whatever line is adopted by our new Board of Management, it will take some time for the organisation to function. Please be patient and do not become disillusioned. The provincial scene will remain relatively unchanged.

**NORTHERN 1987 FIXTURES**

**Spring Tournament:**
- Kelighay G.C.
  - June 3rd
- President's Day, Horsforth G.C.
  - June 10th
- Roses Match, Saddleworth G.C.
  - July 22nd

**Summer Tournament:**
- Manor Golf Club.
  - Wednesday, July 22nd

**Turkey Trot:**
- Royal Oak Golf Club.
  - Wednesday, August 26th

It is with sadness that we report the death, during January of Mr. A. R. Millar of Skegness. Mr. Millar was a Northern Section Life Member. Our deepest sympathies to his family.

In order to prevent a break in continuity if you feel like sending your subscription through it will be banked and held safe. Although it is not confirmed, it seems fairly certain that the sub-rate will be £15 for ALL classes. Whatever line is adopted by our new Board of Management, it will take some time for the organisation to function. Please be patient and do not become disillusioned. The provincial scene will remain relatively unchanged.

**FOR SALE**

Second Hand
Diesel Driven Irrigation Pump Suitable for Sprinkler System

Second Hand
40ft x 10ft Portacabin Ideal for all sorts of uses

Telephone: FOR PRICE DETAILS
077473 2433
Appointments

HEAD GREENKEEPER
Required by
KNARESBOROUGH GOLF CLUB
Applications are invited for the above post from persons of proven ability and experience in Golf Course maintenance
Salary Negotiable
No Accommodation available
Apply in writing, stating age and experience to:-

The Secretary,
KNARESBOROUGH GOLF CLUB,
Boroughbridge Road,
Knaresborough,
North Yorkshire HG5 0QQ

SEATON CAREW GOLF CLUB
GREENKEEPER
to join our team of Greenstaff.
Preference will be given to greenkeeper with leaning/interest in mechanical maintenance as well as knowledge and ability in greenkeeping to the high standard of a Championship Course

Particulars to:-
Chairman Green Committee,
Seaton Carew Golf Club,
Tees Road, Seaton Carew,
Hartlepool, Cleveland

THE RUSHCLIFFE GOLF CLUB
Require
HEAD GREENKEEPER
Must be conversant with all aspects of Course Maintenance
Salary Negotiable
No Accommodation
Applications in writing giving age, experience and date of availability to:-

The Captain,
THE RUSHCLIFFE GOLF CLUB,
Stocking Lane,
East Leake,
Nr. Loughborough LE12 5RL

ALWOODLEY GOLF CLUB
Leeds, Yorkshire
Due to the impending retirement of Mr. Hugh Marshall after 20 years service at this prestigious Championship Heathland Course north of Leeds
Applications are invited for the position of
HEAD GREENKEEPER
commencing 1st March 1988
Applicants should have extensive experience in the Theory and Practice of Golf Course Management, be conversant with the use and maintenance of all modern golf course machinery, and be able, with initiative, to direct and lead by example, the excellent supporting staff
There is no accommodation but the salary which is negotiable will be commensurate with a Club of this standing

For further details and application form apply to:
The Chairman,
The Greens Committee,
Alwoodley Golf Club,
Wigton Lane, Leeds,
West Yorkshire LS17 8SA
Appointments

Required for 9-Hole course on one of the Balearic Islands in Spain

Applicants must be experienced in course management, machinery maintenance and have the ability to lead and motivate Spanish staff.

This is an outstanding career opportunity to work in an invigorating environment on a British-owned and managed sports complex, to assist in the development of the existing course and the construction of nine new holes.

The employment package includes a high salary, accommodation and transport.

It is anticipated that the successful applicant will commence as soon as possible.

ROEVIN LIMITED
1 Roebuck Lane, Sale, Manchester M33 1SY
— For the attention of Hugh Brown —

BRITISH ASSOCIATION OF GOLF COURSE ARCHITECTS

MEMBERS (Full)
J. Hamilton Stutt
Hamilton Stutt & Co.,
12 Bingham Avenue, Poole,
Dorset BH14 8NE
Telephone: 0202-760908

Donald Harradine
CH 6967, Caisano, Switzerland
Telephone: 091-711561

Fred Hawtree, Martin Hawtree
Hawtree & Son,
5 Oxford Street, Woodstock,
Oxford OX7 1TQ
Telephone: 0993-811976

Donald Steel
Cotton, Pennink, Steel & Partners
Miller House, Corporation Street,
Rugby, Warwick CV21 2DW
Telephone: 0788-7719191

Tom McAuley
38 Moira Drive, Bangor, Co. Down,
N. Ireland BT20 4RW
Telephone: 0244-582044

OVERSEAS (Full)
Eddie Hackett
28 Allebury Drive, Dublin 4, Eire
Telephone: Dublin 691692

Jan Sederholm,
S. 252 34 Helsingborg, K. Kristoffergatan 3A,
Sweden
Telephone: 042-371-84

OVERSEAS (Provisional)
Kurt RoBknecht,
Dennenmoos 5a, 8990 Lindau-Bad,
Schachen, Germany
Telephone: 08382-230-05

R. Berthet
57-69 Rue Lhomond, 75005, Paris, France
Telephone: (1) 336-77-50

SENIOR MEMBER
Fraser Middleton
15 Kilmorong Crescent, Cupar, Fife KY15 4DS,
Scotland
Telephone: 0334-56904

PROVISIONAL
Allistair Rae,
26 Tamnoch Road, Uddenspoor Road,
Glasgow G71 4RD
Telephone: 050-580-371

Cameron Sinclair
Cotton, Pennink, Steel & Partners
Miller House, Corporation Street,
Rugby, Warwick CV21 2DW
Telephone: 0788-7719191

Simon Gigman
Hawtree & Son
5 Oxford Street, Woodstock,
Oxford OX7 1TQ
Telephone: 0993611561

ROEVIN LIMITED
1 Roebuck Lane, Sale, Manchester M33 1SY
— For the attention of Hugh Brown —

PARKERS of Worcester Park
Leading Suppliers of all turf care products
are seeking a
SALES REPRESENTATIVE
living in the Hampshire area

Applicants should have a sound knowledge of all aspects of Turf Management and experience in selling would be an advantage though not a necessity.

A company car and various other benefits are provided.

Salary negotiable depending upon age and experience.

Write (with full personal details) in complete confidence to:
The Managing Director,
T. PARKER & SONS (Turf Management) LTD.
Worcester Park, Surrey KT4 7NF

SHRIGLEY HALL GOLF CLUB
GREENKEEPER REQUIRED FOR PROPOSED CHAMPIONSHIP GOLF COURSE

Must be fully knowledgeable on turf management and machinery maintenance.

It is our intention to take on the successful applicant immediately to assist in the development of this prestigious scheme, in a beautiful part of Cheshire.

Please apply in writing to:—
The Director,
SHRIGLEY HALL GOLF CLUB,
Shrigley Park Estate, Pott Shrigley, Macclesfield, Cheshire.
As we look forward to a new season, already our golf committee have several confirmed dates for your diaries:

Thursday April 30th
Moor Allerton Golf Club - Northern Region Rufford Top Dress' Invitation Day

Thursday May 21st
Bury Golf Club - Spring Tournament

Wednesday July 22 - Saddleworth Golf Club
Battle of the Roses

We are already considering holding another one day seminar possibly in the Autumn.

It is seen as a good indicator that members prefer one day seminars as opposed to the winter series of evening lectures held previously. Therefore we trust that all members will soon be supporting these days as I think everybody who attends agrees that they really are value for money.

Contact Sectional Secretaries for entry forms

---

**FORTHCOMING GOLF TOURNAMENTS**

<table>
<thead>
<tr>
<th>APRIL</th>
<th>MAY</th>
<th>JULY</th>
<th>AUGUST</th>
<th>SEPT.</th>
<th>OCTOBBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>16</td>
<td>14</td>
<td>1</td>
<td>17-18-19</td>
<td>3</td>
<td>21-22-23</td>
</tr>
</tbody>
</table>

---

**THE Irrigation Controller**

From Arden Lea Irrigation the most advanced & easy to use programmable watering system ever devised.

- Same cost as any ordinary standard controller.
- Compatible with any existing system - enhances performance.
- Easily updated by new computer technology to promise low-cost, lifelong performance.
- The Controller is designed and built in England for British golf courses, British weather and British greenkeepers.

SPECIAL FEATURE

Computer-intelligent rain sensor will automatically adjust watering to allow for unforeseen rainfall.

TELEPHONE FOR DETAILS TODAY

077 473 2433

or write to Arden Lea Irrigation Ltd.
160 Moss Lane, Heskerth Bank, Preston PR4 6AE.

Arden Lea – Installing, supplying and maintaining all makes of irrigation equipment with 15 years experience.
The first choice for a champion playing surface

A slow release fertilizer produced after exhaustive trials and discussions with course managers, greenkeepers and groundsmen. As part of our policy of continual improvement to the quality and dependability of the Microfine range, our latest tests have led us to improve the product in two distinctive ways.

The I.B.D.U. slow release nitrogen source has been substantially increased across the range, plus the addition of two new formulations.

The range is now as follows: 14:4:7 - 12:0:6+2% Iron - 8:0:0+2% Iron - 8:0:0+4% Iron - 18:0:0+6% Iron - 4:10:10-4:0:8+2% Iron.

Rigby Taylor wish you success with the new product.
PLACE YOUR SMALL ADS IN THE TRADE DIRECTORY

<table>
<thead>
<tr>
<th>TRADE DIRECTORY</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ARTIFICIAL GRASS</strong></td>
</tr>
<tr>
<td>Autoturf Artificial Grass, PGA Ltd., Vorda Works, High Wych, Chelmsford, Essex CM3 6JG. Tel: (0763) 34200.</td>
</tr>
<tr>
<td><strong>GRASS SEED</strong></td>
</tr>
<tr>
<td>BRITISH SEED HOUSES Ltd., Bewsey Industrial Estate, Pite Road, Warrington, Cheshire WA5 5LE. Tel: (0922) 54411.</td>
</tr>
<tr>
<td>Bridges Road, Cannock, Stafford. Tel: (0243) 826591.</td>
</tr>
<tr>
<td>Camp Road, Swindon, Wiltshire. Tel: (0538) 714.</td>
</tr>
<tr>
<td>David Bell Limited, Cestfield Industrial Estate, Penkhill, Middlethorpe, Yorks. Tel: (099 05) 71111.</td>
</tr>
<tr>
<td><strong>SOMMERSTEIG INTERNATIONAL</strong></td>
</tr>
<tr>
<td>Station Road, Finedon, Wellingborough, Northants. Tel: (0933) 871674.</td>
</tr>
<tr>
<td>Telex: 311234.</td>
</tr>
<tr>
<td><strong>IRRIGATION EQUIPMENT</strong></td>
</tr>
<tr>
<td>Cameron, St. Richard's Road, Four Poogs Industrial Estate, Evesham, Worcestershire WR1 6DF. Tel: (0826) 493411.</td>
</tr>
<tr>
<td>Wright Rain Ltd., Florian Road, Newton Flotman, Norwich, Norfolk NR6 7OL. Tel: (0396) 47062.</td>
</tr>
<tr>
<td>Wright Rain Ltd, Unit 3C2, Thorp Arch Trading Estate, Boston Spa, Wetherby, Yorkshire. Tel: (0878) 43055.</td>
</tr>
<tr>
<td>Tel: (0765) 94200.</td>
</tr>
<tr>
<td><strong>CONTRARY AND BRILLION SERVICE</strong></td>
</tr>
<tr>
<td>Boughton Loam Ltd, Boughton Quarry, Boughton, Northampton, Nn9 5NT. Tel: (0604) 867814.</td>
</tr>
<tr>
<td>Suppliers of Loads, Sports and Horticultural Dressings.</td>
</tr>
<tr>
<td><strong>DRAINAGE TUBES AND PIPES</strong></td>
</tr>
<tr>
<td>T. W. BURDEN LTD, Weelsway, Keynsham, Bristol.</td>
</tr>
<tr>
<td>30mm to 300mm diameter, poly- and peat, and peat bonded drainage systems delivered nationwide.</td>
</tr>
<tr>
<td>Professional Horticulture Department, Paper Mill Lane, Brimford, Ipswich, Suffolk IP6 4BZ. Tel: (0372) 830492.</td>
</tr>
</tbody>
</table>

**FERTILIZERS & TOP DRESSINGS**

Fisons plc, for the comprehensive turf fertilizer range, and both granular and liquid top dressing delivered nationwide.

Professional Horticulture Department, Paper Mill Lane, Brimford, Ipswich, Suffolk IP6 4BZ. Tel: (0372) 830492.

**GRASS MACHINERY RANSOMES DISTRIBUTORS**

Burrows G.M. Ltd., Wigan Road, Leyland, Lancs. PR5 2UE. Tel: (0770) 421728. Contact: Mr. J. G. Gledhill.

Burrows G.M. Ltd., Spring Side Works, Cannock Road, Stafford. Tel: (0788) 88137. Contact: Mr. J. G. Gledhill.

Henton & Chellatt Ltd., London Road, Nottingham, NG2 3HW. Tel: 0602 862161.

W. & M. Smith Ltd., Bank Avenue, Morley, Leeds. Tel: (0532) 532161. Contact: Mr. J. M. Smith.

Press of Chichester (P. C. Rice & Co. Ltd.), The Hornet, Chichester, West Sussex PO19 4JW. Tel: Chichester (0394) 86110. Contact: D. Strange. Tel: (0243) 826591.

W. Wilcock & Sons (Preston) Ltd., Walker Street, Preston PR1 2PR. Tel: Preston 53076. |  |

**TRADE DIRECTORY**

Your own heading and product announcement for twelve months will cost only £35.00 and it is cheaper for two or more entries.

**ARTIFICIAL GRASS**

Autoturf Artificial Grass, PGA Ltd., Vorda Works, High Wych, Chelmsford, Essex CM3 6JG. Tel: (0763) 34200.

The Greensward Company, The Old Hall, Langham, Oakham, Rutland. Le15 3UE. Tel: Oakham (0572) 292032 503051. Tel: 43626 Grecio G. P. N. Structures Ltd, 5 Vigo Street, Piccadilly, London, W1 1AH. Tel: (01) 358879. Design, supply and installation of a completely artificial grass system, specifically tuned to golf greens and tees.

**CONSULTANT AGROMONTES**

Martin Bros. Ltd., 1A Clifton Street, Alderley Edge, Cheshire. Tel: (0995) 70675. Contact: Maskells Golf Course Department.

**CONTRARY AND BRILLION SERVICE**

Boughton Loam Ltd, Boughton Quarry, Boughton, Northampton, NN9 5NT. Tel: (0604) 867814.

**DOONEYS OF LINNELL STREET LTD.**

30-32 Bankhead Drive, Sighthill Industrial Estate, Glasgow G23 8PT. Tel: (0473) 830492. Contact: Mr. J. Guest.

**ECCLESBOURNE, LICHFIELD**

30-32 Bankhead Drive, Sighthill Industrial Estate, Glasgow G23 8PT. Tel: (0473) 830492. Contact: Mr. J. Guest.

**FRANK'S OF SOLIHULL LTD.**

30-32 Bankhead Drive, Sighthill Industrial Estate, Glasgow G23 8PT. Tel: (0473) 830492. Contact: Mr. J. Guest.

**GOLF COURSE ACCESSORIES**

W. Wilcock & Sons (Preston) Ltd., Walker Street, Preston PR1 2PR. Tel: Preston 53076.

**GRASS SEED**

BRITISH SEED HOUSES Ltd., Bewsey Industrial Estate, Pite Road, Warrington, Cheshire WA5 5LE. Tel: (0922) 54411.

Perivale Road, Hounslow, Middlesex. Tel: (0223) 823691.

Camp Road, Swindon, Wiltshire. Tel: (0538) 714.

David Bell Limited, Cestfield Industrial Estate, Penkhill, Middlethorpe, Yorks. Tel: (099 05) 71111.

**SOIL STERILIZERS, DRAINAGE AND SHREDDERS**

Terra Force, Kent Horticulture Engineers, Prospect Place, Tonbridge Road, Wateringbury, Kent ME15 5NY. Tel: Maidstone (0623) 81587. Telex: 065222. Contact: John Brough.

**SPRAYING EQUIPMENT**


**TORSO & ISKET SALES & SERVICE**

County Mowers, Tors To Service and Sales, Main Street, Thorpe Underwood, Kettering, Northampton. Tel: 0532-892627. Contact: David Birdsell.

D. J. & N. Needham Ltd, Tors To Sales, Service and parts, Main Street, Leighton Buzzard, Beds. Tel: (0522) 32056. Contact: Needham or M. Grange.

**TREES, SHRUBS & PLANTS**

Potlotus Nurseries Ltd, Wood Street, Sudbury, Suffolk IP12 4AF. Tel: (0394) 3344. Contact: John Dyner, DN.

**TURF (SPECIALITY)**

Boughton Loam Ltd, Boughton Quarry, Boughton, Northampton, NN9 5NT. Tel: (0604) 867814.

**Turf Irrigation Services Ltd.**

Unit 7, Millstream Trading Estate, Christchurch Road, Ringwood, Hants BH24 3SD. Tel: Ringwood (0252) 822231.

Watermead Ltd., Monument Way East, Woking, Surrey GU21 4LY. Tel: Woking (0207) 823379. Contact: E. Inman. Supply and installation of golf course irrigation.

**TRENCHERS**

L. D. Bourne Oxford Ltd. South Sinai, Oxford OX1 5BR Telephone: (0756) 750042. 83141. Contact: Brian D. Pierson (Contractors) Limited 27 Vicarage Road, Verwood, Dorset BH31 6DR Telephone: (0202) 623372.

**VORTEX HIRE**

J. Brailsford, Thring End Farm, Yealand Redmayne, Carnforth. Tel: (0529) 781902.

**WATER STORAGE**

Milline, Eilt (Liquid Storage), Station House, Eye, Leominster, Herefordshire HR6 0DT. Tel: (04975) 5300. Contact: D. P. Glentore.

**WEEDKILLERS, ETC.**

Moles Vantoch Ltd, 10 Acres, Liss, Hants, certain safe and effective method (not Strychnine) £7.50 Packs - 1 acre, £30.00 2 acres. Tel: (0969) 767250. Contact: R. M. Hume. **WEEDECKERS**

Fisons plc, for Tritox, selective turf herbicides, Herbazin ECO, etc. Tel: (0969) 767250. Contact: R. M. Hume. **WEEDECKERS**

Fisons plc, for Tritox, selective turf herbicides, Herbazin ECO, etc. Tel: (0969) 767250. Contact: R. M. Hume. **WEEDECKERS**

Fisons plc, for Tritox, selective turf herbicides, Herbazin ECO, etc. Tel: (0969) 767250. Contact: R. M. Hume. **WEEDECKERS**

Fisons plc, for Tritox, selective turf herbicides, Herbazin ECO, etc. Tel: (0969) 767250. Contact: R. M. Hume.
"You'll see alright. It may be surface water is still a problem. The turf could be looking thin and tired. Weeds could be on the increase.

"What you can't see so easily is the cause. Compaction. Or a build up of thatch. Probably both. Either way, the result's the same. Water doesn't soak in properly. The soil is starved of oxygen. Rooting gets shallow. Weeds and disease get a hold. You've got a problem and just spiking holes in the ground isn't going to solve it.

"Hollow tine aeration is the answer. What the Ryan people call Core Cultivation.

"In fact, I reckon that for most heavily used sports areas, Core Cultivation should be a routine part of any turf maintenance programme. Not just a problem solver. Obviously, how often you use hollow tining varies according to different soil conditions. I find once in the Spring and Autumn is about right.

"Cores of soil and thatch

"New vigorous growth after hollow tining

"Why do I think Ryan hollow tine aerators are the best?

"Well, they've got some very special design features."

"Look at the Greensaire for instance. There's the core pattern created by the tines. A close 2 inch by 2 inch up to 3 inches deep with a 24 inch swath. On a green of say 6000 square feet that's 3 cubic yards of core material. And you can do that in well under an hour.

"So what's this core cultivation all about?

"First, hollow tining actually removes cores of soil—and thatch of course. That obviously relieves soil compaction far better than a spike or slitter. As a result, it opens up the soil giving better movement of air, water and fertilisers. If the soil is good, breaking up the cores, either by a scarifier or a Ryan core processor, separates the thatch, which can then be removed easily.

"Then there's the way the tines actually penetrate the soil. Ryan have a really clever design which makes each tine go in and out absolutely vertically. Unlike other makes, where the tines sort of rock to and fro which can damage the surface.

"It's that sort of thing that makes Ryan aerators the best. In fact, you should have a look at the whole range of Ryan turf maintenance equipment. It's the best you can buy".

"You'll see when ordinary aeration just isn't good enough"
Stroke for stroke, the best in the business.

Greens King® IV Diesel.
Now, you can approach the green with the finest tournament-quality triplex greens mower and cut your fuel costs virtually in half. Because the innovative Jacobsen Greens King family introduces another industry first: Diesel.

The new 16½-hp. diesel Greens King IV provides more power for climbing and cutting. Plus, this diesel model has many standard features you’ll only find as options elsewhere. Like full floating and pivoting reel units that steer through turns without scuffing or marking; full hydraulic drive with dynamic braking for greater control; just let up on the pedal to slow down; and, variable speed control which allows the operator to select the precise ground speed and frequency of cut for greens while still allowing full speed for transport.

By cutting horizontal runners and removing thatch, the patented Turf Groomer™ attachment creates faster, truer and healthier greens without lowering height of cut.

If you prefer a gas engine, both 14-hp. and 16-hp. models are available. Giving you the broadest selection of riding greens mowers in the industry. With more options, to help you meet your greens care needs more precisely.

And, the unique performance monitor which digitally displays all speeds, including cutting frequency, so the operator can evaluate mowing performance, instantly.

What’s more, every Greens King is backed by the most extensive support network in the industry. So, contact your Jacobsen distributor to arrange a free demonstration. And see for yourself why the Greens King family is the best in the business.