The British Golf Greenkeeper



Warren's A-34 may be examined at the Harlow Car Botanical Gardens, Harrogate, Yorkshire. Planted May 1971.



Let them tear it up...

Warren's A-34 Kentucky Bluegrass Comes Back Faster!

Warren's A-34 Kentucky Bluegrass (Poa pratensis), grows vigorously in shade and sun alike. It is proving to be the best all round grass for use on sports-grounds, parks and recreational areas. Its ability to recover quickly from injury makes it ideal for sowing down golf tees and all those areas receiving wear and tear.

Warren's A-34 Kentucky Bluegrass will tolerate up to 65% shade when maintained at a two inch cutting height. On open sites it can be mown down to 3/8ths of an inch, still grow vigorously and retain its power to recover quickly. It is the one pure strain of bluegrass seed that will thrive in shade and sun and tolerate a wide range of soil and climatic conditions. It is not necessary to blend A-34 with seed of other species or strains and the best results have been obtained from using it neat at a low seeding rate.

Warren's A-34 Kentucky Bluegrass has been under observation by turf grass research departments of leading Universities and other research organizations in the United States and they have all given it a high rating for disease resistance and shade tolerance.

For more particulars on Warren's A-34 Seed phone your inquiry to:

HURST GUNSON COOPER TABER, LTD. WITHAM, ESSEX-PHONE WITHAM 3451

Exclusive Importer for the U.K.

PETER ADAMS (GARDEN LANDSCAPERS) LTD., Granley Gardens, Muswell Hill, London N10 3AR. Telephone No.: 01-883 5880 and 0821.

A product of Warren's Turf Nursery, Palos Park, III. U.S.A.



THE BRITISH GOLF

GREENKEEPER

HON. EDITOR: F. W. HAWTREE

FOUNDED 1912

PUBLISHED MONTHLY FOR THE BENEFIT OF GREENKEEPERS, GREENKEEPING AND THE GAME OF GOLF BY MEDIA PROMOTION LTD ON BEHALF OF THE BRITISH GOLF GREENKEEPERS ASSOCIATION

> President: CARL BRETHERTON

Vice-Presidents:
SIR WILLIAM CARR
GORDON WRIGHT
F. W. HAWTREE
S. NORGATE
I. G. NICHOLLS
F. V. SOUTHGATE
P. HAZELL
W. KINSEY
P. MARSHALL
W. PAYNE
W. MOUNTAIN

Chairman:
H. M. WALSH
Horrobin Cottage
Old Links Golf Club, Montserratt
Bolton

Vice-Chairman: I. SCOONES

Hon. Secretary & Treasurer: C. H. Dix Addington Court G.C. Featherbed Lane Addington, Croydon, Surrey CRO 9AA

Executive Committee:
Carl Bretherton (President)
G. Herrington E. W. Folkes
V. Smith P. McCarron
W. Heeles J. Simpson
A. A. Cockfield
H. Fry (Jun.) T. Graham

Hon. Auditors:
Messrs Smallfield Rawlins and
Co., Candlewick House, 116/126
Cannon Street, London, E.C.4.

Hon. Solicitors: HENRY DOWDING, LL.B. 203-205 High Street Orpington

The Association is affiliated to the English and Welsh Golf Unions.

No. 331 New Series

DECEMBER 1972

CONTENTS

TEE SHOTS	PAGE 3	3
SECRETARY'S NOTES		5
PRACTICAL SAND SLITS OR SAND INJECTION	(5
DRAINAGE AND WATER SU WITH DAVIS TRENCHERS	PPLY	9
PITCH FIBRE FOR DRAINAG	E 11	l
SITUATIONS VACANT	13, 15	5
CLASSIFIED ADVERTISEMEN	NTS 15	5
NEWS FROM THE SECTIONS	16	5
BUYERS' GUIDE	20)

Front Cover Picture:

Slovan Marianske, Lasne, Czechoslovakia

EDITORIAL AND SUBSCRIPTION OFFICES: Addington Court Golf Club, Featherbed Lane, Addington, Croydon, Surrey. Telephone: 01–657 0281. SUBSCRIPTION RATE: £1:25 for 12 issues post paid. Published during the first week of each month. All rights reserved. Reproduction of original articles and photographs in whole or in part is prohibited. This Magazine shall not, without the written consent of the publishers first given, be re-sold, lent, hired out, or otherwise disposed of.

Contributions and photographs of interest are invited.

ADVERTISEMENT OFFICE: Media Promotion Ltd, 1 Chester Close, Chester Street, London, S.W.1. Telephone: 01–235 1146. LATEST COPY DATE: 8th of month prior to insertion.

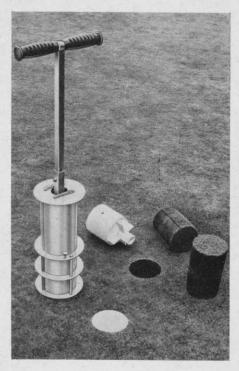
TO INSERT A CLASSIFIED ADVERTISEMENT, write to the Advertisement Manager at the above address. The rate is £2.50 per single column inch. Remittance must be sent with order. Please state number of insertions required and write advertisement in block letters. Advertisements will be inserted in the first available issue.

Printed by Dolphin Press Brighton Williams Lea Group

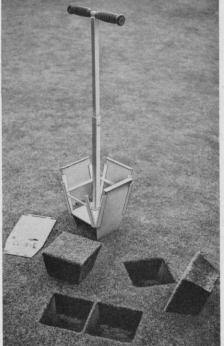
FAST, ACCURATE HOLE CUTTING AND RENOVATION

The 'Supercut' Hole Cutter and the 'Squarecut' Turf Repairer are precision implements. Every plug or sod fits *exactly* into the hole made for it with the same implement.

Clean cut ensures minimum disturbance of root-soil structure.



Perfect holes, perfect plugs. This hole cutter of a completely new design cuts vertically, eliminates wobble, and makes a clean cut simply and quickly.



Square shape means unlimited adjacent cuts for any size of patch. No 'in-between' spaces as with round cutter.

Greens can be back in use immediately after renovation.



Details from

H. PATTISSON & CO. LTD.,

Stanmore Middlesex 01-954 4171

The British Golf Greenkeeper

Tee Shots

THOSE WHO HAVE booked on the Boston trip will have been notified that the dates are now 7th to 12th or even the 13th January, as the G.C.S.A.A. have very kindly invited us to their banquet on the 11th January. Also the main lecture sessions are held from Monday to Thursday and they wrote to warn us that the original dates would miss some of the best parts of the Conference. Don't forget to get your passports endorsed with a visitors visa.

This month we reproduce two advertisements from the first volume of the Journal. After sixty years, the papers printed then still make interesting reading, with a difference. The essay competition was judged by Henry Leach who suggested that entries should be limited to 5,000 words. The present generation seem to have less time for writing.

Golf courses in the Seventies will be designed for women, says C. E. Robinson, President, American Society Golf Course Architects. 'The new golf course of the '70s will ignore the desire of the "heroic" player and will emphasize accuracy and finesse in shot making. Brute strength will become less a factor in the game of golf, and the woman golfer will find herself playing on even terms with men.

'From a recent poll of Society members, one can draw this general conclusion: "New courses will be shorter and tighter, characterized by narrower fairways and smaller greens".

This trend in golf course architecture can be attributed to several factors, not the least of which is the tremendous influence of women on the game of golf. Courses are being built with women in mind, simply because they represent an ever growing part of the golfing population. Women golfers have increased in numbers 1,000% since World War II!'.

THE CHELWOOD RAKE

ALL STEEL LIGHT WEIGHT SELF CLEANING

Designed to keep correct depth of sand in bunker, without pulling up stones and soil

Pushes and pulls easily through dry or wet sand Described by local greenkeepers as the perfect bunker rake 28 in. wide with 18 teeth. Same size and weight as wooden rake

£2.15 Complete with handle

Sent of 14 days approval

Obtainable from

CHELWOOD TOOL CO Telephone: THORNBURY 3809 CHELWOOD HOUSE, THORNBURY, BRISTOL



OR HIGHEST PURIT

CANNOCK FERTILISERS LIMITED, CANNOCK, STAFFS WS11 3LW

NOW FOR OUR FREE GREENKEEPING CATALOGUE

December 1972



RANSOMES-HAHN tournament triplex

It takes less than a minute to convert the Tournament Triplex greensmower to a utility mower to a Verti-Cut to a spiker! The 12-hp Triplex vehicle powers all accessories . . . each of which disconnects by just pulling a pin and disconnecting a quick-couple cable. Literally in less than a minute!

And remember that, because all accessories operate off the standard Triplex vehicle, your total investment in the Tournament Triplex management system will very likely be *less* than your investment in the four conventional turf maintenance machines it replaces!

Features include: Cuts 18 greens in four hours. All reels up front gives full vision. Easy-to-read dials make variable speed mowing simple. Unique geometric steering of reels. Hydrostatic drive for smooth stops and starts. Individual lifts on each mower reel. Aircraft cable drives are strong, reliable, easily serviced. Excellent climbing power on slopes up to 1 in 3. Reels removed in seconds without spanners. Gravity dump trailer provides fast clean up from all operations.

For full details and a demonstration . . .

CONTACT EASTERN TRACTORS

at Bishops Stortford 3325

Chelmsford 56211: Colchester 76111: Braintree 1451: Steeple Bumpstead 377 and Anglian Lawnmowers at Kesgrave 4273

Hon. Secretary's Notes

ANNUAL TOURNAMENT 1973

The Association Annual Tournament for 1973 will be held at the Clevedon Golf Club, Clevedon, Somerset, on the 13th, 14th and 15th August.

Sixty years on: two advertisements from Vol. 1 of this Journal referred to on page 3.

GOLF GREEN COMMITTEES

AND

GREENKEEPERS

who wish their Courses to rank among the finest in the Country SHOULD SOW

Sutton's Famous Mixtures of Grass Seeds.

AS USED AT

St. Andrews, Hoylake, Sunningdale, Swinley Forest, Camberley Heath, Royal St. George's, North Berwick, &c.

PUTTING CREEN MIXTU	RE	***	35/-	per bus.
FAIRWAY MIXTURE		30/- &	17/6	**
WORM DESTROYER		200	11/6	per swt.
GRASS MANURE	, ,,	***	28 6	
LAWN SAND		***	30 -	39
MOSS DESTROYER		***	40/-	90
Reduced Prices f	or lar	ge quar	title	s.

"THE BOOK OF THE LINKS."

A Symposium on Golf. By MARTIN H. F. SUTTON, F.L.S. Royal 8vo. (to in. by 6] in.); 10s. 6d. net.

SUTTON & SONS, READING.

GREENKEEPERS!

Face the Winter with Confidence.

YOU CAN ALWAYS RELY ON

VERMOL Worm Killer

to keep your turf firm and dry under the wettest weather conditions. Have you to economise in upkeep owing to the WAR? Then use VERMOL the great labour saver. 50 saving in labour and dressings.

Very little rolling or sweeping required after using

VERMOL.

This cheap but effective worm killer, after extended trials, is now used by the leading Greenkeepers throughout the United Kingdom which speaks for — itself. Are your Greens Weedy? then apply

VERMOL LAWN SAND

A carefully prepared dressing which destroys Daisies, Dandelions, Chickweed, and all surface rooting weeds Is your turf weak? then strengthen it by sowing

VERMOL GRASS SEEDS.

Various mixtures prepared to suit all kinds of soil.

For pampflets and Price Toists, write to

VERMOL PRODUCTS COMPANY,

61, St. Mary Axe, LONDON, E.C.

Practical Sand Slits or 'Sand Injection'

by

G. W. Davison, Director, Cambridge Soil Services Ltd.

DRAINS filled with permeable material have existed for many years. Much of the credit for applying this idea to sports turf in the form of sand slits, stems from operations carried out by Harold Clark at Twickenham.* His practical work was soon seen to be of great advantage. Others took up the cause. It became a fashionable theme for popular talks and the idea was swept along by a tide of enthusiasm. As a consequence, words said were not always based on practical experience, controlled experiment or economic sense. It is time for a re-assessment of this very valuable technique.

About a ton of water falls on every square yard of Britain every year. Unless natural permeability is extraordinarily good, every area of sports turf requires a drainage system if it is to remain in good playing condition. The most efficient and cheapest basic method of removing these thousands of tons of water is to have a properly designed underground pipe system. To suggest that a complicated system of sand or gravel slits is a feasible alternative to this principle is usually quite wrong, both from the point of view of cost and efficiency of operation. On the other hand, no pipe drainage system is of use if the water falling on the surface cannot run quickly through the soil to reach these pipes. Therefore, it is essential to have a gravel or similarly permeable backfill above every pipe to within a few inches of the surface.

Even then, unless the topsoil is unusually free-draining, a surface pan can soon form. Mud, and even pools, lie on the surface just because water cannot get down those vital first few inches. It is here that the sand slit is so valuable. However, the water must have a ready outlet from the bottom of each band of sand. Sand slits in any form which simply fill with water obviously do no good. It is surprising how often this point is not fully appreciated.

Having established that sand slitting would benefit an area, how wide and deep are the cuts to be? What distance should be allowed between centres? How are the slits to be cut? What sort of sand is to be used and how is it to be persuaded to go down? How much will it cost? It is in answering these points that pure theory is most vulnerable. Specifications have been made involving literally thousands of tons without sufficient regard for the cost either of the basic material or the labour of handling. Faced with the problem that sand is 'funny stuff' (it just will not flow), it has been suggested that dried sand should be used, again regardless of either the cost; or that dry sand very easily becomes wet sand if there is a lot to handle in bad weather.

Attempts to carry out the work were based on unsatisfactory adaptations of existing machines. The size of slit recommended was based on what these machines could do, rather than what was most desirable. It seems that our team at Cambridge is alone in having spent a good deal of time and (our own) money in systematic trials and machinery development to deal efficiently with these problems at a moderate cost. For example, a conventional blade, 2 inches wide, produces far too much surface 'heave'. Its use usually means that an area has to be re-levelled. A chain type trencher is too slow and handling the spoil increases the cost. We have produced a much swifter working method of installing and filling 2 inch or wider slits but, at the same time, our trials strongly suggest that narrower cuts carried out by a completely different method are, in some cases, producing better results at a lower cost.

Slits, even with spoil removal, as wide as 2 inches may cause 'corrugation' due to

^{*}Under the auspices of the S.T.R.I., Bingley.

The new Atco Groundsman. A cut above other mowers.

Atce introduce two new models to their range of professional mowers. The 28" and 34" Groundsman.

Apart from the difference in their cutting widths, they share the same features.

To start with, they're both fitted with six heavy duty blades which give 81 cuts per yard—an unusually fine cut for their size.

Both have a 12 volt electric selfstarter, battery and automatic charging system as a standard fitment. They can be power driven with the cutters stationary by operating a cutter release clutch.

What's more, either machine may be used with or without the optional standard Atco trailer seat. Another feature is the continuous chrome tubular handle specially designed for added manoeuvrability when turning.

It can be adjusted quickly to suit individual operator heights by means of an instant clamping lever.

There's a new 'swing over' type glass fibre grass box. It is mounted on tubular steel support arms and its lower section is recessed so it can be used

with swivel front rollers.

Then there's a large capacity fuel tank which holds one gallon of petrol.

It takes one professional to recognise another. Is it any wonder then that Atco mowers are used on some of the most famous stretches of turf in this country.

ATCO As famous as the lawns we cut.

For full details of Atco mowers write to Charles H. Pugh Ltd., P.O. Box 256, ATCO Works, Birmingham, B9 4PR.



summer drying-out. For safe use their tops have to be buried and this means the risk of a pan forming above them. Narrower slits are 'bridged' by the grass roots and are held positively in place right to the surface. After all, each slit is only draining the surface area within a few inches. You do not need a 12 inch main to fill a tea-cup! It may be argued that a narrower slit will not last. Again, supported as it is by the grass root structure it holds up throughout the year. When the wider cuts dry out they become yet wider, the sand level falls, the top edges collapse, fill with soil, and their efficiency is seriously impared.

Of course, none of this is necessary where a good pitch has been properly designed as, for example at Leeds United. The most modern design can give first class playing conditions in virtually any weather. Professional clubs really should aim to have pitches that do not need any type of sand slit. However, such pitches are expensive. Sand slits, or 'Sand Injection' as we chose to call our development, can be of very great benefit on many playing fields, golf courses, race courses and other recreational areas. This intriguing and important technique is worthy of a balanced and methodical approach. Practical contracts can now replace theoretical specifications.

Turning from the general use of this technique to its particular application on golf courses, there are two main types of requirement. A large, economical machine to treat fairways at a reasonable cost and also a small light machine capable of working on greens without damage. Both of these are now available. Many greens benefit enormously by having a localised pipe-drainage scheme installed and the surface sand-injected. The resultant permeability not also greatly improves drainage and playing conditions but also helps in thatch control. It is virtually giving permanent aeration.

RELF&KENDALL OF CROYDON AND BARNET

With pleasure announce that they hold the greatest concentration of lawn mower spares and lawn mower engine spares in the country

ENORMOUS STOCKS OF RANSOMES SPARE PARTS

RANSOMES

Also BRIGGS & STRATTON VILLIERS, VICTA, J.A.P. B.S.A., DENNIS, ASPERA

Service Exchange items such as CUTTING CYLINDERS-MAGNETOS

OUR FLEET OF VANS IS OCCUPIED DAILY IN MAINTAINING OUR EXPRESS SPARES DELIVERY SERVICE

Telephone your immediate requirements to



We stock a comprehensive range of domestic and professional machinery. Ask for a demonstration on YOUR ground

Drainage and Water Supply with Davis Trenchers

There are two aspects to Davis machines' role in land drainage and water supply, the one as a trencher capable of excavating narrow trenches quickly and neatly, the other as a vibratory plough direct burying up to 2 in. p.v.c. pipes or cable. It is quite possible for a Davis to be set up to undertake either or both of these tasks, the fitting of one attachment in no way interfering with the performance of the other.

The Davis is a compact, manoeuvrable machine, either on 10 in. cleat tracks or high flotation tyres, ideal for work on golf courses where the treatment of grass surfaces is often critical. Its ability to work hard and fast, and yet not gouge or compact the playing surface, makes it popular for such work as direct burying a pop-up sprinkler system to the

green.

Apart from digging clean trenches from 4 in. up, in 2 in. increments, to 12 in. or 18 in., depending on the model, for installing a conventional drainage system, an attachment is now available for the TF500 to dig a 2 in. slit for sand slitting. This was announced at this year's Motspur Park show where it won the bronze medal award.

Every machine in the Davis range of trenchers, whether tracked or wheeled, is equipped with an over centre slip clutch which prevents wear on the drive belt, or shock loads to the engine. A shock absorber is incorporated in the digging boom to prevent damage to the digging chain or teeth when underground obstacles are hit. The drive on all machines is hydrostatic which, by means of a by-pass valve, gives infinitely variable speed control



Davis Trencher supplied by L. D. Bourgein (Oxford) Ltd.

December 1972

Large open spaces need the biggest mower available

The Bomford "Bandit" 2500. The widest flail mower in • 8' 4" cutting width. Europe for park, verge and sportsfield cutting.

Bomford's great experience in flail mower design has now produced this versatile and work-hungry machine developed especially for larger grassed areas (even waist high grass). And the cutting quality is superb. Cut material is mulched and discharged safely downwards. It rapidly disintegrates too - so you can forget collection.

Adaptable to any tractor, the unique "chain-knife" flexible system makes maintenance rarely necessary: the cutters are reversible and can eventually be easily replaced.



OVER 8FT. CUTTING WIDTH

- Ideal for big area grass cutting.
- Working capacity 4 acres plus per hr.
- 3 point linkage mounted.
- Uses Bomford flail-knife cutters.

BANDIT MFORD

2500 Manufactured by

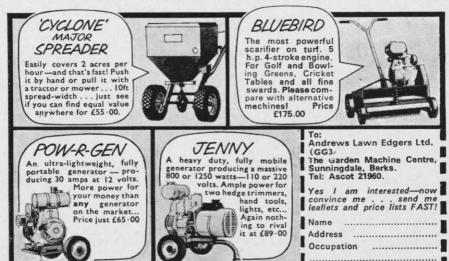
BOMFORD & EVERSHED LTD. Salford Priors, Evesham, Worcestershire WR11 5SW.

Tel: Bidford-on-Avon (078-988) 3383 Telex: 311081

BOMFORD -THE WORLDS LARGEST PRODUCERS OF TRACTOR MOUNTED HIGHWAY FLAIL MOWERS

Andrews go professional

With a range of equipment that makes rival products look like playthings. Here they are - designed for hard work; to give portable power to small labour forces: to offer unbeatable value at unmatchable prices . . .



allowing the operator to select the trenching speed best suited to conditions. Soil disposition is either by auger or conveyor, dependent on model, and it comes up in a fine friable condition making for easy backfilling with a Davis hydraulic angle dozer. Once again the fitting of this attachment does not interfere with the trenching ability of the machine.

Polythene Drainage Tubing

Muntz Plastics make 'Landcoil' Polythene Land Drainage Tubing. This tubing was primarily developed for draining agricultural land but in recent years it has been used quite extensively on sports grounds, tennis courts, etc. It therefore has an application on golf courses. The piping is supplied in black only.

'Landcoil' is a 2 in. diameter tube manufactured from polythene in coils 660 ft. long. The polythene from which it is made has been selected to give a tough tube which has a high crush resistance. At the same time it is sufficiently flexible to allow it to be manufac-

tured in easily handled coils.

In order to provide maximum water absorption, there are 16 rows of small slots running along the length of the tube. These slots are scientifically designed to prevent larger soil particles from entering the tube. Where it is necessary to make a joint between two lengths of 'Landcoil', or it is required to discharge through an outfall into a dyke, a slightly larger diameter tube is available to sleeve over the perforated tube.

'Landcoil' may be used with or without permeable fill except that permeable fill must be used in all situations where it would be used with conventional materials.

Pitch Fibre for Drainage

SURPRISINGLY, pitch fibre pipe is sometimes considered to be a new material, yet it has a development history of at least 150 years. It is known with some certainty that a type of pitch fibre pipe was used to carry water in Germany about 1860. A recorded installation was its use for mains water in Hamburg in 1850 and, when these were uncovered in 1914, they were found to be sound. Such durability is only to be expected of a material, the greatest proportion of which is pitch, a natural preservative. The early method of manufacture was to roll up sheets of pitch impregnated paper onto a mandrel until the desired wall thickness had been obtained. This form of manufacture is crude compared with present day techniques which produce a homogeneous wall of cellulose and asbestos pitch fibre completely impregnated with hard coal tar pitch.

Pitch fibre pipe is now well established for drainage purposes and in 1944 the United States Department of Commerce accepted a standard for the pipe. Although quantitites of pitch fibre conduit have been imported into this country since 1903, no drain pipe was manufactured here until 1952. Perforated pipe for underground drainage work is manufactured to the British Standards Specification for drainage pipe and then perforated.

Characteristics of the Material

The pipe is 70% pitch by weight and consequently has excellent chemical resistance. Laboratory work and field experience has shown that it will satisfactorily cope with aqueous solutions in the p.h. range of 0.3 to 12.5. Aggressive soil conditions, even those with an artificially high sulphate content, created by the use of clinker, ash or slag fills, are not detrimental to the pipe. The smooth bore and self centring joints give it good hydraulic flow properties and the system of dry jointing means ease and speed of installation. The pitch also inhibits the growth of fungi and plant life generally on its

December 1972

S. H. GOSS & CO.

WEED CONTROL SPECIALISTS

Selective or Total Weed Control
Grass Growth Retarding
Brushwood Control
Aquatic Weeds
also
Worm and Mole Control
Fertilisers Applied

3, Mascalls Cottages, Mascalls Lane, Brentwood, Essex.

Telephone: Brentwood 216107

FOR FAST GREENS



FIT A GRASS COMB TO YOUR MOWER

STEWART & CO., FINE TURF SPECIALISTS EDINBURGH. EH2 2AY

SAND INJECTION

BY OUR SPECIALISED MACHINES
CAN TRANSFORM

WET GREENS AND FAIRWAYS

DEEP AERATION BY SUB-AIR
MACHINE
AT ANY TIME OF YEAR
NO SURFACE DAMAGE

We are unaware of any other machine which penetrates to seven inches yet keeps the greens undamaged and in play

Very moderate charges include all transport and an experienced operator

Cambridge Soil Services Limited
Girton Road, Cambridge

Specialists in Science Based Drainage Tel.76002

R. C. CRAIG

AND CO. LTD.

SPECIALISTS IN THE REPAIR AND MAINTENANCE OF ALL TYPES OF MOWERS

- * Agents for: RANSOMES SIMS & JEFFERIES LTD.
- * LLOYDS & CO. LTD.
 WEBBS LAWN MOWERS
- * Distributors: DENNIS BROS, LTD.

GANG MOWERS FOR HIRE

We will gladly call on you to advise on your grass cutting equipment or arrange demonstrations. Ring us now

*

153 Arch Stamford Brook Station, LONDON, W.6.

01-748 5415

surface. Its light weight, shatterproof qualities are great advantages on site. A 10 ft. length of 4 inch pipe weighs 25 lbs. and an 8 ft. length of 6 inch pipe weighs only 44 lbs.

Purpose of Drainage

Effective sub surface drainage is simply the control of unwanted water. Rain not disposed of by surface run-off, absorption by vegative cover, evaporation or transpiration, is unwanted water. Rain enters the ground and seeks a given water table. Topography, soil types and strata profiles are the basic factors which determine the hydraulic shape of the water table. Water tables are rarely consistent, seasonal fluctuations can affect the shape and height considerably.

Effective sub surface drainage ensures that the water table is stable, has increased soil bearing strength, minimal frost heave, optimum soil aeration and low soil erosion.

Soil water can be shown to consist of three main types.

Hydroscopic Water (undrainable). A thin film of water adhering to soil particles which does not affect soil water or vegative growth.

Capillary Water (undrainable). A film of water around each soil particle providing moisture for vegetable growth which does not affect soil bearing strength.

Gravitational Water (drainable). This follows the path of least hydraulic resistance, entering fissures, capillary interstices, seepage zones, underground rivers, etc., until it establishes a ground water table at impervious strata. This type of water fills soil voids below the water table, displaces oxygen, reduces soil bearing strength and discourages the activity of micro organisms. The main purpose of surface drainage is, therefore, to remove and control gravitational water.

Why use Pitch Fibre Pipe?

Pitch fibre perforated pipe has been used very successfully for the drainage of golf course greens, tees and fairways. Clay tiles have been extensively used in the past for this type of drainage, but green keepers are now recognising the advantages of pitch fibre pipe. Pitch fibre pipe, although initially more expensive, over a period of say 50 years shows considerable cost savings because clay tiles lose their effectiveness and quickly silt up. Tiles used under adverse conditions are practically useless after 5 years.

Key Terrain have been manufacturing perforated pitch fibre pipe and conventional drainage pipe for nearly 20 years at their Larkfield factory, having built up considerable expertise in their use. The Technical Service Department of Key Terrain Limited, Larkfield, Maidstone, Kent, are pleased to answer specific questions in the use of pitch fibre pipe.

SITUATION VACANT

ROYAL LYTHAM & ST. ANNES GOLF CLUB

Assistant Head Greenkeeper

required for Championship course, excellent opportunity for suitable applicant.

apply with full details to:-

The Secretary Royal Lytham & St. Annes Golf Club Links Gate, Lytham St. Annes, Lancs,

December 1972

Trade News

Mr. R. N. Bird, Chairman of R. S. Bird Limited, has been honoured by the British Golf Greenkeepers' Association, by being appointed President of the Welsh Section.

Mr. Bird, a keen golfer himself, has been actively interested in the Association for many years.

W. J. Holloway, popularly known as Bill Holloway, retired on the 30th June from the employ of T. Parker & Sons (Turf Management) Ltd. Bill Holloway was Area Representative for South East London and Kent for the Company but, by virtue of the fact he is a keen horticulturist, Bill is known to many customers outside this area, including many of the London Greenkeepers. We feel that there will be many who will join with us in wishing Mr. Holloway a long and happy retirement.

Leasing Co. Formed by Ransomes

A leasing company has been formed by Ransomes Sims & Jefferies Ltd., the Ipswich based engineering group, to complement the organisation's present marketing arrangements. Ransomes Leasing Company Ltd. is a wholly owned subsidiary and will operate from the company's Ipswich headquarters.

Initially leasing will be limited to Ransomes grass machinery products, but at a later date may be extended to their range of fork lift trucks, and certain items of high value agricultural machinery. This leasing scheme will benefit organisations operating on fixed annual revenues, where high capital expenditure on sophisticated machinery cannot conveniently be achieved.







Head Greenkeeper

required by

HARTLEPOOL GOLF CLUB LIMITED

House provided Salary to be negotiated

Apply giving details of experience, age and present employers to the

Secretary Hart Warren Hartlepool

CHIPPING SODBURY GOLF CLUB

HEAD GREENKEEPER

Experienced and qualified applicant A new 18-hole Meadowland course Accommodation or housing will be arranged if required.

Salary negotiable

Apply stating age, experience to:

The Secretary

Chipping Sodbury Golf Club

Chipping Sodbury

Bristol BS176PU

RURAL DISTRICT COUNCIL OF DONCASTER CROOKHILL PARK GOLF COURSE

Appointment of Head Greenkeeper

Within Misc. V - £1,311 - £,1428

Applications are invited from experienced persons for the above post at the Council's new 18 hole Golf Course at Crookhill Park near Doncaster, due to open during 1973.

Housing accommodation will be made available.

Further details may be obtained from the Engineer and Surveyor, Nether Hall, Doncaster to whom applications giving details of qualifications and experience, should be returned by Monday, 4 December, 1972

CLASSIFIED **ADVERTISEMENTS**

Used Golf Balls Bought. Any quantity. Price 20p per dozen. Solid and perished balls no value. Sparkbrook Golf Ball Co. Ltd., 29 Highgate Road, Birmingham 12.

For Hire. Sisis Autoturfman Aerator, £25 per week - do it yourself. For contract prices telephone Burnell, Eaglescliff 780647.

Lawn Mower Spares. Gazelle, Autocretes, Minor and Lightweight. Surplus Ransome, Genuine spare parts. List less 80% Relf and Kendall. Telephone: 01-688 0578.

News B G G A

from the Sections

Special occasions

Nov 27 Northern Section Buffet Dance

Dec 6 Southern Section Lecture

11 North West Section Lecture

1973

Jan 1 Southern Section Lecture

Feb 7 Southern Section Lecture

12 North West Section Lecture

Mar 7 Southern Section Lecture

NORTH-WEST

Chairman: R. VICKERS, Leigh Golf Club By H. M. Walsh Hon. Secretary:

Hon. Secretary: Horrobin Cottage, Old Links Golf Club, Montserrat, Bolton, Lancs.

Lectures

A very interesting, informative, constructive and well put over talk with colour slides was given to a very good turn-out of members by Mr. J. Bradbury of the Mommersteg Seed Co., and his subject was 'Breeding better strains of grass'. Thank you, Jim, we all appreciated it very much. A good 32 members made the trip to Swinton Park Golf Club for this, the first of our winter series of lectures.

The next talk will be on 11th December, same place, same venue, and the speaker will be Mr. Heath of SISIS. Please let us have as good a turn-out for this one.

New Members

Will all new members please note that it takes a little time lapse before they receive the Association monthly journal. We welcome to the section the following new members and hope their association with us will be a happy one: J. E. Nicholson, Longridge Golf Club, J. S. Ashton, Grange Park G.C., R. L. Thomas, Saddleworth G.C., A. I. Jones, Padeswood and Buckley G.C.

EAST MIDLAND

Chairman: G. Darby By S. Fretter

Hon. Secretary: 4 Queens Drive, Leicester Forest East, Leicester

Annual Autumn Golf Tournament

Our Annual Autumn Golf Tournament was held at Wollaton Park Golf Club on Tuesday 3rd October 1972. There was a very good entry of greenkeepers, visitors and Vice Presidents. The weather was perfect and the golf course was in excellent condition. Our thanks to the Captain, committee, inside and outside staff, Secretary Mr. J. Small, Professional Mr. M. Young for making this a perfect day.

The prize winners were as follows:

Greenkeepers

1st R. Buchanan, Wollaton Park

1 down

Greenkeepers Scratch-14

1st R. Willars, Leicestershire 2 down

2nd F. Frost, Derby 2 down last 9

3rd A. Shaw, Radcliffe on Trent

3 down last 9

4th W. Woods, Hollinwell 3 down last 9 5th B. Mott, Kettering 5 down

6th G. Darby, Birstall 8 down

Greenkeepers 15-24

1st G. Arnold, Erewash 5 down last 9

2nd K. Elliott, Wollaton 5 down last 9

3rd G. Armson, Hollinwell 5 down last 9

4th J. Roberts, Radcliffe on Trent

6 down last 9

5th R. Spurr, Erewash 6down

6th I. Frost, Wollaton 7 down

Vice Presidents

B. Bean All square

Visitors

P. Jackson 2 down

Putting

Mr. Davis 35

Our thanks to the following for the prizes:
H. Pattison & Co. Ltd., May & Baker Ltd.,
Mr. A. Webb, Mr. E. Freeman, Tilling Construction Services Ltd., Mitchell & Butlers
Ltd., Sutton & Sons, Fisons Ltd., Mr.
Freeman. Our thanks to Mr. D. Whitehead for

the buying of the prizes. Also thanks to Mrs. Mott, Mrs. Coles and Mrs. Darby for their help in the starting and the putting competition.

New Members

We would like to welcome to this section the following Vice Presidents. Mr. S. Bird, 1001 Melton Road, Leicester, W. Byard, Professional, Birstall Golf Club, Birstall, Leics.

NORTH EAST

Chairman: Mr. J. SIMPSON By G. Jeffries

Hon. Secretary:
55 Brackenfield Road,
Framwell Gate Moor,
Durham

Autumn Tournament

Our Autumn Golf Tournament was held on Thursday 7th September, at the Ravensworth Golf Club, Gateshead, by kind permission of their Captain and Committee.

Results

Best Scratch score over 27-holes: K. Barrs (Ravensworth) 114 – Joseph Miller Salver and table lighter.

The Ransomes Cup and Ransomes Watch was won by J. Carss (Dunstanburgh Castle) for the best nett score of 107.

2nd C. Maston (Billingham Sythonia Rec) 107 – Metamec Clock

3rd P. J. Bryne (Unattached) 109 – Holdall Bag

4th C. Baxter (Whitburn) 1114 - Blanket

5th S. Pope (Tyneside) 111½ – Bed Spread

6th T. Nutman (Tynemouth) 111½ – Clock and the Jack Wroath Trophy for the over 50 Prize

7th J. Smith (Morpeth) 115 – Lighter

8th J. Richardson (Tyneside) 116 – Table Cloth

9th G. D. Thompson (Goswick) 118 – Blanket

10th S. Farrington (Warkworth) 122 – Towels

11th H. Sommerville (Alnmouth) 125 – Scales

12th A. Lowes (Chester-le-Street) 126 – Spoons

Our Chairman, J. Simpson thanked the Captain and Committee for the courtesy of the course and clubhouse. He then introduced the Secretary, Mr. Anderson of Ravensworth Golf Club, who had kindly consented to present the prizes and say a few words on our behalf. Mr.

Anderson said how pleased he was to see members of the North East Section and invited us back to the course anytime.

Our Chairman thanked the Steward and Stewardess and Staff for two enjoyable meals and the course Staff for the condition of the course. Our thanks are also due to the following members of the trade and golf clubs who kindly contributed to our prize list.

Ransomes Sims and Jefferies, Stewart & Co., of Edinburgh, Atco, Parkside, Engineers, May & Baker, Rigby Taylor, Ponteland G.C. South Shields G.C. The Northumberland G.C., City Newcastle G.C., Chester -le-Street G.C., Gosforth G.C., Dinsdale Spa G.C., Alnmouth G.C., Hexhan G.C., Heworth G.C. Alnmouth Village G.C., Tynemouth G.C., Newbiggin G.C., Whitley Bay G.C., Brancepeth G.C., Arcot Hall G.C., Goswick G.C., Bishop Auckland G.C., J. McKenzie Engineers, and T. Oliver Vice-President, J. Rutherford Vice-President.

May I thank Jack Simpson and Norman Fraser for the splendid work they did on the score cards and money; and thank you, Tom Oliver, for the good work in selling raffle tickets – and he played golf in the morning, and this at 77 years young, keep up the good work Tom.

A letter of apology was read from our President Mr. C. N. Storey saying that he was sorry that he could not attend.

New Members

We welcome to the section the following new members and hope their association will be a happy one.

K. Barrs, Ravensworth Golf Club Gateshead, M. Lynn, Tyneside Golf Club, and J. Grainger of Durham City Golf Club.

SOUTHERN

Chairman: C. A. Moore (Stanmore) By F. W. Ford Hon. Secretary: 68 Salcombe Gardens, Mill Hill, N.W.7. Tel: 01–959 2847

October Lecture

A good gathering of 40 plus members came to 'The George', on Wednesday 4th October, to learn all about the Ransomes-Hahn-Tournament Triplex Greens Management System.

Philip Marshall, aided by projection slides on the Triplex GMS and spiking equipment, supplied all the facts and answers. Question time revealed that the Triplex, costing £3,000 complete with vertical mowers etc., have made an impressive impact in the U.K.

Philip Marshall is still suffering from the unfortunate motor accident he had earlier this year and we were all pleased to see him up and about again.

My apologies to members who stood during the meeting owing to insufficient seating accommodation. I hope to remedy this in time for the next meeting.

On holiday here from France, Jack Stobbs found time to spend an evening with us at 'The George'. We were all pleased to see you looking so fit and well, Jack.

New Members

A warm welcome to the following new members: R. W. Scott (Waterlooville), R. F. Baker, S. R. F. Baker (Tiverton), E. W. Greenaway (Hainault), and R. S. Holman (Thorpe Hall).

Secretaries Match

The Southern Section team who played in the match at Porters Park on Wednesday 11th October against the Secretaries just failed to make it three in a row. We looked all set for a win when we went into lunch after the foursome $3\frac{1}{2} - 2\frac{1}{2}$ up. I cannot help thinking judging by our table, that we were wined rather well!! However, out of the thirteen singles we could only manage to win five. On the other hand Fergus Pearce, their Secretary, did threaten last year to field a team good enough to win this year. Well done, Fergus!! The series now stands at three all. The results of the games are as follows:

NORTHERN

President: W. MOUNTAIN By Walter Heeles

Hon. Secretary
7 Tentergate Close,
Knaresborough,
Yorkshire, HG5 9BJ

Greenkeeper Invitation Tournament

Our thanks are due to the Committee and members of the West Bowling Golf Club, Bradford, for giving us the courtesy of their Golf Course and Club-House for our second invitation Tournament; to Donald our many thanks are due for a golf course in first class condition. We are also indebted to the steward and stewardess for the very able way they looked after us, particularly as they had only been at West Bowling for a matter of days.

To all Golf Club Officials and guests, thank you all for joining us. In particular Mr. Bernard Cawthray, President of the Bradford Union of Golf Clubs who spoke on behalf of the guests.

Prize winners were as follows:

C. Geddes and Mr. Schneider

S. Bailes and Mr. Stubley

B. Cawthray and R. Goodwillie

D. Todd and Mr. Jackson

Autumn Tournament

Some 46 Members and Guests met at the Stand Golf Club, Whitefield, Manchester, to take part in the Autumn Tournament of the Section.

On behalf of all the Members, I take this opportunity to thank the Captain, Committee

Foursomes

Secretaries	
F. J. Bird (Letchworth) J. F. Nicol (Home Park) S. T. A. MacDonald (Beaconsfield)	0
J. R. Marshall (Unattached)	0
A. J. Aires (Stoke Poges) R. L. Griffiths (Sandy Lodge) H. J. E. Culley (Hadley Wood)	1/2
J. K. D. Dow (Aldesburgh)	0
F. Lister (Shirley Park) J. A. Dwyer (Ealing) F. A. Pearce (A.G.C.S.)	1
J. A. Randall (Porters Park)	1
	2₺

Singles

F. J. Bird	1	J. Kirkpatrick
J. F. Nicol	0	R. Tempest
J. R. Marshall	0	B. Payne
S. T. MacDonald	1	W. Machin
A. J. Acres	1	G. Payne
R. L. Griffiths	1	R. Lance
H. J. Culley	0	R. Plain
J. K. Dow	1	K. Eastwood
F. Lister	1	D. Gould
J. A. O'Dwyer	1	E. Hall
F. A. Pearce	0	P. Fitzjohn
J. A. Randall	1	C. A. Moore
D. Grier	0	F. W. Ford
	8	
Match Result - 101 -	81/2	

Southern Section

Southern Section	
J. Kirkpatrick (Dulwich) W. Machin (Addington Ct.) R. Tempest (Hartsbourne)	1
R. Lance (Surbiton) K. Eastwood (Dyrham Park)	1
R. Plain (Beaconsfield)	1/2
G. Payne (Maidenhead) B. Payne (Burnham)	1
E. Hall (Ealing) D. Gould (Langley Park)	0
C. A. Moore (Stanmore) F. W. Ford (South Herts.)	0
	31

December Lecture

000

Ô

0

0

This lecture will be given by Mr. Woolhouse, Biologist at the Bingley Research Station on the subject 'Turf Diseases'. It will take place at 6.30 p.m. on Wednesday 6th December, at 'The George', which is about two minutes from Charing Cross Main and Underground Stations.

and Members of the Stand Golf Club for the courtesy of the Course and Club House; to thank Mr. and Mrs. Holland for the first class catering and service, also not forgetting our friend Eric for having the course in first class condition for this event.

Our Principal Guest for the day was our newly appointed Chairman of the British Golf Greenkeepers Association, Mr. Harry Walsh (North West Section). Thank you for coming, Harry, it was a great pleasure having you. On behalf of all in the Northern Section may I wish you a very happy and successful year as Chairman.

Two more gentlemen kindly joined us for a meal in the evening, the Secretary and Chairman of the Green Committee: many thanks for the kind things that you had to say about us gentlemen.

Many thanks to every one who took part in helping to make this a very successful day.

MIDLAND

Chairman: G. HART (Gay Hill) By R. Goodwin Hon. Secretary: 4 Burton Old Road, Streethay, Lichfield, Staffs.

Autumn Tournament

The Autumn Tournament was held at the Stratford-upon-Avon Golf Club on Tuesday 19th September.

Scores and Prize Winners over 27 holes:-

Best Gross	W. Marnock Coffee Set	36 + 74 = 110
Best Nett	B. Lowe Clayton Cup and	33 + 65 = 98 Tea Service
2nd Nett	A. Cutler Stainless Steel Cut	35 + 67 = 102
3rd Nett	T. Cutler Set of Carvers	35 + 69 = 104
4th Nett	G. Woodward 6 Golf Balls	37 + 68 = 105
5th Nett	C. Frost Cigarette Lighter	31 + 74 = 105
6th Nett	A. Jamieson 4 Golf Balls	$31\frac{1}{2} + 75 = 106\frac{1}{2}$
7th Nett	D. Brazier Cocktail Set	$30\frac{1}{2} + 76 = 106\frac{1}{2}$
8th Nett	R. Pullen Bottle of Wine	38 + 69 = 107
9th Nett	E. Benbow Bottle of Wine	$38\frac{1}{2} + 69 = 107\frac{1}{2}$
10th Nett	R. Goodwin 4 Golf Balls	39 + 70 = 109
11th Nett	V. Smith Holdall	$35\frac{1}{2} + 74 = 109\frac{1}{2}$

The Cannock Prize, for the Best Aggregate Score over the year was won by A. Jamieson with a 72 Hole Score of 272.

The Prizes were presented by the Vice Captain of the Stratford-upon-Avon Golf Club, Mr. Rogers, who welcomed Greenkeepers to Stratford and hoped everyone had enjoyed the day.

Our Chairman, George Hart, thanked Mr. Rogers and the Members for allowing Green-keepers the courtesy of the Course and Club-House for the day. He also paid tribute to Mr. Ashby, Head Greenkeeper, and his Green-Staff for the splendid condition of the Course.

He thanked the Steward and Stewardess for the meals and service, and Peter Wyatt and Frank Cashmore who did all the paper work and Score Cards.

We are indebted to the following Prize donors:-

Thomas Clayton & Sons Ltd., Rigby Taylor Ltd., H. Pattisson Ltd., Atco Ltd., Parker & Ballinger Ltd., May & Baker Ltd., Cannock Agricultural Co., Ltd., Vitax Ltd., Harvey's Ltd., Mr. Carl Bretherton.

Handicap Revision

G. Bunting	23-22	R. Pullen	16-15
B. Lowe	16-12	A. Hastilow	18-19
A. Cutler	16-13	H. Drewitt	14-16
T. Cutler	14-13		

WELSH

By J. Rees

Chairman: H. Fry Hon. Secretary: Neath Golf Club, Cadoxten, Neath, Glamorgan

Autumn Tournament

Our Autumn Tournament was held at Neath G.C. on Tuesday 12th September, 1972. This was a 27 hole competition for the Presidents Shield, played by kind permission of the Captain and Committee.

Division 1

1st A. Price - Net 1061 - Presidents Shield and Holdall

2nd D. Jones - Net 112 - Lighter

3rd D. H. Jones - Net 119 - 6 Golf Balls

Division 2

1st D. Gould-Net 121-Grip

2nd P. Robinson - Net 1321 - Socks and Tie

Subscriptions

Outstanding subscriptions for 1972 should be sent to the Treasurer, Mr. M. Geddes, 23 Fenton Place, Portcawl, Glam.

Greetings

Best wishes for Christmas and the New Year from the Welsh Section to our President, Vice Presidents and all members of the Association. Warm Greetings, also, to the numerous Golf Clubs and various trades that so generously support us throughout the year.

Buyers' Guide

FERTILISERS/TURF DRESSINGS SUPATURF PRODUCTS LIMITED

Werrington, Peterborough

Tel: 72470

FLAGS, SIGNS, NETS, SCORE CARDS & EQUIPMENT ELVIN PENNANTS

ELVIN PENNANIS

34 D'Arcy Way Tolleshunt D'Arcy, Essex Brochure on Request

GOLF COURSE CONSTRUCTION VEBLIMITED

Golf Course Construction Division 230 Tottenham Court Road London W1P 0BR Tel: 01–580 7833

SURREY LANDSCAPES (1967) LTD

Oakridge Nursery, Peaslake, Surrey Dorking 730606 Also at Webb's Nursery Hanger Lane, Ealing, W.5 Tel: 01–988 2232

GROUND LEVEL ON/OFF LOADING TRANSPORTERS EEZION LIMITED

Stanley Works Ampthill Road, Bedford Tel: Bedford 62341

HORTICULTURAL SANDS FOR GREENS, SANDS FOR BUNKERS HINCKLEY'S SILICA SANDS LIMITED

Head Office: Sandiron House Beauchief, Sheffield S7 2R A Tel: Sheffield 362231

JOSEPH ARNOLD & SONS LIMITED

Billington Road Leighton Buzzard LU7 8TW Tel: Leighton Buzzard 2264

GRASS MACHINERY SALES, SERVICE & REPAIRS ETB MOWER SERVICES LIMITED

814 Stratford Road, Shirley Solihull, Warwicks Tel: 021–744 3329 and 3295

PAICE & SONS OF FELBRIDGE

East Grinstead, Tel: 24466 Farleigh Hill, Tovil, Maidstone, Tel: 65279 Worthing Road, Horsham, Tel: 4351

W. GRANT CURRIE LIMITED

213 High Street Epping, Essex Tel: Epping 3780

MOWER MANUFACTURERS RANSOMES SIMS & JEFFERIES

Nacton Works Nacton Road, Ipswich Tel: Ipswich 72222

PROFESSIONAL MOWERS & SWEEPERS

HORWOOL MANUFACTURING LTD

Lower Bedfords Road Romford, Essex Tel: Ingrebourne 42380

ROPES & CORDS HALLS BARTON ROPERY COLTD

Virginia Works 132 Pennington Street London E1 Tel: 01–480 7756

SPRAYING CONTRACTORS AGRICULTURAL CROP SPRAYERS (NOTTM) LTD

Shady Lane Southwell Notts Tel: Southwell 2003

SPRAYING EQUIPMENT PRESSURE JET MARKERS LTD

152 The Arches, Stamford Brook London W.6 Tel: 01–748 9255

TURF-AIR CONTRACTS SPECIALIST HIRE RYAN EQUIPMENT

Yew Tree Cottage Iden Green Benenden, Kent Tel: Benenden 768

TURF CONTRACTORS

D.F.SMITH 21 Raymonds Close Abbots Langley Watford, Herts Tel: Kings Langley 63712

ALLAMBYS TURF NURSERIES

Brandon Golf Course Holywell Lane Shadwell Leeds 17 Tel: Leeds 662470

MOWER & SHEAR GRINDING MACHINES

BLAKESLEY REID LIMITED, Manufacturers of the world's finest lawnmower and garden shear grinding machines. As used at golf clubs and parks departments throughout the world. 182 LEICESTER ROAD, MOUNT SORREL, LEICESTER, TEL: ROTHLEY 2168

TC Benner



mightiest blade growing

FYLKING

FYLKING SMOOTH STALK MEADOW GRASS

'FROM QUALITY CONSCIOUS SEED DISTRIBUTORS'

The Champion, a hardy Viking blade, originating in Svalof, Sweden, Fylking Smooth Stalked Meadow Grass excels on every count.

VDISEASE RESISTANCE

VLOW CUTTING HEIGHT TOLERANCE

WEAR TOLERANCE

√RAPID ESTABLISHMENT

VCERTIFIED SEED QUALITY VBRITISH TESTED

Smoothie

To see the 10-blade cutting cylinder of the Auto-Certes whirring smoothly across a golf green is the surest way of appreciating what a truly splendid piece of machinery this famous mower is. And the finish rolling out behind the two-part landroll is a delight to anyone who really cares for fine turf. For a superb finish to golf greens, cricket squares and bowling greens Ransomes Auto-Certes is unsurpassable. Your local distributor would like you to see it for yourself. Contact him now.

Check these features

Choice of 18" or 20" cut.

Separate landroll and reel clutches allow precision control.

NEW high speed gearing on 20" Auto-Certes ensures a smooth 135 cuts per yard.

NEW airflow grassbox ensures full capacity filling, reduces emptying time.

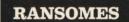
The 10-knife impact-resistant steel cutting cylinder stays razor-sharp for longer.

Single-point height-of-cut from \{\pi' to \{\pi'' at a microscopic \\ 1/64'' at a time.

Power-driven transport wheels mean quiet and easy site-to-site transportation.

Brush and comb set optional extra for turf grooming.

Ransomes Sims & Jefferies Ltd., Ipswich.





18 & 20 Auto Certes