N passed! and most of the major construction work, such as enlargement of tees, drainage, the renovation of bunkers and walkways, are coming to an end, I look forward to spring. March and April are still busy

March and April are still busy months with many other important jobs yet to be done, before we start mowing in earnest. The work will include patching fairways and general areas that have been damaged by normal compaction and last years drought.

I know, seaside links with their light sandy soils are a big advantage to work on through the wet winter months, compared to the heavy type soils on the inland courses, where one cannot take a tractor-trailer for perhaps the whole winter!

A lot of people tend to think links courses look after themselves, but I can assure you, maintenance can be quite high especially following a dry hot summer as we experienced last year, with top soil being less than 1/2" in depth in places, errosion takes place quite easily.

Rabbits for example seemed to thrive on dry conditions, and last year they were more active than usual. I suppose digging in the dry soft sand must have been sheer joy!! Personally, I don't like to kill

them in summer months when they are breeding and have young, but declare war during the winter period when the undergrowth has died off giving them less cover. I am lucky, some because of the greenkeepers are good shots and enjoy the odd night lamping. We will now step up the night shooting and thin them out before the pests start breeding in earnest.

Talking of pests, moles seem to be on the increase. These lovely creatures are rarely seen, and many greenkeepers just smooth over their earthmounds but do not bother to eliminate them, so they go quietly about their business and breed three to four young each year. Trapping and baiting are the normal methods of elimination, but stop their supply of food (mainly worms), and they will have to travel elsewhere, (maybe Safeways), or anywhere except on the golf course.

Once again in our area there shows signs of another bumper crop of Leatherjackets this year. During a quite mild spell of weather, just after the Christmas period, we sprayed and had a very good kill. I was quite surprised how many of the blighters there were, so if



George Brown is pictured, above right, with an assistant on his beloved Turnberry course with the lighthouse in the background.

you have not had a chance to spray yet, it is not too late to do so.

Almost a year ago, we purchased a new tractor mounted sprayer, but never really had the chance to use it. The text books will tell you the best time to spray for weeds would be in the spring or throughout the growing season. (I threw the rule book away several times last year). We normally spray end of April or May, but gale force winds or rain prevented us from doing this, and by the end of May it was too dry, but surely it must rain soon, we are on the west coast of Scotland!

Anyway, as we all know it was at least the end of August before the grasses had recovered enough to even think about it, September too busy with tournaments, October too windy, November too late! (Do you know the feeling?)

The rule book was also thrown away regarding watering, we don't overwater, but how much is too much, especially when we had the hottest summer since records began, 1909? However, many people enjoyed the hot summer, it made a change. I know the irrigation companies enjoyed it, I understand their order books are quite full.

During March and April we do considerable work on our pop-up sprinklers, many of the heads have sunk well below ground level (or is it the regular top dressing that raises the surface levels). I know we have a few hundred, and many of them are rarely used, and soon become overgrown. They also stick down - especially on sandy soils. (I once thought 'popups' were supposed to save labour!)

The irrigation system will be now primed and ready for testing. Pumps and motors have already been checked and serviced during the winter months (haven't they?). So now to check for broken pipes and cables. We have learnt in the past just how versatile the vertidrain can be, there is no better machine for finding shallow irrigation pipes, as well as doing its intended mission.

After repairing the damaged pipework and making good the turf, we will be hoping to get the drying easterly winds, which will allow us to verticut some low lying fairways that have more vigorous growth. Tees and greens will also have their first gentle verticut of the season, followed by a light top dressing of sandy soil (70-30 mix).

I know there is a difference of opinion when one should apply spring organic fertilisers, but that will depend upon the geographical location of the for example golf course, weather conditions can vary tremendously between the North, East, South and West of Britain, not just in temperature, the biggest difference being annual rainfall. (East coast courses may have an average between 19" to 23", compare that to the west coast where rainfall can be anything between 40" to 80" in the northwest, (they don't get the lovely green hills and lochs for nothing.)

Another sign of spring is when certain members who have been trying to tell you how to run your golf course all season, suddenly invite you to pop round and just have a look at their lawn, (because it is in a dreadful state!)

I was interested to read the document 'The Way Forward', prepared by a greenkeeping panel appointed by the Royal and Ancient Golf Club of St. Andrews. The document is critical and certainly does not pull any punches. So do find time to read it. One point is put over very clearly, and that is the need for golf courses to have mud free fairways and firm fast greens all year round!

Being a links man myself, I fully agree with the panel, although this will be achieved much more easily on the drier easterly courses than those on the damper west, that have double rainfall.

Anyway, enough of rainfall, spring is almost here, fertilisers are on and we start our cutting.We serviced our mowing machines (haven't we?), they have been rebladed and sharpened (haven't they?). We have painted our flagsticks (haven't we?). We have ordered our new flags (haven't we?).

Must go now, there appear to be a few things I have forgot! Happy mowing'?

GEORGE BROWN Golf Course Manager, Turnberry Hotel and Golf Courses



York, Parker and Martin form what is probably Europe's most knowledgeable and experienced team of independ ent and objective irrigation design engineers.

Their business is that of helping intending golf course and landscape irrigation system purchasers to obtain the most cost effective and efficient system to a budget, a system which is installed professionally - under supervision - and one which provides the most satisfying long term service . . .

> Retained as design consultant engineers by U.K., U.S.A., European and Middle Eastern customers, York, Parker & Martin have, to date, ensured that the feasibility and capital cost of purchasing such irrigation system has resulted in a wise investment not an expensive mistake!

Tailored to your needs, an automatic irrigation system can represent a considerable purchase so choose wisely - with the professional assistance of York, Parker & Martin.

Remember, they are not in business to sell you or your organisation an irrigation system but simply to ensure the design, installation and long term results are the best you can possibly achieve for your money.

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For further details, talk to York, Parker & Martin today. Phone, fax or write for an appointment.





C.W. Roupe, past captain, Stock Rockford Golf Club, Grantham.

VERTI-DRAINING A GOLFER'S VIEW

RR-MM Tchunk -Tchunk! "What crass D stupidity are the greens People up to? We have enough greens problems. All we need is more watering and fertilizer." Such were the typical comments of most golfers when the Verti-Drainer made its appearance some six years ago

We watched with fascination to see a tractor and the huge Verti-Drainer armed with umpteen 14" spikes trundling over our hallowed greens. It pierc-ed deep holes every 4" and seemed to lift and shake the earth like a carpet. The effect was to leave an impossible putting surface like Duralay underlay for several weeks.

Our greens were laid some 65 years ago as lawns for a handful of golfers and managed by enthusiasts rather than skilled greenkeepers. As little as 10 years ago only 300-400 golfers each week trampled the surfaces. With the popularity of golf we now have over twice that number. The greens were wearing badly with all the problems of compaction. For the golfer this meant they had less hold and gave erratic putting. It also meant grumbles in the Club and Committee. Dedicated Greens Staff,

measured watering, suitable organic fertilizers, slitting and fork tining helped hold the

deterioration, but from the advice of the Agronomist it was evident more drastic action was required. It needed deeper tining to aerate the soil, break it up deep down to help with drainage, and to en-courage the deep-rooted grasses which are the basis of good greens.

The Verti-Drain at the beginning or end of each season has proved to be an answer. The condition of the greens has improved in spite of increased traffic, and we have now started Verti-draining the fairways annually, too.

No longer do we complain but greatly welcome the im-provement Verti-draining has given and cheerfully accept

the disruption. So - Carry on - Brmm, Tchunk, Tchunk.

WESSEX COCOPEAT THE ONLY GENUINE ALTERNATIVE TO PEAT

ESSEX Cocopeat is a 100% renewable resource, with all the characteristics of a high quality peat moss, thereby making it the perfect alternative for peat.

Not only is it a natural alternative to peat but it contains several of its own unique characteristics, such as:

Unlike traditional peat, Wessex Cocopeat has a unique sponge-like structure

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which will retain larger quantities of water, nutrients and oxygen)AFP), resulting in less leaching, thereby reducing the amount of additional feeding and also has the advantage of being 100% weed free.

Wessex Cocopeat differs from traditional peat by containing small quantities of naturally derived NPK and trace lements and has an ideal pH of 5. It is virtually impossible to destroy the spongy celllike structure of Cocopeat, making the same fine grade used for the growing of seeds, seedlings and bedding plants ideal for the growing of nursery stock and container growing as well as for tree planting or as a mushroom casing.

This is because, unlike traditional fine grades of peat, the fines in Cocopeat will not float to the surface and therefore willnot result in capping. The hard peat particles, pieces of wood, cotton grass etc., usually found in medium to coarser grades of peat are not found in Cocopeat, therefore there is no problem with the all-too-familiar blocking of screens, jamming of potting machines etc and the obstruction of natural root growth. In fact, on trials undertaken at our nursery in Sri Lanka and on limited trials here in the UK, it has been found that up to 25% more root growth has been achieved using Wessex Cocopeat.

Due to its naturally high AFP, another major saving in both material and labour in using Wessex Cocopeat over traditional peat is that there is no need to add perlite and bark etc.

More than just being a peat alternative, with all the added benefits listed above, one would expect to pay a premium for Wessex Cocopeat but, in fact, it is competitively priced against a good quality sphagnum peat moss. By using Wessex Cocopeat, you are helping to save the world's ever diminishing vital resources and also significantly contributing to the economy of the third world countries.

Treat the earth well - it was not given to us by our fathers, but loaned to us by our children.

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THE POCKET TOUCH WEEDER - SAFE, EFFECTIVE AND APPROVED

THE Pocket Touchweeder from Thomas Elliott Ltd. is a government approved (MAFF) weedkiller. A wax stick impregnated with selected weedkillers, it deals with most broad leaved weeds. The safest way to get rid of all unwanted weeds, it is ideal for use on the greens and in places where weeds cannot always be dug out or hoed.

It is safe because it is controllable - there is no dust or spray to blow onto or leach and it avoids the risk of accidental spillage or leaving traces in the watering can. The Pocket Touchweeder will kill most broad leaved weeds, including dandelions, plantains, buttercups and daisies etc, and will not harm grass if the manufacturer's instructions are followed. During consumer trials in 1987, Thomas Elliott are pleased to report that another important success can be added to the claims of this product £ a 99% destruction of field bundweed within 2-3 weeks of application. Further trials have recently concluded that over 100 weeds can be killed with only one touchweeder thus it is economical tool



Putting in hard work on the green at Hillside Golf Club

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The Pocket Touchweeder is impervious to water, both from hose and rain, and is therefore not only a labour saving product, as re-application is usually unnecessary, but also ideal to use near garden ponds where sprayed weedkillers cannot be used.

It is the only safe, efficient and economical way to treat unwanted weeds, the Pocket Touchweeder - a government approve Garden Care product from Thomas Elliott Ltd. For further details please contact Alan Gloak, Thomas Elliott Ltd., Hast Hill, Hayes, Bromley, Kent. BR2 7AJ, telephone: 01-462 2271. Fax. 01-462 7035. N EPTUNE Scotland Ltd, having established themselves as Scotland's leading manufacturer of seaweed based, organic soil improvers and allied products, are set to expand to meet increasing demand.

Mr Peter Walker, son of managing director John Walker, has recently taken over as sales director. Peter will have the responsibility for all distributor outlets and is expected to liaise with local authorities, landscape architects and contractors, throughout the UK.

The sales of Neptune's organic products for greenkeeping management in particular and the sports field market in general will remain in the capable and experienced hands of Stewarts of Edin-



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burgh in Scotland, Maxwell Hart in the North and South of England and James Cockburn in Nothern Ireland. Neptune Scotland are also a present involved in re-organising and increasing their manufacturing and storage capacity at Irvine.

Regular applications of organic materials are considered by many greenkeepers and groundsmen to be one of the top priorities when it comes to promoting and maintaining fine turf surfaces in optimum condition.

Enquiries from greenkeepers and sports field managers have become a daily occurrence. We must be in a position to give a first class service and back-up to our distributors. Investment now will ensure our ability to remain in the forefront of manufacturing seaweed based organic products. Seaweed we believe is, and will always be, the best natural organic material available for improving soil structure. With the help of Dr Harry Duncan and his team at Glasgow University we will continue to strive to produce top quality organic products. Seaweed is earth's best friend", says John Walker.

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ERIC HUNTER GRINDERS

N conversation with Hunter Grinder's recently, it was revealed that this company has achieved a personal best

 delivering six of their mower grinding machines into British Golf Clubs in less than two months!

As Mr Eric Hunter the managing director readily admits, six machines installed in a little over six weeks, is more golf club business than the company has handled in the year previously.

Hunter's attribute this to resounding interest in Mower Grinding Machines, and simply that more Golf Clubs are wakening up to the fact that they can save hundred's, indeed thousand's of pounds by equipping themselves with a grinding machine at a sensible price.

Most clubs have a Head Greenkeeper or least one member of staff who have a litle mechanical knowledge. Many Clubs are discovering the advantages of owning a 'small' workshop for doing repairs under cover. Why in fact send machines out for repair when you can 'do-it-yourself'? Another little known fact is that the standard of repairs and mower cutting efficiency can actually be improved by in house repairs. Sadly a minority of Clubs and Greenkeepers lack the necessary confidence to tackle their own repairs, preferring instead to call in the private contractor, who undoubtedly is costing the Club quite a tidy some each year.

Hunter Grinder's appear to have the most attractive machine on the market at present. It has a full 36" capacity and can accurately grind the fixed bottom blade as well as the cutting cylinder. The other technical benefits

The other technical benefits of using a Hunter JUNO machine are that due to the lack of friction, obtained by 'relief' grinding cylinders (1) a cleaner cut (2) less fuel is used to propel the mowing machine (3) doubles the service life of a bottom blade and (4) much longer intervals between major overhauls.

The six clubs or courses who have installed a Hunter Grinder between December 1989 and January 1990 are: Slaley Hall Golf and Country Club in Northumberland. Leek Golf Club in Staffordshire. Whitecraig Golf Club at Giffnock, Glasgow. Kinross Green Hotel Golf Course. The Honourable Company of Edinburgh Golfers at Muirfield, Gullane, and Ely City Golf Club in Cambridgeshire.

They join an impressive number of courses using Hunter's machines, which include Gleneagles Hotel, Carnoustie and the Royal Dornoch in Sutherland.



MANSFIELD SAND TURF DRESSING PRODUCTS

Manual Ansfield Sand Company produce a range of high quality, washed and graded sands which are fully approved by STRI, Bingley for sports turf applications.

The range is sold under the 'Mansil' tradename and includes a medium-coarse grade, Mansil 35 (M35), which is used by many golf courses as a bunker sand and for various specialised drainage uses in addition to its use for top-dressing either alone, or in a blend with topsoil and/or peat.

The sand can be supplied in a dry condition in order to facilitate on site mixing by the greenkeeper.

A medium-fine grade, Man-

sil 55 (M55) is also used extensively for top-dressing turf, particularly winter sports pitches, e.g. soccer, rugby.

e.g. soccer, rugby. New developments from Mansfield sand include a reinforced silica sand which can be used to produce a stabilized free-draining root zone medium and, as such, forms the basis of a new product range named 'Fibreturf'. This product can be used as a pure sand medium or easily mixed on site with a small amount of suitable top-soil to give a sandsoil medium.

The other new product range is 'Gypsand' which is a controlled blend of sports grade, Mansil sand with varying proportions of powdered, agricultural grade, gypsum. The virtues of Gypsum as a general soil conditioner and more specifically as a floculating agent for clays, are widely recognised, however, the Gypsand range now offers the groundsman opportunity of combining the beneficial effects of two natural products in one relatively simple, dust free operation.

FROM QUARRY TO QUALITY OUGHTON Loam Limited is a Company that has grown from small beginnings to one of positive importance in the topsoil industry.

Their premises in Kettering were planned specifically to produce quality turf dressings, loams and horticultural products and their high-tech plant for mixing, sterilising and bagging is purpose built. As you might imagine, such investment has brought its rewards and Boughton Loam is able to supply not only a standard range of dressings, but also to any specification that the greenkeeper may require, be it for additives, soil improvers etc.

To ensure a maintenance of consistent quality, the top soil that is continually available to them is thoroughly checked as to its suitability before being bought in and stockpiled. The final destination is processing for their 'Top of The Table' range of top dressings.

The Soil is blended with a constant source of Leighton Buzzard sand to give a mix of carefully selected top soil with a minimum of clay and silt, and washed lime free silica sand with the majority of particle sizes in the range 0.125mm - 0.5mm. This produces a final product that will encourage

wessex peat

South Newton, Salisbury, Wiltshire, SP2 0QW Tel: (0722) 742500. Fax: (0722) 742571

Over the past 23 years, the Wessex Peat Group have built up an enviable reputation for the manufacture and distribution of quality products throughout the United Kingdom and Europe; and now after many years of research we are now bringing to the UK market **WESSEX COCOPEAT*** the only genuine alternative to peat.

WESSEX COCOPEAT* is a 100% renewable resource, with all the characteristics of a high quality peat moss, thereby making it the perfect alternative for peat, so helping to save the world's ever diminishing resources.

Not only is it a natural alternative to peat but, as it is made completely from coconut husks, it contains several of its own unique characteristics:

Unlike traditional peat, **WESSEX COCOPEAT*** has a unique sponge-like structure which will retain larger quantities of water, nutrients and oxygen (AFP), thereby improving aeration. This also results in less leaching, thereby reducing the amount of additional feeding and also has the advantage of being 100% weed free, with an ideal pH of 5.

Due to its naturally high AFP, another major saving in both material and labour in using **WESSEX COCOPEAT*** over traditional peat is that there is no need to add perlite and bark etc.

More than just being a peat alternative; with all its added benefits one would expect to pay a premium for **WESSEX COCOPEAT*** but, in fact, it is competitively priced against a good quality sphagnum peat moss.

> Treat the Earth Well – It Was Not Given To Us By Our Fathers, But Loaned To Us By Our Children.

*COCOPEAT is a trademark of the Wessex Peat Group.

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finer grasses, assist drainage and integrate rapidly into the sward.



FEN TURF DRESSINGS LTD.

ENDRESS Golf and Bowling Green top dressing which has been manufactured to the highest standards for over ten years, is now established and recognised as one of the leading national brands of top dressing.

The consistent high quality of Fendress is ensured by careful use of only the very best raw materials, which are selected not on cost, but quality. East Anglian Fensoils, rich in humus with minimal clay and silt fractions are blended with lime free Leighton Buzzard washed silica sands and finely screened to produce Fendress, a top

dressing of exceptionally high quality.

Fendress is manufactured for the Professional, where the correct pH content, clay and silt fractions and particle sizes are important. This is essential to help reduce compaction and encourage the finer grasses for top quality putting and bowling surfaces

Supplies are available to all parts of the U.K. from Northern Ireland to East Anglia and Scotland to the South West, principally in 25 and 20 tonne loads, although smaller loads can be supplied. We are offering a special discount for the first time purchasers, also to existing users for a limited period.

Available in bulk loads or prepacked in 25 kg heat sealed sacks, 10/15/20/25 tonnes. Discounts for multiple loads.



TTERTON & Ellis offers a

range of machines to

sharpen all sizes of

Enjoying the fruits of the greenkeeper's labours

INNOVATIVE GRINDERS

FROM ATTERTON



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Jack McMillan is relinquishing his position as head greenkeeper at Sunningdale Golf Club at the end of this month to become the first greenkeeper/consultant employed by the International Golfers Club/BIGGA.

THE CHANGING FACE OF GREENKEEPING IN BRITAIN

HE game of golf is currently enjoying an all-time high in terms of the number of people participating in the game.

However, spare a thought for the person who has to maintain and prepare the golf course. Increase in play has put new demands on both maintenance and management programmes. It was only a few years ago that the average number of rounds per annum was 5,000, now it is nearer 50,000. This is without question the major cause of concern facing greenkeepers as we move into a new decade.

Much of this traffic occurs during dormant winter conditions, and there is increasing pressure to keep courses open irrespective of weather conditions or the amount of golf played during bad weather. Greenkeepers today, not from choice but from pressure accept golf in weather conditions where previously courses would have been closed Anyone who tells us that we do no harm with prolonged heavy traffic during frost on courses with a short growing season and year round golf has no experience of looking after a golf course. They should talk to the greenkeepers who are at the sharp end and who have to prepare courses for major events early in the season

Courses are now being used as a source of revenue more than at any time in the history of the game. This applies to the private members club, the corporate set up, the family business, the local authorities and the hotel groups. I do not at this time see this situation changing, again due to the increased popularity of the game.

This has had a detrimental effect on the conditions of greens. Any deterioration in the condition of greens in the UK at the present time is due primarily for two reasons - bad construction and being overplayed.

Most of the older courses in this country have been constructed using local materials sometimes poor impervious clays. It is significant that the more successful ones are on the sands of the links, the heaths, the Brecklands and the chalk downlands, all in their own way with little or no real drainage requirement. It is also a fact that the sandy structures require less aeration than the heavier materials found inland.

Few if any of the older courses have a drainage system. Where systems have been installed at a later date they were afterthoughts and in the main have been a poor remedial exercise. Many of the old greens were constructed to retain water during periods of drought, a dew pond system being used. This called for a layer



Jack McMillan

"Any greenkeeper experiencing difficulty at his club over the level of aeration he is applying should make it clear that as long as his course is expected to take heavy traffic, he will have to continue with the regular aeration programme. He can with no guilt tell his club that it is not a greenkeeping or an aeration problem but a poorly constructed green problem."

of clay to retain much of the surface water. Modern construction allows for both an excellent drainage system and drainage raft.

On the heavy clay inland courses, the problems of managing the great increase in the popularity of the game, resulting in a more intensive playing programme have been enormous. Many years ago in an article in Bernard Darwin's time the advice was given not to play on the heavy London courses in winter or the burned up links in summer. It would seem contrary to what we hear that today's problems may have been going on even then.

At best, the grass cover variety wise that most greenkeepers in Britain can hope to manage successfully at this time is a mix of bent and annual meadow grass. As the traffic increases and the frequency of mowing and lower heights of cut become the norm, fescue disappears and is replaced with meadow grass. This is the experience in practice. Any evidence of fescue found is on the links and sometimes the policies applied to achieve this become totally unacceptable, ie burning off of meadow grass by stressing in drought. On busy courses a total of two wet years will normally return this situation to meadow grass and the continuing struggle to win back some fescue.

The real cause for conflict between the greenkeeper and his members is that the poorly constructed greens require a level of aeration to keep them alive that offends the member who feels that the management programme is weighted against him. There is no softer, easier way, most of the courses in this country today are doomed to the heavy intensive aeration programmes they are receiving. If someone somewhere knows of another way of keeping badly constructed golf greens alive under heavy traffic would he please let all the greenkeepers in this country know.

Any greenkeeper experiencing difficulty at his club over the level of aeration he is applying should make it clear that as long as his course is expected to take heavy traffic, he will have to continue with the regular aeration programme. He can with no guilt tell his club that it is not a greenkeeping or an aeration problem but a poorly constructed green problem.

We do today have available to us methods of constructing more modern greens, with a rootzone material that will survive with a fraction of the aeration we currently apply. This material is not plucked out of the air in percentage mixes but is put together in a laboratory, to a suitable bulk density, porosity and ability to retain moisture.

It is only fair to warn any interested parties that this is not the cheapest method of construction but in the considered opinion of many experts is the only way forward. The USGA would go as far as to say it will last under heavy play for 100 years or more. When constructed a USGA Greens Section Specification will be slightly more costly in day to day management. There is no such thing as a modified USGA Greens Section Specification.

I am not at this time advocating that every green in this country should be torn up and replaced with a first class specification, the cost of such an exercise would be immense. I am however saying to golfing members get off your greenkeeper's back. He is at this time applying policies in your best interest not from choice but from necessity. No greenkeeper takes any pleasure in the intensive aeration, the regular top-dressing programmes, the sensible use of water programmes. He is, in fact, applying these same programmes in the best interests of the golf course.

Might I suggest that every club choose a green and apply the programme the membership would like - no aeration, no top-dressing, plenty of water in drought, plant cover scoured off to find pace and bags of fertiliser to make it green. This green could be called the members green. By the end of this year we would have one green in every club that would be a disaster area. Hopefully then members might just appreciate what their greenkeepers do for them. I am fed up listening to young greenkeepers who are being given a life of hell for doing a good job.

JACK McMILLAN

Continued from page 21

The "Master" cylinder grinding machine is designed for sharpening large quantities of heavy duty cylinders and is suitable for machines having up to 106cm (42in) cutting width.

Incorporating an automatic feed cycle facility, which can be preset to remove a specific amount of metal from the cylinder, it is claimed to enable unsupervised grinding. A coolant pump with a suds tank is provided for use when applying heavy continuous cuts and to take away the grinding dust, prices are from £7,946.

The company's "Express Dual" cylinder grinding Dual' cylinder grinding machine is capable of both "insitu" or plain cylinder grinding on a wide range of lawnmowers. When used "insitu", the mower is located centrally on the machine, and locked into place. The grinding wheel can be adjusted to approach the cylinder at the most convenient angle. Adjustment of cut is by two handwheels mounted either side of the machine and the cylinder is driven by a geared motor through a flexible coupling and driveshaft. The "Public Authori-ty Express Dual" has a heavy duty mains electric motor. Bottom blades have to be removed for sharpening.

Prices are from £4,245 for the "in-situ" only grinder. £4,074 for the plain cylinder only grinder and £4,790 for the dual action machine. The "Public Authority" version is from £4,852.

from £4,852. The "Express Dual" is available with a "Professional" kit to enable "in-situ" sharpening of a wider range of cutting units and costs from £4,852.

The company says that the "Pilot" plain cylinder grinding machine is intended to meet the needs of the smaller workshop - say 5 to 10 medium sized mowers - and incorporates the essential features of the other machines, but without the high capital outlay.

Arranged for bench fixing, with the "Easitrue" system of cylinder drive and mounting a system claimed to give accuracy combined with simple setting up, the price of the "Pilot" is £1,956.

The range of bottom blade grinding machines offered by Atterton & Ellis include the "FH1 Fastcut", capable of grinding blades up to 24 inch long, and the "FH2 Supacut", for blades up to 36 inch long. Prices for the FH1 start at £735, and for the FH2 at £995.



The "Angemaster" can take blades of up to 106cm (42in) long, and is equipped with an adjustable eccentric bar can then be rotated for grinding the front or top lip to any desired angle. Prices start at £2,854.

Further details are available from: David Smith, Atterton & Ellis Limited, Iron Works, Haverhill, Suffolk CB9 8QH.



MOWER ACCESSORIES LTD.

M COWER Accessories Limited are an established company manufacturing high quality bottom blades, cutting cyclinders and rollers.

In addition the company carries a comprehensive range of spares for most types of machines, as well as supplying the home market, the company exports to Europe, Canada and Australia.

Great emphasis is placed on producing a high quality range of products and of maintaining good customer relations which it has built up over a number of years. As well as exploring new markets, care is taken in assuring prompt delivery both to home customers and those abroad.

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STATUS QUO FOR U.K. BROUWER DISTRIBUTION

ANSOMES, who recently acquired the Canadian-based

Brouwer Company as part of the Cushman Ryan deal, has announced that there will be no change to Brouwer distribution in the U.K. Outside of North America,

Outside of North America, Ransomes commercial division, based at Ipswich, now have the responsibility for marketing Brouwer worldwide and intends letting Turfland Professional Equipment Ltd of Dutton in Cheshire continue selling and servicing the complete Brouwer range in the U.K.

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WHICHEVER WAY YOU LOOK AT IT... ...THE EXPRESS DUAL A CUT ABOVE THE REST

With over 100 years experience we combine all the traditional skills of cylinder grinding with the advanced technology of the Express Dual.

A precise and beautifully made grinder that particularly complements the TORO range to provide the practical

solution for keeping those cylinders sharp and the greens as you want them — innovation, a commitment to excellence and at an economic cost — the Express Dual — a real cut above the rest.

As well as our market leader, we also manufacture a complete range of bottom blade grinders including The Anglemaster which is ideally suited to work alongside The Express Dual — send for our brochure for all the facts.

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MANUFACTURERS OF FINE CYLINDER GRINDERS FOR OVER 100 YEARS