

bins for parts storage, I won't continue as the list is considerable but allow £30-35K for initial set-up and first year re-evaluation. Staffing levels have to increase with the bigger fleet, extra cost there."

What tools should every workshop have?

"Hand tools on a personal level are much like chefs and knives, the individual supplies them. So it follows that the tools used would be much the same in each workshop.

"A rough guide would be:

- A set of metric spanners from 5mm up to 30mm.
- A set of metric spanners from 5mm up to 19mm.
- A set of imperial spanners from 5/16 up to 1 1/4".
- A set of imperial spanners from 5/16 up to 3/4".
- A very full set of sockets.
- An air impact wrench in 1/2" drive with correct grade 6 point sockets. (Often supplied as set).
- A 32oz ball pein hammer.
- A 16oz ball pein hammer.
- A set of screwdrivers.
- A set of cold chisels.
- A test light.
- A multi meter.
- A set of prise bars.

"Pliers, sidecutters, mole grips, point nose pliers, hacksaw (standard and junior), breaker bar, circlip plier set (heavy duty), wire brush, oil

filter wrench, many other items that one begs, borrows and steals over the years to numerous to mention.

"The mechanics tool kit is very personal and differs from one to another but here you have the nucleus, the foundation tool kit without which the job cannot be done. Depending on grade and make this will cost anything from £200.00 to £2,000.00, the tool cabinets are very expensive but not essential and individuals have different tastes and budgets."

Do you hold spares in your workshop? If so, how many?

"Yes, we hold many spares, consulting my excel spreadsheet I use for stock there are 1300 rows but since each row only represents one part number but more than one of those parts is kept I would guess that we keep around 4000 items. Downtime with machines is very inconvenient and we minimise this by having most commonly used spare parts in stock."

Is communication between mechanics and greenkeepers important?

"Yes, the building has many signs asking for machinery faults to be reported to the workshop; this is as opposed to telling one of the technicians over lunch when it could easily be forgotten about. The fault is then entered on a task sheet (along with many others) this helps me to prioritise repairs.

"All greenkeepers are trained on individual machines regardless of their past experience and reporting faults is part of the training and is entered on the training sheet."



How could communication between mechanic and greenkeeper be improved?

“Although we do not have communication problems here I understand many golf courses do. I think that the way to encourage greenkeepers to report faults is to keep working relationships on a friendly footing, thank the person for reporting the fault, add the fault to the task sheet in front of the greenkeeper (if possible) to demonstrate and confirm that his observations are valued.

“Unreported faults can be dangerous and must be discouraged at all levels, a few enquiries usually reveals the offender; unfortunately the bigger the workforce the more difficult making enquiries becomes.”

Do you consider mechanics to be a specialist job? Some people work as greenkeepers and mechanics?

“I most certainly do. Experts in their field train technicians over a long period in colleges on a variety of machines, they are trained in the workplace and mentored by senior technicians. The vast array of machinery found on the average 18 hole golf course can be daunting for the faint hearted. The key to employing a good technician is what training has he had and what experience has he got. Here at the Celtic Manor we have a huge fleet of very diverse machinery involving just about everything you can think of that can be found on a machine, electrics, electronics, computers, diesel, petrol and 2 stroke engines, transmissions that involve everything from a simple belt and pulley set-up, sophisticated hydrostatic drives, electric clutches and hydraulic transmissions. The standard of greens presentation gets higher and the height of cut gets lower, this requires that greens mowers are in the best condition possible whether they are pedestrian or ride on, this calls for specialist machinery to sharpen both bed- knives and cylinders and technicians who know how to use them to the best effect.

“Agreed that some “mechanics” have two hats, one for the golf course and one for the workshop but often he is limited to changing oils and filters on wet days and mending punctures, more difficult work is often contracted out to local dealerships in favour of work on the golf course because he is a greenkeeper first and mechanic second. Don’t get me wrong, I’m not knocking it, this works very well for some clubs.”

How much time and money do you think you can save by having your own workshop?

“In the scenario above where greenkeeping is prioritised over machinery maintenance, but still having a person who is competent in the workshop can pay dividends in less downtime. Machinery problems can be addressed at the earliest opportunity as opposed to transporting to the nearest dealership, getting

a place on the end of a considerable queue then transporting the machine back again a week or two later at great expense and inconvenience.”

How do warranties work?

“Warranties are where a manufacturer guarantees the machine for a pre-determined period of time against defects in materials used and design but excluding accidents and misuse. The period is commonly two years or X amount of hours or miles, sometimes there can be longer warranties on component parts. Electric golf carts from Club Car, for instance, come with a two-year warranty but the batteries are four years, such is the advance in battery technology. Warranty work is normally carried out by the supplying dealership.”

If you lease equipment do dealers have to do the repairs or can anyone do them?

“Leasing is tailored to individual company needs and priced accordingly; the repair and maintenance terms are generally specified in the contract.”

Should every golf club have a mechanic?

“Ideally yes, I think if you asked Course Managers the same question they would all say yes because they are the people who are most inconvenienced by machinery failures. But there are other factors preventing clubs from employing a mechanic. In my opinion first and foremost would be budgeting constraints, justifying a mechanic to those who pay the wage bill, although many clubs now see the wisdom of maintaining expensive machinery for a longer working life. Justification often comes when he is employed with the aforementioned two hats. Just as a point of interest I was employed as a single-handed mechanic at a 36 hole complex for eight years and was the only full time mechanic on a golf course anywhere in Wales. It’s a different tale now although I don’t have any figures to prove it.”

Are you in touch with many mechanics within the industry?

“Yes, I am an active member of both www.golftechs.net and www.igcema.org, golf techs is a somewhat “casual and informal” site catering for golf course technicians, mainly Americans, there are other nationalities who contribute to the forums; The International Golf Course Equipment Managers Association is built on education for technicians. There is also a forum and members may ask and answer questions on many subjects. The word International means just that and we have many members around the world, membership currently stands at 852 from approximately 15 countries.”





CUTTING EDGE TRAINING



Ransomes Jacobsen launched a new training initiative for operators and technicians during Harrogate Week in January, which is known as Cutting Edge Training. This new programme is industry recognised and accredited and is available to all operators and technicians, irrespective of the manufacturer or type of machinery that they use at their respective golf courses.

The Cutting Edge Training Team are committed to providing the turf care

industry with the most comprehensive package of dedicated industry sector training available today. Working closely with industry experts to understand and adapt its training to meet the needs and requirements set out by Government and HSE, the Cutting Edge Team have aligned their training with independent assessment bodies.

With over 75 years of industry experience the Cutting Edge Training Team are well suited to provide training to the sector. All have proven

track records in their chosen areas of expertise and are able to provide candidates with the knowledge required to safely and effectively complete their daily roles.

“Cutting Edge Training is committed to providing a world class service to the industry sector, and as a world wide business our aim is to provide a training standard that can be relied upon around the globe. Our training programmes are available to ALL technicians and operators, irrespective of manufacturer or model of equipment. Training can either be held on-site at the end-users premises or at our Training Centre in Ipswich, where candidates will experience some of the best training facilities in the market available today. We are able to offer both LANTRA training and our own bespoke training to ensure that each candidate is equipped with the knowledge to pass various assessments related to mowers, tractors and ATVs,” Jason King, Customer Support and Training Manager.

The Cutting Edge team have added their backing to the Landbased



Technicians Accreditation scheme (LTA), developed by the AEA in conjunction with the Institute of Agricultural Engineers (IAgrE).

The objective of the scheme is to provide a nationwide means of benchmarking, monitoring and assessing the competence of technicians employed within the sector. The scheme will also provide encouragement and recognition for both employers and technicians, who voluntarily commit to continued professional development in pursuit of technical support excellence.

There are four categories, or tiers, with all tiers being registered on a central database held by IAgrE.

- **LTA 1:** Self registration on-line. Entries on this register would be categorised as either Apprentices (on recognised programmes) or more skilled/mature entrants not yet otherwise assessed and categorised. There is currently no charge to register.
- **LTA 2:** Newly qualified apprentices or assessed skilled technician meeting the required criteria.
- **LTA 3:** A skilled and experienced technician who has successfully attended a series of assessed course programmes - may be a product specialist.
- **LTA 4:** A professional technician having a proven and assessed track record. Additional assessment criteria are included to demonstrate exceptional diagnostic and technical ability together with customer and technical mentoring skills.

“The scheme has been established to give credit and recognition to developing the skills and knowledge of technicians working in the land-based sector. All training is accredited by the relevant manufacturers in conjunction with the employers to guidelines agreed jointly with them, LANTRA and IAgrE. The scheme also provides a clearly defined career path for those working in the land-based engineering sector and is backed by the AEA and BAGMA,” said Jason.

“We are absolutely delighted to be part of this scheme as it dovetails perfectly with our Cutting Edge Training programme, which has been introduced to enhance the skills of today’s grounds care technicians,” he added.

Cutting Edge provides all levels of training from preventative maintenance to diagnostic and problem solving. Using the latest training materials and learning techniques, we can provide the tools to undertake every technical aspect; from routine maintenance to complete strip downs and rebuilds of tractors or mowing machinery.

The team will provide delegates with the skills to keep their machines performing to their expectations, irrespective of model or manufacturer.

A typical example is the introductory one-day course on electrics. Upon completion delegates will be able to understand and use electrical schematic diagrams, identify visually common electrical components and understand their function. They will also be able to demonstrate safe and effective use of basic electrical instruments and test equipment before safely and effectively diagnosing and rectify simple equipment electrical faults.

Many technicians who enter the industry have come from other business sectors, so it’s important that they understand the theory behind cutting grass. At the end of this particular course they will certainly be able to explain the principals of grass cutting and demonstrate an understanding of verti-grooming and scarifying. They will also be able to visually identify grass cutting techniques and problem conditions such as tram lining and ribbing. However, these training sessions are not just theory; hands on experience is essential so delegates will be asked to strip down and rebuild a selection of cutting units, some with verti-groomers and rear roller brushes.



TOP TIPS FOR SETTING UP A WORKSHOP

TOP TIPS

- Make it as big as you can.
- Have as much bench space as room allows.
- Make the bench as strong as you can, do not skimp on materials, fix it to the walls.
- Make the top of steel plate, do not use wood, this will soak up oil like a sponge and heavy objects will be difficult to slide.
- Paint the floor a light colour; thin the first coat by 50% with thinners suitable for the paint. This will help reduce concrete dust; finish off with a non-thinned topcoat.
- Lots of light, as much as you can get, both overhead and on the walls.
- Get a space heater.
- Get a good quality six inch vice, do not buy Chinese.
- Buy good quality jacks and not cheap imports, the warranties are not worth the paper they are written on.
- Buy good quality axle stands.
- If the operation justifies it then get cylinder and bedknife grinding equipment.
- Buy workshop grade hand tools, the nice shiny ones tend to get "lost".
- Leave money in the budget for more hand tools, you'll need them.
- Buy power tools, hand held electric drill with half inch chuck and variable speed trigger, it's more versatile. Angle grinder, four and a half inch. Six inch bench grinder. Parts washer.
- A sink with hot running water, use a good quality hand cleaner.
- I think a computer with Internet link is a must; the person paying the bill may disagree.

- Printer.
- Telephone.
- Access to a fax machine.

Setting up a workshop is a subject in it's own right and the list, as you can see, is not exhaustive.

USEFUL LINKS

www.golftechs.net

www.igcema.org Much technical information is available in the forums of these two websites, both are free to join.

www.johndeere.com

www.toro.com

www.ransomesjacobsen.com

The websites of the "Big Three", online workshop manuals and parts catalogues are available. The latest machinery in their range can be reviewed as can the dealership network where demonstrations can be arranged. Lots of information is available from all three sites, take the time and have a browse around, you could be in for a surprise.

- www.spaldings.co.uk After market spare parts.
- www.centernalspares.co.uk After market spare parts.
- www.turfmachinery.co.uk After market spare parts.
- www.sealey.co.uk Tools and workshop equipment.
- www.greenham.com H & S products plus many more.
- www.sip-group.com Tools and workshop equipment.
- www.hsebooks.co.uk An extensive list of H & S publications available.
- www.steelmaster.co.uk After market tines.
- www.bernhard.co.uk Grinder Manufacturers.
- www.foleyunited.com Grinder manufacturer.
- www.huntergrinders.com Grinder manufacturer.

MEMBERSHIP FOR MECHANICS

BIGGA has just launched a new membership category for mechanics. For just £60 per year mechanics can now also benefit from BIGGA Membership.

BENEFITS INCLUDE:

- Free legal helpline – Access 24 hours a day, 365 days a year for you and your family (living at the same address).
- Personal accident insurance – Cover for time off work due to an accident at home, work or even on holiday as well as one-off payments dependent on the type of injury.
- BIGGA website – You will find a host of information on the website and you will also be able to access the BIGGA bulletin board.

For more information and a full list of membership benefits, please contact the BIGGA Membership Department on 01347 833800 and select option 1





Ever seen electricity leak all over the green? Neither have we.

The run-all-day, 2500E Hybrid Greens Mower from John Deere

It's about advanced technology and common sense. The 2500E is a hybrid mower that puts power in its proper place. The diesel engine of the 2500E powers the reels using an alternator. By removing all the hydraulics from the cutting units, we've eliminated 102 potential leak points. And since 90% of all hydraulic leaks occur in and around the reels, the possibility of a leak is extremely remote. Also, the 2500E reels get constant power from the moment of engagement. This in turn leads to a consistent cut, all day long. When you factor in lower sound levels and less fuel consumption, the 2500E makes even more sense. Call your John Deere dealer for a demonstration today. www.johndeere.co.uk



JOHN DEERE

Nothing Runs Like A Deere



In the Shed

Greenkeeper International brings you 'In the Shed', a puzzle page to keep you entertained when the weather forces you in or for when times are slow.

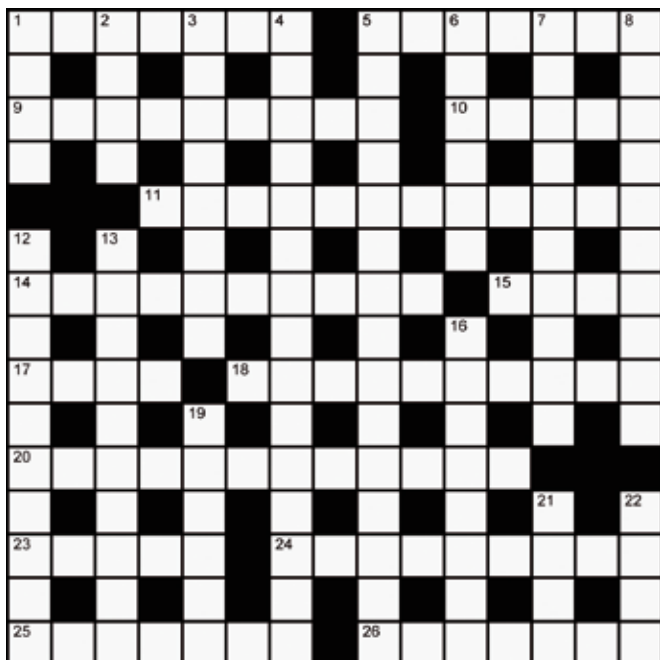
CROSSWORD

ACROSS

- 1 Sailing vessel armed with cannon (3,4)
- 5 Cooked in hot water; hunted illegally (7)
- 9 Divided into parts - anagram of COASTLINE (9)
- 10 Name formerly used for Russia's Mariinsky Ballet (5)
- 11 Radio 4 programme hosted by Dr Raj Persaud (3,2,3,4)
- 14 British car marque founded in 1906 (5-5)
- 15 Reverberation of sound (4)
- 17 Baseball fielder's glove (4)
- 18 Rule for closing an item of parliamentary debate (10)
- 20 Counterbalancing (12)
- 23 Stratospheric gas which screens ultraviolet radiation (5)
- 24 Appraisal, rating (9)
- 25 Physician who is qualified to operate (7)
- 26 Crowned head (7)

DOWN

- 1 In North America, a journey by dogsled (4)
- 2 Small cut (4)
- 3 Neck injury caused by rapid deceleration or acceleration (8)
- 4 Snooker player who won the 2007 UK Masters (6,9)
- 5 Protection for refugees facing persecution at home (9,6)
- 6 Ornament worn above the foot (6)
- 7 "Wasted" fashion look of the mid 1990s (6,4)
- 8 English cricketer whose final test match was in 1992 (5,5)
- 12 Wonderful, terrific (10)
- 13 "Dish of the day" (4,2,4)
- 16 Artificially produced water jet (8)
- 19 Country to which the word "Hellenic" is applied (6)
- 21 In architecture, a vertical supporting structure (4)
- 22 Foot division (4)



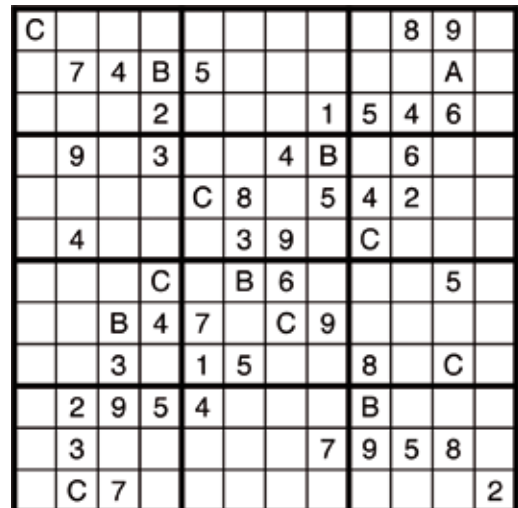
QUICK 'NINE HOLE' QUIZ

QUICK 'NINE HOLE' QUIZ

1. In the Harry Potter novels, who is the author of The Dream Oracle?
2. How many times has the host nation won the football World Cup?
3. If you walked one mile south, one mile west, and then one mile north, and ended up where you started, where would you be?
4. In which city is the film Trainspotting set?
5. The pop groups Ace Of Base and The Cardigans both hail from which country?
6. On which Scottish river does Inverness stand?
7. Who directed the 1985 film Back To The Future?
8. In the board game Cluedo, whose murder has to be solved?
9. Why is the Golden Gate bridge painted plum colour?

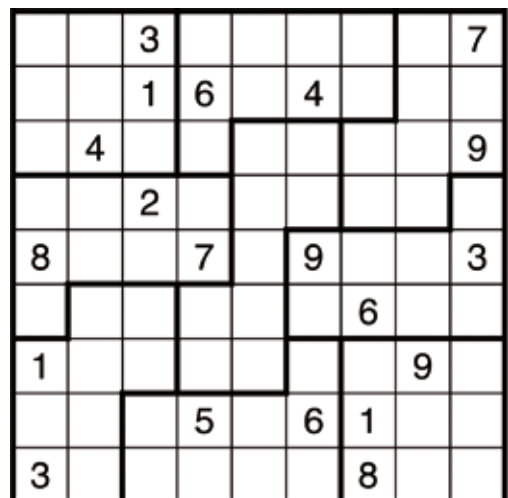
MONSTER SUDOKU

Fill in the grid so that every row, every column and every 3x4 box contains the numbers 1 to 9 and the letters A,B and C.



SQUIGGLY SUDOKU

Fill in the grid so that every row, every column and every 12 box shape contains the numbers 1 to 9.



IN THE SHED ANSWERS ON PAGE 62



IN THE SHED



Turf so good they'll all want to play.

Treatment with Primo MAXX® will create course conditions that are sure to impress the players and turf professionals who really know the difference between good turf ... and superior turf. Primo MAXX increases root and lateral growth creating a high quality surface of increased density which looks good, plays superbly and is more able to withstand stress.

Primo MAXX is a new liquid formulation that is easy to use and comes with a simple to follow season-long programme tailored for specific areas around the course and is compatible and easily mixable with other products.

To learn more about Primo MAXX please go to www.primomaxx.co.uk



Syngenta Crop Protection UK Ltd., CPC4 Capital Park, Fulbourn, Cambridge, CB21 5XE.

Website: www.greencast.co.uk & www.greencast.ie Technical Enquiries: 0800 169 6058 Email: customer.services@syngenta.com

Distributed in the UK and Ireland by Scotts Professional, Tel: 0871 220 5353 Email: prof.sales@scotts.com

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Cut the time and cost of fairway management



Syngenta Technical Manager, Simon Barnaby, reports

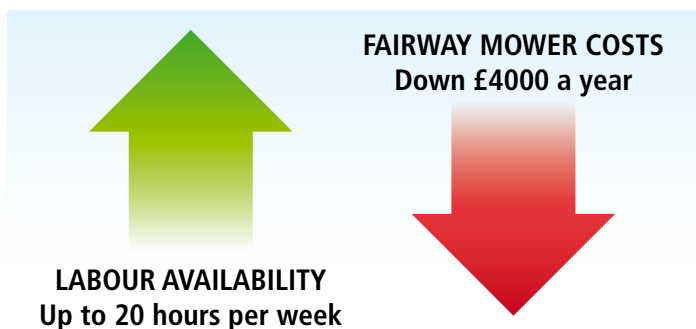
Primo MAXX application on fairways can help cut the time and money involved with mowing turf, to spend on more productive management.

Most golf courses typically spend 24 to 40 man hours a week mowing fairways through the growing season. A Primo MAXX programme could release up to 20 hours additional time for essential maintenance to improve greens, tees and work around the course.

Trim down fairway mowing costs

Furthermore, with the cost of running a fairway mower calculated by turf managers at around £9 an hour, Primo MAXX could save over £4000 a year in lower fuel, maintenance and repair bills - along with the opportunity to cut your carbon footprint with reduced fuel use.

Greenkeepers always report that Primo MAXX gives greater flexibility to manage the mowing programme when conditions are better, or when it causes least inconvenience to players.



Regulation to reduce stress

Research has shown that Primo MAXX makes turf stronger, healthier and more resistant to stress. Deeper rooting enables plants to reach soil water and nutrients, withstanding the effects of drought stress and staying green for longer.

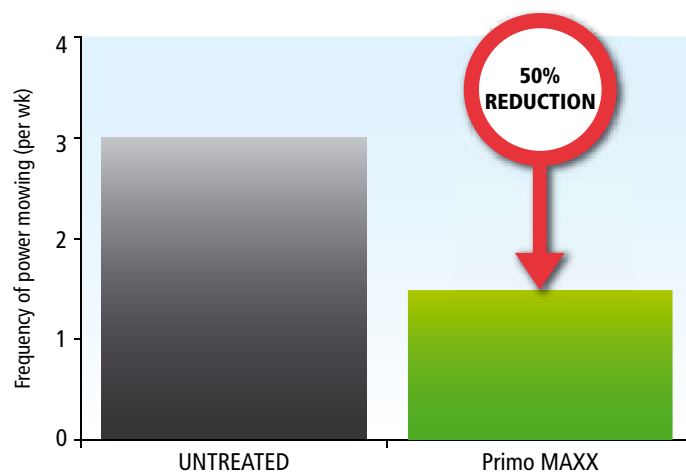
Stronger rooting also enables turf to better withstand the effects of wear and tear from heavy play. Divot recovery is faster - minimising bare patches and the opportunity for *Poa annua* to establish.

Healthier turf plants with improved rooting treatment are better able to fight off the increasing incidence of nematode and soil pest damage. Primo MAXX is an important part of an effective Integrated Turf Management regime.

Cut time spent mowing

Independent user trials with Primo MAXX applications on fairways, conducted by STRI, identified turf managers could typically reduce the frequency of mowing by 50%, whilst still enhancing playing conditions.

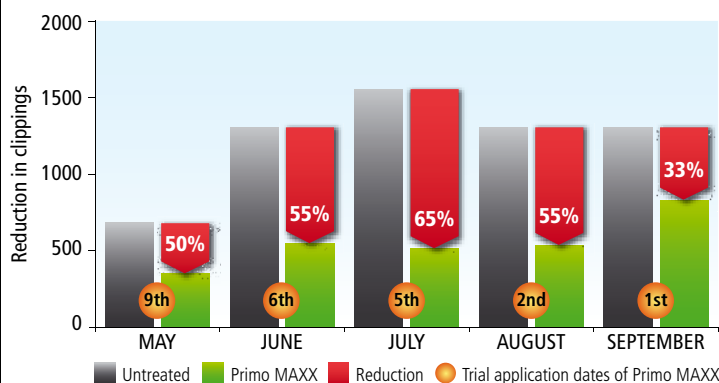
Results were consistent under a range of fairway management regimes, often requiring just one cut per week to maintain high quality fairways.



Source: Observational reports of greenkeepers undertaking Primo MAXX fairway trials

Additionally, turf managers reported the volume of clippings on Primo MAXX treated fairways was significantly reduced, typically by around 50% (below). The result was:

- Faster mowing
- Reduced volume for composting
- Sharper, cleaner finish
- Less drop off of grass clumps when mowing in wet conditions
- Reduced stalking of turf in summer conditions



- Up to the minute weather forecasting
- Advance warning of turf diseases
- Integrated turf management plans
- Independent advice from STRI

New Products



NEW PRODUCTS

CUT WIDTH CHANGEABLE ON THE MOVE

John Deere's new 7400 TerrainCut trim and surrounds mower is a brand new concept machine developed following extensive customer feedback in Europe and the US. Following its European launch at Harrogate Week in January, the mower will be available in limited numbers in late spring 2008, with full availability in the summer.

Designed as a rotary alternative to the company's established 2653B utility mower, the three-wheel drive 7400 features a 36hp turbocharged diesel engine and three independent 27in rotary decks, constructed of 10-gauge steel, with an innovative 'Width on Demand' system. This allows the operator to adjust the working width of cut from 68 to 74in while on the move, thus increasing productivity on the most demanding golf courses.

 www.johndeere.co.uk

4x4 MODEL

The new 4x4 model from JCB is set to build on the success of JCB Groundcare's Groundhog 6x4.

It boasts many of the same key features such as high payload, versatility and the availability of road legal kits - with the added benefits of even greater travel speeds, ground clearance and off-road performance.

The Groundhog 4x4 will be powered by a 20kW (27hp) diesel engine, delivering impressive torque and a top speed of 50kph (31mph).

 www.jcb.com

ELECTRIC POLE SAWS

Pellenc has launched a range of four electric pole saws - the Selion which have been designed for professional tree surgeons, landscapers and viticulturists.

Two models have fixed length poles of 1.30m (P130) & 1.80m (P180) and a further two models have telescopic poles of 1.50m extending to 2.0m (T150/200) and 2.20m extending to 3.0m (T220/300) via an easy adjustment knob.

The Selion is available exclusively in the UK from Lamberhurst Engineering Limited.

 08456 121141
or visit: www.lameng.com

TRIMMOWER

Echo Bear Cat has introduced a range of heavy duty wheeled trimmers they claim can churn their way through the heaviest weeds, or lightly trim around the most intricate landscaping with ease.

The robust Bear Cat EZ TrimMowers are constructed on a solid steel frame, yet are light enough for one person to load and unload, and are easy to manoeuvre and operate.

 www.countax.com



NEW SKID STEER

Ditch Witch has released the SK650.

The SK650 is designed to be efficient, versatile and productive with over 70 quick-change attachments available.

The SK650 has a number of features that make the operator's life easier with both the fuel and hydraulic tanks, mounted on the outside of the machine's frame. Because the fuel tank is exterior-mounted, it is made larger. With an eight-gallon (30 L) capacity, most jobs can be completed without stopping to fuel. Also, with the hydraulic tank on the outside the capacity is increased for more efficient hydraulic performance.

 01792 895906
or visit: www.ditchwitchuk.com



NEW LOOK

Simon Jersey has teamed up with well known leisure brand Cotton Traders to put together a stylish new range of polo shirts and rugby-style tops that look great on employees in less formal situations where appearance is still key.

And for the first time ever you can customise Cotton Traders garments with your club name and logo thanks to Simon Jersey's embroidery service.

 0870 1118800
or visit: www.simonjersey.com



SIX NEW MODELS FOR 2008

Grooved technology leaders YES! Golf used the occasion of the 55th PGA Merchandise Show at Orlando last January to announce it will launch six new C-Groove models for 2008.

The models include two new blades - Nicky and Gina; two mallets - Sandy and Athena; a new 2-piece hybrid called Donna; and a putter with a high MOI and a totally-new patented alignment system called GrooveTube™.

 www.yesgolf.co.uk

