

HOW TO ACHIEVE

MEAN GREENS

A vertical rake attachment can be fitted to Lloyds 53cm Paladin mowers in 15 minutes. Comprising 26 hardened ten blade discs at 19mm centres, the attachment is used in place of the cutting cylinder



Looking for a new greensmower, yet overwhelmed by the range on offer? MICHAEL BIRD discusses the facts and highlights some of the latest innovations designed to produce the ultimate finish on your greens

Greenkeepers need to keep an open mind about the type of machine they select to cut their golf greens, stresses Steve Isaac, agronomist with the Sports Turf Research Institute. "There is little doubt that both the pedestrian and ride-on greens mower have a role to play at the majority of golf clubs in Britain today," he comments. "Experience has shown that those courses which concentrate solely on using just one type of mower usually achieve poorer results than those which adopt a combined approach."

On most new and existing golf courses, time and labour availability have become the major factors dictating the ultimate choice of machine. With increasing constraints on both the quantity and quality of green staff, the ride-on triple mower has taken the lion's share of sales in recent years.

However, there is a growing conflict of interests between those who want to see all → 29

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AD REF 73

'Inadequate instruction is probably the major factor for poor hand mowing results'

27 ➔ greens cut in advance of golfers stepping onto the first tee in the morning and those who expect their course to resemble those featured in televised tournaments from around the world. Such is the power of the commentator, camera and satellite dish!

As Steve Isaac points out, there are few courses with sufficient staff and machines available to hand mow every day, and complete the task in good time. "However, working in partnership with a ride-on triple, it is certainly practicable to use pedestrian mowers to give the greens that special finish before an important match or tournament," he says. It is this ability to give greens an "ironed" appearance, enhanced by the narrower roller stripes, that has brought pedestrian mowers back into the limelight over the past few years. In addition, says Mr Isaac, they can help the greenkeeper keep a closer eye on the condition of the whole green, often providing earlier warning of disease, thatch build-up and turf pests than is possible with the more remote ride-on.

There is also a growing reluctance on the part of a number of clubs to pay the price demanded of some ride-on greens mowers – an understandable reaction when one considers that the necessary complement of pedestrian machine for an 18 hole course can be had for as much as £15,000 less than one ride-on triple.

That sum, they reason, will go a long way towards paying the wages of another member of staff who will then be available for work on the whole course when the hand mowing is completed.

Steve Isaac comments that there had also been recent problems in the development of the triple mower, with reports of powered grooming attachments and grooved rollers causing damage to the turf when perimeter cutting a green. "Steering mowing heads appear to have largely overcome this problem, but users should beware of over-compensation when turning at sharp angles, resulting in missed areas."

That stated, Mr Isaac believes that a correctly set ride-on triple is still more likely to give a better overall cut than a walk-behind mower. "There is definitely a greater likelihood of variation in cut across a green from a pedestrian machine which has to cover



Ian Howard, Dennis's sales director, demonstrates the ease of removal of the interchangeable cassette head on the new FT510 mower

a far greater area at a single, narrower width," he says. "And one should not forget that the human foot causes more compaction than any mower." For these reasons, Mr Isaac advocates thorough training of all greenkeepers in the correct use and setting of their pedestrian mowers.

"Inadequate instruction is probably the major factor for poor hand mowing results," he points out. "Turning to the ride-on machine, training is also important and the greenkeeper must ensure that the mower provides good visibility, that the grass catchers can be removed easily and that there is sufficient engine power to get round the whole course without labouring."

This last point is particularly important with the increasing availability of all-wheel drive, power steering and attachments such as groomers and verti-reels which have greatly extended the versatility of the triple greens mower.

One company aiming to achieve

a similar feat with the pedestrian machine is Dennis, whose new FT510 mower is available with a range of interchangeable cassette head options. Offered with a choice of five- or nine-bladed 20in wide cutting cylinders, light or heavy scarifiers, a verti-cutter and brush, the FT510's cassette heads can be changed in less than a minute without a spanner.

Ian Howard, the company sales director, says the machine was designed and built first and foremost as a mower. "The various cassette options have not compromised its mowing qualities," he points out. "What they have done is extend its versatility to help the greenkeeper with his seasonal turf maintenance programmes in a more cost-effective way."

Available with a 5.5hp Kubota or Honda engine, the FT510 features independent rear roller and cassette head drive, fully floating handle bars and infinitely variable drive speed, giving a cut rate from 150 cuts/yard upwards. It costs from £1,695.

The latest addition to Jacobsen's greens mower range is the walk-behind Greens King 422 offered with the company's Turf Groomer as an option. This tournament standard mower has an 11-bladed reel giving a cutting frequency of 213 cuts per yard down to 5/64in (2mm). An interesting feature of the mower is an adjustable weight system which allows the operator to remove weight from the frame to maintain a constant balance irrespective of whether the machine is fitted with the Turf Groomer or a solid or grooved front roller.

To reduce wear and down-time, the 422 has an automotive-type clutch assembly which has been bench-tested for more than 700,000 operations – equivalent to 70 years of normal use, according to Jacobsen.

Other components designed to minimise maintenance time include a Kevlar-reinforced three belt drive line, Teflon-lined bearings and a reel, bedknife and traction roller which drop out for service in a couple of minutes.

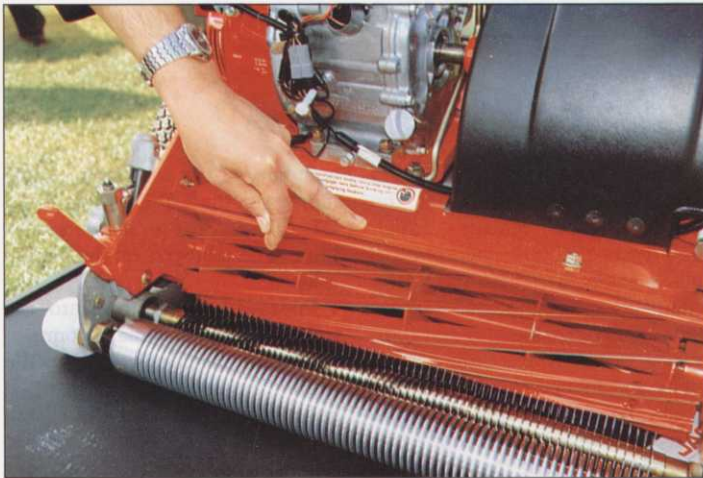
Powered by a 4hp Honda engine, the Greens King 422 has a 22in cut width, a choice of three different bedknives and safety interlock to prevent start-up if any drives are engaged. It is priced at £3,360. The Turf Groomer option costs £870.

While the user of the walk-behind 422 may have few worries about oil leaks, it is a different story when it comes to an all-hydrostatic ride-on. For that reason, Jacobsen now offers its GreenSentry leak detector as a £360 option on the Greens King IV mower. This attachment incorporates a separate tank to allow for the outflow of oil when filling hydraulic rams before the alarm sounds.

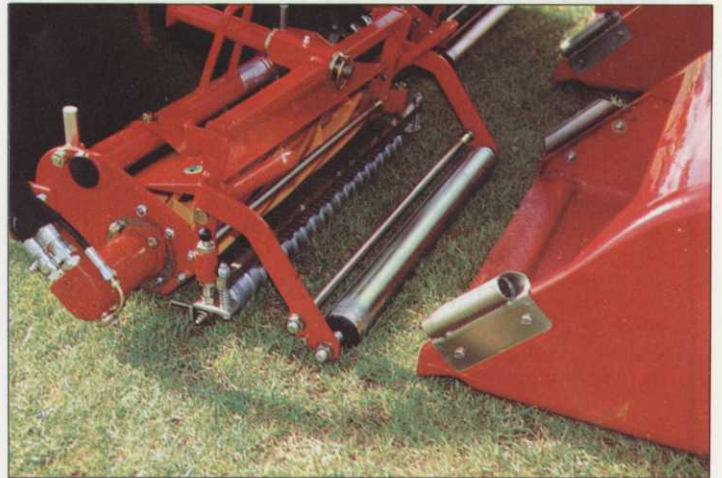
Toro fits its Turf Guardian oil loss detector as standard on its latest ride-on triple – the Greensmaster 3100. This mower is said to be the lightest on the market at about 948lbs, as well as having very low noise and vibration levels.

According to David Boothby of distributor Lely UK, these benefits come primarily from the use of a carefully-mounted and designed Vanguard petrol engine which offers remarkable economy at around 0.5gal/hour. "We have not noticed any resistance to the fact that we do not fit a ➔ 31

'There's no doubting the pedestrian mower's ability to produce optimum appearance'



Removable weights on the Jacobsen Greens King 422 walk-behind mower enable the operator to maintain balance when using different front rollers or with the company's Turf Groomer fitted



Huxleys are now fitting an additional front roller assembly to the 358 Greens Mower. The hinged roller takes the weight of the grassbox off the cutting unit, keeping the box at a constant height above the ground

29 ➔ diesel engine in this particular mower," he comments.

On the pedestrian front, Mr Boothby says that there has been an 80% increase in the sales of Toro's Greensmaster 1000 model, led by demand in the USA for greens of the highest quality cut and appearance. "There is no doubting the pedestrian machine's ability to produce the optimum appearance," points out Mr Boothby. "However, I would agree with Steve Isaac that there is a place on many courses for both types of mower."

John Deere, in common with the other major manufacturers, also offers ride-on and pedestrian machines. Having stolen the limelight with the launch of its offset cut 2243 model with steerable cutting units, the company has now made available a kit which increases by 1.5in the transport height of the two front cutting units.

Designed to reduce the risk of grounding or scuffing in transport and when turning off the green, the £250 kit has been developed by John Deere dealer, Groundcare

(Lincoln).

With demand growing for increasingly lower cut heights, new low cut bedknife support has been introduced for the John Deere 22in walk-behind greensmower. The support enables cutting heights down to 3/32in to be achieved without scuffing the turf, says Deere.

Minimising turf wear and compaction is the principal aim of a new floating roller-carrier assembly for the grass collectors on Huxleys' 358 ride-on greensmower. Positioned ahead of the existing front roller, the carrier removes the weight of the grass boxes from the cutting units and ensures that each box remains at both a constant height above the ground in work and level when the units are raised.

Huxleys have also introduced as options a headlamp, towbar, flag holder and steering wheel extension.

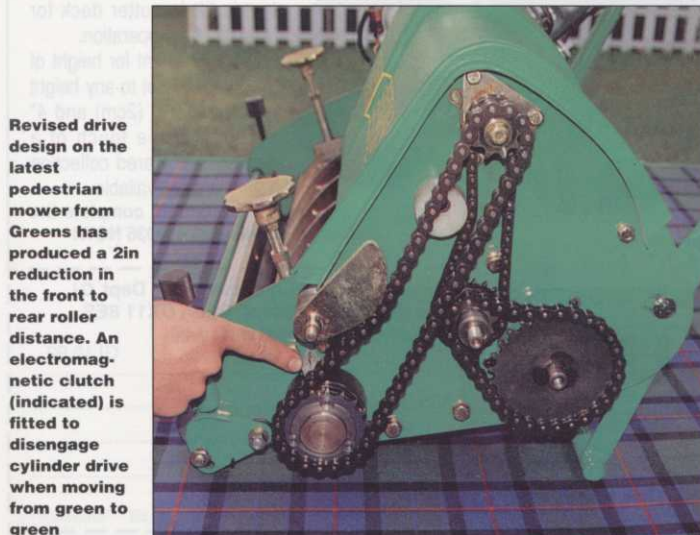
Three-wheel drive has been available on the Huxley 358 since 1989. Now, Jacobsen is evaluating the system in prototype form on its Greens King while Lesco,

distributed in the UK by CDC, launched its 300D Three Wheel Drive Greensmower at the IoG Exhibition, Peterborough.

Powered by a Kubota 16.5hp diesel, the machine has constant drive to all three wheels and transmission braking to prevent over-run on down slopes. The unit includes an electronic differential lock system, applied by a foot or hand switch, to prevent the back flow of oil from any wheel motor and thereby eliminate slip on

steep or wet surfaces. The new mower costs £12,318 and, in common with the other two machines in the Lesco range, can be equipped with a redesigned grooming attachment, verti-cut units, powered rear roller brush and choice of solid or grooved front rollers.

Also built in the USA, the Beaver T92 triple greens mower from Hayter is receiving a major push to gain attention in the UK with a massive price cut of ➔ 32



Revised drive design on the latest pedestrian mower from Greens has produced a 2in reduction in the front to rear roller distance. An electromagnetic clutch (indicated) is fitted to disengage cylinder drive when moving from green to green

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'Extra blade on the greens cylinder produces

31 → almost £3,000. Robin Boyes of Hayter says that the diesel-powered mower, which now costs £12,000, incorporates many of the best features of the competition and deserves a closer look by greenkeepers. It has individual lock-up of the three cutting units and independently-mounted grass boxes. A demonstration revealed that the T92's centre box is certainly one of the easiest on the market to remove and replace.

The latest pedestrian greens-mowers from Ransomes, the Greenspro 51 and 56 (20in and 22in), have a cradle-mounted grassbox for simple handling with the cradle frame acting as a carrier for an out-front dew brush. Both cutting height and cylinder to bottom blade adjustments are by spannerless hand wheels and the mowers can be supplied with Ransomes' Verti-groom attachment.

To help eliminate any risk of scuffing on perimeter cuts, steering arms are now fitted as standard on the cutting units of the

company's two ride-on triple mowers – the GT Champion and GT Classic. These mowers also have hand adjusters on the cutting units.

Improved grass flow into the collector and convenient compensation for cylinder wear are the aims behind an extended polyethylene deflector plate with aerofoils now used on the Allett Supershaver and Tournament pedestrian mowers. The material, which can be formed by hand to mirror the curve of the cylinder, is bolted in position and is said to resist grass sticking.

Both mowers have a cut frequency of 180 per yard down to 3/32in. The principal difference between them is the fitting of a powered spiral brush between the cylinder and front roller on the Tournament. Apart from helping to keep the front roller clean for a constant height of cut, the brush can be moved up and down to alter the action on the turf and promote the lifting of horizontal growth for a more thorough cut.

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a noticeable improvement in cut quality...'

The 20in Tournament costs £1,995, while the Allett Super Shaver (20in or 24in) costs from £1,450.

Lloyds first introduced its Paladin pedestrian mower in 1961. The 1993 version has an up-rated (4hp) Honda engine, a choice of nine or five-bladed cutting cylinders and a front roller on an adjustable eccentric shaft to compensate for wear in its support bushes and the bottom bar.

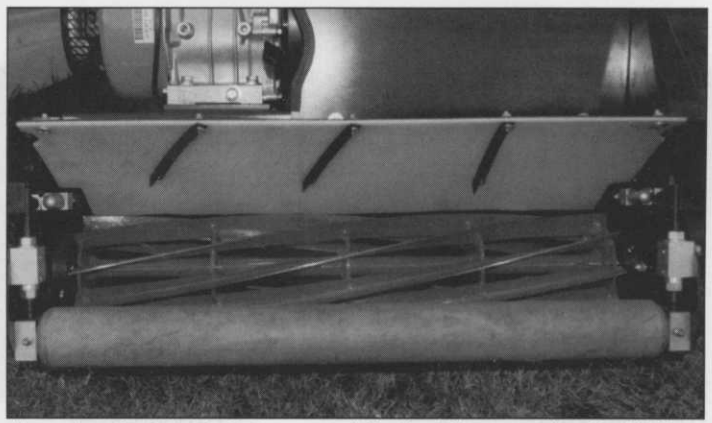
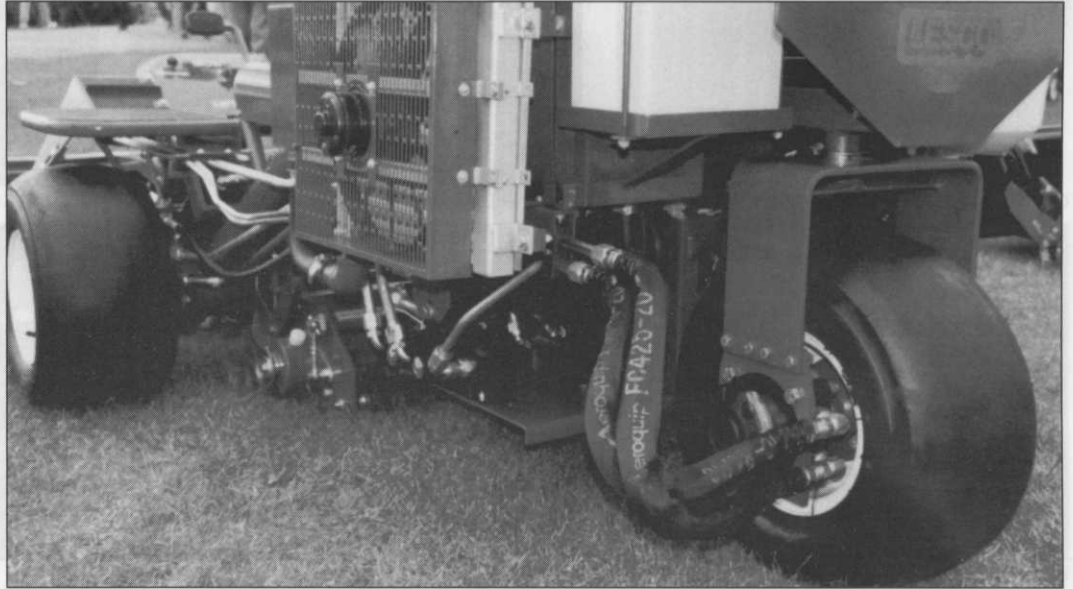
Clive Nottingham of Lloyds comments that the change to the use of steel with added boron had enabled the company to adopt a welded construction for its new cylinder. "The hardness of the material is unaffected by welding," he explained. "In addition, the extra blade on the greens cylinder, giving 16 more cuts per yard, has produced a noticeable improvement in cut quality," he points out.

Options for the 1993 Paladin include transport wheels, comb and verti-rake attachments and a grassbox cover.

Developed from the Zephyr pedestrian mower, the new walk-behind machine from Greens has had extensive surgery to its roller and cylinder drive system to enable the roller to roller distance

to be reduced by 2in. The result? Improved contour following and better balance, according to Greens.

The 10 bladed cylinder gives a consistent cut frequency at 165 per yard irrespective of drive roller speed and minimum height of cut is 1/16in with knife blade. Priced at "around £1,600", the mower has a Honda engine and optional brush and comb set and powered transport wheels.



Above: An extended polyethylene grass deflector plate now used on the Allett Supershaver and Tournament pedestrian mowers can be shaped by hand and gives improved grass flow into the collector.

Below: New for 1993 is an all-wheel drive version of Lesco's diesel-engined greens mower. Priced at £12,318, the mower has a fan-assisted oil cooler and features the company's electronic diff lock system to maintain full traction at each wheel

New health and safety regulations affect all golf course employees

Regulations to implement the European Community (EC) Framework Directive on the introduction of measures to improve the health and safety of workers at work were laid before Parliament in September.

The Management of Health and Safety at Work Regulations 1992, will come into force on 1 January 1993, following wide consultation.

The new regulations are the first in a series to implement six EC directives. Other regulations on workplace conditions, safe use of work equipment, manual handling of loads, personal protective equipment and display screen equipment will follow.

The Framework Directive sets out general principles of EC health and safety law. Some provisions in the directive are

already implemented through existing health and safety legislation, notably the Health and Safety at Work etc Act 1974. The Management Regulations introduce those additional health and safety measures required by the directive.

The new regulations set out broad general duties which apply to almost all work activities and are aimed mainly at improving health and safety management. They make more explicit what is required of employers under the Health and Safety at Work Act.

The main requirements are on employers:

- To assess risks to the health and safety of their employees and others who may be affected in order to identify the measures needed to comply with relevant health and safety law. Employers

with five or more employees will need to record the significant findings of the risk assessment.

- To make arrangements for implementing the health and safety measures identified as being required by the risk assessment. Arrangements for planning, organisation, control, monitoring and review will need to be covered. Again, employers with five or more employees will have to record arrangements.

- To appoint competent people (either from inside the organisation or from outside) to help with the implementation of the health and safety arrangements.
- To set up emergency procedures.

- To provide information to employees which can be understood, as well as adequate training and instruction.

- To work together with other employers sharing the same workplace.

Some of these duties, such as the duty to assess risks, also apply to the self-employed. There are also specific duties on employees to use equipment only in accordance with the training received, and to report dangerous situations and any shortcomings in their employers' health and safety arrangements.

Copies of 'Management of Health and Safety at Work Regulations 1992' are available from HMSO and booksellers. price £2.30. An Approved Code of Practice to accompany the regulations will be launched at a press conference later this year. Details will appear in Greenkeeper International as soon as this is made available.