What's new in mowers . In search of the perfect cut Greenkeeper International Spring Grass Cutting feature

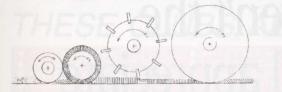
When spring thoughts turn to buying a new mower, what are the latest features and who are the companies supplying them? GLY BRYAN takes a look around

here was a time when the term motor mower meant a powered machine with a front roller, cylinder and rear roller and the only option was whether it came with a (trailed) seat. Nowadays there is a choice of dedicated or multi-purpose power units; mechanical or hydrostatic drives; belts chains or gears and so on.

With so many machines to choose from, it is vital to assess exact requirements before approaching suppliers - otherwise the latest 'gizmo' can easily avert you from your original objectives. Purchasers need to take into account not simply(!) maintaining the grass, but all aspects of labour and machinery needs and resources.

Based at Didcot, Oxfordshire, Allen Power Equipment Ltd offer three ride-on triple cylinder mowers, all featuring beltdriven six-blade reels. Cutting widths are 1.5m (60in), 1.68m (68in) and 2.1m (84in). Brand new at Peterborough, their Allen Mustang, a new 42in ride-on All Terrain mower powered by a Briggs and Stratton Twin Vanguard engine caught many eyes, especially the cutting deck with contra rotating blades and the hydrostatic transmission system with single foot pedal control. The height of cut is electrically powered and can be set at 3/4in to 4in at the touch of a button. The mid-range 1.68m National machine is available with either petrol or diesel engines. Prices start at £3,400.

For 1992, Allett Mowers Ltd from Corby, Northants, is looking to increase its share of the golf market with two new pedestrian cylinder mowers. The Supershaver II is an improved version of the 3.5 hp Supershaver, whilst the Tournament machine differs from other greens mowers by having a power driven spiral nylon brush fitted between the front roller and cutters. This cleans the front roller and lifts up all the grasses to a vertical position, enabling the cutters to cut to a precise, predetermined height. The gentle grooming action takes place automatically each time the green is cut.



Atco's B17 weighs a modest 58kgs (124 lbs) compared with the WWII American bomber's 14.6 tonnes. The Stowmarket company offers two professional cylinder mowers in its Club range, the 10 blade B17 with a 43cm (17in) cut and the 12 blade B20 Deluxe with a 51cm (20in) cut. Prices start at £868.09.

Evesham-based Bomford Turner is developing its range of cylinder machines under the Turner name. The company's new Rider mower uses a 75cm (30in) four blade cylinder unit, but this can be quickly replaced with a rotary or flail head if required. Available in manual or hydrostatic versions, prices start at £3685.

Hayter Beaver's offerings for 1992 include the Bunton (22in) greensmower, displayed at this year's BTME show. It has a 3.5hp Robin petrol engine, nine blade cylinder and cutting height adjustment of 3 to 40mm. Options include a turf groomer or rotary brush, grooved or smooth front rollers and a thatching attachment. A standard feature is two quick-release pneumatic transport wheels.

Honda's Power Equipment division in Chiswick, West London offers a comprehensive range of pedestrian and ride-on mowers, most of which have rotary decks. It also offers three pedestrian cylinder mowers with cutting widths of 40cm, 50cm and 65cm (16in, 20in and 26in). These are chain-drive machines, each fitted with a six blade cutting reel.

In contrast to the size and diversity of the Honda empire comes the family firm of Huxleys in New Alresford, Hampshire. Its 358 greensmower has a 17.5hp diesel engine powering a





# FACTS

hydrostatic transmission and hydraulic drive to the three cutting cylinders. Cutting width is 1.47m (58in) and cutting height is adjustable from 4mm to 13mm. For compact tractors there is the mounted triple reel gang mower or the trailed five reel unit. Both have hydrostatic drive and offer cutting widths of 2.13m and 2.22m (84in and 87.5in) respectively.

Jacobsen at Kettering, Northants, has augmented it's range of pedestrian and ride-on machines with the addition of the ST-5111 model. This huge five reel machine has a cutting width of 3.4m (llft 2in) when all five units are in use. It can also use either three or four reels to give cutting widths of 2.08m or 2.74m (82in or 108in). The cylinders can be replaced with a flail mower, brush or even snow thrower.

Further north at Langar, Nottingham, John Deere's Grounds Care division has built up an impressive range of equipment since it first arrived in the UK. The company currently offers pedestrian, ride-on and gang mowers, but will also supply its 755 or 855 compact tractors as triple reel mowers. Known as 756/856, their hydraulically driven mowers can be removed, allowing the tractors to be used conventionally.

Lloyds and Co of Letchworth says its long-standing policy of refurbishing old machines has provided a valuable fund of experience for development of new equipment. For 1992 the company has fitted a new design of front roller to its Paladin pedestrian machines which it claims will provide minute adjustment for achieving a uniform height of cut. 52cm (21in) Pal-

• Pictured, top: **Toro's Greenmaster** 3100 has an audible oil leak warning: and John Deere shows how to turn a compact tractor into a turf mower

adins will also be available with a new vertical rake attachment.

A useful feature on the 55cm (22in) pedestrian greens mowers from Saxon Industries at Hungerford, Berkshire, must be their drum brakes. The mowers - one with, and one without groomer - have de-mountable transport wheels for moving between greens and staff can 'drive' them at up to 7mph, says the company. Belts and chains have been dispensed with in favour of gear drives and the 9 blade cylinder has a cutting height adjustment from 3mm to 13mm. The company also offers a 9hp triple reel ride-on.

Ransomes offers an extensive range of machines from pedestrian units to ride-ons and gangs. Three of its ride-on models, the GT Champion, GT Classic and Fairway 5000, are exclusively for green and fairway use. The GT Champion has a diesel engine and is available with Verti-Groom, Verticut or Tee cutting units. In standard rig with 3 Verti-Groom units it has a retail price of £16,275.

Another company with a full range of equipment is Lely (UK) Ltd from St Neots, Cambridgeshire, marketing TORO machines. The company claims a unique feature of its triplex Greensmaster 3100 is the hydraulic oil leak detector which sounds an alarm, alerting operators to move off the green. Other features include an engine mounting system, said to make it one of the quietest machines available.

Turner World Mowers of Kings Coughton, Warwickshire is a new company, but its range of machines already includes five models of triple reel ride-on mowers, each with a choice of cylinders. At the top of the range is the diesel-engined 390 which has a cutting width of 2.47m (8ft 4in).

Brouwer equipment is marketed in the UK by Turfland Professional Ltd, based in Dutton, Cheshire. The range of trailed mowers includes five and seven-gang fairway mowers offering cutting widths of up to 4.8m (16ft. Gangs are raised hydraulically, while drive to the cylinders is mechanical, operating from the pto of the tractor unit.

## GRASS FACTS IN SPACED OF a perfect cut

wide variety of factors are important in the design of a reel type grass mower, and they may cause the resulting machine to perform well or poorly depending upon how they are combined in the final machine. Some of the important factors include: the height of cut range in which the machine will be used. what type of terrain will be encountered, clip length, reel diameter, reel construction, reel helix, bedknife/bedbar design, the cutting unit suspension system, the clippings discharge or collection requirements, and the method of adjusting the reel to bedknife contact or clearance. While all of these are important factors, only the method of adjusting the reel to bedknife contact or clearance and the resulting implications will be discussed here.

#### **Reel and bedknife adjustment** methods

There are two concepts of adjustment method. One concept is to adjust the reel down toward the bedknife (moveable reel). The other concept is to adjust the bedknife up to the reel (moveable bedknife). There are, of course, variations in methods of doing each of these concepts, such as whether there is one adjusting knob or several adjusting bolts.

Each of the methods can be made to work well, and each has a number of potential advantages and disadvantages, depending upon the execution and the final requirements for a given machine. These will be discussed in order that the reader may have a better understanding of reel type mowing machines.

#### **Moveable reel**

This method provides a fixed bedknife/bedbar assembly which is rigidly attached to the cutting unit frame. The reel assembly is then adjusted down within the cutting unit frame. Potential advantages include:

1.a rigid cutting unit frame assembly, since the bedbar can be a torsional structural member,

2. a consistent angle of the bedknife to the turf as the reel and bedknife wear.



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