

#### Hugh Tilley judges some of the mowers for rough currently on the market.

ough going is getting less rough it would seem, as greenkeepers reduce the length and extent of their "rough" in order to speed play. The word itself now has many interpretations, from grass cut as low as two inches to some which is never cut at all.

Justification for no or minimal cutting is conservation – of wildlife habitat and natural flora, but not all golfers are happy about long grass as once a ball goes in it can take a lot of time to find it.

In talking to greenkeepers about mowing "rough" the general preference for reel or cylinder mowers is obvious, and while my initial expectation was that all rough would be cut with a rotary, the reality is that some clubs prefer to use gang mowers.

In addition, the tidiness requirement at most clubs is against a rotary which can leave the grass on the top in swaths, thus some clubs have resorted to flail mowers despite their greater power requirement and slower working speed.

The advent of mulching or recycling mowers — where the grass is recut and powered to the ground — was not very evident. However, some rotary mowers spread the cut grass better than others and this should be considered. Roller mowers — rotaries with a roller at front and/or rear produce a neater looking finish because of the stripes but this is mainly cosmetic and, in wet conditions, wheel marks may soon appear too. Also cut grass can build up on the roller.

Another use for the "rough" mower is to remove seedheads from the fairway – when these get away from a fairway cylinder/reel mower. Many courses have tree planted areas which need to be tidied so a rotary or flail type mower may be required for this. Unfortunately tree plantings are often too narrow for the wider mowers which are most economic to use

on open ground. Few are planted with consideration for a club's normal operations.

Many "roughs" are on banks and steep land, so being able to use four wheel drive may be essential. Stability and surefootedness is also needed, but fortunately rough cutting can usually be reserved for dry conditions – there is nothing as slippery as wet grass.

The least expensive mower option is usually a tractor mounted and pto driven rotary mower and these are made by many different manufacturers in several widths – from about 1.8m (6ft) to about 8m (27ft) – although few clubs have, or would want, a sufficiently heavy and powerful tractor for the larger machines.

Several problems affect rotary mowers, one is the power required to cut great bulks of grass, as often the machine will not allow large amounts of cut material to pass out of the back quickly. The front of the mower must be lower than the back or power demand increases considerably often to the detriment of the belts. Mulching mowers also need extra power. Wheel marks are usually left where long grass is run down by the tyres and often not lifted by the cutters, and cut grass can be left in a thick swath which is both untidy and may kill the underlying plant. But in contrast to a cylinder mower the rotary is simple in design, use and maintenance. Flail mowers are also easy to use although their maintenance may be slightly more expen-

While most options utilise a conventional or compact tractor, there are many purpose built self-propelled out front rotaries which offer specific advantages such as exceptional visibility and manoeuvrability.

#### Jacobsen gangmower at Broome Manor, Swindon

Prime reason for using gang mowers for the rough at Broome Manor is to keep play moving. The 27 hole municipal "pay and play" amenity relies on golfers being able to move fairly freely and fast.

Head Greenkeeper, Kelvin Dudley, said that the current set, bought second hand from B.S. Mowers of Bristol, were proving ideal and succeeded a set which had reached the end of their economic life - nevertheless they have been traded-in. The five bladed units are mechanically driven but mounted on a Jacobsen Ranger trailed hydraulic lift and fold frame. Kelvin said that one of the greatest advantages is that they follow contours extremely well. Broome Manor has several ex-highway tractors in its fleet and these are ideal for operating the mowers. A previous wrap-around tractor mounted set had proved less than ideal because the extra weight on the tractor caused rutting on the wet ground, was difficult to remove quickly, and did not follow contours well.

The Jacobsen frame allows the operator to work with three, five or the full seven units down, thus he can cut narrower strips or cut between trees etc, while the full set gives fast coverage of the area. Normal cut height is around 60mm (2 to 3 ins).

Because this configuration of mower has limited demand generally. the price was reputed to be right, especially as the set had seen very little use. To date there have been no reported problems and no breakdowns, and maintenance is simple just a quick grease round.

Cutting during the growing season is normally carried out about every fortnight, thus there are no problems with a clippings mat left over the around.

#### Major two rotor rollermower on a Carraro at Marlborough Golf Club

Marlborough had been using a flail mower/scarifier unit for its semi and attended rough, but this was taking a considerable amount of time - about 14 days, so the decision was made to buy a faster rotary mower.

Danny Dobie, Head Greenkeeper, said that they looked at several options before it was decided that the Major Equipment rotary mower on a reverse drive Antonio Carraro Tigretrac 3800 (pictured) would be ideal.



Simple costing showed that this combination was several hundreds of pounds cheaper than a purpose-built self-propelled out front rotary, furthermore it gave the club a compact tractor which could be used for other operations. In fact, on demonstration, a greens slitter was fitted and proved that the tractor was ideal for this operation.

Reverse drive, with the mower mounted on the linkage and the driving position reversed gives the operator an exceptional view of his work, and exceptional manoeuvrability, all the attributes normally expected from a self-propelled out-front rotary. The club cuts its semi-rough weekly to a height of about 50mm (2in) while the attended rough is cut about every six weeks to a height of about 150mm

The mower is pto driven and has twin contra-rotating rotors, two adjustable leading castor wheels and a rear depth control roller. The combination has been in operation at the club since March and during this time there has been a breakage on a castor wheel arm which was re-welded locally, and a problem with a bearing which resulted in it being out of commission for a week, - having to go back to cutting with the flail mower proved to Danny the speed and value of the new machine.

While scalping is almost impossible in some circumstances it is possible to get the side frames to cut into the edges of banks. Cut grass is discharged from the centre back of the unit and no problem of swathing has been encountered. However, in wet conditions there can be some buildup, and dropping, of grass on the roller.

Overall Danny is very pleased with the combination which has cut down the 14 day operation to one of three days. He commented that it would "go anywhere" (the club has some steepish banks), and it is extremely surefooted and safe, but above all it is

#### Amazone Heavy Duty Groundkeeper at Ogbourne Down Golf Club

The Amazone Groundkeeper is a pto driven flail mower which can scarify and in heavy duty form as at Ogbourne, it is semi-mounted and has a very large capacity hopper to collect the cut grass or other debris. At Ogbourne it is fitted to a 42hp Kubota L4200 with four wheel drive and while it looks as if this tractor is too small to control the Groundkeeper which has a 2.45m width, Nick Pusey, Head Greenkeeper, said that in fact the only time there is any hint of a problem of stability is on steep hillside in damp conditions when the hopper is full.

In particular, the machine is used prior to competitions as it does produce a very satisfying groomed effect. The normal pre-match preparation is to cut the first three strips

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**Amazone Heavy Duty Groundkeeper** 

round the fairways as semi-rough at a 50mm height and a further four strips at a 100mm height. The machine is also used at maximum height in the autumn in order to tidy up outlying long grass and prevent it going into winter this way. An advantage of the Groundkeeper is that because it has a hopper all the cut grass and debris is collected and removed from the course. Scarifying blades are fitted as standard.

In the 18 months that the club has had the machine, it has required one new belt and, a few days outside the warranty period, the drive keyway on the main rotor was found to have worn out. Nevertheless, overall Nick is happy with it and certainly with the finish it leaves.

#### Toro Contour 82 at Clandon Regis Golf Club in Surrey

James Watson, Head Greenkeeper, visited USA last winter, saw the machine launched and impressed. On getting home he asked John Colebrook, of Ian Kerry Machinery, when he could get one. The answer arrived in June this year.

The Contour 82 is a 2.1m (82 in) cut multi-deck out-front machine based on the Toro Groundsmaster 3000D power unit and while it is not cheap, James commented that it does do a magnificent job and it is virtually unable to scalp the ground. He added that some of the rough at Clandon which is a new course is not very level and has significant landscaping. This has made the Toro Contour an ideal machine to use.

The power unit has a 35hp engine and four wheel drive which will take it anywhere. Manoeuvrability is exceptional and the operator has an excellent view of the decks and what he is cutting into. James said that his greenkeepers have found it a very

comfortable and easy machine to use. Semi-rough is cut to 38mm (1+in) height, using the machine up to three times a week when it produces a very clean cut with minimal grass left on the surface. James expressed great satisfaction with the finish and added that it claims ability to recycle up to 50% of the cut grass. On the true rough a conservation policy to protect the fauna means that cutting is not started until late summer, and then the machine is operated at a maximum height for the decks of 100mm (4in). The bulk of grass, perhaps 400mm plus high, required the area to be cut twice in order to produce good finish.

Since receiving the machine there have been a couple of teething problems with the hydraulics - decks are powered hydraulically - but these have been easily and quickly resolved. Obviously adjusting height takes slightly longer than with a conventional rotary deck, and there are more greasing points to be serviced, however this is not considered to be a major problem.

#### Wessex RM24 at North Wiltshire **Golf Club**

Mounted behind a Kubota L4200 and pto driven from it, the Wessex RM24 is a substantial machine with a wide cut (2.4m), three rotors and rollers front and rear under the deck. Bought to replace a narrower and slower machine the Wessex is used on all the roughs at North Wilts as well as occasionally for topping seedheads and stalks on other areas. The club also has a Kubota out-front rotary for trimming around trees and other areas where it's narrower width and greater manoeuvrability is more ideal. The Kubota machine is quick and easy to adjust and therefore it is used for tidying up areas where the Wessex cannot easily reach. Height is seldom adjusted on the Wessex.

First Assistant, Glen Timms, said that the RM24 was a large and heavy machine, and one which needed the front loader on the tractor in order stabilise the tractor and add enough weight to the front. North Wilts have also found it important to keep the check chains on the linkage tight to minimise sway. There is a real fear that "the tail will wag the dog", even to the extent of overturning the trac-

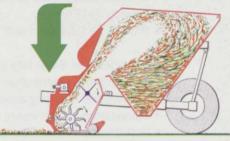
The club has had the machine

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Wessex RM24 on Kubota L4200

since the beginning of the year, and while Glen said that it had caused no problems, on inspection prior to photographing it for Greenkeeper International he noticed that one of the roller bearings looked suspect. No other repairs have been needed, although when delivered noise from two of the rotors needed rectifying by a generous portion of grease - leading to an assumption that either an assembly or pre-delivery maintenance had been omitted.

Because the machine is so heavy. North Wilts have found it important to raise the cutter from the ground before turning, especially where the ground is not flat to prevent the side skids ripping up the ground.

Normal cutting height is about 100mm (4in), however, the machine will take grass which is up to 460mm (18in) high although it is necessary to slow forward speed. Usually the club cuts the roughs regularly before they are more than about 200mm (8in) high.

The cut grass is left on the surface, and while wheel marks are evident, because the area is "rough" there is no criticism of it.

#### Ransomes Frontline 951D at Stockwood Vale nr Bristol

No apologies are made for returning to Nick Tyley, at Stockwood Vale, for a review of this machine, as a previous visit had discerned its existence and the problems it had faced. However, several months have passed and Nick commented that both T H White and Ransomes had been 100% in their support and have always responded quickly and effectively. This meant that the machine was now functioning well and doing what it was bought to do extremely well. He pointed out that Ransomes went to great lengths to set the machine up correctly for the course and usage.

The Frontline follows a range of Ransomes' machines - previously it was the Rider Rotary T-51D - and it is a rugged out-front self-propelled rotary with a front deck and two wings - hence it is also known as the "bat wing". The decks are driven individually by hydraulic motors. The traction is also hydrostatically driven and is what Nick called assisted four wheel drive, with rear wheel drive provided "on demand" by a foot switch.

Full cutting width is 2.95m (114in) but with wings folded the 951 will work the centre deck only with an overall width of 1.55m (61in) and this enhances its versatility so that it can trim around trees and in other confined areas. For the operators, Nick said it is a "dream machine", easy to operate and extremely manoeuvrable. Such is its turning ability that it can cut square corners or back alongside a previous cut without shunting and furthermore turning with the decks down does not mark the turf. The official turning radius is given as 430mm (17in) - using power steering and full lock, the machine also has independent wheel brakes.

The 50hp Perkins engine provides ample power and although it gives the impression of being a thirsty machine, it does cut a lot of grass in a day. Stockwood Vale has some demanding banks and it copes with these easily although there are some reservations over its surefootedness in the most adverse circumstances going uphill, nevertheless it feels extremely stable.

Cutting height is varied, easily, from about 25mm to 100mm as it is used for a variety of parts of the course. In addition to cutting rough and semi-rough, it has the jobs of destalking, and tidving fairways after verti-cutting. Maintenance with the possible exception of oil filter changing is rated as 'very easy.'

Stockwood Vale bought the 951 to do exactly what it is doing, without any competitive demonstrations and Nick is guite happy with its ability and versatility. And he is extremely happy with the back-up he has had. He admitted that he was initially disappointed with the performance, but now with Ransomes having set it he is extremely pleased with it, adding that he thought it "would cut anything". But perhaps the most crucial question was whether he would buy another, and the answer was an unequivocal "yes".

