

MOWER TALES

Roland Taylor concludes his three part series looking at the development of mowing



Mowing is very different now from Old Tom Morris' time!

The time is 7.30am, the year is 1820 and the location is somewhere on a golf course in the UK. A greenkeeper is busily putting the final edge on his scythe, ready for a morning of cutting greens. Today it is hard to imagine this situation, but this was the only method of cutting grass short at that time and it required a considerable amount of skill to achieve reasonable results.

Records show that when scything an acre of grass it would take three men a day and then all the cut material had to be raked up and the lawn rolled. The grass cutting operation was carried out early in the morning when there was plenty of dew about as this helped the grass to stand to the scythe.

Sometime during the next decade, in the Gloucestershire town of Stroud, a mill engineer by the name of Edwin Budding was about to change the playing of sports on turf and garden design, throughout the world. He



invented the cylinder lawnmower. These new machines were well received by the gardening fraternity but virtually shunned by the greenkeepers of the day. These first mowers were heavy to use because of their crude gear drives from the rear roller to the cutting cylinder. In most cases they needed two people to operate one to steer and a second, usually a young lad, to pull the machine.

It was over 60 years from those first introductions before they were accepted by greenkeepers. One of the reasons claimed was the poor finish; it is hard to believe these machines were not an improvement. Why there was a reluctance to change is not clear, one theory is the lack of money and the acceptance of relatively poor putting surfaces. It must have been a daunting task to cut 18 greens using a push mower especially as most courses had minimal greenkeeping staff. Although petrol powered units had been introduced there was still very little enthusiasm for using them.

Another 30 years were to pass before the first specifically designed mower for cutting greens appeared in 1924 - the Ransomes Certes. Where these specialist mowers were used the difference in the playing surface soon became too apparent and players, through their greens committee no doubt, put pressure on the greenkeeper and his staff.

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In 1936, to increase productivity Ransomes introduced the Overgreen. This was a powered towing unit with large pneumatic tyres which pulled three of the Certes push mowers.

Then 1950 saw the launch of the Auto Certes. This was the first purpose built petrol engine mower for producing a good putting surface. Other manufacturers were quick to catch on and a number of this type of mower appeared on the market.

By the 60's society was changing as people had more leisure time and this bought with it an increased interest in sporting activities. With more courses being built throughout the world, there was a need for efficient methods of mowing and by the end of the decade triple ride-on greens mowers were beginning to appear in the UK being imported from America. There was considerable resistance to this method of cutting compared to pedestrian operated greens mowers and in some quarters the pros and cons are still debated today. One argument was that if larger units were used on the green there was the likelihood that increased compaction would occur. The quality of finish was also another area of contention. Some courses compromised, and still do, by using ride-ons generally and pedestrian mowers on match days and other important events.

With the advent of more advanced hydraulics, smaller compact engines and electronics the modern greens ride-on is far removed from those earlier models and is equipped to cover virtually every type of putting surface. One downside is the turning area required.

TRIPLE RIDE-ONS

If all the mowers that are now available from different manufacturers were placed in a line, they will have different body work and covers but the actual nuts and bolts under these are likely to be the very similar. The chances are the engines will be from the same stable or closely similar in design, as will be the hydraulic systems, cylinders and bedknives.

Most readers will have their own preferences for certain manufacturers and models but there is a good case for actually carrying out some research and evaluating more than one model before making that final decision. There are a number of areas that need to be taken into account. The possibility of increasing compaction is a major factor, so the total weight of the machine plus operator and full tank of fuel is a good starting point.



The most important areas are the cutting units and the system that operates them. The efficiency of hydraulics depends on a constant pressurised oil flow, so if a single pump has to operate a number of facilities then the mower's efficiency might be reduced. Triples that have hydraulic systems specifically dedicated for lift, power steering and cylinder and wheel motors are features worth taking into account.

The time taken, and how easy it is, to remove or refit a cutting unit to the carrying frame, will have a bearing on servicing and down time. How the units are suspended, determines where any weight is being applied by such components as lifting arms and grass boxes, to either the cutting units or power unit's main frame.

Both cutting height and cylinder adjustments need to be easily accessible and carried out with preferably no special tools.

Ergonomics now play a major part in the design of most commercial machines and a great deal of attention is paid to operator comfort and safety. Fully adjustable steering columns and seats to suit different size operators are commonplace. Another feature, to be on the look out for, is the amount of visibility from the driving seat.

Electronic and computer technology has crept into some of the latest machines, mainly in the form of monitoring systems. These are mainly for analysing the electric circuitry and hydraulics to identify a failure point if it occurs.

Modern petrol and diesel engines require less servicing than their former counterparts, but they still need to be checked regularly if they are to give optimum performance, long life and minimal pollution.



PEDESTRIAN GREENS MOWERS

No one has yet come up with a mowing system that can match Budding's original idea.

Today's version is obviously more sophisticated but the principle remains the same. So what innovations have taken place over the last few years?

Designers have taken into account the balance of the mower, its turning and manoeuvrability. Greens are rarely flat and to gain the extra finish means mowing as low as possible without scalping. This has seen the introduction of machines that follow any ground contours closely, due to the fact the cutting unit flexes both from side to side and forward and back without altering the cutting height. Like the triple units these machines incorporate many features that make precision cutting easy on the operators and cause them minimal fatigue.

In the future

There is no doubt that the demand for both triple and pedestrian mowers will continue probably at the same ratio. If there were any new, innovative methods of mowing greens on the market, or in the pipeline, the chances of them becoming established would take a considerably long time if the history of the petrol powered greensmower is anything to go by.

Where any changes are likely to occur is in the traction units.

Modern engines are far quieter and cleaner than those produced a decade ago. Some engine manufacturers have long been turning their attention to alternative fuels such as LPG and specifically designed units that operate on this are beginning to find their way on to the market. Conversion kits to LPG are also readily available for most makes of engine.

The use of alternative materials that lower the weight of the mower which are just as durable and give as long a life as those used previously.

The highly competitive market place that manufacturers now find themselves in, means they have to be continually looking for ways of improving their ranges. This situation tends to lean heavily in the users interest, as each company strives to make their equipment more cost effective, easier to operate and produce exceptional playing results.

Golf green maintenance has come a long way over the last few decades and although there appeared to be slowness in accepting the turfcare machinery, especially mowers that were available at one stage, it certainly has caught up today.

Next time you are cutting greens in your mobile armchair surrounded by all those gizmos, spare a thought for your predecessors at the beginning of the last century. I bet you are glad you are managing a course in 2003 and not in 1820.