

Bigger is Better

Roland Taylor examines the swing from using compact tractors to larger models on British golf courses

An increasing number of larger clubs are now turning to more powerful tractors in preference to the compacts they have used in the past. Tractor manufacturers key market is agriculture and they have had to take weight distribution in to account to reduce soil compaction. This has meant changes in design to achieve as near as possible a 50/50 axle loading on the front and rear to give an even weight on each tractor wheel.

Tyre manufacturers have also improved their designs. A large tractor fitted with low-pressure tyres, that are inflated correctly, is likely to cause no more surface compaction than a smaller less powerful model. However, there is the possibility the larger tractor will create more compaction at deeper levels than the smaller one.

Other reasons for selecting more powerful units are that larger and wider turfcare machinery, such as top dressers and vertidrainers, require

higher horsepower to give optimum performance.

Another factor is increased output. It is a continual battle to find ways of reducing costs and finding more efficient ways of maintaining high standards.

The bigger machinery covers the ground quicker and reduces the number of loads required to carry out the work, thus saving both time and manpower.

In the following illustrations a number of clubs have purchased larger tractors and we take a look at their reasons for making this decision and some of their comments.

McCormick

The St Andrews Links Trust in Fife attracts golfers from all over the world who arrive expecting to find the six courses in tiptop condition. The sandy soil and coastal weather make this a tough job. To help them maintain the high levels of excellence they have recently upgraded their tractor fleet with three McCormick CX85s.

This move up from traditional compacts is proving to have a big impact on productivity because the tractors can tow larger trailers. Fewer journeys are needed to haul sand from the beach to fill bunkers or carry turf from the nursery to reconstruct eroded bunker walls. The McCormick is also proving capable of working the six tonne top dressers on the fairways and landing areas.

Gordon Mckie, Head Greenkeeper of the Eden course, said, "The tractors are making a big difference. More material is shifted on each journey and they are quicker. We have found the time taken on the three-mile journey to the beach has been cut by 25%."

One of the tractors is fitted with a Liftmaster hydraulic loader that has a two tonnes lift capacity and a tipping height of 3.8 metres.

Another has large flotation tyres so it can be used to mow the nursery turf and operate a larger aerator. All the tractors have spacious cabs with wide doors and provide a comfortable working environment.

Commenting on these latest acquisitions, St Andrew's Links Superintendent, Gordon Moir said, "The tractors are performing well and the fact that they are British built is a bonus."

John Deere

Woking Golf Club was established in 1893 and this 18 holes, 6340 yard, Sussex course is ranked in the UK's top 100. Last year, through a contract hire scheme with John Deere Credit, they took delivery of a 75hp 5410 utility tractor.



▲ McCormick: Gordon Moir, right, Links Superintendent, and Gordon McKie, Head Greenkeeper of the Eden course, at St Andrews Links have upgraded to the CX85.

Head Greenkeeper, Jon Daly, who took over this role in 2003, having spent five years at the club, explained, "Our previous equipment could not be relied on and so valuable time was wasted. We have found the 5410 tractor highly efficient, comfortable to operate, easy to maintain and above all very efficient. This means that more attention can be paid to ensuring the course is in tip top condition."

The tractor is fitted with floatation tyres and according to Jon the weight distribution is such that with an attachment on board the unit has less ground pressure than a greens mower. No turf marking problems have been experienced.

By having a large power unit they are able to use wider machinery behind it, such as a two metre wide vertdrainer and 1.3 metre earthquake subsoiler. This means that the operations are carried out quickly and efficiently.

The 5410 has now been superseded by the new 5415 model. This latest version has a larger and quieter cab, hydrostatic power steering and a choice of transmissions.

John Deere's Tier 11 emission certified Power Tech diesel engine provides the power. At a rated engine speed of 2,300 rpm it is said to give better fuel economy, quieter running and a more comfortable ride.

The cab has curved rear corner windows for better visibility and with a noise rating of 78dB(A) it is less distressing for the operator.

Other ergonomic features include a choice of a comfort or suspension seat, plus a tilting extendable steering column. There are five synchronised transmissions to choose from and four models make up the 5015 series of John Deere utility tractors from 55 to 80 horsepower.

TYM

According to Course Manager, Mark Logan their TYM T431 tractor at Silvermere Golf & Leisure near Weybridge, Surrey, has gone about its work without any problems.

"We use the tractor for fairway aerating, scarifying and hollow tining. The ground pressure is low enough for it to be used safely on greens.

One of the major benefits we have found is the automatic PTO. It is very efficient and safe, especially when we are training staff on the



▲ JD5410: The John Deere 5410 in action at Woking Golf Club.

tractor. One of the other features my team like about the tractor is the air conditioned cab, they are queuing up to use it in hot weather," said Mark.

The T431 has selectable four-wheel drive with 16 forward and reverse gears including a creeper speed and synchronised shuttle. The PTO has an electronic hydraulic push button control and the choice of 540 or 750 rpm. Power is provided by a 43hp Kubota V2203 engine.

TYM offer two other models in their larger tractor range, the T550 (55hp) and the T700 (70hp). All tractors have a two-years warranty.

Kubota

Like most companies involved in selling tractors to the golf course market, Kubota are finding an increasing number of clubs are considering larger equipment to achieve a more efficient operation.

Their groundcare tractor range offers a choice of models in the higher output category.

One in the L30 series is the 50hp model. This four-wheel drive tractor has a ETVCS water-cooled diesel engine, with a choice of manual or GST transmission. Power steering is standard and it can include air conditioning in the cab.

The ME Series tractors have been designed for high output. There are two models in the range an 86hp and 94hp. Both are powered by Kubota's own engine. A fully synchronised main transmission gives 18 forward and 18 reverse gears.

Hydraulic shuttle transmission is another feature. Operator comfort and ease of use has played an important role in the design of these tractors. There is also the option of an easy and quick to attach, or remove, front loader.

Kiotei

Foxhills at Ottershaw in Surrey has three courses; the Chertsey, an 18 hole parkland course; the Longcross (wooded); plus a par three 9 hole. Course Managers, David Langheim and David Wyborn look after these courses.

With nearly 75,000 rounds of golf being played each



▲ TYM 3825: The TYM T431 is used at Silvermere Golf & Leisure.



▲ Kioti DK50: The Reco Kioti DK50 is a firm favourite at Foxhills.

year they are continually looking for ways of increasing work efficiency. To aid them in this, they have recently acquired a 51hp DK50 Kioti tractor.

David Langheim said, "We were looking for more capacity from our tractors and decided to go for a larger unit that would give us what we needed."

Regarding compaction, he said that they had been using large tractors for years with very little problem.

The new Kioti, which is fitted with a loader and large capacity front bucket, will enable them to reduce their loading time by 50%. They are also looking to buy wider attachments in the future, as this will enable them to carry out operations quicker such as vertidrainage.

The Kioti has a 51.2hp engine, 12 forward and 12 reverse synchromesh gears plus shuttle shift. Independent 540 rpm PTO includes control for automatically engaging or disengaging the PTO when the implement is lifted or lowered.

A fully air conditioned cab is available as an option. The tractor has two-years unlimited hours, parts and labour warranty.

Renault/Claas

Ian Thomson, Groundcare Product Manager for Renault/Claas, said that the most important aspect to consider regarding larger tractors for golf course work is their design and distribution weight. The greater the difference between the weight of the front and rear axle - heavier at the back - will increase the ground pressure, especially if a rear-mounted attachment is fitted.

Modern tyre technology has resulted in the weight of a large tractor being spread over a greater area so the ground pressure is often less than that of a smaller tractor.

Gavin Ballantyne, Course Manager at Turnhouse Golf Club near Edinburgh, took a fresh look at his tractor policy. He explains, "We found our small compacts were fine for mowing, but not a lot else. One of them was fitted with a loader and its capacity was minimal, plus it could not handle pallets. These had to be off loaded by hand.

We decided to buy a 52hp Renault/Claas 210-4 with a five tonne loader and only retain one of our compacts for routine work. The new tractor gives us the power and capacity of a large tractor in a small package.

The original tyres would not allow us to get into tight corners so it was suggested we fitted a slightly thinner tyre with a grass pattern. Although the Renault is twice the weight of our compact the new tyres bought the ground pressure down to 7psi."

Gavin said that most of their equipment is for use behind compacts but as implements come up for renewal there will be the opportunity to go for wider machinery. This would save manpower and be more cost effective.

He concluded by saying that loading times were far less than what they had been before and were also safer because the tractor was well within its capabilities.

The Renault/Claas Pales 210 has a 52hp engine with four gears and three ranges (one extra slow). Steering is hydrostatic with a priority valve. A cab is available as an optional extra. There are two other models available in the Pales range.

Massey Ferguson

From Massey Ferguson there are three models in the MF2200 series with horsepowers of 55hp, 68hp and 80hp. All tractors have Perkins engines and there are a number of transmissions options including Speedshift gearboxes, these allow for gear changes on the move. The low noise cab can be fitted with optional air conditioning for operator comfort.

The electro-hydraulic 540/1000-rpm PTO is controlled by the touch of a button and an independent hydraulic pump ensures the steering has a light response under a variety of conditions.

Tractors are available with two or four wheel drive and optional equipment includes a trailer braking system.

In the UK at present there are at least 23 companies offering a large tractor range. With a rough average of 10 models each this adds up to 230 different tractors on the market.

Admittedly, most of these tractors are designed for the agricultural market. It must be borne in mind that, as far as compaction is concerned, growing crops is no different to cultivating turf-playing surfaces.

Manufacturers have had to take the weight factor into consideration when designing a new model. The main difference between agriculture and groundcare tractors is the type of tyres that are fitted. Again manufacturers of this component have addressed the likely problems and come up with solutions in recent years.

Some suppliers and dealers are not interested in the turfcare market, it is therefore important that greenkeepers deal with those companies that have a department specifically for this sector.

With the right advice, support and help a change over to a larger tractor can bring a host of advantages that make caring for a modern golf course more cost effective and a tad easier.