



Compact and Bijou

Roland Taylor looks at the range of compact tractors currently jostling for position in a crowded market

My dictionary defines "compact" as 'having parts or units closely joined', 'occupying a small volume because of efficient use of space'. Both definitions apply to most modern tractors, regardless of their output. Today, the term compact does not necessarily mean a small tractor when it comes to the power it delivers. Over the last two decades diesel engines have come down in actual size, while horsepower has risen.

With the changes that have taken place in agriculture, manufacturers, who previously showed little interest in the groundcare market, are now producing model ranges specifically designed for it. This has meant an increase in competition with the result that innovation is to the fore, as companies strive to retain or gain market share.

The same also applies to tyre companies and, as a result, larger tractors fitted with the correct tyres can now be used on areas where previously it was not possible without damaging the turf and the rootzone layers.

It is also necessary to take into account the power requirements of modern machinery necessary to maintain a course in good condition, especially when it comes to aeration and dealing with compaction. Often this equipment now needs plenty of both engine and pulling power to do the job satisfactorily. For this reason alone it is necessary to find the right tractor for one's own specific requirement. This involves comparing ground weight and the soil types it is likely to be used on.

The following is to whet your appetite, with a selection of models that are now available (plenty are not included simply due to lack of space) plus some experiences your peers have discovered with specific tractors.

JOHN DEERE

This year saw the launch of two new large chassis compacts - the 4610 (44hp) and 4710 (48hp).

There is a choice of transmissions. The eHydro(tm) combines all the benefits of a gear driven tractor for accurate speed control when using coring or deep aeration equipment, plus the flexibility of hydrostatic transmission, when using a loader.

PowrReverser(tm) transmissions is the alternative and provides clutchless shuffling between 12 forward and 12 reverse speeds, plus additional 12/12 creeper gears.

In addition there is the eMatch(tm) which enables the operator to customise the tractor's transmission response for the specific jobs the tractor is carrying out. The system matches the speed and loading and combined with optional cruise control, gives great accuracy with less operator fatigue, especially when working at low speeds.

John Deere has restyled the Standard models in their 5015 series. These new look tractors are available on turf tyres, with either two or four wheel drive. They have a wider cab with improved all round visibility and a low



▲ John Deere 5515 tractor

noise level of 78dB(A). There is a choice of five synchronised transmission systems.

Woking Golf Club is the oldest heathland course in the country and is rated among the top UK 100.

This spring they took delivery of two John Deere tractors, the 4410 (33hp) and a 72hp 5410.

"Our previous equipment could not be relied upon and we were wasting valuable time. The tractors are much more efficient, easier to maintain and very operator friendly. This means we can get the work done faster, leaving more time to spend working on the courses," said Head Greenkeeper, Jon Day.

The smaller tractor with an Aercore 1500 has been used on the greens throughout the summer. In addition to operating spiking, slitting and sarel rolling, it also powers a Tornado side blower and Sisis Variseeder.

For general grounds maintenance work, the larger 5410 is used with an assortment of attachments including Turfmech TM5 vacuum collector, 2-metre Vertidrain aerator and Earthquake subsoiler.

Jon Day concluded that both tractors cope easily with all the jobs they required them to do and by running them on turf tyres they could be used anywhere on the course without causing damage.



▼ John Deere 5015 Series tractor cab



▲ Massey Ferguson tractor

ACGO (Massey Ferguson)

A three cylinder liquid cooled Iseki diesel has been chosen to power the new MF GC2300 mid range compact tractor. This latest addition is part of a new company policy, following extensive customer research in the grounds care sector.

Safety, ease of use and operator comfort, has played a major part in the design of this tractor. The driving position has a sprung adjustable seat that positions an operator so they have all-round visibility and the semi platform provides plenty of leg room. All the controls are colour coded and within easy access. Another feature of this compact tractor is its versatility to take on a host of grounds maintenance tasks in confined areas.

The MFGC joins the already established 2200 series that offers three models from 55hp to 80hp. The emission compliant Perkins diesel engines used for these tractors, are said to provide 10% more power with 5% less fuel consumption.

There is a choice of transmissions and the Speedshift, which is an option, gives a 20% reduction in every gear.

For those looking for fingertip draft and positioning control, there is an optional electronic linkage system with rotary controls for the setting mounted on the console. There are special GE versions of this tractor for use on extreme hilly terrain. The tractor's height has been reduced, so the centre of gravity is lowered and this is said to have the effect of improving the unit's stability under these conditions.

RANSOMES JACOBSEN

The new Iseki TXG23 tractor has a 23hp, clean burn 3-cylinder diesel engine with a displacement of 1123cc. Iseki say their diesel engine has been designed to provide high performance at low cost, and with a 21-litre fuel tank and 540kg lifting capacity, it is designed for heavy work over long hours.

Hydrostatic transmission gives variant speed selection in both forward and reverse. There are a number of features designed for operator comfort, including, a flat floor that allows easy access from both sides and the tractor's bonnet has been angled to provide a clear view out of the front of the machine.

Power steering is standard and all the controls and levers are within easy reach and there is easy access to the engine and other components and servicing has been kept to a minimum.

KUBOTA

The new ME Series is aimed specifically at professionals working within the amenity sports turf. Comprising three models rated at, 58hp, 85hp and 94hp respectively, the ME5700, (58hp) ME8200 (85hp) and ME9000 (94hp) tractors have been developed to deliver very high levels of comfort, performance and operating efficiency within a compact, lighter-treading frame. All are powered by the E-TVCS (three vortex combustion system) water-cooled diesel engine. These are said to produce high torque rise characteristics, reducing the need to change gear while giving smoother performance in all working conditions.

For driver comfort there are ergonomic control layout, illuminated instrument panel and deluxe suspension seat.

Transmission systems match each model's power output. The ME5700 has a fully synchronised 12/12 transmission with clutchless, on-the-move, hydraulic shifting from forward to reverse and vice-versa. The ME8200 and ME9000 have 18 forward and 18 reverse speeds, fully synchronised gearboxes, also with clutchless hydraulic shuttle shift for directional changes without having to stop the tractor.

All three tractors have an independent hydraulic rear PTO, which can be engaged and disengaged on-the-move.



▲ Iseki TXG23 tractor



▲ Antonio Carraro TTR 4400

ANTONIO CARRARO

The TRX multi functional tractors have the provision to allow the attachments to be used either on the front or rear, in some case both. The drive direction is chosen through RSG, a reversible drive system. The tractors are said to have the capabilities of working in a wide range of environments and different terrains.

SAME DEUTZ

Their Deutz-Fahr Agrokid and Same Solaris have a number of commonalities and specifications.

All tractors in these ranges have three PTO points, a 540/1000 rpm rear a 1000/2000 rpm for front and mid mounted equipment. Position and draft controls are fitted as standard. There is 12/12 mechanical transmission, with the option of hydrostatic on the 25hp model. Features included are oil immersed disc brakes and electro hydraulically operated front differential lock, for added traction.

Solaris have four engine options in their range, three water-cooled plus an air-cooled version.

TRACTORS UK

For courses looking for a small compact there is the 3-cylinder, 18.5hp VST1880D which is said to have a host of features comparable with larger tractors. It is less than 1-metre wide so it can be used in areas where access is very limited.

The tractor is powered by a 3-cylinder Mitsubishi diesel engine and has a 6-speed gear box. The straightforward design is said to require minimal maintenance while retaining durability and make the VST 1880D competitively priced.

MOTOKOV

The TYM range is made up of models from 31hp to 70hp, with the smaller fitted with Kubota engines and the larger 55hp and 70hp have John Deere power units. Synchro shuttle transmission is standard on most models and the creep speed is fitted on the bigger machines. Other features include selectable 4-wheel drive and the multi-plate hydraulic PTO package, which is operated by a hydroelectric control from the driving consul. All the TYM tractors have two years manufacturer's warranty.

KIOTI

The DK range includes 5 tractors from 35hp to 51hp. All have mechanical gearboxes with full synchronisation. The hydrostatic steering has its own hydraulic pump and there is the option on some models of a double speed turning system that is said to reduce the turning radius and avoid scuffing of the tyres. Kiota 'green' engines use indirect injection technology that meets emission regulations throughout the world. The hydraulics has its own high flow pump driven directly off the engine. Position and draft control, plus swinging towbar, are all fitted as standard. The tractors have two year unlimited hours, parts and labour warranty.

RENAULT

The specifications of the Dions and Fructus series include tractors from 52hp to 76hp, with either a field or creep version available. A main feature is the driving position, which has a plenty of leg room and colour coded controls for ease of operation red for transmission, green for hydraulics and yellow for power.

There are now over 20 UK firms offering tractor ranges in what is a relatively static marketplace. It is worth checking out the specifications from as many suppliers as possible. The aim is to determine exactly what is included and what the optional extras are, then talk to other users before arranging a demonstration. There should be no problem in getting suppliers to demonstrate their latest models, it is more likely that you would not have all the time required to see them.

Competition for market share is fierce, so the financial package also needs to be taken into account.

A small amount of research could result in some considerable savings being made.

McCORMICK

Wetherby Golf Club in Yorkshire had a need for a mid sized tractor which would operate a 1.5metre punch-action tiner/corer, but be light enough not to damage the greens.

"The McCormick GX45 is part of a new range of groundcare tractors and seemed to embody the things we were looking for. It has been kept very busy over the past year and exceeded our expectations, in terms of the growing number of jobs we've found for the little tractor," says Head Greenkeeper David Hannam. He went on to say that they decided on a set of generous flotation tyres that allow the tractor to work on delicate grass areas, without leaving a mark yet have enough grip on their more challenging banks.

The GX45 is powered by a 44hp Yanmar diesel engine, has mechanical forward-reverse shuttle and 12-speed transmission plus creep facility. At Wetherby it handles the corer, three different cylinder and rotary gang mowers and a trailer for general transport work.

Eric Wallis, one of the tractor's regular drivers, added that the tractor runs very smoothly, is light to operate and very manoeuvrable.

"It is just what we needed for mowing and other work, and copes well with all the jobs we have given it."

A drop valve to regulate lift arm descent has been added to ensure the heavy corer can be lowered to the ground gently.

David Hannam concluded by saying that following crew training, calibration and familiarity trials, the GX45 recently came through a full 18 green run of hollow tining in eight hours with exemplary performance."



▲ McCormick GX45 tractor