



Modern cabs offer much improved all-round visibility. Think too about noise levels and the need for air conditioning. Are sealed cabs the way to go when carrying out spraying?

# Tractors: Don't let choice get in the way of the right decision

Match the correct combination of tyres, power, manoeuvrability and lift capacity correctly, and it is possible to buy a tractor today that could well still be in use some ten or more years into the future. Try doing that with any other item of equipment. James de Havilland discusses...

It is tempting to open any item on current 'small' tractors with something along the lines of 'modern tractor designs pack more power and manoeuvrability into increasingly compact packages'. On the face of it, this certainly seems the case. The reality is somewhat different. Small tractors are harder to pigeon hole these days, the sub-compact, compact, small or even turf tags we used to hang on tractors having morphed into groups that are far less structured.

Without really trying, it is possible to come up with a list of well know tractor brands that, between them, should contain a model to suit most needs. In fact it is tempting to suggest the dealer who sold the Deere, Jacobsen or Toro kit used on the course could probably come up with a choice of Deere, Iseki, Mitsubishi or Kubota tractor for 90% of users without having to look any further.

But it is worth digging a bit deeper. Tractors from the agricultural sector 'big boys' also make a range of interesting smaller models. Massey Ferguson brand owners AGCO includes small Fendt models, for example. CNH, which has Case IH, New Holland and Steyr in its stables, also has some interesting kit on offer. Then there is McCormick, a company that, like Landini, can draw upon Italian flair to come up with some genuinely interesting tractors.

Then there are the smaller, specialist importers with some tempting kit. Goldoni, Carraro, BCS Volcan, Riko, TYM et al are a few examples. There

really is a long list of available models, but not all are suited to work on a golf course.

To help establish what machines are worth having out on demonstration, set out the basic ground rules. A call to a couple of tyre specialists early on can also help. It is surprising how the tyre options they have specified for end users can help. A specialist who can specify a different wheel and tyre package can really start to open up the choices. Want to run a 75hp monster on your greens? With the right tyres and wheels, why not?

As an initial guide, remember the basics. Modern tractors should have fewer compromises, greater choice - making it less stressful to select a design that will do all the jobs asked of it. Put the intended tasks at the head of the selection process, and the right make and model will probably choose itself.

## Tractors: Don't let choice get in the way of the right decision



Mechanical transmissions with some form of powershift make swapping ratios a doddle. This can be a useful feature to consider. A power shuttle is useful too, with an increasing number of 'small' tractors benefiting from 'big' tractor features

### A FEW BUYING CONSIDERATIONS:

- **Transmission.** This is where matters can get complex if you let them! In outline it has been established that hydrostatic drive is the way to go for variable speed applications such as mowing, but mechanical drive 'mid-range, gear 2 at 1,800rpm' is still the route most prefer for certain often repeated precision jobs such as spraying or top dressing. Where it gets complex is when semi-powershift, shuttle and creep speeds are added into the mechanical transmission mix. The key is having the right gear speed choices within the critical 0.5 to 10kph working range.
- **2WD or 4WD.** Few courses will 'need' the extra traction afforded by 4WD. The key issue, however, is not the drive to the axle itself but the influence a driven front axle will have on standard tyre equipment offered, the ballast effect of a heavier front axle and its influence upon turn radius. A 4WD tractor in 2WD can have a perfectly acceptable lock, but does the inertia within the axle influence how the front tyres scuff during a turn?
- **PTO.** Most tractors will come with a single 540rpm PTO, but a more powerful model may benefit from a 750rpm 'economy' 750 rpm PTO speed choice. This allows 540 rpm to be delivered at the PTO at greatly reduced engine speeds. Tractors of 55hp plus may offer this. Ground speed PTO is another option. How the PTO is engaged is also a consideration. A simple lever and live PTO system is a good starting point, electronic selection not being the gimmick it was once seen to be; modern designs should modulate power uptake to the PTO, avoiding the harsh engagement associated with some early designs.



A 92hp 'ag' tractor on turf tyres does not suddenly become ideally suited to the demands of golf, but it shows what can be achieved. All this good work will be undone by those rock hard trailer tyres!



A simple tractor and loader combination is fantastically useful, but there is no reason why this same tractor, fitted with the right tyres and without its loader, cannot be used to top dress or spray the greens

- **Cab, ROPS, Straddle or platform.** The choice between a cab and ROPS tractor is pretty obvious, an air conditioned and heated cab having obvious attractions. Risk assessment needs taking into account in this decision, particularly on tractors that may be used for spraying. Some tractors may even have sealed cabs that, when fitted with active carbon filters, influencing the safety equipment that needs to be worn when applying certain materials. Traditional straddle tractors, with the transmission tunnel running between the operator's legs, and typically the gear levers too, are rivalled by platform designs with a flat floor and side mounted levers.
- **Front linkage.** A growing number of small tractors can be specified from new with an integral front linkage or retrofitted with one at a later date. The actual number of uses on a course for front linkages

are limited, but they do have advantages. The most obvious is enabling ballast to be easily fitted and removed. Also consider applications such as sweeping, a front mounted mower, extra spray tank or even a transport box.

- **Front loader.** Even if a loader is not at the top of the wish list, it can pay to buy a tractor with a loader ready specification. A tractor that can be specified with mid-mount remote valves with a joystick control have a head start if a loader is purchased at a later date. A specification that can include a shuttle transmission for fast changes between forward and reverse, with or without the clutch, is also worth considering. There are also models that are offered with a choice of loader designs from the factory. These may come at a favourable 'package' price.
- **Tyres.** It is really important to think laterally on the tyre issue. Turf pattern tyres are not necessarily low ground bearing pressure tyres. The standard tractor wheel rims are also not the only ones that can be fitted, offset rims allow far fatter and softer rubber to be fitted. Of equal importance there is no reason why a tractor should be shod with just one set of wheels and tyres. Around 20 minutes with a jack and air wrench should be enough to swap between standard tyres for trailer, loader and hard surface duties and soft turf friendly rubber for top dressing, spraying or coring.



A modern tractor should be far less likely to leak oil, but accidents can happen. It is well worth using biodegradable oil in the hydraulics. This will not prevent hot spilt oil scorching the turf, but it will allow the damaged area to recover much faster



Modern tractors can look pretty stylish but it is the bits you cannot see that really matter. Good ergonomics, the right range of gears and enough lift without too much ballast up front are more important

- **Operator comfort.** There is more to comfort than just choosing between a cab and ROPS model. The way the controls are laid out, levels of noise and vibration plus the type of seat fitted are all critical. On paper specifications are one thing, but actually jumping on a range of different tractors really can highlight just how they vary. In an ideal world, the trick is to draw up a shortlist of models and then try them side by side. A modern looking tractor may be hiding ancient 'oily bits'. The obvious first choice is not always the best choice.



A good place to start when thinking about a new tractor is with a tyre specialist. Fitted with the right wheel rim and tyre combination, larger and heavier tractors need not be restricted to just the fairways



A tractor with 4WD can be extremely manoeuvrable. A flat tread at full lock is a point to look at as it will help reduce turf damage during a really tight turn. A simple test is to do a few 'doughnuts' with a demo tractor