QuickFencer fencing tool:

Straight, true – and quick

It is not too often that a farmer invention succeeds in the tough world of machinery manufacture, but QuickFencer – a system for making fence erection easier and quicker – appears to have achieved just that. Andy Collings reports

The success rate of farmer inventions in the hard, unforgiving commercial world of agricultural machinery manufacture can probably be counted on a couple of hands. What may appear to be a perfectly sound concept is frequently shot down as being too expensive, too complicated or being an idea that someone else has already tried.

Yet there are those – not many, it has to be said – who have persevered with their projects and seen them develop into commercial production and sometimes more. A relatively new member of this select group of entrepreneurs is John Brewer, a true Lancastrian who appears to make little demand on the world other than it should like his fencing system.

Based at Moorgate Farm, Dinkley, near Blackburn, Lancs, Mr Brewer runs an ag contracting business that majors in hay and silage. He has a yard-full of grassland machines, which includes six balers, three wrappers, tedders, a big John Deere 7300 self-propelled forage harvester and a fleet of John Deere tractors. The business also offers hedge and verge mowing, fencing and septic tank emptying.

In the autumn of 2003, Mr Brewer was faced with a larger than normal fencing contract. Not, he says, looking forward to unravelling yard after yard of wire netting by hand, he set about designing and then building a system that would not only make the job easier but also quicker.

"The QuickFencer was the end result of a wet Saturday afternoon in the workshop with my co-designer Steve Rawcliffe," he explains. "I used to hate having to unroll wire netting – it took so long and, when it came to tensioning the netting, it was either too loose, too tight or distorted." A long afternoon's cutting and welding produced the first prototype which, after some fairly minor modifications, actually worked.

QuickFencer was designed to be attached to the front or rear of a tractor, or to the boom of a loader/telehandler. A roll of netting was placed vertically on a metal pole, with the wire fed out to the side and then through a 90° bend so that it faced away from the tractor.

The end of the wire was then stapled to a strainer and the tractor reversed with the wire unwinding as it travelled. The really clever bit came when the unit arrived at

John Brewer claims that a five-man team, with the help of his QuickFencer, is capable of erecting 500m of post and wire fencing in a day.

Wire is loaded onto the QuickFencer. The 500m rolls of netting weigh in at a substantial 300kg and need a telehandler to provide the muscle.

John Brewer sets the machine into its tensioning mode. The outer delivery arm is allowed to pivot and pinch the wire as the tractor is reversed. It's important not to have the pinch point on the 'knots' where the vertical strands are attached to the horizontal wires; if it is, the wire will slip.

which the wire was delivered could be worked in forward and reverse directions.

"This meant that it was effectively double-sided," he says. "And this avoided any tricky manoeuvring in the field. The design became much more versatile."

With the wire attached to a strainer post, it is run out at speeds of up to 16km/hr. Use of a telehandler allows the QuickFencer to be raised over obstacles, but it can also be fitted on a tractor's three-point linkage.

the next strainer. At this point, the frame guiding the wire out to the side was then released so it could pinch the wire in the hinge as the tractor reversed a little further – allowing it to be tensioned before being attached to the strainer.

"The beauty of this tensioning system is that it pulls all the strands of the netting evenly so there is no distortion," explains Mr Brewer. Precisely how much tension to apply is down to experience; clearly it is possible to over-tension the wire just as easily as it is to leave it too slack.

After a few days' use there were some new ideas to incorporate and a second prototype was built, the key difference being that the extending side through

Prior to stapling to the straining post, it's down to the operator to know exactly how much tension to apply. Judging correct wire tension comes with experience.

The machine was certainly quick – Mr Brewer reckoned to travel at speeds of up to 16km/hr when running out the wire – and the tensioning system was reasonably foolproof, providing the pinch point of the wire did not exactly line up with the 'knots' on the wire where the vertical strands were attached.

Those who have struggled to unroll netting by placing a pole or a bar through the middle of the roll, watched it snag at every turn and then suddenly slip along the bar to pinch unwary fingers on a cold frosty day, will appreciate the benefits of such an unrolling system.

By December of that year Messrs Brewer and Rawcliffe considered they had developed the QuickFencer sufficiently to start production. But first they needed to get the design patented.

"It's not a cheap or easy exercise to get machines patented," says Mr Brewer. "To do the job properly needs a lot of work but eventually we succeeded – just before we took it across to the LAMMA event held at Newark." And it was here that, entered into the inventions competition, he took first prize for his category – and better still, he sold the machine off the showground to a visiting farmer.

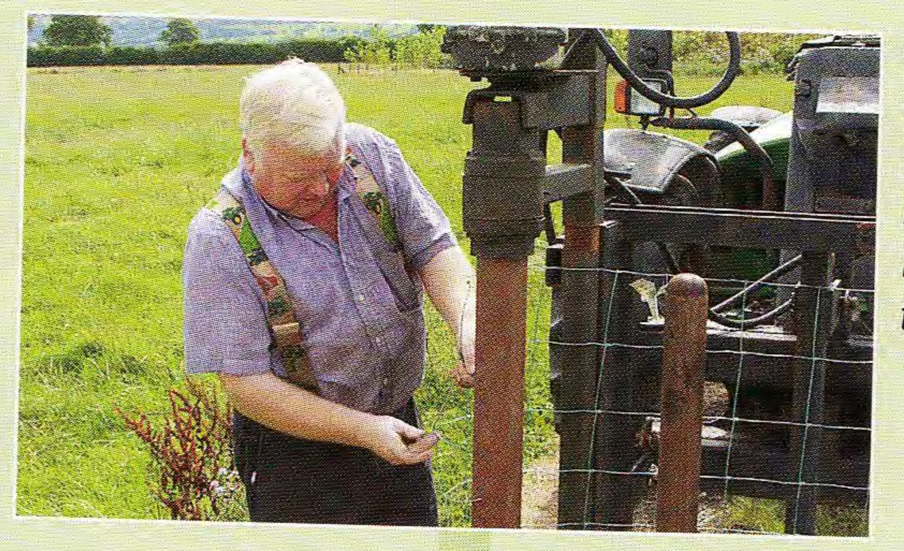
In the first year he managed to sell 100 machines and he reports that he is now selling about 150 each year with markets in the UK, Ireland, France, Belgium and Norway. The machine is now also made under licence in Australia.

There were still some improvements to be made, though. Running out 100m lengths of wire and then joining another roll on to it was not exploiting the full potential of the machine, he reasoned. Instead, he approached wire manufacturers to see if they would be prepared to produce longer rolls – 300m or even 500m rolls.

"They were not interested," he explains, "putting forward the argument that people would get hurt handling them. I told them that they are more likely to get hurt handling the 60kg 100m roll, as no-one would even attempt to lift a 300kg/500m roll of netting without some form of lifting apparatus."

After six months he finally tracked down a manufacturer out in Portugal who could produce 300m rolls. After they had been delivered, other wire producers, anxious not to miss out on what could be some

Wire pinch point detail. Note how the hinge grips the wire as the unit is pulled backwards.



If the fence is only temporary, the wir be rewound using hydraulic motor. Jo Brewer attaches th to the rewind roller

Plus and Minus

+ Speedier fencing – up to 500m/day it is claimed
+ Tensioning of wire with little distortion for a neat result

– Cannot work effectively in difficult, undulating terrain
– Amount of tension achieved is down to human judgement

lucrative sales, started to increase their roll lengths to the point that most major wire makers now offer extra large rolls.

By now other markets were emerging for the QuickFencer. The deer sector wanted it for fencing with 2m tall netting, some countries wanted 1.2m netting to keep in horses; there has even been a request for 2.4m net to prevent bears from getting in fields containing sheep.

Different sizes of net called for modifications to be made to the unrolling system so that it was delivered out freely without distortion. The larger rolls also needed to be lifted by loader and required a central pole and base to allow them to be lifted and lowered down onto the rigid pole on the machine.

Most fences – certainly in the UK – need a strand or two of barb wire along the top of the netting, and Mr Brewer's machine is capable of delivering it and tensioning it. "We are now looking to modify the machine so that it can place four strands of barb wire at the same time – and then tension them individually using hydraulic motors," he says. "This type of fencing is apparently quite popular in parts of Canada to keep cattle in."

Needless to say Mr Brewer is now after long rolls of barb wire, and he has been informed that rolls containing 2,000m will be available by the end of the year.

"We have now got to the point where wire manufacturers approach us seeking opinion on their wire products. Whi very gratifying yet a route I feel we sh avoid; we cannot be seen to be favou or endorsing any particular brand."

For those who only lay out tempo fencing, there is an option for a hydra rewinding system that can recreate of netting that are very nearly the s size as the original.

Wire aside, fences also need posts, a was a logical development to market QuickFencer with a post driver attac to it – to provide the complete packag

"The make of post driver that we ch was a Bryce Suma, which not only ha hydraulic ram/rope weight lift and rele system but also has the ability to tilt in directions and work in an offset positio he explains. Customers can also spe drivers built by Malone or Wrag.

Mr Brewer adds that with a post driver board, daily output virtually doubles.

So, with the QuickFencer configurat now fully developed, it's time to see h it should be operated. At the start of day, the machine is loaded up with wi

The wire builds up on the roller as it is rewound using the hydraulic motor mounted on the top.

It can hold two 500m rolls, each lifted on using a telescopic handler.

"Depending on the shape of the field, I usually try and start by knocking in strainers and bracing them with solid angled supports," he explains. "These support the wire and keep it tight, so they need to be firmly placed in the ground."

On a typical straight fence run the wire is then spun out and tensioned in between the strainers.

"You can put the posts in first, but we prefer to tension the wire and then use the line as a guide for the posts," says Mr Brewer. "Having the wire in place also helps ensure that each post is at the right height and makes for a neater job."

Just how long a length can be tensioned is open to debate, but Mr Brewer reckons that 150m is about the upper limit. There are exceptions, though. He recently heard of one Australian farmer who tensioned 2km in one go.

With wire stapled on to the strainers, the posts at intervals of between 2-5m apart can then be knocked into the ground and the wire attached to them.

"We always try and strain wire away from the field corners to a strainer in the middle of the run," he explains.

"This means that operators don't have to struggle into tight corners with tractors and other kit."

Summary: With a gang of five men – two on the post-driving job and three on the stapling – Mr Brewer reckons that daily QuickFencer outputs can exceed 500m of completed fencing.

QuickFencer Details

Designers: John Brewer and Steve Rawcliffe

Featues:

- Wire unrolling at travel speeds of up to 16km/hr
- Tensioning of lengths in excess of 150m is achieved by allowing the delivery gate to pinch the wire as the vehicle is reversed
- Wire capacity: 2 x 500m rolls
- Wire can be rewound using a hydraulic motor
- Integral post driver can be fitted

Price: From £1,450

"As a general rule, I always say to people that whatever system they are using now to put up post and wire fences, the QuickFencer will double their output," insists Mr Brewer.

"I also tell them that the only problem they will have is that they will get through more staples in a day."