



FOCUS DEVON

QUICK FACTS

Farmer	James Lee
Location	Crediton Devon
Area Farmed	Circa 170ha
Soil Type	Stoney Medium Clay Loam
Average Rainfall	Circa 800mm
Cropping	OSR, Winter Wheat, Winter Oats, Winter Barley, Spring Barley, Linseed, Kale.



Direct drilling suited well to the South West

Direct strip-till drilling using the Claydon system can be as successful in the South West of the UK as it has proved to be in the East, suggests the experience of a Devon contractor who has been using Claydon drills since 2007.

James Lee's decision to invest in a Claydon stemmed from more than a brief assessment of the direct drills on the market. The final year dissertation of his degree in agricultural business management at Reading University focused on different crop establishment systems' suitability for South West conditions, and involved varied assessments of the best type of direct drill to suit the soil types, terrain, farming systems and climate particular to the region.

"With higher rainfall than the east, small field sizes, some areas with soils susceptible to erosion, and a lot of maize grown, I wanted to find a crop establishment system, that would best suit these types of South West farms, and cut establishment costs while maintaining yields," explains James.

"At the time I was finishing my course, on our home farm we were establishing combinable crops conventionally in a three-pass system, using a plough and press followed by a speed harrow and then an Accord tine drill on a Kongskilde Triple K cultivator. It was a

system that, in a decent season, produced good results, but it was very time-consuming and used a lot of diesel. Ploughing alone was costing well over £20/acre.

"I wanted to develop a contracting business focusing on direct drilling, as the work I'd done at university suggested there was potential to reduce establishment costs on our soils with no detriment to yield. Having looked at various drill designs, the conclusion I reached was that the twin-tine principle of the Claydon, with the leading breaker tine working deeper than the following seeding tine to create a channel for drainage and root growth, would also help address compaction, something that wasn't possible with disc coulter-based drills. It would therefore have a wider working window than alternatives, as well as being a better tool to begin the conversion of uneven, compacted fields from conventional tillage to direct drilling."

Based on his research and conclusions, a 3m Claydon SR was ordered for delivery to the family farm at Shobrooke, Crediton, and James

began drilling with the machine at home and for contract customers in September 2007. Having seen considerable variation in autumn weather in the seasons since then, he believes he has learned a great deal about how to get the most from direct drilling even in challenging years. Customer interest increased significantly over the past year, particularly since James this season exchanged his original Claydon SR for the latest Hybrid design, which combines key design concepts of the original V and SR (stone release) drills to create a fully-mounted yet 6m wide machine which is manoeuvrable and easy to transport.

"I covered 3,000 acres with the SR over five years, but with the recent jump in interest meant this season alone I drilled 1,700 acres," he says. "The weather meant the autumn was more difficult, but it was the same for every system. I did less winter drilling, but then I was being asked to do more in the spring."

Much of the reason James is a firm believer in encouraging customers to stick to no-tillage once they have switched over to the system



is the difficulties that can result from thinking that the plough is a solution to wet conditions, he says.

“Making a commitment to a no-tillage system makes it much easier to improve results year on year, and patience is a virtue. Improved structure reduces incidences of compaction, and the ‘need’ for ploughing and subsoiling becomes less, while the benefits of keeping organic matter on the surface become more apparent. On my customers’ land we have seen the effects of reduced soil erosion and moisture loss, a better structure and greater worm populations.

“And while the key benefits come from reduced establishment costs rather than higher yields, soil variation within fields means it’s particularly important in our small fields to improve poorly-structured patches.”

Being more flexible with cropping is beneficial – a good spring barley crop is better than a poor winter wheat, for example – and attention to detail is important when it comes to weed control, he suggests.

“Where we have land now that’s not been ploughed for five years, rainfall percolation has improved, and the tramlines look better and provide more support. And it’s also

about the benefits to the farm and the wider environment of protecting soils from erosion. We have some light, drought-prone land towards the coast that, under conventional tillage is prone to soil being washed away in heavy rain. With the uncultivated strips it leaves between the drilling rows, the Claydon system helps minimise this problem, while also retaining moisture in dry conditions.

“It’s also notable that longer-term Claydon drilled fields are more level, combines leave less of a footprint, tramlines remain almost level with the rest of the field by the end of the season, and the land has become easier to work with the drill as time has gone on.”

Mr Lee operates his 4m Claydon Hybrid behind a 185hp Massey Ferguson 6495, and reckons this size of high-hp but light weight tractor is well-suited to the drill.

“I think the Claydon needs less power than other designs of twin-tine drill, and takes less pulling. On a good day in good conditions, I can cover 75 acres when drilling oilseed rape. My drill is equipped at the rear with press wheels followed by light harrows rather than levelling boards, as they suit the lighter land here, but when conditions are wetter it’s handy to have the option of being able to remove the consolidation/covering elements –

in stickier soils I simply lift the press wheels out of the way, and it’s easy and cheap to run over with a set of spring tines later if any further levelling is required.”

After one of the wettest seasons in many years, Mr Lee acknowledges that the Claydon drill has a certain working window, and that beginning drilling as early as possible is beneficial.

“But forcing crops in using other systems rarely produces good results, and the Claydon has shown me that, as land improves with season upon season of direct drilling, its working window gets longer over each year,” he maintains. “And given time, it’s possible to do some really good things to the land with the Claydon system.”

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