



FOCUS EAST YORKSHIRE

FARM FACTS

Farmer: Sam Middleton

Location: Grange Croft Farm, Wawne near Hull, East Yorkshire

Area farmed: 130 ha + 400 ha contract

Soil: medium clay

Cropping: winter wheat, winter barley, vining peas, herbal leys, cover crops

Faster, more efficient way of establishing crops is a game changer

When East Yorkshire farmer Sam Middleton exited dairying and moved to an arable-system in 2019 he needed a simple, fast, efficient way to establish crops. Direct strip seeding met those objectives while saving significant money and time, allowing him to focus on developing other parts of the business.

“Transitioning from being dairy farmers to running a mainly arable enterprise was a huge decision,” reflects East Yorkshire farmer Sam Middleton, who with his wife Lucy, a former vet, farms 130 hectares at Grange Croft Farm, Wawne, near Hull.



Sam Middleton, farming near Hull, in front of his 3m mounted seed and fertiliser drill.



The 3m Claydon allows Sam to carry out all farm operations himself.

"We had a herd of 150 Holstein cows and followers, but despite being at the forefront of the industry, thinking creatively, and using the latest techniques, such as robotic milking, it was impossible to make money. The milk price was atrocious, just over 15p/litre, so given that it cost 25p/litre to produce our budgets showed that we could end up losing £100,000 a year. The situation did not look like it would improve, so we had to decide what to do, and quickly. We have a young family and I do everything apart from combining, so it was important to strike a balance between earning a living and our personal life."

To generate income the couple started a farm shop, Paradise Produce, which Lucy runs and has, in Sam's words, 'taken off.' A hub of the local community, it sells a wide range of organic items, including rare breed pork from the couple's herd of Oxford Sandy and Black pigs, home-produced lamb, and grass-fed beef, together with seasonal hen and duck eggs, sheepskins made on the farm, wool, and hand-knitted items, together with fruit and vegetables.

As if getting that enterprise off the ground was not enough, Sam and Lucy were making sweeping changes to the nature of the farm.

"Previously, we used contractors to do the field work because I was so involved with looking after the cows and the cost of specialist machinery could not be justified. That was expensive, so when the cows went, we moved to an arable system and do everything ourselves," Sam outlines.

MOVE TO ARABLE

Grass made way for cereals and the former cowshed was turned over to finishing pigs for Ian Mosey Livestock, one of the UK's longest established bed and breakfast pig businesses. Every 12 weeks, batches of 1000 pigs come in at 30kg and leave at 100kg, making it a simple, low-risk approach which works well. Now instead of dairy cows the farm's livestock include 60 Belted Galloway cattle and 180 Jacob and Lleyn sheep.

NON-INVERSION OPTIONS

"As a dairy farm growing 100 acres of wheat and 100 acres of maize, mainly for the cows, we had very few grassweeds, but they began to creep in as we moved to an arable system and began ploughing for cereals. Not wanting them to become a problem, I looked at non-inversion options. We had tried disc-type direct drills in the past, but crop establishment was not good enough to risk going down that route on a larger scale. It is not easy land to farm, so a much more robust method of direct drilling was needed.

"One of my neighbours used a 3m Mzuri trailed direct drill behind a 300hp tractor, but it is heavy and my 175hp Valtra T174 would not pull it, so I looked for an alternative. After reading about the Claydon Opti-Till® system, I visited its designer Jeff Claydon, who took me around his family's arable farm in Suffolk.

SIMPLE, SPEEDY AND EFFICIENT

"The simplicity, speed, and efficiency of his approach, together with the exceptional standard of Jeff's crops, made a real impression. The 3m Claydon combined seed and fertiliser drill I looked at in the factory was linkage mounted and far more manoeuvrable than my neighbour's Mzuri. It was also much less complex with fewer things to go wrong, and £30,000 cheaper.

"Driving home, I asked what I was doing using a plough, deep cultivator, power harrow and drill to establish crops, when the same or better results could be achieved much more quickly, at lower cost and with significant soil health benefits by direct strip seeding.

"I operate the arable side of the farm on my own and getting crops drilled at the right time had been a real issue, so the time-saving potential of Opti-Till® was a huge attraction. Changing from what I knew represented a huge leap of faith but having spoken to Jeff and his team we bought a Claydon M3F seed and fertiliser drill and 7.5m Straw Harrow.

The existing cultivation equipment was sold to avoid the temptation to plough and the proceeds, plus a 25% productivity grant from Defra, covered the cost.

"2019, the first season Opti-Till® was used, turned very wet, so after two passes with the Straw Harrow I drilled straight into stubble and rolled. The combination of a relatively light tractor and drill worked well, even on some tightly compacted clay soil which another farmer had asked me to drill.



Sam Middleton: "Our soils were very tight when the Claydon System was introduced but they have improved dramatically."

“Fuel is one of the big areas for saving with Opti-Till®. Tractor hours have also dropped by 50%.”



HIGH OUTPUT

“The Claydon’s high daily output allows me to wait until the weather or soil conditions are right instead of being forced to muddle crops in. That avoids one of the major challenges of operating an arable farm single-handed, which is having to organise everything exactly, cultivate a large area before drilling and being exposed to weather risk.

“Our largest 23ha field used to take two days to plough, two days to power harrow and a day to drill. Now, I can establish the same area in one day instead of five, with far less pressure and no worries about being caught out by harsh weather.

“There are no significant weed issues, so the goal is to start drilling winter cereals in September and finish by early October, because after then it can turn wet quickly. The tractor and drill run on land which has not been disturbed to depth, so I can get going much sooner after rain and stay working for longer. The land has become much more supportive and is much better able to carry following machinery without causing ruts, so fields stay smooth. That makes operations such as spraying and fertiliser application much easier and more comfortable.

DIRECT STRIP TILL IS A REVELATION

“Compared with the conventional approach used before, direct strip seeding is a revelation. Now it is used to establish all 40ha of winter wheat, 20ha of winter barley and vining peas. We also have herbal leys which are drilled straight into existing grass using front discs on the Claydon instead of

the standard leading tines, plus cover crops which grow over winter in preparation for 50ha of spring barley.

“Cover crops work well. They help to smother weeds, prevent leaching, add organic matter to the soil, and provide additional feed for the sheep which graze them over winter. In the spring we drill barley using the Claydon, but instead of the standard leading tines fit front discs to cut through the green material and allow the following A-shares to drill without blocking. DAP is applied down the spout when drilling spring barley and last year no fertiliser was used on wheat which followed peas or was drilled on fields where manure had been applied.

“Others have seen the results of using the Claydon System and in the first year I picked up 200 hectares of contract drilling, which provided a useful boost to the farm’s income. That has increased every year since and this season I have done 400ha from Hornsea across to Selby, including a 120ha farm.

“Fuel is one of the big areas for saving with Opti-Till®. With the plough-based system our 15,000-litre tank had to be filled five times a season, now the tanker visits twice, which is 60% less. With fuel prices where they are that represents a major saving. Tractor hours have also dropped by more than 50% and the time I save establishing crops can be used to look after the animals.

SOILS IMPROVED

“Another major benefit of direct strip seeding is the massive improvement in soil quality. Water infiltration is much improved, the lack of standing water is very noticeable, and although all straw is baled

for our livestock levels of organic matter are significantly higher.

This is boosted by manure from the livestock and digestate from an AD plant in Teesside which is brought to the farm by Whites Recycling, who spread it on winter wheat, winter barley and grass in the spring at no cost to us.

“After 70 years of being trodden down by dairy cows, ploughed, and compacted by maize harvesting machinery our soils were very tight when the Claydon System was introduced, but they have improved dramatically. Every time we use the drill its leading tines remove compaction, allowing water to drain through the soil.

YIELDS MAINTAINED

“In three years, I have drilled 1215 hectares with the Claydon and the crops that are in the ground now look fantastic. Average yields are the same as with conventional establishment, around 8.65 to 10t/ha for wheat and 7.5t/ha for barley, but costs are much lower and with no need to use compound fertilisers the margins are vastly improved.

“We are in a much better place than otherwise we would be, and many others are realising that the old mindset of smashing the soil and burning diesel has to be confined to the past. The margins just are not there to do that. Direct strip seeding with the Claydon Opti-Till® system might not suit everyone, but for us it is a ‘no-brainer’ and makes it much easier to achieve a decent work/life balance.”