

CLAYDON CUSTOMER FARMFOCUS



Massive reduction in tractor hours and fuel use, higher yields among benefits of direct strip seeding

Annual tractor hours have almost halved and seasonal fuel use has been reduced by 10,000 litres since direct strip seeding was adopted at Rudge Manor Farm in Wiltshire four years ago. Yield increases of up to 0.5t/ha and improvements in soil condition are among the many other benefits which this method of crop establishment has brought to the business.

Farm owner Peter Wilson cites the exceptionally wet autumn of 2019, as one example. When many farms operating a min-till based system struggled to get any winter crops in the ground, the farm achieved all its planned area. Since adopting the Claydon Opti-Till® System of direct strip seeding it has never been caught out by adverse weather conditions.

"We have seen a massive reduction in the hours which our three tractors clock up since switching to direct strip seeding. Collectively, they now do less than our main tractor alone did previously. With the cost of red diesel having more than doubled in the last year, that is a very significant saving," Peter states.

Located at Rudge, a small hamlet between Marlborough and Hungerford, the farm

comprises 280ha of arable land in one block, plus a free-range egg enterprise which was added in 2020 as a diversification initiative. Manure from the 32,000-bird unit is partly applied to standing wheat in spring at 4t/ha, providing 60kgN/ha, half of it readily available, together with 40kgP/ha and 40kgK/ha.



Since adopting the Claydon Opti-Till® System tractor hours have dropped from a combined 1800 hours per year previously to just 1000 hours, generating significant reductions in fuel use, maintenance, and overall costs, with the added benefits of improved timeliness, lower labour requirement and less weather risk.



FOCUS WILTSHIRE

FARM FACTS

Farmer: Peter Wilson

Location: Rudge Manor Farm,
nr Marlborough

Area farmed: 280ha

Soil: Clay loam, chalk field and flints

Cropping: Winter wheat, winter rye,
winter linseed, canary seed, spring oats,
cover crops

Cropping for the 2022 harvest comprised 90ha of KWS Extase and SY Graham winter wheat, all grown for feed as milling quality has historically been difficult to achieve.

The farm also produces 50ha of winter rye (which is whole cropped and used to feed a local anaerobic digester), 40ha of winter linseed and 30ha of canary seed (both on

contract to Premium Crops), plus 30ha of spring oats on a milling contract with Hampshire-based grain merchant Robin Appel. Average yields are 4t/ha for the winter rye, 9.5-10t/ha for winter wheat, 7-8t/ha for spring oats, and 2.5t/ha for linseed. "With our previous establishment system, we typically would carry out two cultivation passes, one with a Simba Terra-Max followed by a Knight M Press tine and disc cultivator before sowing winter crops with a Kuhn Megant tine drill," Peter outlines.

"Typically, land for spring crops would be ploughed in the autumn and in the spring up to three passes, with the Simba Terra-Max, Knight M Press and Kongskilde Vibro Flex cultivators were required to achieve a seedbed. That was time consuming and expensive; it posed a huge weather risk, caused compaction, and reduced yield on headlands, while the loss of seedbed moisture could be significant. I knew there must be a better way and during spring 2017 researched the alternatives."

THOROUGH RESEARCH

Having heard about the Claydon Opti-Till® System but not knowing much about it, Peter learned more by reading various reviews from existing users.

The idea of a disc-type conventional direct drill did not appeal because of potential issues with slugs on heavier soils, along with the risks of reduced or no establishment resulting from the slots cut by the discs either drying out or filling with water. That led Peter to compare direct strip seeding drills from Claydon and Mzuri, the latter being ruled out due to a higher horsepower requirement and having more issues with trash flowing through the drill.

The purchase of a Claydon Hybrid drill and introduction of the Claydon Opti-Till® System in spring 2018 pre-empted the retirement of one of two full-time staff and proved transformational in terms of the benefits. Half of the spring cropped area was established using the previous approach and half with

the Claydon. When both were harvested the Claydon-drilled area produced 0.5t/ha more yield. The largest yield increases have been in the spring crops due to the Opti-Till® System conserving moisture at planting, especially with the dry springs that we seem to get now.

REDUCED TRACTOR HOURS

Tractor hours have dropped from a combined 1800 hours per year previously to just 1000 hours now, generating significant reductions in fuel use, maintenance and overall costs. The added benefits include improved timeliness, lower labour requirement and significantly less weather risk. Despite the 260hp New Holland T7.260 used to pull the Claydon drill being more powerful than its TM155 predecessor, fuel use on the farm is down by 20% to 25%, representing an annual saving of £15,000.

Even though the T7.260 could pull the Claydon drill much faster Peter chooses a forward speed of 9 – 10 km/h to minimise



The New Holland T7.260 could pull the Claydon drill much faster but Peter chooses a forward speed of 9 – 10 km/h to minimise wear on the tungsten tine tips and ensure accurate depth control.



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wear on the tungsten tine tips and ensure accurate depth control.

"When drilling we pay great attention to setting the seeding depth accurately and regularly check it," Peter states. "During the first season a slow puncture in one of the tyres resulted in some seed being drilled too deep. It was something that went unnoticed for about five hectares and gave very variable establishment, so I had the tyres filled with rubber to prevent that from happening again. The solid filled tyres took some serious punishment in the wet autumn of 2019 with a large number of flints and soil building up on them, but they worked well and enabled us to finish planting our winter wheat when many did not.

STUBBLE MANAGEMENT

"Our 7.5m Claydon Straw Harrow was supplied by Haynes Agricultural, the local Claydon dealer, in 2021. It was first used that autumn and the effects were very apparent. The previous season lines of chaff which had been left behind the combine were clearly visible and there were plenty of slugs in those areas. Where the Straw Harrow was used chaff was evenly distributed across the field, any slugs and slug eggs being destroyed by the 14mm spring steel tines. It is also surprising the amount of fine tilth the tines generate when there is a tiny bit of moisture in the surface. While raking a field in summer 2022 we had a scarce, small shower of rain, 1mm or so, and could see to a line in the field where harrowing was done after that shower.



"Depending on labour availability, we aim for two passes with the Straw Harrow behind our 145hp New Holland T.6080 within seven to ten days of combining and another 10 days after that; we then leave weeds and volunteers to grow. If it is very dry, or it rains, I might do another pass to kill any remaining weeds or slugs, leave the soil undisturbed for at least four weeks and spray off any remaining weeds or volunteers with glyphosate just prior to drilling.

CATCH CROPS

"Last year, we tried a catch crop behind our winter linseed for the first time, a mix of phacelia, vetch, buckwheat, oil radish and crimson clover. The mix grew to about 30cm tall and was only sprayed off a couple of days before drilling. The catch crop passed through the drill easily and the following wheat crop established very well without any slug issues. This year, we are being more adventurous and evaluating another multi-species cover crop of black oats, vetch, buckwheat, phacelia, and oil radish.



Since adopting the Claydon Opti-Till® direct strip seeding system at Rudge Manor Farm, Peter Wilson has never been caught out by adverse weather conditions.

DRILLING IS FAST AND EFFICIENT

"Over the last four seasons we have delayed drilling winter wheat until 14 October to help with blackgrass management and finished sowing by 30 October. This autumn the 90ha of winter wheat was completed in under 3 days.

"Strip seeded crops appear to be slightly slower to get going after drilling, possibly because cultivations help to mineralise soil nitrogen. They quickly make up lost ground as the season progresses, but I increase the seed rate slightly from 350 to 400 seeds/m² for winter wheat, from 350 to 375/m² for spring oats and by about 5% for linseed. Subsequently crop performance is much better as this allows for a small bit of slug grazing and hollowing. The increased yields, 0.5t/ha in the case of winter wheat, prove that the system works - and works well.

"Strip seeding certainly makes following operation such as spraying and spreading

much easier because the ground is far more supportive and easier to work. I have also noticed that because the 28m tramlines are in the same place each year they are again much more supportive, so we do not create deep ruts as was previously the case with conventional establishment. Fields remain level and we are not having to gamble in working the land down to create a seedbed ahead of the drill.

MORE WORMS

"One other benefit which I am pleased to see is that our worm population has increased significantly because of the reduced soil disturbance with direct strip seeding. The channels which they create really help to move water from the surface and distribute it throughout the soil profile, which eliminates surface ponding.

"The very wet autumn of 2019 compacted the soil and the following spring we went through wearing metal much faster than normal, so cover crops could be very helpful

in reducing the effects of rain impact and helping soil to recover."

"Currently, arable farming faces enormous risks especially with the price of wheat dropping significantly and fertiliser remaining high. We have bought nitrogen forward, fixed a minimum price for our linseed and sold some wheat forward for 2023 at around £250/t, which is about as much as we can do.

BEST POSSIBLE POSITION

"Having significantly reduced our cost base at the right time we are in the best possible position to tackle the undoubtedly challenging and uncertain situation which faces the industry. The situation is very serious, both for farmers and the country; the only real upside is it is starting to make at least some of the public realise the fragility of the nation's food supply and the importance of our industry in securing it, but that remains an uphill struggle."