CLAYDON CUSTOMER

FARMFOCUS

The Fairbairn family has seen significant benefits since moving from conventional min-till crop establishment to the Claydon Strip Seeding System, with overall and long-term sustainability the goal.

Strip seeding improves Northumberland farm's economic, agronomic and environmental sustainability

Changing to the Claydon System of crop establishment on their arable farm in Northumberland enabled the Fairbairn family to replace the 335hp tractor, which was the mainstay of a min-till system, with a 215hp model. This has saved significant capital and operating costs. Despite the considerable reduction in horsepower, the timeliness of establishment and quality of crops has improved, while additional revenue is being generated by using their 4m Claydon Hybrid to drill 500 acres for other farms in the area.

"The main aim of changing to strip seeding was not just to reduce costs but also to improve the structure, organic matter, fertility and drought tolerance of our soils," explains James Fairbairn who came back to the farm seven years ago after studying Business Management at the Scottish Agricultural College.

Since 1939, his family has been a tenant of the Ford & Etal Estate, which lies in the valley of the River Till between the Scottish Border and Cheviot Hills; this includes Whitton Hill Farm at Milfield near Wooler, where the Fairbairn family farm 750 acres of predominantly light land.

In the last few years the plough was used less and less as min-till became the favoured option to improve timeliness. Nevertheless the primary tractor was still a 335hp Case IH Magnum 335 which carried out an initial pass with a Simba SL heavy cultivator, followed by a Vaderstad Carrier cultivator and 6m Vaderstad Rapid drill.

The Fairbairns began to reassess their approach to crop establishment in 2015. They spent that winter researching the subject, initially reading articles in agricultural publications and on the internet, before visiting farms with experience of the technique. Trials of the latest strip seeding drills from three manufacturers subsequently took place.

"It was a big step for us to change what we had been doing for years and a huge leap of faith into the unknown", James explains. "My father took a bit of persuading, but I was keen to move on from our previous way of doing things for a whole host of reasons. The main one was sustainability, both economic and agronomic. The more I thought about it, the more I realised that we were not operating a system which was sustainable, and that is key to our long-term future."

"Our starting point was to adopt a wider rotation to reduce the frequency with which crops are grown and spread the workload. We also wanted to increase the wheat acreage and reduce the areas of barley and oilseed rape. Instead of wheat, barley and oilseed rape we now have a five-way rotation of wheat, spring oats, wheat, winter barley and oilseed rape.

FOCUS NORTHUMBERLAND

FARM FACTS

- Farmer: James Fairbairn
- Location: Northumberland
- Area farmed: 750 acres plus 500 acres contract
- Soil: mainly light
- Cropping: wheat, spring oats, winter barley, oilseed rape

Looking to farm more sustainably, James Fairbairn changed to the Claydon System.

"We are also using cover crops to reduce erosion, increase soil organic matter and improve the structure of our light soils. Another reason for changing was that we wanted to move away from selling straw off farm, and chop as much as possible, so we needed a drill that would work in chopped straw.

"We looked at all of the drills on the market, but narrowed the field down to Claydon, Mzuri and Sumo, who were invited to demonstrate models which could place fertiliser with the seed. One field was drilled by each to allow us to compare their performance in similar conditions and on a large enough scale to make it meaningful. The Claydon-drilled crop went directly into rape stubble at the end of September and in terms of disease was the cleanest crop of wheat we had on the farm that year.

"It seemed too much of a step to go from a 6m conventional drill to a 3m strip seeding drill, so a 4m version was the ideal compromise. A key reason for moving to strip seeding was to reduce our power requirement and use less fuel, so that ruled out the 4m Mzuri which took a lot of pulling and would have meant keeping the 335hp tractor.

"We decided that the 4m Claydon Hybrid was the best way forward, as it could comfortably be operated by a 215hp tractor, the weight of the drill being well balanced by the front granular fertiliser hopper. The Simba SL cultivator, Vaderstad Rapid drill and 7-leg subsoiler were sold and the 335hp tractor was replaced with a smaller, more fuel-efficient John Deere 6215R."

TIMELINESS ESSENTIAL

"On this farm, we need to have everything in the ground by the end of September because the weather can turn very quickly. We start drilling OSR during the first week of August and are happy to drill wheat from the end of the month, then barley from the first week of September. When drilling spring crops, the soil and weather conditions are far more important than the date, but our aim is to start by the end of March, if conditions allow.

"Placing fertiliser next to the seed is a technique that hasn't been used here since the 1980s, when my father had a Massey Ferguson 30 drill, but that stopped when he moved to a power harrow/drill combination. Now, fertiliser placement is increasingly being used in this area to get winter crops off to a good start and avoid the chopped straw locking up nitrogen. Fertiliser placement goes hand in hand with the Claydon drill, the weight of the front-mounted fertiliser hopper providing a perfect counterbalance to the drill on the rear linkage.

"Part of our approach to long-term sustainability is to reduce the use of slug pellets, and the straw harrow is a key part of the approach to stubble management now that we have more chopped straw. After harvest, we use it to spread the straw and create 20mm of tilth to encourage volunteers and weeds to chit, then spray them off with glyphosate before drilling. The early harvest in 2017 meant that we were harvesting barley in July which gave us several weeks before drilling; this allowed us to rake the stubble twice, encouraging more volunteers to germinate and reducing slug populations further.

Revelation wheat drilled on 9 Sep 2016 at 125 kg/ha (223 seeds/m2) had 70 kg/ha of DAP applied at the same time.

This cover crop of oil radish, tillage radish, forage rye and phacelia was drilled using the Claydon Hybrid on 30 August 2016 at a seed rate 25kg/ha and with 80kg of ammonium nitrate.

"It takes time to adapt to any new system, and that has been the case with the Claydon System. Visually, crops drilled with the 4m Hybrid are different because they are drilled in bands rather than conventional rows, but despite the dry spring Claydon-drilled crops looked better and coped better than others in previous years because they had larger, deeper root structures. Claydon-drilled crops were also very clean, with less fungal disease than we would have expected.

"Strip seeding with the 4m Claydon Hybrid drill saves us a huge amount of time, tractor hours, fuel, labour and wearing metal. Timeliness has been improved and we are less exposed to weather conditions as we do not have large areas of cultivated ground ahead of the drill. We are still learning and adapting to the system, but are in no doubt that it represents a far more sustainable method of crop establishment."

The performance of this Claydon-drilled winter wheat from 2015 convinced the Fairbairn family to purchase their own 4m Claydon Hybrid for 2016.

These spring oats were Claydon-drilled on 31 March 2016. The unseeded bands allow light and air to infiltrate the seeded rows for healthy crop growth.