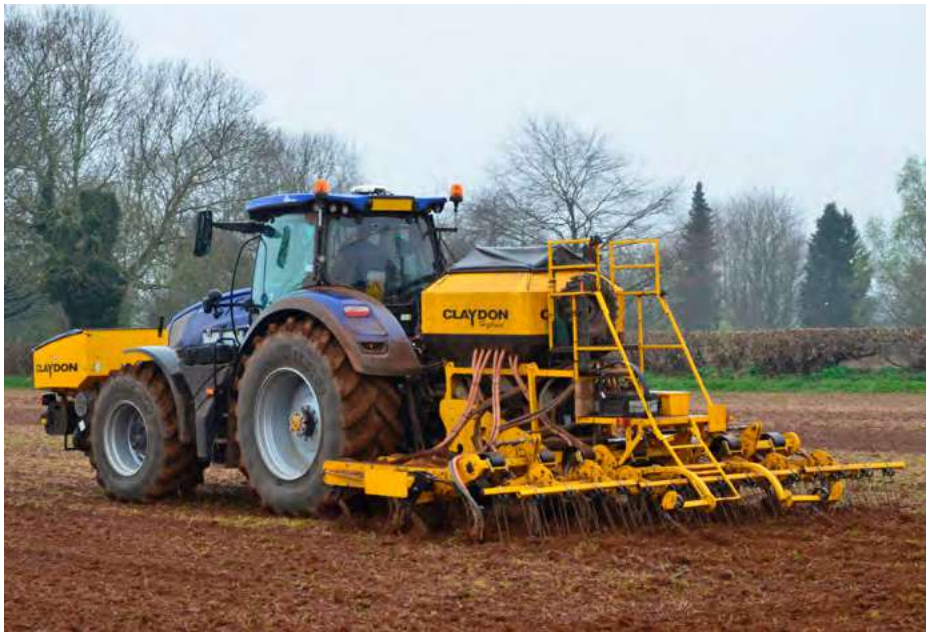
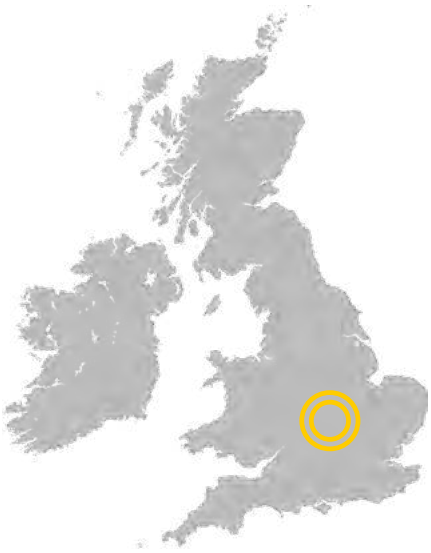
CLAYDON CUSTOMER

FARMFOCUS



The Claydon 4.8m Hybrid mounted drill – establishing crops on Adrian Taylor's Oxfordshire farm since 2016.



FOCUS OXFORDSHIRE

FARM FACTS

Farmer: Adrian Taylor

Location: Claydon, North of Banbury

Area farmed: 750 hectares (170 owned + 580 contract)

Soil: mixed, ranging from ironstone to Warwickshire clay

Cropping: milling wheat, winter beans, oilseed rape, spring linseed, spring oats, herbal ley, wildflower meadow

Need for versatility determines drill choice

Versatility was the key factor which determined the choice of drill for Adrian Taylor, who farms on the Oxfordshire/ Northamptonshire border just outside the aptly named village of Claydon, five miles north of Banbury.

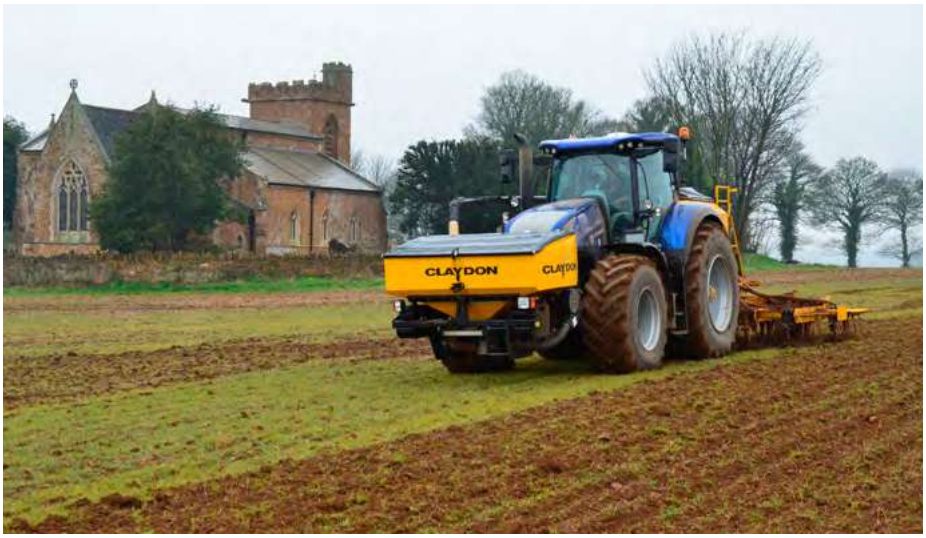
From Clattercote Priory, Adrian farms 750 hectares, of which 170ha are owned and 580ha are on stubble-to-stubble contracts within a 12-mile radius. Though mainly arable, the farm also operates a bed and breakfast pig enterprise, a small Aberdeen Angus suckler herd, together with holiday let cottages attached to the Priory house.

"In terms of soil types, we have a mix of everything here, from ironstone to Warwickshire clay," Adrian explains. "Strip seeding has been used for the last eight years and now the plough only comes out as a last resort, specifically if there is an issue with meadow grass or sterile brome.

"We began strip seeding in 2014 with another make of strip till drill, a 4m Mzuri trailed unit, which was cumbersome to operate in smaller fields, very heavy and needed a lot of power, so even the 400hp Caterpillar we had at the time struggled to pull it.

"That drill was also expensive on wearing metal and could not handle difficult conditions, so it came to a halt when the weather turned wet. When that happened in autumn 2015 we borrowed a Claydon Hybrid from Turney Group at Middleton Stoney. Its versatility and ability to deal with varying soil types and conditions persuaded us to change."

Adrian Taylor and daughter Pippa, a successful event rider who runs a professional competition yard on the farm which provides facilities for breaking and producing top quality competition horses.



Drilling spring linseed on a contract farmed field which has not been ploughed for many years.

The 1750-litre front tank doubles the seed capacity when drilling in the autumn and carries DAP fertiliser when establishing spring-drilled crops.

After two seasons Adrian replaced the Mzuri with a 4.8m Claydon Hybrid, a mounted unit with 15 seeding tines which was chosen for its greater manoeuvrability, an important consideration with field sizes from 3.5ha to 23ha. Despite being slightly less powerful than the previous Caterpillar, the farm's current 315hp New Holland T7.315 tractor handles the Claydon Hybrid well, pulling it at up to 12km/h.

The standard set up incorporates Claydon's leading in-line tine design which alleviates compaction and creates drainage and tilth in the seeding and rooting zone. This leaves the soil profile intact and provides an ideal growing environment.

Adrian's drill set-up also features a 1750-litre front-mounted tank. Not only does this double the seed carrying capacity during the busy autumn period but also allows DAP fertiliser to be applied, either above the seed or below it, when drilling spring oats and linseed.

LEARNING MORE ABOUT STRIP SEEDING

Purchased from Turney Group in spring 2016, the mounted Claydon drill is easier to operate in small fields and to move from farm to farm than the previous trailed unit. When it arrived, Adrian sold the 400hp Caterpillar and since then has come to appreciate the Hybrid's ease of use, lack of complexity and low operating costs.

Having purchased it Adrian visited Jeff Claydon's farm in Suffolk, which is on some very heavy land, and found it to be time well spent. He comments: "Unlike some manufacturers Jeff listens to what you say and always wants to improve his company's products. I learned a lot from that visit."

Accompanying Adrian was his agronomist, Ben Taylor-Davies, also known as Regen Ben (www.regenben.com), who favoured the change to strip tillage and encouraged him to adopt a more regenerative approach to farming.

Ben's ethos is to use sound biological, peer-reviewed methods to produce crops in a way that does not require vast amounts of artificial inputs. A director of the Oxford Farming Conference, Ben owns the 224 ha Townsend Farm at Ross-on-Wye, which produces potatoes, oilseed rape, spring barley, winter wheat, winter rye and grass. He loves breaking the boundaries of farming techniques, reducing pesticide use and the farm's carbon footprint, improving soil health and looking after the environment as part of growing nutrient dense high welfare food.

In 2016 Ben became a Nuffield Scholar, his study being based around the control of blackgrass. But, he says, it soon became apparent that the solution to the problem was not herbicides. What was needed was a change in soil management.

"We had created a perfect environment in which blackgrass could thrive by damaging the functionality of soil and causing moisture-holding clay soils to become wetter and wetter, providing an environment in which blackgrass could survive. The solution was not to treat the symptoms but the cause.

"The huge yield-robbing effect of blackgrass means that some fields and farms are becoming unfarmable. When you begin looking at the soil as the solution to tackling blackgrass you start to unravel one of the most complex and fascinating living organisms on earth, one that is largely ignored. Understanding the complexities of the soil makes you realise that, as a farmer, the very thing you consider to be one of your key assets is the very thing you are destroying.

"Soil is a living organism, so the key is to limit mechanical, chemical, and physical disturbance of soil. Tillage destroys its structure by constantly tearing apart the

"house" which nature builds to protect the living organisms that create natural fertility. Soil structure includes aggregates and pore spaces, so tillage causes erosion and wastes precious natural resource.

"Ploughing has been the mainstay of agriculture for 4000 years, but the problem is that for 3920 years ploughs were pulled by animals. Their limitations meant that this was once only a very shallow operation which kept the soil biology in an aerobic situation, so soils continued to function well. Over the past 80 years, with the anything but 'green' revolution, farms became larger which meant machinery got bigger and heavier. Pulling ever larger ploughs deeper and deeper destroyed the living soil biology, while synthetic fertilisers, herbicides, pesticides, and fungicides all had negative impacts on life in the soil.

"The main principles of regenerative farming which we try to implement are what nature has formulated well for well over half a billion years. Soil armour keeps soil covered at all times. Living roots put sugar-rich carbon into soils that feeds the biology naturally and in return the soil biology provides plants with the nutrients that are locked up in the soil. Soil disturbance should be kept to an absolute minimum, because nowhere in nature does mother nature plough, add synthetic fertilisers, or use hydrocarbon pesticides. Diversity mixtures of plants and species will reduce the pressure that nature places on a mono-crop system by trying to balance these unnatural environments, invading them with what we call pests, weeds, and diseases. Where possible we should integrate livestock and their manures in the system, as nowhere in nature are animals devoid."

This season, Adrian is growing 360ha of winter milling wheat, 120ha of it Group 1 Skyfall on contract to Warburtons, the largest bakery business in the country which contracts over 150,000 tonnes of quality milling wheat in Britain each year. The remainder is into Group 3 biscuit varieties. In addition, there are 110ha of winter beans, 72ha of oilseed rape, 94ha of spring linseed and 92ha of spring oats grown on a low-gluten contract, together with 8ha of herbal ley and 4ha of wildflower meadow. Average yields are 9t/ha for wheat, 5.5t/ha for winter beans, 2.4t/ha for spring linseed and 6.4t/ha for spring oats.

NUMEROUS BENEFITS

"Since we introduced the Claydon Opti-Till® System our soils have become much easier to work and drain much better," Adrian explains. "On heavier clays we sometimes use a He-Va Stealth low-disturbance subsoiler in front of the drill, but you have to know when some soil conditioning is needed. You also have to recognise when you should not drill, because the Claydon Hybrid will travel even when you should not be there.

"Our soils have also become much more supportive, so they carry the weight of following machinery much better without becoming rutted, as was the case when we ploughed. This is important because our 24m Sands Vision sprayer goes through the wheat up to seven times and the 24m Kuhn Axera H-EMC fertiliser spreader is used up to three times. The top layer is improving, yields are stable, establishment costs are under control and worm counts have gone from just two or three in a spadeful of soil, to 30-40 worms. Keeping traffic off the field is a vital part of the approach.

"We leave about 25cm of stubble behind our 2017 New Holland CR9.80 SmarTrax combine, which runs on 600mm tracks to reduce compaction, then go in with the 7.5m Claydon Straw harrow behind one of our 225hp New Holland T7.260s tractors a week or so later. The Straw Harrow is used two or three times as it is a cheap, quick way to encourage an early chit of grass weeds and to control slugs. We intend to add a seeder to it to establish cover crops.

"Drilling wheat begins during the last couple of days in September on cleaner ground and we aim to finish by the end of October. Seed goes in 20mm to 30mm deep and generally we start with a rate of 300/m2 and increase that up to 450/m2 when it is late, or conditions are cold. Those numbers are higher than for our old intensive tillage system.

Soils continue to improve as a result of switching to strip seeding and the adoption of a regenerative farming approach.

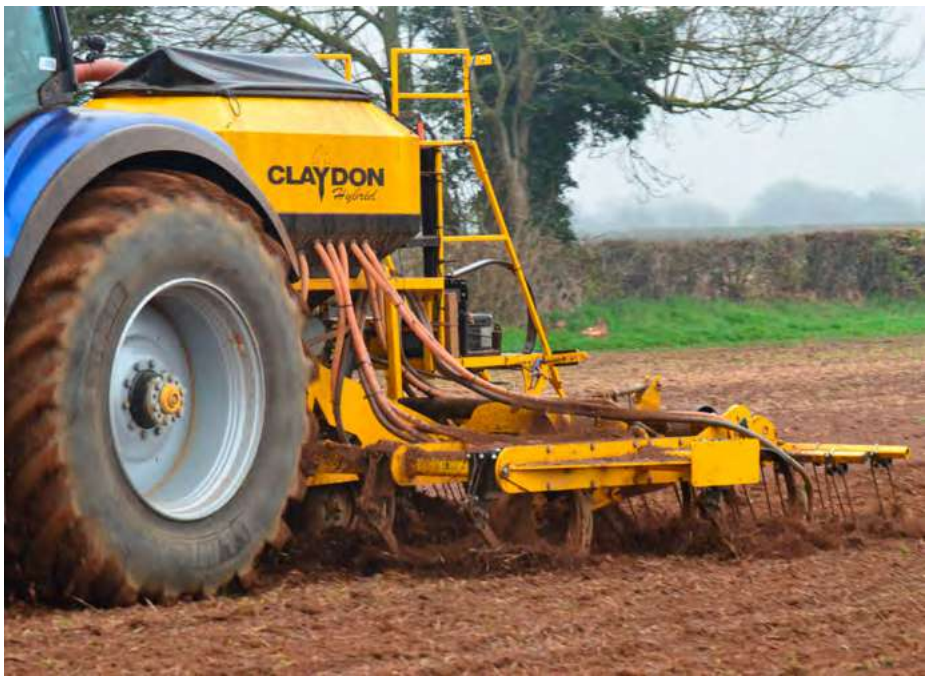
A section of the crop where the Claydon TerraBlade has taken out weeds growing between the rows.

Adrian Taylor's 4.8m Claydon TerraBlade operating in a crop of wheat. The 4.8m version was chosen as it matches the width of the drill and fits in with the farm's 24m tramlines.

To extend the benefits of the Claydon System Adrian has added a 4.8m TerraBlade inter-row hoe, which is used on a New Holland T5.120 to add a non-chemical means of controlling black grass to the system, and this is working well.

A low-cost, mechanical method of controlling weeds in band-sown crops, it keeps the space between the seeded rows clear of weeds during the initial stages of crop growth, reducing competition for nutrients, light, air, and water, allowing plants to grow away strong and healthy.

"Fuel and metal use has dropped significantly using strip seeding and although our main tractor, the New Holland T7.315, is doing similar annual hours it is covering a much larger area in that time," Adrian adds. "Fertiliser and chemical use are not noticeably less, but this may change as we get more into regenerative agriculture. No insecticides have been applied for two years."



Versatile, flexible, manoeuvrable – switching to the 4.8m Hybrid has seen a significant reduction in fuel and metal use.