

Strip-till system opens up new opportunities for young farmer



Herbert Hindley (left) and Andy McLellan with the Mzuri drill behind them.

Herbert Hindley is a fourth generation farmer and first generation strip-tiller who's ventured into the realms of increased yields, improved soil structure and reduced costs. Thanks to selective tillage, Mr Hindley now manages over 1,000ha across a combination of owner-occupied and tenanted estates with a whole range of soil types. The young farmer puts his recent success down to a change of thinking and adopting a more holistic approach to farming, backed by his forward-thinking agronomist Andy McLellan.

When Mr Hindley, from Warrington in Cheshire, took on Sand Farm in 2012 at the age of just 21, the soils had suffered from years of excessive cultivation and, as a result, very little flourished in the sandy loam.

"I put seed in the ground and it wouldn't grow," Mr Hindley said. The 141ha farm yielded an average of just 3.7t/ha in 2012 – something both Mr Hindley and Mr McLellan were desperate to improve on.

Mr McLellan joined the team in 2014 and was keen to look at ways of improving the soil structure through nutrition and reduced cultivation. Not a fan of turning the soil, he first came across the Mzuri strip tillage system working in Northumberland and described it as being "just right".

Mr McLellan was confident that strip tillage offered the perfect combination of targeted tillage and minimum cultivation needed to improve soil productivity and health.

A successful demo was all it took

for the pair to be taken with the new system. The bushel weight was up on the demo plot from 76 to 81kg/hl and the crop "poured off".

Mr Hindley purchased a Dual Tank Pro-Til 3T drill in the Autumn of 2016 and says that he hasn't looked back since.

Mr Hindley operates a six-year rotation of barley, oilseed rape, wheat, beans, wheat and then oats. In the first year of using the drill, beans did very well however barley suffered from high levels of compaction across the farm. To rectify the issues caused by years of heavy cultivations, the farm purchased a Mzuri Rehab low disturbance subsoiler. The Rehab has been the turning point for Mr Hindley: "Going out with the Rehab broke up compaction and allowed the system to truly come into its own."

When the farm switched to the Mzuri Pro-Til drill, soil health and structure improved after just one year.

"You can smell the difference in the soil," said Mr McLellan. "Since autumn 2016 the soils have developed a more composty, organic smell and earthworms have been flourishing."

The business has been retaining the surface residue from the previous crop as much as possible as the best way to return nutrients to the soil and increase organic matter content. It also helps to maintain moisture where it's needed and provide an accessible food source for worms, points out Mr McLellan.

On the original demonstration site, which has benefited from the

longest conversion to strip tillage, the top layer of soil is noticeably darker, with stubble completely broken down from the previous year's crop.

"The other advantage of the system, without a shadow of a doubt, is the wider row spacing. With better light interception, you don't get a build-up of mildew and naturally create more airflow. As a result, the plants look stronger and healthier."

In fact, to prove the point, albeit from an operator error, one field of winter wheat was mistakenly drilled at 70kg/ha (rather than 170kg/ha), however the additional light interception resulted in a crop yielding 15.8t/ha in 2017 – just shy of the World Record. Mr Hindley is eagerly anticipating yield results this harvest and reckons that future world records are now well within reach.

Slug control

Later in the 2016 season, Mr Hindley purchased the Mzuri Rezult rake as part of a wider strategy to control slugs and weeds. The farm now operates a policy to rake after combining and before drilling in order to destroy slug habitats and eggs. Turning eggs onto dry straw on a hot day has proved a very effective method of pest control. As well as providing mechanical control, being fitted with a slug pellet applicator, the Mzuri Rezult rake is capable of giving slugs a double hit.

The one-pass system has meant Mr Hindley has been able to purchase a new combine with savings he's achieved over the past two years, further improving efficiency across the farm. He says he is confident that the savings will continue and he will look to reduce fertiliser inputs over the coming years as the soil structure and fertility improves, while using 'bioscience' to maximise soil health. Thanks to the soil's increasing ability to retain nutrients and the farm's straw retention policy, Mr McLellan believes the farm could see a reduction in fertiliser use next year from 185 to 170 units of N/ha.

Yields across the farm increased by 10 per cent in the first year and Mr McLellan was delighted when the 2017 harvest came in at an average of 12.2t/ha, including the yield from the near record-breaking crop. Even excluding that crop, the average came in at 9.8t/ha – a massive improvement for the farm.

A second drill

Fully invested in strip tillage and reaping the rewards, Mr Hindley purchased a second drill in 2017 to keep up with the demands of taking on more land and has a third machine on order for this autumn. His success with the Mzuri system has brought opportunities to take on more land within the area.

The expansion is now possible due to consolidating arable operations into a single manageable pass. Mr Hindley is confident that reduced tillage is the future and, in these uncertain times, can make farming profitable again. ■



Checking crop roots earlier in the season.