

Fewer passes and lower seed rates



After several years of trial and error, growers are successfully establishing OSR using min-till methods — on both light and heavy land. CPM visits two growers in contrasting situations.

By Nick Fone and Rob Jones

'Finding a suitable one-pass OSR establishment system has been a long and sometimes tricky journey.'

Eliminating three passes from your crop establishment system is certainly a very effective way to cut costs.

For Cambs grower, Roger Gladwin of Hole-in-the-Wall Farm, Christchurch, near Wisbech, it's proved to be an extremely successful progression.

Up until three years ago, he was sub-soiling, discing and sometimes power-harrowing prior to drilling rape.

"I'd always been taught that it was important to provide a fine tilth for rape, as well as a loose, open subsoil — hence the multi-operation approach," he explains. "But a few years ago, the talk changed — it seemed that rape could thrive in a cloddier seedbed so long as there was good seed-to-soil contact.

"It set me thinking that we, like

other growers, could start to knock-out some of these horsepower-hungry machinery passes."

Integrated approach

With the help of some background agronomic advice, Roger Gladwin started looking at ways of integrating his cultivations and seeding operations.

With predominantly lighter soil types, he decided he would make a go of one-pass, sub-soiler seeding.

"We needed to cut costs, up our output and take the pressure off our workload immediately following harvest."

He duly ordered a 3m, five-leg OPICO HE-VA subsoiler coupled with a Hatzenbichler air-seeder. But why this particular machine?

A mechanically-metered seeder was chosen because of its simplicity and value-for-money, while the sub-soiler got the thumbs-up for its hydraulically-adjustable rear roller, as well as its low-draft wings and points.

"I wanted to base my OSR set-up on a system I knew worked well, so I followed the experiences learned in field trials.

"Masstock had achieved some good results with the OPICO unit, so it seemed sensible to stick with that."

It proved to be a good decision

Farm Facts

Roger Gladwin

PJ Farms Ltd

Hole-in-the-Wall Farm

Christchurch

near Wisbech

Cambs

- **Total area farmed:**

546ha, of which 222ha is contract farmed

- **Staff:**

Roger Gladwin and one other full-timer, plus harvest help

- **Cropping:**

283ha Winter wheat, 85ha oilseed rape, 115ha sugar beet, 20ha spring beans 8ha fodder beet, plus 24ha of land let for potato and vegetable production.

- **Soil types:**

Black Fenland through to medium clay loams

- **Mainline machinery:**

Tractors:

John Deere 6830, 6930, 7530 and 7830

Combine:

John Deere S690i

Loader:

JCB 531-70

Sprayer:

3000-litre Bateman RB16 with 24m booms

Spreader: Amazone Z-AM with weigh-cells

— the crop was a success in the very first year, he says. However, certain “insurance measures” were also put in place, he admits.

“Once the straw is baled, the stubble is left for as long as possible to green-up to ensure less weed pressure in the rape. Volunteers and weeds are then sprayed-off before the sub-soiler/seeder moves in, closely followed by a ring-press.

Agronomy advice

“Following advice from various agronomy experts, we decided to run-up behind the sub-soiler with a double-press. By doing so, we made doubly sure we were getting good soil-to-seed contact — even where the seed had fallen down into the troughs left by the roller.”

Roger Gladwin was particularly keen to minimise the level of surface disturbance, so he lifted the press-tines right out of work — and the tactics paid-off, he believes. “We’re definitely getting fewer weed problems in the emerging crop now.”

Weed competition is something of an issue for Roger Gladwin, who has long been an advocate of cutting seed rates. When he starts drilling winter wheat in September, he kicks off at 80kg/ha — with the rape rates down to just 3.2kg/ha at the start of the establishment campaign in late August. For that reason, it’s essential that as many seedlings as possible germinate and survive.

“With our previous set-up, we were sowing rape at about 7.5kg/ha. But having cut the rates, we’re now seeing much healthier crops.



Roger Gladwin reckons he’s seeing fewer weed problems in his OSR crops now.

“The wide rows mean the plants can branch out better and there’s a less damp climate within the crop canopy, and we’re using fewer fungicides as a result.”

He notes that 40% of the crop’s overall yield comes from the pods on the lower half of the plant, so it’s really important to keep an open canopy to allow the light in.

But does this actually translate into higher yields? Roger Gladwin is undecided.

“We’re currently averaging about 4.5t/ha on our light soils. That’s pretty ▶



Roger Gladwin drops his seed rate down to just 3.2kg/ha at the start of the rape establishment campaign.

► good really but I do feel the crop has a lot more potential — I'm convinced there are still more opportunities to find ways of achieving a higher output."

Heavy land farmer, Robin Hall of Kirkley Dam House Farm, Kirkley near Ponteland, Northumberland, admits that finding a suitable one-pass OSR establishment system has been a "long and sometimes tricky journey."

But having trialed a number of different approaches, he believes he's now cracked it.

When grain prices took a serious tumble and inputs costs rocketed around five years ago, Robin and his father, Foster, realised they really needed to move away from their intensive establishment approach.

At the time, they were ploughing and power harrowing twice before eventually drilling their rape.

'Big shiny cultivator'

"It was just uneconomical to continue with things the way they were but we weren't big enough to justify the expense of a big shiny cultivator just for the rape.

"So we tried discing the ground, then drilling it but we were getting way too much surface compaction with our heavy clays — especially on the headlands.

"We just weren't getting the yields we should've been. At best, we were reaching 1.5t/acre (3.75t/ha) and a lot of that could be put down to the crop's lazy rooting. So we decided that we needed to open up the sub-soil."

But the Halls feared they were edging back towards a more intensive approach. On such heavy ground, the concern was that a sub-soiler would bring up clods and lumps — leading to uneven germination.

The solution was found on a visit to Robin's brother-in-law's farm in Notts.

"My brother-in-law, Robert Marshall, had been sub-soiler-seeding for a couple of years with a McConnel Shakaerator and a power harrow hitched on the back. ►

Farm Facts

*Robin Hall
Alex H Hall and Son
Kirkley Dam House Farm
Kirkley
near Ponteland
Northumberland*

● **Total farmed area:**
200ha

● **Staff:**
Alex and Robin Hall plus harvest help

● **Cropping:**
53ha winter wheat, 53ha oilseed rape, 26ha barley, 26ha beans and 40ha grassland

● **Soil types:**
Predominantly heavy clays

● **Mainline machinery:**

Tractors:
Fendt 818, John Deere 6900 and 7810

Combine:
Claas Lexion 470 Montana

Loader: Claas Scorpion 7040

Sprayer:
1500-litre Gambetti Bargam with 24m booms

Spreader:
KRM Bogballe with weigh-cells