

ARABLE OSR VARIETIES & ESTABLISHMENT

Looking to get rape crops off to a better start, one Suffolk farmer has improved seed placement with coulters. Geoff Ashcroft reports.

New approach to OSR establishment sees yields increase

For many growers, rape establishment has become an almost crude process, driven by the desire to trim costs to the bone.

There are those, however, who remain committed to making the most of the crop and it begins with getting it off to as good a start as possible to make the most of yield potential.

Suffolk grower Robert Rush falls into the latter category and has sidelined his Vaderstad Topdown one-pass cultivator and Biodrill establishment system for one which offers more accuracy with seed placement and the ability to sow into clean soil.

He says: "We have been getting away with it for the last few years, but the time has come to put some effort into getting the crop off to a much better start. Our 2015 rape yield was bordering on poor, although flea beetle has been a serious problem."

Based at Hall Farm, Shimpling, near Bury St Edmunds, Mr Rush and his team handle a 1,800-hectare (4,447-acre) workload under the Apollo Farms umbrella.

The predominantly chalky

Farmers Guardian MACHINERY IN PRACTICE

boulder Hanslope series clay soils play host to a mix of combinable crops and sugar beet, with oilseed rape accounting for 350ha (864 acres).

"We have been growing OSR for about 30 years, with varying

Adding liquid fertiliser and a dose of slug pellets all in one pass is the icing on the cake

ROBERT RUSH

degrees of success. And in that time we have tried most systems with a view to keeping establishment a straightforward and low cost process.

"But the 2015 rape yield varied enormously, from 2-4.5 tonnes/ha, with an overall average of just 3t/ha, and I feel this is unsustainable in the long-term."

Mr Rush says he has been looking for ways to encourage more plant vigour and this has led him along a path to more organic principles.

He adds: "Stronger plants should be better placed to withstand winter and fight pests and diseases."

He also plans to widen the farm's rotation, growing rape once every six years.

The route to a more consistent yield target of 4-4.5t/ha, (1.6-1.8t/acre) Mr Rush says, should mostly come from putting more effort into seed placement, rather than broadcasting seed into a trash-filled mix and hoping for the best.

He says: "We do not remove straw, so there is a huge volume of chopped and spread material to incorporate and I believe



Xerion 3800 offers a fuel saving over Apollo Farms' previous system, which used a Quadtrac 550.

mixing trash into the top layer of soil does not help rape get off to a good start. Rape seed faces too much competition."

Investment

The route to higher yield has seen the business invest heavily in an Opico He-Va nine-leg subsoiler, equipped with Accu-Disc coulters carried on a rear frame. These double disc coulters units open a seed slot in the soil, affording better placement.

Each coulters assembly is spring-mounted on a parallelogram frame, enabling ground contours to be followed, while achieving a consistent seeding depth. Each coulters is then followed by a rubber press wheel,

which closes the slot and consolidates the surface to encourage soil to seed contact.

Developed as a one-pass system, the subsoiler carries a slug pellet applicator and Nitro-Jet liquid fertiliser system.

The latter affords nutrient placement in-line with coulters at the time of sowing.

A 1,600-litre liquid fertiliser tank sits on the tractor's front linkage, with seed and slug pellet hoppers carried on an extended beam at the back of the subsoiler.

He says: "Where we had been broadcasting rapeseed into a six-inch mulch of soil, straw and trash, we are now placing seed into a much cleaner strip of soil

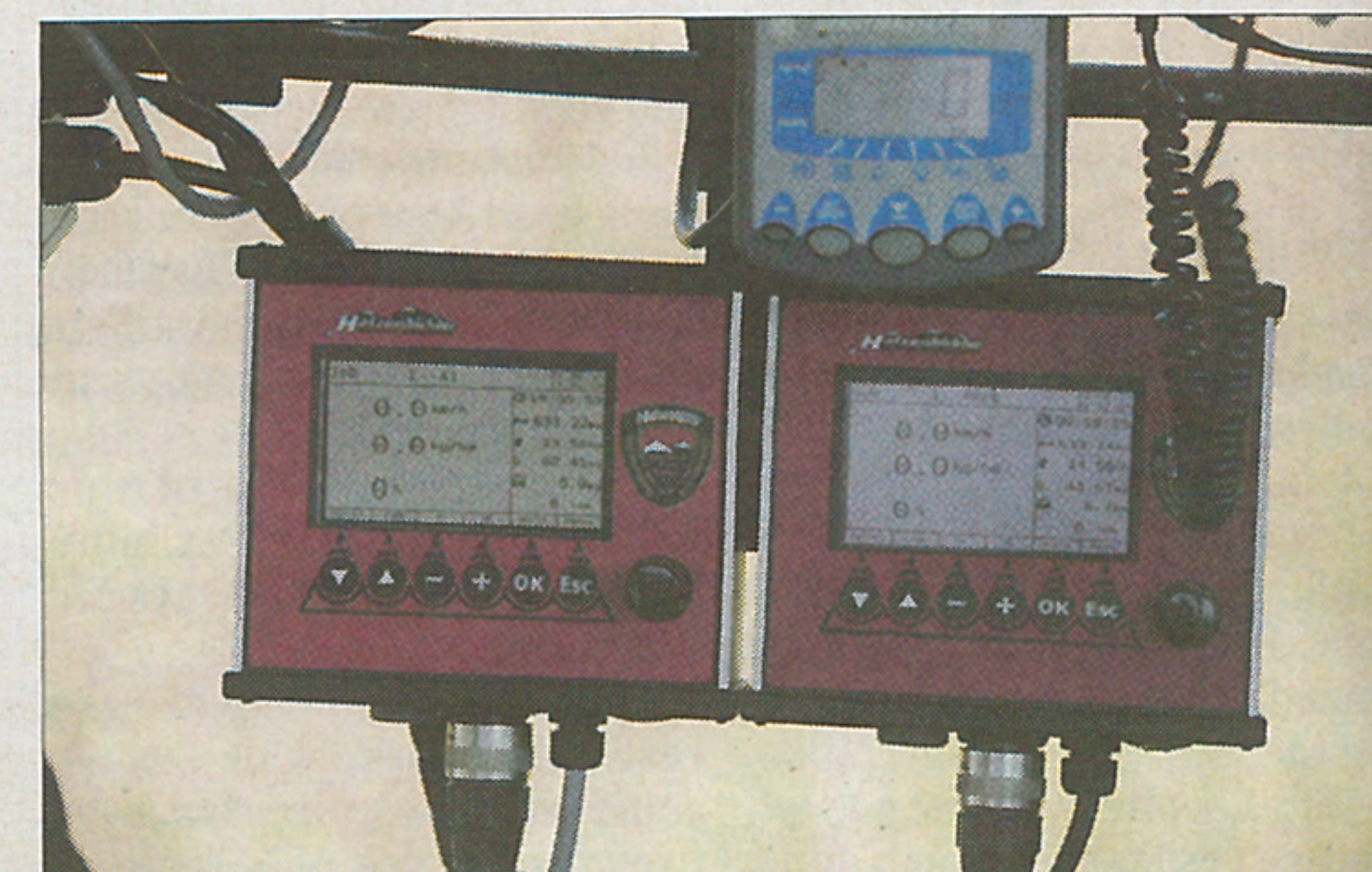
with the help of low disturbance legs and disc coulters.

"The legs sweep trash to the sides, leaving a broken surface which is firmed by the press roller ahead of the coulters.

"Adding liquid fertiliser and a dose of slug pellets all in one pass is the icing on the cake. Once sown, the field is rolled."

Mechanism

Without incorporation of trash, this latest establishment mechanism is one which could place higher demands on the combine's chopping and spreading capability. And all eyes are on surface residues, which Mr Rush sees being utilised by worms over winter.



Xerion's auto-steering affords spare hands for other controllers.



Accu-Disc coulters offer improved placement over broadcasting.



Robert Rush has carried out 15 hectares (37 acres) of supplementary contracting with the machine.



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He says the He-Va system has saved a pass, and output at 40ha/day (16 acres/day) is broadly similar to his previous Topdown/Biodrill system.

"We would always have to follow the Topdown with a press, then, more often than not, we would have to roll the field afterwards," he says. "And where we needed to use our Quadtrac 550 to pull the 6m Topdown, we can handle the 5m He-Va with our Xerion 3800 when using low disturbance legs. So we are saving quite a bit on fuel too."

Accuracy

Seed rates have also been reduced. The greater planting accuracy of disc coulters means the farm's generous 5kg/ha seed rate has been lowered to 3kg/ha.

been considerably higher than any other OSR establishment system previously used by Apollo Farms.

Mr Rush says: "It is not a low cost system. We have gone against the grain a bit with this one and depreciation will be high. But it is a long-term purchase and costs will be spread over a fair few acres over the next 10 years."

Price

Having carried out 15ha (37 acres) of supplementary contracting with the new machine, he is hopeful of a few more hectares this season, which should also help offset the implement's purchase price.

Mr Rush says: "There is always additional pressure to do the job properly on others' land.

"But I am confident of the machine's ability and it will have more than one role in our machinery fleet."

"If we swap the low disturbance legs for proper subsoiler legs, we can put the He-Va behind the Quadtrac and go subsoiling."

When it comes to running costs, Mr Rush says the first set of points gave him a shock.

"Wearing metal costs were heading for £13/acre, so I hard-faced the second set of points in the workshop to try and reduce running costs."

He says there have been a

few teething troubles with the machine too.

"Opico and my local dealer TNS both responded well to my concerns and soon got us going again," he says.

Having done his homework over the last couple of years and considered Mzuri, Stripkat and even home-built kit in the workshop, Mr Rush remains steadfast with his buying decision.

He says: "We cannot overestimate the value of getting the crop off to a good start and I see this as an essential part of achieving consistent yields."

"Getting 5t/ha would be quite an achievement. It is not impossible, but it is a long way off. We certainly could not get it on this land using the Biodrill."

He-Va subsoiler specifications

- Working width: Five metres
- Legs: Nine low disturbance
- Seeding equipment: Accu-Disc double disc coulters bar and press wheels with Variocast unit for OSR
- Slug pellets: Secondary Variocast unit for pellets
- Fertiliser: 1,600-litre Nitro-Jet front tank
- Power rating: Up to 600hp



The 1,600-litre Nitro-Jet tank allows nitrogen and phosphate to be placed with seed when needed.



Row spacings at Hall Farm, Shimpling, are 550mm wide, while seed rates have been reduced from 5kg/hectare to 3kg/ha.



With low disturbance legs, the five-metre He-Va subsoiler and rapeseeding combination establishes up to 40 hectares/day (98 acres/day).