



Cultivation culture brings best results

Machinery On Farm Opinion

While many may be reducing tillage or going no-till, one Staffs grower believes his cultivation system brings good control of grassweeds and the perfect start for an autumn-sown crop. *CPM reports.*

By Rob Jones

A combination of deep and shallow cultivation techniques plus a judicious use of pre-emergence herbicides including Avadex (tri-allate), gives Staffs arable farmer David Rowe the best chance of controlling blackgrass.

Historically the pernicious weed hasn't been a problem on the arable farming enterprise and while it still isn't a major concern now — there are odd pockets within his cropped area that he believes have come in via baling contractors — it's definitely on the radar.

"We're aware of blackgrass presence on the farm and we're tackling it as part of our cultural and chemical control strategy," says David Rowe who farms in partnership with his brother Philip and father as F W Rowe and Sons, Comberford Farm, Tamworth.

Incremental changes

Small, incremental changes to the farming operation over the last few years, have helped maximise profitability on the 1720ha of land that's part owned and rented, while the remainder is share and contract farmed. The company operates over seven farms within a 20-mile radius and supports over 465ha of oilseed rape, 688ha of winter wheat, and nearly 70ha of second early and main crop potatoes, 425ha of winter barley and 92ha of winter rye.

"Brome around the headlands is more challenging and we have the usual broadleaf weeds such as cleavers and groundsel to deal with too. Culturally our aim is to prepare a level and consistent seedbed, achieved using both deep and shallow cultivations. Getting the seedbed

right helps crop establishment and with weed control.

"Our herbicide programme focuses on stacking pre-emergence options and this now also includes Avadex, which is applied through a Vaderstad BioDrill attached to the back of our 8m Vaderstad Rapid RDA drill."

Soils vary from blowing sand to heavy clay and often everything in between can exist in the same field. This can make the choice of cultivation a challenge and David Rowe says he has some fields that are so heavy they should be down to permanent pasture. Having said that, the winter wheat five-year yield average is a "respectable" 10t/ha.

The cultivator fleet includes a 6m and a 7m Vaderstad TopDown which are used down to a depth of up to 250mm. The largest TopDown also has a double SteelRunner at the back to help seedbed preparation and to break up consolidation. A 6m Sumo Quattro plus BioDrill is used for establishing OSR. Its subsoiler legs go down to 430mm while discs help to mix and chop the previous wheat stubbles. Two RexiusTwins and two power harrows

“The seedbed is king and the key to achieving the best one possible is paying attention to detail.”

a level seedbed and consistent seed depth across the whole field.

“What struck us a few years ago was that lots of farmers were moving to spring cropping because their winter herbicide costs had increased trying to tackle blackgrass predominantly,” he explains. “We don’t have large areas of blackgrass yet, so we aren’t in that situation and we haven’t included spring cropping, although we have grown about 160ha of combinable peas in the past because we were limited to light land. Peas at the time were as profitable as second wheat so it made economic sense too.”

He says that his current farming practices don’t follow the minimum tillage strategies adopted by many farmers because of the problem with blackgrass.

“We still think we should be going deep. ▶



David Rowe is tackling blackgrass with a cultural and chemical control strategy.

complete the line-up.

For wheat being drilled into OSR stubbles, David Rowe uses the TopDown straight after harvest, ideally when the soils are dry. Leaving land until later in the season before preparing a seedbed is often counterproductive, especially on the heavier land which can be tricky in the wet.

Prior to drilling he uses a 10.3m and a 6.3m RexiusTwin to mix and level the soil and in the most challenging soils he also brings in two power harrows immediately in front of the drill. The RDAs are equipped with System Disc front tools, and on the newest model, bought in 2016, a BioDrill for applying Avadex granules has been added.

“It seems a lot of farmers have chosen to go down the direct drilling route, believing that minimal soil movement will help to keep on top of blackgrass,” says David Rowe. “But, we often tend to do the opposite to everyone else, and it’s difficult to move away from what has always worked for us. Some farmers might think we’re a bit heavy on our choice of cultivation, but our objective is to achieve



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Soils vary from blowing sand to heavy clay, and the aim is to put the best seedbed in front of the drill.

▶ Using deep cultivation helps reduce compaction. We still have machines running about on the land so we've little choice, though it would reduce our machinery costs by adopting a minimum tillage approach.

"We've employed a TopDown since 2004 and it's the one machine in the portfolio that has stood the test of time," explains David Rowe. "We understand the issues around

blackgrass and we want to nip it in the bud before it takes hold on this farm. This is why we've chosen to use Avadex in addition to our existing pre-emergence herbicide choices."

The TopDown could do with being heavier, but having a double packer has made a big difference he says.

"In my opinion, especially after OSR, just using a TopDown and then drilling

isn't enough. The TopDown consolidates well and therefore helps stop the slugs, but it doesn't leave a suitable seedbed for the drill. It depends on the soil conditions at the time, but we'll then make a decision if we need to go in with the RexiusTwin or power harrow. Sometimes we might go with just the power harrow or twice with the RexiusTwin.

Best seedbed

"The seedbed is king and the key to achieving the best one possible is paying attention to detail," says David Rowe.

"If you get the seedbed right everything will look after itself. Once a crop has been established well all other decisions are straight forward. There's nothing worse than working with half a crop, usually because corners have been cut. In our situation, we have to take care of the soils. We've very patchy soils which can be challenging.

"We've looked at the variable seed rate option but we don't think that approach works and it really needs decisions to be made on the day. Pre-programming seed rates doesn't work for us."

Last year was the first season he applied Avadex along with a pre-emergence programme based on flufenacet, pendimethalin and diflufenican plus oil in 200 l/ha of water. This combination has effectively kept crops weed free, he says. Up to three

applications of glyphosate are applied pre-drilling, depending on conditions, with just one application if it's dry. Drilling normally starts by 17 Sept and Avadex is only used in fields where blackgrass is known to be present or where brome has been an historical problem.

"Last year we used the iScout App from Soyl for controlling the application of Avadex on the BioDrill to about 200ha," explains David Rowe.

"Avadex adds another active into the herbicide portfolio. I understand it works by desensitising the blackgrass as it emerges, which is then killed by the pre-emergence herbicides. Because we retain much of the soil moisture by drilling straight after the RexiusTwin or the power harrow followed by rolling after drilling, the Avadex granule works much more effectively. Even in last year's very dry conditions we still achieved a good result from the Avadex."

He says the BioDrill is an excellent tool for applying Avadex at drilling, because he can utilise the same controls that are used for drilling the wheat and barley. The two functions are effectively synchronised and this takes out the potential human error element on the headlands, therefore minimising over/underdosing. It's also easy to top up the BioDrill hopper with Avadex at the same time as filling the drill up with seed.



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Following a pass with the TopDown the decision is made whether to go in with the RexiusTwin or power harrow.





Preparing a level and consistent seedbed, using both deep and shallow cultivations, helps both crop establishment and weed control.

“Where blackgrass comes through in bad patches in a wheat crop we can still go back in the spring with Atlantis,” he notes. “With either approach, we aim to achieve at least 98% blackgrass control. In the barley crop, we’ll probably use Axial (pinoxaden) in the spring and that should be all that’s necessary to keep grassweeds under control.”

Bad blackgrass

He notes that some of the winter barley on the farm last year had some bad patches of blackgrass, but a pre-emergence application plus Avadex removed the problem completely. He adds that winter barley is also a competitive crop so it was able to smother out some of the blackgrass too.

“Barley is a competitive crop and it should be used as part of the blackgrass control

strategy. If you have thin crop then the blackgrass will just fill the spaces made available.”

But, achieving effective blackgrass control must come at a cost. “There’s no point in trying to save money on blackgrass control,” he says. “But, equally there’s no point in going to the other extreme if it’s not justifiable. Driving costs down eventually becomes counterproductive. We take the view that we have to do what’s necessary to secure a long term position.”

Last year for example he thought he was going to have to go back in the spring with Atlantis even after Avadex, but in the end it wasn’t necessary.

The cultivation strategy is to go in with the TopDown as soon as possible behind the combine and then follow with the RexiusTwin Press to level the seed bed, consolidate the soil and to leave it a weatherproof state. The ▶



A competitive crop, barley is used as part of the blackgrass control strategy.

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Avadex is applied through a BioDrill attached to the back of the Rapid RDA drill.

► seedbed is then left to green up and sprayed off before drilling.

“Our objective is to get the seedbed totally right, especially behind OSR,” he says. “Seedbeds have to be clod free or slugs will become a problem. Slug incidence on our farm has been significantly reduced since introducing a robust seedbed-forming strategy pre-drilling. We use both our 6m power harrows in front of the 8m drill and this ensures there are no bottlenecks.

“Both power harrows are run on vario boxes in the tractor so the speed can be altered according to soil type and ground conditions,” explains

David Rowe. “The most important point is to get the seedbed right. The drill operator needs to be on the ball and he controls the power harrows by communicating with the drivers to ensure seedbed quality is maintained.

“A power harrow produces a dead level seedbed and this is what the RDA drill needs to work efficiently. A common mistake in my opinion is to put the drill in deeper to compensate for a poorer quality seedbed.

Backward step

“Our strategy might seem to some as a backward step but it works for us, especially in difficult conditions. The power harrow sits on the three-point linkage so the tractor distributes the weight evenly and this reduces compaction. We tend to use the power harrow approach later in the season when the weather can often turn wet before drilling.”

David Rowe adds that the power harrow works off GPS so when turning on the headland it moves a distance of 12m each time rather than 6m because they work together. This avoids tight turning and helps to reduce compaction issues on the headlands, but doesn't compromise

performance. Headlands are always drilled last.

“An advantage of the RDA drill is that it also cultivates the soil, which it could be argued is a bit of overkill when the power harrow is involved too, but in my opinion it all helps to ensure the best seedbed is formed.” ■

Farm facts

F W Rowe and Sons, Comberford Farm, Tamworth

- **Farmed area:** 1720ha
- **Cropping:** oilseed rape, winter wheat, winter barley, winter rye, potatoes
- **Soils:** blowing sand to heavy clay
- **Mainline tractors:** John Deere 9620 RX, 9560 RT, 2x 8345 RT, 2x 6215 R, 5x 6930
- **Combine:** 2x New Holland CR 1090 with 12.5m header
- **Drills:** 2x 8m Väderstad Rapid RDA, one with BioDrill
- **Cultivation:** 6m and 7m Väderstad TopDown; 6m Sumo Quattro plus BioDrill; 10.3m and 6.3m Väderstad RexiusTwin; 2x 6m Power harrow

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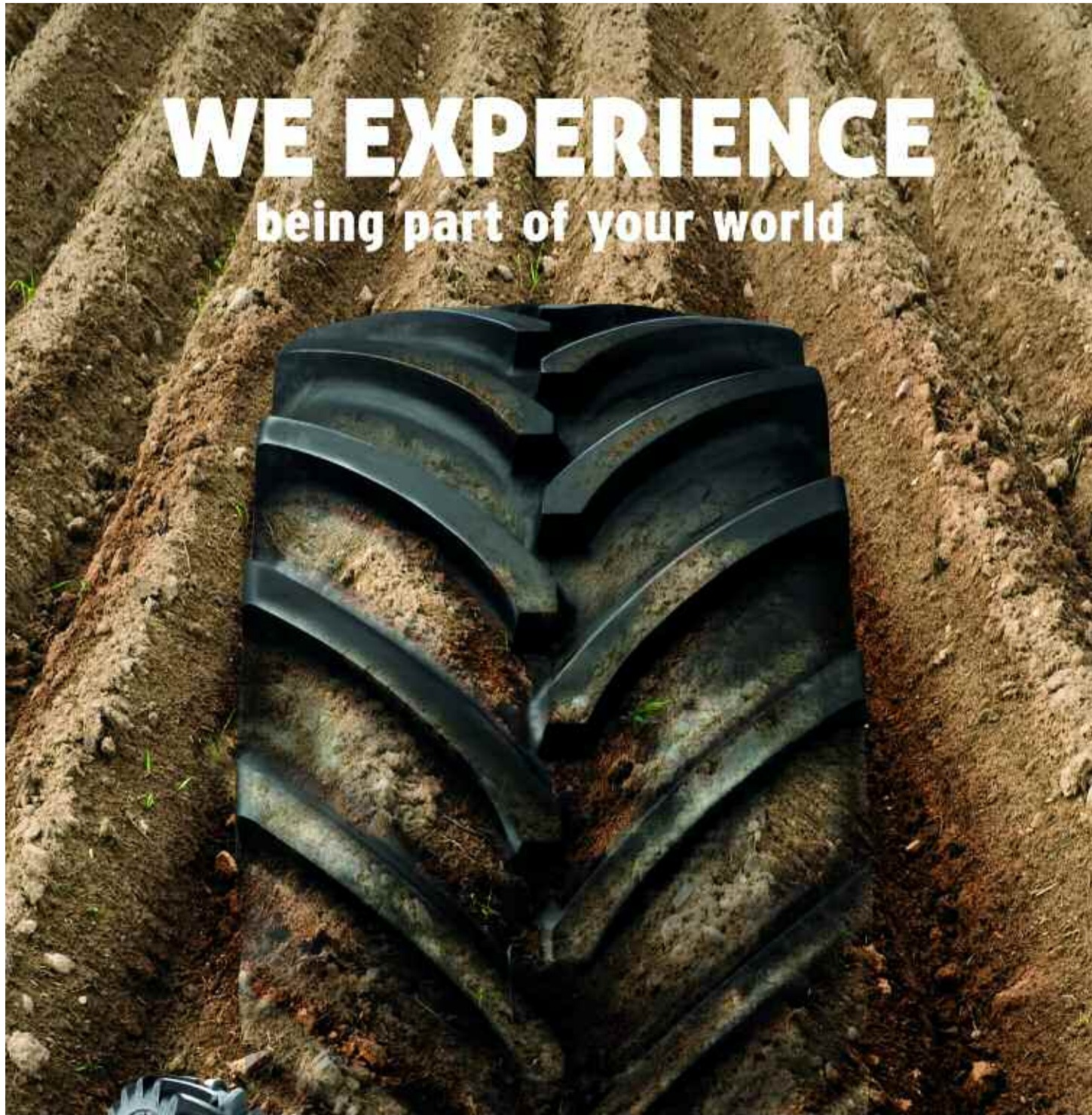


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