



Energy with less effort

Technical Fit for the Future

“You don’t really have to give it very much attention for it to power away and perform for you.”

Among the many candidates lined up to join the Group 4 hard wheat market is one high performer that seems to look after itself. CPM visits an Oxon farm business making a conscious move back into hard feed.

By Tom Allen-Stevens

As you turn up at the farm office of the Hildred Partnership near Wallingford, Oxon, you can’t help but notice the crop of oilseed rape on the slope facing you that’s been hit hard by cabbage stem flea beetle.

“It’s there to remind me never to grow the crop again,” says Guy Hildred. “It was the one field that appeared to grow away from CSFB last autumn, so we decided not to pull it up. But that was a mistake.”

Contrast that with a nearby field of KWS Kinetic winter wheat, drilled on 17 Oct, that faced a similar dilemma at the start of the year, after it was hit hard by crows over the winter. “In places you could barely see the crop in the rows, and we very nearly abandoned it. But it took off in March, and now you can hardly tell the difference between it and our other field that wasn’t affected.”

It’s part of a seed crop of the new Group 4 winter wheat variety that currently leads the AHDB Candidate line-up (see panel on

p18. Hildred Partnership has around 200ha of winter wheat grown for C2 seed in the ground for harvest 2019, with the KWS Kinetic sitting alongside KWS Barrell, RGT Gravity and Costello.

Conscious move

“We’re making a conscious move back to Group 4 varieties, having grown quality wheats for seed over a number of years,” says Guy. “There’s nothing wrong with them, but the milling premium is no longer sufficient. It’s best to focus purely on the yield, getting the wheat harvested and filling up the barn.”

With land that varies from gravel to chalk, and not a single water course across its 800ha, yields for the farm range from 7-11t/ha. The rest of the wheat area is also hard Group 4, while winter barley is also grown for seed. The business has an anaerobic digester, pumping out 2.1MW of gas to grid, fed with maize and rye, while poppies form the only other non-cereal break in the rotation.

The partnership is part of HBH (Farming), a joint-venture concern with a number of other partner businesses. HBH arable farm manager Mike Goodenough now takes day-to-day responsibility for the management of Guy’s wheats, and with a nutrition programme that revolves around the digestate from the AD unit, that can be a challenge, he says.

“The biggest issue with the digestate is the haulage — the timing of the application isn’t decided by when the crop’s ready, but

by when the digestate has to be spread.”

That’s carried out by local contractor Charlie Baker with a tanker spreader fitted with a 30m boom. The application is usually made to the wheat in April, and at a rate of 30m²/ha, the effect on the crop must be factored in, says Mike.

“It’s easy to put the wrong amount on and it will react with the soil in a different way — the available N might be 65kg/ha, it might be 70kg/ha, depending on the temperature. The nice thing about the Kinetic is that it behaves very similarly to other KWS feed varieties — you don’t really have to give it very much attention for it to power away and perform for you.”

Generally first wheats are direct drilled with the 6m Horsch Sprinter after maize, while the second wheats may well be ploughed. Otherwise the cultivation for most crops is a 3.5m Simba Solo followed by a ▶



The field of KWS Kinetic that was hit hard by crows is set to perform as well as the nearby field that was unaffected.

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Digestate is a key source of nutrients for the crop, but the timing of the application is decided by when it has to be spread, rather than when the crop's ready.

▶ 6m Horsch Joker to make the seedbed if needed.

"The aim is for an established population of 355 seeds/m², and we'll go as low as 100kg/ha or as high as 150kg/ha to achieve this. The prime time for drilling would be first week of Oct, although we'd go later where blackgrass is an issue. The Kinetic came up reasonably well, with the more gravelly soil ahead of the rest," says Mike.



With Reflection in its parentage, Kinetic has an erect growth habit (left), while it's been no trouble to keep the crop free of disease from flag to foot (right).

In the spring, concerned that the crow-damaged piece might not take kindly to the digestate, it was given a larger-than-normal dose of N in Feb to help it recover, then ammonium sulphate before its main dose of N as ammonium nitrate in late March, with a total of 160kgN/ha applied. The fuller crop of Kinetic received the usual programme for a feed wheat crop to meet its expected yield (see panel on p19), including the standard dressing of digestate.

Tebuconazole was applied at the T0 timing, with Adexar used at both T1 and

T2. "We'll give it a cheap and cheerful tebuconazole at T3," he adds. "Chloromequat was applied at both T0 and T1. This isn't the strongest ground and Kinetic seems very stiff-strawed, even where it grew fast after the crow damage."

There's now very little difference between the two fields, both are free of disease and Mike expects them to perform well at harvest. "We have two Claas Lexion 770 combines with 12m headers and the seed crop always gets priority. But if the Kinetic holds its Hagberg like KWS Trinity and with a

Kinetic is the 'one to watch' among the hard Group 4s

While some growers have moved away from the Group 4 hard feed market, there's every reason to take another look, believes Agrovista head of seeds Tom Nickerson.

"We've seen one or two game-changing quality wheats that yield well which have tempted growers towards milling varieties. But gone are the days when farmers looked for feed wheats that were purely high input, high output. What we're seeing on the AHDB Recommended List, and especially among the candidates, is a new generation of hard Group 4s that offer good agronomics and appropriate grain quality, as well as the high yields growers expect," he says.

These are the ones now taking market share, and offer additional benefits for those growers who can use their good grain quality in local premium markets, he adds.

Among the RL candidates, it's KWS Kinetic that currently leads the pack. So what's Tom's take on the variety? "It's certainly one to watch," he says. "There's a limited tonnage available for 2019 sowings, but my feeling is that it's one for 2020, by which time we'll have a full set of data on it, and growers will be able to make a more informed choice."

KWS Kerrin, meanwhile, delivers on the yield and has plenty of data to inform the grower looking to move into these wheats, he notes. "Kerrin's shown it can yield consistently, so it's my pick for this autumn. What Kinetic offers in

addition is a considerable step-up in specific weight. It also has a maturity rating that will bring it to harvest a day or two ahead of most other hard Group 4s. So perhaps one to line up for next autumn."

KWS took the unusual step of releasing seed of Kinetic for multiplication before it completed National List trials, notes Will Compson, KWS cereal and sales manager. "This means growers will have access to seed for commercial production this autumn," he notes.

"KWS Kinetic combines a high treated and untreated yield, good disease resistance and the best combination of protein, Hagberg falling number and specific weight of any candidate variety."

A cross between Reflection and KWS Silverstone, Kinetic has orange wheat blossom midge resistance and has performed strongly in all regions, adds Will, although its highest yields have come in the East and West.

"At 105% of controls, its treated yield is at the top of the group, but it will be its stiff straw, early maturity and high specific weight that will capture grower interest — so it not only yields, but these are bankable yields."

Senior wheat breeder Mark Dodds notes that the dry-down evaluation carried out by KWS puts Kinetic on a par with Skyfall in terms of earliness. "It comes down to 15% moisture five days earlier than Gleam or RGT Gravity and has an untreated yield similar to KWS Siskin."



It not only yields, but these are bankable yields, says Will Compson.

Nevertheless, seed availability is likely to be tight for autumn 2019, so product development manager John Miles suggests KWS Kerrin as the Group 4 hard feed variety of choice if Kinetic's not available.

"They are quite different — Kinetic is an upgrade of Reflection, inheriting its high yield, short, stiff straw and earliness, but bringing its disease resistance from Silverstone," he explains.

"Kerrin has KWS Santiago in its parentage. The yield isn't quite at the same level as Kinetic, but you get the consistency growers enjoyed in Santiago. It's also very flexible in terms of when you can drill it — whenever the seed turns up, you can put it in the ground and it'll perform."

Moderately stiff, disease-wise Kerrin may need watching for yellow rust, especially in eastern counties, notes John, but its strength is brown rust. "It has the strongest brown rust score of the leading Group 4 varieties on the RL," he adds.

specific weight higher than nearly everything else on the AHDB Recommended List, I don't expect it'll mind waiting at harvest."

For Guy, Kinetic fits the mould of the many other KWS varieties he's grown in the past. "It's not quite like KWS Santiago, but we've treated it very similarly to the KWS Lili we grew two years ago (see panel on right) — although a Group 2 variety, we grew it as a Group 4 as it was the yield we were after," he says.

"Naturally we'd have to reserve judgement on the Kinetic until the combine goes in, and you can't base your impression of it on just one year. But if it does well, we'd certainly consider rolling it out over the rest of the

Mike Goodenough (left) and Guy Hildred are making a conscious move back to Group 4 varieties, having grown quality wheats for seed over a number of years.



Kinetic has the high yields growers have come to expect of Group 4 varieties with considerably improved grain quality.

wheat area. We've not spent any more time or expense on it than we have for any of our other wheats — it's a wheat that looks after itself." ■



Hildred Partnership's programme for high-yielding wheat, 2017

Date	Product	Rate (/ha)	Price (/ha)
	Seed		£105*
07-Oct		KWS Lili	140kg
	Herbicides		£75
	Insecticides		£2
	Fertiliser		£160
17-Feb	Urea 46% N	100kg	
18-Apr	Digestate	31m ³	
19-Apr	Urea 46%N	213kg	
	Fungicides		£90
10-Apr	T1 – Keystone + CTL	0.8 +1.0 litre	
05-May	T2 – Adexar + CTL	1.25 + 1.0 litre	
02-Jun	T3 – Toledo + Comet	0.45 + 0.25 litres	
	Growth regulators		£1
10-Apr	T1 – Chloromequat	0.8 litres	
Standard	TOTAL VARIABLE COSTS		£433
05-Aug	Harvest	10.5t	£1659**
	GROSS MARGIN		£1226

*Digestate – total applied: 80kgN/ha, 26kg SO₃/ha, 127kg K₂O/ha, 47kg P₂O₅/ha; CTL – chlorothalonil; Keystone – epoxiconazole+ isopyrazam; Adexar – flupyrroxad+ epoxiconazole; Toledo – tebuconazole; Comet – pyraclostrobin; *price for C1 seed; **based on ex-farm price of £158/t*

Fit for the Future

As Britain exits the EU, wheat growers will be preparing their enterprise for a market with less protection, but potentially open to the opportunities of a wider world. Finding the right market, and the variety to fulfil it, will be crucial for those looking to get ahead.

In this series of articles, CPM has teamed up with KWS to explore how the wheat market may evolve, and profile growers set to deliver ongoing profitability.

KWS is a leading breeder of cereals, oilseeds, sugar beet and maize. As a family-owned business, it is truly independent and entirely focussed on promoting success through the continual improvement of varieties with higher yields, strong disease and pest resistance, and excellent grain quality. We're committed to your future just as much as you are.



KWS Group 4 wheat leaders at a glance

	KWS Kinetic	KWS Kerrin
AHDB Winter Wheat List Source for data*	Candidate 2019/20	Recommended 2019/20
Yield mean of controls (t/ha)	10.4	11.2
UK treated yield (% control)	105.1	103.7
UK untreated yield (% treated control)	86.3	81.3
Hagberg falling number (sec)	279	150
Specific weight (kg/hl)	78.8	76.5
Resistance to lodging with PGR	-	6.9
Lodging % (treated)	1.9	
Height without PGR (cm)	83.3	83.7
Maturity (days+/- JB Diego)	0	1.2
Disease resistance		
Mildew	6.1	6.7
Yellow rust	6.4	7.0
Brown rust	6.2	6.8
<i>Septoria tritici</i>	5.8	5.0
Eyespot	-	4.7
Fusarium ear blight	-	5.8
OWBM	R	R

*Note: Yield data are not comparable as varieties were assessed in different trials using different controls