

“Beowulf is a variety that’s been bred by design to include all the key attributes wanted by growers and agronomists.”

Insider’s View: wheat

An epic reimagining

Beowulf has arrived as the strongest fighter, ready to take on Grendel and his mother, but this time in the form of the highest yielding hard feed wheat armed with an arsenal of strong agronomic characteristics. CPM investigates.

By Melanie Jenkins

Beowulf might be known as the legendary protagonist of the epic poem, but a new hard feed wheat variety could be about to reimagine the tale from an entirely new angle.

Although Limagrain is less well-known for its hard Group 4 feed wheats, with the elevation of LG Beowulf to the top of AHDB’s Recommended List, the firm is trying to change this. “We’re building our profile in this Group, first with the launch of LG Typhoon, now with Beowulf and hopefully LG Rebellion as a candidate variety,” says Limagrain’s Ron Granger.

Achieving an average UK yield of 106%, Beowulf is consistent across the different

regions, he explains. “Often there’s an expectation of a dip in yield in the West and North, but this variety yields consistently everywhere. It also demonstrates a wide sowing window of performance, averaging 105% in early sown trials, 106% in the main window and 108% when later sown.”

Consistency in performance is what Limagrain’s wheat breeder, Phil Tailby, believes to be the standout feature of Beowulf. “We’ve seen it perform just as well as a second wheat as it has as a first, whichever window it’s been sown in, across light and heavy soils as well as in all regions — it just gets the job done.”

Respected lineage

Although the author of the epic poem Beowulf is up for debate, the parents of Limagrain’s wheat iteration are of well-known pedigree and it’s this that’s captured the attention of the seed trade. “Beowulf is a cross of Gleam and Costello, which are two varieties that are well thought of on farm,” explains Frontier’s Jim Knightbraid. “Costello provides excellent grain quality which growers will like, while Gleam is notable for its consistency — it’s performed on all systems, across drilling windows, regions and seasons. And considering we’ve seen such a diversity

in conditions during the past four years, from flooding to drought and delayed harvest, having a variety with these two parents instantly makes it stand out.”

Beowulf is the first cross of these two varieties to make it to the RL and its parentage is the first aspect of the variety



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that stood out to Stuart Rowley of independent seed and grain merchants, Mortimers. "We still have Costello being grown

locally after all this time, which speaks volumes for Beowulf's parentage."

Ron believes Beowulf is an ▶

Standing out

Alastair Brumfield is growing his first seed crop of Beowulf for Mortimers grain and seed merchants. Operating a 170ha family farm near Beverley in East Yorkshire on the edge of the Yorkshire Wolds, he grows wheat, barley, beans, peas and usually oilseed rape.

Around 50% of his wheat area consists of seed crops for Mortimers, with the farm having a long-standing history with the firm going back to at least the 1980s. "Mortimers offered me Beowulf for the 2023/24 season, providing 2t for me to sow. The first crop was drilled after oilseed rape on 18 September at 180 seeds/m², which is a little lower than we'd usually aim for."

The ground was min-tilled, drilled with a Claydon strip-till drill, rolled and sprayed with a pre-emergence herbicide within a day. "We then had 5cm of rain and when the Beowulf came through it didn't look very good."

Going into October Alastair slug pelleted the crop four times, anticipating challenges with growing the crop. "However, the crop improved through winter, tillered really well and I now wish all my wheat looked like the Beowulf as it looks magnificent."

An aphicide was applied in

November once Alastair could travel on the ground to help keep BYDV out of the crop until March. Since then, he's applied a PGR and Iodus (laminarin) at T0 to help support the crop's septoria resistance, followed by Inatreq (fenpicoxamid) and Rlyox (mefentrifluconazole+pyraclostrobin) in conjunction with Cleancrop Alatrino Evo (trinexapac-ethyl) at T1. "There weren't any real signs of disease in the crop other than a little septoria early on, which is why I applied the Iodus."

The crop had an application of urea at 45kgN/ha in late February, which was followed by the equivalent of 90kgN/ha from pig slurry the first week of April, and finally a further 50kgN/ha from liquid fertiliser the second week of May. "The pig slurry was due to be applied earlier but it was just too wet, so I applied Polysulphate to ensure the crop had enough sulphur as none was applied with the first dose of N."

Although Beowulf is still to be harvested, Alastair will be growing the variety for Mortimers and likely for good parentage with a decent chance of a strong specific weight, so if it yields well, I'll be planting it as a feed crop as well as for seed."



The crop of Beowulf being grown as a seed crop for Mortimers near Beverley in East Yorkshire improved through winter and tillered well.

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According to Phil Tailby, last year was a particularly high lodging year but Beowulf was one of the stiffest varieties in both Limagrain and official trials.

► upgraded version of Gleam. “When two varieties are crossed, breeders are aiming for the best characteristics of both parents while losing the worst ones. Beowulf is a variety that’s been bred by design, to include all the key attributes wanted by growers and agronomists such as high yield performance and consistency in variable climates. Previously, varieties weren’t able to cope with such variable climatic conditions, so breeders have focused on producing material which is able to perform across different situations.”

Yield retention

Jim believes Beowulf to have good grain characteristics with a specific weight of 78.3kg/hl and a Hagberg of 253. “It’s at the top end of the feed wheats for quality, and unlike some of the other more recent



Interest in Beowulf has already been strong – Jim Knightbraid is confident there’s enough seed crops in the ground to supply 7-8% of the UK’s certified area.

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additions to Group 4, Beowulf does retain yield without compromising specific weight.”

The variety’s grain quality has also been noted by Stuart, who looks for strong traits in varieties to help growers achieve grain premiums. “Varieties that don’t hit the right specific weight won’t make their way through our selection process,” he stresses.

Having good grain quality has been recognised as an important attribute to have when it comes to particularly wet or dry seasons, explains Ron. “The big, bold grain can add weight to a crop which is especially important with the changeable seasons we’ve been experiencing.”

Furthermore, he flags that Beowulf has strong resistance to yellow rust and a good score against septoria with a 6.7. “It’s important for varieties to score at least 6 for this disease as that’s what both growers and agronomists have advised as the minimum accepted rating in recent years,” comments Ron.

Because Brown rust is more of an issue for southerly growers, Jim advises supporting Beowulf’s resistance score of 5 with a correctly timed fungicide. “Beowulf has a strong disease resistance profile but it’s not a low input variety, so it’s important to support its high output with the appropriate fungicide spend.”

Jim also notes Beowulf’s untreated yield performance in Frontier’s trials where there was recognisable disease pressure and no PGR applied. “It has the third highest untreated yield on the RL, and the fifth highest in our trials which is reassuring.”

Another string to Beowulf’s bow is its orange wheat blossom midge resistance,

he adds. "It's good that Beowulf has this, and although most feed wheat varieties do, more than 50% of the planted crop area doesn't have OWBM resistance. So Beowulf provides an opportunity for growers to bring the resistance back into their rotations."

OWBM resistance is an aspect Stuart believes is important, especially for Mortimers' growers who are largely located around the Yorkshire Wolds. "In many cases, OWBM is a critical requirement for a variety and growers won't even entertain one without it, but this trait has to be combined with grain quality."

Standing ability

Beowulf scores strongly for its standing ability but Jim says up until Harvest 2023, it hadn't had a testing season. "However, we saw this tested more last year which has given us confidence that it has bankable straw strength, with very low instances of lodging in trials — something which is particularly important north of the Humber."

According to Phil, last year was a

particularly high lodging year but Beowulf was one of the stiffest varieties in both Limagrain and official trials. "It's no good for a variety to have a big yield and then not have stiff straw, so we've ticked both boxes with Beowulf."

Because Beowulf is towards the later end in terms of its maturity, Jim advises balancing it with earlier varieties in the rotation. "A +2 for maturity isn't of concern and there are plenty of varieties with earlier maturity which can also be planted alongside it on farm to balance."

All in all, Beowulf's strong disease resistance profile alongside its yield potential and grain attributes, have been achieved through advances in plant breeding, says Phil. "We have tools in our programme to be able to follow and map ▶



Orange wheat blossom midge resistance is an aspect Stuart Rowley believes is important, especially for Mortimers' growers who are largely located around the Yorkshire Wolds.

LG Beowulf at a glance

Yield (% treated controls)	
UK treated	106.2
UK untreated	90.9
East region treated	106.4
West region treated	105.5
North region treated	[107]
Grain quality	
Specific weight (kg/hl)	78.3
Protein content	11.1
Hagberg Falling Number	253
Agronomics	
Resistance to lodging without PGR	8.1
Resistant to lodging with PGR	7.5
Straw length without PGR (cm)	89.9
Ripening (days +/- Skyfall)	+2
Disease resistance	
Mildew	[6]
Yellow rust	8.9
Yellow rust (young plant)	-
Brown rust	4.7
Septoria	6.7
Eyespot	5.6
Fusarium ear blight	[6]
Orange wheat blossom midge	R

Source: AHDB Recommended List, winter wheat 2024/54 - [] = limited data.

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Ron Granger says Beowulf is an upgraded version of Gleam, bringing in the best characteristics while losing the worst ones.

► lots of disease resistance genes, so it wasn't a surprise when we started to see populations from the cross of Gleam and Costello perform so well in the field. We've

been able to breed in multiple resistances through marker assisted selection, and this also allowed us to pull out lines with better specific weight and yield much earlier than we'd previously have been able to.

"We're making a lot fewer crosses than we were 20 years ago, and can be more nuanced and targeted with what we're doing. More work goes into each cross as we have the ability to pull apart populations and find lines that are superior, with a greater combination of desirable genes including the specifics of Hagberg and sprouting," he explains. "We can be really precise which means there are exciting things coming through the pipeline due to vast improvements in the whole breeding programme over the past few years.

Resilience strategy

"This'll allow us to produce varieties better able to cope with the pressures from changeable weather, or challenges posed by difficult farm conditions — it's all part of a resilience strategy that made it possible to produce Beowulf. We're now putting a concerted effort into producing the next Group 1," he adds.

Interest in Beowulf has already been

strong, with Jim confident there's enough seed crops in the ground to supply 7-8% of the UK's certified area. "The only caveat is the condition of the UK seed crops due to the difficult winter we've had, especially if some hasn't been drilled."

However, Frontier's seed growers have reported that the variety has come out of the winter well. "Some of it was drilled late but everyone is pretty happy with how it's looking. Beowulf will have nationwide appeal and it's one of the best, if not the best, variety in terms of yield potential for Harvest 2025."

Ron reaffirms that there should be plenty of Beowulf seed available for planting this autumn. "There's been a good amount of interest in the variety already but there are enough seed crops in the ground to meet demand."

Stuart is keeping an eye on how Beowulf performs for Mortimers' seed growers, with the hope that it'll demonstrate a bold grain, hold onto its Hagberg and won't sprout to help growers make a premium. "We're looking to see how it performs on the Wolds, in both treated and untreated situations. If Beowulf has a strong start, there's hope that it'll have longevity in the market." ■

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