

“It’s a great example of our work to future proof varieties.”

RL reset

Technical Recommended Lists

With 21 new varieties and major modifications to disease resistance ratings, it’s very much a year of change for the AHDB Recommended Lists. CPM takes an in-depth look at who’s come and who’s gone, as well as what the new ratings mean.

By Charlotte Cunningham

It’s a slightly more compact offering on the 2021/2022 Recommend Lists, with 25 varieties removed and 21 new entrants filling the space.

That said, those 21 varieties have certainly fought for their place, after the 2019/20 season being an incredibly difficult one for the trials team. “The autumn of 2019 was incredibly wet, which lasted well into the winter and led to the loss of a lot of trials,” explains Paul Gosling, who manages the RL at AHDB. “In total we lost 19 wheat, 14 OSR, eight winter barley and six winter oat trials — either simply because they weren’t drilled, as we were unable to get onto the ground, or because we had to abandon them as they were in such poor condition.”

The spring of 2020 brought further issues due to the COVID movement restrictions meaning four spring barley trials and two spring oat plots were unable to be drilled. “COVID also impacted trial inspections, with AHDB having to turn to drone footage, in some cases, to glean the necessary information,” adds Paul.

So it’s been a year of adapting and working in new ways, but perhaps the most interesting addition this year’s RL is the change to disease-resistance ratings — including brand new disease ratings for winter rye (brown rust) and winter triticale (yellow rust) on the Descriptive Lists.

So what’s the reason behind this? Offering a rich mixture of broad-appeal and niche varieties, the new RL acts as a foundation for integrated pest management and brings opportunities for a wide range of markets, says Paul. “The wheat brown and yellow rust ratings are now weighted, so the most recent years’ results have the largest influence on the rating. This approach makes the rating more sensitive to changes in rust populations, while still building on a valuable three-year data set.

“For wheat yellow rust and spring oat mildew, we’ve also changed the way we calculate disease ratings, relative to our susceptible and resistant variety fixed points. This ‘reset’ means, compared with the previous edition, the same amount of disease will result in a lower rating score. For rust, some varieties have dropped by as much as three rating points. We stress this

is largely due to the way we calculate the ratings, rather than an indication of a major shift in rust races in 2020.”

Turning the focus to the varieties, what’s new and what’s been dropped?

Oilseed rape

After an impressive 13 new varieties last year, it’s a much more sombre affair for OSR this year with five hybrid options added to the RL, and the majority recommended for the East/West.

New for this region is LG Antigua from Limagrain, Respect from LSPB and DK Expectation from Bayer. Also in the general-purpose category is LG Aviron, from Limagrain, however this has been awarded UK recommendation and has performed notably well in the North. “The new varieties continue to push disease resistances higher, with robust resistance ratings for both stem canker and LLS,” explains Paul.

Aviron tops the list with its stable mate,



The 2021/22 RL sees significant changes to disease ratings



Recommended for the whole of the UK, KWS Cranium ticks all the boxes for features of high or very high importance in modern wheat production.

Ambassador, which has held onto its high yields for the second season in a row. “Trait loading of our varieties means that LG Aviron offers the N-Flex trait unique to Limagrain’s OSR portfolio, as well as resistance to pod-shatter, TuYV and RLM 7,” says Will Charlton, Limagrain’s OSR product manager.

“N-Flex is a relatively new trait launched in our hybrids last year offering a step forward in the way that OSR varieties minimise yield losses in sub-optimal N conditions.”

While it’s technically listed as a new variety on this year’s RL, Blackpearl from LSPB, doesn’t yet have any available data as it’s not yet completed National List testing, says Paul. “LSPB are waiting for some data from Blackpearl in order for it to achieve UK National Listing status. So while Blackpearl is recommended, we won’t be sharing any data until that data has been confirmed because after 1 Jan, the variety will have to be on the UK National List to be marketed in the UK.”

The fifth new entrant is a specialist variety — DK Imprint CL from Bayer. “This new addition is a hybrid variety with a specific recommendation for its tolerance to specific imidazolinone herbicides,” says Paul. “It has high resistance to lodging — albeit based on limited data — as well as resistance to pod-shatter and good tolerance to stem canker.”

More than a third of the new varieties on the RL now have TuYV resistance and for the first time this year, the winter OSR list includes pod-shatter resistance data. “We’ve been working with the John Innes Centre over the past three years to try to develop a protocol for testing varieties for pod shatter resistance,” explains Paul. “That has had its problems and we haven’t managed to develop a test that we can get to reliably work yet.

“But because so many varieties have ▶

New winter OSRs at a glance

Variety	Scope and type	Breeder/contact	Points to note
LG Aviron	Hybrid	Limagrain	High GO in the North/East/West. Early flowering, early maturing and resistant to pod-shatter.
DK Imprint CL	Hybrid	Bayer	Specific recommendation for its tolerance to imidazolinone herbicides. High resistance to lodging and pod-shatter.
LG Antigua	Hybrid	Limagrain	High GO in East/West. Resistant to lodging with good stem stiffness at maturity.
DK Expectation	Hybrid	Bayer	Early maturing with resistance to pod-shatter, LLS, stem canker and TuYV. High GO in East/West.
Respect	Hybrid	LSPB	High GO in East/West, resistance to lodging with good stem stiffness at maturity.

New winter wheats at a glance

Variety	Scope and type	Breeder/contact	Points to note
LG Prince	Group 3	Limagrain	Short, stiff-strawed and performs well in East/West. Susceptible to mildew.
LG Illuminate	Group 3	Limagrain	Short, stiff-strawed and high-yielding with uks classification. High resistance to brown rust and septoria as well as OWBM.
LG Quasar	Group 3	Limagrain	High-yielding with uks classification. Relatively late maturing and high treated potential in the East.
Merit	Group 3	Elsoms	Recommended for the East. “Medium” for distilling and uks classified.
LG Astronomer	Group 3	Limagrain	High spec weight and rated as “medium” for distilling. Stiff-strawed and high treated yields in the East.
Swallow	Soft Group 4	Senova	High treated yields in the North. Stiff strawed. Rated as “good” for distilling.
KWS Cranium	Hard Group 4	KWS	Hard-milling, high-yielding and UK recommended. Has high Hagbergs, but tends to give a low specific weight.
RGT Wolverine	Hard Group 4	RAGT	High-yielding with a specific recommendation for resistance to BYDV. Relatively late maturing and a high treated yield in West and North regions.

New barleys at a glance

Variety	Scope and type	Breeder/contact	Points to note
KWS Tardis	Two-row feed	KWS	High spec weight and good resistance to lodging and rhynchosporium. Very high yielding in the East.
Bolton	Two-row feed	Elsoms	Short-strawed with good lodging resistance. High-yielding particularly in East/heavier soils.
Bordeaux	Two-row feed	Senova	UK recommended but performs exceptionally well in East/on heavier soils. Susceptible to rhynchosporium and net blotch.
SY Kingston	Six-row feed hybrid	Syngenta	High-yielding and resistant to BaYMV strain 1 and BaMMV. Relatively tall but responds well to PGRs.
SY Thunderbolt	Six-row feed hybrid	Syngenta	UK recommended with a high spec weight. Performs well on heavier soils and resistant to BaYMV strain 1 and BaMMV.
Skyway	Spring malting variety	Agrii	High-yielding malting variety with potential for brewing. Stiff-strawed with high resistance to brackling and mildew.
Cadiz	Spring feed variety	Senova	High yields in East/West. Good resistance to brackling and mildew. Stiff-strawed.



LG Aviron offers the N-Flex trait unique to Limagrain's OSR varieties.

► been marketing pod-shatter resistance, the oilseed committee felt we had to say something about it and so we're accepting breeders claims while we continue to test this."

Outgoing varieties include Windozz, Architect, Elgar, Butterfly, Elevation, Nikita, Anastasia, Kielder, and Broadway.

Wheat

Things look more dynamic on the wheat front with eight new winter varieties added this year and nabim Group 3 growers set to benefit the most.

New to the Group 3 category is LG Prince; LG Illuminate; LG Quasar and LG Astronomer — all from the Limagrain stable — as well as Merit from Elsoms.

Though Limagrain's offerings fall into the biscuit category, they do have multiple end-use markets says the firm's cereals and pulses product manager, Tom Barker. "They shouldn't just be considered solely as biscuit

wheats, as they all have the additional end market of potential for distilling and two of them (Quasar and Illuminate) also have UK export opportunities on top, for a full marketing outlet opportunity."

As well as this, the addition of two new hard Group 4s are set to provide extra options for growers. KWS Cranium sits joint-top of the leader board of hard feed types in terms of yield at 104%, while RGT Wolverine brings a specific recommendation for resistance to BYDV to the RL for the first time.

According to KWS, Cranium sets some important new standards in the Group 4 hard wheat sector. "Recommended for the whole of the UK, KWS Cranium ticks all the boxes for features of high or very high importance in modern wheat production," says the firm's Will Compson.

"With the best combination of yield, yellow rust resistance and OWBM resistance on the 2021/22 RL, it's a great example of our Sowing for Peak Performance work to future-proof varieties as much as we can."

In the soft Group 4 market, Swallow, from Senova, is causing excitement, particularly for the Scotch Whisky Research Institute, after achieving the highest average alcohol yields in 2020 — well clear of its competitors. "The consistency of performance for alcohol yield across different harvest years and trial sites is a very positive feature of a clearly "good" distilling variety with the potential to have a significant impact on grain distilling," it says.

Swallow also has resistance to OWBM, which will no doubt attract growers, though

Paul warns that limited data suggests it's very susceptible to eyespot ([3]), which is worth keeping in mind if you're considering the variety.

Leaving the list this year are KWS Lilli; KWS Bassett; Zulu; Bennington; LG Motown; Leeds; Viscount; Revelation; KWS Crispin and Dunston.

Looking to spring wheat, WPB Escape, bred by LSPB, replaces outgoing KWS Alderon. "Escape has given high treated yields from both spring and late-autumn sowings (based on limited data) and has high resistance to both yellow rust and mildew," says Paul.

Barley

While there are no new options for winter malting barley growers, the feed market has had quite a shake up with the addition of five new winter feed varieties now on the list, in place of departing varieties, SY Venture, KWS Glacier and KWS Astaire.

In the two-row category, KWS Tardis (from KWS), Bolton (from Elsoms) and Bordeaux (from Senova) all have joint UK yields of 106, beating closest competitors KWS Hawking and KWS Gimlet by 3%.

"KWS Tardis' yield is just 1% point off the highest yielding six-row hybrid," explains Will. "The variety is particularly strong in the East of the country and performs well on light soils, although it's best on heavy ones where yields are at 110% of controls."

Two new six-row hybrid varieties, both from Syngenta have also made recommendation. "Both SY Kingston and SY Thunderbolt offer better disease resistance

More on rust ratings

Since the incursion of new yellow and brown rust populations in the early 2010's, rust populations have been dynamic in space and time and RL rust ratings — based on three years' worth of data — have sometimes struggled to cope.

In 2016, there was a large shift in yellow rust populations and so ratings were based on just one year's data on the 2017/18 RL.

Reports of unexpected levels of rusts on some varieties in 2019 led to questions about new rust races emerging and the veracity of the RL ratings. As a result, yellow and brown rust RL data was subject to additional checks, which showed that varietal resistance was generally in-line with recent years.

Some varieties did have their rust ratings reduced by one point, with KWS' Firefly falling by two points on the brown rust scale.

A special notice was added to the RL tables

last to explain this, but doubts persisted.

So, since last year, AHDB has consulted with pathologists, breeders, agronomists, and statisticians to find a better way of calculating rust ratings, explains Paul. "The trial data is good — varieties with high levels of rust in commercial situations were generally showing high levels of rust in RL trials. However, this wasn't being reflected in the ratings and the system was arguably poor at dealing with constantly changing populations."

As a result, a new system has been developed and agreed by all parties and applies to yellow and brown rust ratings.

So how does it work? In the new way of working, three years' worth of data will continue to be used to calculate ratings, however, data from the current year will be given a weighting of three in the calculations, the previous year, two, and the year prior to that, one.

In yellow rust, the bottom "fixed" point has been adjusted in order to lower ratings for the most susceptible varieties so that disease levels reflect what farmers and agronomist expect to see at those lower levels.

A Yellow Rust Watch List system has also been developed, using RL trial data to highlight varieties that seem to have higher levels of disease than expected in some trials.

"While the watch list doesn't form part of this year's RL it will be available online after Christmas," explains Paul. "This list will be useful to guide monitoring and fungicide programmes, however, it's important to stress again that the resistance itself has not changed significantly this year. What has changed is the calculations, which we hope will better reflect what's actually seen in the field."



Group 3 LG Illuminate also has UK export opportunities on top, for a full marketing opportunity.

and untreated yields, combined with good quality characteristics,” explains Paul.

For those looking for spring cropping options, Skyway — bred by Agrii — is a new high-yielding malting option that’s currently on test for brewing. If successful, this could potentially offer huge yield increases over the current market leader, notes Paul.

Also joining the spring barley line up is Cadiz, a feed variety from Senova, with specific recommendation for the East/West region and good all-round agronomics, says Senova’s Jeremy Taylor. “With a 7 for lodging and an 8 for brackling resistance, Cadiz has similar maturity to other leading spring varieties.”

Leaving the spring barley list is Concerto, after more than 10 years of recommendation.

Oats

There are no changes to either the winter or spring oat RL — with nothing new and nothing removed — however, where there is a difference is within spring oat mildew



KWS Tardis’ yield is just 1% off the highest yielding six-row hybrid.

ratings. “Spring and winter oat mildew ratings were not aligned — higher levels of disease were found in spring varieties than in winter varieties with similar resistance ratings,” explains Paul. “As a result, and to bring this back into line, the bottom “fixed” point used to calculate mildew ratings in spring oats has been moved.

“The effect of this is lower ratings in the less resistant varieties, while more resistant varieties are not affected.”

Looking at the figures, some of the worst hit varieties include Madison, which moves from a score of 5 to 3, while Elison stays unaffected with a score of 8. However, Paul says it’s crucial to point out that this doesn’t mean that there’s been a significant change in mildew races this year — “it’s simply a change in the way we calculate ratings to bring them more in line with winter oats.” ■



Swallow is causing excitement, particularly for the Scotch Whisky Research Institute, after achieving the highest average alcohol yields in 2020.



A new view of spring wheat

An exciting feed variety, **Hexham** excels when autumn and spring sown and its high yields, great disease resistance and flexible drilling date make it an excellent option across the country.



Tel 01223 890777 • Email info@senova.uk.com • [@SenovaLtd](https://twitter.com/SenovaLtd)
www.senova.uk.com