

RECOMMENDED LISTS

AHDB Recommended Lists for cereals and oilseeds 2022/23

Summer edition



CEREALS & OILSEEDS

Produced in partnership with:



British Society of Plant Breeders



Maltsters Association of Great Britain



UK Flour Millers

Using the AHDB Recommended Lists (RL)

This booklet contains tables for AHDB recommended and described varieties, and lists of candidate varieties. Use the guidance in this section to interpret the data. The summer edition features extra information on quality and markets. It also includes variety comments and, where available, parentage information.

For further information on the trialling and recommendation system, including the basis on which varieties are recommended and individual trial results, visit ahdb.org.uk/rl



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Type of list

Recommended lists

Recommended lists present data from a large number of trials. Recommended varieties are considered to have the potential to provide a consistent economic benefit to the UK cereals or oilseeds industry.

Descriptive lists

Descriptive lists show trial data for spring oilseed rape, spring linseed, winter triticale and winter rye. The data available is presented for varieties for which seed is likely to be available. Data on described varieties is more limited and care should be taken when interpreting differences between varieties. A place on the descriptive list does not constitute a recommendation.

Candidate lists

Current candidate varieties are given, along with their breeder or UK contact, on pages following the main RL tables. Candidate varieties are usually in their first or second year of RL trials, having completed at least two years of preliminary trials (e.g. National List trials). If data is sufficient, they are considered for recommendation in the autumn.

Candidate lists containing information on yields and agronomic features can be found on the RL website (ahdb.org.uk/rl) once varieties have achieved National Listing. This information is also available on the RL app.

Regional lists for winter oilseed rape

Winter oilseed rape varieties are presented on a single UK list. Regional recommendations are also maintained, with varieties ordered according to the scope of recommendation. Varieties that are suitable for both the East/West and North regions have a UK recommendation. When choosing a variety, consider those recommended for the UK and your region. Divisions between regions are not absolute and growers are advised to consider which region is most appropriate for their conditions (Figure 1).

Varities not added to the RL

For information on varieties grown in RL trials in 2021 but not added to the RL, visit ahdb.org.uk/rl

Status in the lists

Scope of recommendation

This may refer to a UK or regional recommendation, or a recommendation for a specific end use or agronomic feature.

Varities no longer listed

Varities no longer recommended, or which the breeder has withdrawn from the RL. Before a variety is taken off the RL, it is normally removed from trials (indicated by an * in the tables).

Clubroot-resistant oilseed rape varieties

The pathogen that causes clubroot has several strains. The relative proportion of these strains varies from location to location. Clubroot-resistant varieties are resistant to common clubroot strains and are recommended for growing on infected land. Some strains of clubroot may overcome the resistance in these varieties. Growing clubroot-resistant varieties repeatedly will select for these more virulent strains, potentially causing the resistance genes to become ineffective. These varieties should only be used in line with AHDB clubroot management guidelines, to reduce risk of resistance breakdown (ahdb.org.uk/clubroot).

Described varieties for the major crops

These varieties are usually for niche markets. Although recommendation is not appropriate, there is demand for descriptive data within the RL system.

Yield and quality

Yields

Yields are calculated as a percentage of the controls. Established varieties are selected as controls and the average yield of these varieties is set to 100%. For example, if the average yield of the control varieties is 10.2 t/ha, a variety that yields 10.4 t/ha will be shown as having a yield of 102%.

Regional yields

Regional yields are calculated for winter wheat, winter barley, spring barley and winter oilseed rape. Regional yields are based on fewer trials and should be treated

more cautiously. Divisions between regions are not absolute and growers are advised to consider which region is most appropriate for their conditions (Figure 1).

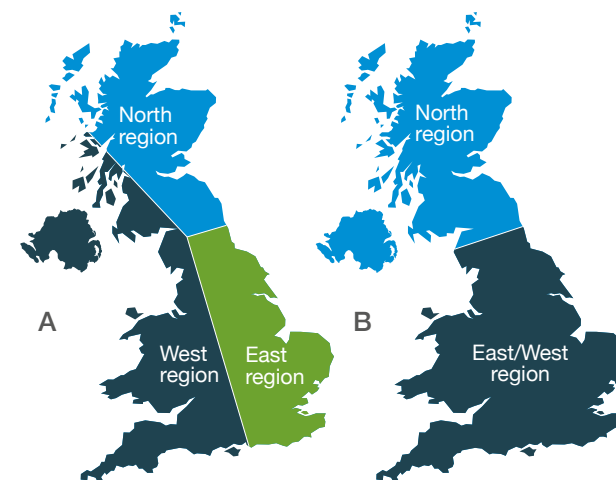


Figure 1. Regions used for calculation of regional yields
A – Winter wheat, winter barley and spring barley regions
B – Winter oilseed rape regions

Annual yields

Collectively, annual yields provide a breakdown of variety performance in different seasons. Consistent yields over several years may indicate that a variety offers a level of yield stability.

Oilseed rape gross output

Gross output is calculated from the seed yield with an adjustment to take account of the oil content.

Oat quality

Grain quality characteristics presented for oats include kernel content, specific weight and per cent screenings through a 2 mm sieve (or 1.8 mm sieve in huskless (naked) oat varieties). High kernel content, high specific weight and low per cent screenings are preferred for milling.

Agronomic traits

Brackling

Brackling is folding or breaking of the stem that occurs higher up the plant than in stem lodging (which occurs close to, or below, the ground). Assessments are carried out on winter and spring barley at harvest. A high number on the 1–9 scale indicates high resistance to brackling.

Lodging

Lodging scores are calculated for varieties grown with and without plant growth regulator (PGR) application. A higher number indicates a variety is more resistant to lodging.

The scales used to calculate the lodging ratings for the RL 2022/23 have been adjusted to include susceptible and resistant fixed points. The aim is to make the ratings more representative of what is seen in the field and improve consistency of the ratings over years. This has contributed to a drop in ratings for some varieties, compared to the RL 2021/22. However, this does not mean that these varieties have become more susceptible since last year. As for all ratings, statistical significance (LSD) should be taken into account when deciding if varieties have a different susceptibility to lodging.

Ripening

In cereal crops, ripening is expressed as days earlier or later than a standard variety. Varieties with a negative number are earlier to mature than the standard variety. The numbers are from RL trial data, but differences can be far greater on farm, particularly where growing conditions are more marginal.

Flowering and maturity in oilseeds

In oilseed crops, flowering and maturity are scored on a 1–9 scale, where one is late and nine is early. Flowering is on a relative scale, with the earliest flowering variety scoring nine. Maturity is based on the degree of canopy senescence and is recorded just prior to swath or desiccation.

Sprouting

Sprouting resistance is based on special irrigated test plots. A higher number represents better resistance to sprouting. Data is limited, so, in the absence of a score, the Hagberg Falling Number (HFN) may provide some guidance – a variety with a low HFN may be prone to sprouting.

Basis of pest and disease resistance

Varietal resistance to pests and diseases forms the foundation of integrated pest management (IPM). Broadly speaking, there are two kinds of resistance, based on ‘minor’ and ‘major’ genes. Individually, minor genes give a low level of resistance but can be combined to give moderate to high resistance. This type of resistance is usually durable. Alone, major genes can give a high level of resistance but may be defeated by specific pathogen races relatively soon after a variety is released.

Important exceptions are the very strong *mlo* resistance to mildew in spring barley and the moderate resistance to eyespot from *Pch1* in wheat, which have been durable for many years. The durability of new sources of resistance can be difficult to predict. A new major gene may be more durable when it is combined with a background of minor genes. As pathogen populations evolve, previously defeated genes may become effective again, so varietal disease ratings can go up as well as down.

The *mlo* resistance gene in spring barley confers almost complete resistance to barley powdery mildew. All spring barley varieties on the current list carry this gene and can, therefore, be assumed to be resistant to powdery mildew.

Statistical significance (LSD)

Natural variability within and between trials means that smaller differences between mean yields of varieties may just be attributed to chance. For most numerical characteristics in the tables, an average LSD (least significant difference) is reported. Differences between variety means that are larger than the LSD are likely to reflect genuine differences, as they would only occur by chance fewer than 1 in 20 times (5%). Differences smaller than the LSD are more likely to occur by chance and should be treated with caution.

Disease resistance ratings

Scores for disease resistance are based on a combination of natural infection and inoculated trials. Information is only used where relatively high levels of disease are present. This helps prevent low disease pressure being mistaken for resistance. Varieties with ratings of 4 or less can be interpreted as susceptible. Varieties with ratings of 8 or 9 can be said to have high resistance; however, the ratings cannot determine the durability of the resistance.

With the exception of eyespot, the disease rating scales are not linear. A difference of 1 on the scale reflects a larger difference in disease susceptibility at low ratings than at high ratings.

The ratings can be read alongside the untreated yield, which provides an indication of the potential yield reduction as a consequence of a combination of all diseases.

Wheat end markets

The largest single market for quality wheat is for flour production. Other uses include cereals foods, distilling, starch production and biofuels. Different uses require specific quality traits, and farmers should speak to merchants before committing to varieties to ensure a suitable end market.

Exports – quality wheats

There is a core market overseas for UK-grown quality wheat and growers can capitalise on this opportunity when choosing varieties to grow. However, distance to a port needs to be considered.

Overseas buyers have different requirements to domestic buyers. AHDB has developed the **uks** (soft biscuit wheat) and **ukp** (bread wheat) classifications. These help overseas buyers, who may be unfamiliar with individual varieties, to understand the qualities that the grain possesses. Overseas buyers commonly use the Chopin Alveograph test (see Table 1). North African and Middle Eastern markets prefer a lower moisture content, often less than 14%.

Table 1. Typical specifications for exports



Minimum specific weight (kg/hl)	76	75
Maximum moisture content (%)	14	14
Maximum admix (%)	2	2
Minimum Hagberg Falling Number (HFN; s)	250	220
Protein content (%)	11.0–13.0	10.5–11.5
Chopin Alveograph W	170 (min)	70–120
Chopin Alveograph P/L	0.9 (max)	0.55 (max)

ukp = meets the specification for **ukp** bread wheat for export.

uks = meets the specification for **uks** biscuit wheat for export.

The W and P/L values are determined by the Chopin Alveograph test, commonly used by overseas buyers. W represents a measure of the baking strength of a dough. A higher number represents a stronger flour. L represents the extensibility of the dough (time taken for a bubble to burst). P is the maximum pressure required. A low P/L measure represents a dough which is very extensible with low strength.

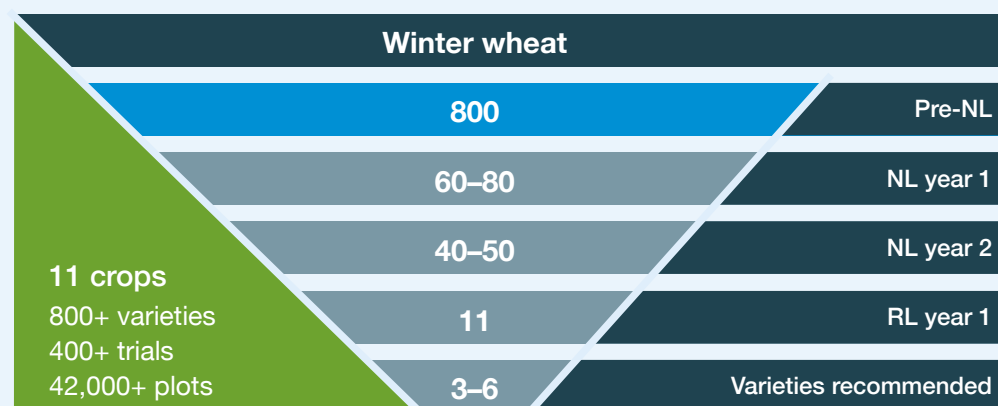
Each year, AHDB carries out a survey of around 250 commercially sourced wheat samples using the Alveograph and Wet Gluten tests. The survey uses RL varieties, with the final selection based on AHDB Planting and Variety survey data. The survey helps to determine the quality of the farm-grown **ukp** and **uks** wheat varieties in each season and supports the marketing efforts of the export business sector (ahdb.org.uk/cereal-exports).

RL: testing variety potential

More than £25 million invested*

£12,832,434 AHDB investment

£12,309,850 industry investment



* Investment figures based on the 2016–2021 RL project
Crop and variety figures based on typical annual numbers.

NL = National List

■ Breeding lines
■ Varieties

Winter wheat septoria tritici disease resistance ratings

In general, septoria disease pressure was relatively high in 2021, especially late in the season. Some varieties, in RL trials and commercial settings, had higher septoria levels than would be expected from their 2021/22 disease ratings. Analysis of the data has resulted in lower septoria ratings for many varieties, especially those with Cougar in their parentages.

Introduced in 2013, Cougar had the highest septoria tritici resistance rating on the RL. However, by 2015 the variety showed a relatively large increase in disease levels. AHDB-funded investigations, led by NIAB, showed that this was due to septoria variants able to potentially overcome resistance in Cougar. At that time, no other varieties were affected. In 2020, further new variants were identified in Ireland that were also able to cause disease on Cougar and varieties descended from this variety.

The use of Cougar in breeding programmes means the 2022/23 RL features ten varieties with Cougar in their backgrounds. Varietal resistance to septoria tritici is the result of the cumulative effect of multiple genes. As a result, the contribution of the 'Cougar resistance' and the shift in disease resistance in each of these varieties differs.

2022/23 resistance ratings

In the 2022/23 RL, septoria tritici disease resistance ratings have been prepared using the standard three-year data set (2019–21*). In addition, the 2021 data has been used to produce one-year ratings to help reveal the influence of the 2021 season, including the relatively large impact on Cougar descendants (Figure 2).

Management implications

The 2021 one-year ratings help to highlight varieties that may benefit from closer monitoring. However, caution needs to be applied, as:

- It uses a relatively small data set
- It is not known how the septoria tritici pathogen population will change

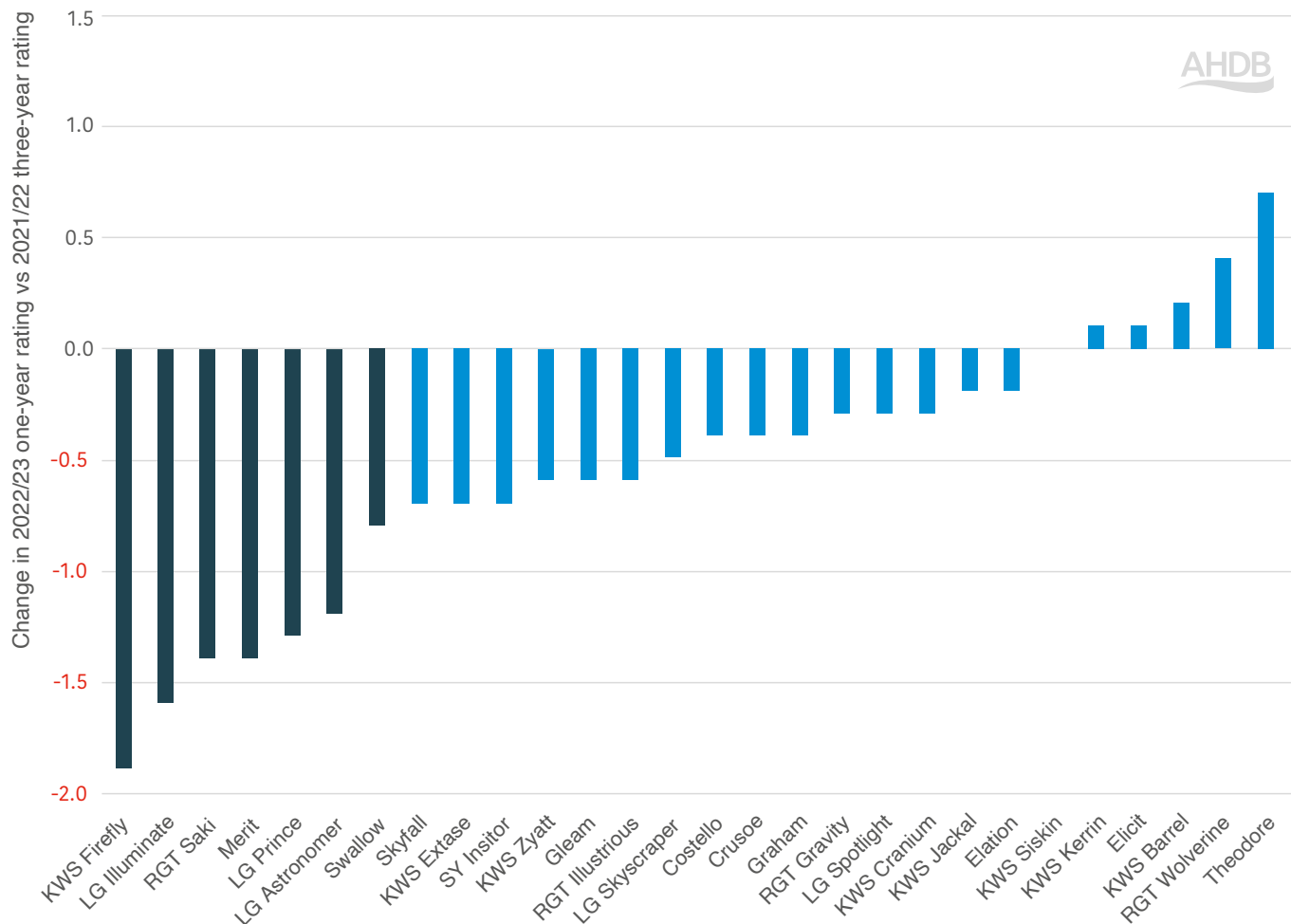


Figure 2. How septoria tritici disease resistance ratings have changed in the RL 2022/23 (2021 one-year data set), relative to RL 2021/22 (2017–20 three-year data set). The dark blue bars indicate known Cougar descendants. New varieties are not included. Variety parentage can be found at ahdb.org.uk/rl

- Changes were not uniform across the UK, resistance in Cougar descendants appeared to hold up better in Scotland

Current evidence suggests fungicide efficacy is not affected**. However a more robust fungicide spray programme may be required to control septoria on affected varieties.

*In the three-year data set, each year is weighted equally.

**Sensitivity of the Cougar-virulent septoria tritici variants to fungicides is similar to the wider septoria tritici population – as tested in 2020 (Ireland, Teagasc) and 2015 (UK, AHDB).

UK Flour Millers (UKFM) overview

UK Flour Millers (previously nabim) represents the UK milling industry, which uses approximately 4 million tonnes of homegrown wheat in an average year. Flour-based products are a cornerstone of the UK diet and demand for flour is stable. Given the consistency of demand, it is no surprise that the UK milling industry is committed to continuous investment, with two new inland mills opening in 2021, offering farmers a greater choice of destinations for milling wheat.

The preference of local millers should always be a significant factor affecting the choice of milling variety. Growing for a specific market should be at the forefront of a farmer's mind if incomes are to be maximised from milling wheat. The UK Flour Millers website features a tool (ukflourmillers.org/millmap) that helps identify local mills and provides relevant contact details.

Bread-making varieties

UK bread-making wheats comprise the majority of millers' requirements and the Group 1 and 2 varieties on the RL continue to meet milling quality thresholds as well as the agronomic needs of growers. Two new winter wheat Group 2s have joined the RL and millers are looking forward to seeing the quality of these varieties at commercial scale, as well as the new Group 1 spring wheats, Nissaba and KWS Ladum.

The four Group 1 winter wheats remain reliable milling varieties and Crusoe is particularly favoured for its good bread-making quality. As the yields of modern milling varieties remain relatively high, greater attention to nitrogen inputs is required than with 'older' varieties in order to achieve the necessary protein quality and gain the maximum premium.

Nitrogen inputs and protein

The rise in price of nitrogen fertiliser has obvious implications for growing wheat. If adjusting rates to account for the price rise, the impact on both yield and protein levels should be understood if growing for the milling market, as this could affect the premium you will

Table 2. Typical specifications for milling wheat

	UKFM Group 1	UKFM Group 2	UKFM Group 3
Minimum specific weight (kg/hl)	76.0	76.0	74.0
Maximum moisture content (%)	15	15	15
Maximum admix (%)	2	2	2
Minimum Hagberg Falling Number (HFN; s)	250	250	220
Protein content (%)	13.0	12.5	11.5

achieve. Growers should consider AHDB guidance on adjustments, available at: ahdb.org.uk/rb209-arable

Soft varieties

As in recent years, a number of Group 3 wheats with excellent yield and agronomic characteristics have joined the RL. Demand for Group 3 wheats remains strong as their unique protein quality is needed to produce a range of flour types and products, for which domestic and export demand continues to expand.

Group 4 soft wheats may also have a specific use in some flours and these varieties can find a milling home. However, not all mills will be interested in these, so it is important to speak to your buyers and understand what local markets are looking for.

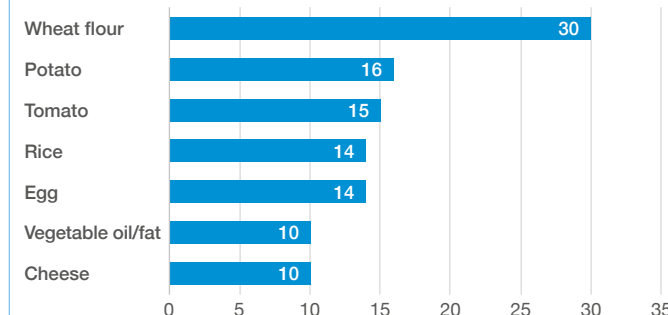
Ensuring food safety

Food safety is a crucial aspect of grain quality and growers should ensure that wheat destined for mills is fit for human consumption and free from contamination. Close attention must be paid to grain moisture during storage to avoid the development of storage mycotoxins. New EU ergot alkaloid limits, affecting flour exported to EU member states and Northern Ireland, came into effect at the beginning of 2022 and many mills have strict tolerances for ergot sclerotia in grain arriving at intake. Knowing your customer specifications on ergot sclerotia is critical to avoiding a costly rejection.

Other information on milling wheat quality requirements and the structure and needs of the milling industry can be found on the UK Flour Millers website at: ukflourmillers.org

Wheat flour is the bedrock of the nation's diet

AHDB

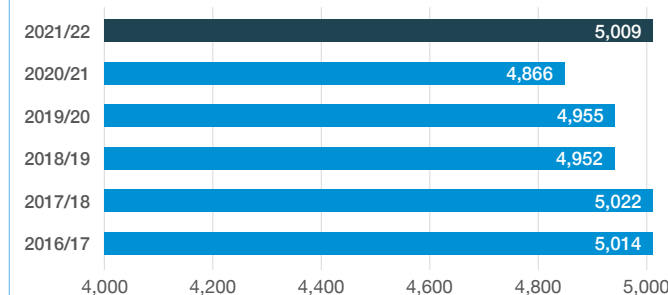


Source: Ascential, May 2019

UK supermarket products containing these ingredients (%).

UK miller wheat demand is stable

AHDB



Source: UKFM, Feb 2022



Wheat usage, including imports (1,000's tonnes).

■ Actual data ■ Estimated data

Winter wheat 2022/23

Market options, yield and grain quality



	KWS Zyatt	Skyfall	Crusoe	RGT Illustrious	KWS Extase	KWS Palladium	KWS Siskin	Mayflower	KWS Guium	LG Prince	KWS Britum	KWS Firefly	RGT Rashid	LG Illuminate	LG Astronomer	Merit	KWS Barrel	Elicit	Average LSD (5%)
End-use group	UKFM Group 1				UKFM Group 2				UKFM Group 3										
Scope of recommendation	UK	UK	UK	UK	UK	UK	UK	UK	UK	UK	UK	UK	E	UK	UK	E	UK	UK	
Variety status	C				NEW C NEW				NEW		NEW		NEW				*C		
Fungicide-treated grain yield (% treated control)																			
United Kingdom (10.8 t/ha)	98	97	96	96	101	100	98	97	102	101	100	100	100	100	100	99	99	98	2.3
East region (10.7 t/ha)	98	97	96	95	100	99	98	98	102	102	101	101	102	100	100	101	99	98	2.6
West region (11.0 t/ha)	99	96	97	97	102	101	99	97	100	101	100	100	97	100	99	97	99	98	2.9
North region (11.1 t/ha)	98	96	94	94	99	[99]	98	[96]	[101]	99	[101]	99	[97]	101	97	100	102	99	3.4
Main market options (The specific attributes of varieties are different, so, whenever possible, varieties should not be mixed in store)																			
UK bread-making	Y	Y	Y	Y	Y	Y	Y	Y	-	-	-	-	-	-	-	-	-	-	
UK biscuit, cake-making	-	-	-	-	-	-	-	-	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	
UK distilling	-	-	-	-	-	-	-	-	[Y]	[Y]	[Y]	-	[Y]	[Y]	[Y]	[Y]	-	Y	
 bread wheat for export	Y	-	Y	-	Y	-	Y	[Y]	-	-	-	-	-	-	-	-	-	-	
 soft wheat for export	-	-	-	-	-	-	-	-	-	-	-	Y	-	[Y]	-	[Y]	Y	Y	
Grain quality																			
Endosperm texture	Hard	Hard	Hard	Hard	Hard	Hard	Hard	Hard	Soft	Soft	Soft	Soft	Soft	Soft	Soft	Soft	Soft	Soft	
Protein content (%)	12.2	12.2	12.7	12.2	11.9	11.8	11.9	11.9	11.3	11.1	11.5	11.7	11.1	11.8	11.7	11.5	11.2	11.5	0.2
Protein content (%) – Milling spec	13.1	13.2	13.5	13.0	12.7	[13.1]	12.7	[12.9]	[12.0]	11.9	[12.3]	12.6	[11.8]	12.7	12.6	12.4	12.0	12.4	0.5
Hagberg Falling Number	260	273	274	270	289	315	282	294	255	253	268	240	226	249	232	258	240	208	25.6
Specific weight (kg/hl)	77.5	78.3	77.8	77.1	78.5	76.9	76.7	78.5	78.1	74.0	77.3	75.3	76.4	76.2	77.4	76.2	76.9	76.4	0.6
Chopin Alveograph W	[175]	[251]	230	-	190	[179]	163	198	[56]	[71]	[74]	90	[72]	82	[132]	79	102	91	25.1
Chopin Alveograph P/L	[0.7]	[0.9]	0.6	-	0.6	[0.6]	0.5	0.7	[0.3]	[0.2]	[0.3]	0.3	[0.3]	0.3	[0.4]	0.2	0.3	0.2	0.2

Varieties no longer listed: KWS Kinetic, LG Detroit, LG Quasar, LG Sundance and Shabras.
Comparisons of varieties across regions are not valid. See page 3 for information on regional yields.
All yields in this table are taken from treated trials receiving a full fungicide and PGR programme.

UKFM	= UK Flour Millers	C	= Yield control (for current table)	[]	= Limited data	LSD	= Least significant difference
UK	= Recommended for the UK	*	= Variety no longer under test in RL trials	Y	= Suited to that market	Average LSD (5%):	Varieties that are more
E	= Recommended for the East region	PGR	= Plant growth regulator	[Y]	= May be suited to that market	than one LSD apart	are significantly different
						at the 95% confidence level	

Winter wheat 2022/23

Market options, yield and grain quality



	RGT Bairstow	LG Skyscraper	RGT Saki	RGT Stokes	LG Spotlight	Elation	KWS Jackal	Swallow	Champion	KWS Dawsum	SY Insitor	Glean	KWS Kerrin	LG Typhoon	KWS Cranium	Graham	RGT Gravity	Costello	RGT Wolverine	Theodore	Average LSD (5%)
End-use group	Soft Group 4									Hard Group 4											
Scope of recommendation	UK	UK	UK	UK	UK	N	N	N	UK	UK	UK	UK	E&W	UK	UK	UK	UK	UK	Sp	W	
Variety status	NEW	C		NEW	*				NEW	NEW		C	*	NEW			*				
Fungicide-treated grain yield (% treated control)																					
United Kingdom (10.8 t/ha)	103	103	103	102	102	100	99	99	106	104	104	103	102	102	102	102	101	100	99	98	2.3
East region (10.7 t/ha)	103	103	103	101	101	100	99	98	107	103	104	103	102	102	102	100	102	99	98	98	2.6
West region (11.0 t/ha)	103	103	103	105	103	100	98	99	105	106	104	103	103	102	101	104	101	100	100	101	2.9
North region (11.1 t/ha)	[103]	102	102	[104]	101	101	100	101	[103]	[106]	105	103	[101]	[102]	101	102	100	100	100	[91]	3.4
Main market options (The specific attributes of varieties are different, so, whenever possible, varieties should not be mixed in store)																					
UK bread-making	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
UK biscuit, cake-making	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
UK distilling	Y	[Y]	-	Y	[Y]	Y	[Y]	Y	-	-	-	-	-	-	-	-	-	-	-	-	
ukp bread wheat for export	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
uks soft wheat for export	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Grain quality																					
Endosperm texture	Soft	Soft	Soft	Soft	Soft	Soft	Soft	Soft	Hard	Hard	Hard	Hard	Hard	Hard	Hard	Hard	Hard	Hard	Hard	Hard	
Protein content (%)	11.2	11.3	11.4	11.3	11.3	11.5	11.1	11.2	11.4	11.2	10.8	11.2	10.7	11.1	11.2	11.3	11.3	11.8	11.0	12.0	0.2
Protein content (%) – Milling spec	[12.2]	12.2	12.2	[12.5]	12.1	12.4	12.0	12.3	[12.4]	[12.1]	11.5	12.0	11.4	[11.8]	12.0	11.9	12.0	12.7	11.8	12.9	0.5
Hagberg Falling Number	228	214	220	248	286	212	179	249	239	304	270	220	149	169	279	275	193	322	268	306	25.6
Specific weight (kg/hl)	75.9	76.5	75.6	75.3	77.7	76.9	74.8	75.8	74.8	79.4	78.2	76.3	76.1	76.3	75.1	76.9	75.6	80.6	75.5	73.8	0.6
Chopin Alveograph W	[50]	-	-	[61]	-	95	-	-	-	-	-	-	-	-	-	-	-	-	[147]	-	25.1
Chopin Alveograph P/L	[0.3]	-	-	[0.3]	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	[0.7]	-	0.2


Varieties no longer listed: KWS Kinetic, LG Detroit, LG Quasar, LG Sundance and Shabras.
Comparisons of varieties across regions are not valid. See page 3 for information on regional yields.
All yields in this table are taken from treated trials receiving a full fungicide and PGR programme.

UK	= Recommended for the UK	Sp	= Specific recommendation. RGT Wolverine has a specific recommendation for resistance to Barley yellow dwarf virus (BYDV). Resistance to BYDV has not been verified in Recommended List tests	C	= Yield control (for current table)	[]	= Limited data	LSD	= Least significant difference
E	= Recommended for the East region			*	= Variety no longer under test in RL trials	Y	= Suited to that market	Average LSD (5%):	Varieties that are more than one LSD apart are significantly different at the 95% confidence level
W	= Recommended for the West region			PGR	= Plant growth regulator	[Y]	= May be suited to that market		
N	= Recommended for the North region								

Winter wheat 2022/23

Yield, agronomy and disease resistance





RECOMMENDED

KWS Zyatt

Skyfall

Crusoe

RGT Illustrious

KWS Extase

KWS Palladium

KWS Siskin

Mayflower

KWS Guium

LG Prince

KWS Brium

KWS Firefly

RGT Rashid

LG Illuminate

LG Astronomer

Merit

KWS Barrel

Elicit

Average LSD (5%)

End-use group	UKFM Group 1				UKFM Group 2				UKFM Group 3										
Scope of recommendation	UK	UK	UK	UK	UK	UK	UK	UK	UK	UK	UK	UK	E	UK	UK	E	UK	UK	
Variety status	C				NEW C NEW				NEW		NEW		NEW				*C		
Fungicide-treated grain yield (% treated control)																			
United Kingdom (10.8 t/ha)	98	97	96	96	101	100	98	97	102	101	100	100	100	100	100	99	99	98	2.3
East region (10.7 t/ha)	98	97	96	95	100	99	98	98	102	102	101	101	102	100	100	101	99	98	2.6
West region (11.0 t/ha)	99	96	97	97	102	101	99	97	100	101	100	100	97	100	99	97	99	98	2.9
North region (11.1 t/ha)	98	96	94	94	99	[99]	98	[96]	[101]	99	[101]	99	[97]	101	97	100	102	99	3.4
Untreated grain yield (% treated control)																			
United Kingdom (10.8 t/ha)	76	70	72	81	93	90	83	90	78	83	80	79	79	84	86	81	73	78	6.0
Agronomic features																			
Resistance to lodging without PGR (1–9) – see page 4	8	8	8	7	7	7	6	6	7	7	7	8	8	7	7	6	8	6	1.1
Resistance to lodging with PGR (1–9) – see page 4	8	8	7	8	8	8	7	7	7	8	7	8	8	7	9	7	8	7	1.0
Height without PGR (cm)	85	84	82	89	90	84	84	89	90	83	92	83	86	83	88	88	84	86	1.7
Ripening (days +/- Skyfall, -ve = earlier)	0	0	+1	+1	-1	-1	0	0	+3	+2	+2	+1	+3	+1	+1	+1	+1	+1	0.7
Resistance to sprouting (1–9)	5	5	6	6	[7]	-	5	-	-	[6]	-	[6]	-	[7]	[7]	[6]	6	5	1.3
Disease resistance																			
Mildew (1–9)	7	6	7	7	7	8	8	8	5	4	7	5	4	5	4	4	6	6	1.3
Yellow rust (1–9)	4	3	9	8	8	9	9	9	9	8	9	6	8	7	8	8	6	8	0.6
Brown rust (1–9)	6	8	3	6	7	5	5	6	3	7	5	5	6	7	8	7	5	6	1.0
Septoria tritici (1–9)	6.1	5.3	6.2	5.7	7.8	7.4	6.5	8.4	4.7	6.4	5.4	5.7	6.9	6.1	6.8	5.8	4.3	4.9	1.3
Septoria tritici (1–9) – one-year rating – see page 6	5.8	5.1	5.9	5.4	7.3	7.2	6.5	8.2	5.0	5.8	5.6	4.9	6.4	5.4	6.2	5.2	4.4	5.2	1.2
Eyespot (1–9)	6@	7@	5	7@	3	[6]	4	[6]@	[4]	5	[6]	3	[4]	5	5	3	4	3	2.9
Fusarium ear blight (1–9)	6	7	7	6	6	6	6	6	7	6	6	5	7	5	6	6	6	6	0.4
Orange wheat blossom midge	-	R	-	-	-	-	-	-	R	R	-	R	R	R	R	R	R	R	

On the 1–9 scales, high figures indicate that a variety shows the character to a high degree (e.g. high resistance). Comparisons of varieties across regions are not valid. See page 3 for information on regional yields.

UKFM = UK Flour Millers
UK = Recommended for the UK
E = Recommended for the East region

C = Yield control (for current table)
* = Variety no longer under test in RL trials
PGR = Plant growth regulator
[] = Limited data

@ = Believed to carry the *Pch1* Rendezvous resistance gene to eyespot, but this has not been verified in Recommended List tests
R = Believed to be resistant to orange wheat blossom midge (OWBM), but this has not been verified in Recommended List tests

LSD = Least significant difference
Average LSD (5%): Varieties that are more than one LSD apart are significantly different at the 95% confidence level

Winter wheat 2022/23

Yield, agronomy and disease resistance



	RGT Bairstow	LG Skyscraper	RGT Saki	RGT Stokes	LG Spotlight	Elation	KWS Jackal	Swallow	Champion	KWS Dawson	SY Insitor	Gleam	KWS Kerrin	LG Typhoon	KWS Cranium	Graham	RGT Gravity	Costello	RGT Wolverine	Theodore	Average LSD (5%)
End-use group	Soft Group 4								Hard Group 4												
Scope of recommendation	UK	UK	UK	UK	UK	N	N	N	UK	UK	UK	UK	E&W	UK	UK	UK	UK	UK	Sp	W	
Variety status	NEW	C		NEW	*				NEW	NEW		C	*	NEW			*				
Fungicide-treated grain yield (% treated control)																					
United Kingdom (10.8 t/ha)	103	103	103	102	102	100	99	99	106	104	104	103	102	102	102	102	101	100	99	98	2.3
East region (10.7 t/ha)	103	103	103	101	101	100	99	98	107	103	104	103	102	102	102	100	102	99	98	98	2.6
West region (11.0 t/ha)	103	103	103	105	103	100	98	99	105	106	104	103	103	102	101	104	101	100	100	101	2.9
North region (11.1 t/ha)	[103]	102	102	[104]	101	101	100	101	[103]	[106]	105	103	[101]	[102]	101	102	100	100	100	[91]	3.4
Untreated grain yield (% treated control)																					
United Kingdom (10.8 t/ha)	85	82	85	83	77	77	74	79	90	92	78	80	73	89	79	88	77	81	69	88	6.0
Agronomic features																					
Resistance to lodging without PGR (1–9) – see page 4	6	6	6	5	7	7	7	[8]	6	7	6	7	7	7	8	7	6	8	7	[6]	1.1
Resistance to lodging with PGR (1–9) – see page 4	6	6	7	7	8	8	6	9	7	7	7	7	7	7	8	8	7	8	7	8	1.0
Height without PGR (cm)	91	92	88	91	93	83	87	80	88	84	95	87	88	88	89	88	89	83	87	84	1.7
Ripening (days +/- Skyfall, -ve = earlier)	+2	0	+3	+2	+1	+1	+1	+1	0	+1	+1	0	+1	+2	+3	-1	+1	+2	+2	0	0.7
Resistance to sprouting (1–9)	-	[5]	[6]	-	[7]	5	5	[5]	-	-	[5]	5	5	-	[6]	7	5	6	[6]	[7]	1.3
Disease resistance																					
Mildew (1–9)	6	7	5	5	6	7	7	6	7	8	6	6	7	7	6	7	5	8	6	[7]	1.3
Yellow rust (1–9)	7	7	8	7	5	8	8	6	8	9	5	5	4	9	8	7	6	9	4	9	0.6
Brown rust (1–9)	6	5	7	5	6	5	5	6	5	7	5	6	7	6	4	5	6	5	8	8	1.0
Septoria tritici (1–9)	6.4	4.9	5.9	6.9	5.1	4.0	4.6	5.5	7.7	6.3	6.5	5.8	4.6	7.2	5.9	6.7	4.7	5.8	5.7	8.5	1.3
Septoria tritici (1–9) – one-year rating – see page 6	6.0	4.6	5.1	6.2	4.9	3.9	4.6	4.9	8.0	6.1	6.1	5.5	4.9	6.9	5.7	6.4	4.6	5.6	5.7	9.0	1.2
Eyespot (1–9)	[4]	4	4	[4]	5	4	4	2	[4]	[5]	4	4	4	[6]	5	3	4	4	6	[4]	2.9
Fusarium ear blight (1–9)	6	6	6	6	6	6	6	5	6	6	7	6	5	6	6	7	6	6	6	5	0.4
Orange wheat blossom midge	R	R	R	-	R	R	R	R	R	-	R	R	R	R	R	-	R	-	-	-	

On the 1–9 scales, high figures indicate that a variety shows the character to a high degree (e.g. high resistance). Comparisons of varieties across regions are not valid. See page 3 for information on regional yields.

UK = Recommended for the UK	Sp = Specific recommendation.	C = Yield control (for current table)	R = Believed to be resistant to orange wheat blossom midge (OWBM), but this has not been verified in Recommended List tests	LSD = Least significant difference
E = Recommended for the East region	RGT Wolverine has a specific recommendation for resistance to Barley yellow dwarf virus (BYDV). Resistance to BYDV has not been verified in Recommended List tests	* = Variety no longer under test in RL trials		Average LSD (5%): Varieties that are more than one LSD apart are significantly different at the 95% confidence level
W = Recommended for the West region		PGR = Plant growth regulator		
N = Recommended for the North region		[] = Limited data		

Winter wheat 2022/23

Supplementary data



	KWS Zyatt	Skyfall	Crusoe	RGT Illustrious	KWS Extase	KWS Palladium	KWS Siskin	Mayflower	KWS Guium	LG Prince	KWS Brium	KWS Firefly	RGT Rashid	LG Illuminate	LG Astronomer	Merit	KWS Barrel	Elicit	Average LSD (5%)
End-use group	UKFM Group 1				UKFM Group 2				UKFM Group 3										
Scope of recommendation	UK	UK	UK	UK	UK	UK	UK	UK	UK	UK	UK	UK	E	UK	UK	E	UK	UK	
Variety status	C					NEW	C	NEW	NEW		NEW		NEW				*C		
Breeder/UK contact																			
Breeder	KWS	RAGT	Lim	R2n	Mom	KWS	KWS	ElsW	KWS	LimEur	KWS	KWS	RAGT	LimEur	LimEur	ElsW	KWS	ElsW	
UK contact	KWS	RAGT	Lim	RAGT	KWS	KWS	KWS	Els	KWS	Lim	KWS	KWS	RAGT	Lim	Lim	Els	KWS	Els	
Annual treated yield (% control)																			
2017 (11.2 t/ha)	100	97	95	96	99	-	98	-	-	-	-	100	-	-	-	-	101	98	-
2018 (10.7 t/ha)	98	97	95	96	101	-	100	-	-	100	-	101	-	100	99	100	99	98	-
2019 (11.6 t/ha)	96	95	98	94	100	100	99	98	100	101	100	101	98	101	100	100	101	99	-
2020 (10.3 t/ha)	97	96	95	97	100	[100]	97	[96]	[103]	102	[102]	100	[100]	101	99	100	101	98	-
2021 (10.8 t/ha)	100	97	96	94	103	99	97	96	100	99	100	98	98	98	98	98	100	97	-
Rotational position																			
First cereal (11.1 t/ha)	98	96	96	96	101	100	98	97	101	100	100	100	100	100	99	99	100	98	2.3
Second and more (9.6 t/ha)	99	98	94	94	101	100	98	99	101	103	101	101	100	100	100	100	98	98	3.6
Sowing date (most trials were sown in October)																			
Early sown (before 25 Sept) (11.3 t/ha)	[100]	96	96	97	[[97]]	-	99	-	[103]	102	[101]	101	-	104	[103]	[100]	100	99	5.4
Late sown (after 1 Nov) (9.2 t/ha)	98	97	95	95	102	[99]	98	[95]	[101]	101	[101]	101	[103]	98	100	102	100	97	3.7
Soil type (about 50% of trials are on medium soils)																			
Light soils (10.9 t/ha)	97	97	94	94	102	[98]	98	[97]	[101]	102	[100]	100	[99]	101	100	101	100	98	3.5
Heavy soils (10.9 t/ha)	99	97	97	96	100	98	98	97	102	101	99	101	100	100	101	100	99	97	3.0
Agronomic features																			
Lodging % without PGR	2	1	2	3	4	4	13	8	3	5	3	1	2	4	3	13	2	10	
Lodging % with PGR	1	3	3	1	2	2	8	6	4	3	5	1	2	5	1	8	3	4	
Latest safe-sowing date [□]	End Jan	End Feb	End Jan	Mid Feb	End Jan	[[Mid Feb]]	End Jan	[[Mid Feb]]	[[Mid Feb]]	[End Jan]	[[End Feb]]	End Feb	[[Mid Feb]]	[Mid Feb]	[Mid Feb]	[Mid Feb]	End Jan	Mid Feb	
Speed of development to growth stage 31 (days +/- average)																			
Early sown (Sept)	-2	-2	-1	0	-4	[-2]	-3	[-4]	[+2]	[-2]	[+2]	-2	[+2]	[-2]	[-8]	[0]	+5	-1	8.0
Med sown (Oct)	-4	-4	-2	+1	-7	-	-5	-	-	[-1]	-	-3	-	[-3]	[0]	[-6]	-1	+2	9.3
Late sown (Nov)	-2	-2	0	-1	-4	-	-2	-	[0]	[+1]	-	-1	-	[-2]	[+1]	[-1]	+2	+2	5.3
Status in RL system																			
Year first listed	17	14	12	16	19	22	16	22	22	21	22	19	22	21	21	21	16	18	
RL status	-	-	-	-	-	P1	-	P1	P1	P2	P1	-	P1	P2	P2	P2	*	-	

All yields in this table are taken from treated trials receiving a full fungicide and PGR programme.
For Breeder/UK contact information, see page 59.

UKFM = UK Flour Millers	* = Variety no longer under test in RL trials	□ = Latest safe-sowing date is the advised latest sowing time to give a sufficient cold period for flowering	[[]] = Very limited data	LSD = Least significant difference
UK = Recommended for the UK	PGR = Plant growth regulator	[] = Limited data	P1 = First year of recommendation	Average LSD (5%): Varieties that are more than one LSD apart are significantly different at the 95% confidence level
E = Recommended for the East region			P2 = Second year of recommendation	
C = Yield control (for current table)				

Winter wheat 2022/23

Supplementary data



	RGT Bairstow	LG Skyscraper	RGT Saki	RGT Stokes	LG Spotlight	Elation	KWS Jackal	Swallow	Champion	KWS Dawsum	SY Insitor	Gleam	KWS Kerrin	LG Typhoon	KWS Cranium	Graham	RGT Gravity	Costello	RGT Wolverine	Theodore	Average LSD (5%)
End-use group	Soft Group 4								Hard Group 4												
Scope of recommendation	UK	UK	UK	UK	UK	N	N	N	UK	UK	UK	UK	E&W	UK	UK	UK	UK	UK	Sp	W	
Variety status	NEW	C		NEW	*				NEW	NEW		C	*	NEW			*				
Breeder/UK contact																					
Breeder	RAGT	LimEur	RAGT	RAGT	LimEur	ElsW	KWS	BA	DSV	KWS	SyP	SyP	KWS	LimEur	KWS	SyP	R2n	KWS	R2n	DSV	
UK contact	RAGT	Lim	RAGT	RAGT	Lim	Els	KWS	Sen	DSV	KWS	Syn	Syn	KWS	Lim	KWS	Syn	RAGT	Sen	RAGT	DSV	
Annual treated yield (% control)																					
2017 (11.2 t/ha)	-	103	102	-	103	100	100	-	-	-	103	102	101	-	-	102	102	100	-	96	-
2018 (10.7 t/ha)	-	102	102	-	100	100	100	100	-	-	103	103	102	-	102	101	100	100	100	97	-
2019 (11.6 t/ha)	103	103	103	104	102	99	100	99	104	104	105	103	102	102	101	102	101	99	101	97	-
2020 (10.3 t/ha)	[104]	103	104	[102]	103	101	100	101	[105]	[106]	103	103	102	[102]	103	102	102	100	101	[96]	-
2021 (10.8 t/ha)	102	102	102	104	103	101	97	98	106	105	106	105	103	102	100	104	101	100	96	97	-
Rotational position																					
First cereal (11.1 t/ha)	103	103	103	103	102	100	99	99	105	105	104	103	102	101	102	102	101	100	99	98	2.3
Second and more (9.6 t/ha)	104	104	103	103	101	102	100	100	107	104	104	103	102	104	102	101	103	99	99	[100]	3.6
Sowing date (most trials were sown in October)																					
Early sown (before 25 Sept) (11.3 t/ha)	-	103	104	-	101	100	101	101	[106]	[108]	[107]	103	[102]	[105]	[102]	100	100	99	[100]	97	5.4
Late sown (after 1 Nov) (9.2 t/ha)	[104]	103	104	[100]	102	101	100	97	[106]	[104]	104	103	103	[101]	104	100	103	102	99	[99]	3.7
Soil type (about 50% of trials are on medium soils)																					
Light soils (10.9 t/ha)	[104]	103	102	[104]	101	101	99	101	[105]	[105]	106	103	102	[102]	103	102	102	99	97	[97]	3.5
Heavy soils (10.9 t/ha)	104	103	102	102	102	100	100	98	106	104	104	103	101	101	100	101	101	99	99	99	3.0
Agronomic features																					
Lodging % without PGR	12	9	9	30	4	3	6	1	11	5	13	5	5	4	2	7	8	3	5	9	
Lodging % with PGR	10	13	4	8	2	3	10	1	8	3	5	5	8	5	3	2	8	2	5	2	
Latest safe-sowing date [□]	[Mid Feb]	End Jan	End Jan	[End Jan]	End Feb	Mid Feb	End Jan	[End Feb]	[Mid Feb]	[End Jan]	End Jan	Mid Feb	End Jan	[Mid Feb]	[Mid Feb]	End Jan	End Jan	End Jan	[End Jan]	End Jan	
Speed of development to growth stage 31 (days +/- average)																					
Early sown (Sept)	[+3]	-4	+7	[+2]	-2	0	+4	[+5]	[-2]	[0]	+2	+6	+1	[+5]	[-3]	+1	+4	-2	[-3]	-1	8.0
Med sown (Oct)	-	-1	[-2]	-	-3	-1	+3	[+2]	-	-	[-2]	+3	0	-	[-3]	0	+2	-2	[0]	[-3]	9.3
Late sown (Nov)	-	-3	0	-	-1	-1	+1	[+3]	[-5]	[+3]	+2	+2	0	-	[-4]	-3	-1	-2	[0]	-1	5.3
Status in RL system																					
Year first listed	22	19	20	22	19	18	18	21	22	22	20	18	17	22	21	16	18	15	21	20	
RL status	P1	-	-	P1	*	-	-	P2	P1	P1	-	-	*	P1	P2	-	*	-	P2	-	

All yields in this table are taken from treated trials receiving a full fungicide and PGR programme.
For Breeder/UK contact information, see page 59.

UK	= Recommended for the UK	Sp	= Specific recommendation. RGT Wolverine has a specific recommendation for resistance to <i>Barley yellow dwarf virus</i> (BYDV). Resistance to BYDV has not been verified in Recommended List tests	C	= Yield control (for current table)	[]	= Limited data	LSD	= Least significant difference
E	= Recommended for the East region			*	= Variety no longer under test in RL trials	[]	= Very limited data	Average LSD (5%): Varieties that are more than one LSD apart are significantly different at the 95% confidence level	
W	= Recommended for the West region			PGR	= Plant growth regulator	P1	= First year of recommendation		
N	= Recommended for the North region			□	= Latest safe-sowing date is the advised latest sowing time to give a sufficient cold period for flowering	P2	= Second year of recommendation		

Winter wheat 2022/23

Variety comments

UKFM Group 1 varieties



Crusoe

Cordiale x Gulliver

Quality: A UKFM Group 1 variety, classified as a **ukp** bread wheat for export. It has high Hagbergs and specific weights, and has consistently given good proteins.

Agronomy: This short and relatively stiff-strawed variety has high resistance to yellow rust, mildew, and fusarium ear blight. It is very susceptible to brown rust.

UKFM comment: This variety has consistently demonstrated good protein content and quality. The bread crumb structure is notably white and of good quality. The baking performance of this variety is good and consequently it remains popular with millers.

KWS Zyatt

Quartz x Hereford

Quality: A UKFM Group 1 variety, classified as a **ukp** bread wheat for export. It has given good proteins under a regime to achieve milling specification.

Agronomy: This relatively short and stiff-strawed variety has given high treated yields throughout the UK, across rotational positions and sowing dates, and in trials on heavier soil. It has high resistance to mildew, but it is susceptible to yellow rust. KWS Zyatt carries the *Pch1* eyespot resistance gene. It has a tendency to sprout, so should be given priority at harvest.

UKFM comment: This variety is popular with millers as shows good gluten strength and milling quality alongside a good baking performance. As a high-yielding variety, nitrogen applications may have to be adjusted to achieve protein specifications.

RGT Illustrious

Qplus x Battalion

Quality: A UKFM Group 1 bread wheat with high Hagbergs. It has given good proteins under a regime to achieve milling specification.

Agronomy: This medium-tall and relatively stiff-strawed variety has given UK treated yields comparable to Crusoe. RGT Illustrious has high resistance to yellow rust, mildew and eyespot (*Pch1* resistance gene).

UKFM comment: This variety has a higher level of water absorption (a good feature) and demonstrates good breadmaking potential, even at lower protein levels.

Skyfall

C4148 x Hurricane


Quality: A UKFM Group 1 bread wheat with high Hagbergs and specific weights. It has given good proteins under a regime to achieve milling specification.


Agronomy: It is an awned wheat with short, stiff straw, and is the only Group 1 variety with resistance to orange wheat blossom midge. It has high resistance to brown rust, fusarium ear blight and eyespot (*Pch1* resistance gene). It is highly susceptible to yellow rust. It has a tendency to sprout, so should be given priority at harvest.

UKFM comment: Large quantities of this variety continue to be seen by millers and it is popular owing to good milling and baking qualities. Because it is high yielding, nitrogen applications may have to be adjusted to achieve protein specifications.

Please note that comments made on resistance to orange wheat blossom midge, Barley yellow dwarf virus (BYDV) and *Pch1* eyespot resistance are based on advice from plant breeders. These have not been verified in RL tests.

Export specifications

ukp  = meets the specification for **ukp** bread wheat for export

uks  = meets the specification for **uks** biscuit wheat for export

For more information on export specifications, please see page 5.

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Winter wheat 2022/23

Variety comments

UKFM Group 2 varieties



UK FLOUR
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KWS Extase

Boisseau x Solehio

Quality: A UKFM Group 2 variety, classified as a **ukp** bread wheat for export. KWS Extase has high Hagbergs and specific weights. It has given good proteins under a regime to achieve milling specification.

Agronomy: This relatively early-maturing variety has given high treated yields in both the East and West regions and has performed well across a range of soil types, rotational positions and in a late sowing situation. It is a medium-tall variety with relatively stiff straw. KWS Extase has given exceptionally high yields in untreated UK trials. It has very high resistance to septoria tritici and high resistance to yellow rust, brown rust and mildew, but it is very susceptible to eyespot.

UKFM comment: This variety has protein levels similar to KWS Siskin, and its performance is consistent with that of other Group 2 varieties. It shows some variability in its baking performance.

KWS Palladium

NEW

KWS Zyatt x KWS Trinity

Quality: This new addition is a high-yielding UKFM Group 2 variety recommended for the UK. It has high Hagbergs and has given good proteins under a regime to achieve milling specification (based on limited data).

Agronomy: This relatively early-maturing variety has given high treated yields in the West region and across a range of rotational positions. It is a short and relatively stiff-strawed variety. KWS Palladium has given high yields in untreated UK trials. It has high resistance to yellow rust, mildew and septoria tritici.

UKFM comment: Over the three years of testing, this variety showed good protein levels and higher levels of water absorption (a good feature) than other Group 2 varieties. It shows some variability in its baking performance.

KWS Siskin

KWS Sterling x Timaru

Quality: A UKFM Group 2 variety, classified as a **ukp** bread wheat for export. It has high Hagbergs, and has given good proteins under a regime to achieve milling specification.

Agronomy: This short-strawed variety has given its best relative performance in the West region and in an early sowing situation. It has moderate straw strength but responds well to plant growth regulators. KWS Siskin has high resistance to septoria tritici, yellow rust and mildew, but it is susceptible to eyespot. It has a tendency to sprout, so should be given priority at harvest.

UKFM comment: This variety has protein levels that are typical of a Group 2. Some yellowness may be seen in the flour colour. It has shown a degree of variability in its baking performance so may be more suited to use in blends.

Mayflower

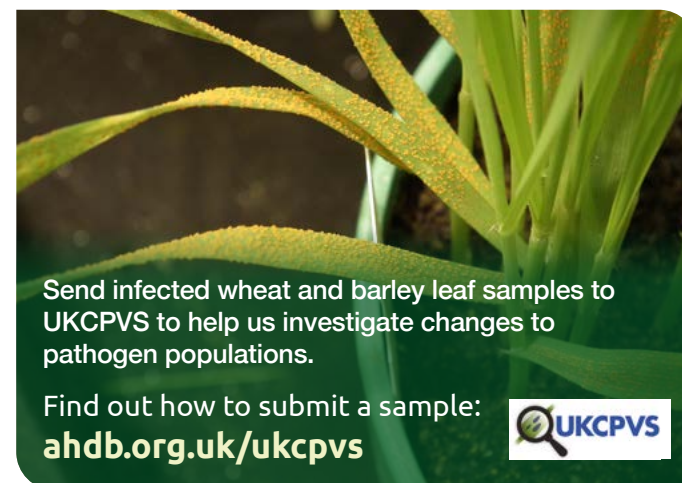
NEW

Ascott x Armada

Quality: This new addition is a UKFM Group 2 variety recommended for the UK. It is classified as a **ukp** bread wheat for export. Mayflower has high Hagbergs and specific weights. It has given good proteins under a regime to achieve milling specification (based on limited data).

Agronomy: This medium-tall variety has given its best relative performance in the East region and in a second cereal position. It has moderate straw strength but responds well to plant growth regulators. It has no major weaknesses in disease resistance, and has given high yields in untreated UK trials. Mayflower has high resistance to yellow rust and mildew, and the highest rating for resistance to septoria tritici for a bread-making variety. It carries the *Pch1* eyespot resistance gene.

UKFM comment: Over the three years of testing, this variety showed good protein levels. This variety showed higher levels of water absorption (a good feature) than other Group 2 varieties. It shows some variability in its baking performance.



Send infected wheat and barley leaf samples to UKCPVS to help us investigate changes to pathogen populations.

Find out how to submit a sample:

ahdb.org.uk/ukcpvs



Winter wheat 2022/23

Variety comments

UKFM Group 3 varieties



UK FLOUR
MILLERS

Elicit

distilling: good

Cassius x Viscount

Quality: A UKFM Group 3 variety. It is classified as a **uks** soft wheat for export and rated as 'good' for distilling.

Agronomy: This variety has given its best relative performance in the North region and in an early sowing situation. It has moderate straw strength but responds well to plant growth regulators. Elicit has high resistance to yellow rust, combined with resistance to orange wheat blossom midge. It is very susceptible to eyespot. It has a tendency to sprout, so it should be given priority at harvest.

UKFM comment: This variety has shown slightly lower Hagberg Falling Number and slightly weaker gluten than other Group 3 varieties, but meets the criteria for the group.

KWS Barrel

Bantam x Viscount

Quality: A UKFM Group 3 variety. It is classified as a **uks** soft wheat for export and is rated as 'poor' for distilling, due to low alcohol levels.

Agronomy: This short and stiff-strawed variety has given very high treated yields in the North region. It has resistance to orange wheat blossom midge, but it is susceptible to septoria tritici and eyespot. KWS Barrel is no longer under test in RL trials.

UKFM comment: This variety meets the Group 3 criteria.

KWS Brium

distilling: medium

KWS Solo x KWS Basset

Quality: This new addition is a UKFM Group 3 variety recommended for the UK. It is rated as 'medium' for distilling.

Agronomy: This variety has given high treated yields in the East region, and limited data suggest it also has a high yield potential in the North. It has performed well across a range of sowing dates and in a second cereal position, where it is high yielding. KWS Brium is a medium-tall and relatively late-maturing variety. It has high resistance to yellow rust and mildew.

UKFM comment: Over the three years of testing this variety met the Group 3 criteria.

KWS Firefly

Cougar x KWS Rowan

Quality: A UKFM Group 3 wheat, classified as a **uks** soft wheat for export. It has a low specific weight and is rated as 'poor' for distilling, due to low alcohol levels.

Agronomy: This short, stiff-strawed variety has produced high treated yields in the East region. It has a high yield potential on heavier soils, across sowing dates and in a second cereal position. KWS Firefly has resistance to orange wheat blossom midge, but it is very susceptible to eyespot.

UKFM comment: This variety meets the Group 3 criteria.

KWS Guium

distilling: medium

KWS Rowan x KWS Tempo

Quality: This new addition is a very high-yielding UKFM Group 3 variety recommended for the UK. It has a high specific weight and is rated as 'medium' for distilling.

Agronomy: This variety has given very high treated yields in the East region, and limited data suggest it has a high yield potential in the North. It has performed well across a range of soil types, rotational positions and sowing dates, where it is very high yielding in an early sowing situation (based on limited data) and on heavier soils. It is a medium-tall and late-maturing variety. KWS Guium has high resistance to yellow rust and fusarium ear blight, combined with resistance to orange wheat blossom midge. It is very susceptible to brown rust.

UKFM comment: Over the three years of testing this variety showed slightly lower water absorption than other Group 3 varieties, but met the Group 3 criteria.

LG Astronomer

distilling: medium

(Cougar x Leeds) x Britannia

Quality: A UKFM Group 3 wheat, rated as 'medium' for distilling.

Agronomy: This relatively stiff-strawed variety has given its best relative performance in the East region and on heavier soils, where it is high yielding. Limited data suggest that it has a very high yield potential in an early sowing situation. LG Astronomer has high resistance to yellow rust, brown rust and septoria tritici, combined with resistance to orange wheat blossom midge. It is susceptible to mildew.

UKFM comment: This variety meets the Group 3 criteria, although it shows slight variability in gluten quality.

Winter wheat 2022/23

Variety comments

UKFM Group 3 varieties



UK FLOUR
MILLERS

LG Illuminate **uks**

distilling: medium

(Cougar x Leeds) x Britannia

Quality: A UKFM Group 3 wheat. It is classified as a **uks** soft wheat for export and is rated 'medium' for distilling.

Agronomy: This short-strawed variety has given high treated yields in the North region and on lighter soils. It has a very high yield potential in an early sowing situation. LG Illuminate has high resistance to yellow rust and brown rust, combined with resistance to orange wheat blossom midge.

UKFM comment: This variety meets the Group 3 criteria.

LG Prince

distilling: medium

(Cougar x KWS Kielder) x Revelation

Quality: A UKFM Group 3 wheat with a low specific weight. It is rated 'medium' for distilling.

Agronomy: This short and relatively stiff-strawed variety has given high treated yields in the West region and has a very high treated yield potential in the East. It has performed well across a range of soil types and sowing dates, where it is very high yielding in a second-cereal situation, an early sowing situation and on lighter soils. It is a relatively late-maturing variety. LG Prince has high resistance to yellow rust and brown rust, combined with resistance to orange wheat blossom midge. It is susceptible to mildew.

UKFM comment: This variety meets the Group 3 criteria, although its protein level is slightly lower than other Group 3 varieties.

Merit **uks**

distilling: medium

Britannia x Cougar

Quality: A UKFM Group 3 wheat recommended for the East region. It is classified as a **uks** soft wheat for export and is rated 'medium' for distilling.

Agronomy: This variety has given high treated yields in the East region. It has performed well on lighter soils, where it is high yielding, and it has a very high yield potential in a late sowing situation. This variety has moderate straw strength but responds well to plant growth regulators. Merit has high resistance to yellow rust and brown rust, combined with resistance to orange wheat blossom midge. It is susceptible to mildew and very susceptible to eyespot.

UKFM comment: This variety meets the Group 3 criteria.

RGT Rashid **NEW**

distilling: medium

(Icebreaker x KWS Solo) x Cougar

Quality: This new addition is a UKFM Group 3 variety recommended for the East region. It is rated as 'medium' for distilling.

Agronomy: This late-maturing and stiff-strawed variety has given very high treated yields in the East region, and limited data suggest it has a very high yield potential in a late-sowing situation. RGT Rashid has high resistance to yellow rust, septoria tritici and fusarium ear blight, combined with resistance to orange wheat blossom midge. It is susceptible to mildew.

UKFM comment: Over the three years of testing this variety met the Group 3 criteria.

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Winter wheat 2022/23

Variety comments

Soft Group 4 varieties

Elation

distilling: good

Cassius x Viscount

Quality: Recommended for the North region as a soft-milling feed variety. It is classified as a **uks** soft wheat for export and is rated as 'good' for distilling.

Agronomy: This short and relatively stiff-strawed variety has performed particularly well in a second-cereal situation, where it has given high yields. Elation has high resistance to yellow rust and mildew, combined with resistance to orange wheat blossom midge. It is susceptible to septoria tritici and eyespot. It has a tendency to sprout, so it should be given priority at harvest.

KWS Jackal

distilling: medium

KWS Santiago x KWS W177

Quality: Recommended for the North region as a soft-milling feed variety. It has a low specific weight and is rated as 'medium' for distilling.

Agronomy: This variety has given its best relative performance in an early sowing situation. KWS Jackal has high resistance to yellow rust and mildew, combined with resistance to orange wheat blossom midge, but it is susceptible to eyespot. It has a tendency to sprout, so it should be given priority at harvest.

LG Skyscraper

distilling: medium

(Cassius x NAWW29) x KWS Santiago

Quality: Recommended for the UK as a soft-milling, high-yielding feed variety. It is rated as 'medium' for distilling.

Agronomy: LG Skyscraper has given high treated yields across the UK, and across a range of soil types, sowing dates and rotational positions. It has a very high yield potential in a second cereal position. This medium-tall variety has moderate straw strength that requires careful management. It has high resistance to yellow rust and mildew, combined with resistance to orange wheat blossom midge, but it is susceptible to eyespot. Limited data suggest that this variety may have a tendency to sprout, so it should be given priority at harvest.

LG Spotlight

distilling: medium

Scribe x Horatio

Quality: Recommended for the UK as a soft-milling, high-yielding feed variety. It has high Hagbergs and is rated as 'medium' for distilling.

Agronomy: LG Spotlight has given high treated yields in the West region, in a first cereal position, a late sown situation and on heavier soils. It is a medium-tall and relatively stiff-strawed variety, and has resistance to orange wheat blossom midge. It is no longer under test in RL trials.

RGT Bairstow

NEW

distilling: good

(Revelation x KWS Santiago) x Cougar

Quality: This new addition is a high-yielding, soft-milling feed variety recommended for the UK. It has a low specific weight and is rated as 'good' for distilling.

Agronomy: This relatively late-maturing variety has given high treated yields throughout the UK. It has performed well across a range of rotational positions and has a very high yield potential across a range of soil types and in a late sown position (based on limited data). It is a medium-tall variety and has moderate straw strength that requires careful management. RGT Bairstow has high resistance to yellow rust, combined with resistance to orange wheat blossom midge.

RGT Saki

Cougar x KWS Santiago

Quality: A high-yielding, soft-milling feed wheat recommended for the UK. It has a low specific weight and is rated as 'poor' for distilling, due to low alcohol levels.

Agronomy: RGT Saki has given high treated yields throughout the UK, and across a range of rotational positions and soil types. This late-maturing variety has a very high yield potential in both an early sown and late sown situation. It has moderate straw strength but responds well to plant growth regulators. RGT Saki has high resistance to yellow rust and brown rust, combined with resistance to orange wheat blossom midge. It is susceptible to eyespot.

Winter wheat 2022/23

Variety comments

Soft Group 4 varieties

RGT Stokes **NEW** **distilling: good**
(Cougar x KWS Santiago) x Revelation

Quality: This new addition is a high-yielding, soft-milling feed variety recommended for the UK. It has a low specific weight and is rated as 'good' for distilling.

Agronomy: RGT Stokes has given very high treated yields in the West region, with limited data suggesting it also has a very high yield potential in the North. It is a relatively late-maturing variety, which has shown a high yield potential across rotational positions and soil types. This medium-tall variety is relatively weak-strawed but responds well to plant growth regulators. RGT Stokes has high resistance to yellow rust and septoria tritici.

Swallow **distilling: good**
KWS Gator x Cougar

Quality: A soft-milling feed variety recommended for the North region. It has a low specific weight and is rated as 'good' for distilling.

Agronomy: This variety has given its best relative performance in the North region, in an early sowing situation and on lighter soils. Swallow is stiff-strawed and is the shortest variety on the 2022/23 recommended list. It has resistance to orange wheat blossom midge, but it is very susceptible to eyespot. Limited data suggest that this variety may have a tendency to sprout, so it should be given priority at harvest.

Hard Group 4 varieties

Champion **NEW** **DSV20122 x Reflection**

Quality: This new addition is a very high-yielding, hard-milling feed variety recommended for the UK. It has a low specific weight.

Agronomy: Champion has given the highest treated UK yields of all varieties on the 2022/23 recommended list, and has shown a very high yield potential across a range of rotational positions, soil types and sowing dates. It has performed particularly well in the East and West regions, where it is very high yielding. This variety has moderate straw strength but responds well to plant growth regulators. Champion has given high yields in untreated UK trials. It has high resistance to mildew and yellow rust, and very high resistance to septoria tritici, combined with resistance to orange wheat blossom midge.

Costello **W151 x Timaru**

Quality: A hard-milling feed variety for the UK. It has high Hagbergs and a high specific weight.

Agronomy: This variety gives its best relative performance in the West and North regions, and has a high yield potential in a late sown position. Costello is a short, stiff-strawed variety that is relatively late-maturing. It has high resistance to yellow rust and mildew, but it is susceptible to eyespot.

Gleam

KWS Kielder x Hereford

Quality: A high-yielding, hard-milling feed variety recommended for the UK.

Agronomy: This variety has given high treated yields throughout the UK and across a range of rotational positions, soil types and sowing dates. Gleam has resistance to orange wheat blossom midge, but it is susceptible to eyespot. It has a tendency to sprout, so it should be given priority at harvest.

Graham

Premio x Expert

Quality: A high-yielding, hard-milling feed variety recommended for the UK. It has high Hagbergs.

Agronomy: This relatively stiff-strawed variety has given very high treated yields in the West region. Graham also has a high yield potential in the North region, in a first-cereal situation and on lighter soils. This relatively early-maturing variety has given high yields in untreated UK trials. It has high resistance to yellow rust, mildew, septoria tritici and fusarium ear blight, but it is very susceptible to eyespot.

KWS Cranium

KWS Crispin x KWS Kielder

Quality: A high-yielding, hard-milling feed variety recommended for the UK. It has high Hagbergs but a low specific weight.

Agronomy: This late-maturing variety has given high treated yields in the East region. It has performed well across a range of rotational positions and on lighter soil, where it is high yielding. KWS Cranium has a very high yield potential in a late sowing situation. It is a medium-tall variety with stiff straw. It has high resistance to yellow rust, combined with resistance to orange wheat blossom midge, but it is susceptible to brown rust.

Winter wheat 2022/23

Variety comments

Hard Group 4 varieties

KWS Dawsum **NEW** KWS Kerrin x Costello

Quality: This new addition is a very high-yielding, hard-milling feed variety recommended for the UK. It has high Hagbergs and specific weights.

Agronomy: KWS Dawsum has performed well throughout the UK and has given very high treated yields in the West and North region (based on limited data). It also has a very high yield potential across a range of rotational positions, soil types and sowing dates (based on limited data). This short-strawed variety has given high yields in untreated UK trials. KWS Dawsum has high resistance to mildew, yellow rust and brown rust.

KWS Kerrin W177 x Santiago

Quality: A high-yielding, hard-milling feed variety recommended for the East and West regions.

Agronomy: This variety has given high treated yields in the East and West region, across rotational positions, in a late sowing situation and on lighter soils. KWS Kerrin has high resistance to mildew and brown rust, combined with resistance to orange wheat blossom midge. It is susceptible to yellow rust and eyespot. It has a tendency to sprout, so it should be given priority at harvest. KWS Kerrin is no longer under test in RL trials.

LG Typhoon **NEW** Garrus x LGW88

Quality: This new addition is a high-yielding, hard-milling feed variety recommended for the UK.

Agronomy: LG Typhoon has given high treated yields throughout the UK. It has a very high yield potential in a second-cereal position. Limited data suggest it also has a very high yield potential in an early-sowing situation and a high yield potential on lighter soils. It is a relatively late-maturing variety that has given high yields in untreated UK trials. LG Typhoon has shown no major weaknesses to disease and has high resistance to mildew, yellow rust and septoria tritici, combined with resistance to orange wheat blossom midge.

RGT Gravity (Scout x Oakley) x KWS Santiago

Quality: A hard-milling feed variety recommended for the UK with a low specific weight.

Agronomy: This variety has given high treated yields in the East region, as well as in a second-cereal position, a late sowing situation and on lighter soils. It is a medium-tall variety with moderate straw strength but responds well to plant growth regulators. RGT Gravity has resistance to orange wheat blossom midge, but it is susceptible to eyespot. It has a tendency to sprout, so it should be given priority at harvest. RGT Gravity is no longer under test in RL trials.

RGT Wolverine (09TC2654 x Panorama) x Coronation

Quality: A hard-milling feed variety with a specific recommendation for resistance to *Barley yellow dwarf virus* (BYDV). It has a low specific weight.

Agronomy: This relatively late-maturing variety has given its best relative performance in the West and North regions. RGT Wolverine has high resistance to brown rust, but it is susceptible to yellow rust.

SY Insitor (Hereford x Oakley) x Hereford

Quality: A very high-yielding, hard-milling feed variety recommended for the UK. It has high Hagbergs and specific weights.

Agronomy: SY Insitor has given very high treated yields throughout the UK, as well as across a range of soil types, rotational positions and in a late sowing situation. This medium-tall variety has moderate straw strength but responds well to plant growth regulators. It has high resistance to septoria tritici and fusarium ear blight, combined with resistance to orange wheat blossom midge. It is susceptible to eyespot. Limited data suggest that this variety may have a tendency to sprout, so it should be given priority at harvest.

Theodore Stigg x Tuxedo

Quality: A hard-milling feed variety recommended for the West region. It has high Hagbergs but a low specific weight.

Agronomy: Theodore has given its best relative performance in the West region. It is a short variety with moderate straw strength but responds well to plant growth regulators. It has given high yields in untreated UK trials. It has high resistance to yellow rust, brown rust and mildew (based on limited data), and the highest rating for resistance to septoria tritici on the 2022/23 recommended list.

Spring wheat 2022



	KWS Ladum	Nissaba	Mulika	KWS Cochise	KWS Giraffe	KWS Chilham	KWS Fixum	WPB Escape	KWS Talisker	Hexham	KWS Kilburn	Average LSD (5%)
End-use group	UKFM Group 1			UKFM Group 2			Hard Group 4					
Scope of recommendation	UK	UK	UK	UK	UK	UK	UK	UK	UK	UK	UK	
Variety status	NEW	NEW	C	C			NEW			C	*	
UK yield as % control (spring sowing)												
Fungicide-treated (6.8 t/ha)	102	95	94	104	101	100	108	105	104	103	100	3.2
UK yield as % control (autumn sowing)												
Fungicide-treated (9.2 t/ha)	-	[97]	95	101	101	99	-	[103]	100	104	[102]	4.5
Grain quality (spring sowing)												
Endosperm texture	Hard	Hard	Hard	Hard	Hard	Hard	Hard	Hard	Hard	Hard	Hard	
Protein content (%)	13.2	13.5	13.6	13.2	13.5	12.9	12.7	12.7	12.5	12.8	13.1	0.3
Hagberg Falling Number	324	297	325	243	301	336	218	261	281	274	266	20.7
Specific weight (kg/hl)	78.0	76.4	77.0	78.5	79.2	78.2	77.8	76.2	78.7	77.3	75.3	0.7
Agonomic features (spring sowing)												
Resistance to lodging with PGR [∞]	-	-	-	-	-	-	-	-	-	-	-	-
Straw height without PGR (cm)	75	77	78	77	75	74	79	72	80	77	79	1.9
Ripening (+/- Mulika, -ve = earlier)	0	+2	0	+1	+1	0	+2	+2	+1	+2	+2	1.2
Resistance to sprouting [∞]	-	-	-	-	-	-	-	-	-	-	-	-
Disease resistance												
Mildew (1-9)	[8]	[5]	7	8	8	8	[8]	8	8	6	7	1.1
Yellow rust (1-9)	6	5	7	4	6	7	7	8	9	8	5	0.5
Brown rust (1-9)	[7]	[9]	[9]	[9]	[8]	[6]	[8]	[7]	[5]	[9]	[9]	1.8
Septoria tritici (1-9)	[7]	[6]	[6]	[6]	[5]	[7]	[6]	[6]	[6]	[7]	[6]	1.1
Orange wheat blossom midge	-	R	R	R	-	R	-	-	-	-	-	-
Annual treated yield (% control, spring sowing)												
2017 (7.4 t/ha)	-	-	92	106	[102]	101	-	-	[104]	[102]	101	4.0
2018 (5.5 t/ha)	-	-	[94]	[106]	[106]	[98]	-	[112]	[105]	[100]	[100]	6.1
2019 (7.0 t/ha)	103	92	93	105	100	96	108	104	103	103	98	4.1
2020 (6.4 t/ha)	[98]	[96]	[94]	[101]	[97]	[99]	[108]	[103]	[102]	[105]	[103]	4.2
2021 (7.6 t/ha)	103	96	96	100	102	103	106	[103]	105	105	99	4.0
Breeder/UK contact												
Breeder	KWS	BA	BA	KWS	KWS	KWS	KWS	WPB	KWS	KWS	KWS	
UK contact	KWS	BA	Sen	KWS	KWS	KWS	KWS	LSPB	KWS	Sen	KWS	
Status in RL system												
Year first listed	22	22	11	17	20	17	22	21	19	19	14	
RL status	P1	P1	-	-	-	-	P1	P2	-	-	*	

On the 1-9 scales, high figures indicate that a variety shows the character to a high degree (e.g. high resistance).

For Breeder/UK contact information, see page 59.

UKFM = UK Flour Millers	* = Variety no longer under test in RL trials	[] = Limited data	P1 = First year of recommendation	LSD = Least significant difference
UK = Recommended for the UK	PGR = Plant growth regulator	R = Believed to be resistant to orange wheat blossom midge (OWBM), but this has not been verified in Recommended List tests	P2 = Second year of recommendation	Average LSD (5%): Varieties that are more than one LSD apart are significantly different at the 95% confidence level
C = Yield control (for the current table)	∞ = No ratings available			

Spring wheat 2022

Variety comments

UKFM Group 1 varieties



KWS Ladum **NEW**

Quality: This new addition is a UKFM Group 1 variety for spring sowing. It has given high Hagbergs and specific weights, and good grain proteins.

Agronomy: This variety has given treated yields that are a significant step up in its UKFM Group 1 segment. Limited data suggest that KWS Ladum has no major disease weaknesses, with high resistance to mildew, brown rust and septoria tritici.

UKFM comment: Over the three years of testing, this variety showed similar analytical qualities to Mulika. While gluten quality was good, there was slight variation in baking quality.

Mulika

Paragon x (Tybalt x Robigus)

Quality: A UKFM Group 1 variety for spring sowing. Mulika gives high Hagbergs and good grain proteins. It remains a popular choice with growers.

Agronomy: This variety has given similar treated yields in both spring and late-autumn sowings. It has high resistance to yellow rust, mildew and brown rust (based on limited data), combined with resistance to orange wheat blossom midge.

UKFM comment: This variety has good protein levels. The gluten quality is weaker than the other Group 1 spring varieties, and there is some variability in its baking performance.

Nissaba **NEW**

Hathaway x BA W54

Quality: This new addition is a UKFM Group 1 variety for spring sowing. It has given high Hagbergs and good grain proteins.

Agronomy: This variety has given treated yields from spring sowings that are slightly higher than the current Group 1 control Mulika. It is a relatively late-maturing variety. Limited data suggest that Nissaba has high resistance to brown rust, combined with resistance to orange wheat blossom midge.

UKFM comment: Over the three years of testing, this variety showed similar analytical qualities to Mulika. The gluten quality was good, although some variability in baking performance was seen.

Please note that comments made on resistance to orange wheat blossom midge are based on advice from plant breeders. It has not been verified in RL tests.

Spring wheat trials are routinely treated with plant growth regulator and there has been little lodging in recent years. There are insufficient data to produce ratings or comments for newer varieties. Quality information is based on spring-sown wheats.

UKFM Group 2 varieties



KWS Chilham

Sparrow x Azurite

Quality: A UKFM Group 2 variety for spring sowing. It has given high Hagbergs and specific weights, and good grain proteins.

Agronomy: This variety has given similar treated yields in both spring and late-autumn sowings. KWS Chilham has high resistance to yellow rust, mildew and septoria tritici (based on limited data), combined with resistance to orange wheat blossom midge.

UKFM comment: This variety has shown lower protein levels than Mulika, but with a stronger gluten quality. The baking quality would not necessarily suit all end users.

KWS Cochise

Ashby x Lapis

Quality: A UKFM Group 2 variety for spring sowing. It has given high specific weights and good grain proteins.

Agronomy: This variety has given high treated yields from spring sowings. KWS Cochise has high resistance to mildew and brown rust (based on limited data), combined with resistance to orange wheat blossom midge. It is susceptible to yellow rust.

UKFM comment: This variety has shown good protein levels and specific weights, although there is a degree of variability in its baking performance.

Spring wheat 2022

Variety comments

UKFM Group 2 varieties



KWS Giraffe

KWS Recoleta x KWS Kilburn

Quality: A UKFM Group 2 variety for spring sowing. It has given high Hagbergs and specific weights, and good grain proteins.

Agronomy: This variety has given consistent treated yields in both spring and late-autumn sowings. It has high resistance to mildew and brown rust (based on limited data).

UKFM comment: This variety has shown similar quality to Mulika. The gluten quality is good, although there is some variability in its baking performance.

Group 4 feed varieties

Hexham

Quality: A hard feed variety for spring sowing.

Agronomy: Hexham has given high treated yields in late-autumn sowings, and performs well in spring sowings. This is a relatively late-maturing variety with high resistance to yellow rust, brown rust (based on limited data) and septoria tritici (based on limited data).

KWS Fixum NEW

Quality: This new addition is a high-yielding hard feed variety for spring sowing. It has given high specific weights and good grain proteins.

Agronomy: KWS Fixum has given the highest yields on the 2022 recommended list, performing consistently in all three years it has been under test. It is a relatively late-maturing variety. Limited data suggest that KWS Fixum has no major disease weaknesses, with high resistance to yellow rust, mildew and brown rust.

KWS Kilburn

Quality: A hard feed variety for spring sowing. It has given good grain proteins.

Agronomy: This is a relatively late-maturing variety with high resistance to mildew and brown rust (based on limited data). KWS Kilburn is no longer under test in RL trials.

KWS Talisker

KWS Westfield x KWS Pepito

Quality: A hard feed variety for spring sowing. It has given high Hagbergs and specific weights, and gives good grain proteins.

Agronomy: KWS Talisker has given high treated yields from spring sowings. It has high resistance to yellow rust and mildew.

WPB Escape

Quality: A hard feed variety for spring sowing. It has given good grain proteins.

Agronomy: WPB Escape has given high treated yields from spring sowings. This is a relatively late-maturing variety with high resistance to yellow rust, mildew and brown rust (based on limited data).

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Candidate varieties – wheat trials harvest 2022

Winter wheat



Previous/proposed
name

Variety ID

UK contact

Selected as potential bread-making varieties

RGT Zinzan	RW41924	3011	RAGT Seeds
KWS Ultimatum	KWSW405	3026	KWS UK
KWS Wrenum	KWSW400	3033	KWS UK

Selected as potential biscuit-making varieties

RGT Wilkinson	RW41991	3018	RAGT Seeds
Gefion	FAL160	3052	KWS UK

Selected as potential feed varieties

Zoom	EW8612	3001	Elsoms Seeds Ltd
Oxford	DSV318214	3005	DSV UK
KWS Zealum	KWSW394	3027	KWS UK
KWS Webbum	KWSW399	3032	KWS UK
SY Coach	SY119122	3049	Syngenta UK Ltd
LG Redwald	LGWU172	3065	Limagrains UK
Mindful	AUK2001	3072	Agrovista UK Ltd

Candidate varieties will be considered for the 2023/24 AHDB Recommended List.

Spring wheat



Previous/proposed
name

Variety ID

UK contact

Selected as potential bread-making varieties

Nimrod	NOS412013.06	3075	Saaten Union UK
KWS Harsum	KWSW406	3079	KWS UK
KWS Lightum	KWSW407	3080	KWS UK
KWS Alicium	KW241-3-17	3082	KWS UK

Candidate varieties will be considered for the 2023 AHDB Recommended List.

After a candidate variety achieves National Listing, the data is published online (ahdb.org.uk/rl) and on the RL app (ahdb.org.uk/rlapp).

MAGB overview



The Malting Barley Committee (MBC) of the Maltsters' Association of Great Britain (MAGB) evaluates and approves barley varieties for their suitability for brewing, malting and distilling use. There is a considerable UK market for MBC approved varieties, with approximately 1.8–1.9 million tonnes of UK malting barley purchased each year.

The local market requirements vary considerably across the UK, and this should guide growers' variety choice and management, particularly the management of nitrogen (Figure 3).

The assessment of varieties for suitability in different malting markets takes several years and varieties are added to the RL while still undergoing MBC evaluation.

Farmers should speak to merchants before committing to varieties that are still under evaluation, to ensure an end market is available.

The MAGB website (ukmalt.com) offers further information on the market for malting barley. It also includes an up-to-date list of approved varieties and information on growing malting barley.

MBC approved list – winter barley



Brewing use

Full approval: Craft, Electrum

Malt distilling use

None approved

Grain distilling use

None approved

MBC approved list – spring barley



Brewing use

Full approval: Laureate, RGT Planet, LG Diablo
Provisional approval: SY Splendor, SY Tungsten, Skyway

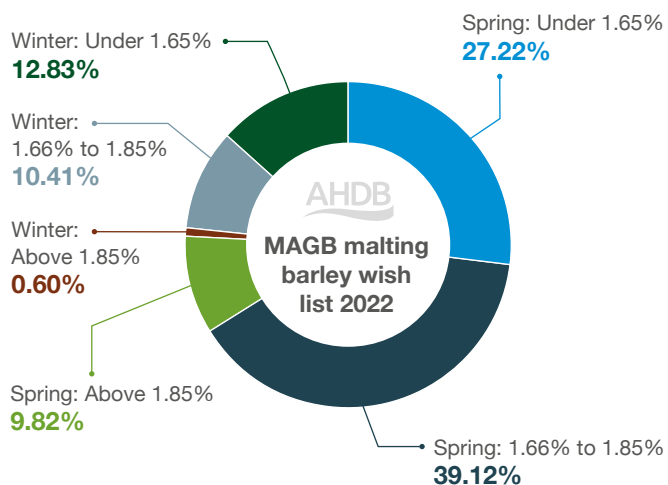
Malt distilling use

Full approval: Laureate, KWS Sassy, LG Diablo
Provisional approval: SY Tungsten, Firefoxx

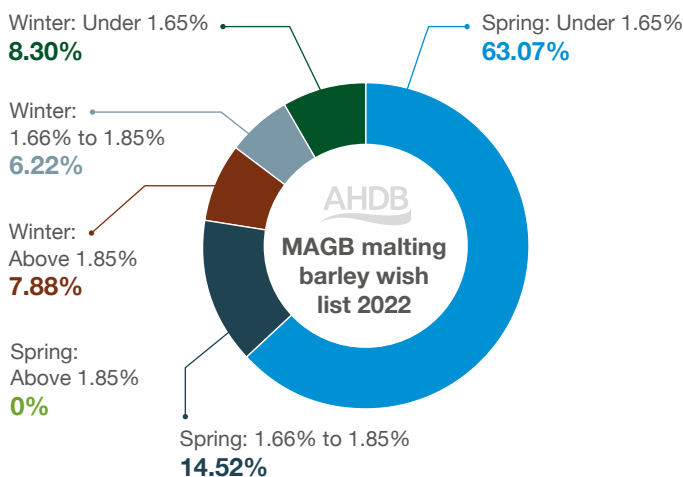
Grain distilling use

Full approval: Fairing
Provisional approval: None approved

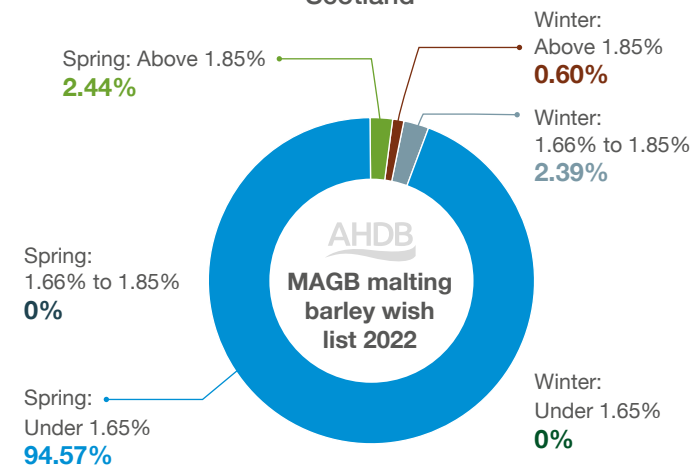
Southern and Eastern England



Northern England



Scotland



Source: MAGB

Figure 3. The chart above shows MAGB members' wish list for grain nitrogen levels in 2022 barley crop purchases from England and Scotland

Winter barley 2022/23

Market options, yield and grain quality



Market options, yield and grain quality																													
<div><div>AHDB</div><div>RECOMMENDED</div></div>		Electrum	Craft	KWS Tardis	Bolton	Lightning	Bordeaux	LG Dazzle	LG Mountain	KWS Gimlet	Jordan	KWS Hawking	Surge	LG Flynn	KWS Orwell	KWS Creswell	Valerie	California	KWS Cassia	SY Thunderbolt #	SY Kingsbarn #	SY Canyon #	SY Kingston #	Belmont #	Belfry #	Bazooka #	KWS Feeris	Funky	Average LSD (5%)
End-use group	Two-row malting		Two-row feed																Six-row feed										
Scope of recommendation	UK	UK	UK	UK	UK	UK	UK	UK	UK	UK	UK	UK	UK	UK	N	UK	W	UK	UK	UK	UK	UK	UK	UK	UK	Sp	UK		
Variety status	C	C			NEW		NEW	C	*	*			*		*						NEW				C	NEW	C		
Fungicide-treated grain yield (% treated control)																													
United Kingdom (9.8 t/ha)	96	95	105	104	104	103	103	102	102	101	101	101	101	100	100	99	98	97	107	106	106	106	106	104	104	103	103	2.7	
East region (9.6 t/ha)	96	95	106	105	104	105	104	103	104	103	102	102	101	100	100	100	100	97	106	106	105	105	106	104	104	103	102	3.2	
West region (10.0 t/ha)	95	94	104	102	[103]	101	[101]	102	100	101	101	100	100	101	99	99	98	98	108	107	[108]	108	106	106	104	[105]	104	3.9	
North region (10.0 t/ha)	95	96	104	103	103	103	102	102	99	98	99	98	100	99	100	99	[96]	96	106	106	105	106	105	104	104	101	103	3.6	
Untreated grain yield (% treated control)																													
United Kingdom (9.8 t/ha)	78	78	85	84	88	81	87	82	82	86	81	87	81	80	75	82	79	81	87	84	89	88	76	87	84	84	88	5.0	
Main market options																													
MBC malting approval for brewing use	F	F	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Grain quality																													
Specific weight (kg/hl)	70.0	70.1	70.2	69.5	68.6	70.7	68.9	70.5	69.5	69.8	69.4	70.1	70.9	68.8	69.4	70.9	68.8	72.1	70.5	70.4	71.2	70.4	69.3	69.1	70.0	69.5	69.8	0.8	
Screenings (% through 2.25 mm)	2.0	2.0	1.4	1.3	1.9	0.9	1.8	1.9	2.0	1.3	1.8	1.5	1.3	1.6	1.8	0.4	1.8	1.2	1.8	1.4	1.8	2.5	2.4	2.4	2.2	0.7	3.4	0.7	
Screenings (% through 2.5 mm)	5.9	6.2	4.3	4.2	5.6	2.7	5.4	6.0	5.9	3.7	5.6	4.7	3.7	4.9	5.8	1.0	5.9	3.5	7.2	5.7	6.4	8.6	8.8	9.1	7.7	3.7	13.2	1.8	
Nitrogen content (%)	1.73	1.67	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.75	-	0.20	
Status in RL system																													
Year first listed	18	16	21	21	22	21	22	19	19	20	20	16	19	16	17	19	13	10	21	19	22	21	18	16	16	22	17		

Varieties no longer listed: KWS Tower, Libra and SY Baracooda.

Comparisons of variety performance across regions are not valid. See page 3 for information on regional yields.

UK = Recommended for the UK	Sp = Specific recommendation. KWS Feeris has a specific recommendation for tolerance to <i>Barley yellow dwarf virus</i> (BYDV). Tolerance to BYDV has not been verified in Recommended List tests	C = Yield control (for current table)	MBC = Malting Barley Committee	LSD = Least significant difference
N = Recommended for the North region		* = Variety no longer under test in RL trials	[] = Limited data	Average LSD (5%): Varieties that are more than one LSD apart are significantly different at the 95% confidence level
W = Recommended for the West region		# = Hybrid variety	F = Full MBC approval	

Winter barley 2022/23

Yield, agronomy and disease resistance



	Electrum	Craft	KWS Tardis	Bolton	Lightning	Bordeaux	LG Dazzle	LG Mountain	KWS Gimlet	Jordan	KWS Hawking	Surge	LG Flynn	KWS Orwell	KWS Creswell	Valerie	California	KWS Cassia	SY Thunderbolt #	SY Kingsbarn #	SY Canyon #	SY Kingston #	Belmont #	Belfry #	Bazooka #	KWS Feeris	Funky	Average LSD (5%)
End-use group	Two-row malting		Two-row feed																	Six-row feed								
Scope of recommendation	UK	UK	UK	UK	UK	UK	UK	UK	UK	UK	UK	UK	UK	UK	N	UK	W	UK	UK	UK	UK	UK	UK	UK	UK	Sp	UK	
Variety status	C	C			NEW		NEW	C	*	*			*		*					NEW					C	NEW	C	
Fungicide-treated grain yield (% treated control)																												
United Kingdom (9.8 t/ha)	96	95	105	104	104	103	103	102	102	101	101	101	101	100	100	99	98	97	107	106	106	106	106	104	104	103	103	2.7
East region (9.6 t/ha)	96	95	106	105	104	105	104	103	104	103	102	102	101	100	100	100	100	97	106	106	105	105	106	104	104	103	102	3.2
West region (10.0 t/ha)	95	94	104	102	[103]	101	[101]	102	100	101	101	100	100	101	99	99	98	98	108	107	[108]	108	106	106	104	[105]	104	3.9
North region (10.0 t/ha)	95	96	104	103	103	103	102	102	99	98	99	98	100	99	100	99	[96]	96	106	106	105	106	105	104	104	101	103	3.6
Untreated grain yield (% treated control)																												
United Kingdom (9.8 t/ha)	78	78	85	84	88	81	87	82	82	86	81	87	81	80	75	82	79	81	87	84	89	88	76	87	84	84	88	5.0
Agronomic features																												
Resistance to lodging without PGR (1–9) – see page 4	7	7	8	7	[6]	7	[7]	6	6	6	7	7	7	7	7	7	7	7	5	6	[7]	6	6	7	6	[8]	8	1.4
Resistance to lodging with PGR(1–9) – see page 4	7	8	8	8	6	8	7	6	6	6	8	7	7	8	7	8	7	7	5	7	5	5	6	7	6	7	7	1.0
Straw height without PGR (cm)	97	97	95	95	[92]	94	[92]	92	102	92	94	93	98	93	96	94	96	96	114	112	[118]	118	112	110	117	[102]	97	3.9
Straw height with PGR (cm)	90	88	86	83	88	85	85	83	95	84	85	85	91	85	88	86	90	89	104	103	106	107	105	101	107	95	91	2.7
Ripening (+/-KWS Orwell, -ve = earlier)	-1	0	0	0	0	0	0	-1	+1	+1	+1	0	+1	0	0	-1	0	+1	-1	0	-1	-1	0	0	0	0	-1	1.1
Disease resistance																												
Mildew (1–9)	6	6	5	6	7	6	6	5	7	6	5	6	5	3	4	6	6	5	8	7	8	7	5	6	5	4	5	1.2
Brown rust (1–9)	7	7	6	6	8	6	8	7	6	8	6	7	7	7	6	5	5	7	6	5	6	6	4	6	5	5	7	1.0
Rhynchosporium (1–9)	6	6	7	5	6	4	7	6	6	7	6	7	5	6	6	6	6	5	6	5	6	6	7	7	6	6	6	1.4
Net blotch (1–9)	5	6	[5]	[5]	[5]	[5]	[4]	5	5	5	6	5	5	5	5	[6]	6	5	[6]	5	[5]	6	5	5	5	[6]	5	1.2
BaYMV	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	-

On the 1–9 scales, high figures indicate that a variety shows the character to a high degree (e.g. high resistance).

Comparisons of variety performance across regions are not valid. See page 3 for information on regional yields.

Resistance to lodging (without PGR) ratings for new varieties are based on a small number of trials so should be treated with caution.

UK = Recommended for the UK	Sp = Specific recommendation. KWS Feeris has a specific recommendation for tolerance to <i>Barley yellow dwarf virus</i> (BYDV). Tolerance to BYDV has not been verified in Recommended List tests	* = Variety no longer under test in RL trials	R = Believed to be resistant to Barley mild mosaic virus (BaMMV) and to <i>Barley yellow mosaic virus</i> (BaYMV) strain 1, but this has not been verified in Recommended List tests	LSD = Least significant difference
N = Recommended for the North region		# = Hybrid variety		Average LSD (5%): Varieties that are more than one LSD apart are significantly different at the 95% confidence level
W = Recommended for the West region	C = Yield control (for current table)	PGR = Plant growth regulator		
		[] = Limited data		

Winter barley 2022/23

Supplementary data



Supplementary data

AHDB

RECOMMENDED

	Electrum	Craft	KWS Tardis	Bolton	Lightning	Bordeaux	LG Dazzle	LG Mountain	KWS Gimlet	Jordan	KWS Hawking	Surge	LG Flynn	KWS Orwell	KWS Creswell	Valerie	California	KWS Cassia	SY Thunderbolt #	SY Kingsbarn #	SY Canyon #	SY Kingston #	Belmont #	Belfry #	Bazooka #	KWS Feeris	Funky	Average LSD (5%)
End-use group	Two-row malting		Two-row feed																Six-row feed									
Scope of recommendation	UK	UK	UK	UK	UK	UK	UK	UK	UK	UK	UK	UK	UK	UK	N	UK	W	UK	UK	UK	UK	UK	UK	UK	Sp	UK		
Variety status	C	C			NEW		NEW	C	*	*			*		*						NEW				C	NEW	C	
Breeder/UK contact																												
Breeder	SyP	SyP	KWS	Ack	Ack	NS	Lim	LimEur	KWS	Ack	KWS	SyP	LimEur	KWS	KWS	Bre	Lim	KWS	SyP	SyP	SyP	SyP	SyP	SyP	SyP	KWS	KWSMR	
UK contact	Syn	Syn	KWS	ElsAck	ElsAck	Sen	Lim	Lim	KWS	ElsAck	KWS	Syn	Lim	KWS	KWS	Sen	Lim	KWS	Syn	Syn	Syn	Syn	Syn	Syn	Syn	KWS	KWS	
Annual treated yield (% control)																												
2017 (10.0 t/ha)	94	94	-	-	-	-	-	101	103	101	101	99	100	101	98	100	100	97	-	106	-	106	106	106	106	-	105	-
2018 (10.3 t/ha)	96	97	105	103	-	104	-	103	100	101	103	99	102	101	101	101	98	97	106	107	-	106	106	104	103	-	102	-
2019 (10.4 t/ha)	97	94	104	103	103	104	101	103	102	101	100	101	100	99	98	-	97	96	107	106	106	106	105	104	104	103	103	-
2020 (9.2 t/ha)	95	94	103	104	104	102	103	104	101	100	100	100	101	101	101	99	96	97	106	105	105	107	106	105	104	102	103	-
2021 (9.5 t/ha)	96	95	105	102	103	101	101	100	99	99	99	101	100	100	100	99	98	98	108	107	108	107	105	104	106	103	103	-
Soil type (about 50% of trials are medium soils)																												
Light soils (9.5 t/ha)	95	96	103	104	102	103	102	102	100	100	99	100	101	99	101	99	96	97	103	105	105	105	104	102	104	101	102	3.6
Heavy soils (9.5 t/ha)	97	93	109	105	102	104	105	103	102	102	104	103	101	100	[99]	[99]	[100]	98	107	104	105	103	103	106	104	104	103	5.9
Agronomic characteristics																												
Lodging without PGR (%)	6	3	2	4	[12]	3	[5]	8	16	13	3	3	6	3	7	3	3	5	20	12	[6]	13	12	6	8	[1]	1	-
Lodging with PGR (%)	5	2	1	1	10	1	5	6	9	7	1	3	3	2	4	2	3	4	16	5	15	14	13	3	6	4	2	-
Brackling (%)	12	11	7	10	11	10	8	27	9	9	6	8	6	9	13	6	8	10	17	15	11	15	18	9	12	9	12	-
Malting quality																												
Hot water extract (l deg/kg)	303.6	309.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	297.0	-	3.6
Status in RL system																												
Year first listed	18	16	21	21	22	21	22	19	19	20	20	16	19	16	17	19	13	10	21	19	22	21	18	16	16	22	17	
RL status	-	-	P2	P2	P1	P2	P1	-	*	*	-	-	*	-	*	-	-	-	P2	-	P1	P2	-	-	-	P1	-	

All yields on this table are taken from treated trials receiving a full fungicide and PGR programme.
For Breeder/UK contact information, see page 59.

UK = Recommended for the UK	Sp = Specific recommendation. KWS Feeris has a	C = Yield control (for current table)	[] = Limited data	LSD = Least significant difference
N = Recommended for the North region	specific recommendation for tolerance to <i>Barley yellow dwarf virus</i> (BYDV). Tolerance to BYDV	* = Variety no longer under test in RL trials	P1 = First year of recommendation	Average LSD (5%): Varieties that are
W = Recommended for the West region	has not been verified in Recommended List tests	# = Hybrid variety	P2 = Second year of recommendation	more than one LSD apart are
		PGR = Plant growth regulator		significantly different at the 95% confidence level

Winter barley 2022/23

Variety comments

Winter barley two-row malting

Craft SY 208-56 x SY Venture

Quality: Fully approved by the Malting Barley Committee (MBC) for the production of malt for brewing, with a high specific weight.

Agonomy: Craft is a relatively stiff-strawed, two-row variety with no major weaknesses in disease resistance. It has high resistance to brown rust and is resistant to the common strains of barley mosaic viruses (BaMMV and BaYMV strain 1).

MAGB comment: Fully approved by the MBC for brewing in 2018. Craft secured almost 50% of total winter malting barley purchased from 2020 crop and continues to lead 2021 crop, retaining highest market share.

Electrum SY208-56 x SY208-59

Quality: Fully approved by MBC for the production of malt for brewing, with a high specific weight.

Agonomy: This two-row variety has given its best relative performance in the East region and on heavier soils. It is a relatively early-maturing variety. Electrum has good overall disease resistance, including high resistance to brown rust. It is also resistant to the common strains of barley mosaic viruses (BaMMV and BaYMV strain 1).

MAGB comment: Fully approved by the MBC for brewing in spring 2020, for 2021 crop. Electrum commenced its first fully approved year with a modest market share.

Please note that comments made on resistance to *Barley yellow dwarf virus* (BYDV), *Barley mild mosaic virus* (BaMMV) and *Barley yellow mosaic virus* (BaYMV) strain 1 are based on advice from plant breeders. These have not been verified in RL tests.

UK winter malting barley market share is given as % of Malting Association of Great Britain (MAGB) member purchases (see page 25).

Winter barley two-row feed

Bolton

A high-yielding two-row feed variety. Bolton has a very high yield potential in the East region and on heavier soils. It has also performed well in the North region and on lighter soils, where it is high yielding. It is a relatively stiff-strawed variety. It is resistant to the common strains of barley mosaic viruses (BaMMV and BaYMV strain 1).

Bordeaux Padura x KWS Glacier

A high-yielding two-row feed variety. This relatively stiff-strawed variety has given high yields in the North region and across soil types, and has a very high yield potential in the East region. Bordeaux is susceptible to rhynchosporium, but it is resistant to the common strains of barley mosaic viruses (BaMMV and BaYMV strain 1).

California

A two-row feed variety recommended for the West region. It is resistant to the common strains of barley mosaic viruses (BaMMV and BaYMV strain 1).

Jordan (KWS Discovery x Matros) x KWS Discovery

A two-row feed variety with a high specific weight. It has performed well in the East region, where it is high yielding. This variety has moderate straw strength and requires careful management. Jordan has high resistance to brown rust and rhynchosporium and has given high yields in untreated UK trials. It is resistant to the common strains of barley mosaic viruses (BaMMV and BaYMV strain 1). Jordan is no longer under test in RL trials.

KWS Cassia (Eden x Carat) x Saffron

A two-row feed variety with a very high specific weight, recommended since 2010. Despite now yielding 8% lower than the top-yielding two-row feed varieties on the 2022/23 recommended list, this variety is still valued for producing consistently good grain quality. KWS Cassia has high resistance to brown rust. It is resistant to the common strains of barley mosaic viruses (BaMMV and BaYMV strain 1).

KWS Creswell KWS B105 x KWS Cassia

A two-row feed variety recommended for the North region. KWS Creswell is susceptible to mildew but is resistant to the common strains of barley mosaic viruses (BaMMV and BaYMV strain 1). KWS Creswell is no longer under test in RL trials.

KWS Gimlet (California x Matros) x Glacier

A two-row feed variety. This relatively tall variety has performed particularly well in the East region, where it is high yielding. It is a relatively late-maturing variety, with moderate straw strength that requires careful management. It has high resistance to mildew and is resistant to the common strains of barley mosaic viruses (BaMMV and BaYMV strain 1). KWS Gimlet is no longer under test in RL trials.

KWS Hawking (11-12 x LG California) x Tower

A two-row feed variety. This relatively stiff-strawed variety is high yielding on heavier soils. It is resistant to the common strains of barley mosaic viruses (BaMMV and BaYMV strain 1).

Winter barley 2022/23

Variety comments

Winter barley two-row feed

KWS Orwell

KWS Tower x Salsa

A relatively stiff-strawed, two-row feed variety. KWS Orwell has high resistance to brown rust, but it is very susceptible to mildew. It is resistant to the common strains of barley mosaic viruses (BaMMV and BaYMV strain 1).

KWS Tardis

11-12 x KWS Orwell

A very high-yielding, stiff-strawed, two-row feed variety with a high specific weight. It has performed well across all regions and soil type, and has a very high yield potential in the East region and on heavier soils. KWS Tardis has high resistance to rhynchosporium and is resistant to the common strains of barley mosaic viruses (BaMMV and BaYMV strain 1).

LG Dazzle **NEW**

Surge x LGB13-6643-C

This new addition is a high-yielding two-row feed variety recommended for the UK. It has given high treated yields in the East region and has a very high yield potential on heavier soils. LG Dazzle has high resistance to brown rust and rhynchosporium, but limited data suggest it is susceptible to net blotch. It is resistant to the common strains of barley mosaic viruses (BaMMV and BaYMV strain 1).

LG Flynn

A two-row feed variety with a very high specific weight. This relatively tall variety has given its best relative performance in the East region. It is a relatively late-maturing variety. It has high resistance to brown rust and is resistant to the common strains of barley mosaic viruses (BaMMV and BaYMV strain 1). LG Flynn is no longer under test in RL trials.

LG Mountain

A two-row feed variety with a high specific weight. This variety has given high treated yields in the East region and on heavier soils. It is relatively early maturing and has moderate straw strength that requires careful management. LG Mountain has high resistance to brown rust and is resistant to the common strains of barley mosaic viruses (BaMMV and BaYMV strain 1).

Lightning **NEW**

Kathmandu x Surge

This new addition is a high-yielding two-row feed variety recommended for the UK. It has performed well across all regions. Lightning has high resistance to mildew and brown rust, and has given high yields in untreated UK trials. This variety has moderate straw strength and requires careful management. It is resistant to the common strains of barley mosaic viruses (BaMMV and BaYMV strain 1).

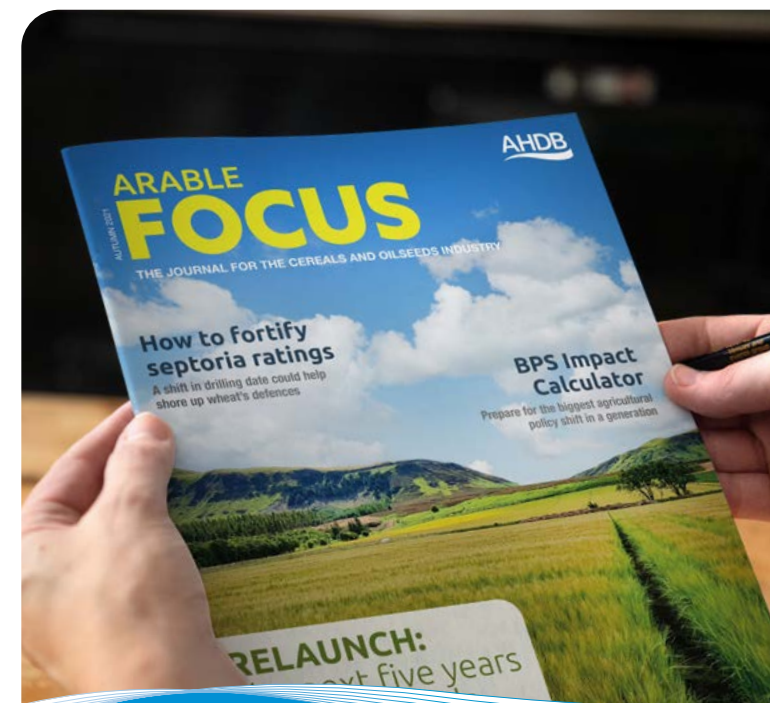
Surge

SJ053088 x Flight

A two-row feed variety with a high specific weight. This variety has given its best relative performance in the East region, and it is high yielding on heavier soils. Surge has high resistance to brown rust and rhynchosporium, and has given high yields in untreated UK trials. It is resistant to the common strains of barley mosaic viruses (BaMMV and BaYMV strain 1).

Valerie

A two-row feed variety with a very high specific weight. This variety has given its best relative performance in the East region. Valerie combines good grain quality characteristics with relatively stiff straw. It is a relatively early-maturing variety. It is resistant to the common strains of barley mosaic viruses (BaMMV and BaYMV strain 1).



ARABLE FOCUS

Aimed at producers of cereals and oilseeds, this arable magazine covers a variety of AHDB-funded activities, designed to help your business succeed in a rapidly changing world.

ahdb.org.uk/arable-focus

Winter barley 2022/23

Variety comments

Winter barley six-row feed

Bazooka

A six-row hybrid feed variety with a high specific weight. It has produced consistent treated yields across the UK and soil types. It is a tall variety with moderate straw strength and requires careful management. It has resistance to the common strains of barley mosaic viruses (BaMMV and BaYMV strain 1).

Belfry

A six-row hybrid feed variety. This tall variety has given very high treated yields in the West region and on heavier soils. It is relatively stiff strawed for a six-row hybrid variety. Belfry has high resistance to rhynchosporium and has given high yields in untreated UK trials. It is resistant to the common strains of barley mosaic viruses (BaMMV and BaYMV strain 1).

Belmont

A very high-yielding six-row hybrid feed variety. Belmont has given very high yields in the East and West regions and has a high yield potential in the North. It is a tall variety with moderate straw strength, and requires careful management. It has high resistance to rhynchosporium and it is resistant to the common strains of barley mosaic viruses (BaMMV and BaYMV strain 1). Belmont is susceptible to brown rust.

Funky

Gigga x Meridian

A relatively early-maturing six-row (non-hybrid) feed variety. This relatively short variety tends to give a good specific weight but gives higher screening levels. It is relatively stiff-strawed and gives its best relative performance in the West region. Funky has high resistance to brown rust and has given high yields in untreated UK trials. It is resistant to the common strains of barley mosaic viruses (BaMMV and BaYMV strain 1).

KWS Feeris

NEW

Amistar x KWS Kosmos

This new addition is a six-row (non-hybrid) feed variety, with a specific recommendation for the UK for its tolerance to *Barley yellow dwarf virus* (BYDV). Over the three years of testing, this variety has given low screening levels. It has a high yield potential in the West region (based on limited data). It is a relatively stiff-strawed variety. KWS Feeris is susceptible to mildew but is resistant to the common strains of barley mosaic viruses (BaMMV and BaYMV strain 1).

SY Canyon

NEW

This new addition is a very high-yielding six-row hybrid variety recommended for the UK. It has a very high specific weight, the highest for a six-row variety on the 2022/23 recommended list. This relatively early-maturing variety has performed well across all regions and soil types. SY Canyon has high resistance to mildew and has given the highest untreated yields in UK trials. It is a tall variety with relatively weak straw, and requires careful management. It is resistant to the common strains of barley mosaic viruses (BaMMV and BaYMV strain 1).

SY Kingsbarn

A very high-yielding six-row hybrid feed variety with a high specific weight. This variety has given very high yields throughout the UK and has a high yield potential on lighter soils. This tall variety has moderate straw strength but responds well to plant growth regulators. It has high resistance to mildew and is resistant to the common strains of barley mosaic viruses (BaMMV and BaYMV strain 1).

SY Kingston

A very high-yielding six-row hybrid feed variety with a high specific weight. This relatively early-maturing variety has given very high treated yields in both the West and North regions. It has also performed well in the East and on lighter soils, where it is high yielding. It is a tall variety with relatively weak straw and requires careful management. SY Kingston has no major weaknesses in disease resistance and has given high yields in untreated UK trials. It has high resistance to mildew and is resistant to the common strains of barley mosaic viruses (BaMMV and BaYMV strain 1).

SY Thunderbolt

A very high-yielding six-row feed hybrid variety with a high specific weight. This tall and relatively early-maturing variety has given very high treated yields throughout the UK and on heavier soils. It has relatively weak straw and requires careful management. SY Thunderbolt has no major weaknesses in disease resistance, and has given high yields in untreated UK trials. It has high resistance to mildew and is resistant to the common strains of barley mosaic viruses (BaMMV and BaYMV strain 1).

Spring barley 2022

Market options, yield and grain quality



	Jensen	Skyway	Firefoxx	SY Bronte	Spinner	SY Tungsten	LG Diablo	Laureate	SY Splendor	RGT Planet	KWS Sassy	Fairing	Fairway	Malvern	Cadiz	Prospect	CB Score ~	Described variety	Average LSD (5%)
End-use group	Malting varieties												Feed varieties						
Scope of recommendation	UK	UK	UK	UK	UK	UK	UK	UK	UK	UK	UK	Sp	UK	W	E&W	UK	UK Null-Lox		
Variety status	NEW			NEW	NEW		C	C		C			*	NEW			NEW		
Fungicide-treated grain yield (% treated control)																			
United Kingdom (7.4 t/ha)	105	105	103	103	103	103	102	102	102	99	97	93	104	103	103	103	101		2.2
East region (7.3 t/ha)	106	106	103	104	103	101	103	102	102	99	95	92	104	103	105	105	100		3.3
West region (7.1 t/ha)	[106]	106	103	[105]	[106]	103	101	103	102	99	98	94	103	[106]	106	102	[100]		3.5
North region (7.8 t/ha)	104	103	104	102	101	104	102	102	102	99	98	92	104	102	100	101	101		2.7
Main market options																			
MBC malting approval for brewing use	T	P	-	T	T	P	F	F	P	F	N	-	-	-	-	-	-		-
MBC malting approval for malt distilling use	-	-	P	-	-	P	F	F	-	N	F	-	-	-	-	-	-		-
MBC malting approval for grain distilling use	-	-	-	-	-	-	-	-	-	N	-	F	-	-	-	-	-		-
Grain quality																			
Specific weight (kg/hl)	65.9	68.7	66.4	66.8	67.5	67.7	67.1	66.6	68.1	68.0	68.6	68.1	65.6	66.4	67.6	67.9	67.1		0.6
Screenings (% through 2.25 mm)	1.4	1.0	1.4	1.3	1.2	1.7	1.4	1.3	1.4	1.2	1.0	1.0	1.2	1.3	0.8	1.8	1.3		0.3
Screenings (% through 2.5 mm)	3.4	2.6	3.7	3.0	2.9	4.5	3.3	3.1	3.6	3.1	2.4	2.6	3.1	3.8	1.8	4.2	3.3		0.7
Nitrogen content (%)	1.50	1.57	1.54	1.54	1.54	1.50	1.52	1.54	1.55	1.56	-	-	-	[1.55]	1.60	1.59	[1.57]		0.09
Status in RL system																			
Year first listed	22	21	20	22	22	20	18	16	20	15	16	16	20	22	21	20	22		

Varieties no longer listed: Cosmopolitan, Iconic, Propino and Sienna.

Null-Lox spring barley varieties are described. Data are provided for information only and do not constitute a recommendation.

Growers are strongly advised to check with their buyer before committing to a malting variety without full MBC approval.

Comparisons of variety performance across regions are not valid. See page 3 for information on regional yields.

All yields on this table are taken from treated trials receiving a full fungicide programme.

UK = Recommended for the UK	C = Yield control. For this table, Cosmopolitan and Propino were also control varieties but are no longer listed	~ = Variety lacking a gene for lipogenase production (a Null-Lox variety)	F = Full MBC approval in this segment	LSD = Least significant difference
E = Recommended for the East region		MBC = Malting Barley Committee	N = Not approved by MBC in this segment	Average LSD (5%): Varieties that are more than one LSD apart are significantly different at the 95% confidence level
W = Recommended for the West region	* = Variety no longer under test in RL trials	[] = Limited data	P = Provisional MBC approval in this segment	
Sp = Specific recommendation. Fairing is suitable for the production of malt for grain distilling			T = Under test for MBC approval in this segment	

Spring barley 2022

Yield, agronomy and disease resistance



	Jensen	Skyway	Firefoxx	SY Bronte	Spinner	SY Tungsten	LG Diablo	Laureate	SY Splendor	RGT Planet	KWS Sassy	Fairing	Fairway	Malvern	Cadiz	Prospect	CB Score ~	Average LSD (5%)
End-use group	Malting varieties												Feed varieties					
Scope of recommendation	UK	UK	UK	UK	UK	UK	UK	UK	UK	UK	UK	Sp	UK	W	E&W	UK	UK Null-Lox	
Variety status	NEW			NEW	NEW		C	C		C			*	NEW			NEW	
Fungicide-treated grain yield (% treated control)																		
United Kingdom (7.4 t/ha)	105	105	103	103	103	103	102	102	102	99	97	93	104	103	103	103	101	2.2
East region (7.3 t/ha)	106	106	103	104	103	101	103	102	102	99	95	92	104	103	105	105	100	3.3
West region (7.1 t/ha)	[106]	106	103	[105]	[106]	103	101	103	102	99	98	94	103	[106]	106	102	[100]	3.5
North region (7.8 t/ha)	104	103	104	102	101	104	102	102	102	99	98	92	104	102	100	101	101	2.7
Untreated grain yield (% treated control)																		
United Kingdom (7.4 t/ha)	96	94	92	92	96	90	92	94	90	90	89	84	91	95	92	93	92	2.9
Agonomic features																		
Resistance to lodging without PGR (1–9) – see page 4	6	7	7	7	7	7	7	6	7	7	6	8	7	8	7	7	7	0.8
Straw height without PGR (cm)	66	74	69	73	70	71	71	69	72	72	77	70	70	71	74	69	70	1.5
Ripening (+/- RGT Planet, -ve = earlier)	+1	0	0	+1	+1	+1	+2	+1	+1	0	+1	-2	-1	0	+1	+1	+1	0.9
Resistance to brackling (1–9)	8	8	8	8	8	8	8	8	9	8	6	8	8	8	8	9	8	0.9
Disease resistance																		
Mildew (1–9)	8	9	9	9	9	8	9	9	9	8	9	8	9	9	9	9	9	0.5
Brown rust (1–9)	5	4	4	4	5	4	5	5	3	5	5	4	3	5	5	4	5	1.2
Rhynchosporium (1–9)	[6]	[4]	5	[5]	[4]	3	5	5	[4]	5	6	8	[3]	[1]	[2]	[6]	[5]	2.8

On the 1–9 scales, high figures indicate that a variety shows the character to a high degree (e.g. high resistance). Comparisons of variety performance across regions are not valid. See page 3 for information on regional yields.

UK = Recommended for the UK	Sp = Specific recommendation. Fairing is suitable for the production of malt for grain distilling	* = Variety no longer under test in RL trials	PGR = Plant growth regulator	LSD = Least significant difference
E = Recommended for the East region	C = Yield control. For this table, Cosmopolitan and Propino were also control varieties but are no longer listed	~ = Variety lacking a gene for lipogenase production (a Null-Lox variety)	[] = Limited data	Average LSD (5%): Varieties that are more than one LSD apart are significantly different at the 95% confidence level
W = Recommended for the West region				

Spring barley 2022

Supplementary data



	Jensen	Skyway	Firefoxx	SY Bronte	Spinner	SY Tungsten	LG Diablo	Laureate	SY Splendor	RGT Planet	KWS Sassy	Fairing	Fairway	Malvern	Cadiz	Prospect	Described variety	Average LSD (5%)
End-use group	Malting varieties												Feed varieties					
Scope of recommendation	UK	UK	UK	UK	UK	UK	UK	UK	UK	UK	UK	Sp	UK	W	E&W	UK	UK Null-Lox	
Variety status	NEW			NEW	NEW		C	C		C			*	NEW			NEW	
Breeder/UK contact																		
Breeder	Sej	NS	Ack	SyP	Sec	SyP	LimEur	SyP	SyP	RAGT	KWS	SyP	NS	NS	NS	Sej	Cal	
UK contact	Lim	Agr	ElsAck	Syn	Agr	Syn	Lim	Syn	Syn	RAGT	KWS	Syn	Sen	AgV	Sen	Sen	ADM	
Annual treated yield (% control)																		
2017 (7.4 t/ha)	-	-	103	-	-	102	103	100	103	100	97	92	103	-	-	103	-	-
2018 (6.8 t/ha)	-	105	104	-	-	104	102	102	103	98	97	94	104	-	104	102	-	-
2019 (7.8 t/ha)	105	105	103	104	104	102	102	102	104	100	98	93	104	103	104	104	100	-
2020 (7.5 t/ha)	104	105	102	103	102	103	102	102	102	99	97	91	103	103	102	102	100	-
2021 (7.6 t/ha)	107	104	106	103	104	103	102	104	99	97	96	93	106	104	104	103	101	-
Malting quality																		
Hot water extract (l deg/kg)	314.0	314.1	313.4	314.8	313.2	314.4	314.1	313.8	313.6	313.3	-	[306.3]	[312.5]	308.0	312.5	312.3	312.1	2.3
Status in RL system																		
Year first listed	22	21	20	22	22	20	18	16	20	15	16	16	20	22	21	20	22	
RL status	P1	P2	-	P1	P1	-	-	-	-	-	-	-	*	P1	P2	-	P1	

All yields on this table are taken from treated trials receiving a full fungicide programme.
For Breeder/UK contact information, see page 59.

UK = Recommended for the UK
E = Recommended for the East region
W = Recommended for the West region
Sp = Specific recommendation. Fairing is suitable for the production of malt for grain distilling

C = Yield control. For this table, Cosmopolitan and Propino were also control varieties but are no longer listed
* = Variety no longer under test in RL trials

~ = Variety lacking a gene for lipogenase production (a Null-Lox variety)
[] = Limited data
P1 = First year of recommendation
P2 = Second year of recommendation

LSD = Least significant difference
Average LSD (5%): Varieties that are more than one LSD apart are significantly different at the 95% confidence level

Spring barley 2022

Variety comments

Malting varieties

Fairing

Titouan x 144-02-4

Quality: Fully approved by MBC for grain distilling use. Fairing has a specific recommendation for its suitability for the production of malt for grain distilling.

Agronomy: This variety is early maturing, with stiff straw and high resistance to brackling. It has high resistance to mildew and rhynchosporium, but it is susceptible to brown rust.

MAGB comment: Fully approved by MBC for grain distilling use in 2018. Growers are advised to speak to their merchants about end markets.

Firefox

Chanson x Acorn

Quality: A high-yielding variety with potential for malt distilling use. It tends to give a low specific weight.

Agronomy: This variety has given high treated yields throughout the UK. It is a relatively stiff, short-strawed variety, with high resistance to brackling. Firefox has very high resistance to mildew, but it is susceptible to brown rust.

MAGB comment: Under test by MBC for malt distilling, with completion expected spring 2022. Growers are advised to speak to merchants before committing to this or other varieties in this position.

Jensen

NEW

RGT Planet x Laureate

Quality: This new addition is a very high-yielding variety recommended for the UK, with potential for brewing use. It tends to give a low specific weight.

Agronomy: This variety has given very high treated yields particularly in the East region and, based on limited data, in the West region. This short variety has high resistance to brackling. Jensen has high resistance to mildew and has given high yields in untreated UK trials.

MAGB comment: New variety currently under assessment by MBC for brewing. Growers are advised to speak to merchants before committing to this or other varieties in this position.

KWS Sassy

Concerto x Publican

Quality: Fully approved by MBC for malt distilling use.

Agronomy: This variety has given its best relative performance in the North and West regions. It has moderate resistance to both lodging and brackling. KWS Sassy has very high resistance to mildew.

MAGB comment: Fully approved for malt distilling use since 2017. KWS Sassy continues to hold its share of the UK spring barley market at around 9%. Growers are advised to speak to their merchants about end markets.

Laureate

Sanette x Concerto

Quality: Fully approved by MBC for both brewing and malt distilling use. It tends to give a lower specific weight.

Agronomy: This variety has given high treated yields throughout the UK. It is a short-strawed variety with high resistance to brackling. It has very high resistance to mildew and has given high yields in untreated UK trials.

MAGB comment: Fully approved by the MBC for brewing and malt distilling since 2017. Laureate continues to dominate the UK spring barley market, with 55-60% market share.

LG Diablo

Quality: Fully approved by MBC for both brewing and malt distilling use.

Agronomy: This variety has given high treated yields in both the North and East regions. It is a late-maturing variety, with relatively stiff straw and high resistance to brackling. LG Diablo has very high resistance to mildew.

MAGB comment: Fully approved by MBC for malt distilling use in 2019, and for brewing use in 2020. LG Diablo continues to grow its share of the UK spring barley market.

Mildew resistance

The *mlo* resistance gene in barley confers almost complete resistance to barley powdery mildew. All spring barley varieties on the current recommended list carry this gene and can, therefore, be assumed to be resistant to powdery mildew.

UK spring malting barley market share is given as % of Malting Association of Great Britain (MAGB) member purchases (see page 25).

Spring barley 2022

Variety comments

Malting varieties

RGT Planet

Tamtam x Concerto

Quality: Fully approved by MBC for brewing.

Agronomy: It has relatively stiff straw with high resistance to brackling. RGT Planet has high resistance to mildew.

MAGB comment: Fully approved by MBC for brewing since 2016. RGT Planet continues to hold its share of the spring barley market at around 15%.

Skyway

RGT Planet x NOS 2105-11

Quality: A very high-yielding variety, with potential for brewing use.

Agronomy: This variety has given very high treated yields, particularly in the West and East regions. It is a relatively stiff-strawed variety with high resistance to brackling. Skyway has very high resistance to mildew and has given high yields in untreated UK trials. It is susceptible to brown rust, and limited data suggest it is susceptible to rhynchosporium.

MAGB comment: Under test by MBC for brewing, with completion expected spring 2022. Growers are advised to speak to merchants before committing to this or other varieties in this position.

Spinner

NEW

Laureate x Flyer

Quality: This new addition is a high-yielding variety recommended for the UK, with potential for brewing use.

Agronomy: This variety has given a high treated yield in the East region, and limited data suggest it has a very high yield potential in the West. It is a relatively stiff-strawed variety with high resistance to brackling. Spinner has very high resistance to mildew and has given high yields in untreated UK trials. Limited data suggest it is susceptible to rhynchosporium.

MAGB comment: New variety currently under assessment by MBC for brewing. Growers are advised to speak to merchants before committing to this or other varieties in this position.

SY Bronte

NEW

(SY Stanza x Ovation) x Laureate

Quality: This new addition is a high-yielding variety recommended for the UK, with potential for brewing use.

Agronomy: This variety has given high treated yields in the East and North regions, and limited data suggest it has a very high yield potential in the West. It is a relatively stiff-strawed variety with high resistance to brackling. SY Bronte has very high resistance to mildew, but it is susceptible to brown rust.

MAGB comment: New variety currently under assessment by MBC for brewing. Growers are advised to speak to merchants before committing to this or other varieties in this position.

SY Splendor

Octavia x Dioptric

Quality: A high-yielding variety with potential for brewing use.

Agronomy: This variety has given high treated yields throughout the UK. SY Splendor has relatively stiff straw with high resistance to brackling. It has very high resistance to mildew, but it is very susceptible to brown rust. Limited data suggest it is susceptible to rhynchosporium.

MAGB comment: Under test by MBC for brewing, with completion expected spring 2022. Growers are advised to speak to merchants before committing to this or other varieties in this position.

SY Tungsten

RGT Planet x Ovation

Quality: A high-yielding variety with potential for both brewing and malt distilling use.

Agronomy: This variety has given high treated yields in both the West and North regions. It has relatively stiff straw with high resistance to brackling. It has high resistance to mildew, but it is susceptible to brown rust. It is very susceptible to rhynchosporium.

MAGB comment: Under test by MBC for brewing and malt distilling, with completion expected spring 2022. Growers are advised to speak to merchants before committing to this or other varieties in this position.

Spring barley 2022

Variety comments

Feed varieties

Cadiz **Cresendo x NOS2104-11**

A high-yielding feed variety recommended for the East and West regions. It has given very high yields in both the East and West regions. It is a relatively stiff-strawed variety with high resistance to brackling. Cadiz has very high resistance to mildew. Limited data suggest it is very susceptible to rhynchosporium.

Fairway **KWS Irina x Odyssey**

A high-yielding feed variety, with a low specific weight. This relatively early-maturing variety has given high treated yields throughout the UK. It has relatively stiff straw with high resistance to brackling. Fairway has very high resistance to mildew, but it is very susceptible to brown rust. Limited data suggest it is very susceptible to rhynchosporium. Fairway is no longer under test in RL trials.

Malvern **NEW** **Dragoon x NOS 2113-11**

This new addition is a high-yielding feed variety recommended for the West region. It tends to give a lower specific weight. It has a very high yield potential in the West region (based on limited data). It is a stiff-strawed variety with high resistance to brackling. Malvern has very high resistance to mildew and has given high yields in untreated UK trials. Limited data suggest it is very susceptible to rhynchosporium.

Prospect

KWS Irina x Overture

A high-yielding feed variety. This variety has given high treated yields in the West region and has given its best relative performance in the East, where it is very high yielding. This relatively stiff, short-strawed variety has high resistance to brackling. Prospect has very high resistance to mildew, but it is susceptible to brown rust.

Described varieties

CB Score **NEW** **(CB China x RGT Planet) x (Lauxana x Laureate)**

Quality: This new addition is a Null-Lox 4G variety, lacking the genes for production of lipoxigenase and dimethyl sulphate both of which can affect beer quality. Described for the UK.

Agronomy: This variety has given its best relative performance in the North region. It is a relatively stiff-strawed variety with high resistance to brackling. CB Score has very high resistance to mildew.



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Candidate varieties – barley trials harvest 2022

Winter barley



Selected as potential malting varieties			
Buccaneer	SJ172271	3321	Saaten Union UK
Selected as potential feed varieties			
SY Nephin	SY218651	3299	Syngenta UK Ltd
LG Caravelle	LGBU18-6531	3305	Limagrains UK
LG Campus	LGBU16-6042-B	3306	Limagrains UK
Bolivia	NOS915.045-51	3327	Agrii

Candidate varieties will be considered for the 2023/24 AHDB Recommended List.

After a candidate variety achieves National Listing, the data is published online (ahdb.org.uk/rl) and on the RL app (ahdb.org.uk/rlapp).

Spring barley



Selected as potential malting varieties			
Sun King	SC53421W	3340	Agrii
Diviner	SC58707W	3342	Agrii
RGT Starlight	RP19013	3345	RAGT Seeds
LG Flamenco	LGBN16509-4	3352	Limagrains UK
Florence	BR13773AZ3	3353	Senova
KWS Curtis	KWS192073	3356	KWS UK
Maronis	KW419531	3360	KWS UK
NOS114.171-07	Trent	3363	Agrovista UK Ltd
LG Mulgrave	LGBU18-1560-A	3371	Limagrains UK
LG Loxstar	LGBU18-1301-A	3372	Limagrains UK
SY Signet	SY419542	3376	Syngenta UK Ltd
SY Tennyson	SY419544	3377	Syngenta UK Ltd
SY Jewel	SY419554	3378	Syngenta UK Ltd

Selected as potential feed varieties			
Hurler	SC57357W	3341	Agrii

Candidate varieties will be considered for the 2023 AHDB Recommended List.

Winter oats 2022/23



	RGT Southwark	Dalguise	RGT Lineout	Mascani	Gerald	Peloton	Fusion #	Grafton	Average LSD (5%)
Variety type	Husked varieties					Naked varieties			
Scope of recommendation	UK	UK	UK	UK	UK	UK	UK	UK	
Variety status	C	C	*	C					
UK yield (% treated control)									
Fungicide-treated (8.8 t/ha)	104	100	100	97	95	77	73	72	3.2
Grain quality									
Kernel content (%)	72.9	73.0	73.1	76.4	70.5	-	-	-	1.3
Specific weight (kg/hl)	53.6	54.2	52.2	53.3	52.4	61.6	60.2	62.9	1.1
Screenings (% through 2.0 mm)	5.5	3.5	6.2	1.7	4.7	-	-	-	1.4
Screenings (% through 1.8 mm)	-	-	-	-	-	19.0	27.7	11.1	4.0
Agronomic features									
Resistance to lodging without PGR (1–9) – see page 4	5	4	6	6	6	7	9	7	1.3
Straw length without PGR (cm)	125	124	118	122	121	118	80	124	4.0
Ripening (days +/- Mascani, -ve = earlier)	-1	-1	-1	0	+1	+1	+3	-1	1.1
Disease resistance									
Mildew (1–9)	4	4	3	6	4	7	4	4	1.0
Crown rust (1–9)	8	4	5	5	4	6	3	4	0.8
Treated yields with and without PGR (% treated control)									
With PGR (8.8 t/ha)	103	100	100	96	96	76	72	72	3.3
Without PGR (8.7 t/ha)	104	100	99	97	96	78	75	73	4.7
Annual treated yield (% control)									
2017 (8.0 t/ha)	102	98	100	100	93	78	69	69	5.6
2018 (9.3 t/ha)	101	102	100	97	99	76	76	74	3.7
2019 (9.3 t/ha)	105	99	100	96	98	78	76	77	6.8
2020 (8.3 t/ha)	105	101	99	95	94	75	73	70	5.1
2021 (9.1 t/ha)	105	100	101	95	93	75	70	69	5.2
Breeder/UK contact									
Breeder	R2n	Sen	R2n	IBERS	IBERS	IBERS	IBERS	IBERS	
UK contact	RAGT	Sen	RAGT	Sen	Sen	Sen	Sen	Sen	
Status in RL system									
Year first listed	18	03	16	04	93	17	10	00	
RL status	-	-	*	-	-	-	-	-	

On the 1–9 scales, high figures indicate that a variety shows the character to a high degree (e.g. disease resistance).
For Breeder/UK contact information, see page 59.

C	= Yield control (for current table)	PGR	= Plant growth regulator	LSD	= Least significant difference
*	= Variety no longer under test in RL trials	[]	= Limited data	Average LSD (5%): Varieties that are more than one LSD apart are significantly different at the 95% confidence level	
#	= Dwarf variety				

Winter oats 2022/23

Variety comments

Husked varieties

Dalguise Mirabel x Solva

A husked variety with a high specific weight. Dalguise is a tall variety with weak straw strength. It is an early-maturing variety, and it is susceptible to both mildew and crown rust.

Gerald Bulwark x 76/17Cn26

A husked variety with a low kernel content and moderate straw strength. It is susceptible to both mildew and crown rust.

Mascani F5 CW0112/15A/05 x Stampede

A husked variety with a very high kernel content and moderate straw strength. Mascani remains by far the most popular variety with oat millers and growers, valued for its grain quality characteristics. It is less susceptible to mildew than most varieties.

RGT Lineout

A relatively early-maturing husked variety, with moderate straw strength. It is very susceptible to mildew. RGT Lineout is no longer under test in RL trials.

RGT Southwark (932536 x 24062) x 24082

A very high-yielding husked variety, with tall straw. It is relatively early maturing. RGT Southwark has very high resistance to the common strains of crown rust, but it is susceptible to mildew.

Naked varieties

Fusion

A huskless (naked), late-maturing oat variety with short, stiff straw. Fusion is susceptible to mildew and very susceptible to crown rust.

Grafton (79.77CN5 x 81-110CN9) x Pendragon

A huskless (naked) variety, with tall straw and moderate straw strength. Grafton is an early-maturing variety. It is susceptible to both crown rust and mildew.

Peloton

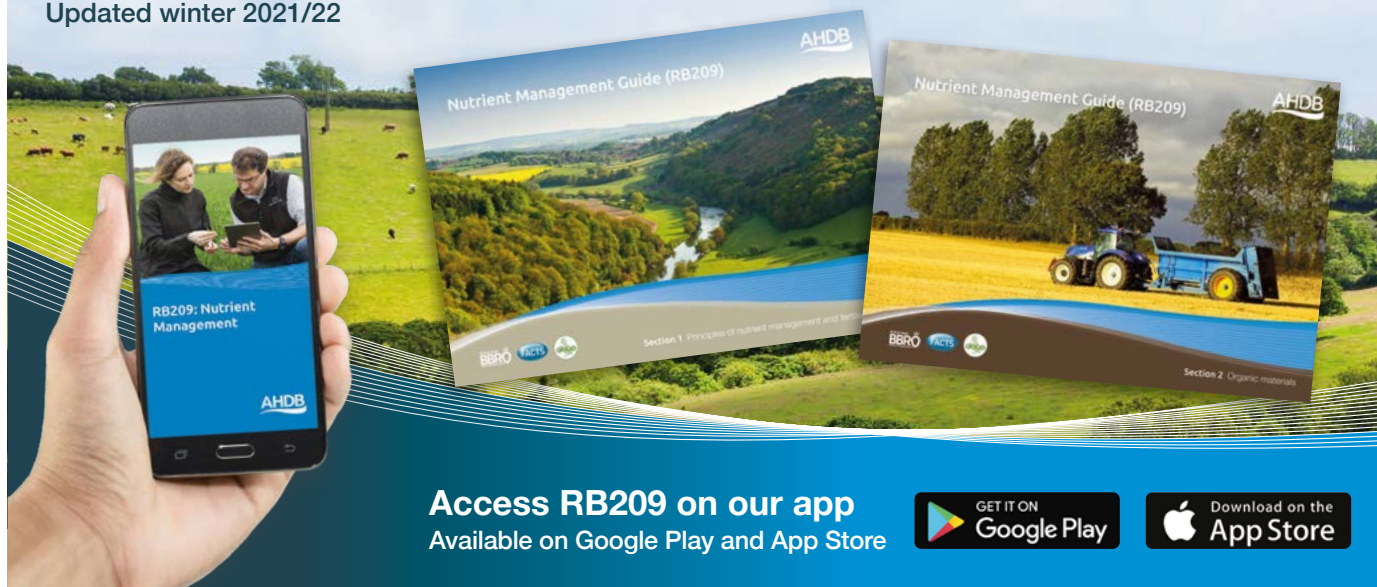
96-41Cn3 x 98-97Cn8

A huskless (naked) oat variety with a higher yield potential than older varieties. It has moderate straw strength. Peloton has no major weaknesses in disease resistance and has high resistance to mildew.

The AHDB Nutrient Management Guide (RB209)

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Updated winter 2021/22



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Spring oats 2022



	Described varieties												Average LSD (5%)
	Delfin	Merlin	WPB Isabel	Yukon	Canyon	Aspen	Conway	Lion	WPB Elyann	Oliver	Lennon	Kamil	
Variety type	Husked varieties									Naked varieties			
Scope of recommendation	UK	UK	UK	UK	UK	UK	UK	UK	UK	UK	UK	UK	
Variety status		NEW			C	C		NEW	C		NEW		
UK yield (% treated control)													
Fungicide-treated (6.8 t/ha)	106	105	105	104	103	100	99	99	98	75	71	68	5.5
Untreated (% of treated control)	102	99	90	100	97	87	90	85	88	64	64	61	6.3
Grain quality													
Kernel content (%)	72.3	72.6	74.4	72.6	72.7	73.1	73.0	76.2	76.1	-	-	-	1.7
Specific weight (kg/hl)	50.6	51.1	53.6	49.6	51.3	51.2	50.0	52.1	50.4	61.6	[61.5]	63.5	1.2
Screenings (% through 2.0 mm)	2.7	1.6	1.9	2.9	2.4	2.1	1.9	1.9	2.6	-	-	-	1.0
Screenings (% through 1.8 mm)	-	-	-	-	-	-	-	-	-	7.5	[11.3]	4.8	2.7
Agronomic features													
Resistance to lodging without PGR (1–9) – see page 4	7	[7]	7	7	7	6	7	[7]	6	7	[7]	7	0.6
Straw length without PGR (cm)	111	[105]	108	105	109	98	104	[104]	99	103	[97]	106	2.5
Ripening (days +/- WPB Isabel, -ve = earlier)	0	-1	0	0	-1	0	-1	-1	-1	0	0	0	1.2
Disease resistance													
Mildew (1–9)	8	8	5	8	8	4	5	3	4	3	5	4	0.7
Crown rust (1–9)	4	[3]	5	5	4	5	4	[5]	5	4	[5]	4	0.9
Annual treated yield (% control)													
2017 (7.2 t/ha)	[112]	-	[111]	[106]	[103]	[101]	[98]	-	[96]	[77]	-	[62]	6.7
2018 (6.0 t/ha)	[106]	[104]	[101]	[100]	[96]	[102]	[96]	[101]	[102]	[70]	[76]	[65]	8.3
2019 (7.1 t/ha)	[104]	[110]	[105]	[105]	[105]	[100]	[98]	[101]	[95]	[78]	[67]	[69]	11.3
2020 (6.1 t/ha)	[106]	[101]	[103]	[105]	[104]	[96]	[102]	[95]	[100]	[76]	[76]	[65]	8.1
2021 (7.7 t/ha)	[105]	[105]	[104]	[102]	[104]	[99]	[102]	[99]	[97]	[74]	[67]	[75]	4.5
Breeder/UK contact													
Breeder	Nord	Selg	Wier	Nord	Nord	Bau	IBERS	Nord	Wier	Selg	IBERS	Selg	
UK contact	SU	Cope	KWS	SU	SU	Sen	Sen	SU	KWS	Cope	Sen	Cope	
Status in RL system													
Year first listed	18	22	20	17	11	15	14	22	17	18	22	18	
RL status	-	P1	-	-	-	-	-	P1	-	-	P1	-	

Varieties no longer listed: Elison, Firth and Madison.

Naked spring oat varieties are described. Data are provided for information only and do not constitute a recommendation.

On the 1–9 scales, high figures indicate that a variety shows the character to a high degree (e.g. high resistance).

For Breeder/UK contact information, see page 59.

C = Yield control (for current table)

[] = Limited data

LSD = Least significant difference

* = Variety no longer under test in RL trials

P1 = First year of recommendation

Average LSD (5%): Varieties that are more than one LSD apart are significantly different at the 95% confidence level

PGR = Plant growth regulator

Spring oats 2022

Variety comments

Husked varieties

Aspen

A short, husked variety. It is susceptible to mildew.

Canyon

A high-yielding and early-maturing husked variety. Canyon has high resistance to mildew and has given high yields in untreated UK trials. It is susceptible to crown rust.

Conway

An early-maturing husked variety. Conway is susceptible to crown rust.

Delfin 07/107 x Canyon

A very high-yielding husked variety. Delfin has high resistance to mildew and has given high yields in untreated UK trials. It is susceptible to crown rust.

Merlin NEW Neklan x Canyon

This new addition is a very high-yielding husked variety recommended for the UK. It is an early-maturing variety. Merlin has high resistance to mildew and has given high yields in untreated UK trials. Limited data suggest it is very susceptible to crown rust.

Lion NEW Poseidon x Max

This new addition is a husked variety recommended for the UK. It is an early-maturing variety, with a very high kernel content. It is very susceptible to mildew.

WPB Elyann (Ivory x LW 00W035-01) x LW 97W020-01

A short and early-maturing variety. WPB Elyann has a very high kernel content. It is susceptible to mildew.

WPB Isabel LW 03W038-06 x Husky

A very high-yielding husked variety with a high kernel content.

Yukon

A high-yielding husked variety. Yukon has high resistance to mildew and has given high yields in untreated UK trials.

Described naked varieties

Kamil

A huskless (naked) oat variety with a high specific weight. It is susceptible to mildew and crown rust.

Lennon NEW MF9018-11801 x 13174Cn3/6n

This addition is an established huskless (naked) oat variety described for the UK. Lennon is a short variety with a high specific weight (based on limited data).

Oliver

A huskless (naked) oat variety with a high specific weight. It is susceptible to crown rust and very susceptible to mildew.



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ahdb.org.uk/cpd

BASIS

NRoSO

Candidate varieties – oat trials harvest 2022

Winter oats



Husked varieties			
	Previous/proposed name	Variety ID	UK contact
Cromwell	10-108ACN15/2	423	Senova
RGT Silver	RVR10017A	426	RAGT Seeds

Candidate varieties will be considered for the 2023/24 AHDB Recommended List.

After a candidate variety achieves National Listing, the data is published online (ahdb.org.uk/rl) and on the RL app (ahdb.org.uk/rlapp).

Spring oats



Husked varieties			
	Previous/proposed name	Variety ID	UK contact
RGT Vaughan	RVT16498	445	RAGT Seeds

Candidate varieties will be considered for the 2023 AHDB Recommended List.

Winter oilseed rape 2022/23

Yield, agronomy and disease resistance




	Recommended for the UK (both East/West and North regions)														Recommended for use on clubroot-infected land only				Average LSD (5%)
	PT303	LG Auckland	Ambassador	LG Aviron	Aurelia	Artemis	Acacia	Annika	Aardvark	Aspire	Matrix CL &	LG Constructor CL ^a	V 316 OL ~	DK Imprint CL &	Crome #	Croozar #	Crossfit #	Crocodile #	
Variety type	Hybrid	Hybrid	Hybrid	Hybrid	Hybrid	Hybrid	Conv	Conv	Conv	Conv	Hybrid	Hybrid	Hybrid	Hybrid	Hybrid	Hybrid	Hybrid	Hybrid	
Scope of recommendation	UK	UK	UK	UK	UK	UK	UK	UK	UK	UK	UK Sp	UK Sp	UK Sp	UK Sp	UK Sp	E/W Sp	E/W Sp	E/W Sp	
Variety status	NEW	NEW				*		NEW	*	C	NEW	NEW	*			*	NEW		
Gross output, yield adjusted for oil content (% treated control)																			
United Kingdom (5.1 t/ha)	107	107	106	105	105	104	104	103	100	100	99	96	96	92	99	96	98	100	4.9
East/West region (5.0 t/ha)	108	108	106	105	105	104	104	103	100	100	100	97	96	92	99	96	99	101	5.5
North region (5.8 t/ha)	104	[104]	104	104	105	102	104	[102]	102	100	96	[94]	97	91	101	97	[92]	96	5.5
Seed yield (% treated control)																			
United Kingdom (4.7 t/ha)	106	107	106	107	105	104	104	103	101	100	99	98	96	94	99	98	97	101	4.5
East/West region (4.6 t/ha)	107	108	106	107	105	104	104	103	101	100	99	98	96	95	98	98	98	102	5.0
North region (5.3 t/ha)	104	[104]	105	106	106	102	104	[103]	101	100	96	[95]	97	94	100	98	[91]	97	5.3
Untreated gross output, yield adjusted for oil content (% untreated control) [□]																			
United Kingdom (5.1 t/ha)	-	-	107	110	106	103	104	-	104	101	-	-	98	94	100	93	-	98	8.3
Untreated seed yield (% untreated control) [□]																			
United Kingdom (4.8 t/ha)	-	-	107	111	107	103	104	-	104	101	-	-	98	96	98	94	-	99	7.9
Agronomic features																			
Resistance to lodging (1–9)	[8]	[8]	8	[7]	8	8	8	[8]	8	8	[8]	[8]	8	[8]	8	8	[8]	8	0.3
Stem stiffness (1–9)	8	7	8	7	8	8	9	8	8	9	8	8	8	7	8	8	7	7	0.7
Shortness of stem (1–9)	5	6	6	6	6	6	7	6	6	7	5	6	6	6	6	7	6	6	0.3
Plant height (cm)	164	155	154	156	150	157	145	149	149	140	159	148	152	158	148	146	148	148	3.5
Earliness of flowering (1–9)	5	7	7	8	7	6	6	6	7	7	6	6	6	5	7	8	7	6	0.4
Earliness of maturity (1–9)	5	6	6	6	5	6	5	4	5	4	6	6	5	5	5	6	6	6	0.4
Pod shatter resistance	-	R	R	R	R	R	-	-	-	-	R	R	-	R	-	-	R	-	
Disease resistance																			
Light leaf spot (1–9)	7	7	7	8	7	6	6	7	7	7	6	6	6	6	6	6	5	6	0.6
Stem canker (1–9)	7	7	7	7	7	7	5	6	6	5	8	6	5	8	4	8	9	4	0.9
TuYV	R	R	R	R	R	R	-	R	-	R	R	R	-	-	-	-	R	-	

Varieties no longer listed in the UK (both East/West and North regions): Ballad, DK Expansion and Temptation. On the 1–9 scales, high figures indicate that a variety shows the character to a high degree (e.g. high resistance). The target (spring) plant population is 40 plants/m² for RL trials. Maximum seed rate is 70 seeds/m² and may be lower if conditions permit. Glucosinolate contents are taken from the National List trials data. Yield figures for regions where the variety is not recommended are provided for information only and are indicated in *italics*.

UK	= Recommended for both the East/West and North regions	&	= Herbicide-tolerant variety. This variety has a specific recommendation for tolerance to specific imidazolinone herbicides (a Clearfield® variety)	□	= Untreated trials are treated for sclerotinia at flowering	LSD	= Least significant difference
E/W	= Recommended for the East/West region	~	= HOLL (High Oleic, Low Linolenic) variety	TuYV	= Turnip yellows virus	Average LSD (5%):	Varieties that are more than one LSD apart are significantly different at the 95% confidence level
Sp	= Specific recommendation	#	= Specific recommendation for growing on land infected with common strains of clubroot. Believed to be resistant to common strains of clubroot, but this has not been verified in Recommended List tests. These varieties should only be used in line with AHDB clubroot management guidelines, to reduce the risk of resistance breakdown	[]	= Limited data		
Conv	= Conventional open-pollinated variety			R	= Believed to be resistant to the trait (TuYV or pod shatter), but this has not been verified in Recommended List tests		
C	= Yield control. For this table, Campus, DK Expansion, Elgar and Temptation were also control varieties but are no longer listed						
*	= Variety no longer under test in RL trials in region						

Winter oilseed rape 2022/23

Yield, agronomy and disease resistance

Recommended for the East/West region only												Recommended for the North region only		Described varieties			Average LSD (5%)
	LG Adonis	Dart	Tennyson	LG Antigua	Respect	Flemming	DK Expectation	Darling	Dazzler	PT279CL &	Nizza CL &	Amarone	Blazen	PX131	PX138	Resort	
	Variety type	Hybrid	Hybrid	Hybrid	Hybrid	Hybrid	Hybrid	Hybrid	Hybrid	Hybrid	Hybrid	Conv	Conv	Hybrid	Hybrid	Hybrid	
	Scope of recommendation	E/W	E/W	E/W	E/W	E/W	E/W	E/W	E/W	E/W	E/W Sp	E/W Sp	N	N	UK SD	E/W SD	UK HEAR
Variety status	NEW	NEW	NEW			NEW		*	*		*	NEW	*		NEW		
Gross output, yield adjusted for oil content (% treated control)																	
United Kingdom (5.1 t/ha)	107	105	103	104	103	103	101	100	99	94	91	101	99	92	92	90	4.9
East/West region (5.0 t/ha)	108	106	104	104	104	104	102	100	99	94	91	100	98	91	91	90	5.5
North region (5.8 t/ha)	103	[95]	[95]	103	99	[97]	96	99	97	92	90	105	101	97	[96]	91	5.5
Seed yield (% treated control)																	
United Kingdom (4.7 t/ha)	106	104	103	104	104	104	101	99	98	95	91	101	100	91	92	90	4.5
East/West region (4.6 t/ha)	106	106	105	104	105	105	102	99	98	95	92	100	99	90	91	90	5.0
North region (5.3 t/ha)	102	[96]	[96]	103	100	[98]	96	98	96	94	91	105	103	95	[96]	91	5.3
Untreated gross output, yield adjusted for oil content (% untreated control) [□]																	
United Kingdom (5.1 t/ha)	-	-	-	106	106	-	96	100	99	93	87	-	98	90	-	93	8.3
Untreated seed yield (% untreated control) [□]																	
United Kingdom (4.8 t/ha)	-	-	-	106	107	-	96	99	97	94	88	-	99	90	-	92	7.9
Agronomic features																	
Resistance to lodging (1–9)	[8]	[8]	[8]	[8]	[8]	[8]	[8]	8	8	8	8	[8]	[8]	8	[8]	8	0.3
Stem stiffness (1–9)	8	9	7	8	8	9	7	8	9	8	8	8	9	9	9	8	0.7
Shortness of stem (1–9)	6	6	6	6	6	6	6	6	6	6	6	7	6	9	9	6	0.3
Plant height (cm)	149	150	150	156	156	156	150	153	148	152	147	143	148	116	121	149	3.5
Earliness of flowering (1–9)	7	7	6	7	7	6	8	7	8	6	7	7	6	6	5	7	0.4
Earliness of maturity (1–9)	5	5	5	6	5	4	6	5	6	6	5	5	5	5	6	5	0.4
Pod shatter resistance	-	-	-	R	-	-	R	R	R	-	-	-	-	R	-	-	
Disease resistance																	
Light leaf spot (1–9)	7	7	7	6	6	7	7	6	6	5	5	7	7	7	6	6	0.6
Stem canker (1–9)	8	7	9	7	7	8	7	8	8	5	6	6	6	6	6	5	0.9
TuYV	R	R	R	R	-	R	R	R	R	-	-	R	-	-	R	-	

Winter oilseed rape 2022/23

Supplementary data



	Recommended for the UK (both East/West and North regions)														Recommended for use on clubroot-infected land only				Average LSD (5%)
	PT303	LG Auckland	Ambassador	LG Aviron	Aurelia	Artemis	Acacia	Annika	Aardvark	Aspire	Matrix CL &	LG Constructor CL &	V 316 OL ~	DK Imprint CL &	Crome #	Croozar #	Crossfit #	Crocodile #	
Variety type	Hybrid	Hybrid	Hybrid	Hybrid	Hybrid	Hybrid	Conv	Conv	Conv	Conv	Hybrid	Hybrid	Hybrid	Hybrid	Hybrid	Hybrid	Hybrid	Hybrid	
Scope of recommendation	UK	UK	UK	UK	UK	UK	UK	UK	UK	UK	UK Sp	UK Sp	UK Sp	UK Sp	UK Sp	UK Sp	E/W Sp	E/W Sp	
Variety status	NEW	NEW				*		NEW	*	C	NEW	NEW	*			*	NEW		
Breeder/UK contact																			
Breeder	PionOS	LimEur	LimEur	LimEur	LimEur	LimEur	LimEur	LimEur	LimEur	LimEur	DSV	LimEur	MonTec	MonTec	NPZ	Lemb	MonTec	Lemb	
UK contact	Cor	Lim	Lim	Lim	Lim	Lim	Lim	Lim	Lim	Lim	DSV	Lim	Bay	Bay	LSPB	LSPB	DSV	DSV	
Annual treated gross output, yield adjusted for oil content (% control) – UK																			
2018 (5.6 t/ha)	-	-	103	103	104	102	104	-	102	102	-	-	96	91	101	95	-	98	-
2019 (5.5 t/ha)	[107]	[105]	105	105	105	104	105	[104]	101	102	[98]	[95]	95	91	101	98	[94]	98	-
2020 (5.4 t/ha)	106	107	107	108	107	103	102	101	101	98	100	97	99	95	99	97	98	98	-
2021 (5.1 t/ha)	105	106	104	103	105	102	103	103	101	99	96	92	96	92	100	95	95	99	-
Treatment benefit at co-located sites (% treated control) §																			
Treated gross output – UK (5.4 t/ha)	-	-	107	109	106	105	104	-	102	100	-	-	97	95	101	97	-	99	8.7
Untreated gross output – UK (5.4 t/ha) □	-	-	102	105	101	98	99	-	99	96	-	-	93	89	95	89	-	93	7.9
Seed quality (at 9% moisture)																			
Oil content, fungicide-treated (%)	46.0	45.4	45.0	44.3	45.0	45.4	45.3	45.2	45.5	45.5	45.8	44.4	45.2	43.7	46.1	44.5	46.4	44.7	0.3
Glucosinolate (µmoles/g)	8.0	12.2	10.9	11.2	10.2	12.3	8.1	11.6	10.0	9.9	14.2	15.8	12.3	14.3	10.8	12.2	11.7	12.8	-
Status in RL system																			
Year first listed	22	22	20	21	20	20	20	22	20	19	22	22	15	21	19	20	22	20	
RL status	P1	P1	-	P2	-	*	-	P1	*	-	P1	P1	*	P2	-	*	P1	-	

For Breeder/UK contact information, see page 59.

UK	= Recommended for both the East/West and North regions	&	= Herbicide-tolerant variety. This variety has a specific recommendation for tolerance to specific imidazolinone herbicides (a Clearfield® variety)	#	= Specific recommendation for growing on land infected with common strains of clubroot. Believed to be resistant to common strains of clubroot, but this has not been verified in Recommended List tests. These varieties should only be used in line with AHDB clubroot management guidelines, to reduce the risk of resistance breakdown	P2	= Second year of recommendation
E/W	= Recommended for the East/West region	~	= HOLL (High Oleic, Low Linolenic) variety	[]	= Limited data	LSD	= Least significant difference
Sp	= Specific recommendation	§	= Co-located sites are a subset of trial locations where both treated and untreated trials are present. Data are presented as a percentage of the treated control varieties at these sites only	P1	= First year of recommendation	Average LSD (5%)	= Varieties that are more than one LSD apart are significantly different at the 95% confidence level
Conv	= Conventional open-pollinated variety	□	= Untreated trials are treated for sclerotinia at flowering				
C	= Yield control. For this table, Campus, DK Expansion, Elgar and Temptation were also control varieties but are no longer listed						
*	= Variety no longer under test in RL trials in region						

Winter oilseed rape 2022/23

Supplementary data



	Recommended for the East/West region only											Recommended for the North region only		Described varieties			Average LSD (5%)
	LG Adonis	Dart	Tennyson	LG Antigua	Respect	Flemming	DK Expectation	Darling	Dazzler	PT279CL &	Nizza CL &	Amarone	Blazen	PX131	PX138	Resort	
Variety type	Hybrid	Hybrid	Hybrid	Hybrid	Hybrid	Hybrid	Hybrid	Hybrid	Hybrid	Hybrid	Hybrid	Conv	Conv	Hybrid	Hybrid	Hybrid	
Scope of recommendation	E/W	E/W	E/W	E/W	E/W	E/W	E/W	E/W	E/W	E/W Sp	E/W Sp	N	N	UK SD	E/W SD	UK HEAR	
Variety status	NEW	NEW	NEW			NEW		*	*		*	NEW	*		NEW		
Breeder/UK contact																	
Breeder	LimEur	DSV	SyP	LimEur	NPZ	NPZ	MonTec	DSV	DSV	PionOS	R2n	LimEur	KWSMR	PionOS	PionOS	Lemb	
UK contact	Lim	DSV	Els	Lim	LSPB	LSPB	Bay	DSV	DSV	Cor	RAGT	Lim	KWS	Cor	Cor	LSPB	
Annual treated gross output, yield adjusted for oil content (% control) – UK																	
2018 (5.6 t/ha)	-	-	-	104	101	-	99	98	97	94	91	-	100	97	-	91	
2019 (5.5 t/ha)	[106]	[101]	[100]	104	102	[101]	100	101	101	91	92	[105]	99	92	[94]	90	-
2020 (5.4 t/ha)	104	101	101	104	103	100	100	101	98	93	87	101	100	93	95	89	-
2021 (5.1 t/ha)	104	99	97	102	100	100	95	97	95	93	90	102	100	94	92	92	-
Treatment benefit at co-located sites (% treated control) §																	
Treated gross output - UK (5.4 t/ha)	-	-	-	105	103	-	97	100	98	93	90	-	98	91	-	91	8.7
Untreated gross output - UK (5.4 t/ha) □	-	-	-	101	101	-	92	95	94	89	83	-	93	86	-	88	7.9
Seed quality (at 9% moisture)																	
Oil content, fungicide-treated (%)	46.4	45.5	45.2	45.4	44.9	44.8	45.2	46.0	46.1	44.8	44.7	45.1	44.5	46.4	45.4	45.6	0.3
Glucosinolate (µmoles/g)	9.7	10.0	11.1	11.5	11.8	12.0	12.2	12.2	11.1	10.9	14.9	11.9	10.7	9.4	11.0	14.0	-
Status in RL system																	
Year first listed	22	22	22	21	21	22	21	20	20	19	20	22	20	20	22	20	
RL status	P1	P1	P1	P2	P2	P1	P2	*	*	-	*	P1	*	-	P1	-	

For Breeder/UK contact information, see page 59.

UK	= Recommended for both the East/West and North regions	HEAR	= High Erucic Acid variety	§	= Co-located sites are a subset of trial locations where both treated and untreated trials are present. Data are presented as a percentage of the treated control varieties at these sites only	P1	= First year of recommendation
E/W	= Recommended for the East/West region	C	= Yield control. For this table, Campus, DK Expansion, Elgar and Temptation were also control varieties but are no longer listed	α	= Untreated trials are treated for sclerotinia at flowering	P2	= Second year of recommendation
N	= Recommended for the North region	*	= Variety no longer under test in RL trials in region	[]	= Limited data	LSD	= Least significant difference
Sp	= Specific recommendation	&	= Herbicide-tolerant variety. This variety has a specific recommendation for tolerance to specific imidazolinone herbicides (a Clearfield® variety)			Average LSD (5%)	= Varieties that are more than one LSD apart are significantly different at the 95% confidence level
Conv	= Conventional open-pollinated variety						
SD	= Semi-dwarf variety						

Winter oilseed rape 2022/23 – regional rankings (East/West and North)

Ranked according to gross output for each region Note: varieties are tested in UK trials but some may only achieve recommendation for one region



	Scope of recommendation	East/West region	
		Gross output (%C) (5.0 t/ha)	Seed yield (%C) (4.6 t/ha)
PT303	NEW	UK	108
LG Auckland	NEW	UK	108
LG Adonis	NEW	E/W	106
Ambassador		UK	106
Dart	NEW	E/W	106
LG Aviron		UK	105
Aurelia		UK	105
Tennyson	NEW	E/W	104
Artemis	*	UK	104
LG Antigua		E/W	104
Respect		E/W	104
Flemming	NEW	E/W	104
Acacia		UK	104
Annika	NEW	UK	103
DK Expectation		E/W	102
Crocodile #		E/W Sp	101
Aspire	C	UK	100
Aardvark	*	UK	100
Darling	*	E/W	100
Matrix CL &	NEW	UK Sp	100
Crome #		UK Sp	99
Crossfit #	NEW	E/W Sp	99
Dazzler	*	E/W	99
LG Constructor CL &	NEW	UK Sp	97
V 316 OL ~	*	UK Sp	96
Croozar #	*	E/W Sp	96
PT279CL &		E/W Sp	94
DK Imprint CL &		UK Sp	92
Nizza CL &	*	E/W Sp	91
Average LSD (5%)		5.5	5.0

	Scope of recommendation	North region	
		Gross output (%C) (5.8 t/ha)	Seed yield (%C) (5.3 t/ha)
Aurelia		UK	106
Amarone	NEW	N	105
LG Aviron		UK	104
PT303	NEW	UK	104
LG Auckland	NEW	UK	[104]
Ambassador		UK	104
Acacia		UK	104
Annika	NEW	UK	[102]
Aardvark	*	UK	101
Artemis	*	UK	102
Crome #		UK Sp	101
Blazen	*	N	101
Aspire	C	UK	100
V 316 OL ~	*	UK Sp	97
Matrix CL &	NEW	UK Sp	96
LG Constructor CL &	NEW	UK Sp	[94]
DK Imprint CL &		UK Sp	91
Average LSD (5%)		5.5	5.3

Dark blue: UK recommendation (recommended for both the East/West and North regions)
Light blue: Regional recommendation (recommended for the East/West or North region)

This table should be read in conjunction with the AHDB Recommended List of winter oilseed rape varieties for 2022/23.

UK = Recommended for both the East/West and North regions	Sp = Specific recommendation	& = Herbicide-tolerant variety. This variety has a specific recommendation for tolerance to specific imidazolinone herbicides (a Clearfield® variety)	* = Variety no longer under test in RL trials in region
E/W = Recommended for the East/West region	# = Specific recommendation for growing on land infected with common strains of clubroot. Believed to be resistant to common strains of clubroot, but this has not been verified in Recommended List tests. These varieties should only be used in line with AHDB clubroot management guidelines, to reduce the risk of resistance breakdown	~ = HOLL (High Oleic, Low Linolenic) variety	LSD = Least significant difference
N = Recommended for the North region		C = Yield control. For this table, Campus, DK Expansion, Elgar and Temptation were also control varieties but are no longer listed	Average LSD (5%): Varieties that are more than one LSD apart are significantly different at the 95% confidence level

Winter oilseed rape 2022/23

Variety comments

Varieties

Aardvark

A conventional, open-pollinated variety recommended for the UK. This variety has high resistance to lodging, with good stem stiffness at maturity. Aardvark has high resistance to light leaf spot. It is no longer under test in RL trials.

Acacia

A conventional, open-pollinated variety recommended for the UK. Acacia has given a high treated gross output in both the East/West and North regions. It has high resistance to lodging and is very stiff-stemmed at maturity.

Amarone **NEW**

This new addition is a conventional, open-pollinated variety recommended for the North region. This variety has given a high treated gross output in the North. It has high resistance to lodging (based on limited data), with good stem stiffness at maturity. Amarone has high resistance to light leaf spot and is resistant to *Turnip yellows virus* (TuYV).

Ambassador

A hybrid variety recommended for the UK. This variety has given a very high treated gross output in the East/West region and a high treated gross output in the North. It has high resistance to lodging, with good stem stiffness at maturity. It is relatively early maturing, with resistance to pod shatter. Ambassador has high resistance to both light leaf spot and stem canker, and is resistant to *Turnip yellows virus* (TuYV).

Annika **NEW**

This new addition is a conventional, open-pollinated variety recommended for the UK. It has given a high treated gross output for the East/West region. It has high resistance to lodging (based on limited data), with good stem stiffness at maturity. It is a relatively late-maturing variety. Annika has high resistance to light leaf spot and is resistant to *Turnip yellows virus* (TuYV).

Artemis

A hybrid variety recommended for the UK. This variety has given a high treated gross output in the East/West region. It has high resistance to lodging, with good stem stiffness at maturity. It is relatively early maturing, with resistance to pod shatter. Artemis has high resistance to stem canker and is resistant to *Turnip yellows virus* (TuYV). It is no longer under test in RL trials.

Aspire

A conventional, open-pollinated variety recommended for the UK. It has high resistance to lodging and is very stiff-stemmed at maturity. It is a relatively late-maturing variety. Aspire has high resistance to light leaf spot and is resistant to *Turnip yellows virus* (TuYV).

Aurelia

A hybrid variety recommended for the UK. This variety has given a high treated gross output in both the East/West and North regions. It has high resistance to lodging, with good stem stiffness at maturity. Aurelia has resistance to pod shatter. It has high resistance to both light leaf spot and stem canker, and is resistant to *Turnip yellows virus* (TuYV).

Blazen

A conventional, open-pollinated variety recommended for the North region. It has high resistance to lodging (based on limited data) and is very stiff-stemmed at maturity. Blazen has high resistance to light leaf spot. It is no longer under test in RL trials.

Crocodile

A hybrid variety with a specific recommendation for the East/West region for its resistance to the common strains of clubroot, though it may be susceptible to strains found in some fields. Crocodile has high resistance to lodging and it is relatively early maturing. It is susceptible to stem canker.

Crome

A hybrid variety with a specific recommendation for the UK for its resistance to the common strains of clubroot, though it may be susceptible to strains found in some fields. This variety has high resistance to lodging, with good stem stiffness at maturity. It is susceptible to stem canker.

Please note that comments made on resistance to *Turnip yellows virus* (TuYV), clubroot and pod shatter resistance are based on advice from plant breeders. These have not been verified in RL tests.

Winter oilseed rape 2022/23

Variety comments

Varieties

Croozier

A hybrid variety with a specific recommendation for the East/West region for its resistance to the common strains of clubroot, though it may be susceptible to strains found in some fields. It has high resistance to lodging, with good stem stiffness at maturity. It is a relatively early-maturing and early-flowering variety. Croozier has high resistance to stem canker. It is no longer under test in RL trials.

Crossfit **NEW**

This new addition is a hybrid variety with a specific recommendation for the East/West region for its resistance to the common strains of clubroot, though it may be susceptible to strains found in some fields. It has high resistance to lodging (based on limited data). Crossfit is relatively early maturing, with resistance to pod shatter. It has very high resistance to stem canker and is resistant to *Turnip yellows virus* (TuYV).

Darling

A hybrid variety recommended for the East/West region. It has high resistance to lodging, with good stem stiffness at maturity. Darling has resistance to pod shatter. It has high resistance to stem canker and is resistant to *Turnip yellows virus* (TuYV). Darling is no longer under test in RL trials.

Dart **NEW**

This new addition is a hybrid variety recommended for the East/West region. It has given a very high treated gross output in the East/West. It has high resistance to lodging (based on limited data) and is very stiff-stemmed at maturity. Dart has high resistance to both light leaf spot and stem canker, and is resistant to *Turnip yellows virus* (TuYV).

Dazzler

A hybrid variety recommended for the East/West region. This early-flowering variety has high resistance to lodging and is very stiff-stemmed at maturity. It is relatively early maturing, with resistance to pod shatter. Dazzler has high resistance to stem canker and is resistant to *Turnip yellows virus* (TuYV). It is no longer under test in RL trials.

DK Expectation

A hybrid variety recommended for the East/West region. It is an early-flowering variety and has high resistance to lodging (based on limited data). It is relatively early maturing, with resistance to pod shatter. DK Expectation has high resistance to both light leaf spot and stem canker and is resistant to *Turnip yellows virus* (TuYV).

DK Imprint CL

A Clearfield® hybrid variety for the UK, with a specific recommendation for its tolerance to specific imidazolinone herbicides. It has high resistance to lodging (based on limited data) and has resistance to pod shatter. DK Imprint CL has high resistance to stem canker. Growers are advised to see the BASF website ([agricentre.basf.co.uk](https://www.agricentre.basf.co.uk)) for more information about Clearfield® management and husbandry.

Flemming **NEW**

This new addition is a hybrid variety recommended for the East/West region. It has given a high treated gross output in the East/West. It has high resistance to lodging (based on limited data) and is very stiff-stemmed at maturity. It is a late-maturing variety. Flemming has high resistance to both light leaf spot and stem canker, and is resistant to *Turnip yellows virus* (TuYV).

LG Adonis **NEW**

This new addition is a hybrid variety recommended for the East/West region. This variety has given a very high treated gross output in the East/West. It has high resistance to lodging (based on limited data), with good stem stiffness at maturity. LG Adonis has high resistance to both light leaf spot and stem canker, and is resistant to *Turnip yellows virus* (TuYV).

LG Antigua

A hybrid variety recommended for the East/West region. This variety has given a high treated gross output in the East/West. It has high resistance to lodging (based on limited data), with good stem stiffness at maturity. It is a relatively early-maturing variety, with resistance to pod shatter. It has high resistance to stem canker and is resistant to *Turnip yellows virus* (TuYV).

Winter oilseed rape 2022/23

Variety comments

Varieties

LG Aviron

A hybrid variety recommended for the UK. This variety has given a high treated gross output in both the East/West and North regions. LG Aviron is an early-flowering variety. It is relatively early maturing, with resistance to pod shatter. It has high resistance to both light leaf spot and stem canker, and is resistant to *Turnip yellows virus* (TuYV).

LG Auckland NEW

This new addition is a hybrid variety recommended for the UK. This variety has given a very high treated gross output in the East/West and a high treated gross output in the North region (based on limited data). It has high resistance to lodging (based on limited data). It is relatively early maturing, with resistance to pod shatter. LG Auckland has high resistance to both light leaf spot and stem canker, and is resistant to *Turnip yellows virus* (TuYV).

LG Constructor CL NEW

This new addition is a Clearfield® hybrid variety for the UK, with a specific recommendation for its tolerance to specific imidazolinone herbicides. It has high resistance to lodging (based on limited data), with good stem stiffness at maturity. It is a relatively early-maturing variety, with resistance to pod shatter. It is resistant to *Turnip yellows virus* (TuYV). Growers are advised to see the BASF website (agricentre.basf.co.uk) for more information about Clearfield® management and husbandry.

Matrix CL NEW

This new addition is a Clearfield® hybrid variety for the UK, with a specific recommendation for its tolerance to specific imidazolinone herbicides. It is a relatively tall variety and has high resistance to lodging (based on limited data), with good stem stiffness at maturity. Matrix CL is a relatively early-maturing variety, with resistance to pod shatter. It has high resistance to stem canker and is resistant to *Turnip yellows virus* (TuYV). Growers are advised to see the BASF website (agricentre.basf.co.uk) for more information about Clearfield® management and husbandry.

Nizza CL

A Clearfield® hybrid variety for the East/West region, with a specific recommendation for its tolerance to specific imidazolinone herbicides. Nizza CL has high resistance to lodging, with good stem stiffness at maturity. Growers are advised to see the BASF website (agricentre.basf.co.uk) for more information about Clearfield® management and husbandry. Nizza CL is no longer under test in RL trials.

PT279CL

A Clearfield® hybrid variety for the East/West region, with a specific recommendation for its tolerance to specific imidazolinone herbicides. PT279CL has high resistance to lodging, with good stem stiffness at maturity, and is relatively early maturing. Growers are advised to see the BASF website (agricentre.basf.co.uk) for more information about Clearfield® management and husbandry.

PT303 NEW

This new addition is a hybrid variety recommended for the UK. It has given a very high gross output in the East/West and a high gross output in the North region. It is a relatively tall variety and has high resistance to lodging (based on limited data), with good stem stiffness at maturity. PT303 has high resistance to both light leaf spot and stem canker and is resistant to *Turnip yellows virus* (TuYV).

Respect

A hybrid variety recommended for the East/West region. This variety has given a high treated gross output in the East/West. It has high resistance to lodging (based on limited data), with good stem stiffness at maturity. It has high resistance to stem canker.

Tennyson NEW

This new addition is a hybrid variety recommended for the East/West region. It has given a high gross output for the East/West. It has high resistance to lodging (based on limited data). Tennyson has very high resistance to stem canker, high resistance to light leaf spot, and is resistant to *Turnip yellows virus* (TuYV).

V 316 OL

A hybrid variety with a specific recommendation for the UK for its high oleic, low linolenic (HOLL) oil type. It has high resistance to lodging, with good stem stiffness at maturity. V 316 OL is no longer under test in RL trials.

Winter oilseed rape 2022/23

Variety comments

Described varieties

PX131

PX131 is a semi-dwarf hybrid (it is believed to carry the Ogu-INRA dwarfing gene in the heterozygous state), described for the UK. It is very short, has high resistance to lodging and is very stiff-stemmed at maturity. It has resistance to pod shatter. PX131 has high resistance to light leaf spot.

PX138 **NEW**

This new addition is a semi-dwarf hybrid (it is believed to carry the Ogu-INRA dwarfing gene in the heterozygous state), described for the East/West region. It is very short, has high resistance to lodging (based on limited data) and is very stiff-stemmed at maturity. PX138 is a relatively early-maturing variety. It is resistant to *Turnip yellows virus* (TuYV).

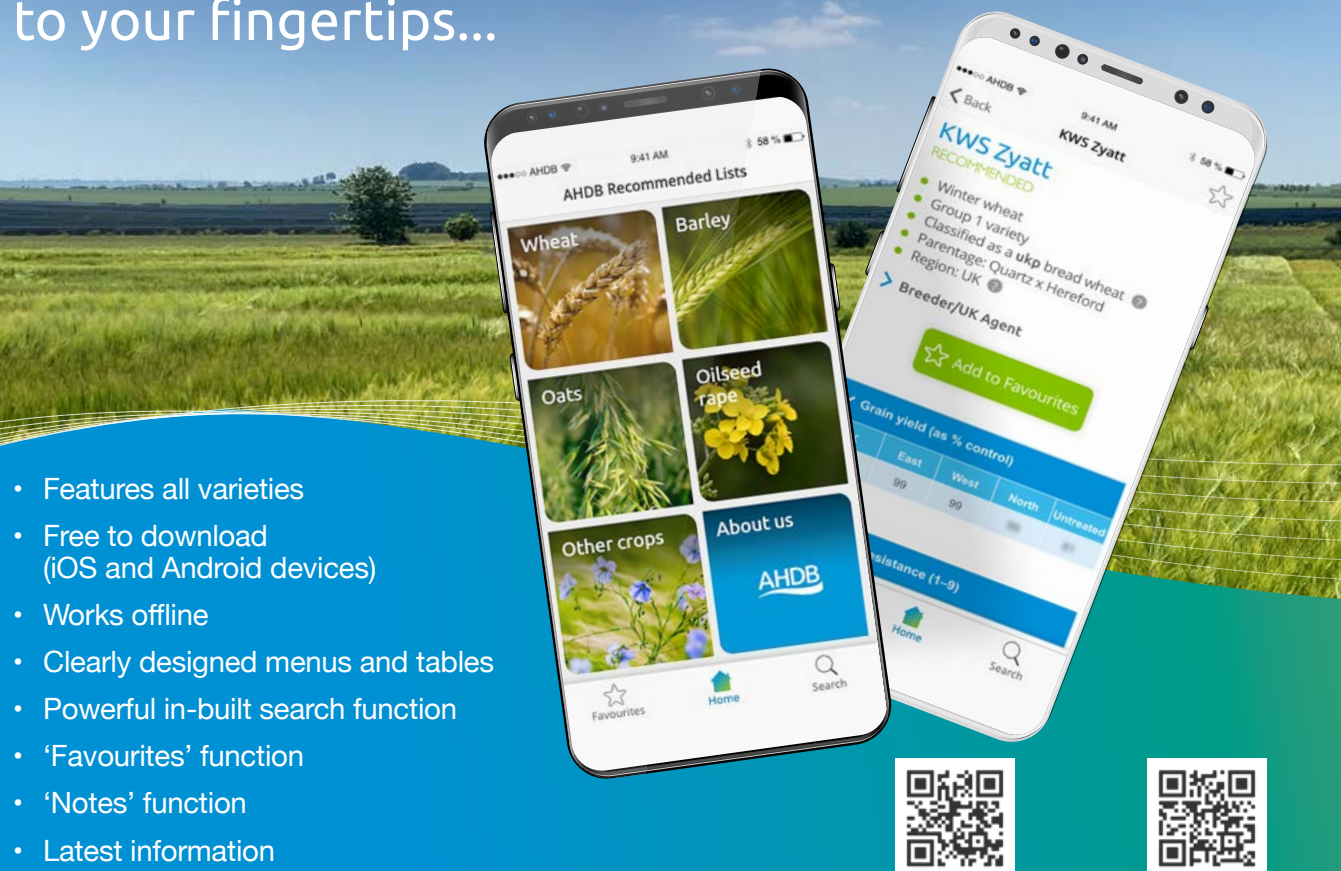
Resort

A high erucic acid rape (HEAR) variety, described for the UK. HEAR varieties have a different oil profile (having around 50% erucic acid, compared with less than 2% for '00' varieties). They are used for a variety of industrial uses, such as specialist lubricants, inks, cosmetics and slip agents. Growers should take action to prevent high erucic volunteers (which can lead to deductions or rejections) from appearing in subsequent '00' oilseed rape crops. It has high resistance to lodging and is stiff-stemmed at maturity.

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Candidate varieties – winter oilseed rape trials harvest 2022



Candidate varieties – UK			
	Previous/proposed name	Variety ID	UK contact
DK Expose	CWH462	3287	Bayer CropScience
Murray	NPZ19244W11	3304	LS Plant Breeding
Vegas	NPZ19245W11	3306	LS Plant Breeding
Turing	NPZ19246W11	3307	LS Plant Breeding
LE19/419	-	3320	Limagrains UK
LG Wagner	LE19/428	3322	Limagrains UK

Candidate varieties will be considered for the 2023/24 AHDB Recommended List.

After a candidate variety achieves National Listing, the data is published online (ahdb.org.uk/rl) and on the RL app (ahdb.org.uk/rlapp).



Candidate varieties – East/West			
	Previous/proposed name	Variety ID	UK contact
Devil	RAP 609	3311	DSV UK
Darkness	RAP 610	3312	DSV UK
Beatrix CL	WRH 567	3314	DSV UK
H9160195	-	3318	KWS UK
LG Ancona	LE18/401	3321	Limagrains UK
MH 17HR272	-	3330	KWS UK
CBI 18-47	Tom	3345	Cluser Breeding International GmbH

Candidate varieties will be considered for the 2023/24 AHDB Recommended List.

Spring oilseed rape descriptive list 2022



	Lagonda	Performer	Lakritz	Lavina	Fergus	Lumen	Builder	Menthal #	Contra CL &	Caramino CL &	Average LSD (5%)
Variety type	Hybrid	Hybrid	Hybrid	Hybrid	Conv	Hybrid	Hybrid	Hybrid	Hybrid	Hybrid	
Variety status				NEW	NEW	C				NEW	
Gross output, yield adjusted for oil content (% control)											
UK without fungicide (3.1 t/ha)	[107]	[107]	[107]	[104]	[101]	[101]	[100]	[100]	[96]	[92]	7.9
Number of trials	8	8	6	5	5	9	9	6	6	5	
Seed yield (% control)											
UK without fungicide (2.9 t/ha)	[108]	[106]	[108]	[104]	[100]	[101]	[100]	[100]	[98]	[92]	8.0
Seed quality (at 9% moisture)											
Oil content (%)	[43.7]	[45.3]	[43.5]	[44.4]	[45.2]	[44.2]	[44.7]	[43.6]	[43.4]	[45.0]	0.7
Glucosinolate content (µmoles/g)	11.0	13.6	10.6	12.5	12.3	11.0	14.4	10.5	12.4	11.3	-
Agronomic features											
Shortness of stem (1–9)	7	6	[7]	[7]	[7]	7	6	[6]	[6]	[6]	0.4
Earliness of flowering (1–9)	7	7	[7]	[7]	[7]	7	7	[7]	[7]	[6]	0.3
Earliness of maturity (1–9)	5	5	[5]	[5]	[5]	6	5	[5]	[5]	[5]	0.5
Annual gross output, yield adjusted for oil content (% control)											
2017 (3.3 t/ha)	[124]	[115]	-	-	-	[100]	[100]	-	-	-	18.5
2018 (3.4 t/ha)	[[108]]	[[113]]	[[102]]	-	-	[[103]]	[[102]]	[[101]]	[[93]]	-	-
2019 (3.8 t/ha)	[[96]]	[[94]]	[[100]]	[[94]]	[[89]]	[[100]]	[[97]]	[[95]]	[[95]]	[[95]]	-
2020 (3.0 t/ha)	[99]	[106]	[106]	[105]	[102]	[104]	[101]	[100]	[92]	[88]	14.0
2021 (2.3 t/ha)	[105]	[105]	[113]	[106]	[106]	[99]	[100]	[98]	[100]	[89]	11.9
Breeder/UK contact											
Breeder	NPZ	BASF	NPZ	NPZ	Lant	NPZ	BASF	NPZ	NPZ	NPZ	
UK contact	DSV	BASF	DSV	DSV	Sen	DSV	BASF	DSV	DSV	DSV	
Status in DL system											
Year first listed	19	20	21	22	22	18	15	21	21	22	
DL status	-	-	P2	P1	P1	-	-	P2	P2	P1	

Varieties no longer listed: Cebra CL, INV110 CL, Lexus, Mirakel and Sunder.

The data in this table are provided for information only and do not constitute a recommendation.

On the 1–9 scale, high figures indicate that a variety shows the character to a high degree (e.g. early maturity).

Glucosinolate contents are taken from the National List trials data.

For Breeder/UK contact information, see page 59.

Conv = Conventional open-pollinated variety	# = Believed to be resistant to common strains of clubroot, but this has not been verified in Recommended List tests. These varieties should only be used in line with AHDB clubroot management guidelines, to reduce the risk of resistance breakdown	& = Herbicide-tolerant variety. This variety has a tolerance to specific imidazolinone herbicides (a Clearfield® variety)	[] = Limited data [[]] = 1 trial only P1 = First year of listing P2 = Second year of listing	LSD = Least significant difference Average LSD (5%): Varieties that are more than one LSD apart are significantly different at the 95% confidence level
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Spring linseed descriptive list 2022



	Juliet	Bingo	Bliss	Buffalo	Ineke	Bowler	Octal	Batsman	Daniel	Lion	Aquarius	Sarah	Abacus	Average LSD (5%)
Seed colour	B	B				B	B	B		B	B	B	B	
Variety status								C			C	NEW	C	
Seed yield as % control														
UK without fungicide (2.2 t/ha)	114	111	110	107	106	106	106	103	100	99	99	99	98	9.7
Number of trials	16	16	16	13	16	16	16	16	16	12	16	11	16	
Seed quality (at 9% moisture)														
Oil content (%)	41.5	40.0	40.3	42.3	39.8	40.9	40.7	40.4	39.8	42.7	42.7	40.7	39.7	0.5
Agronomic features														
Plant height (cm)	56	52	50	51	58	51	50	54	53	49	52	54	50	2.2
Earliness of flowering (1–9)	4	5	6	4	2	4	4	6	6	5	6	3	5	0.8
Earliness of maturity (1–9)	5	6	6	6	4	6	6	7	5	6	7	5	7	0.7
Annual seed yield (% control)														
2017 (1.7 t/ha)	[114]	[104]	[118]	-	[107]	[110]	[109]	[101]	[103]	[100]	[102]	-	[98]	11.7
2018 (2.5 t/ha)	[126]	[119]	[103]	[103]	[100]	[100]	[103]	[106]	[103]	[94]	[99]	-	[95]	16.2
2019 (2.1 t/ha)	[108]	[109]	[118]	[110]	[113]	[111]	[111]	[107]	[97]	[103]	[97]	[99]	[95]	11.1
2020 (2.6 t/ha)	[121]	[107]	[109]	[110]	[112]	[108]	[100]	[103]	[96]	-	[100]	[106]	[97]	11.6
2021 (2.0 t/ha)	[100]	[115]	[107]	[103]	[97]	[100]	[108]	[98]	[104]	[101]	[98]	[89]	[104]	9.8
Breeder/UK contact														
Breeder	GKI	Bilt	Bilt	Bilt	JTSD	Bilt	LaS	Bilt	Med	LimEur	LimEur	JTSD	JTSD	
UK contact	Agr	Els	Els	Els	Bost	Els	Dalt	Els	Agr	Sat	Bost	DSV	Sen	
Status in DL system														
Year first listed	01	17	20	21	18	13	17	12	18	18	17	22	06	
DL status	-	-	-	P2	-	-	-	-	-	-	-	P1	-	

Variety no longer listed: Galaad.

The data in this table is provided for information only and does not constitute a recommendation.

On the 1–9 scale, high figures indicate that a variety shows the character to a high degree (e.g. early maturity).

For Breeder/UK contact information, see page 59.

B = Brown	P1 = First year of listing	LSD = Least significant difference
C = Yield control (for current table)	P2 = Second year of listing	Average LSD (5%): Varieties that are more than one LSD apart
[] = Limited data		are significantly different at the 95% confidence level

Winter triticale descriptive list 2022/23



	Kasyno	SU Liborious	KWS Fido	Temuco	Belcanto	Tender PZO	Cyrkon	Toro	Tribeca	Average LSD (5%)
Variety status	C		C							
Grain yield (as % treated control)										
Fungicide-treated (10.7 t/ha)	101	99	99	99	96	95	94	93	91	9.5
Number of trials	12	10	12	10	10	12	12	12	10	
Agronomic features										
Lodging (%)	[0]	-	[0]	-	-	[16]	[0]	[0]	[9]	2.6
Straw length (cm)	101	[106]	110	[106]	[109]	124	98	96	116	6.4
Ripening (days +/- Agostino, -ve = earlier)	[+1]	[0]	[0]	[+1]	[+4]	[0]	[0]	[0]	[0]	2.4
Grain quality										
Specific weight (kg/hl)	73.1	72.1	75.5	71.2	77.8	74.0	72.7	70.9	71.5	1.5
Protein content (%)	11.9	12.1	11.5	11.7	12.6	12.3	12.0	12.3	12.0	0.6
Disease resistance										
Yellow rust (1–9)	8	7	6	7	7	5	4	5	7	0.9
Breeder/UK contact										
Breeder	Dank	Nord	Lant	Lant	Dank	IGP	Hod	Hod	Desp	
UK contact	Sen	SU	Sen	Sen	Sen	Sen	Dalt	Dalt	Els	
Status in DL system										
Year first listed	18	21	14	21	21	20	16	20	12	
DL status	-	P2	-	P2	P2	-	-	-	-	

Varieties no longer listed: Agostino.

The data in this table is provided for information only and does not constitute a recommendation.

On the 1–9 scale, high figures indicate that a variety shows the character to a high degree (e.g. high resistance).

For Breeder/UK contact information, see page 59.

C = Yield control (for current table)
[] = Limited data
P2 = Second year of listing

LSD = Least significant difference
Average LSD (5%): Varieties that are more than one LSD apart are significantly different at the 95% confidence level

Winter rye descriptive list 2022/23




	KWS Tayo	SU Baresi	KWS Serafino	SU Performer	SU Bendix	SU Elrond	SU Arvid	SU Pluralis	Poseidon	SU Cossani	SU Mephisto	SU Nasri	Inspector	Dukato	Average LSD (5%)
Variety type	Hybrid	Hybrid	Hybrid	Hybrid	Hybrid	Hybrid	Hybrid	Hybrid	Hybrid	Hybrid	Hybrid	Hybrid	Conv	Conv	
Variety status	NEW	NEW		C	NEW	NEW		NEW							
Grain yield (as % treated control)															
Fungicide-treated (10.2 t/ha)	104	102	102	100	99	99	98	97	97	96	95	95	84	83	4.7
Number of trials	11	11	13	15	11	11	13	11	13	15	15	13	15	15	
Agronomic features															
Lodging (%)	[3]	[14]	[4]	[13]	[15]	[17]	[28]	[29]	[6]	[18]	[24]	[18]	[34]	[27]	4.6
Straw length (cm)	128	127	130	128	130	133	134	127	130	126	128	128	143	140	6.6
Ripening (days +/- SU Mephisto, -ve = earlier)	+1	+1	+1	0	+1	+1	+1	+1	0	0	0	0	0	0	1.5
Grain quality															
Protein content (%)	9.6	9.0	9.5	9.5	9.9	9.6	9.4	9.3	10.2	9.7	9.7	9.8	10.2	9.9	0.4
Hagberg Falling Number	259	238	258	244	216	231	197	212	177	231	220	215	215	206	22.0
Specific weight (kg/hl)	76.6	77.5	76.7	77.4	77.3	78.9	76.7	77.2	75.9	76.8	76.5	76.3	77.9	77.8	1.0
Disease resistance															
Brown rust (1–9)	[7]	[5]	7	4	[4]	[5]	4	[4]	4	4	3	3	4	4	1.1
Breeder/UK contact															
Breeder	KWSGmbh	Hybro	KWSGmbh	Hybro	Hybro	Hybro	Hybro	Hybro	NS	SU	Hybro	Hybro	PHP	Hybro	
UK contact	KWS	SU	KWS	SU	SU	SU	SU	SU	Dalt	SU	SU	SU	SU	SU	
Status in DL system															
Year first listed	22	22	21	17	22	22	21	22	21	18	15	21	16	17	
DL status	P1	P1	P2	-	P1	P1	P2	P1	P2	-	-	P2	-	-	

The data in this table is provided for information only and does not constitute a recommendation.
 On the 1–9 scale, high figures indicate that a variety shows the character to a high degree (e.g. high resistance).
 For Breeder/UK contact information, see page 59.


Conv	= Conventional variety	P1	= First year of listing	LSD	= Least significant difference
C	= Yield control (for current table)	P2	= Second year of listing	Average LSD (5%): Varieties that are more than one LSD apart are significantly different at the 95% confidence level	
[]	= Limited data				

Descriptive list candidate varieties – trials harvest 2022

<div><div><div>AHDB</div></div><div>CANDIDATE</div></div>	Previous/proposed name	Variety ID	UK contact
Spring linseed			
LN2011	-	255	Limagrain UK
Gilbert	FP2432	256	JTSD Ltd

Candidate varieties will be considered for the 2023 AHDB Descriptive Lists.

After a candidate variety achieves National Listing, the data is published online (ahdb.org.uk/rl) and on the RL app (ahdb.org.uk/rlapp).

<div> CANDIDATE</div>	Previous/proposed name	Variety ID	UK contact
Winter triticale			
Lumaco	11SWE073-7	124	Senova
Winter rye			
HYH329	SU Nordius	59	Saaten Union UK
HYH314	-	60	Saaten Union UK
KWS Igor	KWS-H200	61	KWS UK
KWS Detektor	KWS-H198	62	KWS UK

Candidate varieties will be considered for the 2023/24 AHDB Descriptive Lists.

Breeder and UK contact information

Abbreviation	Name	Web address
Ack	Ackermann Saatzzucht GmbH	sz-ackermann.de
ADM	ADM Agriculture Ltd	adm-agri.co.uk
Agr	Agrii	agrii.co.uk
AgV	Agrovista UK Ltd	agrovista.co.uk
BA	Blackman Agriculture	
BASF	BASF Agricultural Solutions Seed US LLC	agricentre.basf.co.uk
Bau	Bauer, Germany	
Bay	Bayer CropScience	bayercropscience.co.uk
Bilt	van de Bilt, Netherlands	
Bost	Boston Seeds Ltd	bostonseeds.com
Bre	Saatzzucht Josef Breun, Germany	breun.de
Cal	Carlsberg Research Laboratory	
CBI	Cluser Breeding International GmbH	
Cope	Cope Seeds & Grain	copeseeds.co.uk
Cor	Corteva Agriscience™	corteva.co.uk/pioneer
Dalt	Dalton Seeds	dalmark.co.uk
Dank	Danko Hodowla Roslin, Poland	danko.pl
Desp	Maison Florimond Desprez, France	florimond-desprez.com
DSV	DSV UK Ltd	dsv-uk.co.uk
Els	Elsoms Seeds Ltd	elsoms.com
ElsAck	Elsoms Ackermann Barley	elsoms.com
ElsW	Elsoms Wheat Ltd	elsoms.com
GKI	GK Kht, Hungary	
Hod	Hodowla Roslin Strzelce, Poland	hr-strzelce.pl
Hybro	Hybro, Germany	saaten-union.co.uk
IBERS	Institute of Biological, Environ. & Rural Sciences	aber.ac.uk
IGP	I.G. Pflanzenzucht, Germany	ig-pflanzenzucht.de/en
JTSD	JTSD Ltd	jtsd.co.uk
KWS	KWS UK	kws-uk.com

Abbreviation	Name	Web address
KWSGmbH	KWS Lochow GmbH	kws-uk.com
KWSMR	KWS Momont Recherche	kws-uk.com
Lant	Lantmannen SW Seed BV	lantmannen.com
LaS	Laboulet Semences, France	
Lemb	Lembke, Germany	
Lim	Limagrain UK	lgseeds.co.uk
LimEur	Limagrain Europe SA	lgseeds.co.uk
LSPB	LS Plant Breeding	lspb.eu
Med	Medovarsky	
Mom	Momont, France	kws-uk.com
MonTec	Monsanto Technology LLC	monsanto.com
Nord	Nordsaat, Germany	nordsaat.de
NPZ	NPZ-Lembke, Germany	npz.de
NS	Nordic Seed, Denmark	nordicseed.com
PHP	P.H. Petersen, Germany	phpetersen.com
PionOS	Pioneer Overseas Corporation	corteva.co.uk/pioneer
R2n	RAGT, France	ragt.co.uk
RAGT	RAGT Seeds	ragt.co.uk
Sat	Saturn Seeds	saturnseeds.com
Sec	Secobra, France	secobra.fr/en/accueil
Sej	Sejet, Denmark	sejet.com
Selg	Selgen, Czech Republic	selgen.eu
Sen	Senova	senova.uk.com
SU	Saaten Union UK	saaten-union.co.uk
Syn	Syngenta UK Ltd	syngenta.co.uk
SyP	Syngenta Participations AG	syngenta.co.uk
Wier	Wiersum BV, Netherlands	
WPB	Wiersum Plant Breeding	



The AHDB Recommended Lists (RL) is managed by a project consortium of AHDB Cereals & Oilseeds, BSPB, MAGB and UKFM.

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Contact us

For specific Recommended Lists enquiries:

@ rl@ahdb.org.uk

024 7647 8754

To order printed publications:

@ publications@ahdb.org.uk

0247 799 0069

Preliminary data

The selection of new varieties to promote into RL trials is made on the basis of preliminary data collected during National List and other trials and tests and these data also make a major contribution to the variety means presented in the RL tables. Acknowledgement is made to Defra and the devolved governments as well as BSPB for the use of these data.



Processors

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Test and trials contractors

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Committee members and growers

AHDB wishes to thank all those who give freely of their time to serve on our committees and to the numerous growers across the country who host RL trials.



AHDB Cereals & Oilseeds

Stoneleigh Park
Kenilworth
Warwickshire
CV8 2TL

If you no longer wish to receive this information, please email us on comms@ahdb.org.uk

20018 0423

AHDB is a statutory levy board, funded by farmers, growers and others in the supply chain. We equip the industry with easy to use, practical know-how which they can apply straight away to make better decisions and improve their performance. For further information, please visit ahdb.org.uk

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