

Winter wheat varieties grown in RL trials in 2022 but not added to the AHDB Recommended List

	Control varieties					Other varieties							
	Skyfall	KWS Siskin	KWS Barrel	LG Skyscraper	Gleam	RGT Zinzan	KWS Wrenum	Gelfon	KWS Webburn	Zoom	Mindful	SY Coach	Average LSD (5%)
<b>Fungicide-treated grain yield (% treated control)</b>													
United Kingdom (10.9 t/ha)	97	99	99	103	103	101	100	104	104	103	104	103	2.3
East region (10.7 t/ha)	97	99	98	103	103	99	100	105	103	103	104	102	2.7
West region (11.1 t/ha)	97	99	98	103	104	102	101	104	106	103	104	105	3.0
North region (11.3 t/ha)	96	99	102	102	103	[103]	[101]	[102]	[102]	[99]	[103]	[102]	3.4
<b>Untreated grain yield (% treated control)</b>													
United Kingdom (10.9 t/ha)	70	87	76	86	84	81	89	78	87	92	91	92	5.6
<b>Grain quality</b>													
Endosperm texture	Hard	Hard	Soft	Soft	Hard	Hard	Hard	Soft	Soft	Soft	Hard	Hard	
Protein content (%)	12.0	11.6	11.1	11.2	11.1	11.5	11.4	11.1	11.1	11.6	11.1	11.2	0.2
Protein content (%) - milling spec	13.1	12.4	12.0	12.1	11.8	12.4	12.4	[11.8]	[11.5]	[12.7]	[12.0]	[12.0]	0.5
Hagberg Falling Number	290	297	247	227	237	317	307	244	244	211	268	215	22.6
Specific weight (kg/hl)	79.2	77.5	77.4	77.3	77.3	78.4	78.2	77.8	78.2	77.3	79.3	76.4	0.6
Chopin Alveograph W	268	168	104	-	-	[282]	190	101	102	[74]	-	-	30.4
Chopin Alveograph P/L	1.0	0.6	0.3	-	-	[1.0]	0.7	0.7	0.4	[0.4]	-	-	0.2
<b>Agronomic features</b>													
Resistance to lodging without PGR (1-9)	8	6	8	6	7	[7]	[8]	[7]	[6]	[7]	[5]	[7]	1.4
Resistance to lodging with PGR (1-9)	7	6	8	6	7	8	8	7	7	6	6	7	1.2
Straw length without PGR (cm)	85	84	84	92	87	92	83	87	92	83	91	84	1.6
Straw length with PGR (cm)	77	74	77	83	77	86	75	80	87	76	80	76	1.7
Ripening (days +/- Skyfall)	0	0	+1	0	0	+2	+1	0	0	0	+1	+1	0.7
Resistance to sprouting (1-9)	6	4	6	6	6	[6]	[6]	[5]	[6]	[6]	[6]	[7]	1.0
<b>Disease resistance</b>													
Mildew (1-9)	6	8	6	7	7	7	7	8	7	8	8	6	1.4
Yellow rust (1-9)	3	9	6	7	5	4	6	4	5	7	6	7	0.6
Yellow rust (young plant) - see note below	s	r	s	s	s	s	s	s	s	s	s	s	
Brown rust (1-9)	9	5	5	5	6	8	6	7	7	5	5	5	0.9
Septoria tritici (1-9) - see note below	5.4	6.8	4.6	4.9	5.7	6.7	6.4	5.1	5.7	5.6	6.3	6.6	0.9
Eyespot (1-9) - see note below	[5]@	[4]	[5]	[6]	[5]	[6]@	[3]	[6]	[5]	[4]	[5]	[4]	2.0
Fusarium ear blight (1-9)	7	6	6	6	6	7	6	6	6	6	6	6	0.4
Orange wheat blossom midge	R	-	R	R	R	R	-	R	R	R	-	R	
<b>Breeder/UK contact</b>													
Breeder	RAGT	KWS	KWS	LimEur	SyP	R2n	KWS	KWS	KWS	ElsW	KWS	SyP	
UK contact	RAGT	KWS	KWS	Lim	Syn	RAGT	KWS	FrontAg	KWS	Els	AgV	Syn	

This table should be read in conjunction with the AHDB Recommended List of winter wheat varieties for 2023/24. 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. Protein content (%) - milling spec data are taken from trials managed to a bread-milling protocol.

PGR = Plant growth regulator

[ ] = Limited data

r and s = Young-plant resistance (r) or susceptible (s) to yellow rust as shown by UKCPVS tests and RL trial data

@ = Believed to carry the Pch1 Rendezvous resistance gene to eyespot, but this has not been verified in RL tests

R = Believed to be resistant to orange wheat blossom midge (OWBM), but this has not been verified in RL tests

LSD = Least significant difference

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

AgV = Agrovista UK Ltd ([agrovista.co.uk](http://agrovista.co.uk))

Els = Elsoms Seeds Ltd ([elsoms.com](http://elsoms.com))

ElsW = Elsoms Wheat Ltd ([elsoms.com](http://elsoms.com))

FrontAg = Frontier Agriculture Ltd ([frontierag.co.uk](http://frontierag.co.uk))

KWS = KWS UK ([kws-uk.com](http://kws-uk.com))

Lim = Limagrain UK ([lgseeds.co.uk](http://lgseeds.co.uk))

LimEur = Limagrain Europe SA ([lgseeds.co.uk](http://lgseeds.co.uk))

R2n = RAGT, France ([ragt.co.uk](http://ragt.co.uk))

RAGT = RAGT Seeds ([ragt.co.uk](http://ragt.co.uk))

SyP = Syngenta Participations AG ([syngenta.co.uk](http://syngenta.co.uk))

Syn = Syngenta UK Ltd ([syngenta.co.uk](http://syngenta.co.uk))

**Young-plant resistance to yellow rust**

Winter wheat features two broad types of resistance to yellow rust. Adult-plant resistance provides protection from around stem extension onwards, although timing is variety specific. The RL yellow rust disease ratings (1-9 scale) are based on this type of resistance. Young-plant resistance is effective at all growth stages. Some varieties are susceptible at the young-plant stage but develop some level of adult-plant resistance. Each year, the United Kingdom Cereal Pathogen Virulence Survey (UKCPVS) selects five yellow rust strains (isolates) that best represent the diversity in the population. These are used to test whether recommended and candidate varieties in RL trials are resistant (r) or susceptible (s) to yellow rust at the young-plant stage. RL field trial data (before ear emergence) is used to validate UKCPVS results. If RL field trial data from before ear emergence shows susceptibility of a variety labelled as resistant, the variety may be reclassified as susceptible.

**Septoria tritici**

The 2023/24 RL features ten varieties with Cougar in their background. Evidence from harvest 2022 results indicate that septoria tritici isolates virulent on Cougar derived varieties remain widespread. However, analysis has shown that the effect of these isolates on variety ratings is adequately captured by ratings based on the normal three-year dataset. As a result this is the only rating shown in the 2023/24 RL. For more information, visit [ahdb.org.uk/rl](http://ahdb.org.uk/rl)

**Eyespot**

Eyespot ratings are normally calculated using data arising from a small number of naturally infected and artificially inoculated trials. Over the last two years, data from the inoculated trials has not been consistent with that from the naturally infected trials. As a result, the ratings in the RL 2023/24 have been calculated using only the data from naturally infected trials. This means the ratings are based on a small dataset and should be treated with caution.