

AHDB Recommended List

Winter barley 2021/22

Market options, yield and grain quality



End-use group	Electrum	Craft	KWS Tardis	Bolton	Bordeaux	LG Mountain	KWS Hawking	KWS Gimlet	Jordan	LG Flynn	KWS Orwell	Surge	Valerie	KWS Creswell	KWS Tower	California	KWS Cassia	Belmont \$	SY Kingston \$	SY Kingsbarn \$	SY Thunderbolt \$	SY Baracoda \$	Belfry \$	Bazooka \$	Funky	Libra \$	Average LSD (5%)	
	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	N	UK	W	UK	UK	UK	UK	UK	UK	UK	UK	UK	UK	UK	
	C		NEW	NEW	NEW						C				*				NEW		NEW	*		C	C	UK		
Fungicide-treated grain yield (% treated control)																												
United Kingdom (9.7 t/ha)	97	96	106	106	106	104	103	103	103	102	102	101	101	100	100	99	98		107	107	107	107	107	106	106	104	103	2.6
East region (9.5 t/ha)	97	96	107	107	107	105	105	105	105	104	102	103	101	100	99	100	98		108	106	107	107	107	106	106	103	103	3.3
West region (9.8 t/ha)	96	95	[105]	[104]	[104]	102	103	101	103	101	102	101	100	100	100	99	98		107	109	107	[107]	107	107	105	105	104	4.0
North region (9.8 t/ha)	96	96	105	105	104	105	101	101	99	101	101	99	100	101	100	[98]	98		107	108	107	107	107	105	105	104	102	3.8
Untreated grain yield (% treated control)																												
United Kingdom (9.7 t/ha)	77	76	83	83	81	83	81	82	86	81	80	86	83	73	72	79	81		76	88	85	88	85	89	85	88	81	5.1
Main market options																												
MBC malting approval for brewing use	F	F	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	
Grain quality																												
Specific weight (kg/hl)	69.2	69.5	69.1	68.6	69.9	69.4	68.7	68.5	68.9	70.3	68.1	69.3	70.0	68.4	67.6	68.2	71.4		68.7	69.7	69.7	69.6	68.7	68.6	69.2	69.0	70.8	0.8
Screenings (% through 2.25 mm)	2.3	2.1	2.2	1.9	1.7	2.2	2.3	2.4	1.9	1.7	2.1	1.9	0.9	2.1	2.2	2.0	1.7		2.8	2.6	1.8	2.3	2.1	2.4	2.5	4.4	2.3	0.7
Screenings (% through 2.5 mm)	6.8	6.6	7.2	6.8	5.5	7.5	7.3	7.5	6.1	5.4	6.3	6.0	3.1	7.4	7.3	6.5	5.1		9.6	8.9	7.0	7.9	7.4	9.4	8.7	16.1	8.4	1.8
Nitrogen content (%)	1.69	1.67	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	0.08
Status in RL system																												
Year first listed	18	16	21	21	21	19	20	19	20	19	16	16	19	17	14	13	10		18	21	19	21	19	16	16	17	18	

Varieties no longer listed: KWS Astaire, KWS Glacier and SY Venture.
Comparisons of variety performance across regions are not valid.

UK = Recommended for the UK
N = Recommended for the North region
W = Recommended for the West region

C = Yield control (for current table). For this table, SY Venture was also a control varieties but is no longer listed
* = Variety no longer under test in RL trials

\$ = Hybrid variety
[] = Limited data
F = Full MBC approval

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

AHDB Recommended List

Winter barley 2021/22

Yield, agronomy and disease resistance



End-use group	Electrum		Two-row feed															Six-row feed						Average LSD (5%)			
	UK	UK	UK	UK	UK	UK	UK	UK	UK	UK	UK	UK	UK	N	UK	W	UK	UK	UK	UK	UK	UK	UK				
Scope of recommendation	C		NEW	NEW	NEW	C															NEW	NEW	*	C	C	*	
Fungicide-treated grain yield (% treated control)																											
United Kingdom (9.7 t/ha)	97	96	106	106	106	104	103	103	103	102	102	101	101	100	100	99	98	107	107	107	107	107	106	106	104	103	2.6
East region (9.5 t/ha)	97	96	107	107	107	105	105	105	105	104	102	103	101	100	99	100	98	108	106	107	107	107	106	106	103	103	3.3
West region (9.8 t/ha)	96	95	[105]	[104]	[104]	102	103	101	103	101	102	101	100	100	100	99	98	107	109	107	[107]	107	107	105	105	104	4.0
North region (9.8 t/ha)	96	96	105	105	104	105	101	101	99	101	101	99	100	101	100	[98]	98	107	108	107	107	107	105	105	104	102	3.8
Untreated grain yield (% treated control)																											
United Kingdom (9.7 t/ha)	77	76	83	83	81	83	81	82	86	81	80	86	83	73	72	79	81	76	88	85	88	85	89	85	88	81	5.1
Agronomic features																											
Resistance to lodging (1-9)	7	8	8	8	7	7	8	7	8	7	8	7	8	7	8	8	7	7	7	7	6	7	8	7	8	7	-
Straw height without PGR (cm)	95	93	[92]	[88]	[88]	87	[92]	100	[87]	96	89	89	92	90	93	95	94	112	[120]	113	[114]	121	111	117	96	110	5.0
Straw height with PGR (cm)	91	89	86	84	86	86	87	95	84	92	86	86	87	88	88	92	91	105	107	103	106	110	103	110	92	104	3.0
Ripening (+/-KWS Orwell, -ve = earlier)	-1	+1	0	+1	0	+1	+2	+1	0	0	0	0	0	+1	0	+1	0	0	-1	0	-1	0	0	0	-1	0	1.1
Winter hardiness #	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Disease resistance																											
Mildew (1-9)	6	6	5	6	6	5	5	6	5	4	3	5	6	4	5	6	5	5	7	7	8	7	5	5	5	4	1.0
Brown rust (1-9)	7	6	6	5	5	7	6	6	8	7	7	7	6	6	7	5	7	4	6	5	7	5	6	5	7	6	1.4
Rhynchosporium (1-9)	6	6	7	5	4	5	6	6	7	6	6	7	6	6	5	6	5	7	6	6	6	6	7	6	7	6	1.1
Net blotch (1-9)	6	6	[5]	[5]	[4]	5	6	6	5	6	5	6	[6]	5	4	5	5	5	6	5	[6]	5	5	6	5	6	1.0
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	-

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.

UK = Recommended for the UK
 N = Recommended for the North region
 W = Recommended for the West region

C = Yield control (for current table). For this table, SY Venture was also a control varieties but is no longer listed
 \$ = Hybrid variety
 * = Variety no longer under test in RL trials
 PGR = Plant growth regulator
 [] = Limited data

= The winter hardiness scores are taken from extreme tests in the Jura mountains of France but there is currently insufficient data for 1-9 ratings
 R = Believed to be resistant to *Barley mild mosaic virus* (BaMMV) and to *Barley yellow mosaic virus* (BaYMV) strain 1, 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

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Supplementary data



	Electrum	Craft	KWS Tardis	Bolton	Bordeaux	LG Mountain	KWS Hawking	KWS Gimlet	Jordan	LG Flynn	KWS Orwell	Surge	Valerie	KWS Creswell	KWS Tower	California	KWS Cassia	Beimont \$	SY Kingston \$	SY Kingsbarn \$	SY Thunderbolt \$	SY Baracoda \$	Belfry \$	Bazooka \$	Funky	Libra \$	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	N	UK	W	UK	UK	UK	UK	UK	UK	UK	UK	UK	UK	UK	
Breeder/UK contact	c		NEW	NEW	NEW	c														*	NEW	NEW	*	c			c	*
Breeder	SyP	SyP	KWS	Ack	NS	LimEur	KWS	KWS	Ack	LimEur	KWS	SyP	Bre	KWS	KWS	Lim	KWS	SyP	SyP	SyP	SyP	SyP	SyP	SyP	KWSMR	SyP		
UK contact	Syn	Syn	KWS	ElsAck	Sen	Lim	KWS	KWS	ElsAck	Lim	KWS	Syn	Sen	KWS	KWS	Lim	KWS	Syn	Syn	Syn	Syn	Syn	Syn	Syn	KWS	Syn		
Annual treated yield (% control)																												
2016 (9.4 t/ha)	97	95	-	-	-	104	-	102	-	102	102	101	101	100	100	99	98	109	-	107	-	108	107	107	104	103	-	
2017 (9.9 t/ha)	95	95	-	-	-	103	103	104	103	101	102	100	101	99	98	100	98	107	107	107	-	106	106	106	106	104	-	
2018 (10.2 t/ha)	97	97	106	105	106	104	104	102	102	102	102	100	101	101	102	99	98	107	107	107	107	107	105	103	103	102	-	
2019 (10.2 t/ha)	99	96	107	106	106	105	103	104	103	102	102	103	-	100	99	99	98	107	108	108	109	108	107	106	105	104	-	
2020 (8.9 t/ha)	95	95	104	105	103	105	101	101	100	101	102	100	99	101	100	97	98	106	108	105	106	105	106	105	104	101	-	
Soil type (about 50% of trials are medium soils)																												
Light soils (9.3 t/ha)	96	97	104	105	104	104	101	101	101	102	101	100	100	101	101	97	98	106	106	105	103	105	104	105	104	101	3.3	
Heavy soils (9.6 t/ha)	97	94	[110]	[106]	[107]	107	107	104	104	105	103	103	[101]	99	100	[102]	98	107	107	108	[111]	106	110	107	104	105	5.0	
Agronomic characteristics																												
Lodging without PGR (%)	7	3	1	2	7	12	5	14	17	7	2	4	4	7	3	3	5	13	15	13	37	10	5	7	2	11	-	
Lodging with PGR (%)	4	2	2	1	3	6	2	6	6	4	2	3	1	4	3	2	3	9	10	2	14	6	2	4	2	4	-	
Brackling (%)	16	13	10	11	11	28	8	11	9	7	10	11	7	17	10	9	12	17	13	16	14	12	8	11	13	23	-	
Malting quality																												
Hot water extract (l deg/kg)	305.0	308.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.5	
Status in RL system																												
Year first listed	18	16	21	21	21	19	20	19	20	19	16	16	19	17	14	13	10	18	21	19	21	19	16	16	17	18		
RL status	-	-	P1	P1	P1	-	P2	-	P2	-	-	-	-	-	*	-	-	-	P1	-	P1	*	-	-	-	*		

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

UK = Recommended for the UK
 N = Recommended for the North region
 W = Recommended for the West region
 C = Yield control (for current table). For this table, SY Venture was also a control varieties but is no longer listed

* = Variety no longer under test in RL trials
 \$ = Hybrid variety
 PGR = Plant growth regulator
 [] = Limited data
 P1 = First year of recommendation
 P2 = Second year of recommendation

Ack = Ackermann Saatzzucht GmbH (sz-ackermann.de)
 Bre = Saatzzucht Josef Breun, Germany
 ElsAck = Elisons Ackermann Barley
 [] = Limited data
 KWS = KWS UK (kws-uk.com)
 KWSMR = KWS Momont Recherche (kws-uk.com)
 Lim = Limagrain UK (lgseeds.co.uk)

LimEur = Limagrain Europe SA (lgseeds.co.uk)
 NS = Nordic Seed, Denmark
 Sen = Senova (senova.uk.com)
 Syn = Syngenta UK Ltd (syngenta.co.uk)
 SyP = Syngenta Participations AG (syngenta.co.uk)

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