



## RECOMMENDED LIST WINTER WHEAT 2003

### MARKET OPTIONS AND GRAIN QUALITY

	P2	C	*		P1	C	P1	P2	*		P1	P1	C	C		P2		C	P1	*	*	*	Average LSD				
	Xi19	Malacca	Shamrock	Hereward	Einstein	Option	Scorpion 25	Solstice	Charger	Solissons	Robigus	Deben	Wizard	Consort	Claire	Riband	Access	Tanker	Biscay	Napier	Savannah	Richmond	Madrigal	Equinox	Buchan	5%	
<b>End-use group</b>	<b>Nabim Group 1</b>				<b>Nabim Group 2</b>						<b>Nabim Group 3</b>						<b>Nabim Group 4</b>										
Scope of recommendation	UK	UK	UK	UK	UK	UK	East	UK	UK	South	UK	UK	East	UK	UK	North	UK	UK	UK	UK	UK	UK	North	UK	North		
UK treated yield as % control (10.3 t/ha)	101	97	93	90	103	102	100	100	97	88	104	103	101	100	100	98	103	103	103	103	103	102	99	98	98	3.0	
<b>Main market options (The specific attributes of varieties are different so, whenever possible, varieties should not be mixed in store)</b>																											
UK bread-making	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y											
UK biscuit, cake-making											Y	Y	Y	Y	Y	Y											
UK starch/ distilling											(Y)	(Y)	(Y)	Y	Y	Y											
BCE Export bread-making *	(Y)	Y	(Y)	Y	(Y)	(Y)	(Y)	Y	Y	Y	(Y)	(Y)	(Y)	Y	Y	Y											
BCE Export blending *	(Y)	Y	(Y)	Y	(Y)	(Y)	(Y)	Y	Y	Y	(Y)	(Y)	(Y)	Y	Y	Y											
BCE Export biscuit flour *											(Y)		(Y)	Y	Y	Y											
Year first listed	02	99	99	91	03	01	03	02	97	95	03	01	03	95	99	89	02	01	01	00	98	03	97	97	99		
<b>Grain quality</b>																											
Endosperm texture	Hard	Hard	Hard	Hard	Hard	Hard	Hard	Hard	Hard	Hard	Soft	Soft	Soft	Soft	Soft	Soft	Hard	Hard	Hard	Hard	Hard	Hard	Soft	Hard	Soft		
Protein content (%)	11.7	12.1	12.5	13.1	11.8	11.8	11.9	12.1	12.0	12.8	11.3	11.1	11.6	11.5	11.6	11.4	11.0	11.5	11.4	11.4	11.0	11.6	11.7	11.5	11.5	0.21	
Hagberg falling number	292	312	233	257	270	277	305	266	223	259	191	204	222	224	242	193	179	258	285	153	229	254	200	214	251	17.5	
Specific weight (kg/hl)	76.1	75.6	78.9	79.5	77.4	78.7	77.6	78.1	76.0	78.8	77.0	76.4	77.4	77.3	77.2	75.3	76.1	75.7	77.3	75.9	77.1	78.9	77.3	74.3	78.4	0.60	
1000 grain weight (g)	52.1	46.2	45.7	48.9	50.6	47.8	51.1	51.2	47.3	45.9	45.6	53.7	51.5	50.4	48.8	54.0	51.2	54.1	54.3	54.3	56.2	50.2	48.9	54.6	49.8	1.62	
Zeleny volume	41.9	47.0	54.1	52.4	(39.9)	46.7	(49.5)	44.5	44.8	55.4	(24.7)	26.1	(28.7)	21.5	21.5	15.6	17.2	23.4	25.5	21.9	21.6	42.5	17.8	23.4	18.3	4.8	
Chopin alveograph W	170	203	177	219	164	181	195	178	165	293	90	116	150	102	95	71	62	77	102	71	81	170	58	80	81	20.4	
Chopin alveograph P/L	0.8	0.9	0.3	0.6	0.5	1.5	0.7	0.8	0.5	0.8	0.3	0.8	0.5	0.3	0.3	0.5	1.6	1.7	1.2	1.2	2.0	1.2	0.3	0.8	0.6	0.24	

P1, P2 first and second year of recommendation

C = Yield control

(Y) = May be suited to that market

\* Variety no longer in trials

Y = Suited to that market ? = Further information required

Average LSD 5%. Varieties that are more than one LSD apart are significantly different at the 5% confidence level.

\* Table updated July 2003 to show latest market options from HGCA Wheat and Barley Exports - The Growers' Guide



HGCA

RECOMMENDED LIST WINTER WHEAT 2003

YIELD, AGRONOMY AND DISEASE RESISTANCE

	P2	C	*		P1	C	P1	P2	*		P1	P1	C	C		P2		C	P1	*	*	*	Average LSD			
	X119	Malacca	Shamrock	Hereward	Einstein	Option	Scorpion 25	Solstice	Charger	Soissons	Robigus	Deben	Wizard	Consort	Claire	Riband	Access	Tanker	Biscay	Napier	Savannah	Richmond	Madrigal	Equinox	Buchan	5%
End-use group	Nabim Group 1				Nabim Group 2						Nabim Group 3					Nabim Group 4										
Scope of recommendation	UK	UK	UK	UK	UK	UK	East	UK	UK	South	UK	UK	East	UK	UK	North	UK	UK	UK	UK	UK	UK	North	UK	North	
<b>Fungicide treated grain yield as % treated control</b>																										
United Kingdom (10.3 t/ha)	101	97	93	90	103	102	100	100	97	88	104	103	101	100	100	98	103	103	103	103	103	102	99	98	98	3.0
North region (9.5 t/ha) #	103	101	95	91	107	107	98	103	100	91	108	108	103	105	102	105	109	109	105	107	109	106	105	101	102	3.8
Dry (East) region (10.2 t/ha) #	104	98	96	92	104	102	105	101	99	90	107	105	104	101	102	99	105	105	105	105	103	104	101	102	100	2.8
Wet (West) Region (9.8 t/ha) #	104	99	94	93	107	103	104	103	100	91	107	106	103	102	104	100	105	105	106	105	104	106	101	101	100	3.0
<b>Untreated grain yield as % treated control in comparable trials</b>																										
United Kingdom	74	72	72	72	79	76	74	76	73	68	82	79	69	64	76	60	73	71	75	75	68	77	69	70	72	
<b>Agronomic features</b>																										
Resistance to lodging without PGR +	5	7	8	8	7	6	6	8	3	6	7	4	8	8	7	8	7	8	5	7	7	7	9	8	9	1.5
Resistance to lodging with PGR	8	8	9	9	8	7	8	9	6	7	8	6	8	9	7	8	8	9	6	7	8	9	9	9	9	1.3
Height without PGR (cm)	97	86	84	89	86	89	96	95	85	88	90	95	82	87	91	91	83	83	91	85	88	86	85	81	85	1.2
Ripening ( days +/- Claire, -ve = early)	0	-1	+1	+1	0	+1	0	0	-1	-3	+1	+1	+2	+2	0	+1	+1	+2	0	+1	+2	0	+2	+1	+2	0.7
Resistance to sprouting	7	6	4	5	-	8	-	8	2	8	-	5	-	5	4	6	5	7	6	5	6	6	6	4	6	2.0
<b>Disease resistance</b>																										
Mildew	8	7	2	5	7	4	8	5	8	8	9	6	8	6	4	7	7	7	6	7	8	6	7	5	7	1.0
Yellow rust	9	9	8	5	6	9	9	9	8	7	3	9	4	5	9	6	3	5	4	3	5	8	3	4	3	(1.1)
Brown rust	6	7	4	7	5	5	6	5	5	3	9	5	9	4	8	3	9	6	9	9	8	9	9	9	9	(1.5)
<i>Septoria nodorum</i>	5	7	7	7	6	6	5	6	6	5	8	7	6	5	7	4	6	5	7	6	5	6	5	6	5	(2.5)
<i>Septoria tritici</i>	6	6	6	6	5	5	5	6	5	6	7	6	5	4	7	3	5	4	5	5	4	5	5	4	5	(0.8)
Eyespot	5	4	3	5	7	6	5	4	4	3	5	6	8	7	7	6	4	7	5	4	5	3	7	6	5	(3.3)
<i>Fusarium</i> ear blight	5	6	6	5	6	6	6	7	4	7	6	6	6	6	7	5	5	5	8	5	6	6	6	5	6	(3.5)

On the 1-9 scales high figures indicate that a variety shows the character to a high degree

C = Yield control

Average LSD 5%. Varieties that are more than one LSD apart are significantly different at the 5% confidence level. () bracketed LSDs are approximate

+ The lodging scale without PGR has been extended from that used previously so that Charger moves from 5 to 3.

# The regional yields include supplementary trials (1997 to 2001) which may not have received the full fungicide protocol. Comparisons of variety performance across regions are not valid.



**HGCA**  
**RECOMMENDED LIST WINTER WHEAT 2003**  
**SUPPLEMENTARY DATA**

	P2	C	*		P1	C	P1	P2	*		P1	P1	C	C		P2		C	P1	*	*	*	Average LSD 5%			
	X119.	Malacca	Shamrock	Hereward	Einstein	Option	Scorpion 25	Solstice	Charger	Soissons	Robigus	Deben	Wizard	Consort	Claire	Riband	Access	Tanker	Biscay	Napier	Savannah	Richmond	Madrigal	Equinox	Buchan	
<b>End-use group</b>	<b>Nabim Group 1</b>				<b>Nabim Group 2</b>						<b>Nabim Group 3</b>						<b>Nabim Group 4</b>									
Scope of recommendation	UK	UK	UK	UK	UK	UK	East	UK	UK	South	UK	UK	East	UK	UK	North	UK	UK	UK	UK	UK	UK	North	UK	North	
<b>Breeder/ Agent</b>																										
Breeder	Adv	CPB	Adv	Mon	Nick	Mon	Adv	Adv	Mon	Depr	CPB	Nick	CPB	Mon	Nick	Mon	CPB	Els	CPB	Mon	Adv	Ceb	Mon	CPB	Nick	
Agent	Adv	CPB	Adv	Mon	Nick	Mon	Adv	Adv	Mon	Els	CPB	Nick	CPB	Mon	Nick	Mon	CPB	Els	CPB	Mon	Adv	Ceb	Mon	CPB	Nick	
<b>Annual yield as % control</b>																										
1998 treated (10.2 t/ha)	-	97	90	88	-	101	-	-	96	88	-	101	-	102	98	99	-	104	104	101	103	-	99	98	96	2.7
1999 treated (11.2 t/ha)	105	97	93	89	-	100	-	101	97	85	-	104	-	100	101	96	106	102	101	102	102	103	101	99	98	2.5
2000 treated (11.2 t/ha)	102	97	91	88	100	100	102	98	96	89	104	102	101	100	100	102	103	104	99	103	103	100	100	101	97	2.5
2001 treated (9.4 t/ha)	103	96	95	94	103	104	103	101	98	91	106	106	103	99	100	98	103	103	105	104	101	103	99	100	102	2.8
2002 treated (10.1 t/ha)	100	97	95	94	105	103	99	100	99	89	105	103	101	98	100	97	102	102	106	103	102	104	98	97	97	2.3
<b>Rotational position</b>																										
First cereal treated (10.6 t/ha)	102	96	93	90	103	101	101	99	96	88	105	103	101	100	101	98	103	103	103	102	102	102	100	101	98	2.5
Second and more treated (9.1 t/ha)	100	97	93	91	104	101	98	100	98	90	101	104	101	100	99	98	103	103	102	104	103	102	98	96	98	3.5
<b>Sowing date (most trials were sown after 1 Oct)</b>																										
Before Oct treated (9.7 t/ha)	-	97	93	90	-	-	-	-	98	88	-	-	-	98	101	97	-	-	-	103	100	-	98	98	97	6.7
Late Autumn treated (9.1 t/ha)	-	96	93	91	-	100	-	-	99	92	-	105	-	99	101	97	-	102	104	101	103	-	-	-	-	4.2
<b>Soil type (about 50% of trials are on medium soils)</b>																										
Light soils treated (10.0 t/ha)	101	96	92	89	103	102	101	98	97	87	105	105	101	100	100	99	103	102	103	102	101	101	99	100	98	3.6
Heavy soils treated (10.1 t/ha)	101	96	93	91	102	100	99	98	97	89	103	102	99	100	101	97	102	103	103	103	103	101	99	99	99	3.5
<b>Agronomic features</b>																										
Lodging % without PGR	7.1	1.6	1.2	0.9	2.2	4.1	4.4	1.0	16.6	5.1	2.5	12.1	1.2	0.7	2.2	1.5	2.1	1.6	7.2	3.1	1.9	1.9	0.5	0.8	0.5	
Lodging % with PGR	1.5	0.8	0.3	0.3	0.9	2.3	0.9	0.3	5.0	2.9	1.3	6.4	0.9	0.5	1.9	0.8	1.0	0.5	5.3	1.9	1.1	0.2	0.4	0.4	0.3	

All yields are taken from treated trials receiving a full fungicide and PGR programme

**Key to breeder/agent codes:**

Adv = Advanta Seeds UK ([www.advantaseeds.co.uk](http://www.advantaseeds.co.uk))

Ceb = Cebeco Seed Innovations Ltd ([info@cebeco-seeds.co.uk](mailto:info@cebeco-seeds.co.uk))

CPB = CPB Twyford Ltd ([www.cpb-twyford.co.uk](http://www.cpb-twyford.co.uk))

Depr = Maison Florimond Desprez, France

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

Mon = Monsanto, PBIC Seeds ([www.monsanto-ag.co.uk](http://www.monsanto-ag.co.uk))

Nick = Nickerson (UK) Ltd ([www.nickersonuk.com](http://www.nickersonuk.com))