HGCA RECOMMENDED LIST WINTER WHEAT 2004/05

MARKET OPTIONS AND GRAIN QUALITY

		C		P2	P1	C		*		P1		P2	P1	P2	C	C	P1	P1	P1			C	P2		P1	*	
	Xi19	Malacca	Hereward	Einstein	Cordiale	Option	Solstice	Charger	Soissons	Dickson	Deben	Robigus	Nijinsky	Wizard	Claire	Consort	Istabraq	Gladiator	Smuggler	Access	Napier	Tanker	Richmond	Savannah	Welford $	Equinox	Riband	Average LSD 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	UK	UK	E&W	UK	UK	UK	UK	East	UK	UK	UK	UK	UK	UK	UK	UK	UK	UK	Specific	UK	North	
UK treated yield (% control, 10.3 t/ha)	102	96	91	103	102	102	100	98	89	104	104	103	103	101	100	99	106	105	104	103	103	103	103	102	101	99	98	3.0
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	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
UK biscuit, cake-making	-	-	-	-	-	-	-	-	-	Y	Y	Y	Y	Y	Y	Y	-	-	-	-	-	-	-	-	-	-	Y	
UK starch/ distilling	-	-	-	-	-	-	-	-	-	(Y)	(Y)	Y	(Y)	Y	Y	Y	-	-	-	-	-	-	-	-	-	-	Y	
BCE Export bread-making	(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	-	-	-	-	-	-	-	-	-	-	Y	
Year first listed	02	99	91	03	04	01	02	97	95	04	01	03	04	03	99	95	04	04	04	02	00	01	03	98	04	97	89	
Grain quality																												
Endosperm texture	Hard	Hard	Hard	Hard	Hard	Hard	Hard	Hard	Hard	Soft	Soft	Soft	Soft	Soft	Soft	Soft	Soft	Hard	Hard	Hard	Hard	Hard	Hard	Hard	Hard	Hard	Soft	
Protein content (%)	11.7	12.1	13.1	11.9	12.1	11.9	12.1	11.9	12.8	11.4	11.1	11.4	11.6	11.7	11.6	11.6	11.1	11.7	11.6	11.1	11.4	11.6	11.7	11.1	11.6	11.6	11.6	0.2
Hagberg falling number	280	305	243	267	309	272	263	209	258	241	196	186	214	217	238	219	191	257	251	173	148	257	249	227	242	205	185	16
Specific weight (kg/hl)	76.0	75.6	79.5	77.4	79.1	78.8	78.4	76.1	79.1	77.5	76.4	76.9	75.1	77.2	76.8	77.2	78.4	77.3	75.3	75.8	76.0	75.5	78.7	77.0	74.6	74.4	75.0	0.6
1000 grain weight (g)	53.1	47.1	49.3	51.6	48.3	49.0	52.1	48.4	47.4	52.4	54.7	46.6	48.2	52.5	49.3	51.5	50.3	47.8	46.1	52.1	55.6	55.3	51.1	57.3	44.5	55.8	55.3	2.1
Zeleny volume	41.5	45.5	51.7	(39.6)	(43.0)	46.2	44.1	44.0	54.8	26.1	26.0	(25.3)	27.7	(29.3)	22.9	21.6	13.0	25.0	52.0	17.1	21.5	23.0	41.8	21.0	23.8	22.4	16.4	5.5
Chopin alveograph W	177	209	233	170	227	189	185	175	297	106	122	96	103	155	100	110	71	84	231	69	78	84	176	84	73	81	76	25
Chopin alveograph P/L	0.8	0.8	0.6	0.5	0.6	1.5	0.8	0.5	0.8	0.3	0.8	0.3	0.3	0.5	0.3	0.3	0.2	0.6	1.1	1.6	1.2	1.7	1.2	2.0	0.9	0.8	0.5	0.3

P1, P2 first and second year of recommendation
C = Yield control
(Y) = May be suited to that market
E&W = Specific recommendation for dry (East) and wet (West) Regions
* Variety no longer in trials
Y = Suited to that market
() Limited data

Average LSD (least significant difference) 5%. Varieties that are more than one LSD apart are significantly different at the 5% confidence level.

$ Welford is a specific recommendation for growers wanting a variety with proven genetic resistance to orange wheat blossom midge

HGCA RECOMMENDED LIST WINTER WHEAT 2004/05

YIELD, AGRONOMY AND DISEASE RESISTANCE

	X19	Malacca	Hereward	Einstein	Cordiale	Option	Solstice	Charger	Soissons	Dickson	Deben	Robigus	Nijinsky	Wizard	Claire	Consort	Istabraq	Gladiator	Smuggler	Access	Napier	Tanker	Richmond	Savannah	Welford $	Equinox	Riband	Average LSD 5%
		C		P2	P1	C		*		P1		P2	P1	P2	C	C	P1	P1	P1			C	P2		P1	*		
End-use group	nabim Group 1			nabim Group 2						nabim Group 3							nabim Group 4											
Scope of recommendation	UK	UK	UK	UK	UK	UK	UK	UK	E&W	UK	UK	UK	UK	East	UK	UK	UK	UK	UK	UK	UK	UK	UK	UK	Specific	UK	North	
Fungicide treated grain yield as % treated control																												
United Kingdom (10.3 t/ha)	102	96	91	103	102	102	100	98	89	104	104	103	103	101	100	99	106	105	104	103	103	103	103	102	101	99	98	3.0
North region (10.0 t/ha) #	99	96	88	103	101	102	99	97	87	103	104	102	101	99	98	100	107	105	103	105	104	104	102	104	100	98	100	3.9
Dry (East) region (10.4 t/ha) #	103	96	92	103	102	101	100	98	89	104	104	105	104	102	101	100	106	104	105	104	103	103	102	102	103	101	97	2.7
Wet (West) region (10.3 t/ha) #	102	96	91	105	102	101	101	97	89	105	105	104	105	100	102	99	107	105	105	102	103	103	103	101	100	99	97	3.0
Untreated grain yield as % treated control in comparable trials																												
United Kingdom	77	73	74	82	76	79	78	76	72	77	82	83	80	73	78	69	82	80	84	75	78	74	79	72	77	73	64	4.4
Agronomic features																												
Resistance to lodging without PGR	5	7	8	7	8	6	8	3	6	7	4	7	7	8	7	8	5	6	5	7	7	8	7	7	8	9	8	1.5
Resistance to lodging with PGR	7	8	9	8	8	7	9	6	7	8	5	8	8	8	7	9	7	8	7	8	7	9	9	8	9	9	8	1.0
Height without PGR (cm)	94	84	87	86	80	88	91	83	86	89	92	88	85	81	89	85	93	83	92	81	82	82	84	86	77	79	88	1.5
Ripening (days +/- Claire, -ve = early)	0	-1	+1	0	-1	+1	+1	-1	-3	+1	+2	+1	0	+1	0	+2	+3	0	0	+1	+1	+2	0	+2	+1	+1	+2	0.7
Resistance to sprouting	7	6	6	(7)	-	8	8	3	8	-	5	(5)	-	(4)	5	6	-	-	-	6	5	7	6	6	-	4	6	1.9
Disease resistance																												
Mildew	8	7	5	7	8	4	4	8	7	5	6	9	6	7	4	6	5	7	7	7	7	6	5	7	6	5	6	1.1
Yellow rust	9	9	5	5	(3/4)~	9	9	7	6	4	9	3	8	4	9	5	9	9	9	4	4	5	7	4	6	4	6	(1.0)
Brown rust	7	7	6	6	4	6	4	4	3	4	5	9	7	9	8	4	7	8	7	8	9	6	9	8	6	9	3	(1.7)
Septoria nodorum	5	7	7	6	(6)	6	6	6	5	(5)	7	8	(7)	6	7	5	(8)	(8)	(8)	6	6	5	6	5	(7)	6	4	-
Septoria tritici	6	5	6	5	4	5	5	5	6	4	6	7	6	5	6	4	6	5	7	5	5	4	5	4	5	4	3	(1.2)
Eyespot	4	3	5	6	5	6	3	3	2	4	5	4	6	7	6	7	5	5	4	4	4	6	3	4	8	6	6	(3.3)
Fusarium ear blight	5	6	5	7	7	6	7	4	7	5	6	6	7	6	7	6	7	6	7	5	5	5	6	6	5	6	6	(4)

On the 1-9 scales high figures indicate that a variety shows the character to a high degree (I.e. high resistance) C = Yield control () Limited data, bracketed LSDs are approximate

Average LSD (least significant difference) 5%. Varieties that are more than one LSD apart are significantly different at the 5% confidence level. E&W = Specific recommendation for dry (East) and wet (West) Regions

The regional yields include supplementary trials (1999 to 2001) which may not have received the full fungicide protocol. Comparisons of variety performance across regions are not valid.

~ (3/4) Cordiale is susceptible to an older race of yellow rust but a final rating cannot be given yet.

$ Welford is a specific recommendation for growers wanting a variety with proven genetic resistance to orange wheat blossom midge

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SUPPLEMENTARY DATA

		C		P2	P1	C		*		P1		P2	P1	P2	C	C	P1	P1	P1			C	P2		P1	*	
	Xi19	Malacca	Hereward	Einstein	Cordiale	Option	Solstice	Charger	Soissons	Dickson	Deben	Robigus	Nijinsky	Wizard	Claire	Consort	Istabraq	Gladiator	Smuggler	Access	Napier	Tanker	Richmond	Savannah	Welford	Equinox	Riband	Average LSD 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	UK	UK	E&W	UK	UK	UK	UK	East	UK	UK	UK	UK	UK	UK	UK	UK	UK	UK	Specific	UK	North	
Breeder/ Agent																												
Breeder	Adv	CPB	Mon	Nick	CPB	Mon	Adv	Mon	Depr	Ceb	Nick	CPB	Nick	CPB	Nick	Mon	Nick	Mon	Adv	CPB	Mon	Els	Ceb	Adv	Els	CPB	Mon	
Agent	Adv	CPB	Mon	Nick	CPB	Mon	Adv	Mon	Els	Ceb	Nick	CPB	Nick	CPB	Nick	Mon	Nick	Mon	Adv	CPB	Mon	Els	Ceb	Adv	Els	CPB	Mon	
Annual yield as % control																												
1999 treated (11.2 t/ha)	104	97	89	-	-	100	101	97	86	-	104	-	-	-	101	100	-	-	-	106	102	102	103	102	-	99	96	2.4
2000 treated (11.2 t/ha)	102	96	88	100	-	100	98	96	89	-	102	103	-	101	99	100	-	-	-	103	103	104	100	103	-	100	102	2.5
2001 treated (9.6 t/ha)	103	95	94	103	103	104	100	98	91	106	105	105	104	103	100	99	103	106	102	103	104	102	102	100	103	99	98	3.0
2002 treated (10.3 t/ha)	100	97	94	105	102	103	100	99	89	103	103	105	106	101	101	98	107	104	106	102	103	102	104	102	101	97	97	2.7
2003 treated (10.0 t/ha)	105	95	94	105	102	102	102	-	93	105	106	104	103	101	101	99	110	106	106	103	104	103	104	102	103	-	100	2.2
Rotational position																												
First cereal treated (10.7 t/ha)	103	96	91	103	101	101	100	97	90	105	104	106	104	101	101	99	106	105	105	103	103	103	102	102	103	101	98	2.7
Second and more treated (9.2 t/ha)	101	96	92	105	104	102	101	99	89	104	105	99	101	101	99	100	107	106	105	103	104	103	102	104	101	96	98	3.3
Sowing date (most trials were sown after 1 Oct)																												
Before Oct treated (9.9 t/ha)	104	95	92	105	102	103	102	(86)	(89)	105	106	103	103	102	102	99	109	107	107	104	104	101	103	101	101	100	100	4.8
Late Autumn treated (9.4 t/ha)	102	97	92	(103)	-	100	99	101	-	-	105	(104)	-	(100)	101	100	-	-	-	101	102	102	(104)	-	-	-	-	6.4
Soil type (about 50% of trials are on medium soils)																												
Light soils treated (10.1 t/ha)	102	96	90	104	102	102	99	97	89	104	105	105	104	101	101	99	108	104	106	103	103	102	102	101	100	101	98	3.8
Heavy soils treated (10.6 t/ha)	102	96	91	103	102	101	100	97	89	105	104	103	103	101	101	99	106	105	105	103	103	103	102	103	103	99	98	2.6
Agronomic features																												
Lodging % without PGR	6.2	1.6	0.7	2.1	1.4	4.0	1.0	14.9	2.9	1.9	11.8	2.3	2.1	1.4	2.4	0.9	7.1	3.2	6.7	1.7	2.3	1.0	1.6	1.5	0.9	0.5	1.1	
Lodging % with PGR	1.8	0.7	0.1	0.8	0.7	1.8	0.3	3.9	1.5	1.5	5.9	1.3	0.7	0.8	1.9	0.4	2.0	1.2	2.6	0.8	1.6	0.4	0.2	1.0	0.4	0.2	0.8	
Latest safe sowing date	(End Feb)	End Jan	End Jan	(End Jan)	-	End Feb	(End Jan)	End Jan	Mid Feb	-	Mid Feb	(End Feb)	-	(End Jan)	End Feb	End Jan	-	-	-	End Jan	End Jan	End Jan	-	End Jan	-	End Jan	End Jan	

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

() Limited data

Key to breeder/agent codes:

Adv = Advanta Seeds UK Ltd (www.advantaseeds.co.uk)
Ceb = Cebeco Seed Innovations Ltd (info@cebeco-seeds.co.uk)
CPB = CPB Twyford Ltd (www.cpb-twyford.co.uk)
Depr = Maison Florimond Desprez, France
Els = Elsoms Seeds Ltd (www.elsoms.com)
Mon = Monsanto UK Ltd, PBIC Seeds (www.monsanto-ag.co.uk)
Nick = Nickerson (UK) Ltd (www.nickersonuk.com)