



DAFM Winter Cereal Trials 2014



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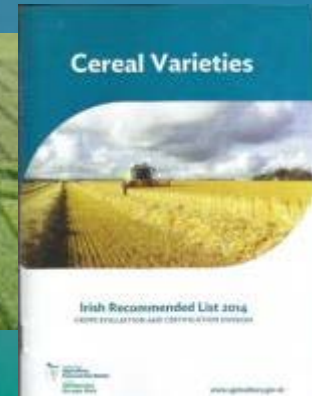
Backweston Farm,
Celbridge, Co. Kildare

DAFM Cereal Variety Trials

- Carry out NL trials to comply with EU and National Legislation
- To identify varieties most suitable for growing under Irish farming conditions.



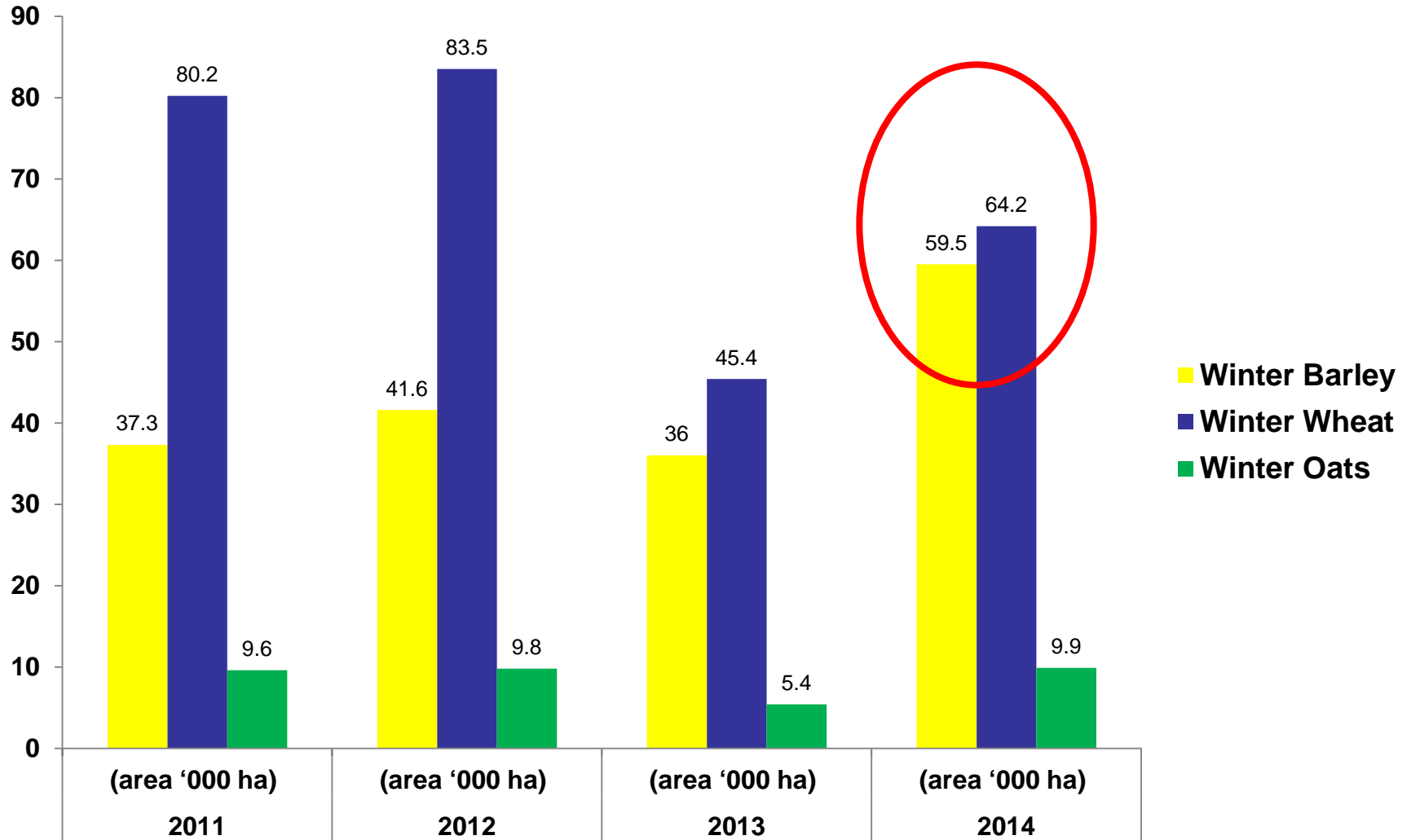
Varietal Choice ?



Sowing Date?



Cereal Production 2011 - 2014



Winter Barley NL1 Trial 2014



- 4 sites - 3 Centres (Kildare, Kilkenny, Cork)
1 Outside Site (Cork)
- 18 varieties
- 6 Row Barley – 5 in trial (1 Hybrid & 4 Conventional)



**NEW
FOR
2014!**



**DAFM Winter Cereal
Variety Trials 2014**

Winter Barley RL Trial 2014



- 5 sites -
 - 2 Centres (Kildare, Cork)
 - 3 Outside Sites (Meath, Offaly, Cork)
 - 18 varieties -
 - 4 Fully Recommended – Leibniz, KWS Cassia, Saffron, Volume
 - 6 Row Barley – 9 in trial (5 Hybrids & 4 conventional)
- Candidate Varieties 2014:
KWS Tower & SY Wootan



Winter Barley RL Trial 2014

Variety	Varietal type	RL Status	% Seed entered into cert. for 2015	Agt
Leibniz	6-R	R	3 %	ST
KWS Cassia	2-R	R	51 %	GC
Saffron	2-R	R	-	GC
Volume	6-R (H)	R	13 %	ST
KWS Tower	2-R	Can	30 %	GC
SY Wootan	6-R (H)	Can	-	ST
Quadra	6-R (H)		2 %	ST
KWS Infinity	2-R		1%	GC

Winter Barley RL Trial 2014

Variety	RL Status	3 yr average <i>(C = 9.5 t/ha/ 3.8 t/ac)</i>	RL Yield 2014 (C = 10.2t/ha /4.1 t/ac (Leibniz, Cassia)	RL Yield 2013 (C = 9.7t/ha /3.9 t/ac Saff/Leibniz, Cassia)	RL Yield 2012 (C = 8.6t/ha /3.5t/ac Amer/Saff t/ha)
Leibniz	R 6R	104	102	105	105
KWS Cassia	R	101	98	101	105
Saffron	R	95	93	94	99
Volume	R 6 R (H)	112	107	113	115
KWS Tower	C 2-R	104	103	103	106
SY Wootan	C - (6H)	114	109	112	120

Winter Barley RL Trial 2014

Variety	Agt	Type	Year	Yield 14 (C = 10.2t/ha /4.1 t/ac)	Yield 13 (C = 9.7t/ha /3.9 t/ac)
Galation	ST	6R (H)	2	106	108
Quadra	ST	6R (H)	2	110	111
Cassablanca	ST	2R	2	101	100
KWS Infinity	GC	2R	2	104	104
Fletcher	ST	6R (H)	1	110	
F24125	ST	6R	1	103	
Crescent	ST	2R	1	92	
Amistar	ST	6R	1	100	
SJ103327	GC	2R	1	102	
SJ115158	GC	2R	1	102	
ANJA	GC	6R	1	101	
05 5041/2	G	2R	1	97	

AGRONOMIC & QUALITY CHARACTERISTICS*	RECOMMENDED 2014			
	KWS CASSIA	LEIBNIZ	SAFFRON	VOLUME
Relative Yield	101	104	95	113
Shortness of straw	7	4	7	4
Resistance to Lodging	7	7	8	6
Straw Breakdown	6	5	7	4
Earliness of ripening	6	6	5	6
Resistance to:				
Mildew	5	6	4	6
<i>Rhynchosporium</i>	5	7	4	7
Brown Rust	7	4	7	6
Net Blotch	7	7	7	7
Grain quality:				
1000 grain weight (g)	59.3	52.5	57.8	46.1
Hectolitre weight (kg/hl)	69.1	65.3	68.7	66.7
Year First Listed	2011	2010	2007	2012

2015 Recommended List ??

		3 yr average	2014	2013	2012
KWS Tower	C 2-R	104	103	103	106
SY Wootan	C - (6H)	114	109	112	120

(C = 10.2t/ha /4.1 t/ac (Leibniz, Cassia))

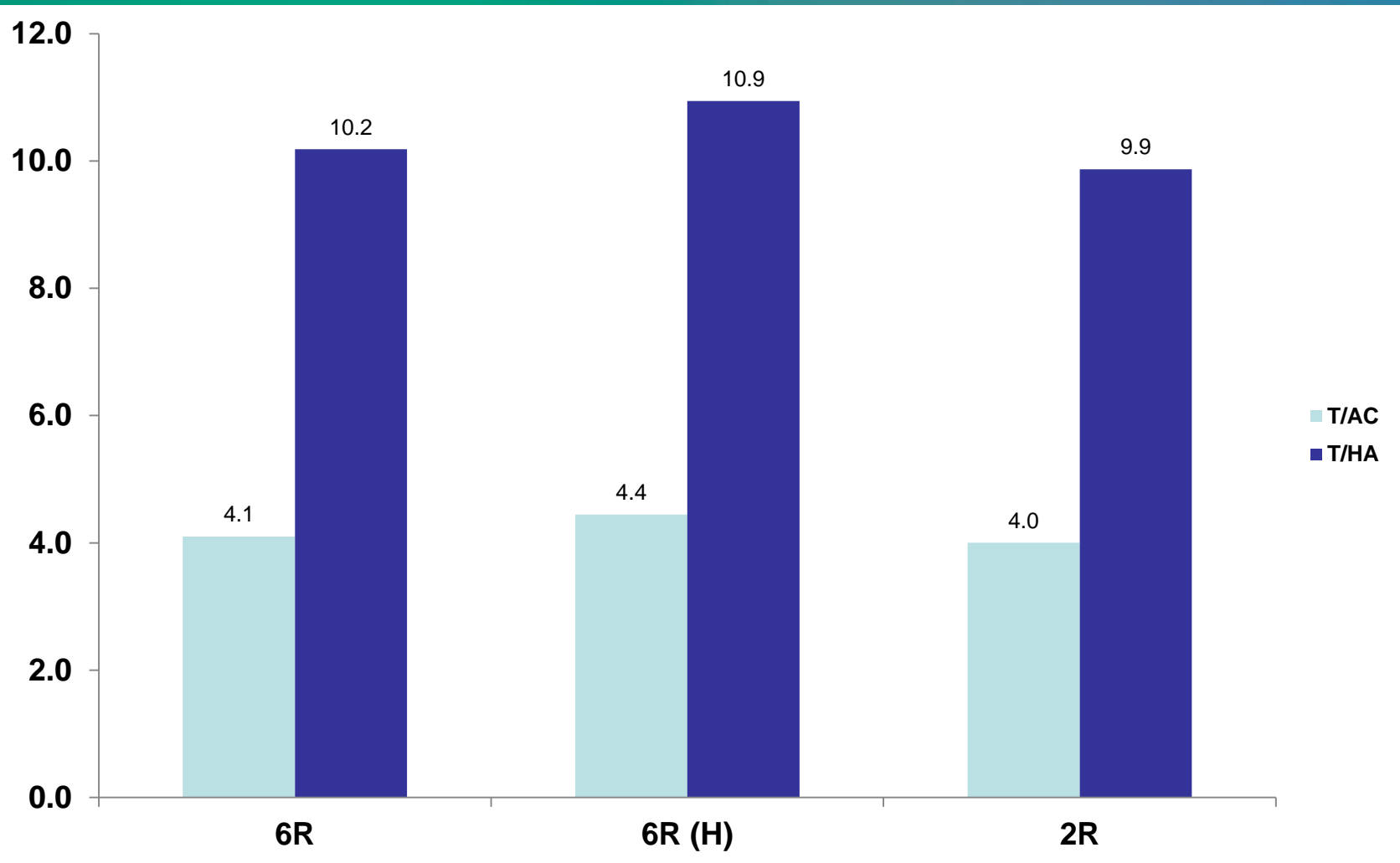
AGRONOMIC & QUALITY CHARACTERISTICS*	RECOMMENDED 2015				PROVISIONALLY RECOMMENDED
	KWS CASSIA	LEIBNIZ	SAFFRON	VOLUME	KWS TOWER
Relative Yield (C=9.5t/ha)	99	101	94	109	101
Shortness of Straw	7	4	7	4	(7)
Resistance to Lodging	7	7	8	6	(7)
Straw Breakdown	6	4	7	4	(6)
Earliness of Ripening	6	6	5	6	(6)
Resistance to:					
Mildew	5	6	4	6	(6)
<i>Rhynchosporium</i>	4	7	4	7	(6)
Brown Rust	7	3	7	6	(6)
Net Blotch	7	7	7	7	(6)
Grain quality:					
1000 grain weight (g)	58.5	51.4	57.5	45.2	60.0
Hectolitre weight (kg/hl)	67.3	63.6	67.4	65.4	64.8
Year First Listed	2011	2010	2007	2012	2015

Treated vs Untreated Yield (3 Sites - 2014)

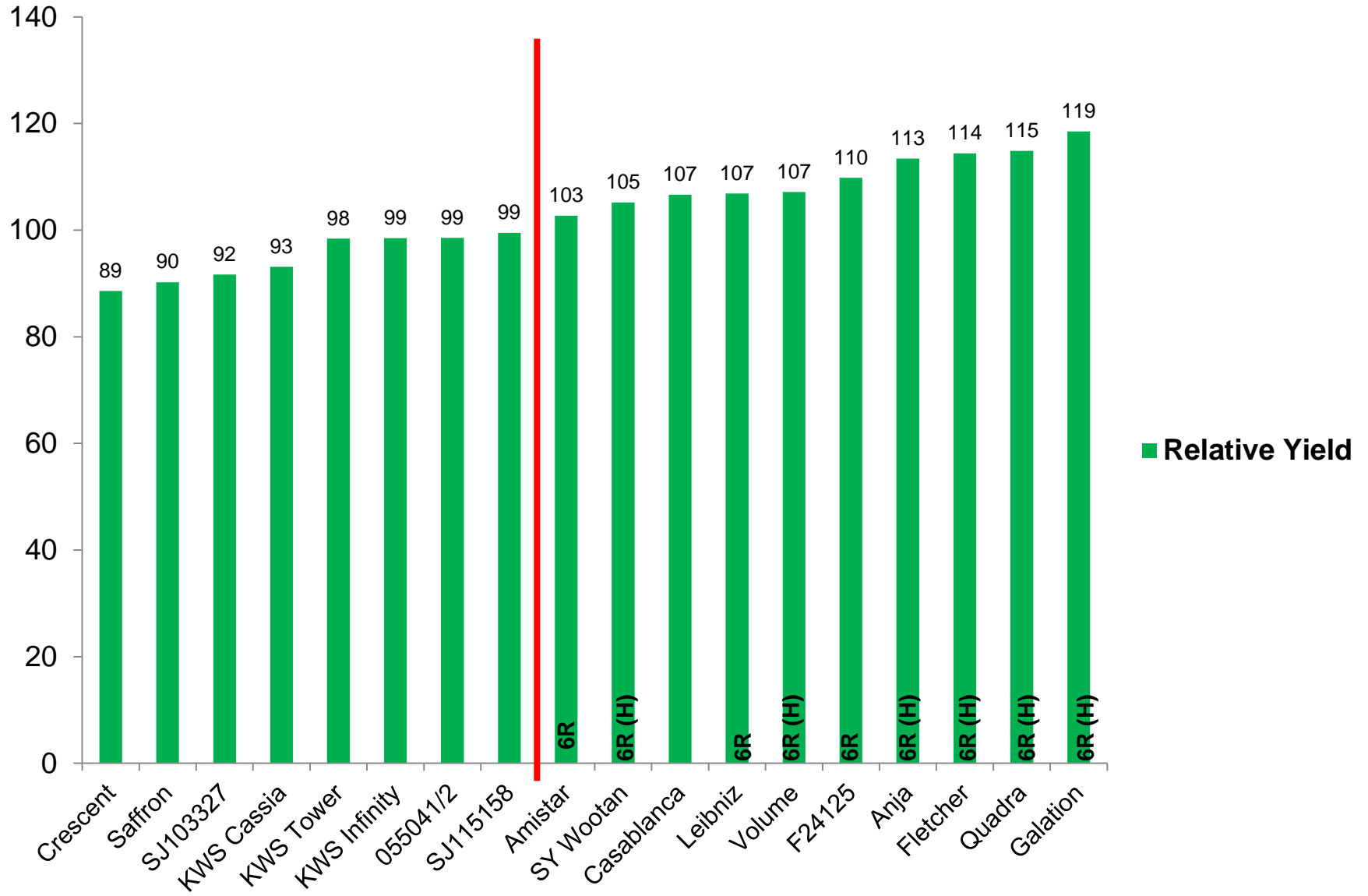
Variety		Relative Yield Untreated yield (5.6t/ha)	% Response to Fungicides Treated yield (11.0t/ha)
Leibniz	6R	86	49
KWS Cassia	2R	114	28
Saffron	2R	113	29
Volume	6R (H)	111	37
KWS Tower	2R	104	38
SY Wootan	6R (H)	115	36
Galation	6R (H)	117	32
Quadra	6R (H)	104	41
Casablanca	2R	114	32
KWS Infinity	2R	89	45
Fletcher	6R (H)	104	43
F24125	6R	135	22
Crescent	2R	93	39
Amistar	6R	94	45
SJ103327	2R	91	46
SJ115158	2R	106	35
Anja	6R	122	25
055041/2	2R	93	41



WB Varietal Type 2013-2014



Relative Yield 2014 – 1 Site (C = 8.5t/Ha)



Winter Oat RL/NL Trial 2014



- 5 sites - 3 Centres (Kildare, Kilkenny, Cork)
2 Outside sites (Kildare, Offaly)

- 11 varieties – 2 Fully Recommended – Barra, Husky



Provisionally Recommended : None

Candidate varieties: Oxalis & Vodka

Winter Oat RL/NL Trial 2014

Variety	RL Status	% Seed entered into certification for 2015 Winter & Spring 2014	Agt
Barra (S)	R	38 %	GC
Husky	R	43 %	ST
Oxalis	C	-	ST
Vodka	C	-	ST

Winter Oat RL/NL Trial 2014

Variety	Yr	Agt	3 yr average (C = 8.3t/ha 3.4t/ac)	Yield 14 (C = 8.3t/ha 3.4 t/ac Barra/Husky)	Yield 13 (C = 8.2t/ha 3.3 t/ac Barra/Husky)	Yield 12 (C =8.3 t/ha Barra/Husky 3.4)
Barra	R	GC	94	96	95	92
Husky	R	ST	106	104	105	108
Oxalis	C	ST	108	112	106	107
Vodka	C	ST	100	95	102	102



AGRONOMIC & QUALITY CHARACTERISTICS*	RECOMMENDED 2014	
	BARRA	HUSKY
Relative Yield ♦	94	106
Shortness of straw	6	7
Resistance to lodging	4	7
Straw breakdown	4	5
Earliness of ripening	5	8
Winter hardiness**	3	5
Resistance to:		
Mildew	3	6
Crown rust	4	4
Grain quality:		
Kernel content (%)	69.2	70.2
1000 grain weight (g)	37.5	37.6
Hectolitre weight (kg/hl)	58.2	58.2
Year First Listed	1986	2010

AGRONOMIC & QUALITY CHARACTERISTICS*	RECOMMENDED 2015		PROVISIONALLY RECOMMENDED
	BARRA	HUSKY	VODKA
Relative Yield ♦	94	106	100
Shortness of straw	6	7	(8)
Resistance to lodging	4	7	(6)
Straw breakdown	4	5	(7)
Earliness of ripening	5	8	(4)
Winter hardiness**	3	5	-
Resistance to:			
Mildew	3	6	(6)
Crown rust	4	4	(6)
Grain quality:			
Kernel content (%)	68.2	68.9	65.9
1000 grain weight (g)	37.9	37.7	38.1
Hectolitre weight (kg/hl)	56.2	55.9	53.3
Year First Listed	1986	2010	2015

Winter Wheat RL 2014

8 sites -

3 - Centres (Kildare, Kilkenny , Cork,)

5 - Outside sites {Louth, Carlow,
Cork (2), Waterford}

18 varieties –

5 Fully Recommended –
Einstein, Cordiale, JB Diego,
Avatar, SY Epsilon.

2 Provisionally Recommended –
KWS Lumos & Dunmore

4 Candidate varieties:

Evolution, Leeds,
Weaver, Monterey



Winter Wheat: Seed entered into Certification

Variety	RL Status (2014)	% Seed entered into certification for 2015	Agt
Einstein	R	-	ST
Cordiale	R	2.9	GC
JB Diego	R	34	G
SY Epson	R	-	ST
Avatar	R	18	GC
KWS Lumos	PR	24	GC
Dunmore	PR	4	ST
Evolution	Candidate	-	GC
Leeds	Candidate	11	ST
Weaver	Candidate	3	G
Monterey	Candidate	-	F & P M

Winter Wheat RL Trials 2014

Variety	Yr	Agt	3 yr average (C =9.9 t/ha/ 4.0t/ac)	**Yield 14 (C =10.9 t/ha/ 4.4t/ac)	**Yield 13 (C = 10.6t/ha/ 4.3t/ac)	Yield 12 (C = 8.1 t/ha 3.2t/ac)
Einstein	R	ST	100	99	101	99
Cordiale	R	GC	99	96	99	101
JB Diego	R	G	102	105	103	101
SY Epson	R	ST	102	102	100	104
Avatar	R	GC	106	107	105	107
KWS Lumos	PR	GC	102	103	101	103
Dunmore	PR	ST	103	102	100	105
Evolution	C	GC	102	102	101	102
Leeds	C	ST	107	104	103	112
Weaver	C	G	106	107	105	105
Monterey	C	F&PM	104	106	99	106

Winter Wheat RL Trials 2014

Variety	Year	Agent	Yield 14 (C = 10.9t/ha/ 4.4 t/ac)	Yield 13 (C =10.6 t/ha/ 4.3 t/ac)	Yield 12 (C = 8.1 t/ha 3.3 t/ac)
Tentation	1	ST	102	(103)	-
LGW87	1	ST	109	(103)	-
Britannia	1	ST	101	(102)	-
Jorvik	1	GC	104	(107)	-
KWS LEON	1	GC	105	(106)	-
KWS Lilli	1	GC	107	(105)	-
Rockefeller	1	GC	104	(108)	-

AGRONOMIC & QUALITY CHARACTERISTICS*	RECOMMENDED 2014						PROVISIONALLY RECOMMENDED	
	AVATAR	CORDIALE	EINSTEIN	JB DIEGO	LION	SY EPSON	DUNMORE	KWS LUMOS
Relative Yield ♦	105	99	101	105	102	102	102	103
Shortness of straw	5	8	7	6	5	6	(5)	(7)
Resistance to lodging	6	8	7	6	5	8	(5)	(8)
Straw breakdown	7	6	8	7	7	7	(7)	(6)
Earliness of ripening	5	8	7	6	6	6	(5)	(6)
Resistance to:								
Mildew	5	6	6	6	4	7	(6)	(8)
Septoria spp.	6	4	4	6	7	7	(6)	(6)
Yellow rust	7	7	7	7	5	7	(7)	(8)
Fusarium ear blight	6	6	6	6	6	6	(6)	(5)
Sprouting	5	7	7	7	5	5	(6)	(7)
Quality:								
Grain Protein % (15%MC)	9.9	11.2	10.8	10.4	10.1	10.7	10.0	10.4
Hagberg Falling No.♠	-	357	299	-	-	-	-	-
Bread-making quality	-	Good	Mod	-	-	-	-	-
1000 grain weight (g)	46.4	43.9	48.7	48.1	44.9	46.2	45.2	43.4
Hectolitre weight (kg/hl)	71.9	73.5	72.8	71.9	72.0	71.6	71.2	73.1
Market +	F	Br	Br	F	F	F	F	F
Year First Listed	2013	2006	2004	2010	2008	2013	2014	2014

Candidate Varieties 2015

- Evolution
- Leeds - 11% seed
- Weaver - 3 % Seed
- Monterey

AGRONOMIC & QUALITY CHARACTERISTICS*	RECOMMENDED 2015							PROVISIONALLY RECOMMENDED	
	AVATAR	CORDIALE	DUNMORE	EINSTEIN	JIB DIEGO	KWS LUMOS	SY EPSON	LEEDS	WEAVER
Relative Yield (C=10.1t/ha)	106	98	101	99	103	102	101	103	106
Shortness of straw	5	8	5	7	6	7	6	(6)	(5)
Resistance to lodging	7	8	5	7	6	8	8	(8)	(5)
Straw breakdown	7	6	7	8	7	7	7	(7)	(6)
Earliness of ripening	5	8	5	7	6	7	6	(5)	(6)
Resistance to:									
Mildew	5	6	6	6	6	8	7	(3)	(6)
Septoria spp.	5	4	6	4	5	5	7	(4)	(5)
Yellow rust	7	7	6	7	7	8	7	(7)	(7)
Fusarium ear blight	6	6	6	6	6	5	6	(6)	(5)
Sprouting	5	7	6	7	7	7	5	(5)	(6)
Quality:									
Grain Protein % (15%MC)	10.3	11.4	10.4	11.2	10.8	10.7	11.1	10.0	9.8
Hagberg Falling No.♠	-	315	-	249	-	258	294	193	271
Bread-making quality	-	Good	-	Mod	-	-	-	-	-
1000 grain weight (g)	45.2	42.7	42.6	47.3	47.1	41.8	44.9	41.6	46.9
Hectolitre weight (kg/hl)	72.9	74.2	71.3	72.7	73.2	73.8	72.6	71.9	72.0
Market +	F	Br	F	Br	F	F	F	F	F
Year First Listed	2013	2006	2014	2004	2010	2014	2013	2015	2015

WINTER
WHEAT RL

CORDIALE

99

AGENT: GOLONOP
BREEDER: HWY LAB

WINTER
WHEAT RL

SY EPSON

102

AGENT: GOLONOP
BREEDER: HWY LAB



AVATAR

CORDIALE



DUNMORE



EINSTEIN



JB DIEGO



SY EPSON



KWS LUMOS



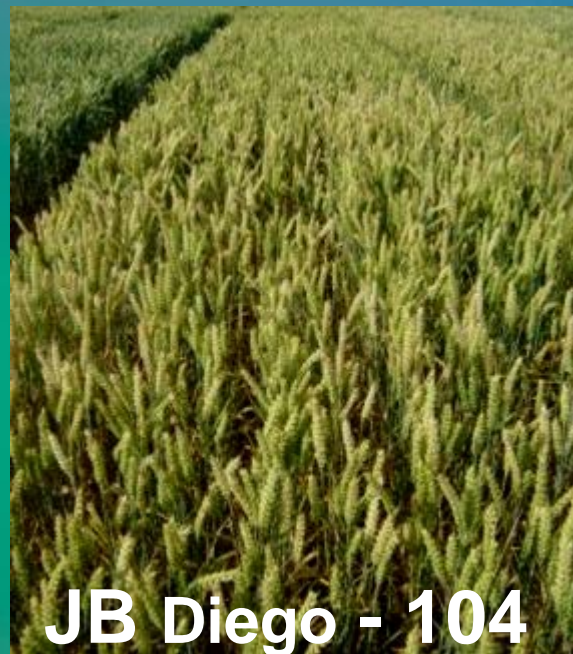
LEEDS



WEAVER

**WW Straw
Strength**

Continuous Wheat Trial



(C =10.6 t/ha/ 4.3 t/ac)
/(C =9.7 t/ha/ 3.9 t/ac)



Treated vs Untreated Yield(3 Sites - 2014)

Variety	Relative yield Untreated yield (6.5t/ha)	% Response to Fungicide Treated yield (10.0t/ha)
Einstein	103	38
Cordiale	85	48
JB Diego	112	36
SY Epson	132	24
Avatar	99	45
KWS Lumos	96	46
Dunmore	115	34
Evolution	108	39
Leeds	105	42
Weaver	118	35
Monterey	119	33
Tentation	108	38
LGW 87	135	27
Britannia	123	29
LG W68	88	51
KWS Leon	106	40
KWS Lilli	119	34
Rockefeller	148	18



EARLY SOWN WINTER WHEAT TRIAL 2014

- 4 sites - 3 Centres (Cork, Kildare, Kilkenny)
1 Outside site {Kilkenny}
- 11 varieties



Early Sown Wheat Trials

Speed of Development

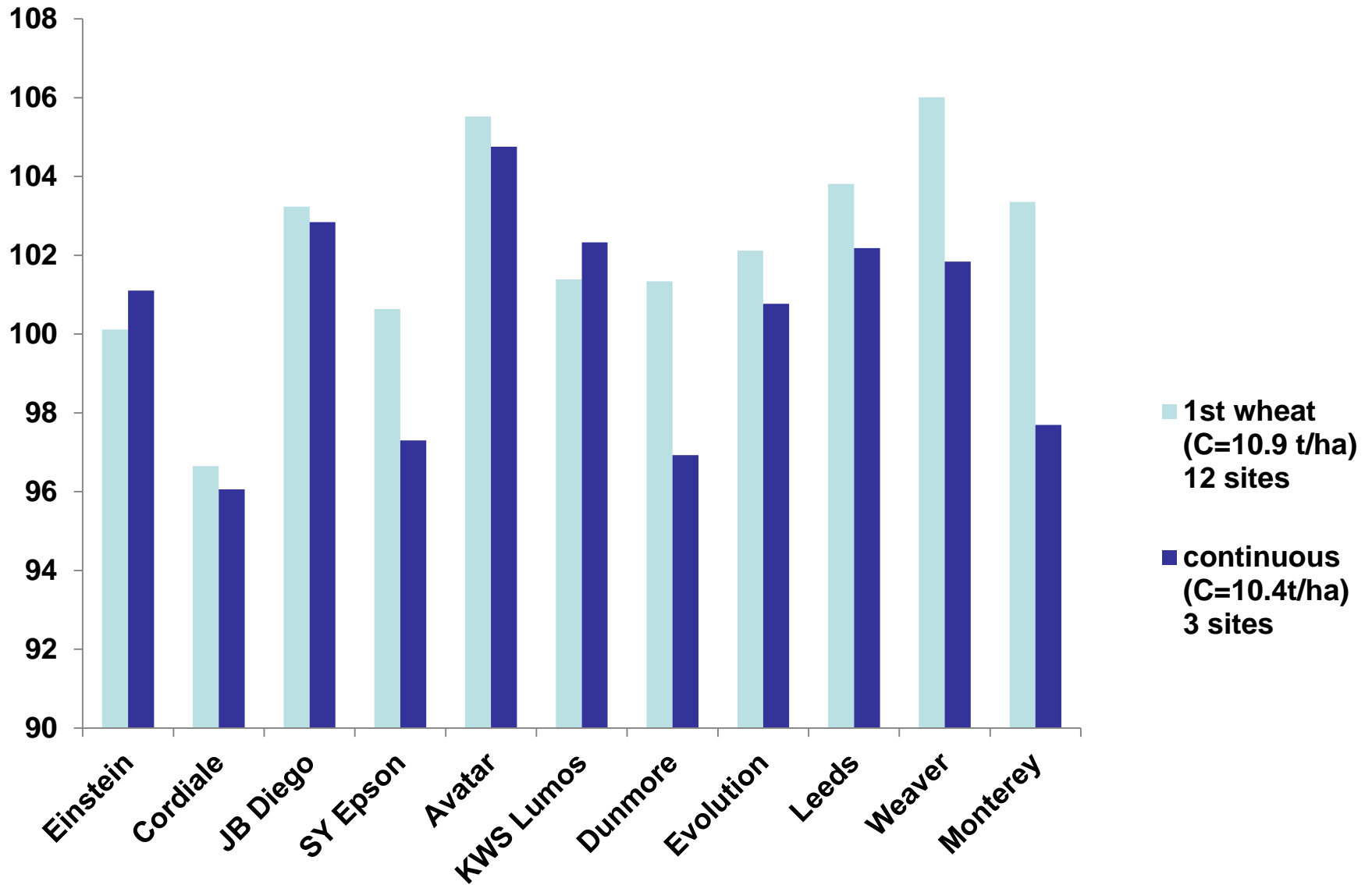


Fast	Medium	Slow
Einstein	JB Diego	Leeds
Cordiale	SY Epson	LGW87
	KWS Lumos	Rockefeller
	Avatar	Dunmore
		Evolution

Winter Wheat - Early Sown Trial Results

Variety	Agt	3-Year Yield (C=10.4 t/ha 4.2 t/ac)	Yield 14 (C = 11.3 t/ha 4.6t/ac)	Yield 13 (C = 11.6 t/ha 4.7t/ac)	Yield 12 (C = 8.3 t/ha 3.4t/ac)
Einstein	ST	99	99	101	97
Cordiale	GC	100	98	99	102
JB Diego	G	104	103	106	104
Avatar	GC	108	104	106	113
KWS Lumos	GC	105	102	104	108
SY Epson	ST	101	101	103	100
Leeds	ST	(103)	104	102	
Dunmore	ST	(102)	100	104	
Evolution	GC	(103)	102	104	
Rockefeller	GC	(104)	104		
LGW87	ST	(107)	107		

1st Wheat vs Continuous Sites Variety Yield Rating 2013 -2014



Acknowledgements

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– Moorepark –

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- Elizabeth Hyland & Staff



– Backweston –

- Clodagh Whelan & Staff

- Seed Agent/Breeders

- Host Farmers



Thank You For Your Attention!