

Winter Cereal Trials 2013

Varieties for 2014 ??



Dr. Josephine Brennan,
Crops Evaluation and Certification Division,
DAFM,
Backweston Farm,
Celbridge, Co. Kildare.

Josephine.brennan@agriculture.gov.ie



Department of
**Agriculture,
Food and the Marine**

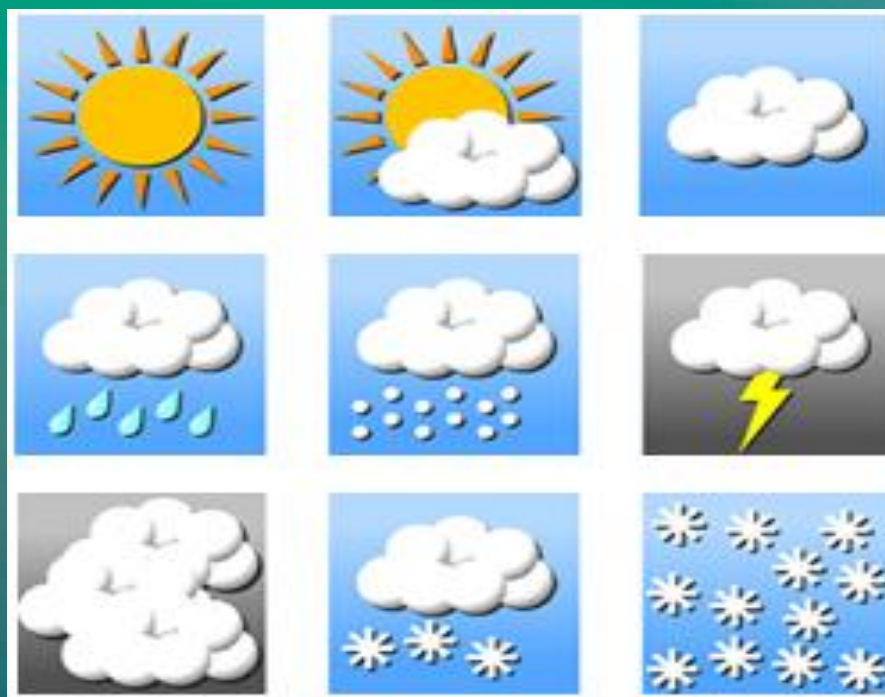
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2010 -2013

Challenges of Cereal Farming in Ireland

Very Variable Environmental Conditions!



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Iascaigh agus Bia**

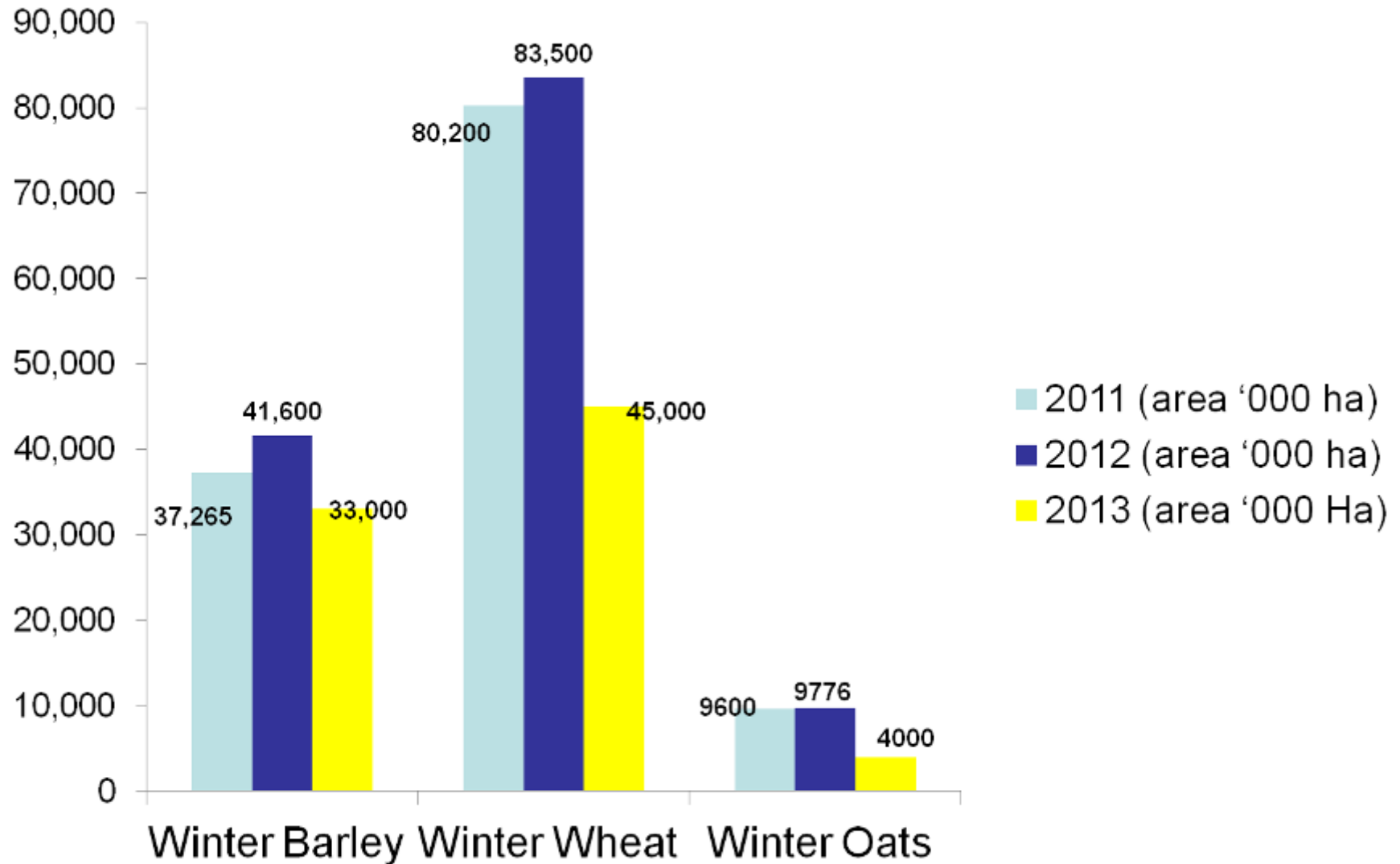


No Two Seasons Alike!



Grain Production 2011 - 2013

• Total cereal area increased by ~ 7 % or 22 000 ha in 2012



Cereal Variety Trials



Aim:

Select Varieties that grow well under Irish conditions

•Identify Consistently High Yielding Varieties



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Good Resistance to Disease



Good Straw Strength



Cordiale



Ferrari



Lion



Ferrari/SY Epson



Highest Yielder 2011



Saffron



Amarena



NSL08-2649B



SY 410-240

Possessing the Required Grain Quality





DAFM Winter Cereal Variety Trials 2013

Winter Barley RL/NL Trials 2013



• 5 sites -

2 Centres (Kilkenny, Cork)

3 Outside Sites (Meath, Offaly, Cork)

• 18 varieties –

5 Fully Recommended – Saffron,
Amerena,
Leibniz
KWS Cassia
Volume

6 Row Barley – 7 in trial (5 Hybrids & 2
conventional)

Candidate Varieties 2014:
KWS Tower, SY Bamboo, California



Winter Barley RL Trial 2013

Variety		RL Status	% Area Sown 2013	% Seed entered into cert. for 2014	Agt
Saffron	2-R	R	17%	5%	GC
Amarena	6-R	R	1%	-	GC
Leibniz	6-R	R	10%	7.3%	ST
KWS Cassia	2-R	R	64%	74.4%	GC
Volume	6-R (H)	R	4%	5%	ST
KWS Tower	2-R	Can	<1%	2.3%	GC
SY Bamboo	6-R (H)	Can	-	-	ST
California	2-R	Can	<1%	3%	ST

Winter Barley RL Trial 2013

Variety	RL Status	3 yr average (C = 9.1 t/ha/3.7t/ac)	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)	RL Yield 2011 (C = 9.0 t/ha /3.6t/ac t/ha) C= Amar/Saff
Saffron	R	95	94	99	94
Amarena	R (6)	103	101	102	106
Leibniz	R (6)	104	105	105	108
KWS Cassia	R	101	101	105	101
Volume	R (6H)	113	113	115	115
KWS Tower	2-R	103	103	106	107
SY Bamboo	6-R (H)	109	110	116	106
California	2-R	100	99	100	99

Winter Barley RL Trial 2013

Variety	Agt	Type	Year	Yield 13	Yield 12
KWS Glacier	GC	2R	2	102	103
Arcanda	GC	2R	2	87	101
Fentara	ST	2R	2	96	97
SY 210-77	ST	6R (H)	2	112	120
Galation	ST	6R (H)	1	108	-
Quadra	ST	6R (H)	1	111	-
NSL 10-6079C	ST	2R	1	98	-
NSL 10-6677C	ST	2R	1	100	-
KWS B104	GC	2R	1	104	-
Antonella	GC	2R	1	101	-

AGRONOMIC & QUALITY CHARACTERISTICS*		RECOMMENDED 2013				PROVISIONALLY RECOMMENDED
	SAFFRON	AMARENA	LEIBNIZ	KWS CASSIA	VOLUME	FAMOSA
Relative Yield ♦	97 (94) 99,94	103 (101) 102,106	106 (105)105,108	102 (101)105, 101	114 (113) 115, 115	98
Shortness of straw	7	5	4	7	4	7
Resistance to Lodging	8	7	7	7	6	7
Straw Breakdown	7	4	5	6	4	6
Earliness of ripening	5	8	6	6	6	4
Resistance to:						
Mildew	4	7	6	5	6	6
<i>Rhynchosporium</i>	4	7	7	5	7	6
Brown Rust	7	7	4	7	6	6
Net Blotch	7	7	7	7	7	7
Grain quality:						
1000 grain weight (g)	56.6	47.9	51.3	57.1	45.0	53.9
Hectolitre weight (kg/hl)	66.9	62.0	63.1	67.1	64.2	65.0
Year First Listed	2007	2008	2010	2011	2012	2011

2014 Recommended List ??

		3 yr average	2013	2012	2011
KWS Tower	2-R	103	103	106	107
SY Bamboo	6-R (H)	109	110	116	106
California	2-R	100	99	100	99

AGRONOMIC & QUALITY CHARACTERISTICS*	RECOMMENDED 2013					PROVISIONALLY RECOMMENDED
	AMARENA	KWS CASSIA	LEIBNIZ	SAFFRON	VOLUME	FAMOSA
Relative Yield ♦	103 (94)	102 (101)	106 (105)	97 (94)	114 (113)	98

AGRONOMIC & QUALITY CHARACTERISTICS*	RECOMMENDED 2014					PROVISIONALLY RECOMMENDED
	AMARENA	KWS CASSIA	LEIBNIZ	SAFFRON	VOLUME	????
Relative Yield ♦	103 (94)	102 (101)	106 (105)	97 (94)	114 (113)	

Winter Oats RL/NL Trial 2013



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

•5 varieties – 2 Fully Recommended – Barra,
Husky

Provisionally Recommended : None

Candidate varieties: Binary



Winter Oats RL/NL Trial 2013

Variety	RI Status	% Area Sown Winter/Spring 2013	% Seed entered into certification for 2014 Winter & Spring 2014	Agt
Barra (S)	R	29% (S)	26.4 %	ST
Husky	R	65%	44%	ST
Binary	Candidate	1%	26.1%	GC
MH 05 PC 1-2 - Oxalis	Yr 2	-	-	ST
MH 05 HQ 11-2-3 Vodka	Yr 2	-	-	ST

Winter Oat RL Trial 2013

Variety	Yr	Agt	3 yr average	Yield 13 (C = 8.2 t/ha 3.3t/ac Barra/Husky)	Yield 12 (C = 8.3 t/ha 3.5t/ac Barra/Husky)	Yield 11 (C = 9.0t/ha 3.6t/ac Barra/Husky Evita)
Barra	R	GC	94	95	92	93
Husky	R	ST	106	105	108	104
Binary	3 (C)	GC	100	99	99	103
MH 05 PC 1- 2 – Oxalis	2	ST		106	107	
MH 05 PC 11- 2 -3 Vodka	2	ST		102	102	

AGRONOMIC & QUALITY CHARACTERISTICS*	RECOMMENDED 2013	
	BARRA	HUSKY
Relative Yield ♦	94 (95) 92, 93	106 (105) 108, 104
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 (%)	70.2	70.7
1000 grain weight (g)	38.0	38.5
Hectolitre weight (kg/hl)	56.8	56.5
Year First Listed	1986	2010

2014 Recommended List??

AGRONOMIC & QUALITY CHARACTERISTICS*	RECOMMENDED 2013	
	BARRA	HUSKY
Relative Yield ♦	94 (95)	106 (105)

Candidate Variety: Binary

AGRONOMIC & QUALITY CHARACTERISTICS*	RECOMMENDED 2014		PROVISIONALLY RECOMMENDED
Relative Yield ♦	BARRA	HUSKY	???
	94 (95)	106 (105)	

Winter Wheat RL 2013



•8 sites -

2 Centres (Cork, Kilkenny)

6 Outside sites {Louth, Offaly, Tipperary, Cork (3)}

18 varieties –

4 Fully Recommended –

**Einstein,
Cordiale,
Lion,
JB Diego.**

2 Provisionally Recommended –

**Avatar,
SY Epsilon.**

**4 Candidate varieties: KWS Lumos,
Dunmore, Evolution, KWS Croft**

Winter Wheat: Seed entered into Certification

Variety	RL Status (2013)	% Area Sown 2013	% Seed entered into certification for 2014	Agt
Einstein	R	5	1	ST
Cordiale	R	8	2.9	GC
Lion	R	2	2.7	GC
JB Diego	R	53	39.3	G
SY Epson	PR	3	9.4	ST
Avatar	PR	11	20.9	GC
KWS Lumos	Candidate	2	15.8	GC
Dunmore	Candidate	<1	3.5	ST
Evolution	Candidate		<1	GC
KWS Croft	Candidate		0	GC

Winter Wheat RL Trials 2013

Variety	Yr	Agt	3 yr average	**Yield 13 (C =10.8 t/ha/ 4.4 t/ac)	Yield 12 (C = 8.1 t/ha 3.2t/ac)	Yield 11 (C = 10.7 t/ha/4.3t/ac)
Einstein	R	ST		101	99	103
Cordiale	R	GC		99	101	97
Lion	R	GC		102	103	101
JB Diego	R	G		104	101	108
SY Epson	PR	ST		100	104	101
Avatar	PR	GC		105	107	103
KWS Lumos	3	GC		102	103	104
Dunmore	2	ST		100	105	(107)
Evolution	2	GC		102	102	(111)
KWS Croft	2	GC		99	95	(108)

*** Not all WW sites included**

Winter Wheat RL Trials 2013

Variety	Year	Agent	**Yield 13 (C =10.8t/ha/ 4.4 t/ac)	Yield 12 (C = 8.1 t/ha 3.3 t/ac)	Yield 11 (C = 10.7 t/ha 4.3t/ac)
Leeds	1	ST	103	(112)	(104)
Weaver	1	G	105	(105)	
Monterey	1	F&PM	99	(106)	
Revelation	1	ST	97	(99)	
Myriad	1	ST	99	(102)	
SJ8576003	1	GC	106	(106)	
KWS Dali	1	GC	101	(106)	
KWS Magic	1	ST	98	(100)	

* Not all WW sites included

AGRONOMIC & <i>QUALITY</i> CHARACTERISTICS*	2013 RECOMMENDED				PROVISIONALLY RECOMMENDED			
	CORDIALE	EINSTEIN	JB DIEGO	LION	AVATAR	GRAFTON	KINGDOM	SY EPSON
Relative Yield ♦	100 99, 101, 97	100 101, 99,103	105 104,101, 108	103 102, 103,101	107 105,107,103	99	98	102 100, 104,101
Shortness of straw	8	7	6	5	(5)	8	7	(6)
Resistance to lodging	8	7	6	5	(6)	8	7	(8)
Straw breakdown	6	8	7	7	(7)	6	6	(7)
Earliness of ripening	7	6	5	5	(5)	7	7	(5)
Resistance to:								
Mildew	6	6	6	4	(5)	7	6	(7)
Septoria spp.	4	5	6	7	(6)	5	5	(7)
Yellow rust	(7)	(7)	(7)	(5)	(7)	(8)	(7)	(7)
Fusarium ear blight	6	6	6	6	(6)	4	6	(6)
Sprouting	7	7	7	5	(5)	5	7	(5)
Quality:								
Grain Protein % (15%MC)	11.1	10.8	10.1	9.8	9.6	10.5	10.6	10.5
Hagberg Falling No.♠	357	299	-	-	-	-	293	-
Bread-making quality	Good	Mod	-	-	-	-	Mod	-
1000 grain weight (g)	44.9	49.3	49.3	46.1	46.8	48.7	47.3	47.1
Hectolitre weight (kg/hl)	74.9	73.0	73.8	73.3	73.2	73.3	74.1	72.7
Market +	Br	Br	F	F	F	F	Br	F
Year First Listed	2006	2004	2010	2008	2013	2012	2011	2013

2013

AGRONOMIC & QUALITY CHARACTERISTICS*	RECOMMENDED				PROVISIONALLY RECOMMENDED			
	CORDIALE	EINSTEIN	JB DIEGO	LION	AVATAR	GRAFTON	KINGDOM	SY EPSON
Relative Yield ♦	100	100	105	103	107	99	98	102

4 Candidate varieties: KWS Lumos, Dunmore, Evolution, KWS Croft

2014

AGRONOMIC & QUALITY CHARACTERISTICS*	RECOMMENDED				PROVISIONALLY RECOMMENDED			
	CORDIALE	EINSTEIN	JB DIEGO	LION	AVATAR	SY EPSON		
Relative Yield ♦					??	??		

EARLY SOWN WINTER WHEAT TRIAL 2013



•3 sites -

2 Centres (Cork, Kilkenny)
1 Outside site {Kilkenny}

12 varieties

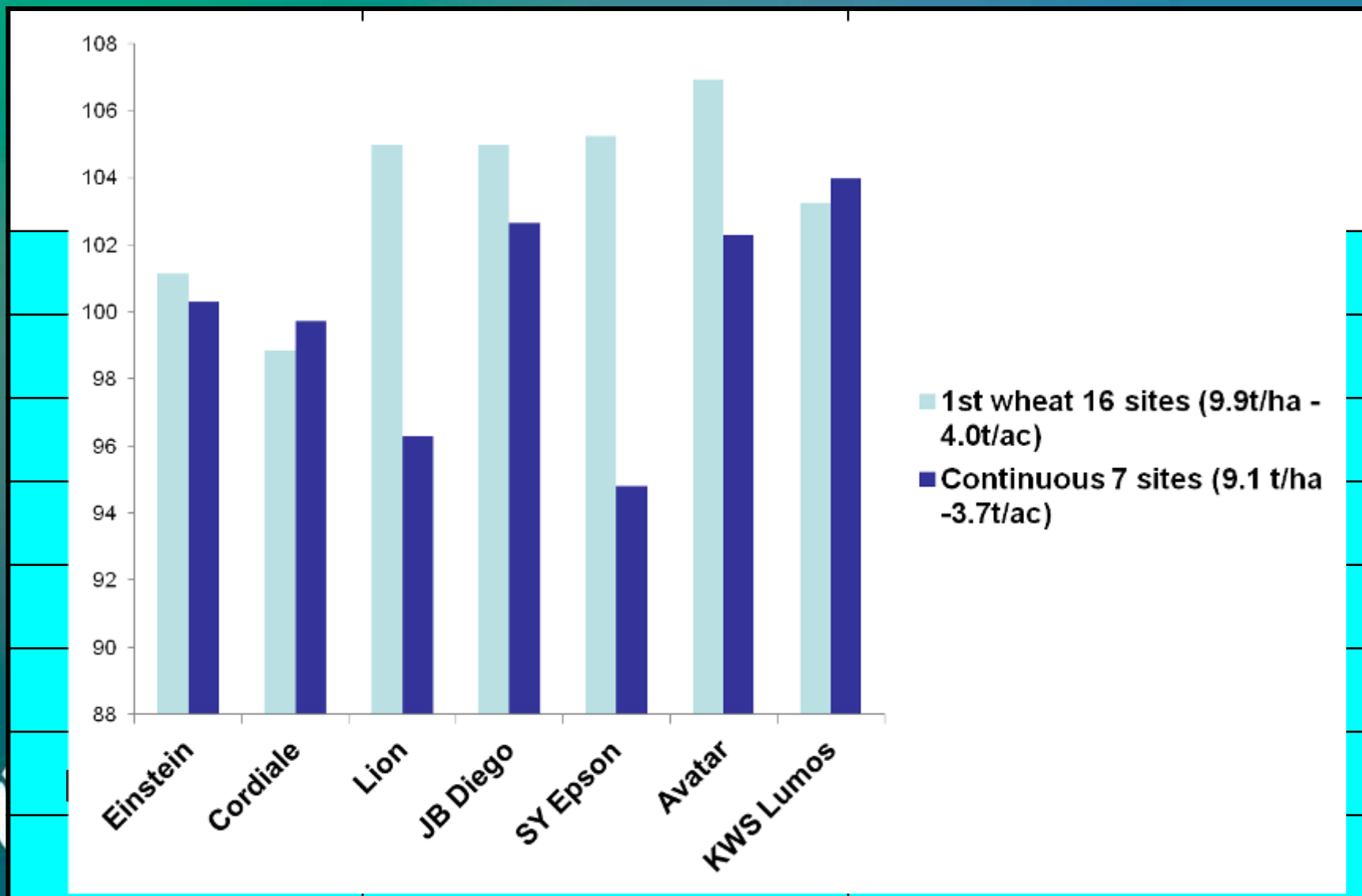
Einstein
Cordiale
Lion
JB Diego
Grafton
Avatar
Denman
KWS
Lumos
KWS Croft
SY Epsom
Leeds
Relay

Winter Wheat - Early Sown Trial Results

Variety	Agt	3-Year Yield (C=10.3 t/ha 4.2t/ac)	Yield 13 (C = 11.6 t/ha 4.7t/ac)	Yield 12 (C = 8.3 t/ha 3.4t/ac)	Yield 11 (C = 11.0 t/ha 4.5t/ac)
Einstein	ST	99	101	97	100
Cordiale	GC	100	99	102	100
Lion	GC	106	102	107	108
JB Diego	G	106	106	104	108
Grafton	GC	98	97	96	101
Avatar	GC	109	106	113	108
Denman	ST	103	102	107	101
KWS Lumos	GC		104	108	
KWS Croft	GC		104	98	
SY Epson	ST		103	100	
Leeds	ST		102		
Relay	GC		104		

1st Wheat vs Continuous Sites

Variety Yield Rating 2011 -2013



Early Sown Wheat Trials

Speed of Development

Fast	Medium	Slow
Einstein	Lion	Grafton
Cordiale	Avatar	Sahara
	JB Diego	Relay
	SY Epson	Leeds
	KWS Lumos	
	KWS Croft	

Talmhaíochta,
Iascaigh agus Bia

*From limited data: Dunmore appears to be
Medium/Late

Thank you



2013 WOSR RL

	Hybrid/ Conv Variety	Treated Relative Seed Yield @9% moisture	Oil Content % @ 9% moisture	Glucosinolate Content ($\mu\text{mol/g}$ seed)	Full Plant Height (m)	Lodging Resistance Of the maturing crop. (1 - 9) (9 = best).	Stem Stiffness (1 – 9). (9 = upright).	Earliness of flowering (1 – 9). (9 = earliest)	Earliness of Maturity/ Ripening Score (1 – 9). (9 = earliest).	Year of first Recommendation
Controls* (actual)	---	4.6(t/ha)	45.5%	---	---	---	---	---	---	---
Compass (R)	Hybrid	102	102	9.5	1.59	8	8	6	(5)	2011
Flash (R)	Hybrid	107	99	14.2	1.61	7	7	5	(4)	2009
Osprey (R)	Conv	97	101	8.8	1.47	8	8	5	(5)	2009

- Compass upgraded from Provisionally Recommended to a fully recommended variety on 2013 RL
- RL available on DAFM website
- <http://www.agriculture.gov.ie/publications/2013/>
- One candidate (Sensation) for 2014 RL