

Cereal Variety Update 2015

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New Variety Agronomy SPA

South Australian Research & Development Institute

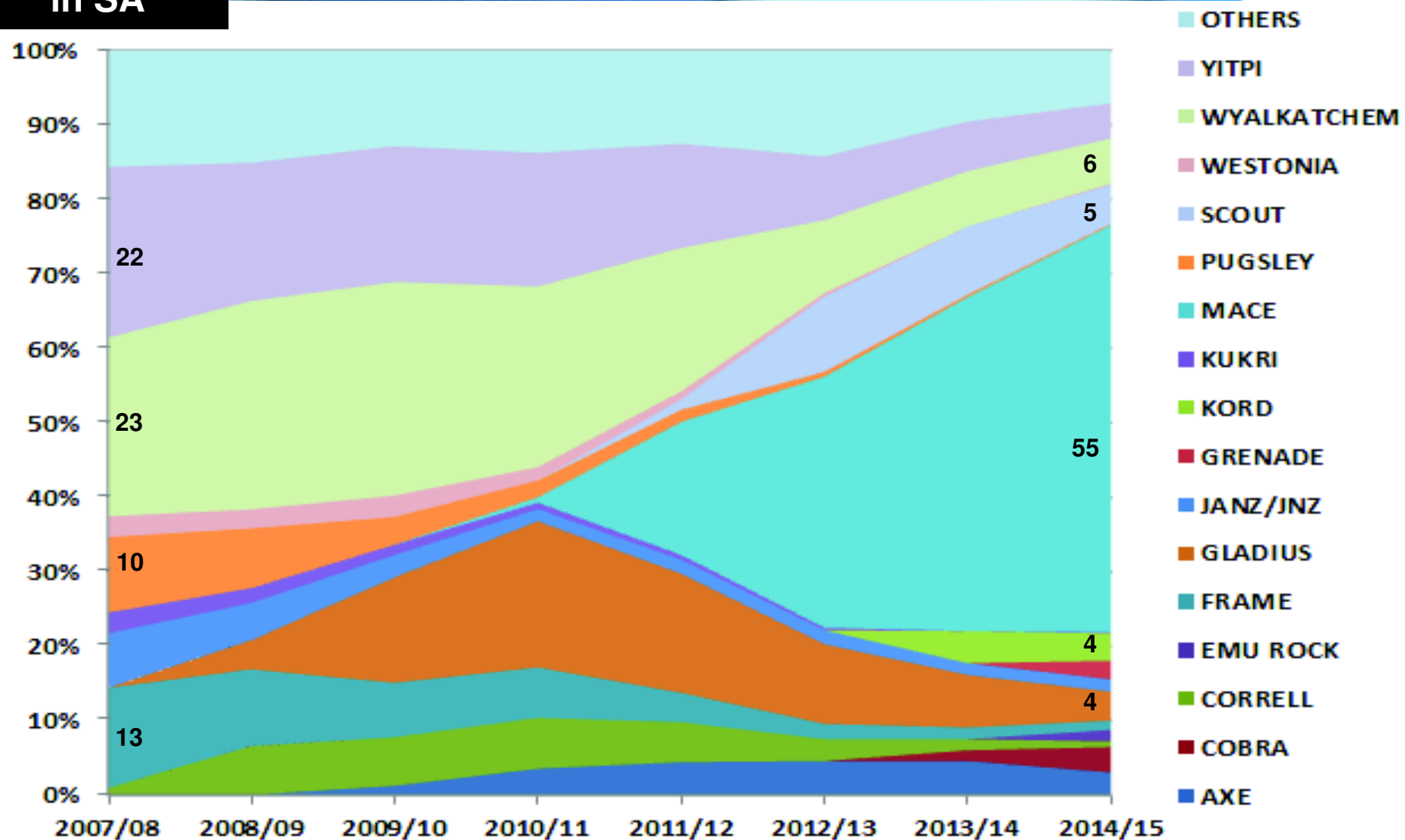
Waite Precinct

- 
- A photograph of a vast, golden wheat field stretching towards a line of trees under a clear blue sky. The wheat is in full bloom, with many heads visible. The text is overlaid on the left side of the image.
- **What varieties are you growing?**

% of total
receivals
to Viterra
in SA

Trends in SA varietal wheat grain receivals 2007 – 2014 incl.

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YEAR

Data courtesy – Viterra

- 
- A photograph of a vast field of golden wheat, likely in a rural or agricultural setting. The wheat is tall and dense, filling the foreground and middle ground. In the background, a line of trees is visible against a clear blue sky. The overall scene is bright and sunny, suggesting a warm climate.
- **What varieties are you growing?**
 - **How did varieties perform last year?**

All NVT sites, year by year yield and quality comparison in SA

	2009	2010	2011	2012	2013	2014 (23 sites)
Yield (t/ha)	3.29	4.34	3.63	2.77	3.44	3.11 (0.57 – 4.79)
Screenings (%)	3.7	1.9	1.4	2.7	2.3	2.4 (0.4 – 5.9)
Test weight (kg/hl)	77.2	77.3	80.9	82.6	82.5	81.9 (78.1 – 84.2)
Protein (%)	12.2	10.2	11.3	11.5	11.8	11.4 (9.5 – 13.4)

- 5 frosted trials in 2014 (3 EP, 2 Nth Mallee)
- Yields and quality similar to 2013
- Varietal average quality tabled in proceedings

SARDI

Relative 2014 wheat variety performance in YP & MN NVT

Variety	Grade	YP	MN	protein %	Testwt kg/ha	Screen %
Mace	AH	112	109	10.8	82.5	2
Cosmick	AH	102	106	10.9	81.7	3.4
Cobra	AH	101	105	11.8	80.7	2
Scout	AH	99	105	11.2	83.3	2.2
Shield	AH	100	101	11.3	80.9	3.3
AGT Katana	AH	103	100	11.5	84.1	1.9
Axe	AH	95	99	11.6	82.5	1.6
Emu Rock	AH	101	99	11.5	82.1	2.6
Wallup	AH	93	99			
Phantom	AH	94	98	11.4	81.2	2.5
Correll	AH	93	95	11.4	79.7	3.5
Gladius	AH	100	95	11.7	81.5	2.3
Grenade CL	AH	101	95	11.2	81.8	1.9
Kord CL PI	AH	99	95	11.6	81.4	2.7
Yitpi	AH	92	95	11.9	81.8	2.6
Corack	APW	112	110	10.8	82.6	1.7
Trojan	APW	109	109	11.1	83.3	2
Wyalkatche	APW	104	103	11.4	82.1	1.3
Espada	APW	102	98	11.9	80.3	2.3
Estoc	APW	101	98	11.9	84	1.9
Region Mean (t/ha)		4.37	3.95	11.4	81.9	2.3
Trial Number		3	4	23	23	23

Relative 2014 varietal performance (top 5) in SA NVT by region

In
descending
order for
yield

LEP	UEP	YP	MN	SE	MM
Cosmick	Trojan	Mace	Corack	Corack	Trojan
Corack	---	Corack	Trojan	---	Cosmick
---	Cosmick	Trojan	Mace	Cosmick	Corack
Trojan	Cobra	---	---	Mace	---
Mace	Katana	Wyalkatchem	Cosmick	Trojan	Mace
Wyalkatchem	Emu Rock	Katana	Scout	Wyalkatchem	Shield

No of trials 3 5 3 4 4 4

Varieties ranked by arithmetic average of site yields within regions

Little signif. yield difference between varieties above dotted lines

Trojan, Corack, Cosmick and Mace led all varieties in statewide average

Mace less dominant in 2014 (UEP,MM) – chilling/frost effect?

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- A photograph of a vast field of golden wheat, likely in a rural or agricultural setting. The wheat is tall and dense, filling the foreground and middle ground. In the background, there is a line of trees under a clear blue sky. The text is overlaid on the left side of the image.
- **What varieties are you growing?**
 - **How did varieties perform last year?**
 - **What is the long term performance?**

SARDI Long Term 2010 - 2014 varietal performance (%SM) in SA NVT by region

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Data just out from ACAS, available on NVT web site – nvtonline.com.au

Yorke Pen.		Lower EP		South East		Mid North		Murray Mallee		Upper EP	
110	Trojan	110	Cosmick	110	Cosmick	110	Corack	111	Mace	109	Mace
110	Corack	110	Trojan	110	Trojan	109	Cosmick	110	Corack	108	Corack
110	Mace	109	Corack	108	Corack	109	Mace	108	Cosmick	108	Trojan
110	Cosmick	107	Mace	107	Cobra	108	Trojan	108	Trojan	107	Cosmick
107	Cobra	106	Cobra	107	Mace	106	Cobra	106	Emu Rock	104	Emu Rock
105	Wyalkatchem	105	Scout	106	Scout	105	Wyalkatchem	105	Espada	104	Espada
104	Scout	104	Wyalkatchem	104	Wyalkatchem	105	Scout	104	Shield	104	Wyalkatchem
104	Emu Rock	103	Emu Rock	102	Wallup	105	Emu Rock	103	AGT Katana	103	Cobra
103	Espada	102	Wallup	102	Emu Rock	102	AGT Katana	103	Wyalkatchem	102	AGT Katana
av.t/ha 4.43		4.31		3.95		3.83		2.66		2.31	

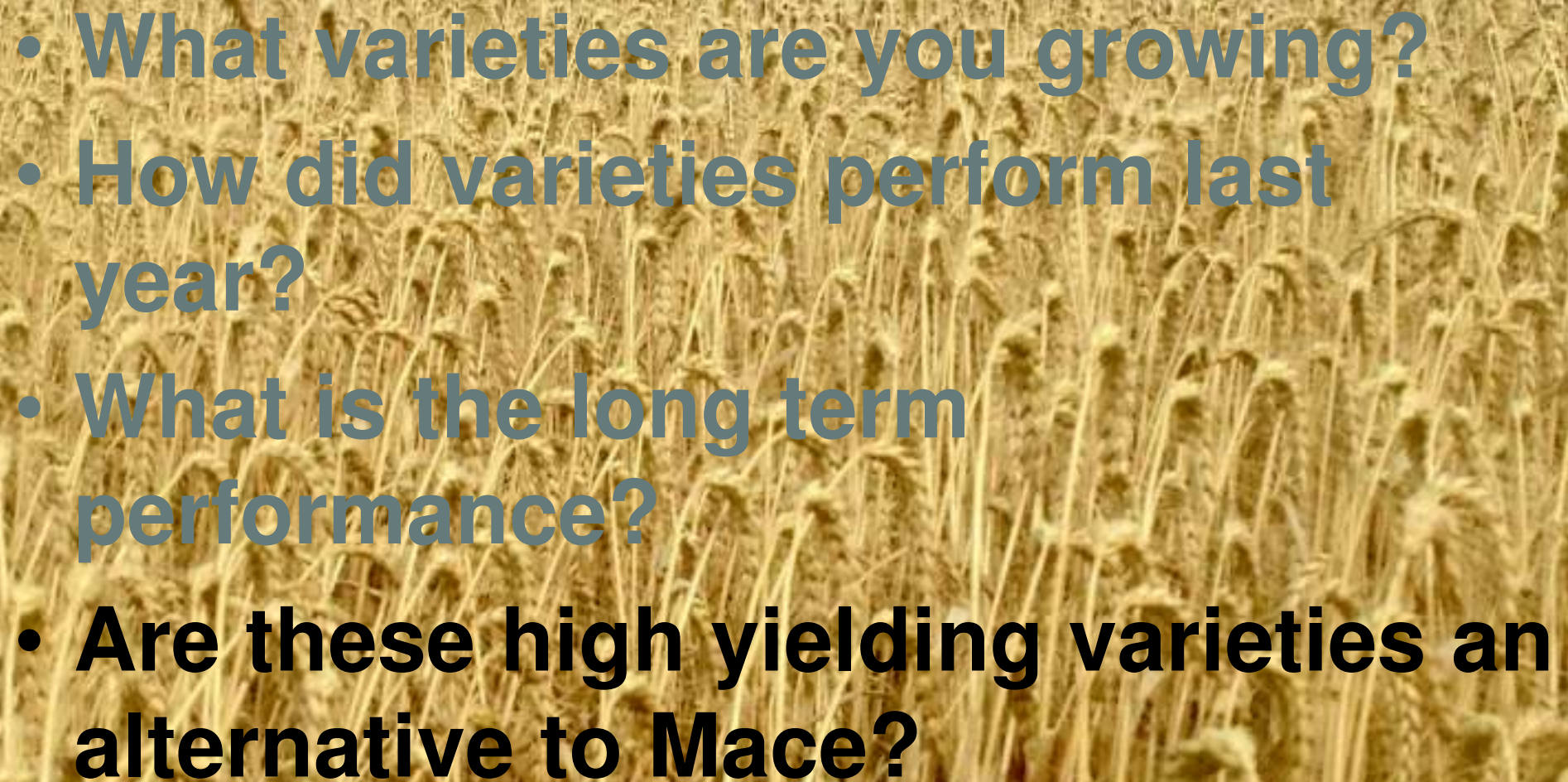
Corack reliable across regions

Mace, Emu Rock more dominant in LRZ

Cosmick, Scout, Trojan, Cobra more dominant in HRZ

Variety performance by yield potential (t/ha&%av.)in NVT (2010-14 all SA regions)

	<1t/ha		1-2t/ha		2-3t/ha		3-4t/ha		4-5t/ha		>5t/ha	
Corack	0.76	113	1.81	112	2.64	109	3.87	110	4.93	110	6.09	106
Cosmick	0.67	101	1.71	106	2.62	108	3.81	108	4.88	109	6.45	112
Mace	0.77	115	1.84	114	2.64	109	3.84	109	4.88	109	5.98	104
Trojan	0.63	94	1.69	104	2.61	108	3.80	108	4.88	109	6.51	113
average	0.67	100	1.62	100	2.42	100	3.52	100	4.47	100	5.74	100
#obs (tot.116)	2		21		25		26		29		13	
AGT Katana	0.72	108	1.70	105	2.50	103	3.60	102	4.56	102	5.74	100
Axe	0.74	111	1.66	102	2.40	99	3.49	99	4.38	98	5.42	94
Correll	0.69	103	1.65	102	2.43	100	3.44	98	4.35	97	5.60	97
Emu Rock	0.79	118	1.79	110	2.55	105	3.68	105	4.64	104	5.68	99
Gladius	0.71	107	1.68	103	2.44	100	3.51	100	4.43	99	5.53	96
Grenade^{CLPlus}	0.75	112	1.69	105	2.42	100	3.46	98	4.34	97	5.31	93
Kord^{CLPlus}	0.76	113	1.73	107	2.46	102	3.50	99	4.40	99	5.39	94
Shield	0.75	112	1.73	107	2.50	103	3.57	101	4.50	101	5.64	98
Cobra	0.60	89	1.59	98	2.46	101	3.70	105	4.76	107	6.19	108
Phantom	0.62	92	1.55	96	2.40	99	3.47	99	4.42	99	5.91	103
Scout	0.65	97	1.62	100	2.49	103	3.65	104	4.66	104	6.16	107
Estoc	0.67	100	1.66	102	2.46	102	3.54	101	4.50	101	5.78	101
Wyalkatchem	0.67	101	1.67	103	2.50	103	3.69	105	4.71	105	5.96	104
Yitpi	0.65	97	1.59	98	2.38	98	3.39	96	4.28	96	5.60	98

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- What varieties are you growing?
 - How did varieties perform last year?
 - What is the long term performance?
 - Are these high yielding varieties an alternative to Mace?

Cosmick^Φ (AH)

- early-mid flowering, Strezlecki/Bonnie Rock derived, ex Intergrain
- 'Mace like' yields, 2yrs SA NVT
- YLS – MRMS, PM - MS
- TW – good, screenings – moderate?, BP - ?
- **issues – Sr – MS, Yr– MS, Lr - S, CCN – MS, Stb – MSS, sprouting?**

Longreach Trojan^Φ (APW)

- mid-late flowering, Sentinel derived, ex LRPB
- Sr - MR, Yr – MR, Lr - MR, YLS – MSS,
- TW – good, BP – MRMS, B tol
- Early sowing option
- **issues - flag smut – VS, CCN – MS,**



Corack^Φ (APW)

- early-mid flowering, Wyalkatchem derived, ex AGT
- CCN - R/MR, YLS – MR
- TW – good, screenings – low, protein - low
- **issues – Yr– MS, Lr - S/VS, PM – S/VS, Stb – S, BP – MS/S**

Longreach Cobra ^Φ (AH)

- early-mid flowering, ex LRPB
- Sr – R/MR, Lr - MR, YLS – MR/MS
- TW – **moderate**, BP – MS
- **issues – Yr – MS/S, sprouting – S, CCN – MS**



“Pending final quality and other release decisions”

- IMI tolerant “Axe type” – AGT – 2015
- “Mace type + yield + Yr resis” – AGT- 2016 ?
- IMI tolerant “Wyalkatchem type” – Intergrain - 2017

The latest news in durum varieties and performance



DBA Aurora ^Φ (durum)

- mid flowering, ex Waite Durum Program
- CCN-MSS, Sr-R, Yr-R/MR, Lr-R, YLS-MRMS, PM-MR
- Mod - high yields
- low - mod screenings
- good early vigour, weed competitive similar to Mace??



SARDI 2014 and long term Durum Performance

Yield and quality – SA NVT data



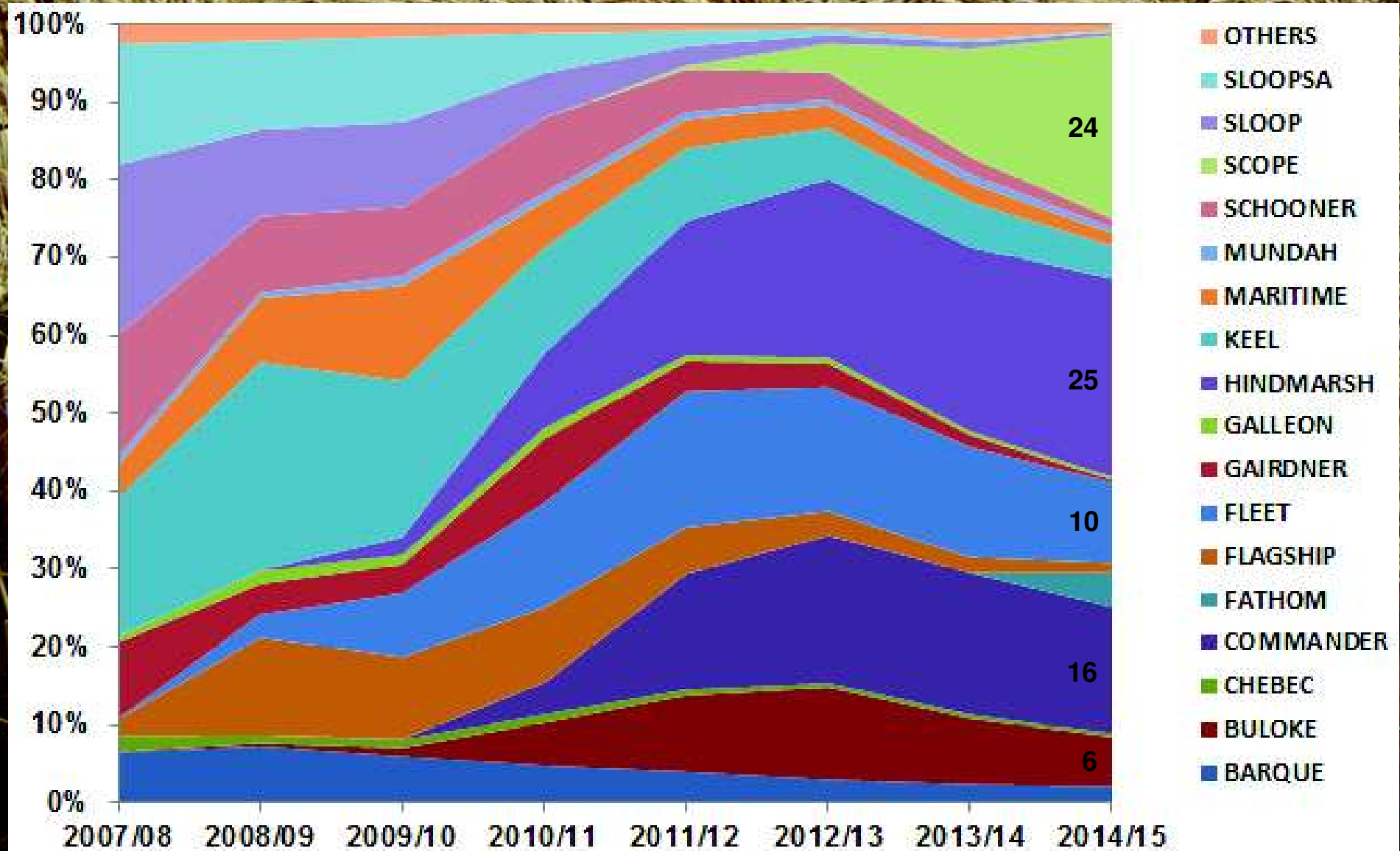
	2014		Mean NVT yield %RMY (2010-14)				Average grain quality (2011-14) 24obs			
	YorkePen	Mid Nth	Y.P.	#obs	M.N.	#obs	Scr<2mm	Test Wt	Protein	1000GW
DBA-Aurora	100	101	109	9	107	10	3.2	79.69	12.7	39.67
Caparoi	95	98	104	12	100	13	1.5	82.47	13.3	42.28
Hyperno	92	98	103	12	105	13	5.4	79.86	13.2	36.24
Saintly	101	107	109	12	104	13	2.5	81.27	12.5	38.18
Tamaroi	93	100	100	12	98	13	2.4	80.65	13.4	43.51
Tjilkuri	101	98	104	12	102	13	3.4	79.37	12.9	36.85
WID802	112	97	106	12	105	13	4.2	78.60	12.7	35.40
Yawa	109	99	110	12	109	13	6.6	79.63	12.6	31.84
Site Mean t/ha	3.61	3.89	3.97	12	4.05	13	%	kg/hl	%	g.
Trial Number	3	3								

WHAT'S THE PICTURE LIKE FOR BARLEY ?



Trends in SA barley varietal grain receivals 2007 - 2014

% of total receivals
to Viterro in SA



2014	SA Agricultural Region						Statewide 2014 trials mean			
Variety	SE	MM	MN	YP	LEP	UEP	protein	Testwt	Retention	Screenings
Feed							%	kg/hl	%>2.5mm	%<2.2mm
Fathom	110	104	106	108	103	108	12.3	69.6	79.3	3.83
Fleet	107	96	101	106	101	101	12.0	68.2	74.8	3.89
Keel	111	109	102	105	103	107	11.5	70.8	73.3	7.14
Maritime	95	80	95	98	98	93	12.4	70.2	87.2	2.3
Oxford	80	88	96	93	94	85	12.0	69.2	51.8	12.4
Food										
Hindmarsh	115	104	109	104	110	108	11.5	70.9	70.2	6.38
Malt										
Buloke	103	94	98	99	101	93	11.9	69.7	61.6	9.02
Charger	98		100	103						
Commander	103	89	101	103	101	99	11.8	68.9	73.7	6.89
Flagship	94	98	94	90	93	90	12.3	71.1	61.4	9.43
Granger	94	89	102	98	96	91	12.3	70.3	72.4	4.83
Navigator	88									
Schooner	93	83	93	91	89	82	12.7	72.1	72.2	5.3
Scope	104	95	96	98	99	90	12.1	69.7	65.7	7.1
Pending										
Compass	116	123	105	111	111	113	10.9	68.6	82.0	3.62
LaTrobe	112	110	109	106	109	111	11.2	71.5	72.7	5.5
sites average	3.07	2.42	4.95	4.31	3.73	3.18	12.1	69.8	69.1	7.3
# sites/region	2	3	3	5	3	4	20	20	20	20

SARDI Long Term 2005 - 2014 varietal performance (%SM) in SA NVT by region

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Data just out from ACAS, available on NVT web site – nvtonline.com.au

Lower EP		Mid North		Murray Mallee		South East		Upper EP		Yorke P	
114	Compass	118	Compass	117	Compass	116	Compass	121	Compass	119	Compass
111	LaTrobe	114	Fathom	112	Fleet	111	Fathom	118	Fathom	115	Fathom
110	Hindmarsh	114	LaTrobe	112	Fathom	110	LaTrobe	115	Fleet	113	LaTrobe
110	Fathom	113	Hindmarsh	109	Commander	109	Charger	114	LaTrobe	112	Fleet
107	Fleet	110	Fleet	108	LaTrobe	109	Fleet	113	Hindmarsh	112	Hindmarsh
106	Granger	108	Charger	106	Hindmarsh	108	Hindmarsh	108	Commander	110	Charger
105	Oxford	106	Commander	105	Granger	108	Commander	105	Bass	107	Commander
105	Commander	104	Granger	104	Oxford	104	Granger	104	Buloke	106	Granger
101	Buloke	103	Buloke	104	Buloke	103	Buloke	104	Granger	103	Buloke
101	Scope	102	Scope	104	Scope	102	Scope	104	Scope	103	Scope
av t/ha	3.63		3.77		2.29		3.98		2.43		3.25

Compass is very reliable and high yielding across regions

LaTrobe performs well in HRZ cv LRZ



Government of South Australia
Primary Industries and Regions SA

SARDI 2015 barley disease ratings(ex Wallwork)



Barley	Leaf rust*	Net form net blotch*	Spot form net blotch*	Black point
Bass	MR-S	MS-SVS	MSS	MS
Buloke	MS-SVS	MR	MS-S	MS
Charger	MR-MS	VS	SVS	MRMS
Commander	MS-S	MS-S	MSS	MSS
Compass	MR-VS	MR-MRMS	MRMS-MSS	MS
Fathom	MRMS-S	MR-MS	MR	S
Flagship	MS-SVS	MR	MRMS	MSS
Fleet	MRMS-S	SVS	MR	MS
GrangeR	MR-S	MR-MSS	S	MS
Hindmarsh	MRMS-S	MR	S	MSS
Keel	VS	MS	MR	SVS
La Trobe	MRMS-S	MR	MSS	MSS
Maritime	MRMS-S	R-VS	MRMS	MSS
Navigator	VS	MR-MS	MR	MSS
Oxford	R-MR	MR-SVS	MSS	MR
Schooner	S-VS	MR	MS	MS
Scope	MS-SVS	MR	MS-S	MSS
Skipper	SVS	MR	MRMS	MSS

“Pending final quality and other release decisions”

- IMI tolerant “Hindmarsh type” – Intergrain – 2016?

**“Mace wheat will continue to dominate but
Commmander and Hindmarsh barley
are in for a shake up”**

Acknowledgements

- Viterra and ACAS Ltd for supply and use of data – www.nvtonline.com.au
- 2015 Cereal Disease Guide – Dr Hugh Wallwork
- SARDI-NVA quality lab staff for grain quality data
- SARDI NVA staff and collaborating farmers for trial management



2015 REPORT
PIRSA web site late March?