



Department of
Primary Industries and
Regional Development

Protect
Grow
Innovate

Wheat for 2023

Brenda Shackley, Dion Nicol and Jeremy Curry
DPIRD

Today's topics

- 2022 vs 2021
- New wheat releases and fit of varieties
- Coleoptile lengths in mainstream varieties – food for thought

2022 NVT results to date



Averaging single site data from 14 NVT sites in 2022, available to date

* = mid-slow maturing varieties

Variety	Average %
RockStar	110
Devil	108
Kinsei	108
Brumby	108
Calibre	107
Denison	107
Ninja	106
Scepter	106
Valiant CL Plus	104
Cutlass	103
Catapult	103
Sting	102
Zen	101
Vixen	99
Hammer CL Plus	98
LRPB Havoc	96
Chief CL Plus	95
Razor CL Plus	94
LRPB Avenger	92
LRPB Anvil CL Plus	89
Emu Rock	87

*

*

*

*

*

*

*

*

New wheat releases for 2023

	Scepter	Brumby	LRPB Anvil CL Plus
Statewide MET yield (% site mean) ¹	110%	107% [^]	106%
Maturity	Quick-mid	Mid	Quick
Classification	AH	APW	AH
Falling no. index	5	-	-
Stem rust	MRMS	MR _p	MR
Stripe rust	MR*	RMR _p	RMR
Leaf rust	MSS	SVSp	SVS
Powdery mildew	S	R*	Sp
Yellow spot	MRMS	MRMS _p	MSS
EPR (\$/t, excl GST)	\$3.25	\$3.50	\$4.25

[^]= single year of NVT data in 2021

Duration of days to flowering relative to Scepter

Variety	Maturity	2020	2021	2022
Sowing date		mid may	mid may	mid may
Emu Rock	Quick	-14	-11	
LRPB Anvil CL Plus	Quick		-10	-9
Vixen	Quick	-10	-7	-8
LRPB Avenger	Quick	-9		-7
Sting	Quick	-7	-5	-4
Hammer CL Plus	Quick-mid	-1	1	0
Calibre	Quick-mid	0	0	-1
Scepter	Quick-mid	0	0	0
Chief CL Plus	Mid	0	2	4
Ninja	Mid	1	3	4
Brumby	Mid		5	5
RockStar	Mid-slow	5	6	7
Kinsei	Mid-slow	6	8	9
Catapult	Mid-slow	8	7	10
Denison	Mid-slow	13	11	12
Valiant CL Plus	Mid-slow		12	10
Cutlass	Mid-slow	10	11	13

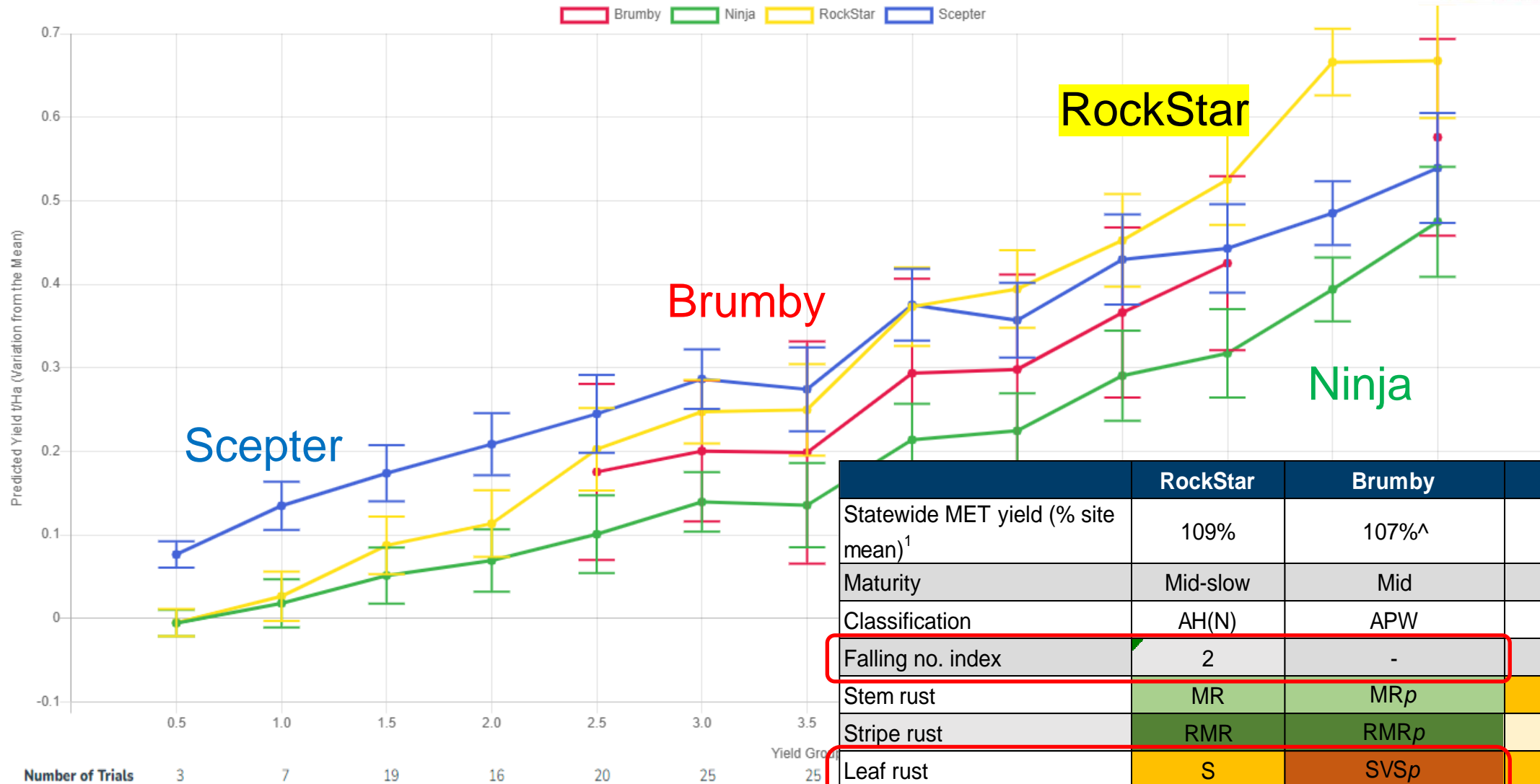
Source: DPIRD and selected NVT trials

Duration of days to flowering relative to Scepter

Variety	Time of sowing		
	Late April	Mid May	Late May
LRPB Anvil CL Plus	-12	-12	-6
Vixen	-13	-11	-7
Brumby	5	5	3
Rockstar	9	7	6
Kinsei	9	9	6
Catapult	17	11	9
Denison	<u>14</u>	13	10
Valiant CL Plus	16	11	8
Cutlass	21	15	12

Source: DPIRD Crop Sowing Guide project

Brumby comparison (only 2021 NVT data for Brumby)



	RockStar	Brumby	Ninja
Statewide MET yield (% site mean) ¹	109%	107% [^]	105%
Maturity	Mid-slow	Mid	Mid
Classification	AH(N)	APW	ANW
Falling no. index	2	-	4
Stem rust	MR	MR _p	S
Stripe rust	RMR	RMR _p	MS
Leaf rust	S	SVSp	S
Powdery mildew	MSS	R*	S
Yellow spot	MRMS	MRMS _p	MRMS

Falling numbers in 2022

Is Brumby is a more robust alternative to RockStar?

DPIRD has lots of work to do.....

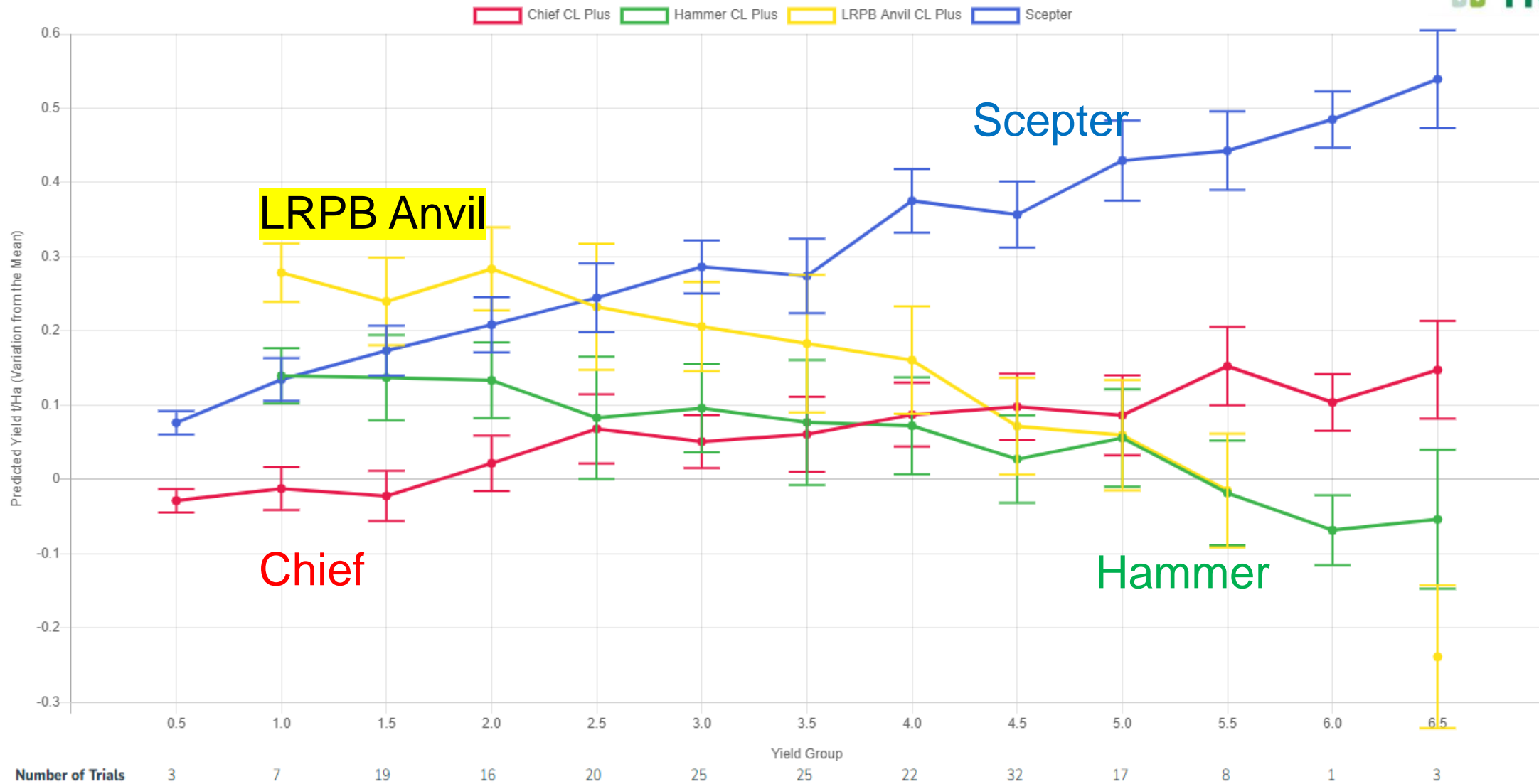


CL Plus varieties

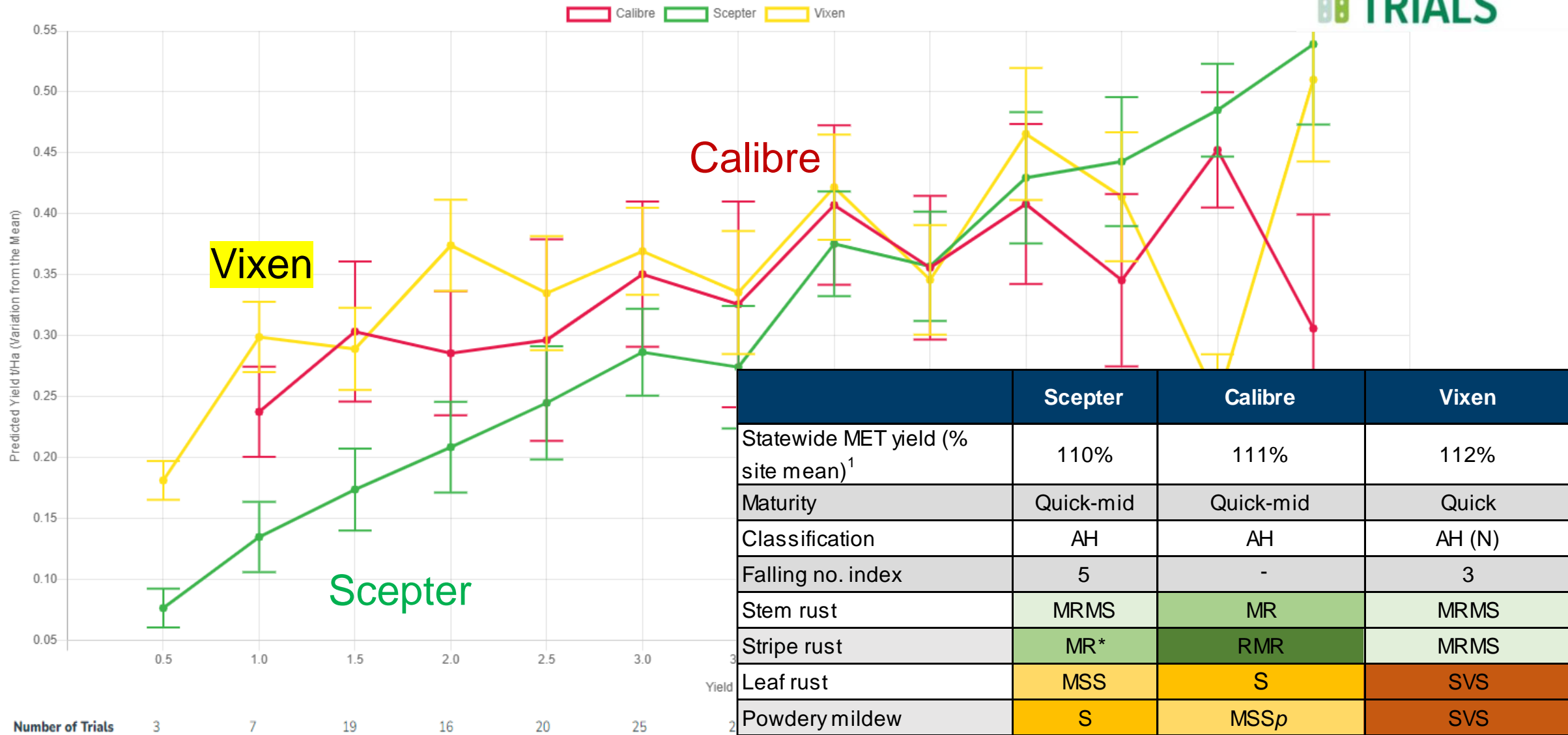
	Vixen	LRPB Anvil CL Plus	Razor CL Plus	Hammer CL Plus	Chief CL Plus
Statewide MET yield (% site mean) ¹	112%	106%	104%	103%	102%
Maturity	Quick	Quick	Quick-mid	Quick-mid	Mid
Classification	AH (N)	AH	ASW	AH (N)	APW(N)
Falling no. index	3	-	4 _p	-	4
Stem rust	MRMS	MR	MR	MR	MR
Stripe rust	MRMS	RMR	RMR	RMR	S
Leaf rust	SVS	SVS	S	S	MR*
Powdery mildew	SVS	Sp	MS	S	S
Yellow spot	MRMS	MSS	MSS	MRMS	MRMS
EPR (\$/t, excl GST)	\$3.50	\$4.25	\$3.30	\$4.25	\$4.25

Note: There are no grower-to-grower sales permitted for any CL Plus varieties

LRPB Anvil CL Plus – its fit



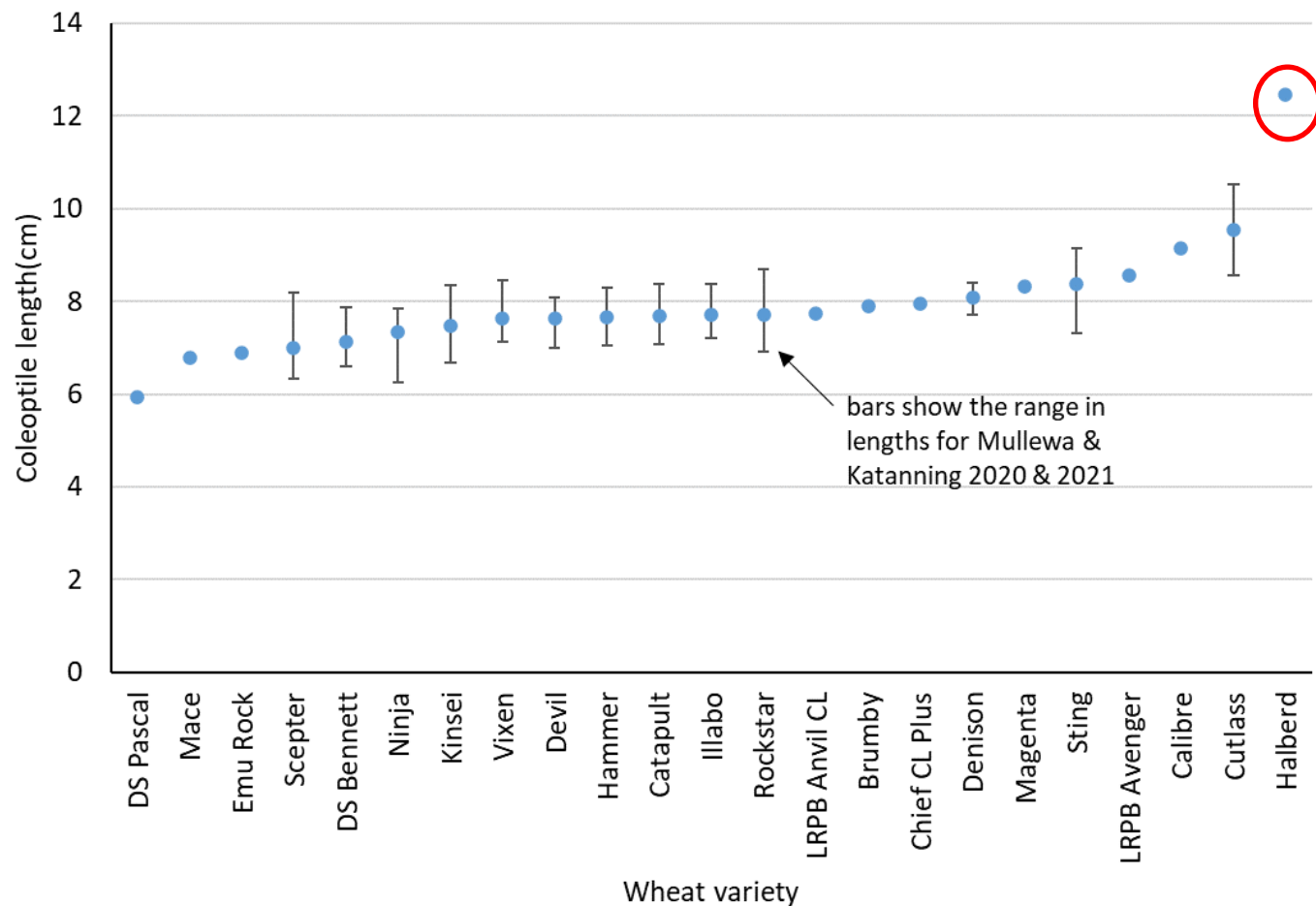
Scepter vs Calibre vs Vixen



	Scepter	Calibre	Vixen
Statewide MET yield (% site mean) ¹	110%	111%	112%
Maturity	Quick-mid	Quick-mid	Quick
Classification	AH	AH	AH (N)
Falling no. index	5	-	3
Stem rust	MRMS	MR	MRMS
Stripe rust	MR*	RMR	MRMS
Leaf rust	MSS	S	SVS
Powdery mildew	S	MSSp	SVS
Yellow spot	MRMS	MRMS	MRMS
EPR (\$/t, excl GST)	\$3.25	\$3.50	\$3.50



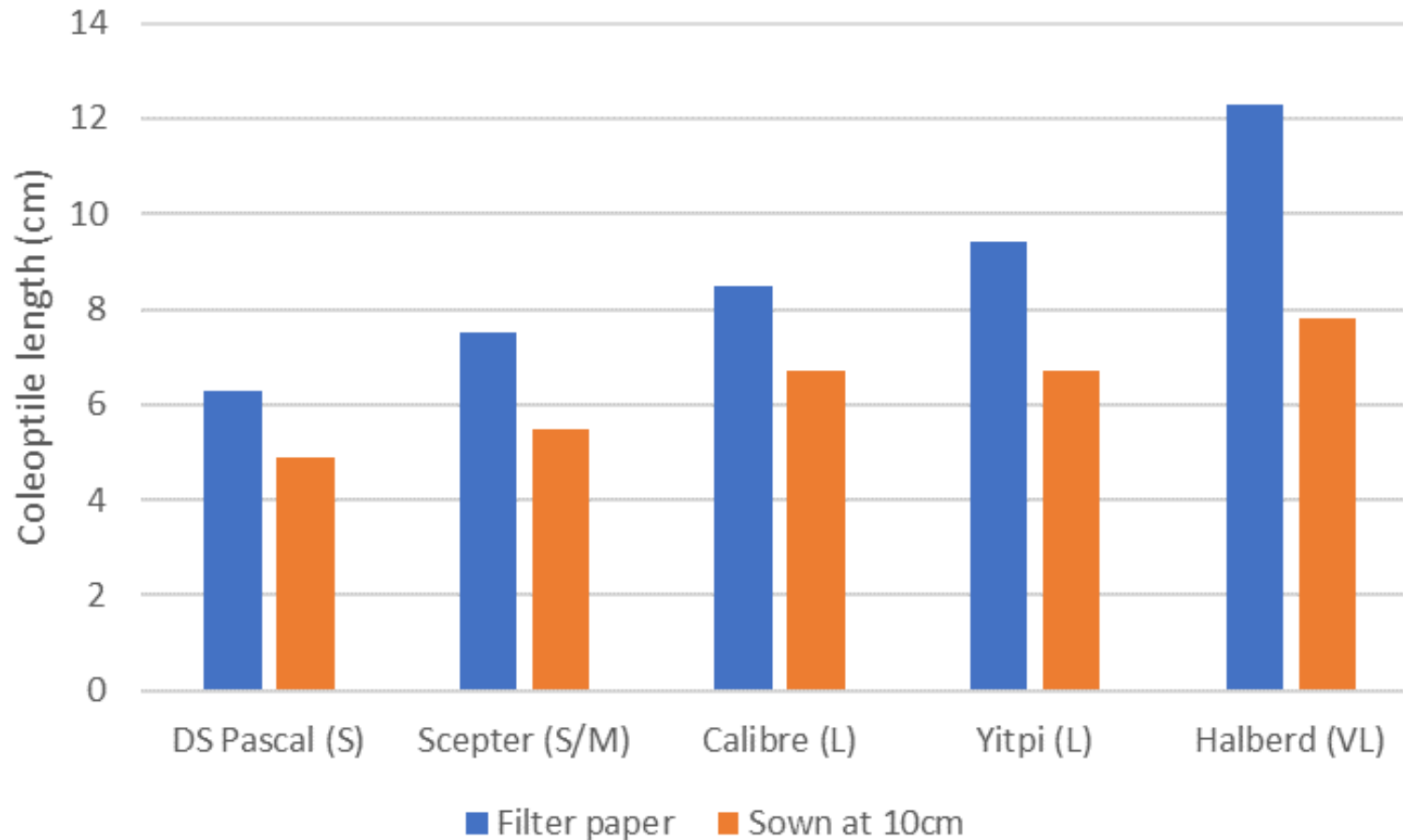
Coleoptile lengths in wheat – the variation



Scepter's variation

Sowing time	Year	Location	Coleoptile length (cm)	Difference
April 20	2021	Mullewa	7.0	
May 6	"	"	7.1	Minor
May 20	"	"	7.0	
	2020	Mullewa	8.2	1.1
	2020	Katanning	6.4	1.8

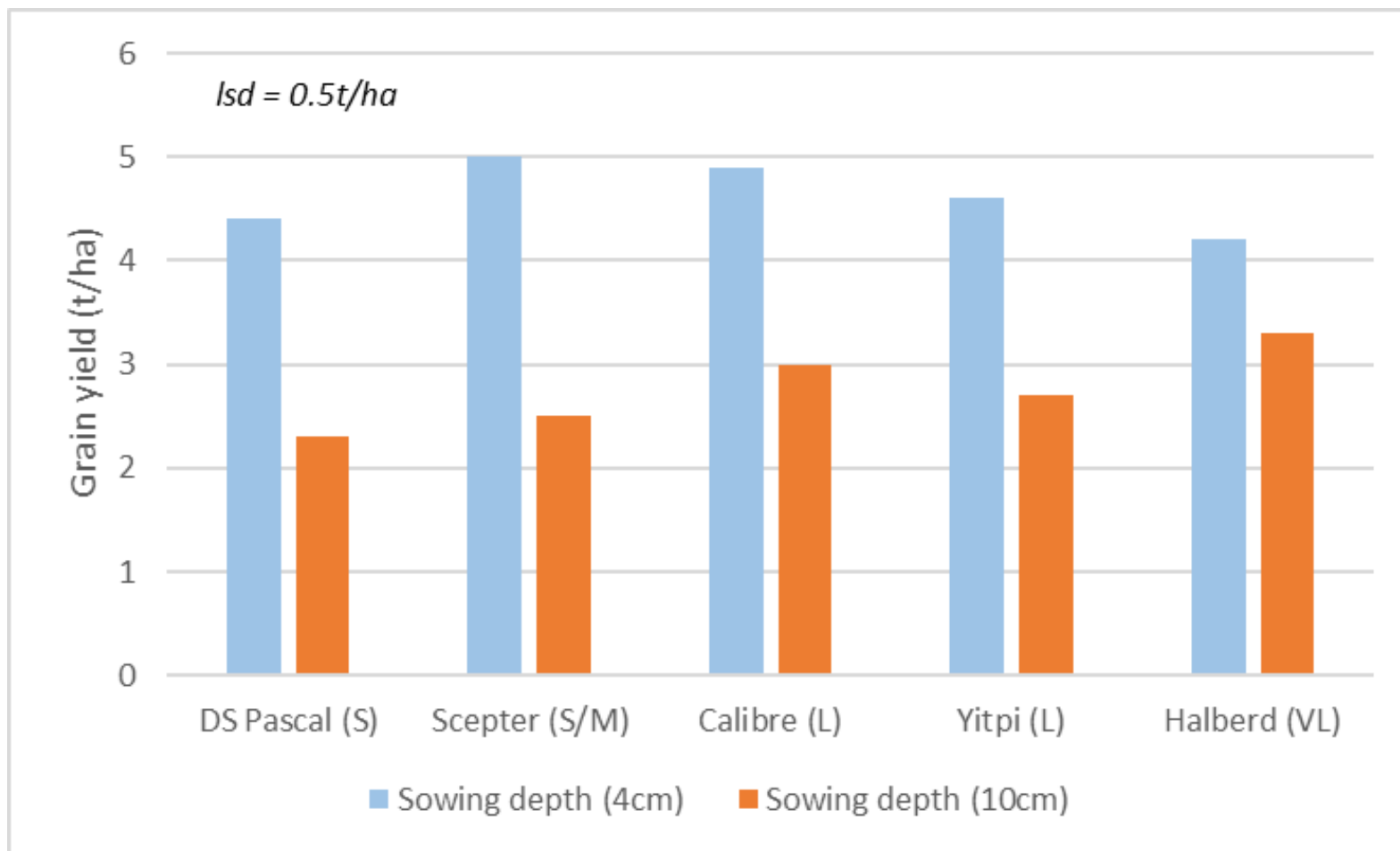
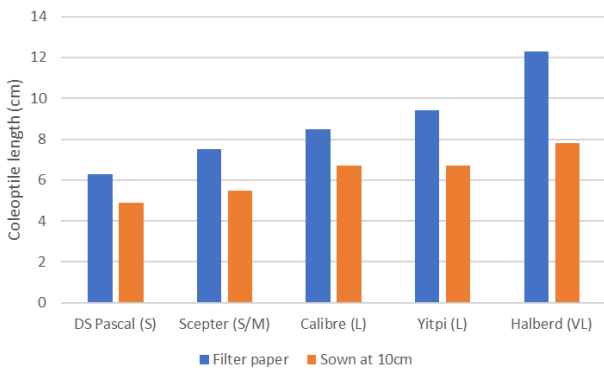
Coleoptile lengths in wheat – decrease in length when sown deep in soil



Source: DPIRD Crop Sowing Guide Project.


Average temp ~15 degree C

Coleoptile lengths in wheat – penalty in sowing deep



0.9 to 2.5 t/ha
yield penalty when sown
deeper

Take home messages

- Keep the 2022 season in perspective
 - *Brumby* an alternative to RockStar where powdery mildew or FN are issues
 - *LRPB Anvil CL Plus* – suited to harsher finishing conditions in low to medium rainfall areas
 - Calibre vs Scepter = 50:50
 - *Seed source* has large affect on coleoptile length – leave deep seeding to the very long coleoptile varieties being developed
- 

Thank you

Acknowledgements

- *DPIRD staff: Rod Bowey, Helen Cooper, Melanie Kupsch and Nihal Hewage*
- *DPIRD Field Research: Geraldton, Merredin, Katanning and Esperance*

- *GRDC and NVT*

Important disclaimer

The Chief Executive Officer of the Department of Primary Industries and Regional Development and the State of Western Australia accept no liability whatsoever by reason of negligence or otherwise arising from the use or release of this information or any part of it.

Copyright © State of Western Australia (Department of Primary Industries and Regional Development), 2022

