



WEST MIDLANDS GROUP
our knowledge hub

2016 GRDC Wheat NVT

Melissa Welsh NVT Project Lead Living Farm
ACKNOWLEDGEMENTS: Living Farm and GRDC

Purpose:	To independently assess the potential for current, newly released and varieties close to commercial release in various locations and environments.
Location:	Dandaragan – West Midlands Group Main Field day site.
Soil Type:	Brown grey sand to yellow brown sand at depth.
Soil Test Results:	
0-10cm	
Nitrate Nitrogen	35mg/kg
Ammonium Nitrogen	3mg/kg
P	20mg/kg
K	30mg/kg
S	4.8mg/kg
Organic Carbon (%)	0.88%
Conductivity (EC)	0.094 ds/m
pH (water)	6.1
pH (CaCl ₂)	5.5
10-30cm	
Nitrate Nitrogen	7mg/kg
Ammonium Nitrogen	1mg/kg
P	12mg/kg
K	15mg/kg
S	3.5mg/kg
Boron	0.22mg/kg
Organic Carbon (%)	0.29%
Conductivity (EC)	0.021 ds/m
pH (water)	5.8
pH (CaCl ₂)	4.8
Rotation:	2015 Lupins
Growing Season Rainfall (April- October 2015):	572mm

BACKGROUND SUMMARY

The aim of the National Variety Trial (NVT) program is to generate independent information for growers and industry about recently released or those due to be released varieties of winter field crops relative to the current commercial varieties grown in the area. Trial data

can be compared by year/s, location and variety. This data is an important decision support tool for growers when assessing if they are growing the right varieties for their farm business.

TRIAL DESIGN

NVT trials are replicated three times (6 ranges, 2 ranges in each replicate) and randomized.

Plot size: 1.52m x 10m

Machinery use: Small plot seeder (row spacing 25.4cm)

Repetitions: 3 replicates

Crop type and varieties used: Various Wheat varieties

Seeding rates and dates: Trial was sown on the 9/05/16 at 85kg/ha

Fertilizer rates and dates:

At seeding: Gusto Gold 100kg/ha + Urea 50kg/ha

Post-em: Flexi-N 40L/ha 7/07/16 + Flexi-N 60L 25/07/16

Herbicide rates and dates:

Pre-emergent: Diuron 250g/ha + Sakura 120g/ha + Treflan 2L/ha + Sprayseed 2L/ha +

Talstar 200ml/ha + Lorsban 500ml/ha 9/05/16

Post-emergent: Velocity 670ml/ha 22/06/16

Other applications/ treatment rates and dates:

Fungicide:

Prosaro 150ml/ha 22/06/16

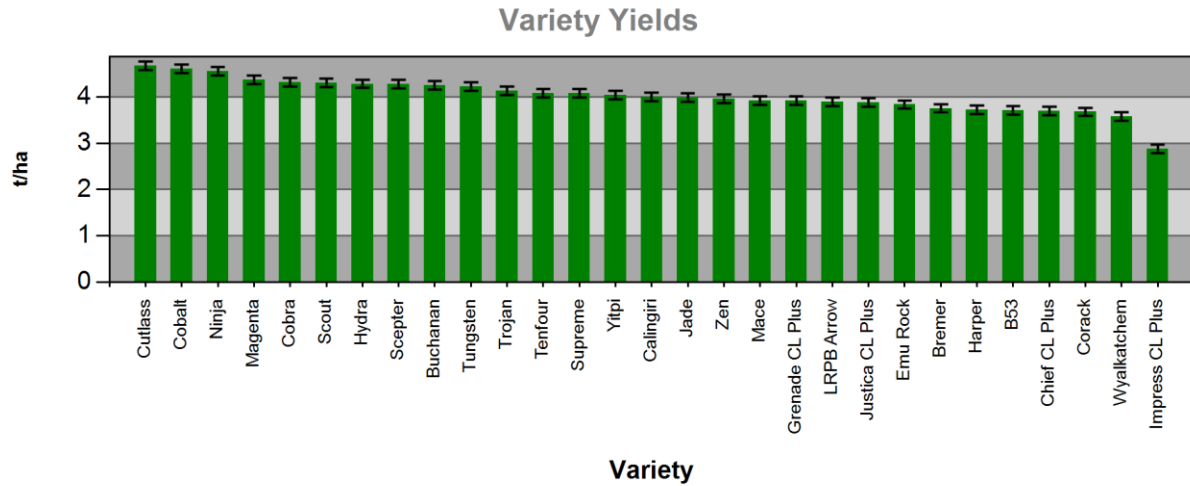
Prosaro 150ml/ha 25/07/16

TRIAL LAYOUT

	Range 1	Range 2	Range 3	Range 4	Range 5	Range 6
Row 1	Cobalt	B53	Buchanan	Emu Rock	Justica CL Plus	LPB11-1728
Row 2	EDGE11V-29-05	Mace	IGW6227	Scout	IGW6148	Trojan
Row 3	LPB13-2225	Jade	Tenfour	Calingiri	Tungsten	Impress CL Plus
Row 4	V09063-56	LPB13-1997	Scepter	Harper	IGW6111	IGW6161
Row 5	IGW6129	Cutlass	LPB13-1995	Magenta	Corack	WAGT452
Row 6	Supreme	Bremer	Cobra	IGW8027	IGW6133	IGW6168
Row 7	Hydra	IGW6089	IGW6155	Yitpi	Zen	Wyalkatchem
Row 8	Grenade CL Plus	EDGE16W-39217	Wyalkatchem	Corack	IGW8027	IGW6089
Row 9	Trojan	IGW6133	B53	Grenade CL Plus	IGW6155	Calingiri
Row 10	Tenfour	WAGT452	IGW6148	LPB13-1997	EDGE16W-39217	Cobra
Row 11	Yitpi	Harper	Impress CL Plus	Cobalt	Cutlass	Hydra
Row 12	LPB11-1728	Zen	EDGE11V-29-05	IGW6129	Buchanan	LPB13-1995
Row 13	Tungsten	IGW6227	Justica CL Plus	IGW6161	Jade	V09063-56
Row 14	Magenta	Scepter	IGW6111	Mace	Supreme	Emu Rock
Row 15	IGW6168	Scout	LPB13-2225	Bremer	Magenta	Mace
Row 16	IGW6111	Cobra	Cutlass	Tungsten	Scout	IGW6129
Row 17	LPB13-1995	Justica CL Plus	IGW6168	Zen	Grenade CL Plus	Bremer
Row 18	Calingiri	Corack	LPB11-1728	Jade	EDGE11V-29-05	Scepter
Row 19	IGW6161	Buchanan	IGW6089	Trojan	Harper	LPB13-2225
Row 20	IGW8027	Impress CL Plus	V09063-56	WAGT452	B53	Yitpi
Row 21	Wyalkatchem	Emu Rock	IGW6133	Hydra	Tenfour	LPB13-1997
Row 22	IGW6148	IGW6155	Supreme	EDGE16W-39217	Cobalt	IGW6227



RESULTS



Analysis and Receival Standards

	Analysis		Receival Standards	
	<i>12/01/2017</i>		<i>9/11/2016</i>	
	<i>Predicted Yield</i>	<i>Hectolitre Weight</i>	<i>Protein</i>	<i>Screenings (<2.0mm sieve)</i>
	<i>tonnes/ha</i>	<i>kg/hectolitre</i>	<i>%</i>	<i>%</i>
Cutlass	4.68	80.97	9.90	1.02
Cobalt	4.62	81.48	11.10	0.85
Ninja	4.56	82.57	11.00	0.73
Magenta	4.38	82.41	11.40	1.71
Cobra	4.32	80.38	11.00	1.55
Scout	4.31	83.02	10.50	1.82
Hydra	4.29	81.58	11.00	1.96
Scepter	4.28	81.92	10.60	1.87
Buchanan	4.26	81.65	11.00	1.24
Tungsten	4.23	78.71	10.30	1.77

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	<i>tonnes/ha</i>	<i>kg/hectolitre</i>	<i>%</i>	<i>%</i>
Trojan	4.13	83.09	10.60	0.55
Supreme	4.08	81.93	10.90	1.44
Tenfour	4.08	80.58	11.80	2.02
Yitpi	4.04	80.87	11.00	1.98
Calingiri	4.00	81.43	11.50	0.79
Jade	3.99	78.79	11.70	2.19
Zen	3.96	81.70	10.90	0.49
Grenade CL Plus	3.93	79.05	10.90	1.02
Mace	3.93	79.52	11.90	0.78
LRPB Arrow	3.90	81.85	11.70	0.50
Justica CL Plus	3.88	78.61	11.50	0.70
Emu Rock	3.84	79.10	12.60	2.27
Bremer	3.76	80.17	11.40	0.70
B53	3.72	80.80	11.60	0.52
Harper	3.72	81.72	11.10	2.36
Chief CL Plus	3.70	81.22	11.80	0.73
Corack	3.68	79.89	12.10	0.84
Wyalkatchem	3.58	81.01	12.40	0.56
Impress CL Plus	2.88	77.18	13.90	1.24

DISCUSSION

This trial was sown into warm and moist soil on the 9th May, providing excellent conditions for establishment. The rainfall received was excellent (572mm GSR) and was consistent throughout the growing season, setting the trial up for a high yield potential.

Variety Summary.

The 2016 season was well set up for longer season varieties to perform well, which is what has been seen in the yield results of this trial.

Cutlass was the highest yielding variety (4.68t/ha) in this trial in 2016. Cutlass is a Yitpi replacement so similar in maturity (long season) and suits a mid-April to mid-May planting date (trial was sown 9th May). It has proven to be a higher yielding than Yitpi in previous years however has an APW classification. It has good (improved over Yitpi) yellow spot resistance which is important if wheat on wheat is part of the rotation.

Cobalt performed similar but slightly behind that of Cutlass yielding well however, it is a feed variety so its utility may be limited.

Ninja is the new noodle variety from Intergrain. Parentage is from both Calingri and Wyalkatchem and is of mid seasons maturity. Yield data from NVT trials suggests that it is can yield 5-6% higher than Mace. It also has improved udon noodle qualities over that of Calingri. Certainly worth considering if you are growing noodle wheat in your system.

Magenta is also a longer season variety well suited to this planting date. It can be sensitive to sowing rate, too high and screenings can result at harvest.

Cobra has Westonia parentage and is of mid maturity. It performs well in high yielding environments especially in average to above average rainfall seasons. It's disease package is good on key diseases, Septoria and yellow leaf spot.

AGT's new AH variety Scepter performed well yielding 4.28t/ha which was 0.35t greater than Mace (3.93t/ha). When you consider protein, we saw Mace give higher protein (11.9%) compared to Scepter (10.6%)

Of the Imidazoline tolerant varieties the top performing variety was Grenade CL Plus (3.93t/ha). Justica CL closely followed yielding 3.88t/ha. These two varieties compared have some slight differences, Grenade has poor disease resistance but a higher test weight compared to Justica CL. The new Clearfield variety from Intergrain, Chief CL Plus performed moderately compared to the other varieties, being a mid-season it will be one to keep an eye on.

PAPER REVIEWED BY: Richard Devlin

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