



2016 GRDC Roundup Ready Canola NVT Trial

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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 Wheat
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 8m

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

Repetitions: 3 replicates

Crop type and varieties used: Various roundup ready canola varieties

Seeding rates and dates: Trial was sown on the 22/04/16 at 2.9kg/ha

Fertilizer rates and dates:

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

Post-emergent: SOA 200kg/ha 22/06/2016

Flexi-N 50L/ha 29/06/2016

Flexi-N 40L/ha 7/07/2016

Herbicide rates and dates:

Pre-emergent: Propyzamide 1L/ha + Treflan 1.5L/ha + Lontrel (750g/kg) 60g/ha + Talstar 200ml/ha + Lorsban 500ml/ha – 22/04/2016

Post-emergent: Glyphosate 900g/ha 13/05/2016, 900g/ha 22/06/2016.

Fungicides: Prosaro 400ml/ha 29/06/2016

Insecticides: Transform 100ml/ha 7/07/2016

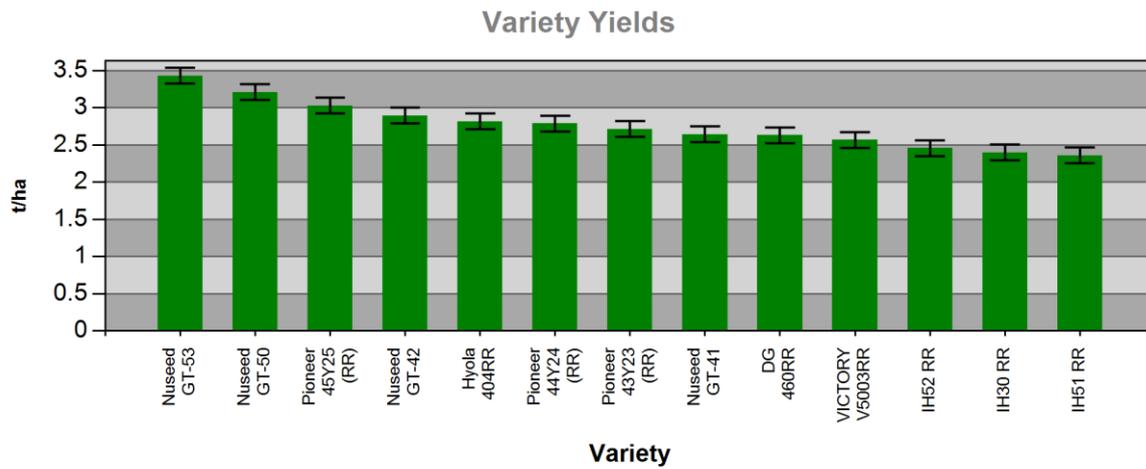
Desiccation: Reglone 2L/ha 1/11/20106

TRIAL LAYOUT

	Range 1	Range 2	Range 3	Range 4	Range 5	Range 6
Row 1	IH52 RR	Pioneer 43Y23 (RR)	PHR-1604	Hyola 404RR	Nuseed GT-50	DG 460RR
Row 2	Pioneer 45Y25 (RR)	PHR-1605	Nuseed GT-42	Pioneer 44Y24 (RR)	IH30 RR	VICTORY V5003RR
Row 3	11H4009	Filler	NCH13G046	Nuseed GT-41	IH51 RR	Bayer AN15R5537
Row 4	SN-AKZ 13-2620	11H4054	11H4009	Bayer AN15R5537	Pioneer 45Y25 (RR)	Pioneer 43Y23 (RR)
Row 5	Nuseed GT-41	DG 460RR	PHR-1605	SN-AKZ 13-2620	PHR-1604	Filler
Row 6	IH30 RR	Hyola 404RR	11H4054	IH52 RR	NCH13G046	Pioneer 44Y24 (RR)
Row 7	Nuseed GT-50	Nuseed GT-42	IH51 RR	VICTORY V5003RR	Hyola 404RR	11H4009
Row 8	Pioneer 44Y24 (RR)	IH51 RR	Pioneer 43Y23 (RR)	Nuseed GT-50	SN-AKZ 13-2620	Nuseed GT-42
Row 9	PHR-1604	Bayer AN15R5537	IH30 RR	Filler	PHR-1605	IH52 RR
Row 10	VICTORY V5003RR	NCH13G046	DG 460RR	Pioneer 45Y25 (RR)	Nuseed GT-41	11H4054



RESULTS



Site Mean: 2.72t/ha

LSD: 0.21t/ha

CV: 4.5%

Probability: <0.001

Analysis and Receival Standards

	Analysis		Receival Standards	
	12/01/2017		9/11/2016	
	<i>Predicted Yield</i>	<i>Oil</i>	<i>Protein - seed</i>	
	<i>tonnes/ha</i>	<i>%</i>	<i>%</i>	
Nuseed GT-53	3.43	48.40	18.10	
Nuseed GT-50	3.21	47.40	18.90	
Pioneer 45Y25 (RR)	3.03	49.00	18.20	
Nuseed GT-42	2.90	47.20	20.00	
Hyola 404RR	2.81	49.00	19.30	
Pioneer 44Y24 (RR)	2.78	47.00	19.60	
Pioneer 43Y23 (RR)	2.71	46.00	20.30	
Nuseed GT-41	2.64	47.90	19.60	
DG 460RR	2.63	49.70	19.40	
VICTORY V5003RR	2.57	48.90	18.70	
IH52 RR	2.46	46.10	19.40	
IH30 RR	2.40	46.80	20.40	
IH51 RR	2.36	46.50	19.80	

DISCUSSION

This trial was sown into warm and moist soil on the 22nd April, providing excellent conditions for establishment. The rainfall received was excellent (527mm GSR) and consistent throughout the growing season, setting the trial up for good yield potential. The trial established well and had strong early growth up until the early cabbage stage where it looked to be lacking in nitrogen. As a result, it was given higher than anticipated levels of nitrogen. The crop recovered somewhat and ended up significantly exceeding yield estimates, which was partly attributed to the very large seed size obtained in most varieties.

Variety Summary:

The top performing variety in this trial was the mid maturity line GT-53 from Nuseed, returning a yield of 3.43t/ha. GT-53 has performed well in previous NVT trials and provides improved blackleg resistance (R) over that of GT-50.

The second highest yielding variety was GT-50, another mid-maturity roundup ready variety from NuSeed, returning an average yield of 3.21t/ha.

45Y25 was the third highest yielding variety in this trial at 3.03t/ha. The longer season seemed to benefit this variety when compared to the other shorter season Pioneer lines of 44Y24 and 43Y23. Best suited to medium to high rainfall zones, with good resistance to blackleg.

GT- 42 another out of the NuSeed suite, it is an early to mid-maturity variety and is adaptable to a range of environments.

The benchmark RR standard Hyola 404RR came in at middle of the road (2.81t/ha) again showing that although it's now an older variety it still manages to yield well, despite the longer season which probably gave some of the other varieties a head start.

PAPER REVIEWED BY: Richard Devlin

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