



## 2016 GRDC Oat NVT

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**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 <sub>2</sub> )	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 <sub>2</sub> )	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 Oat varieties

**Seeding rates and dates:** Trial was sown on the 9/05/16 at 60kg/ha (plant density of 200p/m<sup>2</sup>)

**Fertilizer rates and dates:**

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

**Post-em:** Flexi-N 60L 25/07/16

**Herbicide rates and dates:**

**Pre-emergent:** Diuron 250g/ha + Dual Gold 500ml/ha + Sprayseed 2L/ha + Talstar 200ml/ha + Lorsban 500ml/ha 9/05/16

Post-emergent: Precept 1L/ha 22/06/16

**Other applications/ treatment rates and dates:**

**Fungicide:**

Prosaro 150ml/ha 22/06/16

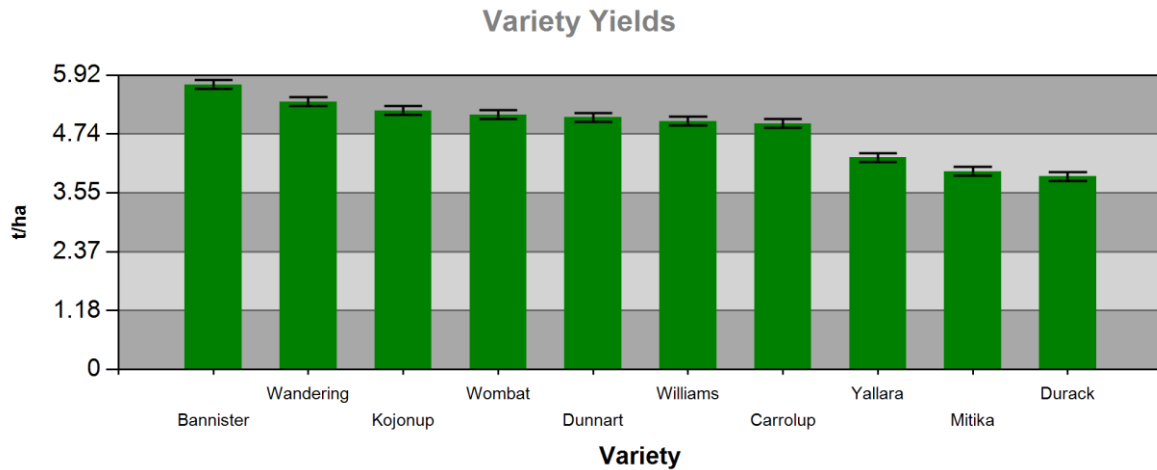
Prosaro 150ml/ha 25/07/16

## TRIAL LAYOUT

	Range 1	Range 2	Range 3	Range 4	Range 5	Range 6
Row 1	Williams	Kojonup	SV03216-35	WA02Q302-9	Mitika	SV04199-3
Row 2	Dunnart	SV03198-18BG	Yallara	Wombat	Bannister	Carrolup
Row 3	Wandering	Filler	SV06204-16	SV05096-32	Williams	SV03198-18BG
Row 4	Wombat	SV06204-16	Dunnart	Mitika	Filler	SV05096-32
Row 5	WA02Q302-9	Bannister	SV04199-3	Kojonup	Yallara	Wandering
Row 6	Carrolup	SV03216-35	Wandering	Filler	Dunnart	WA02Q302-9
Row 7	Yallara	SV05096-32	Bannister	Carrolup	Kojonup	SV06204-16
Row 8	Mitika	SV04199-3	SV03198-18BG	Williams	Wombat	SV03216-35



## RESULTS



**Site Mean: 4.79t/ha**

**LSD: 0.18t/ha**

**CV: 2.3%**

**Probability: <0.001**

### Analysis and Receival Standards

	<b>Analysis</b>		<b>Receival Standards</b>	
	<i>13/01/2017</i>		<i>4/11/2016</i>	
	<i>Predicted Yield</i>	<i>Hectolitre Weight</i>	<i>Protein</i>	<i>Screenings (&lt;2.0mm sieve)</i>
	<i>tonnes/ha</i>	<i>kg/hectolitre</i>	<i>%</i>	<i>%</i>
Bannister	5.73	52.38	8.20	1.21
Wandering	5.39	51.63	9.80	0.74
Kojonup	5.21	51.75	9.40	1.50
Wombat	5.12	54.00	9.20	4.26
Dunnart	5.07	49.66	8.90	1.81
Williams	4.99	51.33	9.80	3.25
Carrolup	4.94	53.47	10.10	2.55
Yallara	4.26	53.52	9.70	2.17
Mitika	3.99	53.31	10.40	0.54
Durack	3.89	52.35	11.30	1.67

## **DISCUSSION**

This trial was sown into warm and moist soil on the 9<sup>th</sup> 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.

### Top 3 Varieties

Bannister was the highest yielding variety in this trial at 5.73t/ha. It is a mid-season maturing variety so the sowing window was ideal for this variety. It is a milling quality variety which shows a 15% yield gain over Carrolup. It is susceptible to Septoria so ideally suited to lower rainfall areas where disease pressure is less.

Wandering performed well but was 0.3t/ha behind that of Bannister. It is a feed variety that has gained good market acceptance for export into the horse racing industry. It is also susceptible to Septoria so again better suited to lower rainfall areas or can be managed by the use of fungicides.

Kojonup is a mid-season milling variety that has consistently shown to be better adapted to medium and high rainfall zones. Kojonup has performed well in this trial this year however in previous years at this site it has been well behind Bannister and Wandering for yield. It is also susceptible to septoria.

**PAPER REVIEWED BY:** Richard Devlin

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