

Disclaimer:

This document is based on the results from an individual trial and may contain experimental use patterns that are currently off-label. **This document does not provide any interpretation and should not be taken as an endorsement of any unregistered use pattern.**

Professional advice should be sought for specific recommendations to ensure access to the most up to date information and knowledge.

Any product referred to in this document must be used strictly as directed, and in accordance with all label or permit instructions. Always consult the label prior to use.

Chickpea Desiccation - Product Evaluation

Trial ID: BD1810 **Location:** Tulloona **Trial Year:** 2018
Investigator: Branko Duric

Objective:	To evaluate the efficacy of Chickpea desiccation options
Planting:	15/05/2018 with Commercial Tyne Planter on 38cm row spacing at 12cm depth
Application Date:	23/10/2018 (~14 Days prior to expected harvest)
Growth Stage at Application:	90% of Pods physically mature (yellow/golden pod)
Application Volume:	100 L/ha
Application Nozzles:	AIXR110015
Harvest Date:	7/11/2018
Harvest Equipment:	Small Plot Harvester
Keywords:	Chickpea, desiccation

NB: Sharpen is registered for chickpea desiccation at 34 g/ha when mixed with registered rates of glyphosate or paraquat plus crop oil. Sharpen at 34 g/ha plus crop oil was evaluated alone to evaluate the performance without the mixing partners.

Crop Name Crop Variety Assessment Date Assessment Type Assessment Unit Treatment-Evaluation Interval ARM Action Codes			Chickpea PBA Seamer				
			30/10/2018 STEM SNAP %	7/11/2018 DISCOLOUR %	7/11/2018 LEAF DROP %	7/11/2018 STEM SNAP %	7/11/2018 YIELD t/ha
			7 DAA	15 DAA AA	15 DAA	15 DAA ET1R1	15 DAA TY1
Trt No.	Treatment	Product Rate					
1	Untreated	-	38-	88f	93-	60	1.26-
2	Weedmaster Argo	1100ml/ha	48-	99bcd	95-	90	1.23-
3	Weedmaster Argo	1800ml/ha	55-	100ab	96-	88	1.25-
4	Weedmaster Argo Ally	1100ml/ha 5g/ha	78-	100a	93-	98	1.17-
5	Weedmaster Argo Experimental	1100ml/ha 25g/ha	53-	99abc	98-	93	1.22-
6	Weedmaster Argo Sharpen Hasten	1100ml/ha 9g/ha 1% v/v	63-	99abc	95-	88	1.32-
7	Weedmaster Argo Sharpen Hasten	1100ml/ha 34g/ha 1% v/v	63-	100ab	96-	88	1.13-
8	Sharpen Hasten	34g/ha 1% v/v	43-	97cde	95-	78	1.22-
9	Gramoxone	800ml/ha	55-	97cde	94-	88	1.30-
10	Gramoxone Sharpen Hasten	800ml/ha 9g/ha 1% v/v	48-	97de	94-	85	1.24-
11	Gramoxone Sharpen Hasten	800ml/ha 34g/ha 1% v/v	63-	99abc	94-	90	1.30-
12	Reglone Chemwet 1000	3000ml/ha 0.2% v/v	70-	96e	93-	85	1.38-
LSD P=.05 Treatment Prob.(F)= CV=			nsd 0.0828	5.4t 0.0001	nsd 0.3165	nsd 0.2629	nsd 0.9225 16.5%

Means followed by same letter do not significantly differ (P=.05, LSD)

t=Mean descriptions are reported in transformed data units, and are not de-transformed.

Mean comparisons performed only when AOV Treatment P (F) is significant at mean comparison OSL.

nsd = No significant difference

NB: The Untreated was excluded from the Stem Snap score at 15 DAA due to skewness in data.

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Trial ID: BD1810

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Trial Year: 2018

Crop Name Crop Variety Assessment Date Assessment Type Assessment Unit ARM Action Codes			Chickpea PBA Seamer			
			20/11/2018 PROTEIN %	20/11/2018 MOISTURE %	20/11/2018 TEST WEIGHT kg/hL	20/11/2018 SCREENING % AL
Trt No.	Treatment	Product Rate				
1	Untreated	-	23.8-	9.3-	68-	7.2-
2	Weedmaster Argo	1100ml/ha	24.0-	9.4-	69-	6.8-
3	Weedmaster Argo	1800ml/ha	24.1-	9.3-	69-	5.8-
4	Weedmaster Argo Ally	1100ml/ha 5g/ha	23.9-	9.8-	68-	6.9-
5	Weedmaster Argo Experimental	1100ml/ha 25g/ha	24.0-	9.4-	69-	7.5-
6	Weedmaster Argo Sharpen Hasten	1100ml/ha 9g/ha 1% v/v	24.2-	9.2-	67-	7.3-
7	Weedmaster Argo Sharpen Hasten	1100ml/ha 34g/ha 1% v/v	23.9-	9.4-	69-	6.1-
8	Sharpen Hasten	34g/ha 1% v/v	24.3-	8.9-	68-	7.4-
9	Gramoxone	800ml/ha	24.2-	9.1-	69-	6.9-
10	Gramoxone Sharpen Hasten	800ml/ha 9g/ha 1% v/v	23.8-	9.7-	69-	6.8-
11	Gramoxone Sharpen Hasten	800ml/ha 34g/ha 1% v/v	24.4-	9.2-	70-	9.8-
12	Reglone Chemwet 1000	3000ml/ha 0.2% v/v	24.1-	8.9-	71-	6.9-
LSD P=.05 Treatment Prob.(F)=			nsd 0.5823	nsd 0.1876	nsd 0.8992	nsd 0.2103

Assessment Type

STEM SNAP = Measurement of stem dry down as indicator of harvest readiness. 10 plants/plot were twisted and evaluated. The % of plants were recorded where all stems had snapped in 2 twists.

LEAF DROP = Estimate of % of leaves dropped from plant

DISCOLOUR = Phytotoxicity - % discoloration

SCREENING = Grain screenings 4 mm screen - % defective grains

ARM Action Codes

AA = Automatic arcsine square root % transformation

ET1 = Excluded treatment 1

AL = Automatic log transformation of X+1

TY1 = 0.6944445*[7]

DAA = Days after Application

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Location: Tulloona

Trial Year: 2018

Conclusions:

This trial was conducted to evaluate chickpea harvest management options for crop desiccation, yield and grain quality.

At 7 days after application, there was no significant difference between any treatment and the Untreated in stem drydown (as assessed by % of plants with stems snapping). At 15 days after application there was no significant difference in stem drydown between any desiccation treatment. The Untreated had the lowest results at both assessments. At 15 days after application, all desiccation treatments significantly improved chickpea discoloration compared to the Untreated with little difference between treatments.

There were no significant differences between any treatment and the Untreated in grain yield or any grain quality measurement with all treatments, including the Untreated, successfully harvested at 15 days after application.

Applied at a crop stage of ~90% mature pods, desiccation treatments increased crop discolouration but had no impact on yield or grain quality.

Application Description

Application Date:	23/10/2018
Application Start Time:	2:00 PM
Application Stop Time:	4:00 PM
Application Method:	SPRAY
Application Timing:	PRE HARVEST
Application Placement:	FOLIAR
Air Temperature, Unit:	34 C
% Relative Humidity:	34
Wind Velocity, Unit:	2.7 m/s
Wind Direction:	NW
Dew Presence (Y/N):	No
% Cloud Cover:	70

Crop Stage at Each Application

Crop:	Chickpea
Stage Scale Used:	GRDC
Stage Majority, %:	19 R12 90% of Pods physically mature

Application Equipment

Operation Pressure, Unit:	300 kPa
Nozzle Type:	AIXR
Nozzle Size:	110015
Nozzle Spacing, Unit:	50 cm
Boom Length, Unit:	4 m
Boom Height, Unit:	50 cm
Ground Speed, Unit:	7.2 km/h
Carrier:	WATER
Spray Volume, Unit:	100 L/ha