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## Chickpea Desiccation – Product Evaluation

Trial ID: **LB1812**      Location: **Warra**      Trial Year: **2018**  
 Investigator: **Linda Bailey**

<b>Objective:</b>	<b>To evaluate the efficacy of chickpea desiccation options</b>
<b>Variety:</b>	<b>PBA Seamer</b>
<b>Planting:</b>	<b>27/05/2018 with Commercial Tyne Planter on 50cm row spacing at 13cm depth</b>
<b>Planting Rate:</b>	<b>68 kg/ha</b>
<b>Application Date:</b>	<b>2/11/2018</b>
<b>Growth Stage at Application:</b>	<b>85% of pods physically mature (yellow/golden pod)</b>
<b>Harvest Timing:</b>	<b>16/11/2018</b>
<b>Keywords:</b>	<b>Chickpea, desiccation</b>

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			
			9/11/2018 DISCOLOUR %	9/11/2018 LEAF DROP %	16/11/2018 STEM SNAP %	16/11/2018 YIELD t/ha
			7 DAA	7 DAA	14 DAA	14 DAA
			AA	AA	AA	TY1 AA
Trt No.	Treatment	Product Rate				
1	Untreated	-	72d	59-	42f	0.86-
2	Weedmaster Argo	1100ml/ha	83cd	75-	40f	0.86-
3	Weedmaster Argo	1800ml/ha	90abc	78-	77b-e	0.79-
4	Weedmaster Argo Ally	1100ml/ha 5g/ha	90abc	79-	71cde	0.78-
5	Weedmaster Argo Experimental	1100ml/ha 25g/ha	84c	71-	65def	0.86-
6	Weedmaster Argo Sharpen Hasten	1100ml/ha 9g/ha 1% v/v	86bc	69-	60ef	0.82-
7	Weedmaster Argo Sharpen Hasten	1100ml/ha 34g/ha 1% v/v	94ab	78-	67def	0.83-
8	Sharpen Hasten	34g/ha 1% v/v	94ab	75-	53ef	0.97-
9	Gramoxone	800ml/ha	95a	69-	87a-d	0.85-
10	Gramoxone Sharpen Hasten	800ml/ha 9g/ha 1% v/v	97a	64-	90abc	0.88-
11	Gramoxone Sharpen Hasten	800ml/ha 34g/ha 1% v/v	97a	70-	95ab	0.92-
12	Reglone Chemwet 1000	3000ml/ha 0.2% v/v	94ab	70-	97a	0.77-
LSD P=.05			8.1t	nsd	16.5t	nsd
Treatment Prob(F)			0.0001	0.2092	0.0001	0.7357

Yield cv = 7.9%

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.

nsd = No significant difference

## Chickpea Desiccation – Product Evaluation

Trial ID: LB1812

Location:

Warra

Trial Year: 2018

Crop Name Crop Variety Assessment Date Assessment Type Assessment Unit ARM Action Codes			Chickpea PBA Seamer			
			30/11/2018 PROTEIN % AA	30/11/2018 MOISTURE % AA	30/11/2018 TEST WEIGHT kg/hL AA	30/11/2018 SCREENING % AA
Trt No.	Treatment	Product Rate				
1	Untreated	-	22.8-	9.8a-d	72.0-	6.7-
2	Weedmaster Argo	1100ml/ha	23.0-	9.6cde	71.5-	7.7-
3	Weedmaster Argo	1800ml/ha	22.9-	9.5e	71.5-	8.0-
4	Weedmaster Argo Ally	1100ml/ha 5g/ha	22.4-	9.7b-e	69.6-	6.3-
5	Weedmaster Argo Experimental	1100ml/ha 25g/ha	22.8-	9.7b-e	69.7-	7.4-
6	Weedmaster Argo Sharpen Hasten	1100ml/ha 9g/ha 1% v/v	22.7-	9.5de	70.3-	6.6-
7	Weedmaster Argo Sharpen Hasten	1100ml/ha 34g/ha 1% v/v	22.7-	9.6cde	72.0-	7.4-
8	Sharpen Hasten	34g/ha 1% v/v	22.5-	9.6cde	71.6-	7.0-
9	Gramoxone	800ml/ha	22.8-	9.9abc	70.5-	8.4-
10	Gramoxone Sharpen Hasten	800ml/ha 9g/ha 1% v/v	22.6-	10.0ab	71.4-	9.1-
11	Gramoxone Sharpen Hasten	800ml/ha 34g/ha 1% v/v	22.3-	10.1a	70.6-	8.4-
12	Reglone Chemwet 1000	3000ml/ha 0.2% v/v	23.0-	9.5de	71.9-	8.1-
LSD P=.05 Treatment Prob(F)			nsd 0.0909	0.36t 0.0158	nsd 0.8342	nsd 0.5854

### 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

DAA = Days after Application

## Chickpea Desiccation – Product Evaluation

Trial ID: LB1812

Location:

Warra

Trial Year: 2018

**Objectives:**

To evaluate the efficacy of chickpea desiccation options

**Conclusions:**

Treatments were applied when ~85% of the grain were physiologically mature (yellow beak stage).

Leaf discolouration and leaf drop were assessed at 7 days after application. All treatments, except Weedmaster Argo 1100 mL/ha, had significantly more discolouration than the untreated. There were no significant differences in leaf drop.

Stem 'snappiness' was assessed at 14 days after application. Reglone and all treatments that included Gramoxone, provided the highest level of stem 'snappiness'. Sharpen in mixture with Gramoxone provided significantly more stem snappiness than the same Sharpen rate mixed with Weedmaster Argo.

There were no significant differences between the Untreated and any treatment for yield, protein, test weight or screenings. All treatments recorded grain moisture levels between 9.5 and 10% with Weedmaster Argo 1800 mL/ha the only treatment with significantly lower moisture than the untreated. NB Grain quality, including moisture, was not conducted until 14 days after harvest.

Applied at a crop stage of ~85% mature pods, there were no clear differences between desiccation treatments and the Untreated in yield or grain quality.

### Application Description

Application Date:	2/11/2018
Application Start Time:	3:00 PM
Application Stop Time:	5:00 PM
Application Method:	SPRAY
Application Timing:	PRE-HARVEST
Application Placement:	FOLIAR
Air Temperature, Unit:	30 C
% Relative Humidity:	33
Wind Velocity, Unit:	10 km/h
Wind Direction:	E
Dew Presence (Y/N):	No
% Cloud Cover:	10
Next Moisture Occurred On:	8/11/2018

### Crop Stage at Each Application

Crop:	Chickpea
Stage Scale Used:	GRDC
Stage Majority, %:	18 R11, 60%
Stage Maximum, %:	19 R12, 40%

### Application Equipment

Application Equipment:	Polaris
Equipment Type:	BOOM
Operation Pressure, Unit:	300 kPa
Nozzle Type:	AIXR
Nozzle Size:	110015
Nozzle Spacing, Unit:	50 cm
Nozzles/Row:	8
Boom Length, Unit:	4 m
Boom Height, Unit:	80 cm
Ground Speed, Unit:	7.2 km/h
Spray Volume, Unit:	100 L/ha