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.***

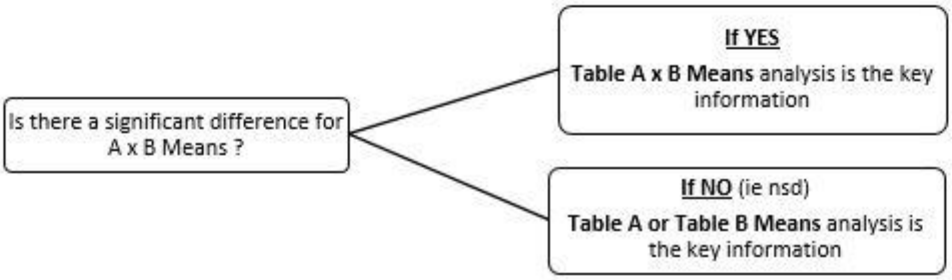
Residual Herbicides for Grass Weed Control in Chickpea 2015

Trial ID: AM1531 **Location:** Baan Baa **Trial Year:** 2015
Investigator: Anthony Mitchell

Planting Date:	**8/07/2015**	
Planting Equipment:	**Commercial Single Disc Planter**	
Row Spacing:	**40cm**	
Application Code:	**A**	**B**
Application Date:	**27/05/2015**	**09/07/2015**
Target/Stage:	**Pre-plant IBS**	**PSPE**

Trial designed and analysed as a Strip Plot

	In Simple Terms
Table of A Means:	Mean of 'Main Herbicide' performance with **ALL** 'Balance' treatments
Table of B Means:	Mean of 'Balance' performance with **ALL** 'Main Herbicide treatments
Table of A x B Means:	'Main Herbicide' performance with **EACH** 'Balance' treatment



Trt No.	Treatment	Product Rate	Appln. Code			
Pest Scientific Name					***Carthamus lanatus***	***Echinochloa colona***
Pest Name					**Saffron Thistle**	**Awnless Barnyard Grass**
Crop Name				**Chickpea**		
Crop Variety				**PBA HatTrick**		
Assessment Date				**15/08/2015**	**17/10/2015**	**23/11/2015**
Assessment Type				**EMERGENCE**	**COUNT**	**COUNT**
Assessment Unit				**/m²**	**/m²**	**/m²**
Crop Stage Majority				**3 leaf**		
Pest Stage Majority					**9 node**	**2-5 leaf**
Treatment-Evaluation Interval				**80 DAA**	**143 DAA**	**180 DAA**
ARM Action Codes				**AL**		**AL T1**
TABLE OF A MEANS (Main Herbicide)						
1	Untreated	-	-	13.9-	0.9a	71.6a
2	Sakura	118g/ha	A	15.0-	0.8a	24.8bcd
3	Outlook	1000ml/ha	A	15.7-	0.8a	24.6bcd
4	Outlook Gp G S	1000ml/ha 75g/ha	A A	14.4-	0.3b	72.1a
5	Boxer Gold	2500ml/ha	A	14.4-	1.0a	20.9cde
6	Triflurx	1700ml/ha	A	15.5-	0.9a	29.1bcd
7	Rifle	2250ml/ha	A	15.4-	1.0a	5.0gh
8	Experimental	1000ml/ha	A	15.9-	1.1a	52.7ab
9	Terbyne Xtreme Avadex Xtra	1000g/ha 1600ml/ha	A A	15.9-	0.3b	13.9def
10	Terbyne Xtreme Triflurx	1000g/ha 1700ml/ha	A A	16.3-	0.2b	10.9efg
11	Simagranz	1500g/ha	B	15.5-	0.4b	3.2h
12	Terbyne Xtreme	1200g/ha	B	15.4-	0.2b	8.5fg
13	Gp D R	1000ml/ha	B	14.7-	1.0a	37.3abc
14	Rifle Balance	1500ml/ha 100g/ha	B B	17.0-	0.1b	0.5i
TABLE OF B MEANS (Balance)						
1	Untreated	-	-	14.6b	1.2a	17.4-
2	Balance	100g/ha	B	16.1a	0.1b	16.2-

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Pest Name					Saffron Thistle	Awnless Barnyard Grass
Crop Name				Chickpea		
Crop Variety				PBA HatTrick		
Assessment Date				15/08/2015	17/10/2015	23/11/2015
Assessment Type				EMERGENCE	COUNT	COUNT
Assessment Unit				/m²	/m²	/m²
Treatment-Evaluation Interval				80 DAA	143 DAA	180 DAA
ARM Action Codes				AL		AL T1
Trt No.	Treatment	Product Rate	Appln. Code			
TABLE OF A x B MEANS						
(Main Herbicide without Balance)						
1	Untreated	-	-	13.0-	1.7a	87.0-
2	Sakura	118g/ha	A	13.0-	1.6a	29.5-
3	Outlook	1000ml/ha	A	15.2-	1.6a	24.4-
4	Outlook	1000ml/ha	A	15.1-	0.7bc	90.1-
	Gp G S	75g/ha	A			
5	Boxer Gold	2500ml/ha	A	15.3-	1.9a	30.5-
6	Triflurx	1700ml/ha	A	14.2-	1.7a	33.5-
7	Rifle	2250ml/ha	A	15.6-	1.9a	4.0-
8	Experimental	1000ml/ha	A	15.5-	1.9a	46.2-
9	Terbyne Xtreme	1000g/ha	A	13.5-	0.6bcd	16.5-
	Avadex Xtra	1600ml/ha	A			
10	Terbyne Xtreme	1000g/ha	A	15.7-	0.4b-e	10.5-
	Triflurx	1700ml/ha	A			
11	Simagranz	1500g/ha	B	14.3-	0.7b	3.5-
12	Terbyne Xtreme	1200g/ha	B	15.2-	0.3b-e	11.0-
13	Gp D R	1000ml/ha	B	13.2-	1.8a	21.3-
14	Rifle	1500ml/ha	B	15.7-	0.2b-e	0.3-
	Balance	100g/ha	B			
(Main Herbicide followed by Balance)						
1a	Untreated	-	-	14.8-	0.1cde	58.9-
	Balance	100g/ha	B			
2a	Sakura	118g/ha	A	17.2-	0.0e	20.8-
	Balance	100g/ha	B			
3a	Outlook	1000ml/ha	A	16.2-	0.0de	24.8-
	Balance	100g/ha	B			
4a	Outlook	1000ml/ha	A	13.8-	0.0e	57.7-
	Gp G S	75g/ha	A			
	Balance	100g/ha	B			
5a	Boxer Gold	2500ml/ha	A	13.6-	0.2b-e	14.2-
	Balance	100g/ha	B			
6a	Triflurx	1700ml/ha	A	17.0-	0.1de	25.3-
	Balance	100g/ha	B			
7a	Rifle	2250ml/ha	A	15.2-	0.0e	6.1-
	Balance	100g/ha	B			
8a	Experimental	1000ml/ha	A	16.3-	0.2b-e	60.2-
	Balance	100g/ha	B			
9a	Terbyne Xtreme	1000g/ha	A	18.7-	0.0e	11.8-
	Avadex Xtra	1600ml/ha	A			
	Balance	100g/ha	B			
10a	Terbyne Xtreme	1000g/ha	A	17.0-	0.0e	11.3-
	Triflurx	1700ml/ha	A			
	Balance	100g/ha	B			
11a	Simagranz	1500g/ha	B	16.9-	0.1cde	3.0-
	Balance	100g/ha	B			

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Trial ID: **AM1531** **Location:** **Baan Baa** **Trial Year:** **2015**

Pest Scientific Name					*Carthamus lanatus*	*Echinochloa colona*
Pest Name					Saffron Thistle	Awnless Barnyard Grass
Crop Name				Chickpea		
Crop Variety				PBA HatTrick		
Assessment Date				15/08/2015	17/10/2015	23/11/2015
Assessment Type				EMERGENCE	COUNT	COUNT
Assessment Unit				/m²	/m²	/m²
Treatment-Evaluation Interval				80 DAA	143 DAA	180 DAA
ARM Action Codes				AL		AL T1
Trt No.	Treatment	Product Rate	Appln. Code			
12a	Terbyne Xtreme	1200g/ha	B	15.6-	0.1de	6.6-
	Balance	100g/ha	B			
13a	Gp D R	1000ml/ha	B	16.2-	0.1b-e	64.8-
	Balance	100g/ha	B			

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.

ARM Action Codes
AL = Automatic log transformation of X+1
AA = Automatic arcsine square root % transformation
T1 = LOG([6]+ 1)

DAA = Days after Application

COMPLETE STRIP-BLOCK AOV Chickpea - PBA HatTrick 15/08/2015 EMERGENCE /m² 80 DAA AL						
Source	DF	Sum of Squares	Mean Square	F	Prob.(F)	LSD (.05)
Total	111	0.583293				
R	3	0.013914	0.004638	0.887	0.4561	
A	13	0.050143	0.003857	0.805	0.6516	0.1
RA	39	0.186913	0.004793			
B	1	0.049162	0.049162	20.139	0.0206	0.0
RB	3	0.007323	0.002441			
AB	13	0.072003	0.005539	1.060	0.4195	0.1
RAB	39	0.203834	0.005227			

COMPLETE STRIP-BLOCK AOV *Carthamus lanatus* - Saffron thistle 17/10/2015 COUNT /m² 143 DAA						
Source	DF	Sum of Squares	Mean Square	F	Prob.(F)	LSD (.05)
Total	111	81.949245				
R	3	4.078647	1.359549	8.805	0.0001	
A	13	13.757445	1.058265	6.624	0.0001	0.4
RA	39	6.231045	0.159770			
B	1	37.275355	37.275355	36.025	0.0093	0.6
RB	3	3.104091	1.034697			
AB	13	11.480598	0.883123	5.719	0.0001	0.6
RAB	39	6.022064	0.154412			

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Trial ID: AM1531 **Location:** Baan Baa **Trial Year:** 2015

COMPLETE STRIP-BLOCK AOV *Echinochloa colona* - Awnless Barnyard Grass 23/11/2015 COUNT /m^2 180 DAA AL T1						
Source	**DF**	**Sum of Squares**	**Mean Square**	**F**	**Prob.(F)**	**LSD (.05)**
Total	111	69.044044				
R	3	7.159578	2.386526	8.808	0.0001	
A	13	24.440800	1.880062	17.350	0.0001	0.3
RA	39	4.226182	0.108364			
B	1	0.025315	0.025315	0.004	0.9564	1.6
RB	3	21.586377	7.195459			
AB	13	1.038487	0.079884	0.295	0.9895	0.7
RAB	39	10.567304	0.270957			

Application Description		
	A	**B**
Application Date:	**27/05/2015**	**9/07/2015**
Application Start Time:	**10:00 AM**	**12:00 PM**
Application Stop Time:	**11:00 AM**	**1:00 PM**
Application Method:	**SPRAY**	
Application Timing:	**Pre-Plant**	**PSPE**
Air Temperature, Unit:	**26.5 C**	**22 C**
% Relative Humidity:	**52**	**46**
Wind Velocity, Unit:	**3 km/h**	**10 km/h**
Wind Direction:	**N/E**	
% Cloud Cover:	**0**	**30**
Next Moisture Occurred On:	**1/06/2015**	**10/07/2015**

Application Equipment		
	A	**B**
Application Equipment:	**Quad bike**	
Equipment Type:	**BOOM**	
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:	**10.3 km/h**	
Spray Volume, Unit:	**70 L/ha**	