

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.

Broadleaf Weed Control in Sorghum

Trial ID: **LB1823** Location: **Brigalow** Trial Year: **2018**
Investigator: **Linda Bailey**

Objective:	To evaluate in-crop options for <i>Tribulus spp.</i> control
Crop:	Sorghum (MR Buster)
Planting Date:	03/11/2018
Planting Details:	JD MaxEmerge twin disc on 1m row spacing at 37,500 seeds/ha
Application Date:	28/12/2018 (55 days after planting)
Nozzles:	AIXR110015
Volume:	70 L/ha
Weed:	Yellow vine
Weed Stage at Application:	4 true leaves, 3-5 cm diameter
Weed Population at Application:	11 /m ²
Crop Stage at Application:	Majority 4 nodes, ~70cm tall (range from head initiation to flag leaf)
Harvest Date:	01/02/2019
Keywords:	Yellow vine, knockdown, sorghum

Pest Scientific Name			<i>Tribulus micrococcus</i>		Sorghum (MR Buster)		
Pest Name			Yellow vine				
Crop Name							
Assessment Date			10/01/2019	1/02/2019	10/01/2019	1/02/2019	13/02/2019
Assessment Type			BURNDOWN	COUNT	HEIGHT	TOTAL HEADS	HEAD WEIGHT
Assessment Unit			%	/m ²	cm	/m Row	g
Treatment-Evaluation Interval			13 DAA	35 DAA	13 DAA	35 DAA	47 DAA
ARM Action Codes			AA				
Trt No.	Treatment	Product Rate					
1	Gesaprim 900 WG Starane Advanced Hasten	1500 g/ha 450 ml/ha 0.5 % v/v	87a	0.06bc	64.7d	4.1-	115 -
2	Gesaprim 900 WG Starane Advanced Hasten	2000 g/ha 450 ml/ha 0.5 % v/v	92a	0.03bc	65.5cd	4.0-	126 -
3	Gesaprim 900 WG Starane Advanced Hasten	3000 g/ha 450 ml/ha 0.5 % v/v	97a	0.16b	66.0bcd	4.2-	127 -
4	Gesaprim 900 WG Starane Advanced Hasten	1500 g/ha 800 ml/ha 0.5 % v/v	93a	0.01c	66.1bcd	3.7-	126 -
5	Gesaprim 900 WG Cutlass 500 SL Hasten	1500 g/ha 500 ml/ha 0.5 % v/v	85a	0.03bc	67.5a-d	4.2-	105 -
6	Gesaprim 900 WG Tordon 75-D Hasten	1500 g/ha 500 ml/ha 0.5 % v/v	92a	0.03bc	67.2a-d	4.0-	144 -
7	Gesaprim 900 WG Stuka Flexi Hasten	1500 g/ha 155 ml/ha 0.5 % v/v	47b	0.56a	68.0abc	4.0-	99 -

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Pest Scientific Name Pest Name Crop Name Assessment Date Assessment Type Assessment Unit Treatment-Evaluation Interval ARM Action Codes			<i>Tribulus micrococcus</i> Yellow vine		Sorghum (MR Buster)		
			10/01/2019 BURNDOWN % 13 DAA	1/02/2019 COUNT /m ² 35 DAA AA	10/01/2019 HEIGHT cm 13 DAA	1/02/2019 TOTAL HEADS /m Row 35 DAA	13/02/2019 HEAD WEIGHT g 47 DAA
Trt No.	Treatment	Product Rate					
8	Gesaprim 900 WG Agritone 750 Hasten	1500g/ha 460ml/ha 0.5% v/v	100a	0.00c	69.9a	3.5 -	127-
9	Terbyne Xtreme Starane Advanced Hasten	950g/ha 450ml/ha 0.5% v/v	93a	0.02bc	68.7ab	4.7 -	124-
	LSD P=.05 Treatment Prob.(F)		21.3 0.0035	1.742t 0.0046	2.86 0.0300	nsd 0.8666	nsd 0.1802

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.

Missing data estimates are included in columns: Average=1, 4, 2, 6, 14

Assessment Type

BURNDOWN = % Burndown/brown out

ARM Action Codes

AA = Automatic arcsine square root % transformation

DAA = Days after Application

Conclusions:

This trial was conducted to evaluate options for the control of yellow vine in sorghum. Gesaprim 1500 g/ha + Starane Advanced 450 mL/ha + Hasten 0.5% was used as the commercial standard. Treatments were applied to yellow vine at a population of ~11 weeds/m² with an average diameter of ~3-5 cm.

Weed burndown was assessed at 13 days after application. High levels of burndown (~85 - 100%) were achieved from all treatments except Gesaprim + Stuka Flexi. Weed counts at 35 days after application found high levels of control from all treatments (95-100%) with complete control achieved by Gesaprim + Agritone. Gesaprim + Stuka Flexi had significantly higher surviving weed numbers than all other treatments.

There was little or no impact from treatments on crop safety.

When applied on small yellow vine (4 leaf, 3-5 cm diameter), high levels of control were achieved from all treatments except Gesaprim + Stuka Flexi. In this situation, no treatment provided a clear benefit to the commercial standard of Gesaprim 1500 g/ha + Starane Advanced 450 mL/ha + Hasten, although the results achieved by Gesaprim + Agritone may warrant further evaluation on more advanced weed stages.

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Trial ID: LB1823 Location: Brigalow Trial Year: 2018

Application Description	
Application Date:	28/12/2018
Application Start Time:	11:45 AM
Application Stop Time:	1:35 PM
Application Method:	SPRAY
Application Timing:	EARLY POST-EM
Application Placement:	FOLIAR
Air Temperature, Unit:	28 C
% Relative Humidity:	47
Wind Velocity, Unit:	4.5 km/h
Wind Direction:	SE
Dew Presence (Y/N):	No
Soil Moisture:	DRY
% Cloud Cover:	50
Next Moisture Occurred On:	14/01/2019

Crop Stage at Application	
Crop:	Sorghum
Stage Majority, %:	GS34
Height, Unit:	70 cm

Weed Stage at Application	
Pest:	<i>Tribulus microccus</i> – Yellow vine
Stage Majority, %:	4 leaf stage
Diameter, Unit:	3-5 cm
Density, Unit:	11 m ²

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:	10.3 km/h
Spray Volume, Unit:	70 L/ha