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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:** LB1728      **Location:** Mt Tyson      **Trial Year:** 2017  
**Investigator:** Linda Bailey

|                             |                                                         |          |            |            |
|-----------------------------|---------------------------------------------------------|----------|------------|------------|
| <b>Objective:</b>           | To evaluate in-crop options for <i>Tribulus</i> control |          |            |            |
| <b>Crop:</b>                | Sorghum (MR Buster) 90% at 5 Leaf Stage                 |          |            |            |
| <b>Planting Date:</b>       | 25/10/2017                                              |          |            |            |
| <b>Application Code:</b>    | A                                                       | B        | C          | D          |
| <b>Nozzle:</b>              | AIXR110015                                              | DG110015 | AIXR110015 | AIXR110015 |
| <b>Spray volume:</b>        | 70 L/ha                                                 | 70 L/ha  | 50 L/ha    | 100 L/ha   |
| <b>Application Date:</b>    | 22/11/2017                                              |          |            |            |
| <b>Weed:</b>                | Yellow Vine ( <i>Tribulus micrococcus</i> )             |          |            |            |
| <b>Weed Stage Majority:</b> | Full Flowering (90% of Population)                      |          |            |            |
| <b>Weed Population:</b>     | 0.2/m <sup>2</sup>                                      |          |            |            |
| <b>Keywords:</b>            | <i>Tribulus</i> , Yellow vine, knockdown, sorghum       |          |            |            |

| Pest Scientific Name          |                                                  |                                   |             |                               | <i>Tribulus micrococcus</i> |                 |                 |                  |
|-------------------------------|--------------------------------------------------|-----------------------------------|-------------|-------------------------------|-----------------------------|-----------------|-----------------|------------------|
| Pest Name                     |                                                  |                                   |             |                               | Yellow Vine                 |                 |                 |                  |
| Description                   |                                                  |                                   |             |                               |                             | Survivors       | Newly Emerged   | Weed Groundcover |
| Assessment Date               |                                                  |                                   |             |                               | 8/12/2017                   | 21/12/2017      | 21/12/2017      | 9/01/2018        |
| Assessment Type               |                                                  |                                   |             |                               | BURNDOWN                    | COUNT           | COUNT           | AREA             |
| Assessment Unit               |                                                  |                                   |             |                               | %                           | /m <sup>2</sup> | /m <sup>2</sup> | %                |
| Pest Stage Majority           |                                                  |                                   |             |                               | 65                          | 65              | 13              | 65               |
| Treatment-Evaluation Interval |                                                  |                                   |             |                               | 16 DAA                      | 29 DAA          | 29 DAA          | 48 DAA           |
| ARM Action Codes              |                                                  |                                   |             |                               | AA                          | T1 AA           | T2 AA           | AA               |
| Trt No.                       | Treatment                                        | Product Rate                      | Appln. Code | Spray Volume                  |                             |                 |                 |                  |
| 1                             | Nu-trazine 900 DF<br>Starane Advanced<br>Chemwet | 1100g/ha<br>450ml/ha<br>0.5% v/v  | A           | 70L/ha<br>70L/ha<br>70L/ha    | 48bc                        | 0.3ab           | 1.0-            | 30abc            |
| 2                             | Nu-trazine 900 DF<br>Starane Advanced<br>Hasten  | 1100g/ha<br>450ml/ha<br>0.5% v/v  | A           | 70L/ha<br>70L/ha<br>70L/ha    | 36c                         | 0.5a            | 0.4-            | 50a              |
| 3                             | Nu-trazine 900 DF<br>Starane Advanced<br>Hasten  | 1100g/ha<br>450ml/ha<br>0.5% v/v  | B           | 70L/ha<br>70L/ha<br>70L/ha    | 39c                         | 0.3ab           | 0.7-            | 17a-d            |
| 4                             | Nu-trazine 900 DF<br>Starane Advanced<br>Hasten  | 1100g/ha<br>450ml/ha<br>0.5% v/v  | C           | 50L/ha<br>50L/ha<br>50L/ha    | 36c                         | 0.4ab           | 0.1-            | 31ab             |
| 5                             | Nu-trazine 900 DF<br>Starane Advanced<br>Hasten  | 1100g/ha<br>450ml/ha<br>0.5% v/v  | D           | 100L/ha<br>100L/ha<br>100L/ha | 26c                         | 0.1bc           | 0.6-            | 11bcd            |
| 6                             | Nu-trazine 900 DF<br>Starane Advanced<br>Hasten  | 1100g/ha<br>600ml/ha<br>0.5% v/v  | A           | 70L/ha<br>70L/ha<br>70L/ha    | 92a                         | 0.1bc           | 0.9-            | 16bcd            |
| 7                             | Nu-trazine 900 DF<br>Cutlass 500 SL<br>Hasten    | 1100g/ha<br>500ml/ha<br>0.5% v/v  | A           | 70L/ha<br>70L/ha<br>70L/ha    | 90ab                        | 0.2ab           | 1.2-            | 15bcd            |
| 8                             | Nu-trazine 900 DF<br>Tordon 75D<br>Hasten        | 1100g/ha<br>500ml/ha<br>0.5% v/v  | A           | 70L/ha<br>70L/ha<br>70L/ha    | 98a                         | 0.0c            | 0.5-            | 4d               |
| 9                             | Nu-trazine 900 DF<br>Bromicide 200 EC<br>Hasten  | 1100g/ha<br>2000ml/ha<br>0.5% v/v | A           | 70L/ha<br>70L/ha<br>70L/ha    | 99a                         | 0.0c            | 0.9-            | 5cd              |

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| Pest Scientific Name<br>Pest Name |                                        |                                 |             |                            | <i>Tribulus micrococcus</i><br>Yellow Vine |                 |                 |                  |
|-----------------------------------|----------------------------------------|---------------------------------|-------------|----------------------------|--------------------------------------------|-----------------|-----------------|------------------|
| Description                       |                                        |                                 |             |                            |                                            | Survivors       | Newly Emerged   | Weed Groundcover |
| Assessment Date                   |                                        |                                 |             |                            | 8/12/2017                                  | 21/12/2017      | 21/12/2017      | 9/01/2018        |
| Assessment Type                   |                                        |                                 |             |                            | BURNDOWN                                   | COUNT           | COUNT           | AREA             |
| Assessment Unit                   |                                        |                                 |             |                            | %                                          | /m <sup>2</sup> | /m <sup>2</sup> | %                |
| Pest Stage Majority               |                                        |                                 |             |                            | 65                                         | 65              | 13              | 65               |
| Treatment-Evaluation Interval     |                                        |                                 |             |                            | 16 DAA                                     | 29 DAA          | 29 DAA          | 48 DAA           |
| ARM Action Codes                  |                                        |                                 |             |                            | AA                                         | T1 AA           | T2 AA           | AA               |
| Trt No.                           | Treatment                              | Product Rate                    | Appln. Code | Spray Volume               |                                            |                 |                 |                  |
| 10                                | Terbyne Xtreme Hasten                  | 1200g/ha<br>0.5% v/v            | A           | 70L/ha<br>70L/ha           | 11c                                        | 0.6a            | 0.2-            | 38ab             |
| 11                                | Terbyne Xtreme Starane Advanced Hasten | 950g/ha<br>450ml/ha<br>0.5% v/v | A           | 70L/ha<br>70L/ha<br>70L/ha | 100a                                       | 0.1bc           | 0.3-            | 2d               |
| 12                                | Gp HC V                                | 1000ml/ha                       | A           | 70L/ha                     | 100a                                       | 0.0c            | 0.7-            | 10bcd            |
| LSD P=                            |                                        |                                 |             |                            | 28.5t                                      | 2.08t           | nsd             | 21.0t            |
| Treatment Prob.(F)=               |                                        |                                 |             |                            | 0.0001                                     | 0.0023          | 0.2917          | 0.0332           |

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, 3, 5, 6

nsd = No significant difference

Assessment Type

BURNDOWN = % Burndown/brown out

Pest Stage Majority

65 = Full flowering: 50% of flowers open, first petals may be fallen

13 = 3 True leaves, leaf pairs or whorls unfolded

ARM Action Codes

AA = Automatic arcsine square root % transformation

T1 = [C2]/10

T2 = [C4]/10

DAA = Days after Application

| Application Description    |              |   |   |   |
|----------------------------|--------------|---|---|---|
|                            | A            | B | C | D |
| Application Date:          | 22/11/2017   |   |   |   |
| Application Start Time:    | 7:10 AM      |   |   |   |
| Application Stop Time:     | 10:30 AM     |   |   |   |
| Application Method:        | SPRAY        |   |   |   |
| Application Timing:        | LATE POST-EM |   |   |   |
| Application Placement:     | FOLIAR       |   |   |   |
| Air Temperature, Unit:     | 20 C         |   |   |   |
| % Relative Humidity:       | 51           |   |   |   |
| Wind Velocity, Unit:       | 12 km/h      |   |   |   |
| Wind Direction:            | E            |   |   |   |
| Dew Presence (Y/N):        | No           |   |   |   |
| Soil Moisture:             | DRY          |   |   |   |
| % Cloud Cover:             | 70           |   |   |   |
| Next Moisture Occurred On: | 3/12/2017    |   |   |   |

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| Application Equipment     |           |           |           |          |
|---------------------------|-----------|-----------|-----------|----------|
|                           | A         | B         | C         | D        |
| Appl. Equipment:          | Quad Bike |           |           |          |
| Equipment Type:           | Boom      |           |           |          |
| Operation Pressure, Unit: | 300 kPa   |           |           |          |
| Nozzle Type:              | AIXR      | DG        | AIXR      | AIXR     |
| Nozzle Size:              | 110015    |           |           |          |
| Nozzle Spacing, Unit:     | 50 cm     |           |           |          |
| Nozzles/Row:              | 8         |           |           |          |
| Boom Length, Unit:        | 4 m       |           |           |          |
| Boom Height, Unit:        | 50 cm     |           |           |          |
| Ground Speed, Unit:       | 10.3 km/h | 10.3 km/h | 14.4 km/h | 7.2 km/h |
| Spray Volume, Unit:       | 70 L/ha   | 70 L/ha   | 50 L/ha   | 100 L/ha |