



Fleabane Trial – July 07

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Field history:

Sorghum 2005/06. Zero-tillage fallow 2006/07. A sequential application of glyphosate followed by 2,4-D Amine was applied in early June to provide knockdown of early emergence of fleabane, milk thistle and prickly lettuce.

Treatments:

Applied June 22, 2007 with self-propelled sprayer. Atrazine and Diuron treatments applied with 11004XR @ 300 kPa and 19 kph for carrier volume of 90L/ha. Tordon® 75D applied with Hardi Minidrift nozzle @ 400 kPa and 12.5 kph for carrier volume of 90 L/ha. Chemwett 1000 applied at a rate of 0.1% v/v for all treatments. Note that 2 kg/ha rates of Atrazine and Diuron as well as Diuron + Atrazine treatments applied in 2 passes. Note that Diuron is not approved for use in fallow prior to planting sorghum but could be useful in fallow prior to planting cotton. Diuron is also now approved for use in winter pulse crops as a pre-emergence treatment, so the results achieved in this trial are relevant for situations where chickpeas or faba beans are planted.

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| 1. Untreated | 5. Atrazine 2 kg/ha |
| 2. Atrazine 1 kg/ha | 6. Diuron 1 kg/ha |
| 3. Atrazine 1 kg/ha + Diuron 1 kg/ha | 7. Tordon 75D 700 mL/ha |
| 4. Untreated | 8. Untreated |

First rain occurred June 23, 2007 with approximately 30 mm. Rain (80 mm) received August 15 to 22 and 30mm September 5 to 7. Fertilizer was applied with disc opener on July 15.

Table 1. Weed control assessed September 11, 2007 (81 days after treatment)

	Plants per 396 square metres				
	Fleabane	Milk thistle	Prickly lettuce	Black thistle	Bladder ketmia
Untreated	95	34	16	11	0
Atrazine 1kg	7	20	10	5	0
Atrazine 1kg + Diuron 1kg	0	14	2	1	3
Untreated	90	57	17	7	3
Atrazine 2kg	0	11	1	0	6
Diuron 1kg	7	8	6	1	23
Tordon 75D	2	5	5	3	31
Untreated	122	41	18	5	23

NB: Newly emerged (<2 leaf) fleabane plants not included (mostly in untreated plots)

Other weeds noted in untreated plots include fireweed, Australian bluebell, cudweed, blackberry nightshade, medic, caustic weed, red pigweed, urochloa. Some unidentified grass and broadleaf weeds were also present.

Conclusions:

The standard treatment of 2 kg/ha Atrazine provided excellent control of fleabane, prickly lettuce and black thistle with moderate to good control of milk thistle. Atrazine applied at 1 kg/ha provided good control of fleabane and fair control of milk thistle, prickly lettuce and black thistle. Diuron applied at 1 kg/ha provided good control of fleabane but slightly better control of milk thistle, prickly lettuce and black thistle compared to the equivalent rate of Atrazine. The addition of 1 kg/ha Diuron to Atrazine appeared to increase control of fleabane, prickly lettuce and black thistle relative to 1 kg/ha Atrazine alone. Diuron would be useful in fallow leading to dryland cotton to provide control of fleabane and other broadleaf weeds or in winter pulse crops where it is now registered for use as a pre-emergence herbicide. Tordon 75D provided excellent control of fleabane and good control of milk thistle and prickly lettuce.

On September 19 (89 days after treatment), more data was collected, this time including recently emerged fleabane seedlings. Overall observation was that Atrazine and Diuron treatments provided 94 - 98.5% reduction in flax-leaf fleabane numbers while Tordon 75D provided 78% reduction. Diuron provided slightly better control at the 1 kg/ha rate compared to Atrazine at the equivalent. A higher rate of Diuron applied at 2 kg/ha provided a slightly higher level of control of fleabane. Diuron also provided better control of milk thistle compared to Atrazine though numbers were very low in relation to those of fleabane. There was very little bladder ketmia toward the western end of the strips so data for this weed does not appear on the radar.

An interesting observation was that in untreated plots, approximately 93.5 - 95% of fleabane plants have emerged in last 3 weeks or so and only 5 - 6.5% from rain occurring at the end of June. All treatments have provided a high level of control of the early germination.

From these trials it appears we need to consider the value of residual herbicides as an option in highly infested paddocks. Growers will need to consider the relevant label recommendations and plant back periods when using the above herbicides.

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