

COMPARISON OF GRASS SPECIFIC HERBICIDES IN A MEDIC PASTURE

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Introduction

Annual ryegrass resistance to grass selective herbicides is becoming more frequent in our cropping areas. In addition, silvergrass populations are increasing and it may be more judicious in the future to only apply non-selective herbicides in the pasture phase. The valuable grass selective herbicides should be saved for the more valuable cash crops. We should be thinking of non-selective herbicides or cultivation in the pasture phase as methods of reaching a reasonable balance between herbicide and non-herbicide methods of weed control. Past experience indicates that over reliance on herbicides can lead to problems of weed population changes.

If grass selective herbicides are to be used to control grasses such as brome grass, barley grass and self-sown cereals in winter, then a following 'mop up' treatment such as pasture mulching by cultivation or spraytopping later in the season is required to kill resistant ryegrass and silvergrass. Vigilance is required with resistant ryegrass and silvergrass looming as potential widespread problems in the Mallee.

Demonstration details

Grass herbicides were compared alone and in combination with common broadleaf herbicides. Annual ryegrass was sown into the medic stand to ensure a good population for the trial. Gramoxone was compared with the grass herbicides with and without Simazine. High points of the demonstration are:

1. *Comparison of Grass Selective Herbicides*

- * The grass selective herbicides had control on the grasses, except for silvergrass which was not controlled.
- * None of the treatments caused damage to medics.
- * The sown annual ryegrass appeared to have been contaminated with resistant ryegrass seed. (Seed is being tested, however recent surveys have shown that a high proportion of ryegrass seed sold has a percentage of resistant ryegrass). The treatments Correct, Select or Sertin plus (all in the 'Dim' group of grass selective herbicides) appear to have given reasonable reduction of the resistant ryegrass however commercial experience indicates that continued use will lead to resistance.

2. *Grass/Broadleaf Herbicide Mixtures*

- * The broadleaf herbicides MCPA LVE, Brodal and Simazine all caused slight reductions in annual ryegrass control when mixed with a grass herbicide. Broadstrike did not appear to reduce the grass control efficiency of Verdict.
- * Medic suppression was quite severe with MCPA LVE at 300 ml/ha, whereas there was little or no damage with Brodal and Simazine applied to a well established medic stand (4 - 6 cm runners). Broadstrike did not cause medic damage.
- * The only consistent weed across the site was wild mustard. Both MCPA LVE at 300 ml/ha and Broadstrike gave excellent control. Brodal gave suppression. The mustard plants at application were at the rosette stage and too advanced for Brodal. Brodal needs to be applied to small mustard to give adequate control. Simazine gave little or no control of mustard, which is not surprising as it is essentially a pre-emergence herbicide for most weeds.

3. *Gramoxone With and Without Simazine*

- * Gramoxone without Simazine gave reasonable reduction in grass weeds however there was a tendency for regrowth. Early application would give better reduction in grass species, however medic tolerance would probably be reduced. Later timings are likely to give better medic tolerance however poorer grass reduction. Gramoxone will reduce grass dominance in pastures, but it is unlikely that this treatment will give adequate grass control to achieve a CCN or Take-all disease break.
- * Simazine addition to Gramoxone gives additive control of grasses however experience from higher rainfall regions of the State indicates that early application and follow-up rainfall soon after application are pre-requisites for silvergrass control. The earlier application would compromise medic safety. Further work is required with this treatment for silvergrass control in medic pastures as this grass species is increasing in frequency and abundance in the Mallee partly due to the frequent use of grass selective herbicides which do not control this grass.

Summary Comments

We need to reduce the use of grass selective herbicides in pastures, however if it is necessary to use grass selectives, make sure there is a 'mop-up' treatment later in the year to control resistant annual ryegrass and silvergrass. More work is required on the use of Gramoxone and other non-selective herbicides for winter cleaning of grass weeds in medic pastures.

COMPARISON OF GRASS SPECIFIC HERBICIDES (all rates per hectare)

| | Bromegrass | Barley Grass | Self-sown ryegrass | Sown ryegrass | Wheat | Barley | Oats | Silver Grass | Medic |
|----------------------|------------|--------------|--------------------|---------------|-------|--------|------|--------------|-------|
| Targa 250 ml # | E | E | E | V | E | E | E | L | L |
| Targa 300 ml # | E | E | E | V | E | E | E | L | L |
| Fusilade EC 250 ml # | V | V | S | V | E | E | E | L | L |
| Fusilade EC 300 ml # | E | V | S | V | E | E | E | L | L |
| Fusilade EC 350 ml # | E | V | V | V | E | E | E | L | L |
| Fusilade DF 350 g # | E | V | V | V | E | E | E | L | L |
| Verdict EC 500 ml Δ | E | E | E | V | E | E | E | L | L |
| Verdict EC 750 ml Δ | E | E | E | V | E | E | E | L | L |
| Select 250 ml ∇ | V | S | E | E | E | V | E | L | L |
| Select 375 ml ∇ | V | E | E | E | E | E | E | L | L |
| Correct 200 ml | E | E | E | V | E | E | E | L | L |
| Correct 300 ml | E | E | E | E | E | E | E | L | L |

cont...

COMPARISON OF GRASS SPECIFIC HERBICIDES cont...

| | Bromegrass | Barley Grass | Self-sown ryegrass | Sown ryegrass | Wheat | Barley | Oats | Silver Grass | Medic |
|--|------------|--------------|--------------------|---------------|-------|--------|------|--------------|-------|
| Focus 300 ml | S | V | E | V | V | E | E | L | L |
| Focus 500 ml | S | V | E | V | E | E | E | L | L |
| Sertin Plus 800 ml | L | S | E | E | S | S | E | L | L |
| Sertin Plus 1.6 L | S | E | E | E | E | E | E | L | L |
| Sertin Plus 400 ml + Fusilade 150 ml # | S | V | E | V | E | E | E | L | L |
| Sertin Plus 400 ml + Fusilade 250 ml # | E | V | E | V | E | E | E | L | L |
| Gramoxone 500 ml | V | S | S | S | V | V | V | S | L |
| Gramoxone 500 ml + Simazine 1 L | E | V | V | S | V | V | E | V | L |
| Untreated control | L | L | L | L | L | L | L | L | S |

L Little to no activity (0 - 50%)
 S Suppression (50 - 80%)
 V Very good control (80 - 90%)
 E Excellent control (> 90%)

Ulvapon oil 1 l/100 l + BS1000 200 ml/100 l
 Δ Uptake oil 5 l/100 l
 ∇ DC-Trate oil 1 l/100 l

GRASS/BROADLEAF HERBICIDE MIXTURES (all rates per hectare)

| | Barley | Wheat | Bromegrass | Oats | Wild Mustard | Barley Grass | Self-sown Annual Ryegrass | Medic |
|---------------------------------------|--------|-------|------------|------|--------------|--------------|---------------------------|-------|
| Targa 300 ml # | E | E | E | E | L | E | E | L |
| Targa 300 ml + MCPA LVE 300 ml # | E | E | E | E | V | E | V | S |
| Targa 300 ml + Brodal 100 ml # | E | E | E | E | E | E | V | L |
| Targa 300 ml + Brodal 200 ml # | E | E | E | E | E | E | V | L |
| Targa 300 ml + Simazine 1 L # | E | E | E | E | E | E | V | L |
| Verdict 750 ml Δ | E | E | E | E | E | E | E | L |
| Verdict DF 150 g + Broadstrike 25 g Δ | E | E | E | E | E | E | E | L |
| Gramoxone 500 ml | V | V | V | V | L | S | S | L |
| Gramoxone 500 ml + Simazine 1 l | V | V | V | V | L | V | V | L |
| Untreated control | L | L | L | L | L | L | L | S |

L Little to no activity (0 - 50%)

S Suppression (50 - 80%)

V Very good control (80 - 90%)

E Excellent control (> 90%)

medic

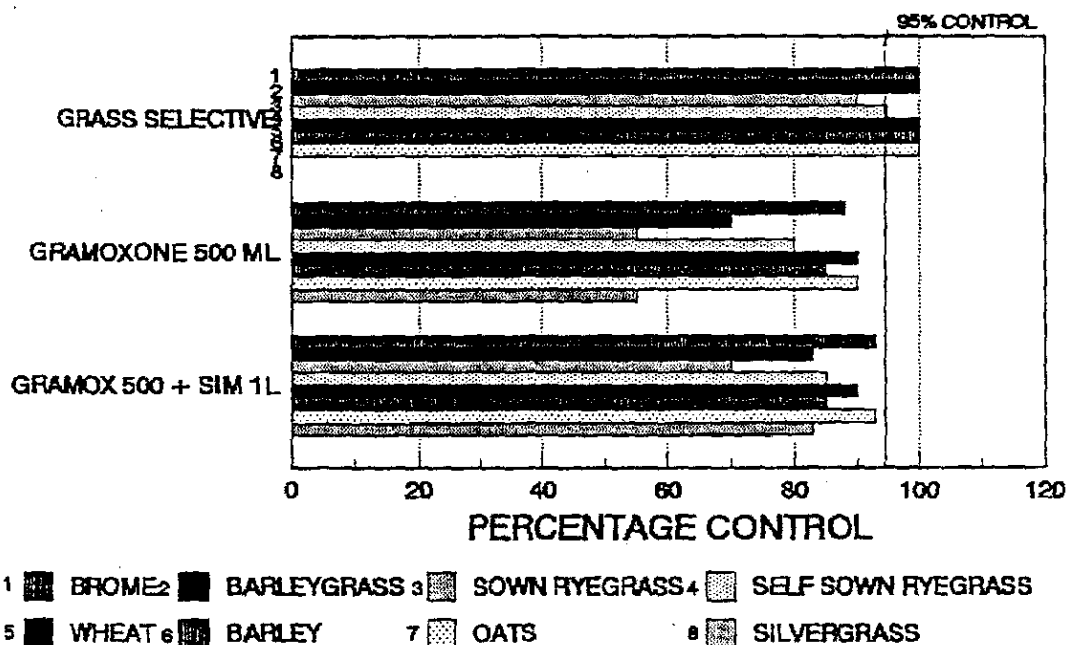
mustard

4 - 6 cm runners

Rosette stage

GRASS SELECTIVE HERBICIDE VS GRAMOXONE

% CONTROL OF GRASSES



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REMEMBER: BCDS Field Day - 14 September