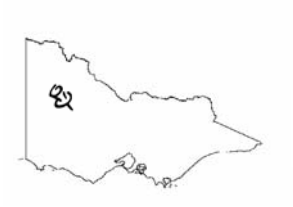


Group D herbicide comparison

H Category: Weed control and disease

The aim of this trial was to compare Triflur 480 versus Stomp, in relation to traditional use and minimum cultivation, on wheat and canola.

Summary Triflur480 (trifluralin) and Stomp (pendimethalin) were compared on wheat and canola in relation to crop emergence and ryegrass control. The canola crop failed due to the dry conditions. The wheat crop was very marginal (average yield of 0.1 t/ha) and no yield differences between products could be determined. In relation to ryegrass control the higher rates of the products applied and incorporated by sowing (IBS) (Triflur480 1.2L and Stomp 1.8L) were more effective compared the lower rates of these products (0.8L and 1.8L respectively) when applied and incorporated 5 days prior to sowing.

Why it was conducted:
With the increase in Group A resistant ryegrass populations, the Group D herbicides trifluralin (Triflur480) and pendimethalin (Stomp), have increased in use as part of an integrated herbicide management strategy. Both chemicals require incorporation prior to sowing. It is said that pendimethalin is slightly less volatile. We compared Triflur480 and Stomp on both wheat and canola. The herbicides were applied and incorporated 5 days prior to sowing (the traditional method) and compared to a minimum tillage approach where the herbicides were applied immediately prior to sowing at a higher rate. The control comparison for ryegrass was a Group A herbicide.

How it was conducted:
This trial was sown on the 29th May at Birchip. All treatments received 80kg/ha of Mallee Mix 1 at sowing. Urea was pre-drilled on the 2nd May at 40kg/ha.

Yitpi wheat was sown at 80kg/ha and Outback canola was sown at 5kg/ha.

Treatments:

Product	Rate of application	Timing of application
Triflur 480	0.8 L/ha	5 days Pre-Sow Incorporated (PSI)
Triflur 480	1.2 L/ha	Incorporated By Sowing (IBS)
Stomp	1.2 L/ha	5 days Pre-Sow Incorporated (PSI)
Stomp	1.8 L/ha	Incorporated By Sowing (IBS)
Wheat – Hoegrass Canola – Verdict	1.5L +0.25% wetter 75ml +0.5% Uptake	Ryegrass at 4 leaf

Plant establishment rates for both wheat and canola were recorded. Yield, protein and screenings were recorded for Yitpi wheat at harvest. The canola was unable to be harvested due to the drought.

Results of the trial:
There was no significant difference in plant establishment, yield performance or quality of Yitpi wheat when comparing Group D herbicides with incorporation methods (Table 1).

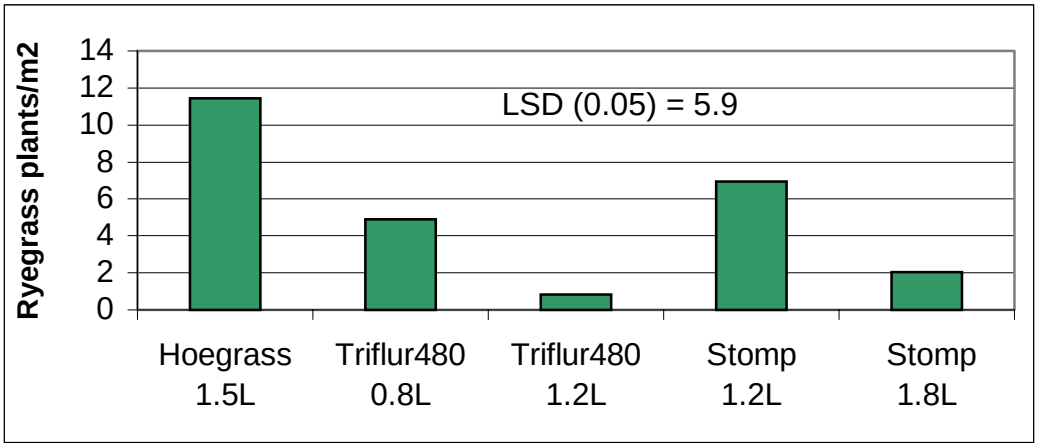
Average yields across the five treatments was 0.1 t/ha.

Table 1. Crop establishment, yield and quality performance of Yitpi wheat.

Treatment	Plant estab. Plants/m^2	Yield t/ha	Protein %	Screenings %
Trilfur480 0.8L, PSI	99	0.10	13.3	7.0
Triflur480 1.2L, IBS	106	0.11	13.6	5.5
Stomp 1.2L, PSI	119	0.10	13.3	6.0
Stomp 1.8L, PSI	97	0.09	13.5	6.0
Hoegrass 1.5L	90	0.08	13.4	6.0
Significant difference	**NS**	**NS**	**NS**	**NS**

Ryegrass counts were also recorded in the wheat trial. The number of ryegrass plants/m^2 varied considerably (Figure 1). Plots that were treated with Hoegrass had the highest level of ryegrass plants per square meter.

Figure 1. The number of ryegrass plants/m^2 in the wheat trial when treated with 5 different herbicide options.



Interpretation:

It is difficult to make a fair comparison of Triflur480 and Stomp due to the dry seasonal conditions. At sowing in 2002 the soil was dry - this reduces the volatilisation potential of Group D herbicides. In relation to wheat plant establishment there were no differences between the products and the untreated controls (the control treatments were later sprayed with Hoegrass for ryegrass control).

In relation to ryegrass control:

- no difference between the Triflur480 and Stomp at low rates (0.8 and 1.2L respectively), applied 5 days pre sowing and incorporated
- no difference between the products at the high rates (1.2L and 1.8L respectively), incorporated by sowing
- both products had less ryegrass when applied immediately prior to sowing at the higher application rate
- Hoegrass was not very effective because the ryegrass plants were moisture stressed at the time of sowing

Commercial practice:

Stomp does not appear to be a 'softer' product compared to Triflur480. Sowing conditions in 2002 were very dry and the potential difference between the products in volatilisation from a wet soil could not be determined. At this stage the choice of products should be based on cost. If applying these products at sowing make sure that the sowing does not place the seed in the band of the chemical.