

Trial 17

Grass Weed Control in Wheat

Aim: to determine the most effective techniques for controlling grass weeds in wheat (variety Meering).

Wild Oats and ryegrass were spread before sowing. Each treatment was replicated three times.

Results:

	Cost \$/ha	Crop Effect #	Wild Oats #	Rye Grass #	Yield t/ha
Control		1	1	1	1.92
<i>pre-sowing</i>					
Trifluralin 1L	5.20	2	4	3	1.52
Trifluralin 1L + Glean 5g	7.33	2	4	3	1.34
Trifluralin 1L + Logran 10g	10.00	2	4	3	1.31
Avadex 2L + Trifluralin 700 ml	27.60	2	4	3	1.58
Avadex 1.4L + Trifluralin 700 ml	20.40	2	4	4	1.64
Trifluralin 700 ml + pre emergent Diurex 275g (500ml)	7.35	3	5	5	2.03
<i>pre-emergent</i>					
Trifluralin 1.5L	7.80	2	1	4	1.80
Trifluralin 2.5L	13.00	2	1	4	1.99
Significant difference in yield: P<0.05, LSD=0.53					
<i>post emergent</i>					
Topik 50 ml + DC Trate 1%	22.90	*	*	*	1.92
Topik 130 ml + DC Trate 1%	57.70	*	*	*	1.79
Achieve 380g + Super charge 0.75%	32.40	*	*	*	1.92
Puma S 500 ml (no wetter)	32.00	*	*	*	1.88
Tristar 1.5L (no wetter)	31.50	*	*	*	1.82
Hoegrass 1.5L + Wetter 0.25%	34.60	*	*	*	2.01
Ally 5g + MCPA 500 300ml + Wetter 0.1% (follow up 2-4 days Hoegrass 1.25 L + Wetter 0.25%)	37.40	*	*	*	1.93
Buctril D 1.2L (no wetter) (follow up 2-4 days Hoegrass 1.25 L + Wetter 0.25%)	38.25	*	*	*	2.45
Ally 5g +MCPA 500 300ml + Wetter 0.1% (follow up 2-4 days Achieve 380 g + Supercharge 0.75%)	41.40	*	*	*	1.85
Buctril D 1.2L (no wetter) (follow up 2-4 days Achieve 380 g + Supercharge 0.75%)	42.40	*	*	*	2.02
Significant difference in yield: NS					

Assessment made September 8, 1995 (1=no effect on weed or crop, 5= total weed or crop death)

* not measured (at 8 September 1995)

Interpretation: Trifluralin at 1.5L and 2.5L/ha applied post sowing with a single harrowing was safer and yielded significantly better than using Trifluralin at 1.0L pre-sowing and incorporated, either on its own or in combination with Glean or Logran. Trifluralin at 700ml applied pre-sowing in combination with Avadex (either at 2 or 1.4L) and Diurex (275g) was quite safe and resulted in no yield loss (note - for the last treatment the Trifluralin was incorporated prior to sowing and the Diurex applied post-sowing pre-emergent).

There were no significant differences in yield between the post emergent herbicides used in the trial. And yields were similar to the post sowing pre-emergent use of Trifluralin.

Commercial Practice: In 1994 the BCDS demonstrated that the post sowing pre-emergent use of Trifluralin was quite safe, in 1995 the same was found. On heavy clay soils we expect the level of damage on the crop to be higher. However, the degree of harrowing appears to be critical. Only one harrowing appears to be safe, and the wheat should be sown a little deeper than normal (take care with short coleoptile wheat varieties). The BCDS will continue with trial work in this area before a definitive statement on crop safety can be made.

The use of post-emergent herbicides for the control of grass weeds was also successful and resulted in no yield penalties. However, herbicide resistance to the Fop and Dim group of herbicides is a problem in ryegrass and to a lesser extent in wild oats. The continued use of these herbicides will lead to resistance developing. Growers should use a mix of grass weed control techniques without becoming dependent on Fop and Dim herbicides for control of grass weeds.

Broadleaf weed control applied 2 to 3 days before the grass herbicides were applied reduced the control of wild oats, compared to applying the grass herbicide alone. The recommendation is to apply grass weed herbicides first, followed 10 to 14 days later by the broadleaf herbicide.