Trial 16

Trial of Brome and Barley Grass Control in Wheat and Barley Crops

Aim: To investigate the control of brome and barley grass in Meering wheat and Galleon barley

Results:

1. In crop assessment made September 8, 1995 (1 = no effect on weed or crop, 5 = weed or crop dead)

Treatments	Wheat	Barley	Barleygrass	Bromegrass
Control	1	1	1	1
Knockdowns 2 days before emergence				
Gramoxone 1L	1	1	2	4
Round-up CT 350 ml + Wetter 0.2%	1	1	2	3
Round-up CT 600 ml + Wetter 0.2%	1	1	2	4
Knockdowns after emergence (1.5 leaf)				
Gramoxone 1L	4	4	2	3
Round-up CT 600 ml + Wetter 0.2%	5	5	3	3
Pacer 300g (no wetter)	5	5	3	3
Pre-sowing				
Yield 2.3L	1	1	3	3
Trifluralin 1L	1	1	3	3
Trifluralin 1.5L	1	1	4	3
Stomp 1.8 L	1	1	3	3
Early post emergence (2 Leaf stage)				
Lexone 100g	2	2	2	2
Lexone 200g	3	1	4	4
Lexone 100g + Sertin Plus 250ml + Wetter 0.1%	3	3	4	4
Lexone 50g + Sertin Plus 250ml + Wetter 0.1%	3	2	4	4
Isoproturon 1.5L	1	1	2	3

2. Crop yields and herbicide cost

Treatment	Cost $/ha	Wheat Yield (t/ha)	Barley Yield (t/ha)
Control		3.02	3.07
Knockdown 2 days before emergence			
Gramoxone 1L	7.00	4.41	3.59
RoundUpCT 600ml + wetter 0.2%	6.30	4.43	3.51
RoundUpCT 350ml + wetter 0.2%	3.70	4.30	3.48
Pre-sowing			
Yield 2.3L	23.30	3.84	3.85
Trifluralin 1L	7.00	3.74	3.35
Trifluralin 1.5L	10.50	3.57	3.49
Stomp 1.8L	18.90	3.61	3.25
Early post emergence (2 Leaf stage)			
Lexone 100g	8.40	4.37	3.72
Lexone 200g	16.80	4.39	3.90
Lexone 100g+Sertin 250ml+wetter	16.20	3.93	3.51
Lexone 50g+Sertin 250ml+wetter	12.00	4.34	3.64
Isoproturon 1.5L	18.00	4.85	3.74
		P<0.05, LSD=0.92	P=NS

Interpretation:

Wheat: Wheat yields were significantly reduced by competition from barley and brome grass. The use of knockdowns post sowing but pre-emergent (2 days before emergence) provided excellent control of the grass weeds which translated to a yield benefit of about 1.4 t/ha. The pre-emergent herbicides (Trifluralin, Yield and Stomp) were not as successful in controlling the grass weeds compared to the knockdowns. However, there was a yield benefit compared to the control (no use of herbicides at all).

The use of post-emergent herbicides at the 2 leaf stage all provided excellent control and resulted in significant yield benefits (up to 1.8 t/ha). The use of Isoproturon should be investigated in more detail. **Barley:** The trends in control of grass weeds and yield benefits were similar to the results achieved with wheat. However, the results were not significantly different. This could be due to the very competitive nature of Galleon barley.

Using knockdowns at the 1.5 leaf stage of the crop (for both wheat and barley) killed the crop and these plots were not harvested.

Commercial Practice:

Opportunities exist to get some control of barley and brome grasses sing Trifluralin, however at high weed populations Trifluralin alone is not sufficiently effective. The use of knock down herbicides post sowing pre-emergent is an effective tool to reduce grass weed populations. Some carry-over knockdown herbicide can occur, especially on sandy soils. The use of knockdowns after crop emergence is not recommended.

The use of Lexone at 100 g/ha should be regarded as salvage only.