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Rye grass control

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DEPARTMENT OF AGRICULTURE
Western Australia



EXPERIMENTAL SUMMARY 1977

J. Holmes
Weed Agronomy Section
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RYE GRASS CONTROL

Time of Spraying Two Chemicals

Location : Katanning property, Mr Schaffer.

Treatment: Hoegrass applied at four different growth stages and Dosanex applied at recommended stage, to a rye grass infested wheat crop.

Results :

Date	Treatment	ARG Growth Stage	Crop Stage	ARG/ sq m	Wheat Yield	% Increase
Sown 1/6	Nil	-	-	276	248.0	-
11/7	Dosanex 1.7 kg	1-3	3	255	580.5	134
11/7	Hoegrass 1 l + W	1-3	3	38	1,235	398
25/7	" "	4-5	5	32	1,058	326
12/8	" "	6-8	6-8	13	414.0	67
3/9	" "	Mid Late Tillering		120	243.0	-

*Wetting Agent at 0.5%

LSD 52.5 kg cv 6.7%

Comments

Dosanex was applied to wet ground but no rain fell for another three weeks. This probably reduced its activity. As well, some ryegrass was too advanced.

The crop was quite thin, probably equal to that which would result from a 20 kg sowing. This would not allow it to capitalize on the reduction of ryegrass vigour caused by the Dosanex. Hoegrass performed well. The yield response was good for the early spraying.

From this trial and in tune with similar trials, the important period for ryegrass-wheat competition can be seen to be early in the growth of the crop, before the three to four leaf stage.

The crop is unable to compensate if the ryegrass is removed at a late stage.

RYEGRASS CONTROL

Time of Spraying Hoegrass - 77LG28

Location : Newdegate Research Station

Treatments: 7/6/77 Annual Ryegrass sown at 16 kg/ha
7/6/77 Wheat at 45 kg + DAP at 80 kg
1/7/77 Dosanex sprayed at 1.7 kg - Treatment 6
4/7/77 Hoegrass sprayed at 1.5 l - Treatment 2
15/7/77 Hoegrass sprayed at 1.5 l - Treatment 3
18/7/77 Hoegrass sprayed at 1.5 l - Treatment 4
4/8/77 Hoegrass sprayed at 1.5 l - Treatment 5

Results :

Spray Date	Chemical	Stage of Ryegrass	Stage of Wheat	Ryegrass Plant/sq. m	Wheat Heads/m row	Weight grain/head	Yield kg/ha	% of Control
-	Nil	-	-	438	19	.77 g	563	-
1/7	Dosanex	1 - 1½	1 - 1½	211	30	.95 g	1,345	138
4/7	Hoegrass	1½ - 2	1 - 1½	11	29	1.01g	1,658	194
15/7	Hoegrass	4½ - 5	3 - 4	6.5	26	.86 g	1,387	146
18/7	Hoegrass	5 - 6	3 - 6	6.5	29	.92 g	1,376	144
4/8	Hoegrass	Full tiller	Early tiller	25.5	19	.78 g	625	11

LSD 5%
214 kg
CV. 14.9%

Comments

It can be seen from the data that irretrievable losses occur early in the growth of the crop due to ryegrass competition.

The residual weed population with the ryegrass treatment would not be sufficient to significantly affect yields.

Dosanex although achieving poor weed control, did achieve a good yield increase. This chemical retards the growth of the ryegrass and makes it less competitive.

ANNUAL RYEGRASS CONTROL

Time of Spraying Two Herbicides

Location : T. Reynolds, North Miling 77Mo32

Treatments: Hoegrass and Dosanex were applied to a ryegrass infested crop of wheat. Hoegrass was sprayed at various times during the growth of the crop. Due to the dry spell, the ryegrass spray times were reduced to two.

Results :

Spray Date	Treatment/ha	Weeds/sq m In crop	Weed	Yield/ha
			Control Rating	
			0= No Ryegrass 10= No Effect	
1/7	Nil	362	7.0	706
18/7	Dosanex 1.7 kg	240	5.5	955
18/7	Hoegrass 1 l	110	3.0	1,020
18/7	Hoegrass 1.5 l	60	1.5	1,104
18/7	Hoegrass 1 l + 0.5% Wetter	80	1.5	1,062
2/8	Hoegrass 1 l + 0.05% Wetter*	30	0.5	800

*Error in calculations, should have been 0.5%

Crop and Weeds Stages: Early Tiller 18/7 6 - 8 leaves.
Mid tiller 2/8

Comments

Drought affected the timing of spraying. Dosanex was sprayed too late for optimum effect, although there was no possibility for its successful use earlier due to lack of rain.

Delaying spraying reduced the yield increase considerably. There appears to be some effect due to wetter and increased rate of Hoegrass.

RYEGRASS CONTROL

Rates and Time of Spraying Hoegrass

Location : J. Lynch, Hyden 77Na50

Treatments: Rates of Hoegrass 1 and 1.5 l/ha
Wetting agents at 0.5%
Applications at Early Tillering and Late Tillering
2/8/77 and 5/9/77

Results :

Treatments	rate/ha	Wetting Agent added	Date of Spraying	Yield kg/ha
Hoegrass	1.0 l	-	2/8	711
Hoegrass	1.5 l	-	2/8	732
Hoegrass	1.0 l	+	2/8	778
Hoegrass	1.5 l	+	2/8	750
Hoegrass	1.0 l	-	5/9	610
Hoegrass	1.5 l	-	5/9	593
Hoegrass	1.0 l	+	5/9	643
Hoegrass	1.5 l	+	5/9	654
Nil	-	-	-	558

LSD = 61.7 kg

CV = 7.45%

Ryegrass level at first time of spraying 150/sq m.

Crop and weed details at times of spraying :

	<u>1st time</u> 2/8	<u>2nd time</u> 5/9
Wheat	To 8 leaf	Elongation - 12 visible nodes
Ryegrass	To 12 leaf	Elongation - 12 visible nodes

Comments

Effect of Spraying Time:

Both times of spraying are too late for optimum responses. The first time of spraying yielded a significant yield response when compared to the late time.

The addition of wetter appears to have improved the response with 1 l/ha at the early spraying and possibly with the 1.5 l/ha rate at the late spraying.

From other trials, the Hoegrass rates are too high to exhibit a great response to wetters.

RYEGRASS CONTROL

Time of Spraying Two Herbicides

77Es35

Location : R. Kirby, Salmon Gums

Treatments: To a ryegrass infested wheat crop, Hoegrass was applied at various growth stages. Dosanex was applied at the appropriate time as a comparison.

Results :

Treatment	Growth Stage	Wheat Yield/ha
Nil	-	93
Dosanex	1 - 2	113
Hoegrass	1 - 2	135
Hoegrass	3 - 4	108
Hoegrass	5 - 6	110
Hoegrass	Mid tillering	110

Number of ryegrass plants/sq. m at first time of spraying - 576/sq. m.

Comments

Severe drought completely over shadowed any effect of the Hoegrass. Under severe drought, this chemical does not perform well and ryegrass plants, although severely damaged, did not die rapidly.

RYEGRASS CONTROL

Efficiency of Ryegrass Herbicides

Location : Newdegate Research Station 77WZ1

Treatments: Wheat and ryegrass sown 7/6/77.
Treated Trifluralin pre-plant.
Post emergent Hoegrass as per results sprayed 4/7/77.

Results :

Chemical	Rate	Ryegrass Plant/sq m	Yield kg/ha	% Yield Increase
-	-	390*/387	829 a	-
Trifluralin	1.0 l	81.0	1,554 b	88%
Hoegrass	0.5 l + W**	26.0	1,840 c	122%
Hoegrass	0.75 l + W	14.0	2,050 d	147%
Hoegrass	1.0 l + W	7.5	1,830 c	121%
Hoegrass	1.0 l	11.8	2,013 d	143%
Hoegrass	1.25	10.6	2,112 c	155%
Hoegrass	1.50	5.6	1,835 c	121%

* Density/sq. m at spraying. Ryegrass 1½ - 2 leaf, CV 8.84%

** W = 0.5% Agral 60%

Quadrat Yield - Wheat

Treatment	Heads/m row	Wt/head g	Yield/ha kg/ha
Nil	25	0.94	1,299
Treflan	28	0.93	1,599
Hoegrass 1 l + W	31	1.02	1,858

Comments

The Trifluralin incorporation displaced the treated soil from the sprayed plot. As the incorporation was at right angles to the sprayed plot, and the incorporation was back and forwards across the site, the treated zone was attunable tending towards one side of the plot with each pass of the drill.

Hand harvests were made from the treated zone to estimate the actual yield increase. This problem can be overcome by incorporation in one direction only.

From the data it can be seen that Trifluralin yielded a substantial increase, but not as good as Hoegrass. All rates of Hoegrass used yielded a substantial yield increase. There appears to be an optimum rate about 0.75 l/ha + wetter, and 1 l - 1.25 l/ha without wetter.

AERIAL SPRAYING TRIAL - RYEGRASS CONTROL

Location : At property of M. Lourdes, Minivale 77No44

Treatments: Hoegrass (36% Hoe 23408) 1.0 and 1.5 l/ha.
E101 (28% Hoe 23408 + wetter) 1.0 and 1.5 l/ha.

Plot size : 102 m x 200 m.

Aircraft : Cessna Ag. wagon, Swath 25.5 m.
Spray at 34.5 l/ha.

Spray

Conditions: Sprayed 28/7/77

Wind eight to fourteen knots gusting slightly, 45° to runs.

Temperature - 18 to 20°C.

Time - 2.00 to 4.00 p.m.

Crop and : Both 4 to 6 leaf stage, soil moisture adequate.

Weed

Results

The evenness of the applications were measured by taking transects across the plots and plotting the results.

In general the Hoegrass was more even than the E101. But in all cases propeller wash strips and the strips between swaths were obvious.

It appears that the wind cross component was not sufficient to carry the chemical across from one swath to the next.

Ground Application

Adjacent to the aerial trial, a ground application of the same treatment was applied.

Results :

Treatment	Wheat Yield/ha
Nil	408
Hoegrass 1.0 l	524
Hoegrass 1.5 l	548
E101 1.0 l	556
E101 1.5 l	524

Each chemical achieved good ryegrass control when applied by ground application.

AERIAL SPRAYING RYEGRASS

Location : B. Ballard, Noman Lake 77Na60

Treatments: Hoegrass (36% Hoe 23408) 1.0, 1.5, 2.0, 3.0 l/ha.
E101 (28% Hoe 23408 + wetter) at 1.5, 2.0, 3.0 l/ha.

Note - Error in calculation resulted in the 2.0 and 3.0 l rates being used.

Plot size : 80 m (4 swaths) x 200 m.

Spraying : Sprayed 5/7/77.

Conditions 90° cross wind at 10 to 15 knots, gusting and steady in direction.

Temperature - 17 to 20°C.

Time - 10.00 to 11.30 a.m.

Spray Volume : 22.5 l/ha. Nozzles inclined back.

Aircraft : Piper Pawnee spraying 20 m at height of 6 m.

Crop and Weeds : Wheat 4 - 7 leaf First tiller formed
Ryegrass 3 - 6 leaf

Soil moist, crop growing well.

Ryegrass infestation moderate to dense, somewhat uneven, averaged 150 plants/sq. m.

Results

Crop tolerance - No apparent damage to crop under any treatment except 3 l E101, very slight yellowing.

Weed control - Assessed through transects measured across the plots and counting surviving weeds. When graphed these transects showed that even applications were obtained with all Hoegrass rates.

E101 was not quite as even in application as the Hoegrass. Some propeller wash effects were seen.

Ground Trial

At the same site a ground application trial was laid out to check the effect of chemicals.

Treatment	Ryegrass Control	Wheat Yield kg/ha
Hoegrass 1.0 l	5	2,486
Hoegrass 1.5 l	5	2,460
E101 1.0 l	5	2,425
E101 1.5 l	5	2,530
Nil -	0	1,989

0 = No effect 5 = Total kill Ryegrass plants at spraying 150 sq. m.

Summary

Aerial application appears feasible provided:-

- 1) Aircraft height is 5 to 7 m.
- 2) Wind direction is 90° to runs.
- 3) Wind is steady, and at least 10 knots.
- 4) Rates to use are not less than 1 l/ha and approx. 22.5 l/ha total carrier. The carrier may be reduced with experience.

The operator has successfully sprayed one area of 17 ha with Hoegrass.

There appears to be no advantage with the 28% formulation.

RYEGRASS CONTROL SYSTEMS - EFFECT OF SOWING SYSTEMS

Location : Wongan Hills Research Station 76WH102

Treatments: Three sowing methods, Triple Disc Drill, Direct drilling combine and District Practice.

Ryegrass control:

- a) Spray top at 550 ml/ha, October 1976
- b) Autumn cultivate - Scarifier, 22/4/77
- c) Hoegrass at 1 l/ha + wetter
- d) Sprayseed at 2 l + Dicamba at 500 mls on 10/6/77.

The combinations are listed in results.

Planted 17/6 Gamenya on 100 kg super.

Results :

Treatment	Ryegrass		Wheat		
	Viab. Seeds/ Sq m	Plants/sq. m Pre-crop 9/6	Plants/sq m in crop	Nos/m row	Yield kg/ha
TDD	2,846	851	79.0	14	1,159
TDD + ST	238	467	35.3	15	1,326
TDD + AC + ST	238	576	37.5	17	1,506
TDD + Hoe	2,846	-	62/1*	15	1,202
DDC + ST	238	407	60.0	14	1,234
DDC + ST + AC	238	416	30.0	14	1,454
DDC + Hoe	2,846	633	133/1*	14	1,112
DP	2,846	-	20.0	16	2,010
DP + AC	2,846	-	13.8	14	2,019
DP + ST	238	-	14.0	16	1,990
DP + ST + AC	238	-	11.0	18	2,088
DP + Hoe	2,846	-	23/1*	14	2,073

TDD - Triple Disc Drill
 DDC - Direct Drilling Combine
 DP - District Practice

LSD Wheat yields - 332
 CV - 14.7%

* Post Spraying

Comments

Population dynamics - Ryegrass

- a) Seed levels - Spray top reduced viable seed production by 92%.
- b) Germination at opening rains - considerably more plants germinated on spray top treatment than the numbers of seeds present as determined by

sampling in December. This appears to indicate that probably sampling methods were inefficient or some seed carried over for more than one season. Spray top reduced plants germinating by 40% and Autumn cultivation did not significantly increase the number of seedlings germinating. The dry season probably caused this.

- c) Incrop - Spray top appears to be the dominant factor in the level of plants which appeared within the crop. Autumn cultivation appeared to work only within the Direct Dilling Combine treatment.

Effect of Cultural Systems

It appears that the level of ryegrass present within the crop is greatest with the intermediate cultivation level.

With TDD, seed was left in a non optimum zone, and with the DP seedlings were controlled, and seed placed in optimum zones.

Hoegrass did not work well as it was applied at the six leaf stage. The delay was due to the dry weather. From other work, this would have been very much sub optimal.

RYEGRASS CONTROL

Effect of Sowing Systems

Location : Avondale Research Station 76Av32

Treatments: Three sowing systems, Triple Disc Drill, Direct Drilling Combine, and District Practice.

Ryegrass control by:-

- a) Spray top at 550 mls/ha + wetter, October 1976.
- b) Autumn cultivations
- c) Hoegrass at 1 l/ha + wetter.
- d) Sprayseed at 2 l/ha + Dicamba at 500 mls.

Crop Gamenya planted at 50 kg + Super at 64 kg.

Results:

Treatment	Ryegrass			Wheat	
	Viable Seeds Dec. 1976 /sq. m	Seedlings Pre Crop/sq. m	Plants in Crop /sq. m	Plants/ m row	Yield kg/ha
TDD	3,972	987	100	10	905
TDD + ST	977	665	47	11	1,334
TDD + ST + AC	-	656	36	11	1,474
TDD + Single Cult.	-	-	40	11	1,551
TDD + Hoegrass	-	-	NC*	8	889
DDC + ST	-	763	93	10	1,039
DDC + ST + AC	-	560	35	13	1,516
DDC + Hoegrass	-	-	NC*	13	790
DP	-	1,065	113	18	1,310
DP + ST	-	-	23.6	12	1,741
DP + AC	-	-	100	14	1,550
SP + ST + AC	-	-	27	16	2,041
DP + Hoegrass	-	-	NC*	16	1,441

TDD - Triple Disc Drill
 DCC - Direct Drill Combine
 DP - District Practice

AC - Autumn cultivation
 ST - Spray top

*NC Counts
 omitted.

Comments

The crop yield and weed numbers in crop comparisons are difficult to interpret due to the loss of some replications in some treatments.

Spray top reduced viable seed production considerably. This effect can be seen in the numbers of plants emerging pre-planting and within the crop.

Autumn cultivation does not appear to be greatly effective within the TDD and DP treatments. Within DDC treatments it appears to have been very effective.

The intermediate soil disturbance as which occurs with DDC is more conclusive to ryegrass establishment.

Hoegrass did not perform well, as it was sprayed somewhat later than optimal timing due to the dry spells.

SOWING SYSTEMS

Location : R. Barrett, Broomehill 77Ka23

Treatment: Crop - Wheat var. Egret.

Chemical : Sprayseed at 2 l + Dicamba. DDT added at 0.5 kg/ha.
used

Sowing : As outlined in results. N Fertilizer at 130 kg Agras/ha.
Methods

Results :

Treatment	Chemical	Wheat Yield kg/ha
District Practice	-	3,430
Direct Drill Combine	2 l sprayseed	3,760
Single cultivator, spray TDD	2 l sprayseed	3,100
Direct Drill - TDD	2 l sprayseed	3,090
Modified scarifier, spray TDD	2 l sprayseed	3,570
Modified scarifier, spray combine	2 l sprayseed	3,620
Single cultivation, combine, seed	-	3,130

TDD - Triple Disc Drill

Modified - Every second tyne removed. Performed at
Scarifier opening of season.

Cultivation - Scarifier.

Comments

Weed control was satisfactory in all treatments, but slightly more in single cultivated and modified combine treatments.

TDD plots emerged later, and appeared weaker than with combine. The TDD appeared to decline in vigour relative to conventional plots till early spring when they caught up to the others.

Slight lodging occurred in all combine seeded plots.

SOWING SYSTEMS

Location : B. Ives, Kojonup 77KA22

Treatments: Testing planting techniques using Direct drilling with conventional and triple disc drills, and the potential of an alternate herbicide for minimum tillage.

Crop : Barley. 1.5 l Hoegrass application for ryegrass control, N fertiliser, N Fertilizer at 130 kg Agras/ha.

Results :

Planting Method	Chemical/ha	Yield kg/ha
District Practice	Sprayseed 2 1	2,850
Direct Drill Combine	Sprayseed 2 1	2,900
Single Cult. Spray - TDD	Sprayseed 2 1	3,050
Direct Drill - TDD	Sprayseed 2 1	3,060
Direct Drill - TDD	Roundup 1 1	2,890
Single Cult., Combine seed.	-	2,800

Comments

Combine seeded plots planted too deep with reduced emergence. Weed control not ideal in conventional treatment despite post emergent herbicide.

There appeared to be a retardation of barley growth in mid-late winter or TDD treatments. This was compensated for later and with little apparent difference between cultivation systems at harvest.

Weed control by Roundup was not as good as Sprayseed. Rates used were shown to be too low in adjacent trial.

BARLEY TOLERANCE TO HOEGRASS

Location : K. Pardey, Cuballing 77Na54

Treatments: Hoegrass with and without wetter on a ryegrass infested barley crop.

Sprayed 11/8/77 when barley and ryegrass well tillered.

Results :

Treatment	Rate	Visual Effect on Ryegrass*	Crop Yield
Nil	-	0	894
Hoegrass	1.0	4.5	1,234
Hoegrass	1 + 0.5% wetter	4.7	1,155
Hoegrass	1.5	5.0	1,155
Hoegrass	1.5 + wetter	5.0	1,169
Hoegrass	2.0	5.0	1,265
Hoegrass	2.0 + wetter	5.0	1,164

* 0 = No Effect 5 = Total Kill

Comments

This site was evenly, fairly densely infested with ryegrass. There appears to be little yield response with increased rates of Hoegrass.

There also appears to be a slight yield reduction with the addition of wetting agent. This trial was sprayed too late for optimum yield increases.

As far as barley tolerance to the chemical is concerned, it appears quite satisfactory at the rates required for ryegrass control.

WILD OAT CONTROL

Aerial Spraying

Location : D. Eaton, Dowerin 77N033

Treatments: Hoegrass at 2 l/ha + 0.5% wetter.
Avenge at 1.15 kg/ha + 0.75% wetter.
Matavin at 3 l/ha

Aerial Spraying Details - sprayed 25/7/77

- Wind at 45° to runs at 10 to 15 knots. Gusty and slightly choppy.
- Plot size, four swaths wide (80 m) x 300 m.
- Temperature 17 to 20°
- Aircraft, Cessna Ag. wagon.
- 33.5 l/ha total spray volume, nozzles inclined back.
- Height 6 m.

Crop and : Both at mid-late tillering.

- Weed
- Soil moisture adequate.
 - Weed density very dense, 100% ground cover.

Results

Evenness was determined by taking rating transects across the plots.

Hoegrass - Propeller wash and insufficient overlap apparent. Wild oat control reasonable where chemical landed.

Avenge - Propeller wash and insufficient overlap not as bad as with Hoegrass. Reasonably even over most of the area. Control good where chemical evenly applied.

Matavin - As for other chemicals. Appears to have been not as effective as with Avenge.

Ground Trial

Visual Rating Only

	Rating	Wheat Effect
Hoegrass	4.1	0
Avenge	4.4	1
Matavin	3.6	1
Nil	0.0	0

0 = No effect on weed 5 = Total kill.

There appeared to be slight height reduction with both Matavin and Avenge.

Summary

The results of the trial indicate that a good cross wind component appears essential to achieve good even spraying.

Dry weather and fairly advanced wild oats did not help in the activity of the chemicals and this would have made more obvious any irregularity in spray distribution.

WILD OAT HERBICIDES

Location : N. King, Yealering 77Na5?

Treatments: Hoegrass at 2.5 l/ha + 0.5% wetter.
Avenge at 1.15 kg/ha + 0.6% wetter.
Matavin at 3 l/ha
Wetter - Agral.

All treatments applied at late tillering to a wild oat infested wheat crop.

Results :

Treatment	Crop Rating*	Weed Rating**	Yield kg/ha
Nil	3.0	0	473
Hoegrass	5.0	4.0	658
Avenge	4.5	4.0	577
Matavin	4.5	4.8	575

* 0 = Crop killed 5 = best on site

** 0 = NO efect 5 = total kill

Comments

This site was sprayed too late for the optimum effect of Hoegrass and Avenge. This can be seen from the reduced apparent kill of Wild Oats by Hoegrass. Plants continued to grow, pushed up a seed head and then usually the head broke off. Avenge stunted the wild oats. Matavin is more effective against wild oats at later growth stages than at early stages and killed the wild oats efficiently.

Yields indicate that Hoegrass appears to have resulted in a better response than the other two chemicals. The Hoegrass treated crop appeared in early heading to be slightly better with larger and a greater number of heads.

WILD OAT HERBICIDES

Location : R. & W. Boyle, Kellerberrin. 77ME32

Treatments: Wild oat infested wheat crop, herbicide sprayed as per results table.

Results :

Chemical	Rate	Yield kg
Nil	-	82
Hoegrass	1.25 l/ha	108
Hoegrass	2.50 l/ha	147
Avenge	1.15 kg/ha	97
Matavin	3.0 l/ha	106

Comments

The site was severely drought affected. It appears that Hoegrass at 2.5 l/ha did have some effect.

WILD OAT HERBICIDES

Location : Mr R. Crombie, "Arrawarra", Watheroo. 77M031

Treatments: Post emergent wild oat herbicides applied to a wild oat infested crop of wheat as per results in table.

Results : Wild oat level - 5 plants/sq. m.

Chemical	Date Sprayed	Rate	Crop Growth Stage	Weed Growth Stage	Yield kg/ha
Nil	-	-	-	-	1,334
Hoegrass	19/7	2.5 l + W*	1 - 2	1 - 3	1,063
Avenge	19/7	1.55 kg	1 - 2	1 - 3	1,067
Neoban	19/7	550 mls.	1 - 2	1 - 3	1,072
Matavin	16/8	3 l	Tillering	Tillering	1,156
Matavin	27/7	4 l	5	4	1,104

W* Wetter added at 0.25%

Comments

It would appear that yield depression was caused by all treatments. The site was quite dry all season. The wild oat infestation was not very dense.

Matavin and Avenge both did not appear to cause any visual crop damage, as did Hoegrass.

The control of wild oats as visually estimated and in descending order is Hoegrass, Matavin 4 l/ha early, Matavin 3 l/ha late, followed by Avenge and Neoban.

WILD OAT HERBICIDES - POST EMERGENT

77Ka24

Location : Mr Bell, Katanning.

Treatments: Hoegrass at 2.5 l/ha, Avenge at 1.15 kg/ha, Matavin at 3 l/ha,
at times of spraying.

Wheat crop densely infested with wild oats.

Results :

Treatment	Crop Stage	Yield/ha	% Yield Increase
Hoegrass 2.5 l	4 leaf	2,472	79%
Avenge 1.15 kg	4 leaf	2,340	69%
Matavin 3 l	Mid-late Tillering	1,252	-9%
Matavin 4 l	4 leaf	1,930	39.75%

Comments

Early spraying produces a better yield response than does late spraying. It appeared during the growth of the crop that the chemicals which performed best, coped with the dry periods of the season most effectively. Hoegrass appeared most active under all conditions, Avenge did appear to damage the crop somewhat yet this was transient, Matavin does not appear to cope with periods of stress due to water shortage as well as the other two chemicals.