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Summary of 1974 Weed control in lupin evaluations

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1974

SUMMARY OF 1974 WEED
CONTROL IN LUPIN EVALUATIONS

J.M. ALLEN

FEB. 1975

1. Herbicides x Depth of Seeding

There is no evidence of a herbicide x depth of seeding interaction in lupin plant numbers, at either Broomehill or Eradu. The lupin plants on the shallow sown plots were reported to be more effected by herbicides than on the deeper sown plots at Eradu.

It is suggested that shallow seeding may be a factor in predisposing lupin crops to simazine damage particularly on sandy soils, however it has not been possible to demonstrate such an effect.

2. Herbicides x Time of Seeding

At two sites (Myrup, Namban) there was a large response in lupin yield to early seeding. At both sites the early sown treatments responded to herbicide treatments.

At Chapman the later sown plots gave higher yields. There was a slight response to herbicides at the early time of seeding.

The response to herbicides is greater in early sown lupins than in lupins sown into a conventionally prepared seed bed.

3. Herbicide Recommendations

Unchanged from 1974 (see technote 10/74)

LUPINS - DEPTH OF SEEDING X HERBICIDES

74GE3

Locality - P. Harod Eradu
 Variety - Unicrop
 Seeding - 2 Depths 1-2 cm and 5-6 cm
 Spraying - Immediate post seeding
 Assessment - Weed and Crop counts 24/6/74
 Harvest - 9/12/74

Treatment	Plant m ²			Yield kg/ha
	B leaved	Grass	Lupin	
1-2 cm Depth				
Control	60	206	23	384
Simazine 1kg	8	65	31	455
Simazine 3kg	2	21	21	450
Diuron 3kg	4	64	34	448
5-6 cm				
Depth Control	71	146	35	579
Simazine 1kg	4	83	29	598
Simazine 3kg	1	15	21	532
Diuron 3kg	2	54	29	566

Comment

A visual difference was apparent in the effect of simazine on lupins sown at different depths.

The variability within plots masked this effect in the counts recorded.

Yields were reduced by the dry spring.

There appears to be a yield response to the greater seeding depth.

LUPINS - DEPTH OF SEEDING X HERBICIDES

74KA1

Locality - A. Barrett - Broomehill
Variety - Uniharvest
Seeding - 1-2 cm and 5-6 cm depth 25/4/74
Spraying - Immediate post seeding
Assessment Weed and crop counts June
Harvest - 30/12/74

Treatment	Plants m ²		Yield kg/ha
	Grass	Lupin	
1-2 cm Control	52.0	22	868
Simazine 1kg	8.3	19	1130
Simazine 3kg	3.0	19	1172
Treflan 1.5l	25.6	22	802
5-6 cm Control	46.0	15	942
Simazine 1kg	9.5	20	1079
Simazine 3kg	2.8	15	1225
Treflan 1.5l	27.6	18	926

Comment

There appears to be a better establishment of lupins at the shallow depth with or without herbicides.

Simazine has given good ryegrass control and significant yield increases.

Treflan gave poor grass control.

LUPINS - DEPTH OF SEEDING X HERBICIDES

74E1

Locality - Esperance Downs Research Station
Variety - Uniharvest
Seeding - Seeded at 1 depth only
Spraying - Immediate post seeding
Assessment - Weed and crop counts 23/12/74
Harvest - 23/12/74

Treatment	Plants m ²		Yield kg/ha
	Grass	Lupin	
Control	19	46	762
Simazine 1kg	11	45	857
Simazine 3kg	4	48	952
Treflan 0.5l	13	50	809

Comment

Yields are inversely proportional to the density of grass.
Simazine at 3kg per ha was required for good weed control.
No crop damage occurred.

LUPINS - TIME SEEDING X HERBICIDES

74C1

Locality - Chapman Research Station
Variety - Unicrop
Seeding - 1st 3.5.74 2nd 22.5.74
Spraying - Immediate post seeding
Assessment - Weed and crop counts 18.7.74
Harvest - 9.12.74

Treatment	Plants m ²		Yield kg/ha
	B leaved	Lupin	
EARLY			
Control	11.4	19.9	1294
Diuron 1	-	-	-
Diuron 2	2.7	24.0	1395
Simazine 1	1.6	32.0	1339
LATE			
Control	3.7	30.6	1685
Diuron 1	0.4	22.5	1585
Diuron 2	0.9	23.4	1613
Simazine 1	0.4	35.8	1488

Weeds present - Doublegee and Capeweed

Comment

Yields were higher at the later time of seeding.

Diuron and simazine gave good doublegee and capeweed control.

LUPINS - TIME OF SEEDING X HERBICIDES

74M05

Locality - R. Ward Namban
 Variety - Unicrop
 Seeding - 1st 7.5.74 2nd 30.5.74
 Spraying - Immediate post seeding
 Assessment - Lupin plant count
 Visual rating weeds
 Harvest - 40 m x 10 rows December

Treatment	Lupin Plants m ²	Weed Rating	Yield kg/ha
EARLY SEEDING			
Control	39	3	932
Simazine 1kg	39	1	936
Simazine 3kg	20	0.5	1207
Diuron 1kg	41	2	932
LATE SEEDING			
Control	20	8	459
Simazine 1kg	24	7	590
Simazine 3kg	27	7	412
Diuron 1kg	25	5	820

Weed rating 0 Weed free
 10 Dense doublegee, capeweed.

Comment

Early sown plots had more lupin plants, less weeds and gave a higher yield.

Simazine 3kg/ha thinned the early sown crop, but still increased yield. Rain was heavy following the early time of seeding, and probably contributed to the crop thinning.

LUPINS - TIME OF SEEDING X HERBICIDES

74ES2

Locality - R. Russell Myrup
Variety - Uniharvest
Seeding
Spraying - Immediate post seeding
Assessment - Weed and crop counts 24.7.74
Harvest - 6.1.75

Treatment	Plants m ²		Yield kg/ha
	Weed	Lupin	
EARLY			
Control	156	33	1250
Simazine 1kg	49	40	1278
Simazine 3kg	9	51	1409
Treflan 1.5l	63	40	1590
LATE			
Control	58	75	434
Simazine 1kg	48	62	444
Simazine 3kg	43	66	587
Treflan 1.5l	49	54	494

Comment

Late sown treatments effected by split seed at harvest.
Simazine 3kg/ha and Treflan 1.5l/ha increased yeilds particularly on early plots.

LUPINS - RATE OF SEED X HERBICIDES

Locality - Muresk Agricultural College
Variety - Uniharvest
Seeding
Spraying
Assessment
Harvest - 11/12/74

Treatment	Yield kg/ha
25 kg/ha Nil	406
25 kg/ha Simazine 1kg	328
25 kg/ha Simazine 3kg	324
50 kg/ha Nil	362
50 kg/ha Simazine 1kg	362
75 kg/ha Nil	278
75 kg/ha Simazine 1kg	368
100 kg/ha Nil	521
100 kg/ha Simazine 1kg	384

Comment

Yields were low and variable.

LUPINS - SIMAZINE DEMONSTRATION

74KA2

Locality - Ramel & Nilsson Orchid Valley
Variety - Uniharvest
Seeding - 27/5/74
Spraying - Immediate post seeding
Assessment - Visual
Harvest - 15/1/75

Treatment	Yield kg/ha
Control	1000
Simazine 1	881
Simazine 2	1095

Comment

Yields increased across the site and this effect masked any yield response due to herbicides.

LUPINS - PRE EMERGENCE HERBICIDES

74BA2

Locality - Badgingarra Research Station
Variety - Uniharvest
Seeding - 10/4/75
Spraying - Immediate post seeding
Assessment - Visual rating July
Harvest - 6/1/75

Treatment	Visual Rating Weed Control	Yield kg/ha
Control	7	670
Simazine 1kg	6	476
Simazine 3kg	4	317
Sencor 0.5kg	6	486
Sencor 1.0kg	3	352
Rental 4.0kg	6	609
Lasso 4l	7	495

Rating - Mean rating 10 = Weedy 1=weed free

Comment

Weed control was poor with all treatments.

Yields were low as a result of the dry spring.

LUPINS - PRE EMERGENCE HERBICIDES

74MT1

Locality - Mount Barker Research Station
Variety - Uniharvest
Seeding - 14/5/74
Spraying - Immediate post seeding
Assessment - Weed and Lupin count 9/9/74
Harvest - 23/12/74

Treatment	Plants m ²			Yield kg/ha
	B leaved	Grass	Lupin	
Control	24.1	45.3	64.0	2152
Simazine 1kg	4.1	18.1	73.5	2352
Simazine 3kg	3.3	3.6	62.3	2587
Metribuzin 0.5kg	4.8	14.0	66.3	2368
Metribuzin 1kg	4.1	8.3	68.2	2512
Rental 4kg	11.5	31.5	76.5	2221
Lasso 4 l	10.6	10.8	65.8	2512

Comment

No herbicide treatment effected lupin plant numbers.

Yields were increased by all herbicides.

Rental does not warrant further evaluation.

Simazine 3kg Metribuzin 1kg and Lasso 4 l gave the greatest yield increase.