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1975 Control of silverleaf nightshade and saffron thistle

P A. Rutherford

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Rutherford, P A. (1975), *1975 Control of silverleaf nightshade and saffron thistle*. Department of Agriculture and Food, Western Australia, Perth. Report.

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SUMMARY OF EXPERIMENTAL RESULTS

FIELD TRIALS 1975

P.A. RUTHERFORD
WEED AGRONOMY SECTION

WESTERN AUSTRALIAN
DEPARTMENT OF AGRICULTURE

1. Control of Silverleaf Nightshade
2. Control of Saffron thistle

1. SILVERLEAF NIGHTSHADE

75Na6 Rates of Tordon 50-D x times of application on
Silverleaf Nightshade (*Solanum elaeagnifolium*)

Property: Dare & Lloyd, Harrismith

Site: pasture (Dwalganup sub clover, grasses & *Erodium* sp.)
Sand/clay with Salmon Gum/White Gum.

Plot Size: 3m x 3m

Treatments	Time	Counts of Live Shoots of S.L.N *			
		29/5/75		12/12/75	
		Count	% Control	Count	% Control
1. Nil - Control		59.75	-	68.50	-
2. Picloram + 125g/ha	19/12/74	6.50	89.1	75.75	-10.6
3. " 250g/ha		5.50	90.8	66.00	3.7
4. " 375g/ha		2.75	95.4	49.25	28.1
5. " 125g/ha	23/1/75	0.25	99.9	57.75	15.7
6. " 250g/ha		0.50	99.9	53.75	21.5
7. " 375g/ha		0	100.0	45.25	33.9
8. " 125g/ha	18/2/75	1.00	98.3	52.50	23.4
9. " 250g/ha		3.00	95.0	50.00	27.0
10. " 375g/ha		0.50	99.9	33.00	51.8
11. " 125g/ha	18/3/75	1.25	97.9	60.00	12.4
12. " 250g/ha		1.75	97.1	45.75	33.2
13. " 375g/ha		0.50	99.0	29.75	56.6

+ The rates of Picloram applied are equivalent to the following rates of Tordon 50-D : 2.8, 5.6, 8.4 litres per hectare.

* Plant counts are means of four replications.
The treatments were applied in water at 2000 l/ha.

Comments

Statistical analysis has shown that time of application was highly significant ($p = 0.001$) with the May 1975 counts, but was not significant by the December 1975 counts. Rate of application was not significant in May 1975, but there was a significant ($p = 0.01$) effect of rate of application by December 1975, when the new season's growth appeared.

The rates used are too low for long term control, with a single application, and the plots will be retreated during the summer of 1976.

75Na7 Herbicide screening trial on Silverleaf Nightshade

Property: Dare & Lloyd, Harrismith

Site: pasture (Dwalganup sub-clover + Grasses +
Erodium sp.)

Sand/clay with white gum/salmon gum.

Plot Size: 3m x 3m

Treatment +	12/12/75 Live Shoot Counts *	
	Counts	% Counts
1. Nil - Control	74.67	-
2. Dowco 290 1kg/ha	40.67	45.5
3. Hyvar X 5kg/ha	83.00	-11.2
4. Weedazol T1+ 5kg/ha	65.33	12.5
5. Roundup 1kg/ha	53.67	28.1
6. 2,4-D ester 1kg/ha	57.33	23.2

+ The treatments are in rates of active ingredient per hectare.

* Liveshoot counts are means of three replications.

Only one rate of each chemical was used as only a small area of S.L.N. was available. The treatments were applied in water at 2 000 l/ha.

Comments

The treatments were only marginally non-significant after statistical analysis. However, Dowco 290 and Roundup (Glyphosate) look promising even at the low rates used and will be further examined in 1976.

In addition, Glyphosate had **no** visible effect on the sub-clover content of the pasture.

2. Saffron thistle

75Es25 Saffron thistle control in wheat.

75Es26 Saffron thistle control in pastures.

75Es25 Property - G. Graham, Circle Valley

This trial was sprayed in the farmer's wheat crop with a medium to heavy infestation of Saffron thistle.

Times of spraying: Rosette = 25/7/75
Bolting = 29/9/75

Plot Size - 2.5m x 60m

No.	Herbicide	Rate	Time	Plant Count *
1	Nil			7.00
2	2,4-D ester	½ l/ha	Rosette	2.67
3	2,4-D ester	1 l/ha	Rosette	4.33
4	2,4-D ester	½ l/ha	Bolting	9.67
5	2,4-D ester	1 l/ha	Bolting	3.00

* Plant counts are means of 6 x 1sq.m. quadrats per plot over three replications. Counted on 3/12/75.

The crop was sprayed for radish/turnip by air and severely affected the Saffron growing in the trial area. This could account for the non-significance of the results.

75Es26 Property - G. Graham, Circle Valley.

This trial was sprayed on a pasture very heavily infested with Saffron thistle.

Times of spraying: Rosette - 3/7/75
Bolting - 29/9/75

Plot size - 2.5m x 60m

No.	Herbicide	Rate	Time	Plant Count *
1	Nil			88.33
2	2,4-D ester	1 l/ha	Rosette	5.33
3	2,4-D ester	2 l/ha	Rosette	4.33
4	2,4-D ester	1 l/ha	Bolting	27.33
5	2,4-D ester	2 l/ha	Bolting	56.67

* Plant counts are means of 6 x 1 sq.m. quadrats per plot over three replications. Counted on 3/12/75.

Analysis of the results show a significant effect of herbicide compared with no treatment. Also spraying at the rosette stage of the thistle was significantly better than at the bolting stage. There was no significant difference between the rate of application.

(P.A. Rutherford)

February 13, 1976