



1990

Murex medic field evaluation.

D. J. Gillespie

D. R. McClements

Department of Agriculture and Food, Western Australia

D. S. Francis

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Recommended Citation

Gillespie, D J, McClements, D R, and Francis, D S. (1990), *Murex medic field evaluation..* Department of Primary Industries and Regional Development, Western Australia, Perth. Report.

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EXPERIMENTAL SUMMARY

1990

D.J. Gillespie

1. TITLE: Murex Medic Field Evaluation

PERSONNEL: D.J. Gillespie; D.R. McClements; D.S. Francis

DATE: 1990

FILE: 5786EX

TRIAL NUMBER: 90GE113; 90MO62; 90WH87; 90ME72; 90NO115; 90A24;
90AB17; 90AL35

DOS FILE NAME: GILDJ90a.DOC

90GE113: Sown: 1/6/1990
Sprays: Lemat @ 50 mL/ha on June 26
Tribunil @ 800 g/ha on July 26
Fusilade @ 250 mL/ha on August 8
Grazing: Nil

No dry matter cuts or estimates were made on this trial.

Flowering data and seed yields are shown below in Tables 1-5.

90MO62: Sown: 8/5/1990. Seedbed dry. Germ. date 22/5/1990.
Sprays: Lemat @ 50 mL/ha - end June
Fusilade @ 250 mL/ha - end June
Grazing: August 1-12 at high stocking rates
Plots: 1, 2 and 6 in all reps were inadvertently missed at sowing.

Results are given in Tables 1-5.

90WH87: Sown: 31/5/1990
Sprays: Karate @ 180 mL/ha on 12/6/90 and 29/6/90
Rogor @ 85 mL/ha on 12/6/90 and 29/6/90
Diuron/24DB @ 250/400 mL/ha in mid August
Grazing: July 26/27. Hard grazed.
September 5/6. Hard grazed.

Results are given in Tables 1-5.

90ME72: Sown: 11/6/1990
Grazing: Nil

Results are given in Tables 1-5.

90NO115: Sown: 28/5/1990
Sprays: Lemat @ 50 mL/ha in mid July
Lemat @ 50 mL/ha at end August
Fusilade @ 250 mL/ha at end August
Grazing: August 1-10 at high stock rates.

Results are given in Tables 1-5.

90A24: Sown: 25/5/1990
Sprays: Fusilade @ 250 mL/ha in mid July
Diuron/24DB @ 250/400 mL/ha in mid July
Brodal @ 150 mL/ha at end August
Grazing: July 27-August 3 at moderate S.R.

Note: Flowering delay and leaf distortion due to
sprays noticed. Severe wild oat and radish
competition due to resistant weeds.
No dry matter assessments made.

Results of flowering and seed yield are shown in
Tables 1-5.

90AB17: Sown: 17/5/1990. Dry seedbed. Germ. on 29/5/1990
Sprays: Fusilade @ 250 mL/ha at end July
Lemat @ 50 mL/ha at end July
Sertin (rate unknown) at end August.
Grazing: 10/8/1990. Hard grazed.

Results are given in Tables 1-5.

90AL35: Sown: 16/5/1990
Sprays: Cypermethrin (rate unknown) in early June.
Verdict @ 750 mL/ha in late June.
Grazing: 9/8/1990. Hard grazed.

Results are given in Tables 1-5.

Table 1. Murex medic variety trials - 1990
Days to commencement of flowering (SAFE analysis conducted)

Var. No.	Variety	GER	NN	WH	MER	SBR	AVON	KAT	TEN	AVE
1.	87F01-5	88	96	95	93	98	100	104	103	97
2.	87F01-22	89	95	94	93	100	98	102	104	97
3.	87F01-28	92	96	94	92	95	100	103	104	97
4.	87F01-37	-	99	97	95	100	100	106	105	100
5.	87F01-45	91	97	97	94	98	103	105	104	99
6.	87F01-48	-	95	95	93	99	101	104	-	98
7.	87FB2-30	90	98	95	95	100	101	101	103	98
8.	87FB2-36	88	96	96	92	99	105	106	104	98
9.	87FB2-46	87	94	94	91	97	101	103	104	96
10.	87FB2-51	86	95	96	92	98	103	104	104	97
11.	87FB5-14	89	95	94	90	97	102	102	104	97
12.	87FB5-18	80	95	95	92	97	101	105	103	96
13.	SEP26-2-1	85	100	100	95	104	109	106	110	101
14.	SEP26-2-7	87	100	100	95	102	105	106	108	100
15.	SEP28-2	98	103	104	96	104	106	108	110	104
16.	SEP29-1	95	104	100	96	102	106	105	106	102
17.	SEP29-2	-	103	102	96	104	109	107	107	104
18.	SEP30-3	85	99	97	91	102	106	107	107	99
19.	SAR3490	94	100	98	94	104	107	105	107	101
20.	GRC23-7	-	105	105	101	108	110	108	111	107
21.	GRC50-3	89	91	91	87	95	102	99	100	94
22.	GRC63-5	-	101	99	92	103	105	104	106	101
23.	GRC69	86	92	92	89	95	103	101	101	95
24.	GRC87-1	90	102	101	96	107	107	106	106	102
25.	GRC5661	-	-	93	88	-	103	103	-	97
26.	Dalkeith	87	100	94	85	96	104	103	103	97
27.	Santiago	68	88	83	80	88	90	90	93	85
28.	Circle Valley	80	96	93	92	101	102	106	105	97
29.	Paraggio	88	99	101	93	104	107	101	108	100
30.	Parabinga	82	94	92	88	96	103	98	103	95
	LSD	4.5	3.0	1.8	1.7	2.6	2.6	3.8	2.6	

GER = Geraldton.
 NN = New Norcia.
 WH = Wongan Hills.
 MER = Merredin.
 SBR = Southern Brook.
 AVON = Avondale.
 KAT = Katanning.
 TEN = Tenderden.

Table 2. Murex medic variety trials - 1990
Dry matter production (kg/ha) and winter vigour (1-10) (SAFE analysis conducted)

Var. No.	Variety	NN	WH	MER	SBR	KAT*	TEN*
1	87FO1-5	3,659	467	725	307	4.3	7.8
2	87FO1-22	2,601	368	554	815	2.4	7.8
3	87FO1-28	3,071	523	657	556	2.4	6.9
4	87FO1-37	3,163	388	396	844	1.4	5.3
5	87FO1-45	3,089	412	526	545	2.3	3.6
6	87FO1-48	3,296	419	777	739	3.6	-
7	87FB2-30	3,444	430	566	273	4.6	5.7
8	87FB2-36	3,797	523	715	458	5.8	8.5
9	87FB2-46	2,910	257	635	842	3.0	5.9
10	87FB2-51	2,762	341	729	536	3.0	5.6
11	87FB5-14	2,689	447	589	775	3.6	6.0
12	87FB5-18	3,743	363	642	738	4.4	5.6
13	SEP26-2-1	3,700	398	469	922	4.9	6.4
14	SEP26-2-7	4,615	403	618	981	5.0	5.5
15	SEP28-2	3,543	648	560	1,036	6.3	4.5
16	SEP29-1	3,764	888	720	1,013	6.4	5.8
17	SEP29-2	3,346	545	656	1,194	6.7	6.4
18	SEP30-3	3,314	694	782	1,325	6.8	5.1
19	SAR3490	3,891	510	695	392	3.6	8.5
20	GRC23-7	3,062	610	786	773	2.4	6.1
21	GRC50-3	3,651	321	687	462	4.3	4.2
22	GRC63-5	3,330	433	517	559	3.7	3.7
23	GRC69	3,146	368	748	761	4.3	3.5
24	GRC87-1	3,908	636	587	752	3.3	8.4
25	GRC5661	-	328	469	-	3.6	-
26	Dalkeith	3,424	359	1,102	181	2.4	7.5
27	Santiago	3,393	372	1,129	19	6.4	6.0
28	Circle Valley	2,676	255	814	667	3.0	5.2
29	Paraggio	3,921	333	795	167	4.7	2.8
30	Parabinga	3,890	439	1,124	425	3.4	1.8
	LSD	855	296	238	532	2.2	2.6

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* Vigour rating 1-10: 1 = Worst; 10 = Best.

Table 3. Murex medic variety trials - 1990
Seed yields (kg/ha) (SAFE Analysis conducted)

Var. No.	Variety	GER	NN	WH	MER	SBR	AVON	KAT	TEN	AVE
1	87F01-5	40	474	91	48	100	86	44	66	119
2	87F01-22	70	440	14	39	25	49	64	210	113
3	87F01-28	39	399	56	65	86	56	63	363	141
4	87F01-37	25	436	49	19	45	12	56	107	94
5	87F01-45	30	385	10	29	34	37	23	62	76
6	87F01-48	-	370	54	49	71	80	55	-	111
7	87FB2-30	72	383	22	61	35	62	46	117	100
8	87FB2-36	42	489	46	84	43	20	84	243	131
9	87FB2-46	26	440	29	36	44	22	52	97	93
10	87FB2-51	70	325	19	70	58	36	37	160	97
11	87FB5-14	62	354	35	56	38	37	98	138	102
12	87FB5-18	34	413	15	86	47	40	33	112	98
13	SEP26-2-1	31	524	57	47	87	31	43	80	113
14	SEP27-2-7	59	517	39	56	71	58	51	112	120
15	SEP28-2	43	567	18	33	72	50	72	76	116
16	SEP29-1	81	688	113	221	137	82	89	97	189
17	SEP29-2	49	482	24	96	85	32	111	132	126
18	SEP30-3	67	452	47	199	119	7	90	57	130
19	SAR3490	38	477	58	18	38	94	82	270	134
20	GRC23-7	18	465	24	68	38	65	127	112	115
21	GRC50-3	51	472	52	138	40	18	96	85	119
22	GRC63-5	14	517	44	125	38	74	90	117	127
23	GRC69	59	450	60	115	88	71	97	95	129
24	GRC87-1	76	373	53	62	111	34	103	147	120
25	GRC5661	27	-	26	61	-	24	54	-	38
26	Dalkeith	112	473	43	215	25	103	214	146	166
27	Santiago	35	597	12	379	34	44	211	147	182
28	Circle Valley	48	412	27	378	10	26	35	117	131
29	Paraggio	20	633	48	348	3	117	69	35	159
30	Parabinga	72	493	29	283	96	111	68	52	151
	LSD	47	-	49	74	57	55	61	-	

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Varieties were also ranked for dry matter (where measured) and seed yield (all trials) and an overall rank was calculated. This is shown in Tables 4 and 5 and gives a clearer picture of the relative performance of each variety than do Tables 1-3.

Table 4. Murex medic variety trials - 1990
Relative rankings of dry matter production (1-30) at six sites

Variety	Overall rank	Site					
		NN	WH	SBR	MER	KAT	TEN
SEP29.1	7.3	8	1	4	12	4	15
SEP30.3	8.7	19	2	1	7	1	22
SEP29.2	9.0	17	6	2	17	2	10
87FB2.36	9.7	7	8	23	13	6	1
GRC87.1	11.3	4	4	13	22	21	4
SEP26.2.7	11.5	1	17	5	20	7	19
SEP28.2	11.8	13	3	3	24	5	23
SAR3490	11.8	5	9	25	14	16	2
87FO1.5	13.0	11	10	26	11	14	6
SEP26.2.1	13.3	10	18	6	29	8	9
Santiago	13.8	16	20	30	1	3	13
GRC 23.7	14.3	25	5	11	6	28	11
87FO1.48	15.2	20	15	14	8	19	-
87FB5.18	15.5	9	23	15	18	11	17
Parabinga	15.5	6	12	24	2	20	29
87FB5.14	16.5	28	11	10	21	17	12
87FO1.28	16.7	24	7	19	16	26	8
Paraggio	16.7	3	26	29	5	9	28
Dalkeith	17.0	15	24	28	3	25	7
GRC69	17.2	22	21	12	9	12	27
87FB2.30	17.3	14	14	27	23	10	16
GRC50.3	19.0	12	28	22	15	13	24
GRC63.5	19.3	18	13	18	27	15	25
87FO1.22	19.7	30	22	9	25	27	5
87FB2.46	20.0	26	29	8	19	24	14
Circle Valley	20.5	29	30	17	4	22	21
87FB2.51	20.7	27	25	21	10	23	18
87FO1.37	21.2	21	19	7	30	30	20
87FO1.45	23.3	23	16	20	26	29	26
GRC5661	24.3	-	27	-	28	18	-

Table 5. Murex medic variety trials - 1990
Relative rankings of seed yield (1-30) at nine sites*

Variety	Overall rank	Site								
		GER	NN	WH	SBR	MER	AVON	KAT	TEN	SA*
SEP29.1	5.7	2	1	1	1	5	6	12	19	4
Dalkeith	9.2	1	14	15	28	6	3	1	9	6
Parabinga	10.1	5	9	19	5	4	2	17	28	2
SEP29.2	11.6	13	11	22	9	11	22	4	11	1
Santiago	11.9	20	3	29	26	1	16	2	7	3
GRC69	12.2	10	18	3	6	10	9	7	21	26
GRC87.1	12.2	3	27	8	3	17	21	5	8	18
GRC63.5	13.2	29	7	14	20	9	8	11	14	7
87FB2.36	13.4	16	10	13	17	13	27	13	3	9
87FO1.28	14.0	18	24	6	8	16	13	19	1	21
SAR3490	14.0	19	12	4	22	30	4	14	2	19
SEP26.2.7	14.1	11	6	16	11	20	12	24	15	12
SEP30.3	14.2	8	17	12	2	7	30	10	27	15
Paraggio	14.4	27	2	11	30	3	1	16	29	11
GRC50.3	14.9	12	15	9	19	8	28	8	22	13
87FO1.48	15.0	-	28	7	12	22	7	21	-	8
87FO1.5	15.3	17	13	2	4	23	5	26	25	23
87FB5.14	16.4	9	29	17	21	21	18	6	10	-
Circle Valley	16.8	14	23	20	29	2	24	9	13	-
87FB2.30	17.2	4	26	24	24	19	11	25	12	10
87FO1.22	17.8	6	20	28	27	25	15	18	5	16
SEP26.2.1	17.8	22	5	5	7	24	23	27	23	24
SEP28.2	17.8	15	4	26	10	27	14	15	24	25
87FB2.51	17.9	7	30	25	13	14	20	28	6	-
GRC23.7	18.0	28	16	23	23	15	10	3	17	27
GRC5661	19.2	24	-	21	-	18	25	22	-	5
87FB5.18	20.0	21	22	27	14	12	17	29	16	22
87FO1.37	20.2	26	21	10	15	29	29	20	18	14
87FB2.46	21.4	25	19	18	16	26	26	23	20	20
87FO1.45	24.8	23	25	30	25	28	19	30	26	17

* Seed yield results from a trial at Finniss in South Australia are also included for comparison.

The selection SEP29.1 was outstanding for both dry matter production and seed yield over a wide range of sites varying in both rainfall and soil type.

On the basis of these trials, six lines have been selected for further evaluation in 1991. They are:

SEP29.1
SEP26.2.7
GRC69
GRC87.1
87FO1.28
87FB2.36

2. TITLE: Redlegged Earthmite Field Experiments

PERSONNEL: D.J. Gillespie; D. Chalwell

DATE: 1990

FILE: 6130EX

TRIAL NUMBER: 90A25; 90N0116

DOS FILE NAME: GILDJ90b.DOC

90A25: Sown: 12/6/1990
Assessment dates: 3/7; 11/7; 18/7

Very low levels of redlegged earthmite and only minor damage to test varieties was recorded in this trial. Damage ratings were recorded at 3, 4 and 5 weeks after sowing and plant yields at 3, 5 and 7 weeks, but the trial was then abandoned due to minimal responses. Results obtained are shown in Table 6.

Table 6. Performance of sub.clover varieties exposed to redlegged earthmite attack in the field

Variety	Damage rating*			Plant dry matter (g/sq.m)		
	3/7	11/7	18/7	3/7	18/7	1/8
DGI7	4	2	2	3.4	7.1	11.4
65321C	3	6	4	2.6	3.5	5.2
80S22.3.3.1	2	5	6	1.5	2.1	2.5
80S22.20.10.4	2	6	5	1.6	3.3	2.7
80S25.23.3.4	3	5	4	2.1	5.6	6.8
80S42.8.2.3	3	4	5	1.9	2.6	5.8
81S42.2	2	6	4	2.5	4.0	4.5
89838G	2	7	5	1.3	2.4	2.6
Junee	3	4	4	2.5	6.6	12.7
Seaton Park	2	5	5	3.5	4.3	6.4

* Damage rating 1-10: 1 = No damage; 5 = 50% of leaf area damaged;
10 = All plants dead or dying.

In spite of only low levels of redlegged earthmite the selection DGI7 was clearly less damaged than all other selections and this was reflected in plant growth.

Assessments of mite densities was made by CSIRO and the data showed that mite numbers were much lower on DGI7 than other varieties (data not presented).

90N0116: This trial was abandoned soon after sowing due to massive germination of contaminant clover present in the paddock and negligible levels of redlegged earthmite.

