DEPARTMENT OF AGRICULTURE AND FISHERIES, SOUTH AUSTRALIA

Agronomy Branch Report

MONITORING FIELD RESISTANCE TO LEGUME APHIDS
OF SUBTERRANEAN CLOVER AND MEDICS
&
ANNUAL PASTURE LEGUME CULTIVAR DEMONSTRATIONS

S.N. Brooks,
Plant Protection Agronomist

Report No. 99
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**ANNUAL PASTURE LEGUME CULTIVAR DEMONSTRATIONS - 1978**

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**PERENNIAL LEGUME PASTURE DEMONSTRATION - 1978**

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</table>
INTRODUCTION

The objective is to monitor the effect of aphids (B.G.A. and S.A.A.) on popular current cultivars, older less popular cultivars and newer cultivars.

**Annual medics**

Medicago littoralis  
*(strand medic)*  
*Cultivar* Harbinger

Medicago rugosa  
*(gama medic)*  
*Cultivar* Paragosa  
Paraponto  
Sapo

Medicago acutellata  
*(snail medic)*  
*Cultivar* Robinson  
Sair  
Sava

Medicago tornata  
*(disc medic)*  
*Cultivar* Saleg

Medicago truncatula  
*(barrel medic)*  
*Cultivar* Cyprus  
Ghor  
Jemalong  
Sanza

**Annual clovers**

Trifolium hirtum  
*(rose clover)*  
*Cultivar* Hykon  
Kodinin

Trifolium subterraneum  
ssp. subterraneum  
*(subterranean clover)*  
*Cultivar* Bacchus Marsh  
Daliak  
Dwalganup  
Esperance  
Geraldton  
Howard  
Mt. Barker  
Northam  
Nungarin  
Seaten Park  
Talgarook  
Woogenellup  
Clare  
Larisa  
Trikkala

ssp. brachycalyicum

ssp. yanninicum

**Perennial clovers**

Trifolium repens  
*(white clover)*  
*Cultivar* Haifa  
Ladino  
N.Z. white  
Siral  
Tamar

Trifolium pratense  
*(red clover)*  
*Cultivar* Montgomery red
2. **BASIC SITE PLANS**

The basic plot set up in a sown area of one square metre, with a one metre buffer all around (exceptions can be noted from plans).

Other information is as indicated.

Insecticide was used where necessary to protect the plots in early stages from Red-legged earthmite and Lucerne flea attacks.
<table>
<thead>
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<th>Cleve</th>
<th>Coomandook</th>
<th>Kapunda</th>
<th>Kapoona</th>
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FIELD RESISTANCE TO APHIDS OF SUBTERRANEAN CLOVER & MEDICS - 1978

**SITE:** Cleve - H.d., SN
**PROPERTY:** Byre Peninsula Field Day Site
**DATE SOWN:** 24-5-78
**SOIL TYPE:** Malley Loam
**ANNUAL RAINFALL:**
**PADDock HISTORY:** 1977 Ley (probably)
1976 Cereal (probably)
1975 Not known
**FERTILIZER:** Super at 100 kg/ha
**SEEDING RATE & PLOT SIZE:** Subterranean clover 1.5 g/m² - 15 kg/ha
      Medic 1.0 g/m² - 10 kg/ha

<table>
<thead>
<tr>
<th>Cultivars</th>
<th>Jemalong</th>
<th>Sanza</th>
<th>Sapo</th>
<th>Robinson</th>
<th>Savai</th>
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![Diagram of Cleve and Industrial Area]
FIELD RESISTANCE TO APHIDS OF SUBTERRANEAN CLOVER & MEDICS - 1978

SITE: Coomandook - Rd.
PROPERTY: M.P. & R.G. Ballard (Ross Ballard)
DATE SOWN: 1-6-78
SOIL TYPE: Sandy loam
ANNUAL RAINFALL: 425 mm
Paddock History: 1977
1976
1975
FERTILIZER: Super at 100 kg/ha
SEEDING RATE & PLOT SIZE: Subterranean clover 1.5 g/M² - 15 kg/ha
Medic 1.0 g/M² - 10 kg/ha
CULTIVARS:

<table>
<thead>
<tr>
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<th>Sair</th>
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<td>Dwalganup</td>
<td>Geraldton</td>
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Diagram:

- Coomandook
- Main Highway
- Melbourne
- Adelaide
- Gate
- House
- Road
- Site

Legend:
- N
FIELD RESISTANCE TO APHIDS OF SUBTERRANEAN CLOVER & MEDICS - 1978

SITE: Kapunda - H. Gibert, SN 508
PROPERTY: Sharefarmed by C. Huppertz, Riverton
DATE SOWN: 6-6-78
SOIL TYPE: red brown earth
ANNUAL RAINFALL: 450 mm
SEEDING RATE & PLOT SIZE: subterranean clover 1.5 g/m² - 15 kg/ha
medic 1.0 g/m² - 10 kg/ha

CULTIVARS:

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<th>Trikkala</th>
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<th>Dalley</th>
<th>Clare</th>
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<th>Mt. Barker</th>
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[Diagram of site with labels and distances]
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FIELD RESISTANCE TO APHIDS OF SUBTERRANEAN
CLOVER & MEDICS - 1978

SITE: Keppoch - Hd., SN
PROPERTY: D. Brown
Phone (087) 656063
DATE SOWN: 23-5-78
SOIL TYPE: Sandy loam
ANNUAL RAINFALL: 500 mm
PADDOCK HISTORY:
1977 Pasture and lucerne - irrigated
1976 Pasture and lucerne - irrigated
1975 Pasture and lucerne - irrigated
FERTILIZER: Super at 100 kg/ha
SEEDING RATE & PLOT SIZE:
Subterranean clover 1.5 g/m² - 15 kg/ha
Medic 1.0 g/m² - 10 kg/ha
CULTIVARS:

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FIELD RESISTANCE TO APHIDS OF SUBTERRANEAN CLOVER & MEDICS - 1978

SITE: Lameroo - Hd. Cotton, SN 83
PROPERTY: R.R. Liddell
Phone: Lameroo 82
DATE SOWN: 6-6-78
SOIL TYPE: Sandy loam
ANNUAL RAINFALL: 375 mm
PADDocks HISTORY: 1977 Pasture
1976 Wheat
1975 Pasture
FERTILIZER: Super at 200 kg/ha
SEEDING RATE & PLOT SIZE: Subterranean clover 1.5 g/M² - 15 kg/ha
Medic 1.0 g/M² - 10 kg/ha
CULTIVARS:

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<th>Sava</th>
<th>Sair</th>
<th>Paragosa</th>
<th>Paraponto</th>
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KAROONDA

WILKAWATT 12 km

LAMEROO 16 km
**FIELD RESISTANCE TO APHIDS OF SUBTERRANEAN CLOVER AND MEDIC - 1978**

**SITE:**
Loxton (Nangari) - Rd. Gordon, SN 128

**PROPERTY:**
P. Fogden
Phone: (085) 872248

**DATE SOWN:**
12-6-78

**SOIL TYPE:**

**ANNUAL RAINFALL:**
280 mm

**PADDock HISTORY:**
1977 pasture
1976 pasture
1975 pasture

**FERTILIZER:**
Superphosphate at 125 kg/ha

**SEEDING RATE & PLOT SIZE:**
Subterranean clover 15 kg/ha
Medic 10 kg/ha

N$^2$ and 2M$^2$

**CULTIVARS:**

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<td></td>
</tr>
<tr>
<td>SAO 364</td>
<td></td>
</tr>
<tr>
<td>SAO 664</td>
<td></td>
</tr>
<tr>
<td>Tornafield</td>
<td></td>
</tr>
</tbody>
</table>

---

**Diagram:**
- Loxton
- East Rd.
- WHEAT TRIALS
- MEDIC
- House
- Gate
- GRATWICK RD. (or NOORA RD)
- PASTURE
- Approx. 23 km
FIELD RESISTANCE TO APHIDS OF SUBTERRANEAN CLOVER & MEDICS - 1978

SITE: Milang - H. Alexandriana
PROPERTY: B.C. Landseer
Phone: Milang 120
DATE SOWN: 1-6-78
SOIL TYPE: Sandy loam
ANNUAL RAINFALL: 375 mm
PADDOCK HISTORY:
- 1977 Pasture - 125 kg/ha of Super
- 1976 Pasture
- 1975 Pasture - 125 kg/ha of Super & Copper at 5 kg/tonne
FERTILIZER: Super at 200 kg/ha
SEEDING RATE & PLOT SIZE:
- Subterranean clover 1.5 g/m² - 15 kg/ha
- Medic 1.0 g/m² - 10 kg/ha
CULTIVARS: Trefflan at 1.8 L/ha

<table>
<thead>
<tr>
<th></th>
<th>Jemalong</th>
<th>Sanma</th>
<th>Robinson</th>
<th>Dwaiganup</th>
<th>Dalisk</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Diagram:

- Gate
- Site
- House
- Shed
- 'Bimba Den' B.C. Landseer
- Pt. Sturt 19 Clayton 15
- Watson St
- Cemetary
- Milang Hotel

Legend:
- N
FIELD RESISTANCE TO APHIDS OF SUBTERRANEAN CLOVER & MEDICS - 1978

SITE: Minlaton - Rd. Minlaciewie, SN 44
PROPERTY: D. Flower, Brentwood Phone: Brentwood 261
DATE SOWN: 8-6-78
SOIL TYPE: Mallee loam
ANNUAL RAINFALL: 375 mm
PADDOCK HISTORY:
1977 Barley - 140 kg/ha superphosphate
1976 Pasture - (barley grass)
1975 Wheat - 150 kg/ha superphosphate
FERTILIZER: 150 kg/ha super
SEEDING RATE & PLOT SIZE:
Subterranean clover 1.5 g/m² - 15 kg/ha
Medic 1.0 g/m² - 10 kg/ha
CULTIVARS:

<table>
<thead>
<tr>
<th></th>
<th>Jemalong</th>
<th>Sanza</th>
<th>Robinson</th>
<th>Sava</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sair</td>
<td>Dwalganup</td>
<td>Northam</td>
<td></td>
</tr>
</tbody>
</table>

SITE: See page 20 indicated thus*
FIELD RESISTANCE TO APHIDS OF SUBTERRANEAN CLOVER AND MEDICS - 1978

SITE: Mt. Cooper - Hl.

PROPERTY: E.F. Little
Phone: Mt. Cooper 4-K

SOIL TYPE:

ANNUAL RAINFALL:

PADDock HISTORY:

1977
1976
1975

FERTILIZER: Superphosphate 200 kg/ha

SEEDING RATE & PLOT SIZE:

Subterranean clover at 1.5 g/2m² - 7.5 kg/ha
Medic 1.0 g/2m² - 5.0 kg/ha

CULTIVARS:

<table>
<thead>
<tr>
<th>Nungarin</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Chor</td>
<td>Robinson</td>
</tr>
<tr>
<td>Sava</td>
<td>Harbinger</td>
</tr>
<tr>
<td>Sair</td>
<td>Northam</td>
</tr>
</tbody>
</table>
-13-

FIELD RESISTANCE TO ANTS OF SUBTERRANEAN CLOVER & MEDICS - 1978

SITE: Palmer - Hl. Finnis, SN
PROPERTY: A.J. Kruwe
Phone: Palmer 223
DATE SOWN: 22-5-78
SOIL TYPE: Sandy Loam
ANNUAL RAINFALL: 338 mm
Paddock History:
1977 Pasture
1976 Oats
1975 Oats
FERTILIZER: Super at 200 kg/ha
SEEDING RATE & PLOT SIZE:
Subterranean clover 1.5 g/㎡ = 15 kg/ha
Medic 1.0 g/㎡ = 10 kg/ha

CULTIVARS:

<table>
<thead>
<tr>
<th>Northam</th>
<th>Sir</th>
<th>Robinson</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sava</td>
<td>Sanza</td>
<td>Jemalong</td>
</tr>
</tbody>
</table>

\[\text{---} N \text{---} \]

\[\text{MANNUM} \quad \text{MAIN ROAD} \quad \text{PALMER} \quad \text{Tower} \]

\[0.7 \text{ km} \quad \text{A.J.K. (House)}\]
FIELD RESISTANCE TO APHIDS OF SUBTERRANEAN CLOVERS & MEDICS - 1978

SITE: Rudall - Hd. Rudall (paddock E2)
PROPERTY: H.P.K. Dunn
Phone: Tuckey 44030
DATE SOWN: 19-5-78
SOIL TYPE: Leasy mallee
ANNUAL RA INFALL: 360 mm
FERTILIZER: Superphosphate at 90 kg/ha
SEEDING RATE & PLOT SIZE: Subterranean clovers 1.5 g/N
Medics 1.0 g/N
CULTIVARS:

<table>
<thead>
<tr>
<th>Nungarin</th>
<th>Northam</th>
<th>Sair and Sava</th>
<th>Sanza</th>
<th>Jesalong</th>
<th>Robinson</th>
</tr>
</thead>
</table>

N
FIELD RESISTANCE TO APHIDS OF SUBTERRANEAN CLOVERS & MEDICS — 1978

SITE: Vanilla — Rd. Mortlock, SN 80
PROPERTY: G.A. Giddings, "Beaumont Farm"
Phone: 85 2271
DATE SOWN: 9-6-78
SOIL TYPE: Sandy loam
ANNUAL RAINFALL: 475 mm
PADDock HISTORY:
1977 Barley. Pre supered 80 kg/ha +
200 kg/ha 3:1 at seeding
1976 Pasture. 125 kg/ha
1975 Barley
FERTILIZER:
100 kg/ha of super.
Treflan (R) 1.4 L/ha
SEEDING RATE & PLOT SIZE:
Subterranean clover 1.5 g/M² — 15 kg/h
Medic 1.0 g/M² — 10 kg/h

CULTIVARS:

<table>
<thead>
<tr>
<th></th>
<th>Sanza</th>
<th>Robinson</th>
<th>Save</th>
<th>Sair</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dalit</td>
<td>Seaton Park</td>
<td>Trikkala</td>
<td>Esperance</td>
<td>Wogentliu</td>
</tr>
</tbody>
</table>

Rotation Trial

SITE

Gate

horse

B. Laves

5.6 km

EDILLILIE

75 KM

WANYUNDA SIDING

6.5 km

WANILLA
FIELD RESISTANCE TO APHIDS OF SUBTERRANEAN CLOVER & MEDICOS — 1978

SITE: Yeelanna — Hl. Brooker, SN 15
PROPERTY: A.E. Glover
PHONE:

DATE SOWN: 13-6-78

SOIL TYPE: Sandy loam

ANNUAL LOAM: 400 mm

Paddock History:
1977 Barley, super @ 197 kg/ha,
super ammonia 1:1 @ 165 kg/ha
1976 Pasture, super @ 150 kg/ha
1975 Barley, super at 190 kg/ha

FERTILIZER:
Super at 100 kg/ha
Treflan at 1.4 L/ha

Seeding Rate & Plot Size:
Subterranean clover 1.5 g/m² — 15 kg/ha
Medic 1.0 g/m² — 10 kg/ha

Cultivars:

<table>
<thead>
<tr>
<th>Jemalong</th>
<th>Sapza</th>
<th>Sapo</th>
<th>Paraponto</th>
<th>Robinson</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sava</td>
<td>Sair</td>
<td>Nor'ham</td>
<td>Geraldton</td>
<td>Daliant</td>
</tr>
</tbody>
</table>

![Diagram of the experimental site with labels for KANKO, Brooker, Yeelanna township, Cockaleechi, and Cummins.]
FIELD RESISTANCE TO APHIDS OF SUBTERRANEAN CLOVER & MEDICS - 1978 (perennial clovers)

SITE: Mt. Gambier (Moorak)
PROPERTY: J. McKinlay
DATE SOWN: 22-7-78
ANNUAL RAINFALL: 768 mm
SEEDING RATE AND PLOT SIZE: 1.0 g/M²
CULTIVARS:

| Montgomery red | Ladina | N.Z. white | Tamar | Haifa | Sirel |

N →

- Diagram showing locations of sites, including Moorak School, Moorak Milk Factory, and Pt. Mcdonald with the site marked as close to McKinlay House.
INTRODUCTION:

Annual Legume Demonstration started 1977

Sites at Maitland, Minlaton, Callington and Milang were burr harvested at time of maturity 1977 and just prior to the "break" in 1978. The harvests taken will be evaluated for total yield and composition of cultivars presented.

Sites at Maitland and Minlaton were oversown with cereal in 1978, and received split dressings of nitrogenous fertilizer. Other information is as indicated on plans.

Sites at Callington and Milang are in a pasture phase (sown 1977).

Two sites at Rudall and Minlaton were sown with annual legume (1978), for a repeat of the YEAR I stage.
ANNUAL LEGUME DEMONSTRATION - 1978 - YEAR 1

SITE: Rudall - Ha. Rudall (paddock E2)

PROPERTY: H.P.K. Dunn
Phone: Tuckey 44030

DATE SOWN: 19-5-78

SOIL TYPE: Loamy mallee

ANNUAL RAINFALL: 360 mm

FERTILIZER: Superphosphate at 96 kg/ha

CULTIVARS & SEEDING RATE:

<table>
<thead>
<tr>
<th>Cultivar</th>
<th>Seeding Rate (kg/ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nil seed + Nil super</td>
<td></td>
</tr>
<tr>
<td>Jemalong</td>
<td>5</td>
</tr>
<tr>
<td>Snail</td>
<td>6</td>
</tr>
<tr>
<td>Jemalong</td>
<td>1</td>
</tr>
<tr>
<td>Jemalong (Insect)</td>
<td>5</td>
</tr>
<tr>
<td>Field resistance to Legume Aphids plots</td>
<td></td>
</tr>
<tr>
<td>* Snail 6 kg/ha + Swan oats 20 kg/ha</td>
<td></td>
</tr>
</tbody>
</table>

* to demonstrate value of snail medic and swan oats as a hay crop and as a non-host for cereal cyst nematode.
ANNUAL LIME TREATMENT DEMONSTRATION - 1978 - TRIP I

SITE: Minalton - Hde. Minlacowie, SN 44

PROPERTY: D.F. Flower
Phone: Brentwood 261

DATE SOWN: 4-5-78

SOIL TYPE: grey mallee

ANNUAL RAINFALL: 375 mm

Paddock HISTORY:
- 1977 Barley, super at 155 kg/ha
- 1976 Pasture, (nil fertilizer and nil seed)
- 1975 Wheat, super at 200 kg/ha

Paddock PREPARATION: nil workings

SOWING MACHINE & METHOD: International 62, 24 row combine fitted with lucerne points. Seed sown through small seed box (International grass seeder - no hoses used), harrows dragged.

FERTILIZER: Superphosphate at 100 kg/ha

SEEDING CONDITIONS: dry sown

CULTIVARS & SEEDING RATE:

<table>
<thead>
<tr>
<th>Cultivar</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jemalong</td>
<td>5 kg/ha</td>
</tr>
<tr>
<td>Jemalong</td>
<td>10 kg/ha</td>
</tr>
<tr>
<td>Snail</td>
<td>20 kg/ha</td>
</tr>
<tr>
<td>nil seed + super</td>
<td></td>
</tr>
</tbody>
</table>

\[
\begin{array}{|c|c|}
\hline
\text{Jemalong} & 10 \text{ kg/ha} \\
\hline
\text{Jemalong} & 10 \text{ kg/ha} \\
\hline
\text{Jemalong} & 5 \text{ kg/ha} \\
\hline
\text{Snail} & 20 \text{ kg/ha} \\
\hline
\text{nil seed + super} &       \\
\hline
\end{array}
\]
**ANNUAL LEGUME DEMONSTRATION 1978**

**YEAR II (in crop)**

**SITE:** Maitland - Ha. Maitland, SN 227

**PROPERTY:** A. Brown, Box 221, Maitland

**Phone:** Maitland 2504

**DATE SOWN:** 20-6-78 - Barley (Clipper) 55 kg/ha

**SOIL TYPE:** self mulching red brown black

**ANNUAL RAINFALL:** 510 mm

**Paddock History:**
- 1976 barley, super at 78 kg/ha
- 1975 barley, super at 78 kg/ha
- 1974 pasture, nil fertilizer and nil seed

**Paddock Preparation:** Scarifier
Harrowed and Treplan (R) applied at 1 L/ha

**Sowing Machine & Method:** Connor-Shea wideline seeder

**Fertilizer:** Superphosphate at 100 kg/ha
Sulphate of ammonia at 20 kg/ha
Nitrogen - where indicated.

**Seeding Conditions:** wet

**Cultivars & Seeding Rates:**

<table>
<thead>
<tr>
<th>Cultivar</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mixture 2/3 Borung + 1/3 Jemalong</td>
<td>12 kg/ha</td>
</tr>
<tr>
<td>Mixture 2/3 Borung + 1/3 Jemalong</td>
<td>10 kg/ha</td>
</tr>
<tr>
<td>nil seed + fertilizer</td>
<td></td>
</tr>
<tr>
<td>Mixture 2/3 Borung + 1/3 Jemalong</td>
<td>3 kg/ha</td>
</tr>
</tbody>
</table>

* Nitrogen applied to eastern half of all plots indicated with *.

[Diagram of location showing Maitland, Balgovan, and Arthurlton with distances and directions.]
ANNUAL LEGUME DEMONSTRATION - 1978

YEAR II (in crop)

SITE: Minlaton - Rd. Minlacowie, SN 48S

PROPERTY: D.P. Flower
Phone: Brentwood 261

DATE SOWN: 9-7-78 and 10-7-78 - Barley (clipper) 55 kg/ha

SOIL TYPE: grey mallee

ANNUAL RAINFALL: 375 mm

PADDOCK HISTORY:
1976 wheat, super at 202 kg/ha
1975 pasture, (nil fertilizer and nil seed)
1974 barley, super at 202 kg/ha

PADDOCK PREPARATION: cultivator (field span)
harrowed
cultivator (field span)
harrowed and Traflan (R) applied at 1 L/ha

SOWING MACHINE & METHOD: International 62 - 24 row combine

FERTILIZER: Superphosphate at 100 kg/ha
Sulphate of ammonia at 15 kg/ha of Nitrogen where indicated.

SEEDING CONDITIONS: O.K.

CULTYARS & SEEDING RATE:

<table>
<thead>
<tr>
<th>Cultivar</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jemalong (insect)</td>
<td>10 kg/ha</td>
</tr>
<tr>
<td>Sourcob control area</td>
<td></td>
</tr>
<tr>
<td>* Jemalong</td>
<td>5 kg/ha</td>
</tr>
<tr>
<td>* Jemalong</td>
<td>10 kg/ha</td>
</tr>
<tr>
<td>* Nil seed + super</td>
<td></td>
</tr>
<tr>
<td>* Nil seed + nil super</td>
<td></td>
</tr>
</tbody>
</table>

* Nitrogen applied to southern half of all plots indicated with *

Site: Minlaton

Cemetery

Brentwood 13

Barooka 29

Yorketown 27
ANNUAL LEGUME DEMONSTRATION - 1978 -
YEAR II (pasture)

SITE: Callington - HD Monarto SN 42 & 43 of 2001
PROPERTY: C.E. Wegener - Callington 5254 - Phone: (085) 385 017
DATE SOWN: 26-5-78
SOIL TYPE: Transitional loamy mallee
ANNUAL RAINFALL: 380 mm
Paddock History: 1976 Wheat, super at 123 kg/ha
1975 Pasture, (nil fertilizer & nil seed)
1974 Barley, super at 90 kg/ha
Paddock Preparation: fire harrowed scarifier (shallow)
harrows (heavy)
Sowing Machine & Method: MP 80, 28 row combine, seed sown through normal seed box - trailing harrows
Fertilizer: Super at 54 kg/ha
Cultivars & Seeding Rate: Jemalong - 10 kg/ha
Geraldton - 15 kg/ha
Seeding Conditions: Moisture satisfactory, dust raised on surface
ANNUAL LEGUME DEMONSTRATION – 1978 –
YEAR II (pasture)

SITE: Milang – HD Alexandra SN 153

PROPERTY: B.C. Landseer – phone Milang 120

DATE SOWN: 12-5-78

SOIL TYPE: Sandy loam

ANNUAL RAINFALL: 375 mm

Paddock History:
1976 Barley, super at 210 kg/ha
1975 Pasture, (nil fertilizer & nil seed)
1974 Oats, super at 110 kg/ha
1973 Pasture

Paddock Preparation:
Stubble disced in harrowed
harrowed

Sowing Machine & Method:
Sunshine disc drill, 20 row, seed
sown through normal seed box –
trailing barrows and rubber tyred

Fertilizer:
Super at 134 kg/ha

Cultivars & Seeding Rate:
Jomalong 10 kg/ha
Dwalganup 15 kg/ha
Dwalganup & Geraldton 15 kg/ha
(Insecticide)

Seeding Conditions:

<table>
<thead>
<tr>
<th></th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nil Seed + Nil Super</td>
<td></td>
</tr>
<tr>
<td>Jomalong – 10 kg/ha</td>
<td></td>
</tr>
<tr>
<td>Dwalganup – 15 kg/ha</td>
<td></td>
</tr>
<tr>
<td>Dwalganup &amp; Geraldton (Insect)</td>
<td></td>
</tr>
</tbody>
</table>

SITE: See page 10 indicated thus *
INTRODUCTION:

Perennial Legume Demonstration - 1973

A site at Murray Bridge (Monteith) was sown with five (5) clovers for a comparison. The different cultivars were included as the white clover component in a perennial grass based mixture, of a flood irrigated dairy pasture.

<table>
<thead>
<tr>
<th>Perennial clovers</th>
<th>Cultivar</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trifolium repens</td>
<td>Haifa</td>
</tr>
<tr>
<td>(white clover)</td>
<td>Ladino</td>
</tr>
<tr>
<td></td>
<td>N.Z. white</td>
</tr>
<tr>
<td></td>
<td>Siral</td>
</tr>
<tr>
<td></td>
<td>Tamar</td>
</tr>
</tbody>
</table>
SITE: Monteith
PROPERTY: D.W. Llewellyn
Phone: (085) 323937
DATE SOWN: 2-5-78
SOIL TYPE: Murray swamp
ANNUAL RAINFALL: 345 mm (Murray Bridge)
PADDock HISTORY: 1977 Millett
PADDock PREPARATION: Rotary Hoe (twice)
Mole ploughed
Graded
Rotary hoe and levelled
SOWING MACHINE & METHOD: Connor-Shea Disc Sod Seeder, harrowed
after
FERTILIZER: Superphosphate at 300 kg/ha
SEEDING CONDITIONS: Ideal - irrigated 3-5-78
GENERAL COMMENT: Plot size 0.1 ha
CULTIVARS & SEEDING RATE:

<table>
<thead>
<tr>
<th>Seed Variety</th>
<th>Rate (kg/ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Haifa</td>
<td>4.4</td>
</tr>
<tr>
<td>Tamar</td>
<td>Individual varieties replace</td>
</tr>
<tr>
<td>Siral</td>
<td>in irrigated perennial</td>
</tr>
<tr>
<td>N.Z. white</td>
<td>pasture mixture. Total</td>
</tr>
<tr>
<td>Ladine</td>
<td>rate sown at 24 kg/ha.</td>
</tr>
</tbody>
</table>

Drain:

PUBLIC ROAD

Tank & Salt drain

<table>
<thead>
<tr>
<th>Seed Variety</th>
<th>Rate (kg/ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Haifa</td>
<td>9.05</td>
</tr>
<tr>
<td>Tamar</td>
<td>5.45</td>
</tr>
<tr>
<td>Siral</td>
<td>8.7</td>
</tr>
<tr>
<td>N.Z. white</td>
<td>6.5</td>
</tr>
<tr>
<td>Ladino</td>
<td>4.4</td>
</tr>
<tr>
<td>Commercial mixture</td>
<td></td>
</tr>
</tbody>
</table>