Agronomy Branch Report

ANNUAL PASTURE LEGUME CULTIVAR DEMONSTRATIONS
1977 SEASON

N.M. Brooks
SEED PRODUCTION ADVISER

Report No. 82
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<table>
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</thead>
<tbody>
<tr>
<td>4. 1</td>
<td>Rudall</td>
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<td>4. 2</td>
<td>Neishaby</td>
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<td>4. 3</td>
<td>Glaistone</td>
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<td>4. 4</td>
<td>Port Broughton</td>
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<td>4. 5</td>
<td>Maitland</td>
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<td>4. 6</td>
<td>Minlaton</td>
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<td>4. 7</td>
<td>Bagot Well</td>
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<td>4. 8</td>
<td>Palmer</td>
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<td>4. 9</td>
<td>Palmer</td>
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<td>4.10</td>
<td>Lyndoch</td>
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<td>4.11</td>
<td>Callington</td>
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<td>4.12</td>
<td>Milang</td>
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<td>4.13</td>
<td>Comandook</td>
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<td>4.14</td>
<td>Wynaaka</td>
</tr>
<tr>
<td>4.15</td>
<td>Lameroo</td>
</tr>
<tr>
<td>4.16</td>
<td>Woolpunda</td>
</tr>
</tbody>
</table>

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The objective is to measure the impact of annual legumes in the farming system.
To obtain results that could or should produce economic evidence for sowing medic and/or subterranean clover, especially in relation to cereal crops in the year following.

To make the sites available for more detailed trial work by other interested persons.
E.g. There is a need for more information to be obtained on suitable herbicides to inhibit weed competition at an economic cost for pasture situations, as distinct from seed crops.

To study annual seed reserves through rotation.
I.e. attempt to determine by sampling techniques a satisfactory level of seed reserves for pasture regeneration purposes.

The programme is a co-operative effort between the Department of Agriculture and Fisheries, (involving District Agronomists), South Australian Seed Producers Association, Seed Industry Association and farmers.
2. **BASIC SITE PLANS**

Annual Legume Promotion Sites - 1977

**YEAR I** (on stubble)

Example - 24 hoe combine - actual figures to nearest metre (M) shown in brackets.

<table>
<thead>
<tr>
<th>Fence line</th>
<th>(293M)</th>
<th>300M</th>
</tr>
</thead>
<tbody>
<tr>
<td>(69M)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CONTROL (stubble)</td>
<td>0.5 ha</td>
<td></td>
</tr>
<tr>
<td>BEST LEGUME (6 kg/ha)</td>
<td>0.5 ha</td>
<td></td>
</tr>
<tr>
<td>NORMAL LEGUME (1 kg/ha)</td>
<td>0.5 ha</td>
<td></td>
</tr>
<tr>
<td>70M</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Insecticide</td>
<td>0.25 ha</td>
<td></td>
</tr>
<tr>
<td>BEST LEGUME No Insecticide</td>
<td>0.25 ha</td>
<td></td>
</tr>
</tbody>
</table>

2.0 ha Total area

**YEAR II** (in crop)

<table>
<thead>
<tr>
<th>Fence line</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Apply nitrogen</td>
<td>0.25 ha</td>
</tr>
<tr>
<td>CONTROL</td>
<td>No nitrogen</td>
<td>0.25 ha</td>
</tr>
<tr>
<td></td>
<td>Apply nitrogen</td>
<td>0.25 ha</td>
</tr>
<tr>
<td>BEST LEGUME</td>
<td>No nitrogen</td>
<td>0.25 ha</td>
</tr>
<tr>
<td>NORMAL LEGUME</td>
<td>0.5 ha</td>
<td></td>
</tr>
</tbody>
</table>

1.5 ha Total area

Distance to travel with combines to cover 0.5 ha, (17 cm between hoes)

- **24 hoe** 1 172 metres sows 4.27 metres wide
- **20 hoe** 1 412 metres sows 3.54 metres wide
BASIC SITE PLANS

The Basic Site Plans are used as an example of how the areas are set up, and have some variation depending on local situation demands.

e.g. In some situations an additional treatment is added by having another CONTROL PLOT where no seed is sown, but superphosphate is applied.

In Year II the area will be sown with a cereal, and crop yield differences measured over the differing treatments.

In some situations, e.g., seasonal failures, sites may need to be resown to a legume in Year II, instead of the cereal cropping phase.

Comparisons could also be made in some situations with split plots, comparing the result of legume reseeding with natural regeneration.
SOWING AND MANAGEMENT TECHNIQUES

The basic set up is as per plan, with no gaps between individual plot areas.

Seed, was provided by the South Australian Seed Producers Association.

Superphosphate, CONTROL has NO fertilizer, all other plots received an agreed reasonable minimum rate.

Seeding rates, in most situations was not less than 6 kg per ha. For subterranean clover a 50% loading was applied on the 6 kg rate.

Sowing technique, farmers machinery was used. In most situations if there is an agreement between Co-ordinator, District Agronomist and Co-operator on choice of cultivar and/or mixture of cultivars and sowing rate, a NORMAL LEGUME FLOT is dispensed with.

Insects, where spraying for insect control is to be carried out half of the INSECT FLOT is unsprayed as a comparison treatment, (usually outside part for ease of operation).

Fencing, it is not intended to fence off site areas so as to obtain as near as possible a normal and unbiased farm situation approach.

The Co-operator is asked as far as practical to manage the area to avoid both under and over grazing.

General, selected sites will be signposted, aided by Seed Industry Association Funds. Additional information and plans are available if required.

Co-ordinator: N.M. Brooks,
Department of Agriculture and Fisheries,
Grenfell Centre,
ADELAIDE, S.A. 5000

Phone: (08) 227-3028
<table>
<thead>
<tr>
<th>Site</th>
<th>Property</th>
<th>Rose Clover</th>
<th>Medic</th>
<th>Sub. Clover</th>
<th>Average Rainfall (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Rudall</td>
<td>H.P.K. Dunn</td>
<td>M</td>
<td></td>
<td></td>
<td>360</td>
</tr>
<tr>
<td>2 Nelsbaby</td>
<td>P.R. Franks</td>
<td>M</td>
<td></td>
<td></td>
<td>337</td>
</tr>
<tr>
<td>3 Gladstone</td>
<td>R. Sargent</td>
<td>M</td>
<td>S</td>
<td></td>
<td>410</td>
</tr>
<tr>
<td>4 Port Broughton</td>
<td>G.J. Dennis</td>
<td>M</td>
<td></td>
<td></td>
<td>350</td>
</tr>
<tr>
<td>5 Maitland</td>
<td>A. Brown</td>
<td>M</td>
<td></td>
<td></td>
<td>510</td>
</tr>
<tr>
<td>6 Minlaton</td>
<td>D.P. Flower</td>
<td>M</td>
<td></td>
<td></td>
<td>375</td>
</tr>
<tr>
<td>7 Bagot Well</td>
<td>J.A. O'Brien &amp; Son</td>
<td>M</td>
<td>S</td>
<td></td>
<td>430</td>
</tr>
<tr>
<td>8 Palmer</td>
<td>V.E. Wegener</td>
<td>R</td>
<td></td>
<td></td>
<td>400</td>
</tr>
<tr>
<td>9 Palmer</td>
<td>A.J. Krause</td>
<td>M</td>
<td></td>
<td></td>
<td>338</td>
</tr>
<tr>
<td>10 Lyndoch</td>
<td>F. Mattner</td>
<td>M</td>
<td>S</td>
<td></td>
<td>370</td>
</tr>
<tr>
<td>11 Callington</td>
<td>C.B. Wegener</td>
<td>M</td>
<td>S</td>
<td></td>
<td>380</td>
</tr>
<tr>
<td>12 Milang</td>
<td>H.C. Landseer</td>
<td>M</td>
<td>S</td>
<td></td>
<td>375</td>
</tr>
<tr>
<td>13 Coomandook</td>
<td>M.R. &amp; S.G. Ballard</td>
<td>M</td>
<td>S</td>
<td></td>
<td>415</td>
</tr>
<tr>
<td>14 Wynarka</td>
<td>G.C. Blacket</td>
<td>M</td>
<td></td>
<td></td>
<td>350</td>
</tr>
<tr>
<td>15 Lameroo</td>
<td>F.R. Maynard</td>
<td>M</td>
<td></td>
<td></td>
<td>363</td>
</tr>
<tr>
<td>16 Woolpunda</td>
<td>K. Boyd</td>
<td>M</td>
<td></td>
<td></td>
<td>250</td>
</tr>
</tbody>
</table>
6.

ANNUAL LEGUME PROMOTION - 1977

SITE: Tuckey - Ha. Rudall, SN 24
PROPERTY: E.P.K. Dunn - Phone: Tuckey 44030
DATE SOWN: 1/6/77
SOIL TYPE: Loamy mallee
ANNUAL RAINFALL: 360 mm

Paddock History:
1976 Wheat, super at 145 kg/ha
1975 Pasture, nil fert. & nil seed
1974 Wheat, super at 112 kg/ha
1973 Pasture, super at 60 kg/ha

Paddock Preparation: Stubble very heavily grazed, almost no surface residue.

Sowing Machine & Method: Trash seeder, 28 row, seed dropped on top free small seeds box - seed covered by soil thrown by discs of the trash seeder.

Fertilizer: Super at 120 kg/ha

Seeding Conditions: Soil moisture limited but all other conditions ideal.

General Comment: Due to a mechanical problem one half of the super drive was not operational. Rather than correcting the fault part way through seeding, it was left as was and recorded.

Cultivars and Seeding Rate:

<table>
<thead>
<tr>
<th>Cultivar</th>
<th>Seeding Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nil Seed + Nil Super</td>
<td>N to S</td>
</tr>
<tr>
<td>Jemalong</td>
<td>6 kg/ha</td>
</tr>
<tr>
<td>Jemalong</td>
<td>1 kg/ha</td>
</tr>
<tr>
<td>Jemalong (Insect)</td>
<td>6 kg/ha</td>
</tr>
<tr>
<td>Jemalong (Treflan)</td>
<td>6 kg/ha</td>
</tr>
</tbody>
</table>

(Super) Seeding Pattern Running
(Nil Super) → N to S

Diagram:
- Site
- Rudall
- Road
- House & Sheds
- Lock
ANNUAL LEGUME PROMOTION - 1977

SITE: Nelshaby - HL Napperby, SN 375
PROPERTY: P.E. Franks, Port Pirie, S.A. 5540
Phone: (086) 344283
DATE SOWN: 31/5/77
SOIL TYPE: Sandy loam
ANNUAL RAINFALL: 337 mm
Paddock History: Occasional cropping, unimproved pasture.
Paddock Preparation: Nil, Sown directly into grazed area.
Sowing Machine and Method: Disc drill, seed mixed with fertilizer. Sowing depth 20 mm. Plots 4 combine widths of 5 m, length 200 m.
Fertilizer: Super at 100 kg/ha

<table>
<thead>
<tr>
<th>Cultivars and Seeding Rate:</th>
<th>2 kg/ha</th>
<th>5 kg/ha</th>
<th>10 kg/ha</th>
<th>5 kg/ha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jemalong</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jemalong</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nil Seed + Nil Super</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Port Pirie  | NATIONAL HIGHWAY 1 | Port Germain

SITE

Empty House

N  N
ANNUAL LUCUMA PROMOTION - 1977

SITE: Gladstone - Rd. Booyoolie, SN 26

PROPERTY: J.R. Sargent, Gladstone, 5473
Phone: (086) 52 2083

DATE SOWN: 30/6/77

SOIL TYPE: Hard setting clayey red brown earth.

ANNUAL RAINFALL: 410 mm

PADDOCK HISTORY:

A Wheat, pasture, pasture, wheat, pasture, pasture.

B Wheat, fallow, volunteer pasture, wheat, fallow, volunteer pasture.

PROPOSED ROTATION:

A Crop, pasture, crop, pasture.

B Crop, pasture, crop, pasture.

CULTIVARS & SEEDING RATE: Mixed Geraldton, Woogenellup and Jemalong - 13 kg/ha. Improved pasture site only.

PROPOSED MEASUREMENTS:

Each area 5 hectares.

Crop yields and wool production.

Observations of changes in soil structure.
ANNUAL FORAGE PROMOTION - 1977

SITE: Pt. Broughton - HD Wokurna SN 39
PROPERTY: G.J. Dennis - phone Port Broughton (086) 352212
DATE SOWN: 27.4.77
SOIL TYPE: sandy mallee
ANNUAL RAINFALL: 350 mm

PADDock HISTORY: 1976 Wheat, super at 134 kg/ha
1975 Pasture, medic sown at 0.5 kg/ha with super at 67 kg/ha
1974 Wheat, super at 134 kg/ha

PADDock PREPARATION: Nil workings, sheep on stubble only

Sowing machine & Method: International 24 row disc drill seed mixed with fertilizer.

FERTILIZER: Super at 100 kg/ha

CULTIVARS & SEEDING RATE: 2/3 Harbinger & 1/3 Jenalong at 10 kg/ha
2/3 Harbinger & 1/3 Jenalong at 5 kg/ha

SEEDING CONDITIONS: Dry sown

| CONTROL (NIL SEED + NIL SUPER) |
| MIXTURE 2/3 HARBINGER & 1/3 JENALONG - 10 kg/ha |
| MIXTURE 2/3 HARBINGER & 1/3 JENALONG - 5 kg/ha |
| NIL SEED + SUPERPHOSPHATE |

N

35 KADINA

39 WALLAROO

13 PT. BROUGHTON

GUMMUTYUNEN

19 BUTE

SNOWTOWN
ANNUAL LEGUME PROMOTION - 1977

SITE: Maitland - Hild. Maitland, SN 227
PROPERTY: A. Brown, Box 221, Maitland. Phone: Maitland 2504.
DATE SOWN: 7/6/77
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 & nil seed
PADDOCK PREPARATION: Scarifier
Harrowed and burnt (heaps)
Scarifier
SOWING MACHINE & METHOD: Connors-Shea Wideline Seeder
64 row, seed sown through normal seed box.
FERTILIZER: Super at 112 kg/ha (applied after seeding with combine).
SEEDING CONDITIONS: Ideal
CULTIVARS AND SEEDING RATE:

<table>
<thead>
<tr>
<th>NIL SEED + NIL FERTILIZER</th>
</tr>
</thead>
<tbody>
<tr>
<td>SNAIL</td>
</tr>
<tr>
<td>22 kg/ha</td>
</tr>
<tr>
<td>MIXTURE 2/3 BORUNG + 1/3 JEMALONG 12 kg/ha</td>
</tr>
<tr>
<td>MIXTURE 2/3 BORUNG + 1/3 JEMALONG 10 kg/ha</td>
</tr>
<tr>
<td>NIL SEED + FERT.</td>
</tr>
<tr>
<td>MIXTURE 2/3 BORUNG + 1/3 JEMALONG 3 kg/ha</td>
</tr>
<tr>
<td>Approximately 2/3 Plot had Treflan (R) applied</td>
</tr>
</tbody>
</table>

Diagram: Map of the site location with distances and directions labeled.
ANNUAL LEPINE PROMOTION - 1977

SITE: Minlaton - ED Minlacowie SN 48S

PROPERTY: D.P. Flower - phone Brentwood 261

DATE SOWN: 7.5.77

SOIL TYPE: grey mallee

ANNUAL RAINFALL: 375 mm

Paddock History: 1976 wheat, super at 202 kg/ha
1975 Pasture, (nil fertiliser & nil seed)
1974 Barley, super at 202 kg/ha

Paddock Preparation: nil workings, fire harrowed only

Seeding Machine & Method: International 62-24 row combine fitted with lucerne points. Seed sown through small seedbox (international grass seeder - no hoses used), harrowed after seeding.

Fertilizer: Super at 100 kg/ha

Cultivars & Seeding Rate: Jemalong - 10 kg/ha
Jemalong - 5 kg/ha

Seeding Conditions: Dry sown

<table>
<thead>
<tr>
<th>Seed Type</th>
<th>Rate (kg/ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jemalong (Insect)</td>
<td>10</td>
</tr>
<tr>
<td>Sourcesob Control Area</td>
<td>5</td>
</tr>
<tr>
<td>Jemalong</td>
<td>5</td>
</tr>
<tr>
<td>Jimalong</td>
<td>10</td>
</tr>
<tr>
<td>Nil Seed + Super</td>
<td></td>
</tr>
<tr>
<td>Nil Seed + Nil Super</td>
<td></td>
</tr>
</tbody>
</table>

Diagram: Map of the paddock showing directions and distances to Minlaton, Brentwood, Varooka, and Yorketown.
SITE: Bagot Well - Ht. Kapunda, SN 270

PROPERTY: J.A. O'Brien & Son
Phone: (085) 662068 (N.J. O'Brien)

DATE SCN'N: 4/7/77

SOIL TYPE: Sandy Red Brown earth

ANNUAL RAINFALL: 430 mm

PADDock HISTORY: 1976 Wheat, cut for sheared hay, super at 125 kg/ha. 
1975 Peas, super at 125 kg/ha. 
1974 Pasture, nil fert. & nil seed.

PADDock PREPARATION: Cultivator (2x) 
Combine (2x) 
Harrowed

SOWING MACHINE & METHOD: 20 row combine & trailing harrows, seed sown through small seed box.

FERTILIZER: 
Super at 146 kg/ha

CULTIVARS & SEEDING RATE: Geralton Dalisk & Seaton Park 
6 kg/ha Oats sown at 62 kg/ha on all plots.

SEEDING CONDITIONS: Moist at seeding.

Plots are sown along S.W. boundary of SN 270. 
Mixture nearest fence 
Plots 2 combine widths 
Mixture in middle to complete 20 ha paddock 
Similar plot sits SN 272 into cereal crop, legume sown down 1974.
ANNUAL LEGUME PROMOTION - 1977

SITE: Palmer - HD Tungkillo SN
PROPERTY: V.E. Wegener - phone Palmer 265
DATE SOWN: 14.6.77
SOIL TYPE: transitional loamy mallee
ANNUAL RAINFALL: 400 mm
Paddock History:
- 1976 wheat, super at 123 kg/ha
- 1975 pasture, (nil fertilizer & nil seed)
- 1974 wheat, super at 123 kg/ha

Paddock Preparation: stubble raked and burnt
scarifier with light harrows
combine
heavy harrows

Sowing Machine & Method: Shearer combine, 18 row, seed mixed
with fertilizer, dropped on top,
harrowed after seeding.

Fertilizer: super at 88 kg/ha

Seeding Conditions: dry on top, moist underneath

Cultivars & Seeding Rates:

<table>
<thead>
<tr>
<th>CROP AGRONOMY TRIAL</th>
<th>10 kg/ha</th>
</tr>
</thead>
<tbody>
<tr>
<td>JEMALONG</td>
<td></td>
</tr>
<tr>
<td>JEMALONG &amp; HARDINGER</td>
<td>10 kg/ha</td>
</tr>
<tr>
<td>GERALDTON</td>
<td>15 kg/ha</td>
</tr>
<tr>
<td>KONDININ</td>
<td>8 kg/ha</td>
</tr>
<tr>
<td>NIL SEED + NIL. SUPER</td>
<td></td>
</tr>
<tr>
<td>JEMALONG (INSECT)</td>
<td>10 kg/ha</td>
</tr>
</tbody>
</table>
ANNUAL LEGUME PROMOTION - 1977

SITE: Palmer - UD Finnis SM 370
PROPERTY: A.J. Krause - phone Palmer 223
DATE SOWN: 16.5.77
SOIL TYPE: sandy loam
ANNUAL RAINFALL: 338 mm
PADDOCK HISTORY: 1976, Wheat, super at 123 kg/ha + 1 kg/ha Jemalong
1975, Fallow
1974, Pasture, nil fertilizer & nil seed
PADDOCK PREPARATION: Scarifier
SEEDING MACHINE & METHOD: Shearer single disc drill, 20 rov, seed sown through small seed box mounted on front of drill, dropped on top.
FERTILIZER: Super at 84 kg/ha
SEEDING CONDITIONS: Dry
CULTIVARS & SEEDING RATE:

<table>
<thead>
<tr>
<th>NIL SEED + NIL SUPER</th>
</tr>
</thead>
<tbody>
<tr>
<td>JEMALONG              6 kg/ha</td>
</tr>
<tr>
<td>JEMALONGS             1 kg/ha</td>
</tr>
<tr>
<td>JEMALONG &amp; HABINGER   6 kg/ha</td>
</tr>
<tr>
<td>JEMALONG (TINECT)     6 kg/ha</td>
</tr>
</tbody>
</table>

CALGOOTE 11 km

MAIN ROAD

PALMER

ADELAIDE 72 km

UP A L R O S

SIGN

QUARRY

FIT

1ST TURN OPF
R.H.S.

WATER TOWER

MANNUN

N

N

NO THROUGH ROAD
ANNUAL LEGUME PROMOTION - 1977

SITE: Lyndoch - Ed. Barossa, SA 3129
PROPERTY: P.C. Mattner - Phone: (035) 244010
DATE SOWN: 22/6/77
SOIL TYPE: Sandy
ANNUAL RAINFALL: 570 mm
PADDock HISTORY: Vineyard until 1976
PADDock PREPARATION: Cultivated (3x)
Harrow used
SOWING MACHINE & METHOD: 12 row combine, seed mixed with
fertilizer (plots 6 combine widths)
FERTILIZER: Super at 240 kg/ha
Super at 120 kg/ha
nil legume seed plot
CULTIVARS & SEEDING RATE: Geraldton)
Woogonellup 8 kg/ha
Mount Barker 0ats sown at 43 kg/ha
Trikkala  
Clare  
on all plots.
SEEDING CONDITIONS: Ideal
ANNUAL LEGUME PROMOTION - 1977

SITE: Callington - HD Monarto SN 42 & 43 of 2001

PROPERTY: C.E. Wegener - Callington 5254 - phone (085) 358017

DATE SOWN: 26.5.77

SOIL TYPE: transitional loamy mallee

ANNUAL RAINPALL: 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
scorifier (shallow)
harrows (heavy)

SOWING MACHINE & METHOD: MF 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

<table>
<thead>
<tr>
<th>NIL SEED + NIL SUPER</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>GERALDTON</td>
<td>15 kg/ha</td>
</tr>
<tr>
<td>JEMALONG</td>
<td>10 kg/ha</td>
</tr>
<tr>
<td>JEMALONG (INSECT)</td>
<td>10 kg/ha</td>
</tr>
</tbody>
</table>

KANMANTOO

SITE

G (wire)

1.6 km

BONDBLEECH 11

HARROGATE 21

A. BREMER

CALLINGTON

MURRAY BRIDGE
ANNUAL LEGUME PROMOTION – 1977

SITE: Milang – HD Alexandria SN 153
PROPERTY: B.C. Lawe Set – phone Milang 720
DATE SOWN: 12.5.77
SOIL TYPE: Sandy loam
ANNUAL RAINFALL: 375 mm

PADDock HISTORY: 1976 Barley, super at 210 kg/ha
1975 Pasture, (nil fertilizer & nil seed)
1974 Cattle, super at 110 kg/ha
1973 Pasture,

PADDock PREPARATION: stubble disced in
harrowed
cultivator
harrowed

SOWING MACHINE & METHOD: Sunshine disc drill, 20 row, seed
sown through normal seed box –
trailing harrows and rubber tyred
roller.

FERTILIZER: Super at 134 kg/ha

CULTIVARS & SEEDING RATE: Jemalong 10 kg/ha
Dawalganup 15 kg/ha
Dawlganup & Geraldton 15 kg/ha
(Insecticide)

SEEDING CONDITIONS: Ideal

CULTIVARS & SEEDING RATE:

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

Site 1 (VIRE)
ANNUAL LEGUME PROMOTION – 1977

SITE: Coomandook – HD Roby SN 9A
PROPERTY: M.F. & R. C. Ballard – phone Coomandook 73 3012
DATE SOWN: 28.5.77
SOIL TYPE: sand over clay (some none wetting)
ANNUAL RAINFALL: 415 mm
Paddock History: 1976 Barley, super at 100 kg/ha
1975 Pasture, (nil fertilizer & nil seed)
1974 Barley, super at 100 kg/ha
Paddock Preparation: Nil, medium quantity of stubble, also medium density of green stinkwort.
Sowing Machine & Method: MP 78 disc drill, 24 row, sown through small seedsbox, dropped on surface, no harrows.
Fertilizer: Super at 110 kg/ha
Seeding Conditions: Ideal

Cultivars & Seeding Rate:

<table>
<thead>
<tr>
<th>Cultivar</th>
<th>Rate (kg/ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TORNAFIELD</td>
<td>9</td>
</tr>
<tr>
<td>HARBINGER</td>
<td>10</td>
</tr>
<tr>
<td>KONDININX</td>
<td>10</td>
</tr>
<tr>
<td>DVALIDUN &amp; GERALDTON</td>
<td>15</td>
</tr>
<tr>
<td>NIL SEED + SUPER</td>
<td></td>
</tr>
<tr>
<td>TORNAFIELD (INSECT)</td>
<td>10</td>
</tr>
</tbody>
</table>

Diagram: Site plan with labels for Adelaide, House, Ramp, No Through Road, Coomandook School, Melbourne, Old Buildings, and Site.
ANNUAL LEGUME PROMOTION - 1977

SITE: Wynarks - H. Hooper, SN 26
PROPERTY: G.C. Blacket - Phone: Wynarks 3-U
DATE SOWN: 5/5/77
SOIL TYPE: Sandy loam
ANNUAL RAINFALL: 350 mm
PADDock HISTORY:
1976 Barley, super at 134 kg/ha
1975 Pasture, nil fertilizer & nil seed
1974 Pasture, nil fertilizer & nil seed
PADDock PREPARATION: Nil
SOWING MACHINE & METHOD:
Shearer D. Series Trash Seeder,
20 row-seed mixed with fertilizer
FERTILIZER:
Super at 90 kg/ha
SEEDING CONDITION:
Dry sown
CULTIVARS & SEEDING RATE:

<table>
<thead>
<tr>
<th>NIL SUPER + NIL SEED (NOT CULTIVATED)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUPER + NIL SEED</td>
</tr>
<tr>
<td>-- JEMALONG</td>
</tr>
<tr>
<td>2 kg/ha</td>
</tr>
<tr>
<td>-- JEMALONG</td>
</tr>
<tr>
<td>8 kg/ha</td>
</tr>
<tr>
<td>-- HANNAFORD</td>
</tr>
<tr>
<td>2 kg/ha</td>
</tr>
<tr>
<td>-- HANNAFORD</td>
</tr>
<tr>
<td>8 kg/ha</td>
</tr>
<tr>
<td>-- JEMALONG</td>
</tr>
<tr>
<td>8 kg/ha</td>
</tr>
<tr>
<td>-- JEMALONG (Insect)</td>
</tr>
<tr>
<td>8 kg/ha</td>
</tr>
</tbody>
</table>

Diagram:
- Site locations
- Moorlands 21
- Rail Track
- Bobhill 34
- Map coordinates
ANNUAL LUCIDINE PROMOTION - 1977

SITE: Lamerco - H. Bews, SN 150.
PROPERTY: P.R. Maynard - Phone: Lamerco 67-K
DATE SOWN: 5/5/77
SOIL TYPE: Mallee loam
ANNUAL RAINFALL: 363 mm
PADDock HISTORY: 1976 Barley, super at 67 kg/ha
1975 Pasture, nil fert. & nil seed
1974 Wheat, super at 90 kg/ha
PADDock PREPARATION: Nil workings, stubble short & sparse
SOWING MACHINE & METHOD: Shearer Wide Seeder, 40 row-seed mixed
with fertilizer, sown at 2.5 cm
FERTILIZER: Super at 100 kg/ha
SEEDING CONDITIONS: Dry sown
CULTIVARS & SEEDING RATE:

<table>
<thead>
<tr>
<th>NIL SEED + SUPER (CULTIVATED)</th>
</tr>
</thead>
<tbody>
<tr>
<td>JEMALONG                      2 kg/ha</td>
</tr>
<tr>
<td>JEMALONG                      10 kg/ha</td>
</tr>
<tr>
<td>BORUNG                        10 kg/ha</td>
</tr>
<tr>
<td>BORUNG                        2 kg/ha</td>
</tr>
<tr>
<td>JEMALONG (Insect)             10 kg/ha</td>
</tr>
<tr>
<td>NIL SEED + NIL SUPERS (NOT CULTIVATED)</td>
</tr>
</tbody>
</table>

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6.8 km

9.6 km

Traffic

Roundabout

House

Shed

Shed

Farm Race

UG (Wire)

SITE
ANNUAL LEGUME PROMOTION - 1977

SITE: Woolpunda - Hd. Moorook, SN 323
PROPERTY: E. Boyd - Phone: Kingston 830272
DATE SOW: 6/6/77
SOIL TYPE: Red Mallee Sandy Loam
ANNUAL RAINFALL: 250 mm
PADDock PREPARATION: Nil
SOWING MACHINE & METHOD: International A6-1, 20 row combine, seed mixed with fertilizer (Plots 6 combine widths)
FERTILIZER: Super at 60 kg/ha
CULTIVARS & SEEDING RATE: Harbinger - 5 kg/ha Cypruss - 5 kg/ha Jemalong - 5 kg/ha
SEEDING CONDITIONS: Fairly dry (14 mm rain over previous 2 weeks)

N

Moorook 18 km
MAG

G

E

29 km

Harbinger 5 kg/ha
Cypruss 5 kg/ha
Jemalong 5 kg/ha
Harbridge (Insect) 5 kg/ha