



DEPARTMENT OF AGRICULTURE, SOUTH AUSTRALIA

Agronomy Branch Report

HERBAGE SEED PRODUCTION

1974 - 75 SEASON

By G.E. Cooper,
Seed Production Adviser.

Report No. 67.

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Table 2: Certified Seed Production
Hectares Accepted & Rejected

Crop Variety	Hectares Inspected		kg seed produced from areas accepted from 1/7/74 to 30/6/75	
	Accepted from 1/7/74 to 30/6/75	Rejected from 1/7/74 to 30/6/75	Released	Rejected
<u>Barrel medic:</u>				
Jemalong	1,941	51	564,298	29,713
<u>Brome grass:</u>				
Deborah	19.5	1.5	19,200	9,800
<u>Cocksfoot:</u>				
Currie	287.5	12	87,772	13,386
<u>Disc medic:</u>				
Tornafield	102	-	85,850	792
<u>Gama medic:</u>				
Paragosa	98	28	16,423	5,500
<u>Kale:</u>				
Marrow stem	25	-	-	846
Green marrow stem	12	-	1,047	-
<u>Lucerne:</u>				
Cancreep	66	-	2,140	-
C.S.I.R.O.	2	-	-	-
Du Puits	54	-	3,564	-
Hunter River	3,648	64	306,563	40,184
Luna	0.1	-	-	-
Paravivo	83	-	5,935	700
Siro Peruvian	76	-	2,162	-
<u>Onions:</u>				
Early lockyer	-	.2	-	-
<u>Peas:</u>				
All round	8	-	-	-
<u>Phalaris:</u>				
Australian	94.5	60	1,410	3,513
Seedmaster	298.5	42.5	124,574	10,992
Sirocco	14	16	2,852	-
Sirosa	4	-	703	-
Tunisian	1.5	-	890	-
<u>Rape:</u>				
Giant Emerald	25	-	9,880	-
<u>Rose clover:</u>				
Kondinin	44	-	875	-

Table 2: (Contd.)

Crop Variety	Hectares Inspected		kg seed produced from areas accepted from 1/7/74 to 30/6/75	
	Accepted from 1/7/74 to 30/6/75	Rejected from 1/7/74 to 30/6/75	kg seed produced from areas accepted from 1/7/74 to 30/6/75	
			Released	Rejected
<u>Ryegrass:</u>				
Grassland Tama	2	-	216	-
Hora	3	-	-	-
Perma	8	-	-	300
Terhoy	10	-	-	1,565
<u>Strand medic:</u>				
Harbinger	1,181	336	184,504	32,940
<u>Strawberry clover:</u>				
O'Connors	52	60	7,706	-
Palestine	224	118	8,891	3,498
<u>Subterranean clover:</u>				
Bacchus Marsh	94	-	14,137	15,486
Clare	759	124	193,861	13,937
Geraldton	6	-	-	-
Howard	38	-	10,400	-
Mt. Barker	1,448	170	117,666	2,230
Tallarook	9	-	1,600	200
Woogenellup	260	64	35,224	2,821
Yarloop	973	8	94,245	45,699
<u>Tall fescue:</u>				
Demeter	461	66	240,062	70,923
<u>Tall wheat grass:</u>				
Largo	6	-	-	-
<u>White clover:</u>				
Tamar	6	-	2,086	127
Total	12,444	1,221	2,146,736	305,152

4. YIELDS:

Medic yields were a record on many properties in the Northern region. The highest being 647 kg/ha of Jemalong barrel medic with several producers obtaining over 500 kg/ha. Giant shaftal clover yields were excellent due to the good harvesting conditions. Deborah brome grass is proving to be a good seed growing prospect, although rather a worry to seed cleaners because of its long awns. High yields of Tornafield medic were obtained in the Upper South East. Several growers harvested over 1,000 kg/ha of Demeter fescue.

4.1 Germinations

Problems have been experienced this season with low germinations in Demeter fescue and Yarloop subterranean clover. Re-tests have shown marked improvement. High hard seededness in lucerne has also been a problem, particularly in the South East where much of the crop was harvested after "the break" in the season.

5. CROPS SOWN UNDER SUPERVISION:

There has been a further decrease in plants of supervised crops. This was due to the increased sowings of annual legume crops for which sowing supervision is not required. Some new crops were sown for the first time, i.e. Unicrop lupins, Trikkala subterranean clover and three new varieties of Giant shaftal clover (see Table 3).

6. REGISTRATION OF PERENNIAL CROPS:

The total area of unharvested perennial crops registered to maintain eligibility for future certification dropped compared to previous years. Hunter River lucerne was the main crop in this regard (see Table 4).

7. SEED SALES:

7.1 Seed Prices

The year has seen a rather drastic fall in prices of some seed lines, such as Hunter River lucerne, Demeter fescue and Mt. Barker subterranean clover as compared with the two previous seasons. This has been due to the plight of the pastoral industry. During March and April Hunter River lucerne was as low as 55 cents per kg, but still did not stimulate a demand. Low prices do not necessarily create an increase in sales.

7.2 Export Situation

The large export of seed has again been the highlight of the small seeds industry. The largest quantities exported have been the annual legumes and medics in particular. Most of the seed has been exported to countries in the Mediterranean Basin. These crops have shown a reasonable return to the grower.

Where seed has no export market, the prices are low because there is little demand from local buyers. During June, 150 tonnes of certified Hunter River lucerne were blended into 10 tonne lots for shipment to South Africa.

8. UNWANTED SEEDS:

8.1 Dock (Rumex sp.)

Traces of dock seed in certified seed lots continued to be a problem despite the campaign to overcome this worry. This was due to another favourable season for dock growth. Of the growers with dock in their samples last year, one-third eliminated dock seed this year. More effort is needed by seed cleaners and growers to reduce the number of lines that are contaminated.

8.2 Burr medic (Medicago polymorpha)

Less lines of seed were rejected because of burr medic this season than last year due to a better approach to the cleaning methods.

Table 3: Crops Sown Under Supervision

Crop Variety	1974-75		1973-74	
	No. Fields	Hectares Sown	No. Fields	Hectares Sown
<u>Brome grass:</u>				
Deborah	3	12	2	18
<u>Cocksfoot:</u>				
Currie	5	27.5	4	32
<u>Gama medic:</u>				
Paragosa	3	52	6	68
<u>Giant shaftal clover:</u>				
7432	5	20	-	-
7506	2	1.7	-	-
7509	1	3	-	-
<u>Kale:</u>				
Green marrow stem	-	-	2	33
Midas	-	-	1	16
<u>Love grass:</u>				
Renner	-	-	1	4
<u>Lucerne:</u>				
Cancreep II	1	0.5	1	0.5
C.S.I.R.O. No. 2	-	-	1	0.5
C.S.I.R.O. No. 3	-	-	1	0.5
Hunter River	42	816	37	594
Luna	-	-	1	0.1
Paravivo	5	48.5	10	69
<u>Lupins:</u>				
Unicrop	3	70	-	-
<u>Onions, white:</u>				
Early lockyer	1	0.2	2	0.2
<u>Peas:</u>				
Allround	1	11	3	8
Blue Boiler	-	-	1	3
<u>Phalaris:</u>				
Seedmaster	3	26	14	101
<u>Rape:</u>				
Giant Emerald	2	25	-	-
<u>Ryegrass:</u>				
Hora	-	-	1	4
Medea	-	-	1	6
Tama	-	-	1	3
<u>Strawberry clover:</u>				
O'Connors	1	4.5	3	36
Palestine	10	157.5	6	88

Table 3: (Contd.)

Crop Variety	1974-75		1973-74	
	No. Fields	Hectares Sown	No. Fields	Hectares Sown
<u>Subterranean clover:</u>				
Trikkala	1	7	-	-
<u>Tall fescue:</u>				
Demeter	15	254	24	268
<u>Tall wheat grass:</u>				
Largo	1	8	-	-
<u>White clover:</u>				
Milka	-	-	1	4
Total	105	810	124	1,357

Table 4: Crops Registered for 1974-75

Crop	Hectares Accepted	
	1974-75	1973-74
<u>Cocksfoot:</u>		
Currie	78	123
<u>Lucerne:</u>		
African	16	11
Cancreep	13	19
Du Puits	33	73
Hunter River	9,684	13,595
Paravivo	-	1
Siro Peruvian	280	551
<u>Perennial ryegrass:</u>		
Hora	10	-
<u>Phalaris:</u>		
Australian	1,806	1,784
Seedmaster	33	23
Sirocco	60	26
<u>Strawberry clover:</u>		
O'Connors	31	64
Palestine	780	538
<u>Tall fescue:</u>		
Demeter	169	474
<u>White clover:</u>		
Milka	4	4
Total	12,997	17,286

8.3 King Island melilot (Melilotus indica)

This weed seed appeared in more lines than usual, due no doubt, to the excellent winter growing conditions.

9. "TRUTH-IN-LABELLING":

Truth-in-labelling was commenced in January with restricted weed seeds having to be detailed on a self-adhesive card placed on the back of the certified tag. The offer was also made for use of the "stickers" for all lines of seed. The response from the seed trade has been over-whelming. In all, there have been stickers issued for 289 lines.

10. CROP DEVELOPMENTS:

10.1 Giant Shaftal Clover

Yields of Giant shaftal clover have been very good this year with several fields yielding between 900 and 1,100 kg/ha. A total of 70 tonnes was produced. Three new varieties of Giant shaftal clover have been sown which will produce basic seed. Details are set out in Table 3.

10.2 Perennial Ryegrass Seed Production

Again yields from these crops have been most disappointing and points to the need for more research in assessing the potential for these crops.

10.3 Unicrop Lupins

Certification of 70 hectares of Unicrop lupins has been undertaken this season for the first time. Western Australian stock seed is being used. A close watch is being kept on the disease aspect of these crops.

11. OTHER ACTIVITIES:

Besides the normal routine field inspections, advisory work and seed processors' visits, the Section has been involved in other areas.

11.1 Plot Testing

The Section has taken delivery of a special seeding machine to sow the pre- and post-control lines. This machine can handle all types of seeds quickly and effectively. Fifty-four lines of annual legumes have been plot tested since January. Three hundred and twenty annual legume post-control lines have been sown recently.

There have been no mortalities in the breeders' plants of Currie cocksfoot transplanted from the Waite Institute last year. Seed will be harvested from the area this coming season.

11.2 Extension Programmes

11.2.1 Stock seed for certified seed establishment

This programme has been continued as the results from the efforts last year have been encouraging. There has been good relationships between the Department, seed producers and the seed trade in obtaining good lines of stock seed.

11.2.2 Harvesting effectiveness

This programme has commenced to make seed producers aware of the problems of harvesting their crops, particularly in regard to cleaning the seed. At this stage the emphasis has been on the Horwood Bagshaw clover harvester.

11.2.3 Bulk handling

Further efforts were considered necessary to make seed growers aware of the certification requirements when handling seed in bulk.

11.2.4 Production costs

A bulletin setting out production costs of both annuals and perennials has been published during the year and has found ready acceptance by seed growers. It will be revised when necessary.

11.2.5 Seed cleaning costs survey

A survey has commenced to establish the costs of cleaning seed. This will be presented to the seed trade in due course. This is one field of seed production that has been somewhat overlooked in the past. Prospective seed cleaners need to be aware of likely costs of cleaning their own seed rather than sending the seed to an established cleaner.

11.2.6 Insect pests in lucerne

This programme will be activated when there is likely to be a serious insect pest problem.

11.2.7 Increased medic production in Northern regions & Eyre Peninsula

This on-going programme has been successful in the north, but quite unsuccessful on Eyre Peninsula due to better alternatives, namely cereals.

11.2.8 Demonstration & experimental projects

To test the effectiveness of Asulox(R) in controlling dock (Rumex sp.) in established lucerne fields in comparison to 2,4-DB and amine 2,4-D plus dicamba.

Determine the effect of Igran(R), Tropolox(R), Tribunil(R), 2,4-DB Bromoxynil, Nitrofen on Paragosa gama medic in the control of wild mustard.

Evaluate the effectiveness of Igran(R), Bromoxynil, Tropolox(R), Gramoxone(R), Reglone(R) or Sprayseed(R) to control seedling sow/milk thistle in Tallarook subterranean clover.

Evaluate the effectiveness of 2,4-D ester on medics to control wild turnip.

Determine the effect of Neoban(R), Buctril MA(R), Tribunil(R), Treflan(R) in controlling Emex sp. in medics.

11.2.9 Regulatory, extension & diagnostic services

	<u>No. Visits</u>
Certification visits, farm	689
Certification visits, warehouses	223
Inspections on behalf Seed Testing Laboratory	63
Extension farm visits	339
Field days attended	11
Sampling seed on behalf of Victorian Department of Agriculture	13
Quarantine inspections	5
Weed plant identifications	9
Insect pest identifications	8
Disease identifications	5
Seed identifications	2

12. CONFERENCES:

Mr. Ragless addressed the Seventh National Convention of the Australian Seed Industry Association held in Adelaide, October, 1974. Messrs. Schubert and Cooper also attended the Convention.

Messrs. Ragless, Schuber, Cooper and Miss Dodson attended the Annual Symposium of the South Australian Seedgrowers Co-operative in Adelaide, November, 1974. Messrs. Ragless and Coleman attended the Annual meeting of the South Australian Seedgrowers Association (S.A.S.P.A.) held at Struan Regional Headquarters, September, 1974.

Mr. Ragless attended the Co-ordinating Committee for Seed Certification and Australian Seed Industry Advisory Committee meetings in Canberra, September, 1974.

Mr. Ragless attended the Annual meeting of the Australian Seed Producers Federation held in Launceston, November, 1974. He also attended the Australian Development Assistance Agency meeting in Canberra in February to help arrange an international training course in seed improvement and certification.

A total of 11 field days were attended by various members of the Section, including one at Saddleworth with representatives from the Horwood Bagshaw Company, along with members of S.A.S.P.A. Various aspects on the functioning of the clover harvester were examined and discussed, from both the manufacturer's and operators' viewpoints.

All staff attended the field day held by S.A.S.P.A. following the annual meeting in the Naracoorte district, September, 1974.

Almost all meetings of the Seed Industry Association and Seed Producers Association were attended by one or more members of the Section.

13. INTERSTATE STUDY TOUR:

From 2nd to 15th November, 1974, four Seed Production Advisers, Messrs. Coleman, Cooper, Simons and Schubert, were able to study and discuss latest developments in pasture seed production and certification in New South Wales, Canberra and Victoria. Although the standard of our own services appeared to shape up very well with our eastern states counterparts, the tour proved fruitful with many things learnt and others worth investigating.

14. STAFF CHANGES:

Mr. T.R. Prance transferred to District Agronomist in December, 1974 and was replaced by Mr. E.S. Hogg in March, 1975.

15. VISITORS:

During the year the Section had eleven overseas visitors and four interstate visitors. The overseas visitors came from Libya, Argentina, Algeria, U.S.A. and Yugoslavia.

16. PUBLICATIONS:

- Coleman, W.O. & Mulligan, D. - "Costs of Seed Production". Journal of Agriculture.
- Coleman, W.O. - "Small Seeds - What is a Reasonable Return?". Monthly reports on South East Seed Production.
- Cooper, G.E. - "Growing Giant Shaftal Clover Seed Crops". Special Bulletin 14.75.
- Dodson, C.M. & Schubert, C.A. - "Annual Seed Production Report, 1973-74".
- Dodson, C.M. - "Individual Growers' Performance Report".
- Dodson, C.M. - "Monthly Statistical Summary of Seed Production".
- Ragless, D.C. - "The Importance of Seed Quality". Agronomy Report No. 71.
- Ragless, D.C. - "Herbage Seed Production". Agronomy Report No. 57.
- Ragless, D.C. - "Marketing of Seed of New Pasture Varieties in South Australia". Australian Seed Review.
- Ragless, D.C. - "The production of Certified Seeds in South Australia during the Period, 1960-1973". Agronomy Report No. 53.
- Ragless, D.C. - "Future Standards for Certified Seed". Australian Seed Review - in print.
- Simons, I.H., Smith, K.R. & Kloot, P.M. - "A Guide to Herbicides for Weed Control in Lucerne Seed Crops". Special Bulletin No. 7. 75/1.
- Simons, I.H., Smith, K.R. & Kloot, P.M. - "A Guide to Herbicides for Weed Control in Annual Medic and Subterranean Clover Seed Crops". Special Bulletin 7. 75/2.
- Simons, I.H., Smith, K.R. & Kloot, P.M. - "A Guide to Herbicides for Weed Control in Perennial Grass Seed Crops". Special Bulletin No. 7. 75/3.

Simons, I.H. - "Comparison of Certified Hunter River Lucerne Seed Produced in South East from Spray and Irrigated Flood Irrigation of Five Year Period".

Simons, I.H. - "Areas of Pasture Seed Crops Certified in Each County of the South East for 1974-75".