



DEPARTMENT OF AGRICULTURE, SOUTH AUSTRALIA

Agronomy Branch Report

SEED CERTIFICATION

1970-71 SEASONAL REPORT

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SEED CERTIFICATION

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* Supervision inspection is an inspection of the crop at establishment to commence eligibility for producing certified seed.

* Registration inspections are made on perennial crops in a non-harvest year to maintain eligibility.

* Certification inspections are made on crops during the harvest year.

SEED CERTIFICATION - 1970-71 SEASONAL REPORT

The total volume of seed certified is less than last season due primarily to publicity given to over-production and the effects of lower prices discouraging sideline production.

Decreases in production occurred with Mt. Barker subterranean clover and Australian phalaris while production of a number of varieties largely produced by specialist growers, increased. The amounts of Clare subterranean clover, Demeter fescue and Medea perennial ryegrass have all doubled since last year. Du Puits and Siro Peruvian lucerne, Currie cocksfoot and Seedmaster and Sirocco phalaris have all shown increases in production.

This season a number of sideline producers have dropped out of the seed industry. At the same time the remaining and usually more specialised growers have improved efficiency. Interest is being taken in new varieties that look profitable. Kales, rape, oil seed crops, field and garden peas, lupins, shaftal clover, trefoil, Chewings fescue and perennial ryegrass, are all crops being tried commercially.

The seed certification organisation has again functioned without delay or fuss. Speedy release of seed has again been made possible by the untiring efforts of the girls in the seed testing laboratory.

Seed Yields:

Improvement in yields per acre has been a feature of the season. Several growers produced over 1,000 lbs. per acre of Clare subterranean clover, the highest being an average of 1,440 lbs. per acre from a 90 acre paddock. The best paddock average yield of seed from Demeter fescue was 1,134 lbs. per acre, while a Jemalong barrel medic paddock averaged 1,264 lbs. per acre. With lucerne the Du Puits variety yielded 681 lbs. per acre, Siro Peruvian 632 lbs. to the acre and a dryland Hunter River lucerne paddock 500 lbs. per acre.

Contamination of Certified Paddocks:

There has, over the years, been a steadily growing appreciation of the need to control weeds and realisation of the standard of weed freedom required for certified paddocks. This aided by the recent availability of more sophisticated herbicides and appreciation of their usefulness, has produced seed crops entered for certification which are in very many cases now completely free of all weeds.

On the other hand, over the last five years, there has been an increase in the incidence of other crop plants and other varieties present in certified paddocks. With annual crops a few years ago most were 100% true to type. This is now not so. An ever increasing number of paddocks occur with sufficient contamination to be "borderline" for certification and necessitating "grow-on" plot testing for varietal verification.

In the 1969-70 season, 20% of the Clare subterranean clover seed paddocks entered for certification were suitable for production of "Mother" seed. Last season this reduced to 4%. A similar situation exists with all other annual crops.

In the case of the perennial crops it is now becoming common to find plants of other crop species, such as cocksfoot, in Fescue crops or phalaris on cocksfoot or vice versa. A few years ago this was unusual.

To help overcome these contaminations, growers must pay greater attention to the choice of stock seed for seed production and should always check the details of the analyses. If difficulty is experienced in obtaining analytical results they can be very quickly obtained from the seed certification headquarters, Adelaide. More care is also needed in making sure that not only the machinery used to sow but also to work, spray, harvest, inspect and process seed crops, is free from contaminating seeds.

If the present trend of increasing contamination of annual seed crops is not slowed up it will soon become essential for these crops to be certified by limited generation pedigree system (as with Paragosa gama medic). This will involve official institutions maintaining "breeder" seed and releasing suitable quantities when necessary. All crops eligible for certification must then relate through several generations to "breeder" seed. This is a situation which should be avoided for as long as possible because of the added complexity to both the grower and certifying authority.

Contract Multiplication:

A few growers have commenced production of seed under contract to seed firms, mostly multiplications for overseas firms. There appears to be a growing realisation among growers of the value of this form of production.

There appears to be a wide range of crops from forage plants to turf plants for which a potentially profitable export market exists. The main problem limiting development is that of rapidly developing cultural experience and know how with these new crops. With valuable "basic" seed supplied by overseas firms, we simply cannot afford to have failures due to inexperience. It is not just that our growers and seed firms lose income, but more important, that overseas firms lose confidence and may not be inclined to give further contracts to South Australia.

To quickly get information on the behaviour of a range of new crops under local environments, using present cultural treatments, officers of the seed certification group are carrying out several trials. One is aimed at defining the optimum time of sowing and the interactions between times of sowing, plant density and nitrogen application of Stabil kale. Two trials at other sites are designed to assess the reaction of a wide range of overseas fodder and turf varieties to our environment and present herbicide recommendations. Because some seed firms who supplied seed samples for these trials expressed a wish that the identity of the varieties provided be kept secret, all varieties included in the trials have been coded. The key to the code for any particular variety is only available to the supplier.

Plot Testing:

The transfer of one field officer from Naracoorte to Adelaide to devote his time to plot work associated with the seed certification scheme has enabled commencement of a number of detailed studies on varietal identification. A number of grow-on tests have been completed with samples of uncertified annual seeds submitted by seed firms.

Export of Seed:

Large quantities of a range of grass and legume seeds have been exported to a number of South American and Mediterranean countries this season.

Failures in some South American countries of lucerne seed crops have helped boost exports of Hunter River lucerne seed. What a few months ago looked like a massive seed surplus has now been sold.

A record number of almost 300 Orange International Certificates have been issued by the seed testing laboratory. This has involved certification field staff in considerable extra sampling and sealing activities.

Costs of Seed Production:

Due to lower seed prices and the depressed state of rural industry, growers are seeking to cut costs in all possible ways. Cleaning costs over which the grower has no direct control have always been a contentious issue. Many growers are now finding that the cost of cleaning seed has become a critical cost, especially if they cannot negotiate a ready cash sale for the seed. This has caused among growers renewed interest in cleaning their own seed. This year three new growers have installed their own cleaning plants.

While from the point of view of the individual grower this trend is understandable, from an industry viewpoint in the long term, it cannot result in any lowering of cleaning costs. Growers who install good but low cost secondhand plant may clean seed cheaply, particularly if they can use existing sheds and do not cost their own labour.

However the more small cleaning plants we have the less cleaning business each plant large or small, will have available and the less incentive for any plant to invest the necessary money in equipment to develop better facilities.

In leading seed producing countries elsewhere in the world, costs of seed cleaning have been reduced by installing the best possible machinery (involving very large amounts of money), and operating the equipment for very long hours daily for as near as possible to a twelve months season.

The current trend in South Australia is almost in direct opposition to that in leading seed areas elsewhere in the world.

At present it is not unusual for several lots of first generation seed of the same variety to go to a number of different cleaners. Because each lot involves a machinery clean down, a number of individual and costly clean downs occur. It would seem sense for all first generation seed of a variety to go to the same cleaner. This would then mean a number of growers would share the cost of clean downs instead of individually paying. This season, for example, costs of clean downs have been as high as \$180.00 for an individual lot of seed. This heavy cost would be less burdensome if spread over a number of growers. Information from our seed certification records is freely available and would aid this sort of co-operation which would be a step toward reducing cleaning costs.

The Outlook for Next Season:

Crops

The more specialised growers, particularly those in the Lower South East, are diversifying and attempting where possible to avoid crops that are considered to be over-supplied.

Weather

Autumn and early winter rains have been well above average. Due to wet soil conditions this has made seeding of new crops and pastures difficult. Many have been postponed until spring and some, no doubt, may be abandoned.

Autumn rains clashed with burning of seed crop stubbles in the South East. This resulted in poor burns (or none at all), which in turn has meant poor responses from autumn applied soil active pre-emergent herbicides. Special permission to allow early burning of crops appears to be the only answer to alleviate this problem.

Sowings under supervision

The acreage of pedigreed crops sown is slightly more than last season. Demeter fescue has increased dramatically, and would appear that, unless new markets for seed can be developed, problems of over-supply must be faced.

All other crops with the exception of lucerne have shown a decrease in new plantings.

SUMMARY OF CERTIFICATION INSPECTIONS DURING 1970-71 (Part 1)

Crop	Acres Applied For	Acres Cancelled	Acres Accepted	Acres Rejected
<u>BARREL MEDIC:</u>				
Jemalong	3,030	152	2,666	212
<u>COCKSFOOT:</u>				
Berber	5	-	5	-
Currie	1,487	133	1,245	109
<u>GAMA MEDIC:</u>				
Paragosa	225	125	100	-
<u>KALE:</u>				
Marrow stem stabil	60	-	60	-
Marrow stem midas	50	-	50	-
<u>LUCERNE:</u>				
African	204	-	202	2
Cancreep	356	-	356	-
Du Puits	448	26	422	-
Hunter River	13,598	545	12,558	497
Siro Peruvian	594	157	419	18
<u>PHALARIS:</u>				
Australian	63	-	63	-
Seedmaster	327	-	327	-
Sirocco	203	-	153	50
<u>ROSE CLOVER:</u>				
Kondinin	40	-	40	-
<u>RYEGRASS:</u>				
Medea	407	70	175	162

SUMMARY OF CERTIFICATION INSPECTIONS DURING 1970-71 (Part 2)

Crop	BASIC LBS. SEED		1ST GENERATION OR MOTHER		2ND GENERATION OR CERTIFIED	
	Released	Rejected	Released	Rejected	Released	Rejected
<u>BABEEL MEDIC:</u> Jemalong			3,400		567,682	52,896
<u>COCKSFOOT:</u> Berber Currie	173 1,350	173 1,350	3,750	13,476	294,161	29,838
<u>GAMA MEDIC:</u> Paragosa						
<u>KALE:</u> Marrow stem stabil Marrow stem midas					24,986	
<u>LUCERNE:</u> African Cancreep Du Puits Hunter River Siro Peruvian			5,420 5,800		8,104 23,422 46,214 1,388,746 46,488	248 23,634
<u>PHALARIS:</u> Australian Seedmaster Sirocco					5,759 78,893 18,956	4,614 14,245
<u>ROSE CLOVER:</u> Kondinin					6,520	11,565
<u>RYEGRASS:</u> Medea	550	650			36,846	15,000

SUMMARY OF CERTIFICATION INSPECTIONS DURING 1970-71 (Contd.) (Part 1)

Crop	Acres Applied For	Acres Cancelled	Acres Accepted	Acres Rejected
<u>STRAND MEDIC:</u>				
Harbinger	3,710	41	3,376	293
<u>STRAWBERRY CLOVER:</u>				
O'Connor's	428		183	245
Palestine	2,018	59	833	1,126
<u>SUBTERRANEAN CLOVER:</u>				
Bacchus Marsh	280		210	70
Clare	3,283	157	2,840	286
Daliak	26	15	11	
Dwalganup	209		209	
Geraldton	446	120	326	
Howard	87		45	42
Mt. Barker	1,318		1,248	70
Seaton Park	110	40	20	50
Tallarook	38		19	19
Woogenellup	780		702	78
Yarloop	545		425	120
<u>TALL FESCUE:</u>				
Demeter	1,429	174	1,117	138
<u>WHITE CLOVER:</u>				
Ladino	18		18	
<u>WOOLLY POD VETCH:</u>				
Namoi	40		40	
Total All Crops	35,862	1,814	30,463	3,587

SUMMARY OF CERTIFICATION INSPECTIONS DURING 1970-71 (Contd.) (Part 2)

Crop	BASIC LBS. SEED		1ST GENERATION OR MOTHER		2ND GENERATION OR CERTIFIED	
	Released	Rejected	Released	Rejected	Released	Rejected
<u>STRAND MEDIC:</u>						
Harbinger					297,331	27,452
<u>STRAWBERRY CLOVER:</u>						
O'Connors			7,700		4,746	
Palestine			1,300	4,875	56,532	1,300
<u>SUB. CLOVER:</u>						
Bacchus Marsh					11,500	10,700
Clare			22,300		797,298	12,826
Daliak						
Dwalganup					13,600	
Geraldton					11,070	1,900
Howard					114,408	300
Mt. Barker						
Seaton Park						
Tallarook						
Woogenellup					22,730	14,916
Yarloop					4,987	5,364
<u>TALL FESCUE:</u>						
Demeter			17,100	11,365	357,809	68,169
<u>WHITE CLOVER:</u>						
Ladino						
<u>WOOLLY POD VETCH:</u>						
Namoi						
Total All Crops	2,073	2,173	73,164	29,716	4,240,854	294,967

SUMMARY OF SUPERVISION INSPECTIONS FOR 1970-71

Crop	Acres Applied For	Acres Can-celled	Acres Accepted	Acres Rejected
<u>COCKSFOOT:</u>				
Currie	488	255	233	
<u>GAMA MEDIC:</u>				
Paragosa	51		51	
<u>KALE:</u>				
Dwarf	38		38	
Cavalier rouge	50		50	
Marrow stem stabil	60	1	59	
Thousand head	10		10	
Marrow stem midas	43		43	
Marrow stem green	50		50	
<u>LUCERNE:</u>				
African	140	50	90	
Cancreep	353	164	189	
Du Puits	354	40	314	
Hunter River	10,234	521	9,083	630
Paravivo	1		1	
Siro Peruvian	988	11	977	
C.S.I.R.O. plots	4		4	
<u>ONIONS:</u>				
Early Lockyer	1		1	
<u>SHAFTAL CLOVER:</u>				
Maral	270		270	
<u>PHALARIS:</u>				
Seedmaster	28		28	
Sirocco	315	35	280	
<u>RYEGRASS:</u>				
Medea	45		45	
<u>STRAWBERRY CLOVER:</u>				
O'Connor's	80	5	75	
Palestine	384	336	48	
<u>TALL FESCUE:</u>				
Demeter	1,316	158	1,146	12
<u>WOOLLY POD VETCH:</u>				
Namoi	60		60	
Total All Crops	15,363	1,576	13,145	642

SUMMARY OF REGISTRATION INSPECTIONS FOR 1970-71

Crop	Acres Applied For	Acres Cancelled	Acres Accepted	Acres Rejected
<u>COCKSFOOT:</u>				
Currie	1,127	10	1,080	37
<u>LUCERNE:</u>				
African	104		104	
Cancreep	15		15	
Du Puits	16		16	
Hunter River	39,701	20	39,346	335
Siro Peruvian	139		139	
<u>PHALARIS:</u>				
Australian	5,381	4	5,377	
Seedmaster	608	75	533	
Sirocco	132	28	104	
<u>RYEGRASS:</u>				
Medea	39		33	6
<u>STRAWBERRY CLOVER:</u>				
O'Connor's	322		322	
Palestine	3,460		3,415	45
<u>TALL FESCUE:</u>				
Demeter	705	12	693	
Total All Crops	51,749	149	51,177	423