CHAPTER FOUR

Another War and Boom Times

The Second World War was to have a major effect on agriculture in South Australia, in fact, on all aspects of South Australian industry and society. After the high unemployment of the Depression years came a period of severe labour shortages. Thousands of men went off to war, many of them never to return. Those left behind were urged to increase production in order to feed the troops as well as themselves. However, it would be some time before the full effect of these changes would be felt by the average man on the land.

In the meantime, the first Junior Agricultural Bureau was formed. Mr H. J. Finnis, now the Secretary of the Royal Agricultural and Horticultural Society, had suggested at Congress that something of this nature would be an asset. This would bridge the gap between the time boys left school and when they were old enough to take an active part in the Men's Agricultural Bureau. The Minister for Agriculture, the Hon. A. P. Blesing, approved the plan, and on 20 September 1939 the first Junior Agricultural Branch was formed at Echunga. Sixteen boys enrolled as foundation members of the new club and elected officers – Chairman, O. Nicol; Vice-Chairman, W. Anderson; Secretary and Treasurer, R. Edmonds.

The Junior Agricultural Bureau was to continue as a successful organisation until the Rural Youth Movement took its place in 1951. After that, young country lads lost interest in the Junior Bureau and it was finally abandoned.

In order to increase funds for the war, the Australian Government made war savings certificates available to any groups or individuals interested. War savings stamps could be bought for sixpence each and then exchanged for a certificate to the value of 16s when 32 stamps had been collected. This certificate was guaranteed to be worth £1 seven years later. In effect, the certificates represented a loan to the Government to assist in financing the war effort. Many branches of the Agricultural Bureau formed groups to buy the certificates. Among the first were: McLaren Flat, Lights Pass, Lone Pine (named for the battle at Lone Pine in the First World War), Swan Reach, Greenock, Lenswood and Forest Range, Rosedale, Towitta and Blackwood. Women's Branches also took part in the scheme.

Many members of the Agricultural Bureau had been forced to leave their cars in the garage during the Depression years because they could not afford to pay the registration fees or buy petrol. Now that prices of their produce had improved at last and they had a bit more money to spare, petrol rationing was instituted. The Advisory Board of Agriculture agreed to relax the attendance rules for branches in the middle of 1941. Members could not be expected to use their very limited supplies to drive to meetings when the petrol was needed for farm machinery. Those who relied on motor cars to get to meetings were excused from missing more than three consecutive meetings. (Under normal circumstances this would result in members being removed from the branch rolls.)

By 1942, South Australian farmers were really starting to feel the pinch induced by the war. At their February meeting, the ABA discussed the shortages of artificial fertilisers. Shipping was disrupted and many Commonwealth ships had been commandeered by the Navy. It was difficult to get nitrate of soda from Chile, Australia's main supplier. Potash from Germany and France was also unavailable due to the hostilities and disruption of industry. In 1940, a German raider had destroyed the port facilities at the Pacific island, Nauru, where most of South Australia's super-

phosphate came from. The loading machinery and storage bins would be out of use for some time. Added to this, the Japanese began bombing Christmas Island, another source of Australia's superphosphate. In April 1942, a decision was made to ration superphosphate. Farmers were allowed 60% of what they had used in the 1939/40 season. This was then cut again by 50%, so that approximately one-third of the normal amount of fertiliser was available. However, several priority crops were allowed extra. These were vegetables, especially potatoes and blue boiler peas (which could be kept for long periods without being refrigerated), and flax, all of which were used in large quantities by troops. The situation was not fully resolved until August 1945 when it was announced that superphosphate supplies would be back to normal for the following season.

During the war years, chemicals used in sheep drenches were also in very short supply. Australians had relied upon foreign industries to provide their chemicals, and had very limited facilities to provide for their own needs. In particular, carbon tetrachloride, tetrachlorethylene, nicotine sulphate and phenothiazine were very hard to procure. Towards the end of 1942, restrictions on stock licks were announced. It became necessary to procure a permit from the State Veterinary Authorities if sheep needed salt licks. Permits would be issued to ensure the health of sheep grazing in copper or cobalt deficient areas, or as a bait to make them consume carbonated lime to supplement a diet consisting mainly of cereal grains. Feeding of phosphates to sheep was prohibited, largely because no discernable benefit from this was observed. It was still possible to use them in licks for cattle as they did need extra phosphate if it was deficient in local soil. This applied to milking cows and breeding stock in particular.

Imbalances had occurred in the food production due to the fluctuating prices and labour shortages accompanying the rapid change from a period of Depression to a state of war. The altered requirements of a nation at war were discussed by Mr W. J. Spafford, Director of Agriculture, during a radio talk in October. Wool was one of the few primary industries not seriously disrupted by the advent of war. It was a necessity, particularly as soldiers needed warm clothing in the European arena. Flax too was urgently needed, and South Australians increased their production of this fibre. Much less wheat was grown in the 1942 season than in earlier years. Expensive to produce, it had been so difficult to sell in previous years that many farmers had gone out of wheatgrowing and turned their attention to other lines. The high demand for pig products had dropped, so many farmers had stopped keeping them, resulting in a shortage by 1942. Fat lambs had remained a good proposition, and dairy products were in great demand. However, now the demand was for butter rather than cheese, a reversal of the situation a few years previously. Eggs were also selling well, although the market was for dried eggs rather than in the shell. These had a longer shelf life and required much less shipping space. Growers also received good prices for vegetables at this time. Supplies had become scarce; the shortage of labour made it very difficult to carry out the intensive farming required for market gardening.

In order to deal with these imbalances and the labour shortages, the Commonwealth Government organised District War Agricultural Committees. The scheme was described by Mr R. C. Scott, the Chief Agricultural Adviser, on a wireless broadcast on 22 November 1942. He explained that a similar scheme had been instituted in England shortly after war broke out, resulting in an additional six million acres of land being cultivated. This meant that England could now supply 63% of its food requirements, over double the amount previously grown. The main increase was in wheat and potato production. Three thousand inefficient and negligent farmers had been dispossessed and the land taken over by more capable hands, no doubt a rather frightening prospect calculated to encourage farmers to do their very best. The entry of Japan into the war led the Australian Government to implement a similar scheme here.

> Immediately Japan came in there was an increased demand for foodstuffs from Australia on account of the number of troops located in areas where they could not live on the land, so necessitating practically all requirements being forwarded to them from this country, whilst because of men arriving from overseas, certain products such as pig meats and beef, are now in urgent request [sic], so much so that beefless days for the civilian population have been suggested. In addition, certain industries that had been allowed partially to lapse, such as cane sugar production in Queensland, have had to be revived, and manpower has been drawn from the Army for the purpose ... Within Australia, New South Wales was the first State to create District War Agricultural Committees. These were advisory to the National Service Officer, assisting in the organization of labour and in making the best use of that which was available. The results obtained were so suc-

cessful that the Commonwealth Government decided to form committees throughout the whole of Australia, and to give them extended powers affecting rural industries . . . Headquarters of the committees are located at Wudinna, Lock, and Port Lincoln on Eyre Peninsula; Crystal Brook, Jamestown and Riverton in the North; Maitland on Yorke Peninsula; Nuriootpa, Mount Barker, and Willunga in the higher rainfall areas in the vicinity of Adelaide; Barmera and Murray Bridge on the River Murray; Karoonda in the Murray Mallee, and Naracoorte and Mount Gambier in the South-East of the State.

Each committee is relatively small, consisting of three producers, a business man who has had agricultural experience, the National Service Officer for the district, an officer of the Department of Agriculture who will be chairman and executive officer, and a part-time secretary. The members have been appointed by the Minister of Agriculture and every effort has been made to secure the services of the best men available within the respective districts.

The organisation commences with the Minister for Commerce, thence to the State Minister for Agriculture, followed by an executive committee, which in South Australia, consists of the Director of Agriculture (Mr W. J. Spafford) and the writer [R. C. Scott], with Mr F. C. Richards as secretary . . . In South Australia, such organizations as the Agricultural Bureaux, Dairymen's Associations, Branches of the Stock Owners' Association, District Councils, and other bodies are being approached and asked to help the movement by advising the district committee on matters affecting rural production in their district, or problems associated with their particular class of industry.

At the moment the most important function of these committees is to organize labour so that the best use is made of that which is available. There is no surplus of rural labour in any district in South Australia, whilst there is considerable difficulty in drawing workers from the secondary industries or from the Army. Consequently, we are dependent upon existing labour, Women's Land Army and Alien labour. (*JASA*, December 1942, pp. 83-4.)

The South Australian farmers were required to increase their production of mutton and lamb, pig meats, eggs, canned and dried fruit and potatoes. These particular goods were already being produced in large quantities in South Australia, so it was a matter of increasing production of industries already established, rather than introducing new agricultural industries.

The Women's Land Army – preparing to go ploughing, 1943.

The labour shortage created by thousands of young men going off to war was felt as early as 1941. It was particularly noticeable at harvest time when the casual seasonal workers farmers relied upon were no longer available. Several measures were taken in an effort to ease the situation. The Australian Women's Land Army was formed in September 1942, and by May 1943 had 500 members enrolled in South Australia. Some of the women were full-time agricultural workers, and others were available on a part-time basis for the busiest seasons. These women worked in all areas of agriculture, from mustering and tailing sheep to ploughing, haycarting and fruit picking.

Busy seasonal periods were a worry to farmers – could they organise sufficient labour to get the job done in time? Shearing was one of those occasions. At the Wudinna Conference of 1943

The Women's Land Army – spreading flax, 1943.

the members enquired about zoning of sheep shearing. In 1942 experienced shearers and shed hands had been released from the Army and protected industries to do their usual work, but such arrangements could not be made for 1943. Thus, shearing was to be carried out at the specific times nominated for each district or zone in 1942. Zoning was introduced so that shearing teams could be kept constantly employed throughout the year and ensure that all pastoralists with over 1,000 sheep could get their sheep shorn. The Department of Labour and National Service was responsible for these men, but sheep owners were encouraged to make their own arrangements if enough local labour was available. If not, the procedure was as follows:

> Any sheep owner with more than one thousand (1,000) grown flock sheep who intends to use any form of "local labour" to conduct his shearing during the prohibited period, must make application and obtain a permit to do so from the Deputy Director General of Manpower, 23 Currie Street, Adelaide at least 28 days before his intended starting date of shearing. In making the application, a full and detailed list must accompany the application, setting out the names, present addresses, and full Identity Card No. (e.g. S17/M05/814) of each person to be engaged. (*JASA*, August 1943, p. 9.)

Although this system was not ideal, at least the wool was taken off and the job done satisfactorily.

The labour situation became worse, and further measures were necessary. In September 1943 the *Journal of Agriculture of South Australia* recorded that Italian POW's would be doing rural work that season. The War Agricultural Committee had to provide labour from somewhere, and it seemed sensible for prisoners to work and make some contribution to their keep. Out of 1,500 Italian POW's in South Australia, 1,070 were put to work in country areas. Most of them went to the South-East and the Adelaide Hills areas. A few were also sent to Lameroo, Clare and Maitland.

In December 1943, the Hon. A. P. Blesing, the Minister of Agriculture, issued a message to South Australian farmers. It was printed in the *Journal of Agriculture of South Australia* and began:

> The time has come for every primary producer to realize just how important food production is to Australia's part in winning the war. Food alone cannot win the war, but it can truthfully be said that food had become a munition as much in demand as any other war material, and it is one which Australia is called upon to supply in increasing quantities. (*JASA*, December 1943, p. 187.)

He encouraged farmers to put all their efforts into making the following year one with an all-time record in production, for which there was virtually unlimited scope for expansion. The District War Agricultural Committees were instructed to do all they could to ensure the supply of manpower, materials and machinery to make this possible. Farmers were advised to contact their local Committee if any difficulty threatened to hold up production.

Practical incentives were devised, as well as this message of encouragement. A fixed price scheme was introduced in November 1943 to promote an increase in pig production. Growers were guaranteed ninepence per pound and a virtually unlimited market for best pig meat. It was hoped that this would result in a renewal of interest in pig-breeding to meet the demands of consumers. By 1944, South Australia had doubled its acreage under vegetables, but further increases were necessary to meet the war requirements. In order to make this possible, new methods of vegetable growing were needed. To cut down on the labour required, mechanisation was necessary. Small garden tractors were designed to speed up operations. Attachments could be bought to plant, cultivate, and spray or dust crops, heralding a revolution in vegetable growing in this country.

Farmers everywhere discussed their role in the war effort. Mr O. Bowden, a District Agricultural Adviser, addressed the Lower North Conference at Blyth on 25 February 1943 on the subject *Cereals in the War Effort*. His purpose was to draw attention to the need for "wide reconstruction of the economic agricultural framework of the rural industry". (*JASA*, March 1943, p. 192.) While it was necessary to change over from cereal growing to the other industries recommended by the Government (dairying, pigs, vegetable growing), he recognised this could not be done immediately – time was needed to build up herds, erect suitable fencing, etc. He also warned that a longer term view was essential; farmers had to look to the post-war period and ensure they would still be farming on sound economic terms after making the required changes. During the boom period during the First World War, many farmers had over-capitalised – buying land at inflated prices and purchasing expensive modern machinery to work it. Cereal growers had been particularly hard hit and were reluctant to create further problems for themselves by rapidly changing direction once again. He emphasised the importance of neigh-

bours working together to grow and harvest crops efficiently.

> The grim determination to see the job through is indicated by the willingness with which sons and daughters have been released to the war essentials. This denudation of farm assistance has brought many production problems associated with labour, so much so that most properties are now working with only skeleton staffs – often only man and wife on a holding ... Of the few avenues now remaining to the producer further to meet the need of the times, that of community effort appears to be the most promising of further development.
>
> Greater inter-farm assistance has been a major factor in permitting the efficient handling of a very large harvest this year, and all concerned – not omitting the womenfolk and juveniles – deserve great credit for their part in the story ... There appears then to be room for a scheme of contribution equivalent, not so much to replace existing amicable arrangements, but to overcome some of the obstacles preventing full-scale co-operation between neighbours. Farm production will of necessity be further restricted by the shortage of superphosphate and other essentials, to the extent that it should not be impracticable for groups of farmers to handle future production without calling upon labour engaged in military service or war industry. (*JASA*, March 1943, p. 193.)

Bowden suggested a list of "Contribution Equivalents" so that members of a group would all feel they had contributed their fair share.

Suggested Scale of Unit Value

	Hours	
Tractor	10	per £100
Auto-header	6	per £100
Header (including engine functioned)	6	per £100
Harvester (including engine functioned)	6	per £100
Binder	4	per £100
Mower	6	per £100
Baler	12	per £100
Winnower	14	per £100
Grader	14	per £100
Combine or drill	16	per £100
Combine or drill (disc)	10	per £100
Stripper	20	per £100
Hay or sweep rake	20	per £100
Plough	24	per £100
Cultivator	24	per £100
Harrow	24	per £100
Cultipacker or land roller	30	per £100
Hay trolly and other similar conveyances	36	per £100

For each £100 cost when new, machine or implement with attachments (extension-steering, power take-off, crop lifters, etc.) to cover capital charges. Repairs and all lubrication, labour, fuel, shares, points, and other materials when needed are additional.

Horses	16 hours per horse
Adult labour	2 hours
Juvenile and female labour	4 hours

It is suggested that all the above equal one unit of 5s value, for time actually worked at the scene of operations (except for horses and driver stable to stable). (*JASA*, March 1943, p. 194.)

Members of the Arthurton Branch heard a paper by Mr S. K. Coleman on *Agriculture in War-Time* on 19 July 1943. He summed up the major factors affecting agriculture at this time.

> Shortly after the outbreak of the present war, the system of price fixation was established. Prices Control Regulations were not only wise but necessary. Without control prices would have risen enormously and rapid inflation would have resulted. Even under control prices have mounted considerably, and it is estimated that purchasing power generally has depreciated by 25 per cent during the past 3½ years.
>
> The farmer is necessarily a large purchaser of machinery, fuel, merchandise and other requisites, as well as a hirer of labour and other services. In many of these lines and services there has been a 50 per cent increase, without a corresponding increase in the price of our products. During the past few years the lot of the primary producer has become increasingly difficult. Drastic superphosphate rationing has been necessary. This not only means smaller returns and lower yields at present, but is depleting the soil of its fertility for future crops and pastures. The acreage of wheat sown in South Australia this year will be less than two million acres, compared with four million acres in 1930-31.
>
> Consequent upon the enforced lesser acreage sown to wheat, stock has taken a larger part in farm production, and the fat lamb and pig industries have been extended, due to the urgent needs of the fighting services and civilian requirements. Prices for these have been and are generally remunerative.
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> Transport difficulties and charges have militated against these two industries. In this respect producers on Yorke Peninsula have

been hard hit. In addition to transport charges, which have increased heavily, all other charges have risen. Stock-raising entails much labour, and the country has been drastically combed for all available manpower. Recently, however, the authorities have realized the manpower shortage in rural areas and are taking steps to ease the acute labour position on farms. (*JASA*, September 1943, p. 94.)

The three main problems facing South Australian farmers were manpower, machinery, and prices.

> Farm mechanization has considerably developed during recent years, making the farmer more dependent than ever upon the output of factories and the services of skilled mechanics. The number of tractors in use increased from 882 in 1924-25 to 6,351 in 1940-41, while the number of engines, stationary and portable, advanced from 9,741 in 1924-25 to 18,106 in 1940-41. On the other hand the number of horses declined from 267,639 in 1921-22 to 182,206 in 1940-41, a decrease of about one third. A very practical way in which the Government could help relieve the mechanized farm difficulties would be to make available more skilled mechanics. It would make for greater efficiency and production. (*JASA*, September 1943, p. 95.)

He also believed that the fixed prices must be kept in line with the costs of production.

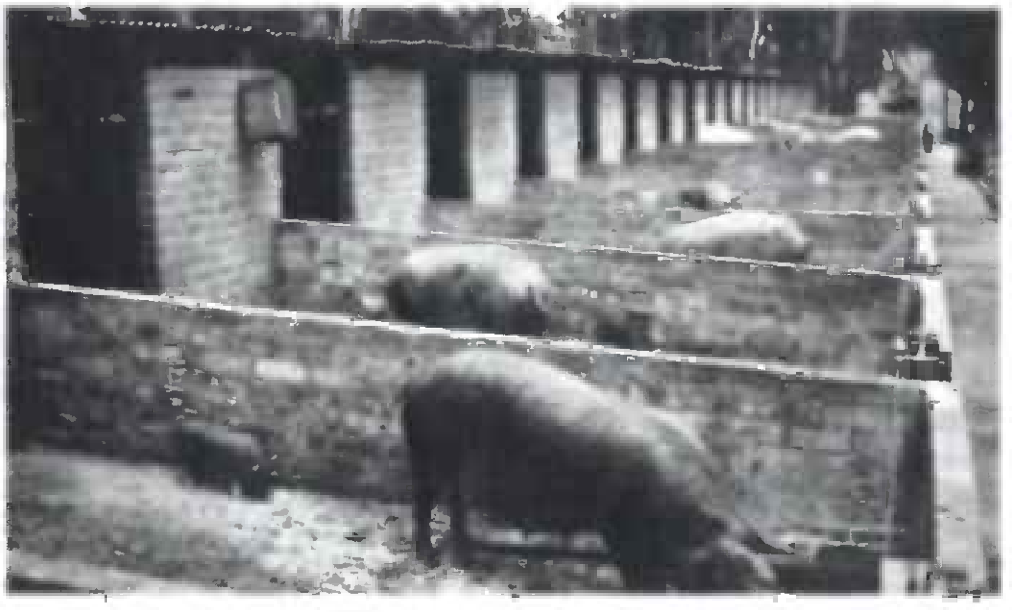
> During the past 10 or 15 years, agriculture has been, plainly speaking, "a sweated industry". In other words, we are still on our farms because we have worked overtime, for which we have received no pay. It is this "payless overtime" which still keeps us on our farms. No other industry could or would stand for it. (*JASA*, September, 1943, p. 95.)

He conceded that they must do their best under the prevailing circumstances; the war effort must come first, and afterwards, families should continue to make their contribution to the nation's prosperity, receiving fair prices for their goods at the same time.

The Agricultural Bureau was as disrupted as any other aspect of life during the war period. Hundreds of the members went off to fight, seriously depleting the numbers attending meetings. As in the First World War, those members who joined the armed services could retain full membership of the Bureau without attending meetings or paying subscriptions. However, so many members were unable to be present at meetings on a regular basis, that a large number of branches elected to go into recess for the duration of the war. The branches which did continue to function during this time continued in much the same way as before.

A lot of emphasis was placed on keeping pigs at this time, due to current shortages. Mr A. W. H. Neumann of the Blyth Branch addressed a meeting in 1941 taking as his topic *What is the Better Paying Proposition – Selling Baconers or Porkers?* These were the two classes in demand for the export market. He believed baconers to be the best paying proposition:

> the demand for this pig is about twice as much as for the porker. To produce bacon pigs they should be run in a fair-sized paddock and grazed on greenfeed when available so as to keep them growing without becoming too fat,



Farmers were advised to keep pigs during this period.

which seems to be the trouble when they are fed in small yards: a fat pig does not bring the price of a pig in the right condition.

My experience with having small yards is to go in more for the porker, and over a period of years they have been a very good price. With good care and feeding one can produce a good porker in four months. The milk available from most farms goes a long way towards feeding pigs to the porker stage. A lot also depends on whether a person breeds his own pigs or buys them. Anybody buying pigs and only keeping a few, could keep them longer, making them into baconers, which would be the best plan, providing that they were of the right type. In the case of a breeder who has young pigs coming on all the time, the demand for suckers is so low that it is advisable to sell a lot more as porkers. *(JASA,* September 1943, p. 451)

In June 1941, Mr J. G. Christian read a paper on *Growing a Competition Crop* before the Yaninee Branch. The State Wheat Crop Competition continued throughout the war years. The only break was in 1946. Mr Christian described the process from the first step.

One of the first points to observe when intending to enter a crop for competition is good, clean seed, free from bunt, weeds, barley, oats, etc. To this end keep seed drills, harvesting machines, and graders as clean as possible.

Select a good, clean piece of land, which has not been over-cropped with wheat, one on which the rotation for the four previous years has been as follows:– Wheat, pasture, oats, and fallow. The average farmer with a medium-sized holding cannot afford a 5-year rotation ... Cultivation is important. In this district it is not advisable to work the land very deeply. An initial working of 2½ in and not more than 3 in is deep enough, with each subsequent working shallower.

During the last few years I have used a cultivator rather than a plough for fallowing purposes. In a wet winter this would have to be followed up with the same implement within a few weeks of the first working, as the weeds would quickly take root again. A subsequent working with either the same implement or a combine early in the spring should be quite sufficient in this district.

I have not advocated using the harrows. This is obvious because of drift. This does not mean that harrows cannot be used to advantage, even in the mallee districts. In dry winters two workings with the cultivator should suffice. On no account should land be worked or stirred up when not necessary for destroying weeds or when very dry, because much of the best soil will be lost through drift. Sheep may always be used in keeping down weeds and packing down the land.

A week or two before seeding the land may be harrowed, if not too hard, especially if there is moisture underneath – which most good fallow should have. If there is then sufficient moisture to ensure a good germination, the seed may be put in with a combine, with light harrows attached for levelling out purposes, and again harrowed with heavy harrows 4 or 5 days after sowing.

The generous use of the harrows is advocated at this stage, as if there is sufficient moisture for a good germination the wheat will get away quickly enough to prevent bad drifting of the soil; it will also ensure a good seed bed and conserve much more moisture than when a heavy implement is used. On no account use the harrows in very dry years when the soil is continually drifting and when there is little moisture for a good germination. A good time for seeding is from the beginning of May to the third week in May, but this finally depends on when the rains come. Seed at the rate of 55 lb and 90 lb of 45 per cent super should suffice ... Every farmer knows that to grow a good crop it is important to eradicate weeds, but he also knows that this is easier said than done, because if the land is overworked it may blow away, and at the end of it all there will be a better crop of wild mustard than of wheat. The most effective of all weedkillers is to allow the land to drift just sufficiently to kill the young weeds without it actually blowing away. *(JASA,* June 1941, p. 670.)

He concluded by reminding his listeners that the market for wheat was in a very poor state. Much of it was extremely difficult to sell, and South Australian farmers must look for new lines to supplement cereal croppings.

The Wheat Crop Competitions remained a popular event in Bureau life. Even though the demand for wheat was not as great as in previous years, it was still to the grower's advantage to get good returns from the crops planted The costs per acre were high, and even a reduced acreage should be as profitable as possible. The Paskeville Branch was able to offer a new prize in the 1942 Wheat Crop Competition. The Myer Trophy, donated by the late Mr G. Myer was offered to the local branch member who received the highest

score in the North Yorke Peninsula Crop Competition. When the results were announced, the trophy was awarded to Mr G. M. Abbot.

In 1940, a list of recommended wheats had been issued by the Department of Agriculture. The varied conditions existing in the different parts of the State required different varieties of wheat if good returns were to be secured.

Upper Eyre Peninsula – Hopetoun, Kintore, Way, Dufferin: NABAWA, RANEE, GLUYAS, LATE GLUYAS, WARATAH, BENCUBBIN, CANBERRA.

Central Eyre Peninsula – Robinson, Bonsanquet, Le Hunte, Buxton: RANEE, BENCUBBIN, NABAWA, GLUYAS, TOTADGIN.

Lower Eyre Peninsula – Musgrave, Jervois, Flinders: RANEE, FORD, DUNDEE SWORD (better soils), WARATAH, RANEE, GLUYAS, NABAWA, BENCUBBIN, GLUYAS, WARATAH (lighter soils).

Upper Northern and North-Eastern – Burra, Kimberley, Herbert, Granville, Newcastle, Hanson, Blackford: RANEE, NABAWA.

Northern – Light, Stanley, Victoria, Dalhousie, Frome: RANEE, DUNDEE SWARD, DAN (better soils), SWORD, NABAWA, BENCUBBIN, GLUYAS, WARATAH (lighter soils).

Lower North and Yorke Peninsula – Gawler, Daly, Fergusson: SWORD, BENCUBBIN, GLUYAS, NABAWA, WARATAH (lighter soils), RANEE, DUNDEE, FORD (heavier soils). *Central* – Adelaide, Hindmarsh: SWORD, WARATAH, NABAWA, BENCUBBIN (lighter soils), RANEE, FORD, DUNDEE (heavier soils).

Murray Flats – Eyre, Sturt: RANEE, NABAWA, SWORD

Northern Murray Mallee – Albert, Alfred, Young, Hamley: BENCUBBIN, NABAWA, GLUYAS, WARATAH (lighter soils), RANEE, SWORD (better soils).

Southern Murray Mallee – Russel, Buccleuch, Chandos: RANEE, SWORD, DUNDEE, FORD (better soils), WARATAH, BENCUBBIN, NABAWA, GLUYAS (lighter soils).

Upper South-Eastern – Cardwell, Buckingham: GHURKA, DUNDEE, RANEE (better soils), BENCUBBIN, NABAWA (lighter soils).

Lower South-Eastern – Grey, Robe, McDonnell: SWORD, RANEE, FORD, DUNDEE. (*JASA*, March 1943, p. 583.)

These are still more or less the divisions used today, although more advances have been made in research into varieties and most on this list have been superseded.

A new wheat developed at the Waite Institute was released in 1944. John Ridley, inventor of the stripper for harvesting wheat, was to be honoured once again when the new variety was named after him. A cross between Nabawa and Hard Federation, it yielded 29 bushels per acre on average in tests, compared with 26½ bushels per acre for Ranee (previously one of the best yeilding varieties). Ridley also showed strong baking qualities. Its characteristics were described in *The Journal of Agriculture of South Australia*.

> Ridley is a mid-season wheat possessing strong medium length straw bearing attractive bold heavily tip-awned heads similar to Dundee, but resembling in colour the Nabawa parent. The grain is medium to large with angular cheeks and usually hard and vitreous. While moderately resistant to flag smut, it is susceptible to stem rust. (*JASA*, February 1944, p. 302.)

The war years were difficult for everyone, but it was not a period of unrelieved gloom. There was still cause for celebration at times, and the Agricultural Bureau experienced these occasions too. The Bute Branch acknowledged its 50th Anniversary in September 1943, by holding a field day. Practical demonstrations dealing with pigs, fat lambs, wool and dairy cattle were held on the property of Mr W. G. Fidge. Officers of the Department of Agriculture attending the event were the Chief Secretary (Hon. A. O. McEwin), the Speaker, (Sir Robert Nicholls), the Hon. J. M. Beerworth, Director of Waite Institute (Prof A. J. Prescott), Chief Agricultural Adviser (Mr R. C. Scott), District Agricultural Adviser (Mr O Bowden), Field Officer (Mr P. C. Angove) and the Acting General Secretary of the Agricultural Bureau (Mr F. C. Richards). Mr H. Barlow, the Chief Dairy Instructor, and Mr W. S. McAuliffe, the pig husbandry adviser urged local farmers to increase their production of butter, cheese and pig products to help meet the needs of the nation at war. Mr Scott discussed fat lamb production. He pointed out the drifting sand hills in the area and suggested that in the future they should pay more attention to improving pastures, especially lucerne, and less to wheat growing and stock. A demonstration of wool classing was next on the agenda. Mr C. A. Goddard, the Assistant Wool Instructor at the school of Mines, removed the fluffy back of a fleece, explaining that its inclusion would have reduced the fleece value by 1¾d per pound. The highlight of the celebration was the banquet in the evening, presided over by the branch President, Mr C. M. Green.

In 1943 the Cherry Gardens Branch held a Jubilee Conference. All of the conferences that

year had been remarkably well attended, and this one was no exception. A very distinguished audience included the Hon. Thomas Playford (Premier of South Australia at that time), Mr W. J. Spafford (Director of Agriculture) and several other members of the Department of Agriculture and the ABA, and Members of Parliament. The opening address was delivered by a Mr H. N. Wicks of the ABA. He congratulated the Stone family in particular for their unselfish devotion to the Agricultural Bureau. The Secretary, Mr A. R. Stone was a life member; at the same time, his son Ivan Stone was Chairman and a life member, and *his* son was a member of the Urrbrae Junior Branch. The thought of war was never far from anyone's thoughts at this time, however, and Mr Wicks referred to the farmer's role in a nation at war.

> Not only is stability given to a people by primary production but further, no country is really safe physically or economically unless it has unrestricted access to, or itself produces, an abundant supply of foodstuffs, and there is no single factor which has done more to make South Australia the garden city of the Commonwealth than the unselfish services, through the medium of the Bureau system, rendered by such people ... As producers we are living in troublous times, in a world which is changing so rapidly that the slow pulse so characteristic in rural engagements, and so necessary in so many branches of production, is being whipped into a bewildering whirlpool of changing influences. The exigencies of war are playing havoc with all our preconceived ideas of such commonplaces as marketing and transport, but nevertheless, the production of foodstuffs is being maintained in South Australia at a much higher level than would appear possible with such depleted manpower and shortages in so many necessities for the working of holdings. Such revolutionary happenings as controlled marketing and restricted production have been taken in a stride. (*JASA*, October 1943, pp. 41-42.)

A wool demonstration was organised by the Lameroo Branch at the end of 1943. Mr Pocock made his yard available and also provided 20 rams and 600 sheep as subjects. His generosity was rewarded by a good attendance of approximately 50 local men and boys from the higher primary school. The wool classing demonstration by Mr C. A. Goddard, the Assistant Instructor of Wool at the School of Mines, proved a useful and enlightening lesson. A great deal of discussion about city milk supplies occurred around this time. On 11 May 1944 the topic was addressed by Mr J. Y. Hudd of the Adelaide Branch at the Dairy Conference held at Yankalilla. Recognising the importance of milk as a valuable foodstuff, he believed that certain controls should be introduced to ensure its purity.

> May I take the liberty of setting out my views; they have been gathered from many years experience as a producer, retailer, and wholesaler. Firstly, milk should be controlled by a board, as already outlined, with definite statutory laws governing it. Let us deal with it from producer to consumer. Only farms or dairies that have been, and are to be regularly inspected and passed as hygienically fit should be allowed to offer milk for sale for city consumption. All herds should be tested for TB and all milk stand up to a methylene blue test for a prescribed period before treatment. Only suppliers whose milk can stand up to prescribed tests should participate in the price set for city milk, whether they be suppliers either to co-operative or proprietary factories.
>
> All milk for city trade should be pasteurized under methods set out by the controlling authority or board. At present various methods of pasteurization are practised. All persons in charge of or operating pasteurizers should carry a certificate of competency issued by a competent authority. All milk served to the consuming public by licenced vendors should be bottled in an efficient and up-to-date bottling establishment. Bottling is one of the most necessary precautions to be embodied in any statutory law set up for the control of city milk. The present method of loose delivery or hand can method will never be successful, for it is impossible to educate the consuming public in the proper care and sterilization of receptacles for milk. The range and type of vessels or containers put out for the milkman is amazing, and the evidence given off by some closed containers or cans when opened is staggering. The vending of milk in sealed, sterilized bottles would also get rid of the dust nuisance, also free the vendor of the unjust accusations of having ants and other insects in his milk. It would also, to a very large extent, prevent the contamination of milk with typhoid, diptheria, tonsilitis, and many other infectious diseases, probably spread by an unsuspecting and unsuspected carrier of these germs.
>
> All milk vendors should be subject to an annual X-ray test for TB. Practically all harmful bacteria are killed by efficient pasteurization, but what is the use of pasteurization if milk is to be allowed to become recontaminated, as is

An area damaged by wind erosion.

possible under present methods? At present a milk vendor may lean over an open serving can from 100 to 200 times every morning. Provision should be made for any controlling authority to set up plant and personnel for maintaining a bacteriological count of milk used for city trade. (*JASA*, May 1944, p. 444.)

In today's world of pasteurised and homogenised milk delivered to the consumer in sealed bottles or plastic coated cardboard, it is hard to imagine the product of those days.

1944 saw the first Agricultural Bureau Congress since 1939. The ABA had decided to cancel the annual meeting of all the branches for the duration of the War. Now that peace was in sight, they elected to have another. It was a severe drought year, as bad as the drought in 1914 which heralded the beginning of the Great War.

One of the main concerns of this period was soil conservation. Erosion by wind (and water in previous years) was rapidly increasing, aggravated by the denudation of the land accompanying drought, until it had become a major problem. Farmers would have to learn to deal with this difficulty. The Soil Conservation Act was passed in 1939, and further amendments were made in 1945. During the next decade, soil conservation would become a major concern of all farmers, reflected in the discussions and field days held by the Agricultural Bureau.

Mr A. E. Horstmann discussed soil erosion at a meeting of the Sandalwood Branch in a meeting of 1945. The last two dry years had accelerated the problem in the mallee areas, although the wheat cropping restrictions in force at the time and superphosphate shortages meant that larger areas had been left untouched than would otherwise have been the case. However, many areas had been stocked to their full carrying capacity; natural and improved pastures had been grazed heavily. He suggested measures which could be taken to reverse the damage.

A good early sowing of ungrazed rye corn is, of course, the first step. On almost any farm the rearrangement of the division fences is desirable, so as to isolate as much as possible of the damaged area. Some very drifty patches may need to be separately enclosed if they are included in the good paddocks. This work cannot of course, be done all at once, but, as many fences will soon need re-erection, they can then be re-sited as wire and manpower become available. The poor paddocks, when held, should not be cropped, and only very lightly grazed in times of necessity by big stock, preferably cattle.

If stock are kept off at critical times a fair amount of rough herbage will appear and re-sowing should not be necessary for many years. Needless to say, rabbits must not be allowed to establish themselves.

Pyp grass is a help where deep sand has lodged, and it is amazing how well isolated clumps of lucerne will grow in areas where many feet of soil has blown away. On calcareous subsoils I have seen lucerne thicken up where it is allowed to seed, but on the more common clay subsoil it does not do so well . . . A modification of our fallowing practices seems to be necessary. Our custom has usually been to feed off a paddock before fallowing. I believe that in the long run it is better to refrain from fallowing unless there is a good covering of herbage to be ploughed in or left on top of the soil. Certainly, fertility is

Trees in the foreground indicate extent of erosion.

more likely to be built by this method than the bare fallowing commonly seen in all but the wettest years. (*JASA*, July, 1945 p. 548.)

Mr H. H. Carter of the Wilmington Branch had some interesting thoughts on the problem of soil erosion.

> Soil erosion in the different forms such as wind, rain, rabbit infestation, and overstocking, are to my mind only terms of camouflage . . . Personally, the only fair conclusion I come to is this – soil erosion in Australia would be more aptly termed man-erosion. To arrive at that conclusion we have only to look to the soil in its natural state before the white man stole the country from the blacks. Wind and rain, the first two terms mentioned, are provided by nature and man has no control over their coming, so we must leave them out. Rabbits and overstocking are both terms that man is responsible for. Therefore let us call it lack of foresight by those responsible for introducing the rabbit to the country. However the rabbit can be controlled, so actually it is more to blame on man and not so much on the rabbit. This brings us to the last term mentioned, that of overstocking and overcropping, and this term covers a very wide range. I am not prepared to place the blame on the producer, be he farmer, pastoralist, dairyman or gardener. The position has been forced on him by the high cost of everything needed by those in the various pursuits, coupled with high wages and short hours. This has forced the man on the land to extract the last ounce out of the soil to keep his head above water, and this has left the country in the sorry state it is today. (*JASA*, July 1945, p. 550.)

At the Murray Plains conference on 7 March 1946, Mr L. E. Kroehn of the Forster Branch discussed the combined problem of soil erosion and wild turnip which Murray Mallee landowners were facing. He believed the Soil Conservation Act would do much to ease the first, but it was up to farmers themselves to eradicate wild turnip.

> I have done quite a lot of experimental work with the wild turnip during the last five years. The only cereal that will dominate the turnip is cereal rye. I suggest fallowing the land when the wild turnip is commencing flowering, and then keep the fallow free from turnip until seeding operations. I recommend fallowing deep and working shallow, using chiefly harrows to keep the seed sufficiently deep so that germination cannot take place. It is also necessary to sow late in the autumn to make sure that the biggest amount of seed has germinated.
>
> I recommend sowing 70 lb to 80 lb of graded wheat in the flats and cereal rye on the hills for protection from soil erosion; the following year again fallowing the flats with the straw on and again cropping with wheat and lucerne. It is then necessary to give the land a rest for at least 4 to 5 years before repeating this rotation.
>
> The chief implement for sowing is the combine as it is most essential that all turnips be killed before any cereals are planted. It is also practicable to sow cereal rye for pastures, as many farms have been deprived of their native grasses. Finally all landholders should do their share in eradicating the menace. Nothing is impossible; so why not win this battle? (*JASA*, March 1946, p. 360.)

Many branches organised field days with soil erosion as the major theme. If Bureau members

Contour furrows are a useful means of conserving soil.

and local farmers could be educated in the ways of preventing and curbing soil erosion, the problem would cease to exist. The Watervale Branch arranged a demonstration of contour planting in association with the Department of Agriculture. Approximately 250 people were present at the Leasingham vineyards on September 21. The official guests included the Hon. G. F. Jenkins, MP, Mr R. H. Martin of the ABA and Mr A. G. Strickland, Chief Horticulturalist, Mr R. I. Herriott, Soil Conservator, and Mr J. A. Beare, Assistant Soil Conservator. Approximately 280 acres of vineyards were laid out for Messrs Buring and Sobels using a new technique of planting vines in groups of parallel rows instead of creating varying widths between rows, as was previously done. Of this area, 80 acres were transferred to Burgess Brothers, and the rest would be subdivided for sale.

In March 1947 the Redhill Branch staged a contour planting demonstration. The field day was held on the property of Mr J. J. Hughes. Mr J. A. Beare, the Assistant Soil Conservator, and Mr J. Blencowe, a Field Officer of the Department of Agriculture, explained the process and taught local farmers how to put the theories into practice.

In 1943, Mr Stan Moore of Caltowie had recognised the problem soil erosion was causing on his property, and set about rectifying the damage. On 28 February 1949, the Jamestown Branch visited the site to inspect his progress; they were very impressed by what they saw.

> On one paddock which has been contour banked, Mr Moore had grown a crop which had gained second place in the local Wheat Crop Competition, and upon inspection of the stubble the cloddy nature of the soil was much in evidence even after ten months. This surely indicated that successful crops can be grown without working the soil to a fine tilth.
>
> The party climbed to the top of a steep rise on the property where Mr R. I. Herriot (Soil Conservator) gave an account of the work done in the vicinity. The results spoke for themselves. In places where contour work had been carried out, the gullies and sheet erosion so very apparent on the "square-worked" farms had been arrested, and the increased amount of grass between the contour banks was most significant.
>
> The adequate control of run-off water from the ends of the contour banks by means of a grassed waterway was stressed, and some well established grassed runways were seen. A feature which caused some interest was the outlet of one grassed runway into a permanent creek. In the early days of his conservation work, Mr Moore had padded this area with straw, held in position by wire netting, and today no further cutting back of the outlet could be noticed; in fact all the soil in the immediate vicinity had an excellent covering of grass. (*JASA*, April 1949, p 450.)

Branches everywhere discussed the significance of soil erosion in relation to their own districts. The Inman Valley and Yankalilla Branches combined for a debate on the issue on 14 April 1947. Yankalilla Branch took the affirmative side on the topic *Soil Conservation is a National Problem* and were declared the winners.

The Nuriootpa Branch held a Soil School on 14, 21 and 28 May 1948, to inform local people of the issues concerned. The lectures were given by officers of the Department of Agriculture. Although

it was organised by and for the members of the Agricultural Bureau, any interested parties were welcome to attend.

1945 saw the first conference of Junior Branches. On 15 February, delegates met at the Murray Bridge High School. Several Officers of the Department of Agriculture were present, including the Director of Agriculture (Mr W. J. Spafford), the Chief Dairy Instructor (Mr H. B. Barlow), the Chief Horticulturalist (Mr A. D. Strickland) and the Acting Secretary of the Agricultural Bureau (Mr F. C. Richards). Two District Officers also attended, Messrs M. J. Taylor and N. E. Stringer. The Agricultural Master at the Murray Bridge High School, Mr A. C. K. Beviss, spoke on the role of High Schools in agricultural education in their State. This was followed by an address on *Soil Erosion in the 1944 Drought*, by Mr R. I. Herriott, the Department of Agriculture Soil Conservator. The group then adjourned to the High School garden to inspect the trees and nursery. Here Mr H. N. Wicks of the Advisory Board led a discussion on diseases affecting trees. Inspections were also made of the gardens of Messrs Wells & Son, and D. Mineff, where particular attention was paid to the watering system in use. At the end of the day, the delegates agreed such conferences should become an annual event, and the Jervois Branch elected to host the next one the following year.

Gummosis had been affecting apricot trees in the Barossa Valley since the end of last century. It had gradually increased in proportion until it was a major concern of growers in the 1930s. In 1945, Mr B. Boehm of the Light Pass Branch gave a paper on *Apricot Gummosis* at the conference of non-irrigated branches on 7 November. He outlined the history of the disease as it spread through the Barossa. From 1940 it had spread at an alarming rate and immediate action was necessary. To gauge the extent of the damage, Mr Boehm surveyed a block of trees which had been planted in 1916. Roughly half of its productive capacity had been destroyed by this disease. It was believed to be a fungal disease which took effect when the spores got under the bark of trees, entering through a crack or abrasion in the trunk and limbs. Mr Boehm called for Government research into the disease, so that a cure could be found as soon as possible.

During 1945 a vast increase in interest in the Agricultural Bureau was noticed. Everywhere membership of branches soared and new branches were created. Record attendances at conferences reflected the renewed enthusiasm in the workings of the Bureau. Many of the new members were men returning from the war and embarking on a new life on the land. Some had been farmers before joining the armed services and wanted to get in touch with current theories and methods of farming; others were new to the game and had to learn it all from scratch. Those who took advantage of the Soldier Settler Scheme were a large proportion of this second group. The areas particularly affected by the scheme were the South-East, Kangaroo Island and Eyre Peninsula. The blocks were not ready for occupation immediately after the war; most of the blockers took up their land in the late '40s and early '50s, which was reflected by the rising number of Bureau members. Mr Brian (Brick) W. Bradford, a foundation member, remembers the early days of the Wanilla Branch of the Agricultural Bureau at the soldier settlement sixteen miles north of Port Lincoln.

> The Wanilla Men's Bureau started in the late Wally Byles' cottage, alongside the homestead, in 1949. Byles' was the camp for most of the men working on cleaning the settlement before occupation . . Every year we held a picnic either at Coffin Bay or Louth Bay for members and their wives and families. It was always an enjoyable day and part of the night?! We soldier settlers learnt a lot from the early settlers who resided in the district, such as the late Johnny Walter, Mac Murchison, Stuart Sinclair, etc. These men helped us in many ways. Branching out on our own, we had a lot to learn.

The Pioneer Bend Branch on Kangaroo Island was formed for the benefit of new settlers during this period. Bill Kelly, one of the original members explains:

> by the end of the war new settlers were arriving and new farms were being developed. Communications were poor and agricultural extension work was sadly neglected ... New settlers felt the need to shape the small knowledge that they had acquired and sometimes visited each other's farms and discussed mutual agricultural problems

In 1946 a sheep adviser with the Department of Agriculture, Mr Dennis Muirhead, addressed a group of the local farmers at the home of Mr and Mrs D. G. Kelly. He suggested that they should form a branch of the Agricultural Bureau, to which the assembled group agreed. Thus the Pioneer Bend Branch was formed.

Mr J. A. Tremaine reports on the early days of the Parndana Agricultural Bureau Branch, also situated on Kangaroo Island where Soldier settlers cleared a vast tract of land.

> Being new prospective settlers in a completely new area much had to be learned. It was on 8 March 1948 when fourteen settlers together with their wives and members of the MacGillvray Branch ... formed the Men's Parndana Branch of the Agricultural Bureau. Later that evening the Women's Branch was also formed. By April 1950 membership was around fifty. Members were anxious to learn about farm life on Kangaroo Island, so it was natural for the branch to hold field days at various properties and learn of their owners' experiences.

Sir Thomas Playford was probably the best-known member of the Agricultural Bureau. He was a member of the Ashton Branch and retained his interest in the Agricultural Bureau for many years, although his official duties prevented him from attending meetings regularly. He attended the Lobethal Branch Annual Meeting and addressed those present as Premier of South Australia on 19 July 1945.Reports on the year's progress were received from Mr Wuttke, the branch Secretary and Miss J. Camens of the WAB.Mr Leishman, Manager of the Blackman Experimental Orchard, reported on the potato competition which had been won by Mr J. P. Kerber. Two other official guests, Mr H. N. Wicks of the ABA and Mr F. C. Richards, the Acting General Secretary of the Agricultural Bureau, spoke to the assembled group. The following year, Sir Thomas Playford gave an address, illustrated by a film, about the Morgan-Whyalla pipeline at a meeting of his home branch.

Another display of the neighbourly concern of those involved in the Agricultural Bureau was demonstrated by the actions of the Koolunga Branch on 14 July 1945. Two of the branch members were unable to work due to ill health and injury – Mr A. Heintze was suffering from an acute gastric ulcer and his brother, Mr B. Heintze had crushed three fingers in the cogs of a combine. The local Agricultural Bureau branch rallied their forces and 20 men met on the property. Within the day, they managed to prune most of the 50 acres of vines and fruit trees.

The Australian Broadcasting Commission inaugurated a nationwide series to become known as *The Country Hour*. It was to be conducted under the direction of Mr John Douglas, formerly of the New South Wales Department of Agriculture, with Mr A. L. Langsford as the South Australian Rural Officer. Mr Langsford was also in charge of the *Countryman's Session* which had begun in July 1937 and was heard each Sunday at 9.00 a.m. *The Country Hour* was to commence at 11.00 a.m. on week days and included market reports, the news, a serial called *The Lawsons* and discussions on topical agricultural issues. *The Country Hour* has continued to be of vital importance to the primary producer until the present day, having much the same format as the original sessions, although the serial has been dropped.

Then in January the following year, a new chemical, DDT, was available to anyone wishing to use it. Right from the start, people were wary of such a powerful insecticide. The *Journal of Agriculture* published many articles about the new chemical, praising its effectiveness, and warning farmers to be extremely careful when using it. One branch requested that a list of necessary precautions for users to observe be published. The request coincided with the Director of Agriculture's warnings appearing in the *Journal of the Department of Agriculture of South Australia;* both had seen the need to lay down some strict rules for those using DDT and related chemicals.

After the Second World War, farmers began to realise they must do things on a bigger scale if they were to make a profit from their land. Mechanisation was therefore necessary to cope with larger numbers of livestock and greater acreages of crop. Organised marketing plans must be put into action to serve the swelling number of city dwellers.

Many of the young men who had fought in the war had seen the American army vehicle known as the "Jeep". It was believed that, with a few modifications, it could be very useful on the farm. Mr T. L. Day of the Wasleys Branch reported on its possibilities.

> The Jeep is supposed to be a remarkable vehicle as far as ruggedness and performance go. It has one drawback, however; its thirst for petrol under heavy mud or at high speeds. It is possible, however, that this thirsty machine can be an economical farm worker if used properly.
>
> It should be realized that the Jeep is not intended to be used as a substitute for a tractor. It could be used in an emergency for pulling light draught implements, but its real job would be to undertake haulage jobs fromthe fields to the barn or stack, to collect requirements from the town and to act as general "rouseabout"... if modified by shortening the turning radius and a lower gear ratio so as to get the maximum horsepower available. It could be quite useful in conjunction with the farm tractor in pulling lighter implements, whilst tractors would be used on a heavier type implement, thus it would

Members of the Kilkerran Branch Committee at their 50th Anniversary Dinner, 26 June 1946.
L-R: Messrs H Elies, W Johns (Secretary), K Koch, Colin Heinrich (Chairman), Trevor Rogers.

help in speeding up field operations in a late season. Whether the Jeep can be used on farms in this country remains to be seen, but the writer of these nots is of the opinion that they will be in the not too distant future as plans are afoot in England for a Jeep that will out-Jeep the present version. (JASA, March 1946, p. 367)

In order to retain the renewed interest in the Agricultural Bureau, branches introduced new activities at meetings. The Streaky Bay Branch held an agricultural quiz on 13 March 1946. Questions relevant to their area were answered enthusiastically with a mixture of sound practical knowledge and a little guesswork in some instances.

The Gladstone Branch held an unusual question box evening in June 1949. The questions were devised by two District Advisers, Mr P. C. Angove and Mr A. T. Hooper. Each person present was handed a question to answer as best he could. The rest of the group discussed the answer, and any further information needed was provided by the Departmental Officers. It was a more interesting way to initiate discussion than a straight lecture, and encouraged the participation of everyone present.

The Petersville Branch held an interesting meeting on 13 May 1946. The Secretary arranged a list of topics covering a wide range of subjects. Then every member attending the meeting was allotted a topic and required to make an impromptu speech on the subject. It proved to be very successful – everyone got a chance to speak and even the quiet ones found they had plenty to say.

The 53rd Congress of the Agricultural Bureau was opened by the Duke of Gloucester. Sir Thomas Playford was also present in his capacity of Premier on 3 September 1946 at Bonython Hall in the Adelaide University. A particularly interesting address was given by Dr A. E. V. Richardson. He concentrated mainly on the United Nations resolution to feed the world and emphasised the great increase in production this would entail.

> The Governments of the United Nations have solemnly pledged that they will take all measures to raise the level of nutrition and the standard of living of the peoples under their jurisdiction. If this pledge is to be kept, a vast increase in world agricultural production will be needed.

Prior to World War II, a large proportion of the world's population was undernourished. This was particularly true of the teeming millions of Asia and many parts of Europe. Even in the wealthiest industrial nations, such as USA and Britain, there was a considerable proportion of the population which suffered from malnutrition. The immediate and major problem of peace, therefore, is to provide more and better food for the 2,000 millions of people which constitute the human family.

Stark famine occurs in many parts of Europe and Asia, which together hold three-quarters of the world's population. The critical world food situation is due to the fact that more than 100,000,000 men were mobilized for war purposes. The withdrawal of these men from industry and agriculture and the concentration of the civilian population on the production of armaments, gravely distorted the pattern of production. Shortages of labour, fertilizers and other farming essentials reduced world production of foodstuffs far below that of world demand. For some years to come there will be a tremendous demand for foodstuffs to meet the actual needs of the suffering countries and to raise the level of nutrition ... The Governments of the United Nations established the "United Nations Relief and Rehabilitation Administration", or UNRRA, to administer relief to the starving countries of Europe and Asia.

The agreement was signed by 44 nations in November, 1943, and was financed by a fixed levy on the national resources of the contributing countries. Every signatory country agreed to contribute assistance of one kind or another: wheat from United States of America, Canada and Australia; rice and coffee from Brazil; tea from India and Ceylon; sugar from the East Indies; dried milk from New Zealand, etc ... The long-term policy should be to increase efficiency of production through better farming methods; the encouragement of research and agricultural education; the exploitation of

undeveloped areas . . . I believe that Australia is in a very favourable position with respect to the future of her agriculture – because we can produce many of the primary products the world urgently needs as cheaply as any other country – particularly wheat, wool, beef, fat lambs, and, in the better rainfall areas, dairy products. Our constant endeavour and long-term policy should be to maintain and increase the efficiency of our agricultural and livestock industries by the encouragement of better farming methods by extension and education work, and by bringing technology to the aid of the men on the land. (*JASA*, September 1947, pp. 69-74.)

The Secretary of the Waikerie Branch, Mr F. B. Harden, suggested during this Congress that badges indicating life membership be designed. They could be worn by life members on occasions such as conferences and congresses and everyone could identify those men who had served their organisation with energy and enthusiasm.

This Congress was also the occasion for some amusement for the delegates from Weavers Branch. Reg Sherriff remembers the day:

> we had stayed overnight at Gawler. While motoring down to Adelaide next morning we admired the beautiful colour of the paddock which extended to the abattoirs in those days. They were a mass of Salvation Jane.
>
> We were eventually seated in the lovely Bonython Hall on North Terrace, and waiting for the Duke of Gloucester who was to open the Congress. The Duke arrived and his Duchess who wore a beautiful frock, and what colour? None other than that we had been admiring while motoring down earlier! (*An Old Man Remembers*, March 1987.)

A resolution was passed at the 1946 Congress requesting the Department of Agriculture to establish a 16 mm film library. This library was to be made available for loan by branches of the Agricultural Bureau. They would all be "talking" films on educational subjects. Already the Wool Board had seven films which could be borrowed by the Department of Agriculture, and the Department had a film on *Soil Erosion*, by Mr R. I. Herriott and one entitled *A Heritage of Health*, by Mr H. N. Wicks, on the apple industry. The last two were silent, however and must be accompanied by the author.

Around this time, the Sheep Husbandry Adviser, Mr W. S. Reid, gave many demonstrations of mulesing. He believed this was one of the best methods available to sheep owners to control blowfly. One of these was held at Mr W. Whitehead's property organised by the Elliston Branch of the Agricultural Bureau. Approximately 40 men attended the demonstration, some travelling up to 40 miles to take advantage of the opportunity to learn to perform this operation. Another was arranged by the Mt Bryan East Branch. So many people were interested to learn the method that three sessions had to be held in order to provide adequate instruction for everyone. On 16 July 1946, local sheep owners met at Mr D. McInnes' woolshed to see how the operation was done. They progressed to Mr L. W. Gare's property the following day to observe the operation being performed on hoggets, and then lambs at Mr L. Thomas' property.

The first field day for Kangaroo Island Branches was held on 29 October 1946. Initiated by the Shoal Bay Branch, the MacGillivray and Pioneer Bend Branches also took part. They met on a Government block in the Hundred of Seddon. Here the District Agricultural Adviser, Mr R. L. Griffiths, addressed the assembled Bureau members. Mr D. G. Kelly then gave a shearing demonstration before the group retired to the home of Mr W. B. Kelly for lunch. After lunch, they inspected his Dorset Horn stud. He also showed them the results of his efforts to eradicate Salvation Jane from their property. Further advice on this subject was offered by Mr H. E. Orchard, the Department of Agriculture Weeds Adviser. Finally, they visited the property of Mr A. J. McBride, where the Manager, Mr A. L. Berry, conducted them around the paddocks. Particular interest was shown in the large herd of beef cattle and the making of meadow hay.

As far back as 1939 the WAB had discussed at Congress the need for a permanent women's organiser. At that time, their request had been refused due to lack of funds. Finally, the Minister of Agriculture agreed to appoint a Women's Extension Officer and the subject was again brought up at Congress. Miss Marjorie Gardener took up her duties on 24 February 1947. From this time onwards, the WAB became more and more independent of the Men's Agricultural Bureau, until in March 1948, the WAB Council was set up as a separate body. However, the association between the WAB and the Agricultural Bureau has continued until the present day.

In the post-war years, members of the Agricultural Bureau took advantage of their increased mobility. The Jervois Branch of river swamp settlers visited the Barossa Valley and the other members of the Agricultural Bureau showed them around. On 4 February 1947, 26 members

inspected the Yalumbah and Angaston Fruit Packing Shed under the guidance of Mr K. Robinson. In the afternoon, Mr B. Boehm of the Light Pass Branch arranged for them to visit Penfold's Winery, Tarac Manufacturing Company, and Mr C. Roberts' Orchard. At the latter, they were particularly interested in the frost prevention equipment used there.

The Ashton Branch visited Parliament on 13 June 1947. The State Premier, Sir Thomas Playford, a member of that branch, invited them to inspect the House of Parliament and conducted the tour himself, explaining the workings of Parliament as they went.

A very successful field day was held by the Weavers Branch on 7 August 1947. Seventeen tractors lined up at 11.30 a.m. in a paddock belonging to Mr R. D. Sherriff. The best machine was judged to be that owned by Mr J. S. Duncan, followed closedly by Mr Denis Stocker's tractor and Mr K. S. Brundell's unit. The judges for the occasion were Mr Stan Heinrich and Mr F. C. Gross. Approximately 1500 people turned out for the day, and in the afternoon were treated to a hay baling demonstration staged by Mr Kev R. Koennecke. Afterwards, Elder Smith & Co. gave a demonstration of shearing, innoculating and drenching sheep. Other items were demonstrated, including the fire-fighting equipment and the *G-Well* bag loader. The profit of £40 was donated to the Southern Yorke Peninsula Hospital. The success of the day was due in a large part to the energetic organisation by Mr Harold W. Cornish.

A seed wheat competition was inaugurated by the Gladstone Branch in 1947. The entries were to consist of two varieties of seed in a state ready for seeding. The samples must come from a bulk of at least 18 bushels of each variety to be collected from the farm by two members of the Competition Committee. The winner was Mr R. W. Pearce, with samples of King's White and Reldop.

The positive atmosphere of growth and prosperity as Australia recovered from its years at war was reflected in the Minister's speech at Congress in 1947.

> Cattle numbers increased from 374,000 in March, 1946, to almost 424,000 in 1947. Sheep numbers which were shown at slightly over 6,750,000 in 1946 have increased to almost 8,000,000 in 1947.
>
> The wool clip of 1946-47 shows an increase of over 13,000,000 lb on that of the previous year. This increase, with present prices, means much to the State.
>
> The wheat season of 1946-47 was affected by trying weather in the early spring months – rust, frost and dry weather combined to considerably reduce the aggregate yield. In spite of these factors, an average of 11.08 bushels per acre was returned, a total yield of 27,900,000 bushels from 2,500,000 acres. This year's returns indicated a slightly higher acreage sown, while the outlook for a record return per acre was never better. The dairying industry indicates record production this year. There has been a considerable increase in the herd testing activities in the State, the Associations having been increased from three to fourteen, and it is anticipated that a further four will be started this year.
>
> The drought depleted sheep flocks to such an extent that the number of carcasses of fat lambs we could export was considerably reduced, but a marked improvement was made last year when 303,700 lambs went through the abattoirs at Gepps Cross and 48,200 at Port Lincoln. These figures indicate that we are well on the way to our normal export again. The quality of the lambs exported last year was the best ever sent from Gepps Cross, and the outlook for the present season in regard to quality is equally favourable, the average weight of lambs treated for export this year being 40½lb.
>
> The poultry industry has gone ahead by leaps and bounds, and this must continue now that the United Kingdom has agreed to take all our poultry products until 1950 at payable prices, and now that the Commonwealth Egg Equalization Scheme has been accepted by the Commonwealth and the States. An indication of the tremendous increase in poultry production is given by the figures for 1943-44 when we handled 9,800,000 doz eggs, while for 1946-47 this had increased to 14,240,000 doz. (*JASA*, October 1947, p. 106.)

There were difficulties to be faced – the fruit industry had experienced a bad year with consistent summer rain encouraging diseases such as downy mildew and black spot on apples and pears, noxious weeds were causing serious problems, and soil erosion was reaching massive proportions in some areas – but the general feeling was one of good times ahead.

The Department of Agriculture organised the first Farmers' School at Jamestown in mid-August 1946, then another at Port Lincoln for members of the Agricultural Bureau on 4-6 February 1947. The second was very well-attended, with a minimum of 65 at each of the 18 sessions held over the three

days. Lectures were aimed at the specific interests of farmers on Eyre Peninsula. Educational films were shown in the evenings, and a tour of inspection of the Government Produce Department slaughtering and freezing works took place on the last afternoon.

The success of the Port Lincoln Farmers' School led to the arrangement of similar schools all over the State. On 3 February 1948, the Kadina Branch held a similar school, and the Naracoorte Branch followed suit.

The Minister of Agriculture, the Hon. George Jenkins, gave the opening address of the Clare Farmers' School held on 10-12 August 1948. He explained the background of the schools.

> Shortly after I took office as Minister of Agriculture I suggested to the Director that although I recognised the very great value of the Agricultural Bureau Organisation I felt that something further was necessary for the education of adults resident in country districts, and I believed that Farmers' Schools of some kind could be conducted to the benefit of our agriculture. As the Director was agreeable the Scheme was launched as soon as the main War-time strain on agriculturists had eased, and the results have been quite as good as could be anticipated.
>
> The . . . centres were chosen because:–
>
> 1. In the vicinity of these Districts many Branches of the Agricultural Bureau have been active over a long period of years.
> 2. There is sufficient Hotel and Boarding House accommodation available to house those attending.
> 3. They are centres of first-class agricultural districts. (George Jenkins, *Clare Farmers' School Notes*, 1948.)

An enormous amount of information was provided over three days. Despite being organised by the Department of Agriculture, the Bureau was closely associated with the Schools.

Then in May that year the Nuriootpa Branch held a Soil School over four consecutive weeks. The idea had come from Mr Bert Boehm of the Light Pass Branch. The Assembly Room of the Nuriootpa High School was made available to the Agricultural Bureau, and the School was opened by the Minister of Agriculture, Sir George Jenkins. Lectures were given by Officers of the Department of Agriculture and covered many aspects of the subject, from *Micro-organisms in the Soil* to *Principles of Soil Conservation* and *Trace Element Deficiencies in Orchards and Vineyards*.

The River Murray Irrigated Areas organised a fruit growers' school on 5-7 October at Berri that year as well. The suggestion came from Mr J. J. Van Velsen originally, a member of the ABA from Barmera. He had been impressed by the school at Nuriootpa and believed that fruit growers in his area would benefit from a similar event.

The Minnipa Branch of the Agricultural Bureau organised a sheep-shearing contest at the Minnipa Agricultural Show on 27 September 1947. Mr H. E. Broad, Secretary of the Branch, sent his report to the *Journal of the Department of Agriculture of South Australia*:

> The event went off really well, in fact, much better than the committee expected. It was a bit difficult to get shearers to nominate [sic], but eventually eight started; two heats and a final.
>
> I don't think that I have ever seen anything to attract a crowd so much as the shearing did. During the afternoon a horses in action programme was held, but very few, if anybody, watched it, all being too interested in the shearing contest.
>
> The event was won by A. Cameron, of Adelaide, who happened to be shearing in the Sheringa district at the time. This man is a master of the job and no doubt showed other competitors a few finer points of the game. A local shearer, M. Douglas, from Pygery, was second; M. Kelsh, Minnipa, third.
>
> All three place-getters scored full points for speed, 3½ minutes per sheep.
>
> As you would imagine, the judging would be difficult, and on talking to the judges afterwards they all agreed that with a little practice it would be quite easy.
>
> The general feeling among spectators and shearers is that the event has something big and worthwhile and should do a lot to popularize shearing as a calling and so help the wool industry. If we have turned hard work into a sport I feel we have done something. (*JASA*, December 1947, p. 242.)

The death of Mr J. B. Murdoch of Waikerie was recorded in February 1948. He had been appointed to the ABA in January 1932 and continued in its service for many years, including two years as Chairman from July 1943 to May 1945. Murdoch was a recognised authority on the irrigated dried fruits industry. He sat on the Commonwealth Dried Fruit Export Board, the Australian Dried Fruits Association and the Waikerie Co-operative Fruit Packing Company. His death was a sad loss

to the Agricultural Bureau and the South Australian dried fruit industry.

An unusual meeting was held by the Willowie Branch in March, based on the old-style homestead meetings of the early years of the Agricultural Bureau; branch members and their wives arrived at the dairy of Mr S. J. McCallum in time to watch the evening milking. Here, they observed the recently installed milking machines under electric light. The District Dairy Adviser, Mr A. T. Hooper, answered many questions put by the audience, and demonstrated the approved method for washing milking machines and explained the Babcock method of testing milk. He later gave an address, *A Plea for Increased Dairy Production* while the audience sat on bales of straw in the milking shed. By holding meetings like this, enthusiastic members of the Bureau breathed new life into the organisation.

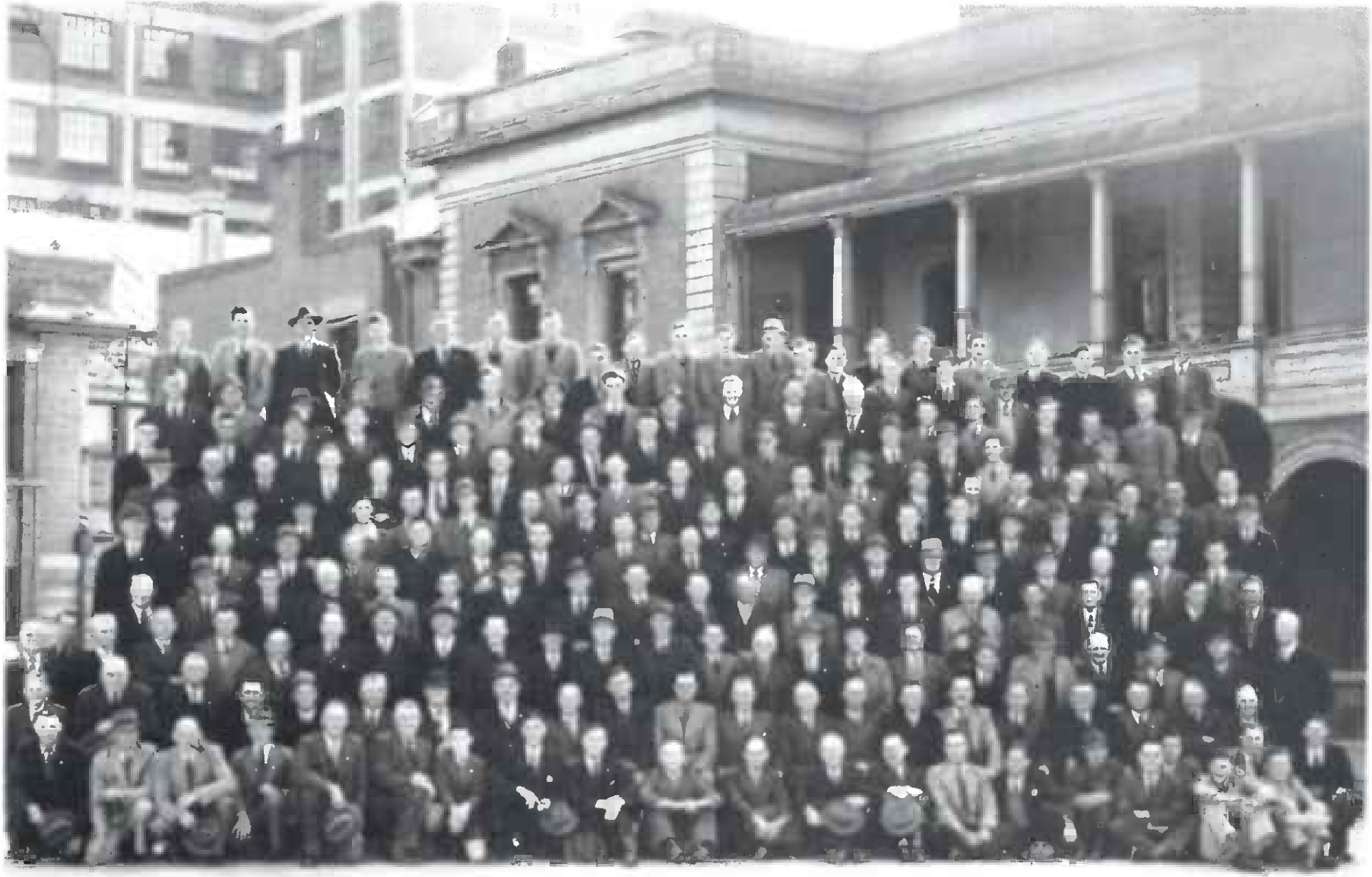
The Ashton Branch visited the Lenswood and Forest Range Branch for their annual combined meeting on 18 October 1948. Mr F. C. Richards (General Secretary of the Agricultural Bureau) attended, along with Mr H. Parry Brown of the New South Wales Agricultural Department, Mr D. Kilpatrick, the District Horticultural Adviser and 105 Agricultural Bureau members. Mr Richards reported on the proceedings.

> The Branch is indeed fortunate that it has such an enthusiastic Committee headed by Mr Clark Filsell (Chairman) and Mr Clarrie Mason (Hon. Secretary).
>
> After having conducted their formal business, the members of the Lenswood and Forest Range Junior Branch joined the Seniors' meeting.
>
> Mr Filsell presided over the formal portion of the programme; which included a 20 minute "problem session" during which anyone present was invited to seek information on any question. This was a very striking example of the value of the Bureau, for it provided an excellent opportunity for any member or visitor to put before his fellow producers a problem on which he sought enlightenment. It is a practice which I strongly recommend all Branches to adopt, for it brought forward a wealth of very valuable information from practical men.
>
> The Chairman of the visiting Branch, Mr R. Miller, then took charge of the meeting, and two papers of outstanding merit were read, one on strawberry culture and another on the care of the orchard tractor, the latter by a member who had not previously spoken at a meeting. The discussion which followed was keen and instructive. Then Messrs Cramond and Schulze opened a discussion on orchard cultivation. They occupied chairs in front of the meeting and debated the pros and cons of the subject in a conversational manner, the audience being invited to participate and ask either speaker questions.
>
> Again I commend this practice to the consideration of the programme committee of all Branches.
>
> I then presented a Life Membership Certificate to Mr R. Cramond in recognition of his service to the Agricultural Bureau. (*JASA*, November 1948, p. 194.)

Mr Parry Brown was in South Australia to investigate the Bureau with the intention of setting up a similar organisation in New South Wales and was extremely impressed by what he saw. Today, New South Wales is the only other State in Australia to have an active Agricultural Bureau movement.

1948 marked the 60th anniversary of the Agricultural Bureau of South Australia. The 50th anniversary had passed with less celebration than one would expect, as Australians struggled to survive the Depression. Now in the post-war euphoria they could make up for lost opportunities with jubilant celebrations. The Advisory Board arranged a dinner to be held on 6 September, the day before the Annual Congress began. Approximately 560 attended the function in John Martin's Dining Hall in Rundle Street. The Governor, Sir Willoughby Norrie addressed the assembled group after a dinner representing the finest local produce – cream of tomato soup, crumbed whiting with tartar sauce, roast seasoned turkey and ham with vegetables in season, topped off with apple pie and custard. At the end of the evening, entertainment was provided by Mr Tom King (pianist), Mr A. Campbell (vocalist), Mr S. Aquilina (piano accordionist) and Mr H. S. Cheesman ("Technicolor in Rags"). It was a great success and set the Congress off to an excellent start.

Mr W. J. Spafford retired from the position of Director of Agriculture on 12 April 1949 after 44 years of service to agriculture in South Australia. In 1903 he had graduated from Roseworthy Agricultural College. Two years later he was appointed Assistant Experimentalist there, and in 1914, became Superintendent of Experimental Work for the Department of Agriculture. He held that position for 10 years, after which he was made Chief Agricultural Adviser, then in 1936, he was appointed Director of Agriculture. While at



Delegates to the 1948 Diamond Jubilee Congress.

Roseworthy, he had developed several strains of wheat, including Ford and Sultan, which were used extensively for many years. He sat on many committees in his time, the most important being the Rural Settlement Committee, Commonwealth Board of Enquiry on Wheat Harvest Costs and the Advisory Committee on Soil Conservation. He was also Chairman of the Australian Barley Board and of the District War Agricultural Committee in South Australia.

Dr A. R Callaghan was appointed in his place, taking up the duties on 30 May 1949. Dr Callaghan grew up at Bathurst in New South Wales and was educated at the Bathurst High School and University of Sydney. He was selected as the New South Wales Rhodes Scholar for 1925 and studied agriculture at Oxford. Afterwards, he spent four years working for the New South Wales Department of Agriculture and the Government Experimental Farms before taking the position of Principal of Roseworthy Agricultural College in July 1932. He was awarded the CMG in the 1945 Birthday Honours. He was deeply involved in the development of land for soldier settlements after the Second World War. At the time of his appointment to the Directorship, he was still needed to conclude this work, so was permitted to remain Chairman of the Land Development Executive. In the meantime, some of his duties as Director of Agriculture would be performed by Mr R. C. Scott (Chief Agricultural Adviser) and Mr S. T. North (Secretary of the Department).

The members of the Yandiah Branch of the Agricultural Bureau took advantage of their increased prosperity and mobility during the post-war period to arrange a 9-day tour. Twenty-eight members of the branch visited the Murray Valley, Wimmera and South-East Districts, accompanied by an officer of the South Australian Government Tourist Bureau, Mr T. A. Sexton. The cost of this whole trip, including hotel accommodation, was £17 10s. Their first port of call was the Morgan pumping station which marked the beginning of the Morgan-Whyalla pipeline. The first night was spent at Renmark, where the Chairman of the local branch of the Agricultural Bureau, Mr J. Showell, met them and described the irrigation system in use at Renmark. The group visited his property, the largest in the area, and also inspected the overhead sprinkler system used by a Mr Watkins for citrus production. Similar hospitality was offered throughout the trip, and those taking part had many opportunities to inspect advances in farming in all areas visited. The tour was a great success, and other branches flooded the Tourist Bureau with enquiries, all keen to arrange similar excursions. These trips were to become a major feature in Bureau life over the next few years. Varying in length, many were confined to a few days as it was awkward for those concerned to leave their farms for extended periods.

With the availability of air transport, branches could travel greater distances in their limited time. One of the first branches to take advantage of this was the Freeling Branch of the Agricultural Bureau, which visited Kangaroo Island on 11 September 1952 for the day.

Motoring from Freeling, the party boarded a Guinea Airways DC3 'plane at Parafield, which had been chartered for the trip, and spent a most interesting air journey, flying over the City, Mount Lofty Ranges to Mount Bold Reservoir, and thence along the coast, crossing Backstairs Passage to the Island and landing at Cygnet. There the party was met by a Bond's bus, previously hired for the occasion, and commenced a motoring tour along the southern road leading to Parndana and the Soldier Settlements area. Members were conducted over the many workshops, repair shops and temporary township from which is directed the Government's operations in connection with the new settlements. A member of the Parndana staff then journeyed with the party to point out other features of the scheme, including the new farms in their different stages of development and the permanent township in course of completion. The progress being made in converting the virgin country into arable land was shown the members, and it was of particular interest to note the advancement on properties carefully graded and being made ready for tenants. Water conservation, pasture sowing, fencing, and all the various steps to establish the settlement were inspected during the morning until it was time to return to Kingscote for lunch. After the meal the town and foreshore were viewed and, once again boarding the bus, the party motored along sections of the north Coast, calling at some of the Island's beauty spots. A stop was also made at the shearing shed of the biggest farm on the Island, where the visitors were conducted around the comprehensive plant while sheep were being shorn.

There had been much discussion and many cameras had clicked many times, but Cygnet marked the end of the day's tour, and the 'plane awaited members for the return flight to Parafield. This was done along the usual route, but nearing West Beach, the Pilot flew inland in

The Freeling Branch setting off for Kangaroo Island, photographed in front of the DC3 aeroplane chartered for the journey.

order to give his passengers a view of the new airport under construction. (*JASA*, October 1952, p.142.)

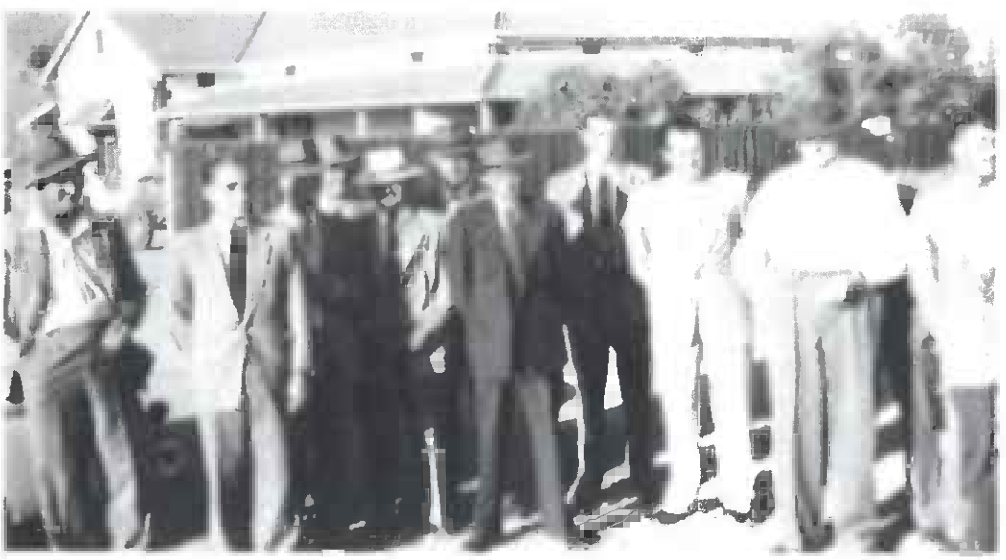
It was a great success, and many other branches would follow their lead in later years.

By the end of the '40s, field days were a major part of Agricultural Bureau life. Nearly every branch was involved in a field day of some description, visiting Government Experimental Plots, inspecting the work done on members' farms, or attending machinery demonstrations. The following reports give an idea of the variety of subjects covered by these days.

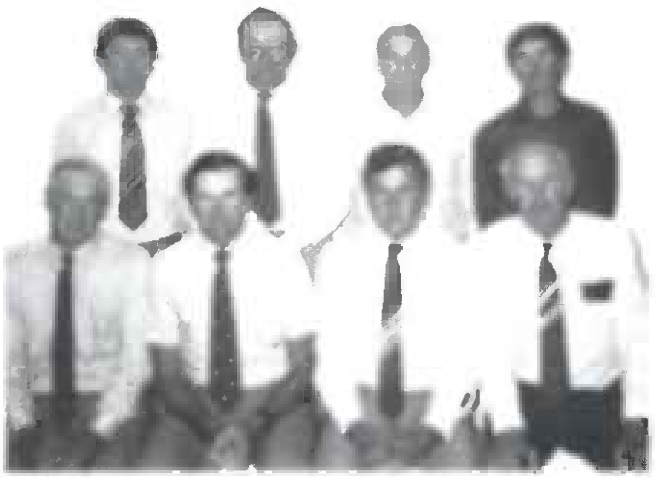
Buchanan Branch at property of Mr S. O. Thomson, Hampden on 15 July 1949.

There was an attendance of approximately 80 farmers from Kapunda, Eudunda, Neales Flat, Frankston, Tarlee, Point Pass, Julia and Ngapala.

Mr Thomson's lucerne fields were admired. The ones sown in 1943 had recently been cultivated in strips to show the effect of heavy cultivation with 4 in shares in comparison with 2 in, both worked 3 in to 4 in deep. Two strips not worked at all demonstrated clearly a control of barley grass and the invigoration of lucerne plants which were just commencing fresh growth. This



South Hummocks Branch departing for Adelaide, 1957, L-R: Messrs H Hamdorf, L Forrest, A Scott, H Taylor, J Bailey, A Penna, Ray Taylor, R Young, R Forrest, C Taylor, B Young, P Crowe. At rear is house of B Penna.



Buchanan Branch Committee, 1987.
Back L-R: Messrs E G Hansen, R D Pfitzner, O C Schutz, T G Schutz. Front L-R: Messrs T H Prior, M E Nietschke (Sec), M S Geister (Pres), M H Armstrong. Absent: Mr J A Oliver.

field has carried two sheep per acre for the past five seasons, and has provided a fine reserve of quality lucerne hay which farmers inspected, some with envious eyes.

The field sown in 1948 and cultivated and topdressed with superphosphate about six weeks to eight weeks ago, was showing a nice growth of fresh lucerne 4 in to 6 in high.

Mr Thomson's field of Phalaris tuberosa, sown with 2½lb seed per acre in 1948 on a well prepared seedbed, was a delight to see. It was a stand of nice, even thickness, with a fresh growth of leaf with the medics, mostly barrel, commencing amongst it.

Mr L. J. Cook, Experimentalist of the Department, addressed the farmers on these pasture fields and their treatments.

The soil conservation work of the farm has also been very well done under the supervision of the Department's soil conservation staff. Mr J. A. Beare, Assistant Soil Conservator, explained the making of the banks on cultivated fields with the establishment of runways, and the furrowing on higher slopes of pasture land. One field of banking had just been completed and sown this year, and farmers saw the runway which was sown with Phalaris, barrel clover, and Wimmera ryegrass, which was just germinating.

The older field that had been banked for several seasons showed how well the land was being held, and how an established runway of grass and clover was coping with the excess water, and was looking green and fresh and not a weed on what was previously a deep gutter. *(JASA,* September 1949, p. 68.)

The Shoal Bay Branch visiting the Penneshaw Branch, photographed near the Cape Willoughby Lighthouse overlooking 'Backstair Passage', November 1946.
Back row L-R: Messrs Bill Barrett, Arthur Buck, John Turner, Eric Bell, Eric Buck, Peter Turner, Milton Turner. Front row: Messrs Glen Barrett, Garret Bell, Len Trethewey, Dick Trethewey. Len and Dick Trethewey were members of the Penneshaw Branch and were, together with Mr A L Howard, hosts for the day.

Mallala Branch on 10 July 1949

During the day between 300 and 400 people assembled to inspect spray equipment, tractors, cultivators, and scarifiers in action, as well as a number of stationary plants, such as milking machines, wood sawing machines, etc. In the morning, Mr H. E. Orchard (Weeds Adviser) conducted a spraying trial, using a commercial hormone-type weedicide called Weedar, applied by means of a low-volume spray plant mounted on an ordinary sedan car. Demonstrations were also given with spray plants attached to tractors.

Lunch was provided by the Mallala CWA and the afternoon proceedings were opened by Mr O. H. Heinrich (Member, Advisory Board of Agriculture). A practical demonstration of the effect of speed and type of implements on soil structure was conducted by Mr R. I Herriot (Soil Conservator). Other official guests included Messrs A. L. Royal (Advisory Board), F. C. Gross (Agricultural Adviser), L. J. Cook (Experimentalist), W. A. Michelmore (Field Officer), F. C. Richards (General Secretary), and C. M. Allender (Assistant General Secretary).

The success of this day must be attributed to the untiring efforts of the organizing committee led by Mr A. S. Helps (Branch Chairman) and Mr Max Marshman (Secretary), and the co-operation of local agents and farmers who made implements and machines available for display. (*JASA*, September 1949, p. 75.)

Coonawarra and Comaum Branches, on 2 November 1949.

The Field Day was devoted to the inspection of pasture plots laid down by the Department of Agriculture to demonstrate the establishment and maintenance of pastures on varying soil types in the district. The plots of Messrs Hinze and S. H. Castine were on comparatively heavy black land whereas the next plot to be inspected was on a reclaimed orchard property belonging to Messrs Redman and Sons at Coonawarra ... After lunch speeches were given by Messrs P. J. Baily and S. Shepherd (Members of the Advisory Board of Agriculture), Mr R. C. Scott and other department officers. The first stop in the afternoon inspection was at Mr B. J. Magarey's where a field of Phalaris tuberosa was being left for seed. The next stop was at Mr C. F. Provis' where pasture was being established on sandy stringy bark country. The final stop was made at Mr A. K. Berkin's at Comaum where further pasture plots were inspected.

The departmental officers present attended and spoke at a meeting of the Comaum Branch held during the evening. (*JASA*, November 1949, p. 177.)

Younghusband Branch, 3 November 1949

The party assembled at Mr Garry Schmidt's property, where the owner exhibited and explained his flood irrigation system, his main inlet channel from the river pumping plant, spray irrigation system, and 75 acres of vines, citrus and stone fruits interplanted with vegetables. During the inspection, Mr D. T. Kilpatrick commented on the fruit trees, and Mr M. B. Spurling on the dangers of overwatering by using sprinklers with too large a coverage. Afternoon tea was served at Mr Schmidt's and the party then moved to Mr Jim Brooks's where main interest was focused on the spray irrigation system, lucerne paddocks, experimental plots and the stud Jersey herd. Mr J. O. Hatter gave a short address on the general management of dairy cattle and cleanliness of dairies and dairy equipment. (*JASA*, December 1949, p. 222.)

Loxton Branch at Lindsay Point on 10 March 1950

Latest of the numerous official and semi-official visits to be paid to Lindsay Point to inspect the notable development in irrigated pastures made by Mr H. C Kempe took place on 10 March when a party of members of the Loxton Branch of the Agricultural Bureau did the trip by bus. The party numbered 32 members in all, including four from the Loxton North Branch ... After the party had partaken of a picnic lunch, Mr Kempe conducted the members on a tour of inspection of his paddocks answering numerous questions en route. Watering was in progress in most of the sections, and it was necessary to pick one's way carefully. In reply to questions, Mr Kempe explained various points, some of which are given below.

In the early paddocks inspected there was an abundance of kikuyu grass, and this Mr Kempe said was the principal summer fodder he grew and had proved itself the best for this season of the year in these parts. Sheep, he explained, were necessary for the successful establishment of irrigated pastures, but once properly established cattle had been found essential to control the growth effectively. Legumes, such as lucerne and clovers, were essential in laying down pastures, and of the summer clovers white clover was much in evidence at the present time.

Watering of pastures about every ten days was desirable during the summer for optimum

results. The recognized rotation to be followed was, broadly: Water – graze – superphosphate. But close attention to farm management was necessary. Ten chains was about the longest run of water to allow per bay. Super was applied once a year – up to 180 lb per acre – and a little seed added from year to year, though the aim was to obtain a permanent sward reproducing itself from season to season.

Without undertaking careful scientific tests over a long period, he said, it was impossible to state accurately the carrying capacity of his paddocks, but he considered that where properly established the pastures should be capable of supporting 15 sheep or one cow per acre. On one paddock of 12 acres, 50 head of cattle were running in tall grass after sheep had eaten down the short stuff in between the tussocks.

Asked how irrigated pastures competed with good natural growth in feed value, Mr Kempe said that they had been scientifically developed over the years so that the mixtures laid down provided as good an all-round diet as it was possible to get. The only time when natural feed of comparable value would be found in these parts would be the peak month in the spring of a really good season, such as occurred perhaps once every half dozen years. Whenever he had brought in sheep from the back country on to the irrigated pastures they had always shown a distinct improvement in a short time. *(JASA,* May 1950, p. 459-60.)

Cummins Branch at property of Mr W. C. B. Tribbeck on 24 August 1950

A large gathering of farmers from all parts of Eyre Peninsula showed great interest in the proceedings, and it was estimated that the attendance exceeded 700.

The opening ceremony was performed by Mr R. W. Pearson, M.P., a member of the Advisory Board of Agriculture. Mr Pearson was introduced by the President of the Cummins Agricultural Bureau, Mr Ken Hayman.

The function took the form of a demonstration of agricultural machinery, together with a test of skill on the part of drivers, who had to strike out and return on a land [sic] with a cultivator, and then work out the land. In addition to these two sections, a championship award was given.

Events were judged by a panel of farmers made up of Mr W. Barraud of Lipson, Mr Frank Richardson of Tumby Bay and Mr Keith Jarrett of Edillilie. The awards were:–

Strike out and return:–
First: J. Hill
Second: EricBorgas

Work out–
First: Syd Borgas
Second: M. Palm

Championship–
Syd Borgas

The chief value of the event was undoubtedly the opportunity it afforded farmers to view and compare the respective makes and types of tractors and see the various advances in agricultural machinery which were demonstrated.

Nineteen tractors were on show, representing 13 makes. Considerable interest was shown in the newer types such as Hanomag and Nuffield, but it would appear that the age of the tractor is of less importance than the efficiency of the driver, as the championship was won by the oldest machine in the competition.

In the area provided for the purpose were large numbers of machines of various types. Mr K. A. Jericho displayed his Farmall tractor fitted with a front-end loader and his home-made post-hole digger, constructed from scrap. A Caterpillar tractor fitted with a bulldozer blade was also on show.

Land cultivating implements were confined to various makes and types of cultivators. Disc implements were not in evidence except for one disc harrow. Some garden roto-hoes were on show, but were by no means a feature of the display.

Interest in weed spraying equipment was catered for by two types of machine, a low-volume boom spray and a high-velocity sprayer. Both types were seen under operational conditions. Some cars and trucks were also on display, but were not one of the main features.

A meeting was held at night in the Cummins Institute, when a moving picture lecture was given by Mr O. Heinrich of the Advisory Board of Agriculture. Mr Heinrich lectured on his trip through America and also presented the prizes for the day. This meeting was particularly well attended, and Mr Heinrich was accorded an enthusiastic vote of thanks for his splendid lecture. *(JASA,* October 1950, p. 153.)

Weavers Branch at Stansbury on 2 August 1951

Almost every mechanical device used in modern cereal farming was demonstrated – bulldozers, calfdozers, rabbit rippers, front-end loaders, haybalers, elevators, and tillage implements.

Weavers Branch Committee, 1987. Back L-R: Messrs Ron Duncan (Yorketown Area School Agricultural Committee Representative), Paul Preuss, Graham Duncan (Sr Vice Pres).
Front L-R: Messrs Mark Witcomb (Sec), Ian Bishop (Pres), Graham Warren (Treas), Bob May. Absent: Messrs Alan Twartz (Jr Vice Pres), Adrian Bishop (Publicity), Roger Lienert.

The strong, bitterly cold wind prevented weedsprayers from working.

Mr G. Strauss, of Rainbow, Victoria, inventor of a rabbit plough, a copy of which was demonstrated by his uncle, Mr O. H. Jaehne, Yorketown, said Victorian wheat districts had nothing like Weavers field day, which gave farmers [the] opportunity to see the latest machinery under actual test, and new devices applied.

A significant point that emerged from organizing this year's trial, the fifth staged by Weavers Branch, was the difficulty in finding a farmer who wanted his land fallowed. Emphasis by the Department of Agriculture on stubble mulching instead of stubble burning, and warnings of irreplaceable loss of organic material through fallowing, has introduced a changed agriculture. The District Agricultural Adviser (Mr F. C. Gross, Balaklava), who opened the field day, congratulated Weavers Branch on its splendid arrangements. The machines were a sign that mechanization was becoming more complete. Faster and more efficient machines were, however, a responsibility and soil improvement must not be overlooked. Every available straw of organic matter should be restored to the soil. Overhead draft implements with plenty of clearance to allow the passage of litter and rubbish, had been in action in the strikeout, and he hoped that this type of machine would soon be on every farm. Tillage implements adapted to the handling of organic matter were becoming the aim of implement makers . . . Five styles of rabbit rippers or ploughs were seen in action, some ploughing to a depth of 3 ft. Cheapest, most unique, and highly effective ripper was a broad-bladed, long-rigged one shown by Mr O H. Jaehne, Yorketown, and drawn by a small 2-ton crawler. Mr Jaehne said that Messrs Ron and Ken Sherriff, Yorketown, who constructed the implement had worked from photographs of the original ripper, invented and built by his nephew, Mr G. Strauss, Rainbow, Victoria. Cost of construction was about £5. Mr Strauss, who attended said every neighbour at Rainbow with rabbits had copied the idea. An 8 ft length of harvester spindle comprised the backbone, and a pull on a rope or lever put the 4½ in wide blade in or out of the ground to a depth of 3 ft. A trailer-pull pin held the unit, which travelled on its shoe or share when out of the ground. The photos on which the implement was fashioned were received only a fortnight before the field day. Another unorthodox design was by J. E. P. Campion & Sons, Curramulka, whose ripper blade protruded 6 ft beyond the nose of a Fordson Major. Where other designers had to devise means to force the tyne into the ground Campions' requires a steel rope regulator to prevent the natural downward and forward thrust from taking the share too deeply. Arms forking from the backbone of the ripper, passing beneath the body of the tractor, are pushed from rear stanchions. This unusual ripper can probe into corners, beneath fences, under trees and stone heaps, or into any hitherto practically inaccessible location. A feature is its simplicity.

E. H. Daniell & Sons, Coobowie, demonstrated a front-end loader of standard build for International tractors. Brian Daniell, who has just finished a course of welding, fitted the highly-efficient loader to the powerful W6 tractor. Many Coobowie fences are of limestone 4 ft high and 4 ft thick and frequently have further stone heaped alongside. Daniells will use the loader for rock-picking and for loading stone to take to Wool Bay Lime Co, not far from the farm.

Bourne Engineers, Pine Point, showed the uses to which their adjustable elevator can be put, particularly in bulk handling of grain. Open-mouthed sacks were elevated into a demonstration bin on a truck. Tipping was rapid, efficient, requiring only an operator to remove the empty bag. Bournes have purchased premises at Ardrossan, where bulk bins for all types of trucks will be made. Mr Bourne considers that bulk handling will constitute only part of Y.P. growers' marketing problems, as barley might continue to be bagged. Open-mouthed sacks

could be used for years, and farmers could commence bulk handling to terminal bins or the Ardrossan silo when completed, with little additional cost.

The range of exhibits of this striking and important field day, was further demonstrated by Barrett Bros, maltsters, Adelaide, who provided an interesting display of barley adversely affected during the malting process because of bad harvesting. Mr B. C. Newland, who visited Y.P. frequently in the open marketing days before 1939, said most frequent causes of barley damage was heavy threshing and fast speeds when harvesting. If the germ-end was knocked off, the grain would not grow in the malting process. Broken skin allowed the shoot to grow through the side, and faster than the rest. Damaged grain produced malt of uneven quality and substance was lost. (*JASA*, October 1951, p. 166-167.)

Tailem Bend Branch, the property of Mr A. H. Lienert on 4 October 1951

The crowd estimated to number 450 ... included visitors from all surrounding districts, and coming from as far afield as Gawler on the one side, and Loxton and Keith on the other. Makes included:– Chamberlain, Massey Harris, International, Fordson (kerosene, Diesel, and Diesel crawler types), Hanomag, Ferguson, and Marshall.

A fair display of tillage implements was provided by local farmers, including a trash seeder (Shearer), which commanded a fair amount of interest. It was the first opportunity for some to see it work, as this machine is a comparatively new invention to come into the field of agriculture, and the committee is very grateful to Messrs H. R. Gardner and Sons for bringing this machine along for demonstration. A "Strike out of land" competition proved to be a popular feature, and was keenly contested by 14 entrants. The winning strike out was made by Mr Harry Lienert driving his Marshall Mark 2, and drawing a 10 ft Sunduke cultivator. Mr Ted Miegel was placed second, driving a W.6; and Mr Peter Nagel came third with the handling of his Massey Harris 44K. The "strike outs" were all made with the "Sunduke" cultivator.

During the luncheon adjournment opportunity was taken by visiting farmers to inspect a fine crop of field peas growing on the property of Mr Mel Lienert. A crop of hay yielding 2 tons to the acre, being cut on the property of Mr E. A. Winen, was noticed en route to this inspection, and must have dispelled any doubts in the minds of visitors from the older districts as to the productive potentiality of our new land once it comes under development with modern and scientific methods ... After a grand parade of machinery, followed by tractors demonstrating with the implements, several items of interest were demonstrated and "bomber" tyres were displayed on Massey Harris and Chamberlain tractors as a first feature. It seems that wheel tractors, equipped with these tyres could be the answer to the problem of landholders who have new land to deal with. Any doubts as to their traction under a load were dispelled when Wally Pannach successfully hauled a 20 tyne Shearer cultivator over the testing sandhill with his Chamberlain 40KA equipped with these tyres.

Stump grubbing with the hook and cable was demonstrated quite satisfactorily by nearly every tractor present. Sceptical comment was made by a few as to the damage done to a tractor if engaged on this really tough job, and although it must be agreed that such work could not be conducive to the long life of a tractor, it must be pointed out that the little 12 year old Massey Harris Pacemaker, owned and driven by Mel Lienert, which won the applause of the crowd with its creditable exhibition of efficiency in the sandhill test, fitted with Anders patent grips, has grubbed many hundreds of tons of mallee stumps during its life. (*JASA*, November 1951, pp 217-218.)

Meningie Branch on 18 October 1951

Approximately 100 people attended the Field Day conducted by the Meningie Branch on properties east of Meningie on 18th October. Assembling on the scrub property of Dr H. C. Trumble at 10.30 am, visitors were shown over two-year and three-year old pastures by Dr Trumble himself. After an excellent luncheon provided in part by the ladies present, near the home of Mr Nigel Brookman, visitors were shown, with the help of an excellent map prepared by the owners, over Brookman Bros. property. A stand of pasture including perennial ryegrass attracted considerable attention.

Later in the afternoon those present motored to "Yarindale" Station where they were received by the owner, Mr S. Barton Pope. Mr Pope took visitors over a carefully organized inspection of his outstanding pastures (*JASA*, November 1951, p. 218.)

Mr A. M. Dawkins retired from the ABA at the end of 1949. He had served on the Board for 47 years, taking the position of Chairman twice, and

being a member of the Agricultural Bureau for 57 years – a remarkable achievement. He was one of the first students at Roseworthy when it opened. On completing his studies there, he returned to his father's property at Gawler River and was the foundation member of the Gawler River Branch of the Agricultural Bureau. His interest in Roseworthy continued; for over 20 years he was one of their examiners, and was appointed to the governing council of the college in 1932. His tireless efforts to promote agriculture in this State were recognised in 1948 when he was awarded an OBE on the Birthday Honours List.

In order to maintain the new interest in the Agricultural Bureau, branches arranged all sorts of innovative meetings. Field days and annual socials did a great deal to encourage members' participation, but other novelties were necessary. The Weavers Branch organised an "Old Members Night" on 7 April 1952. Unfortunately, the first Secretary from 1922, Mr L. Slade, was unable to attend, so Mr Harold Cornish presided over the gathering. He had served the branch as Secretary for 25 years. Seven of their members had been made life members – Messrs A. E. Anderson, J. A. Bridgers, W. G. Agnew, A. J. and H. W. Cornish, E. H. Giles and L. Slade. Mr Fred Richards attended the evening in his capacity as General Secretary of the Agricultural Bureau, and addressed the group, commenting on the vast changes in agriculture since his involvement with the Bureau. Most importantly were:

> the almost universal replacement of horses by tractors; an appreciation by farmers of the need for soil conservation practices in cultivation methods; the development of poorer soils in the better rainfall districts; rust resistant varieties of wheat; the increase in the extension services given by the Department, and last, but by no means least, the improvement of living conditions in farm homes and an appreciation of the part women play in the life of the rural community. (*JASA*, April 1952, p. 469.)

The Rosedale Branch recognised the fund of information held by its neighbours as well as its own members. In order to tap this resource, and encourage contact between themselves and nearby branches, they invited the Lyndoch Branch to send three speakers to their August meeting. First Mr Lee discussed *Farm Machinery*, explaining the method of rating horsepower, the different effects of rubber and steel wheels, optimum speeds for various machines, and how to make tools from scraps of metal found on a farm. This was followed by a talk on *Training a Sheep Dog* by Mr Daly. He recommended starting off the dog in a small yard with a few sheep, gradually building up the number until the young dog could cope with a large mob out in the open. Finally, Mr Ted Filsell spoke on *Home Fruit Tree Growing*. He covered the subject in detail, from the choosing of properly budded stock, through correct planting arrangements to the best methods of pruning and spraying. It was a very successful evening and encouraged the members to make further contact with the neighbouring branches of the Agricultural Bureau.

Rosedale Branch, 1987. Back L-R: Messrs Ian Evans (Treas), Roger Strong, Dean Afford, Trevor Secomb. Front L-R: Messrs Andrew Pulford (Vice Pres), Rodney Zerk (Pres), Bruce Bishop (Sec).

A tree planting competition was inaugurated by the Penwortham Branch in 1950. Each competitor was to plant at least six trees and the judge, Mr F. C. Gross, (District Agricultural Adviser), took into account the choice of varieties, separation of soil, protective measures against stock and vermin, and the maintenance of the trees. The trees chosen by competitors included Macrocarpa cypress, Pinus radiata, Arizona cypress, Upright cypress (Candle Pine), flowering gums and Athel trees. Mr P. Hyde was declared the winner after Mr Gross had inspected the sites with the branch Chairman, Mr Ashton. Close behind were Mr G. E. Ashton and Mr J. Rucioch. The planting of new trees had been sadly neglected by South Australia's farmers; it was hoped that similar competitions would be held by other branches to create an interest in and awareness of the need for more trees on farming land.

The Agricultural Bureau was broadening its horizons all the time. In 1949, the Kangarilla Branch enquired whether women could become members of the Men's Branches. In 1917 the Board had been against the idea, but many attitudes had changed during the last war, and this time they had no objections. It would be some time yet,

however, before many women did join Men's Branches. Even today, there are no women who have been sufficiently involved in the Agricultural Bureau to become members of the Advisory Board. However, with a large number of women on the rolls of the Agricultural Bureau today, it is certain women will take their place on the Board in the future.

In the post-war years the Upper South-East was developed as an important pastoral region. The apparently poor land could be improved through the use of artificial fertilisers. With the introduction of suitable clovers and grasses, fine pastures were developed. As early as 1950, Mr G. W. Neate of the Wirrega Branch could report on the results of 13 years of experimenting in this direction. Under the supervision of the Department of Agriculture he had conducted trials with copper and zinc added to superphosphate. These trace elements did not have any discernable effect on the pastures. The improvement appeared to have been caused solely by the super. However, the copper deficiency in the soil did affect the quality of the wool produced; steeliness in the clip could be rectified by supplying salt licks containing copper. It would seem that the most effective means of improving pastures in the area were the application of superphosphate and the introduction of good fodder crops.

The Paracombe Branch witnessed the first demonstration of aerial spraying in South Australia in 1950. The Neptune Oil Company and Robbie Aircraft Co. sprayed the apple orchard belonging to Mr S. M. James of Kersbrook with DDT. Although aerial spraying had been carried out interstate, this was the first in South Australia. It was believed that the nature and action of DDT was well-suited to this method of application. However, other sprays which were effective only if complete cover was accomplished, such as lead arsenate and the fungicides, would still have to be administered by hand. The Bureau members left with the impression that aerial spraying would soon find a very useful place in the horticulturalist's battle against insects.

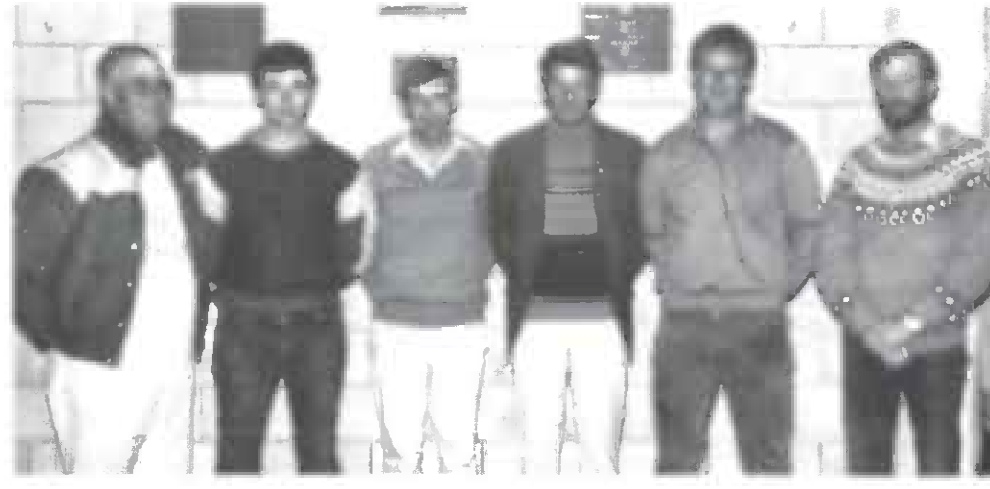
Another spray, 2,4-D, was increasing in popularity as a weedicide at this time. Applied as a spray, it attacked broad leafed plants only, so it could be used in cereal crops. Because of its selective action, it would not damage the crop already growing; only the weeds in between would be affected. Mr G. H. Herbert of the Bute Branch at the Yorke Peninsula Conference in 1951 discussed his own experience in spraying crops.

> During September last we purchased a 12 ft low-volume spraying plant. This plant consists of a 12 ft boom, a 1 h.p. engine and pump combined, and two 6-volt motors, which actually do the spraying. The two motors, one on each end of the boom, each drive a whizzer which sprays the solution or weedicide to a width of 24 ft.
>
> This plant we fitted on a four-wheeled trailer together with a 200 gal tank in which the mixture was held. The trailer was pulled by a tractor, and the two 6-volt motors were worked by the batteries of the tractor. Any 6-volt battery would operate the motors, and I believe a fully charged battery would last the motors for 17 hours.
>
> This year, 1950-51 season, we sprayed some 400 acres of crop, using 2,4-D in powder form at the rate of 7 oz per acre. The powder was first mixed with water and then poured into the 200 gal tank of water, with the pump working at 16 lb pressure. A gauge is supplied and with the tractor travelling at five miles per hour, 4 gal to 5 gal of mixture are sprayed per acre at the rate of 12 acres an hour. It is our belief that as low as 4 oz of 2,4-D per acre would be sufficient to kill turnip if sprayed at the correct time, that is when the crop is 4 in to 6 in high and the turnip small. (*JASA*, April 1951, p. 455.)

Using this method Mr Herbert obtained a 99% kill rate of wild turnip in crops of wheat, barley and oats. At a cost of 7s per acre he believed it well worthwhile.

Wheat Crop Competitions continued to be a major feature of Bureau life throughout the 1950s. In the 1951-52 season, two new categories were introduced in the championship competitions – the State Quality Wheat Crop Competition relating to good milling and baking qualities of varieties, and the State Wheat Grower Championship which took into account the grain yield in relation to "useful" rainfall. This latter category was won by Mr E. S. R. Rayson of Buckleboo (north west of Kimba). In a marginal cropping area, he had in fact achieved a rate of production equalling 176 lb (nearly 3 bushels) for each inch of rainfall during the growing period. Under the circumstances prevailing at that time, this approached the highest possible yield for a wheat crop. The State Quality Wheat Crop Championship was awarded to Mr C. Rodda and Sons of Thrington with a crop of Warigo, a variety bred at the Waite Institute.

The Laura Branch inaugurated a pasture competition in 1951. Of the 11 competitors who participated, nine were primarily concerned with dairying. The following scale of points was used



Laura Branch Committee, 1987. L-R: Messrs Len Klemm, Colin Zanker (Vice Chairman), Bevan Smith (Chairman), Dean Jared, Fraser Smith, Graham Peck (Sec).

by Mr P. C. Angove, District Agricultural Adviser, in judging the entries:

Density and evenness of sward	60
Composition of pasture	40
Freedom from weeds	25
Management –	
Control of grazing	25
Fertilizing	25
General use – harrowing, mowing etc	25
Total	200

(*JASA*, January 1952, p. 304.)

Few of the entries approached the ideal pasture of approximately 60% of improved grasses and 40% of improved clovers. There was also a fair proportion of weeds present, especially Salvation Jane, which detracted from the value of the pastures. He experienced a complication in judging the pastures because the entries encompassed a wide range of different conditions from the high rainfall in the hills country to the plains, which received an average annual rainfall of 16 in. Taking this into account, and after much deliberation, Mr F. H. Smith was declared the winner with 179 points. Second was Mr O. Pech, with 165 and Mr V. I. Pech was placed third with a score of 151 points.

In November 1951, *The Journal of Agriculture* published a news review broadcast by the Director of Agriculture, Dr A. R. Callaghan. He announced that the 15% increase in Australian population in recent years had not been met by Australian farmers with a parallel increase in food production. The number of farm workers had not increased in anything like the proportion of city dwellers, and the resulting imbalance meant that fewer people on the land had to provide even more food for those in the cities. He listed the following figures to show the disparity between producers and consumers in South Australia.

Year	Population	Farm Workers	Factory Workers
1931	577,000	41,000	24,000
1939	599,000	44,000	43,000
1950	712,000	45,500	79,000

(*JASA*, November 1951, p. 180)

In fact, this meant that farmers were in a good position, for all their produce would find a ready market and they could afford to expand their operations. Very high prices were received for wool in the 1950-51 season – on average 129d per pound and many even higher for top grade wool (although this dropped back again the following year). Callaghan recommended combining sheep with wheat and barley, using oats as a pasture to further widen the rotation. Their land needed rest periods if they were to continue to secure high yields. It was hoped that wool, meat and dairy products from the newly established war service land settlements in high rainfall areas would help to meet the sudden increase in demand for primary products. Poultry and egg production had declined in previous years; the rapid spread of built up areas on the Adelaide Plains meant that vegetable production had decreased by 20-30%. All primary producers would find a ready market for their produce under the conditions, and the '50s proved to be a prosperous period for South Australian farmers.

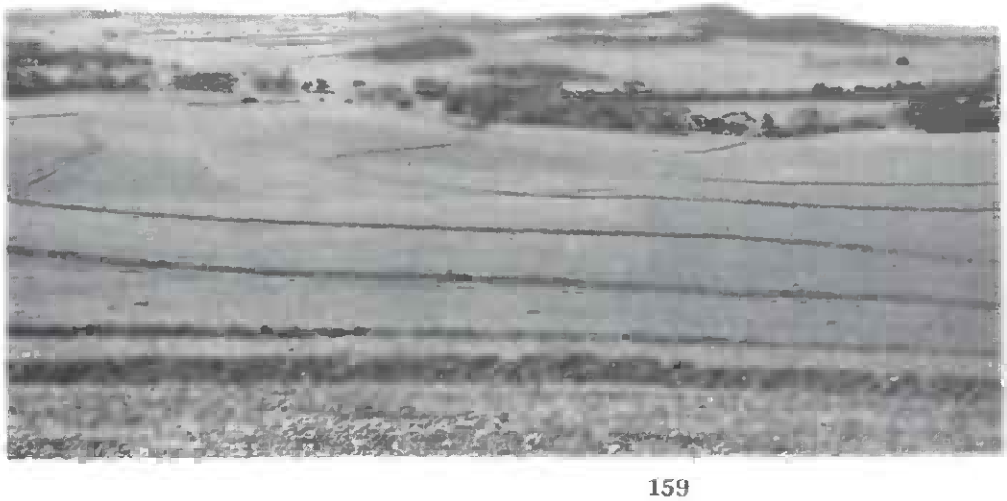
The idea of holding hogget competitions originally came from Mr Glen Dinning of the Mundalla Branch of the Agricultural Bureau. The first one was held on 22 August 1951 by the Mundalla Branch. In 1965 Glen Dinning was presented with a special award at the Tatiara Conference in recognition of his foresight and innovation. The Weavers Branch initiated this move, believing he should be rewarded for his contribution to the sheep industry. It is interesting to note that

Weavers District was named for Alfred Weavers, who established the first commercial enterprise attempted on the Yorke Peninsula, namely, sheep grazing. He chose the site well, and the area became an excellent sheep breeding district. Hogget competitions caught on and were held all over the State. They are still popular today.

During this period, the Department of Agriculture set itself up to take an active, positive role in changing farming practices to prevent soil erosion. A special branch was set up to administer the Soil Conservation Act and to educate South Australian farmers. Soil conservation districts were declared in the Murray Mallee, Murray Plain and Upper Eyre Peninsula, each with officers to implement schemes to repair the damage of soil erosion and prevent further erosion. Another district was soon formed on Yorke Peninsula, and still later one encompassing the western half of the Broughton catchment area. In 1953 the Soil Conservation Branch held its first soil school. The members of the South Kilkerran and Urania Branches of the Agricultural Bureau on Yorke Peninsula met for six evenings and two field days to listen to lectures and observe practical demonstrations by Peter Geytenbeek of the Soil Conservation Branch. This was only the first of a whole series of soil schools organised by the Department of Agriculture and conducted under the auspices of the Agricultural Bureau. Eighteen schools were held in the next three years, mainly on Eyre Peninsula, Yorke Peninsula and in the North. In a handbook compiled by the Officers of the Soil Conservation Branch, the recommended size for these schools was between 25 and 40 participants. They also suggested that schools be held February to April in cereal growing areas, and July to August in pastoral areas. In order to provide useful practical information, soil schools provided the farmer with information on how soils differ, how they behave, and how management can affect soils. Generally the lectures were held on a weekly basis, a six week course in cereal growing areas, and five in pastoral districts. Field days were then held to demonstrate this theory in practice. After a few years, interest in soil schools waned until a further upsurge of enthusiasm occurred in 1965. This was partly due to the efforts of the Soil Conservation Branch advertising its services and offering schools in place of conferences.

Members of the Petersville Branch were concerned about the erosion problems in their area. Mr Peter Geytenbeek of the Soil Conservation Branch was largely responsible for the "Petersville Watershed Project" in its initial period from 1951 to 1956, a project designed to check erosion in the area. Several properties were involved including those of Messrs V. Dutschke, J. W. Thomas, E. T. Thomas, H. W. Heard, A. Heard, C. H. Vandepeer, A. Vandepeer, Smith Bros, E. Palin, B. Wood and K. Wood. Together, these properties encompassed a catchment area that fed into one major watercourse. This had caused severe erosion problems on the individual properties, and when substantial rains fell, the watercourse flooded, causing further damage. The main road was flooded, depositing silt on the road when the waters finally drained away. In order to be successful, the whole watershed had to be treated.

Peter Geytenbeek gained the confidence of the farmers involved, and they all agreed to co-operate in the project. The Department of Agriculture staff planned and surveyed the area. A system of contour banks was constructed to lead the water safely from the watershed along a natural waterway which eventually entered the sea at Ardrossan. Where possible, the natural drainage



Contour banks built as part of a soil conservation programme.

was used, but some watercourses were too severely eroded for continued use. In these situations, grassed waterways were constructed alongside them.

The Petersville Watershed Project successfully arrested the water erosion in its vicinity. Vulnerable areas were protected by the measures introduced, and the work at Petersville served as a model for other areas where similar circumstances existed, in particular, Narridy Creek and Pisant Creek in the Mid-North.

Barley was becoming an increasingly important crop in South Australia. However, more care was needed in harvesting this cereal; the damaged grain was unsuitable for malting. The Barley Board used the Agricultural Bureau conferences to publicise this fact at the time. At the end of 1952, the Tailem Bend Branch suggested that a Barley Competition, run along the lines of the Wheat Competition, be introduced. The idea was put into action, and the result was popular competition that ran for many years. In 1955 the Mount Hope Branch offered its members the H. N. Myers Shield to be kept by the most consistent winner of the Barley Competition over 10 years. When the time came for it to be awarded, it turned out that Messrs R. J. Mahoney and Sydney Ness had both won three times. However, Sydney Ness had scored the highest aggregate over the years, so was ultimately declared the winner. Another shield was donated by F. H. Myers, and again Sydney Ness was the outright winner.

"Trash" farming was introduced in 1953. Instead of burning all the stubble or pasture residue in a paddock before sowing the next crop it could be ploughed under. This way the soil could be enriched and the organic matter built up rather than depleted as in the old method. It has taken many years for trash farming to be properly mastered, and even today there are many questions still to be answered, and suitable machinery developed to allow all burning to cease.

Footrot in sheep was becoming a major problem in South Australia in the early '50s. In 1954 the ABA, the Stock Owners Association, and the Australian Primary Producers Union demanded something be done to contain the disease. In reply, the Director of Agriculture, Dr Callaghan, sent a report to the Minister of Agriculture. He recommended that a detailed survey be carried out in the South-East (where the problem was most prevalent), with a view to taking legislative action. The Department of Agriculture should continue its intensive extension programme to help producers combat the disease, and an additional veterinary officer and stock inspector be appointed to ensure this could be achieved effectively.

Mr Hugh Myers (right) presenting H N Myers Shield to Mr Sydney Ness, 1963.

Although the rainfall for 1954 was three inches below average, it was a good year for primary producers. In his 1955 New Year's message, the Minister of Agriculture, the Hon. A. W. Christian, reported on production figures for the past year. Due to the dry spring, wheat and barley yields would be about 20% down on last year, but prices were good. Fruit and vine growers had had a very good season. A record lambing coincided with a marked improvement in quality, and a heavy wool clip made up for slightly lower prices for wool. Egg production was increasing even though prices were not as high as hoped. Since the drought of 1944-45, South Australia had experienced a run of good seasons and fair prices. Farmers could look forward to the next few years with optimism.

On 2 January 1955, a devastating bush fire raged through the Adelaide Hills. "Black Sunday", as it later became known, caused thousands of pounds of damage, especially to orchards in the area. A total of 89,000 trees were damaged, covering an area that comprised all of the State's cherry production, 5/6 of the apple production and 1/2 of the pear producing capacity. Most of the damage took the form of scorching and defoliation rather than actual burning. 555 acres of trees were completely destroyed. Almost half of those trees damaged were cherries. Because the damaged trees were more susceptible to disease during their slow recovery, orchardists saw a great increase in cherry virus disease and silver leaf over the next few years. Further damage was sustained by the fruit industry in the 1956-57 River Murray

Bulk handling would do away with the arduous task of bag sewing.

flood. Estimates a year later claimed that 20-30,000 fruit trees died as a result and 1,000-1,500 acres of vines suffered. These two disasters coming so close together caused a major setback in the fruit industry from which it took some time to recover.

Bulk handling of cereals was gradually gaining a place in South Australia by this time. In 1952, Ardrossan had been converted to bulk handling facilities. Following the Bulk Handling Act becoming effective on 7 June 1955, eight additional depots had been installed in the Lower North to deal with the 1956-57 harvest. These were at:–

Depot	Storage Capacity *(Bushels)*
Ardrossan	1,030,000
Paskeville	300,000
Bute	500,000
Balaklava	500,000
Hoyleton	500,000
Snowtown	500,000
Blyth	500,000
Brinkworth	500,000
Nantawarra	421,000

(JASA, August 1956, p. 11.)

After discussions at Agricultural Bureau meetings since 1900, bulk handling was finally adopted.

A new constitution of the ABA was submitted to the Minister of Agriculture in December 1956. The most important change was the limit of 12 years membership on the Board. This rule was introduced so that the ABA could benefit from the knowledge and enthusiasm of a greater number of people. Previously, many of the members had stayed on the Board for much longer periods and although they still had a lot to offer, it was deemed necessary to include more new members.

Numbers at the Annual Congress had gradually dropped off by this stage. Several members of the ABA were appointed to look into this matter. They came up with the following recommendations for improvements in the 1957 Congress.

1. *Objectives of Congress*:–
   (1) To publicise the Agricultural Bureau.
   (2) To examine the current trends in agriculture.
   (3) To attend to the business of the Agricultural Bureau.
2. *Time of Year for Congress*:–
   To hold Congress on Tuesday, Wednesday and Thursday during last full week of June.
3. *Form of Agenda*:–
   Tuesday Evening – Bonython Hall:– Oration by an eminent agriculturalist.
   Wednesday – Morning Session – Hall to be arranged in Adelaide:– *Current Trends in Agriculture.*
   Wednesday – Afternoon Session – Visit.
   Thursday – Morning Session – Hall to be arranged in Adelaide:– *Business Session.*
4. Delegate Fares:– Delegates to pay own fares to Congress – expenses not to be met by Department.
5. Branch Representation:– No limit to Branch representation – dispense with principle of delegates.

It was decided that the afternoon session on Thursday should be free unless there was a carry over from the business session. *(JASA*, March 1957, p. 364.)

By changing the format of Congress, it was hoped that every talk would be of interest to all Bureau members. Thus, only general topics would be discussed. More time would be devoted to Bureau business, such as constitutional changes. The Congress was seen by many as an opportunity for the Agricultural Bureau to publicise the

movement, and also a chance to examine itself from within.

The first Oration was delivered by Sir Ian Clunies-Ross, Chairman of the Commonwealth Scientific & Industrial Research Organisation (CSIRO) at that time. His address was on *Strengthening the Foundations of Australian Agriculture*. Australian farmers and agricultural scientists had worked hard to create solid foundations for their industries. This was necessary to enable them to survive droughts or sudden price drops resulting in decreased demand for their produce. There was still room for improvement, but in general, farmers could be optimistic about their future.

Some changes had been made in the attendance rules for branches at this time. Previously, members missing more than three consecutive meetings without sending an apology were removed from the roll book. Now, any person not attending at least three meetings in a year could be struck off the roll. A branch that held less than three meetings per year would soon cease to exist. A branch with less than 10 members could be closed by the ABA. This change in ruling pruned out the deadwood, those members who really took very little interest in the Bureau, thereby strengthening the Agricultural Bureau as a whole. Active, vital branches and members were the key to a successful organisation. Following the suggestion of the Clare Branch members, it was decided to allow branches to approve their own members, rather than the ABA. After all, it was the branch itself which could reasonably decide who should belong to the Bureau, rather than some distant Board which had never met the people concerned.

The Millicent Branch of the Agricultural Bureau held the first of many shearing schools in South Australia during September 1957. The local branch of the Stock Owners' Association joined them in this venture. Twenty-eight learners assembled at the shearing shed of Mr C. G. C. Skeer of Hatherleigh. Sheep for the school were provided by F. G. Bowman, H. A. Miles and E. R. Skeer. It was a great success and was followed by another in March the following year. Since then it has been a popular annual event, and has been the training ground for many future shearers. Many years later, in 1966, the Tally-Hi shearing method was introduced at the Millicent schools.

It was also in the South-East that the problem of cobalt deficiency was first recognised. During the '50s experiments were undertaken to discover whether cobalt drenches in lambs would be of any value. It was a success, and by 1958 cobalt bullets were developed and made available to farmers commercially. In this form the cobalt was easy to administer, and a small dose slowly released into the animal's system continuously. It was also found that doses of cobalt prevented "staggers" experienced by sheep in improved pastures containing phalaris.

Further changes in the Bureau constitution were introduced at the 1958 Congress, this time with regard to life membership awards. Meritorious service was more deserving than loyalty. It was really not enough to belong to the Bureau year after year, sitting quietly at the back of the group – an active part must be played by the member concerned. The ABA decided only to award about 12 life memberships each year, so that those concerned would have to have made

Mr W Spafford presenting life membership certificates to Messrs E Garrett and C H Behn at the conference marking the 500th meeting of the Saddleworth Branch, 26 May 1958.

an outstanding contribution to the Agricultural Bureau. They soon realised it was not necessary to limit the number awarded, merely to assess the recommendations received to ensure members were deserving of this honour. A smaller badge was introduced in May 1959 to distinguish those life memberships awarded under the new scheme from the old ruling.

During 1958 the boundaries of the conference districts were redrawn to avoid the overlapping of previous years. A new district, Hummocks, was formed in the process, including Upper Yorke Peninsula and the lower rainfall areas of the adjoining Lower North. Two years later it was possible to form another new district, the Murraylands North District. This was possible through the formation of two new branches, Mantung and Meribah-Paruna, and it included two of the older branches, Loxton and Lowbank. The last few years had seen a marked increase in the attendance figures for the regional conferences which were held annually. Part of this improved attendance was put down to a conference format which encouraged more discussion and participation from members than previously.

The Wheat Crop Competitions had outlived their value to some extent by this stage. Too much time was spent by Department of Agriculture officers in judging the crops. District competitions were called upon to do the preliminary judging for themselves, to cut down on the time required for departmental judges to inspect the crops and make decisions. Government subsidy was taken away from these competitions soon after. The last State Wheat Crop Competition was held in the 1960/61 season, although some branches continued to hold their own local competitions.

A new organiser had been appointed to the Agricultural Bureau in 1958, Colin Wood, who had previously been employed in the Education Department. Then in 1959, a new Director of Agriculture was appointed, Mr A. G. Strickland. After graduating from the University of Melbourne, he had worked for the Victorian Department of Agriculture before coming to South Australia as the Chief Horticulturalist in 1934. From that time on he served South Australian agriculture in many capacities. In particular, he was admired for the effective eradication measures he had implemented to deal with the post-war fruit fly outbreak in the Adelaide metropolitan area. He had been Chairman of the Irrigation Development Committee and a member of the Plantings and Sub-Divisions Advisory Committee for War Service Land Settlement in South Australia. He had also been Chairman of the Wheat Industry Improvement Committee, Weeds Advisory Committee, Agricultural & Chemicals Act Committee and Deputy Chairman of the South Australian Dried Fruits Board. In 1951, he was awarded a CBE in recognition of his services.

After the turbulence of the Second World War, South Australian rural life settled down to the prosperity of the 1950s. Agricultural practices had become increasingly modernised. By the end of the decade bulk handling of grain was rapidly taking over, horses had been completely replaced by motor power, new chemicals for the control of weeds and insects were in use, and mixed farming was on the way out. The next 10 years would see increasing specialisation on farms all over the State More and more farmers found that a scientific approach to their work was necessary and new technology was introduced in every branch of agriculture, horticulture and animal husbandry. Many of the branches of the Agricultural Bureau which had gone into recess during the war reopened. The new farmers in the Land Settlement Scheme realised they had a lot to learn about their chosen profession; old farmers needed to learn about the new ways. Thus the Bureau saw an enormous upsurge in membership during this period. The disruption of the '40s was replaced by the peace and prosperity of the '50s and farmers all over South Australia looked towards a bright future with enthusiastic optimism.