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100 Years of the Agricultural Bureau Movement,  
South Australian Agriculture and Its Future

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Establishment of the Bureau movement

Let us begin by looking at what led to the establishment of the Bureau Movement. The origins date to the mid 1870's - years of agricultural prosperity in South Australia. The years 1873 and 1874 were particularly successful and led to a great deal of optimism about the future for agriculture in the state. They also lent encouragement to the notion, then widely believed, that "rainfall follows the plough".

In 1875 the South Australian Government appointed its first Minister of Agriculture, Ebenezer Ward who was also the Minister of Education. Incidentally he subscribed to a policy that education should not be free as it would otherwise undermine family responsibility and might encourage radical ideas. The position of Minister of Agriculture was abolished again in 1877.

However, in 1875 there was also established a Royal Commission into agricultural education. There were three major recommendations arising from it. The first suggested the creation of a Department of Agriculture but this was not implemented. The second recommended the appointment of a Professor of Agriculture with an area of land upon which to operate, and in consequence Professor J. D. Custance was appointed and Olive Hill Farm at Roseworthy was purchased. Professor Custance was established there in 1882 and took in his first student intake in 1885. The third recommendation suggested the establishment of experimental farms and two were purchased. The first was at an area of 1 280 acres at Mannahill, adjacent to the Broken Hill Railway. Cereal farming was attempted there for several years but was finally abandoned in the drought of 1880. The second farm was established on 1 000 acres of drained swamp at Millicent, but the government gave little instruction to the overseer appointed other than to "do as well as he could".

The third important development in 1875 was by the printer Albert Molyneux, who introduced a new journal entitled "The Garden and Field".

What was agricultural productivity like in the 1870's?

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A number of books were written around this time for consumption in England outlining the progress of the Colony of South Australia, probably encompassing a degree of optimism. It was indicated that one man with a four horse team could do ploughing at the rate of two to three acres a day using a double mouldboard plough. Seeding was carried out by one man with a 22 ft wide Adamson broadcaster, able to drop seed on the ground at the rate of forty acres per day. Harrowing was carried out by one man with a six horse team using six leaved harrows, and this was followed up by a second harrowing with lighter harrows. If the rust, cockchafers or locusts did not get the crop, it would be taken off with strippers, each operated by one man with four horses covering seven to eight acres a day. One winnower was required for each three strippers. The winnower operators got one penny per bushel or two pence if they put the grain through twice. From there it was sent to the blowers and screens where it was bagged off. I believe we have seen some degree of improvement in our agricultural production methods since that time.

The early years of the 1880's were more difficult economically and less productive agriculturally, and little happened until July 1887. In this month, the Legislative Council and the House of Assembly jointly set up a "Committee to inquire into measures to encourage among farmers and small occupiers of land, products specially adapted to the soil and climate of South Australia, that would give the greatest profits, promote employment and increase the railway traffic." (One assumes it was not necessary to pay a levy of one pound, five shillings to the Railways if you used your own horse trolley.)

A variety of suggestions for various crops arose from this inquiry and more significantly there was adopted by the government the suggestion of Albert Molyneux to create an Agricultural Bureau Movement. The first meeting of the Central Agricultural Bureau, which was the precursor of today's Advisory Board of Agriculture, was held on 10 April 1888. Mr. Molyneux was soon afterwards appointed its Secretary and within 12 months there were 18 branches of the Bureau Movement with 135 members. At that time branches were limited to having a maximum of 12 members each.

Thus was created a volunteer band of enthusiastic agricultural experts with the objective of encouraging the development of agriculture in South Australia and who saw it as an honour to be able to serve within the Bureau movement.

The position of Minister of Agriculture was reintroduced in 1882, some additional staff were appointed to service the Bureau movement and gradually a Department of Agriculture began to develop although it was not formalised until 1902.

The Bureau movement gradually spread throughout the state and at its peak there were nearly 400 branches across the width and breadth of South Australia.

#### Agricultural issues

What have been the issues in South Australian agriculture over the years?

In the 1890's, the primary issues debated among members of the Agricultural Bureau Movement included the prevention of phylloxera in vines, and the identification of new wheat varieties especially rust resistance. This was often done by an individual Bureau to which members brought their own preferred wheat samples and comparisons were made. Considerable interest was expressed in matters of soil fertility especially in the use of superphosphate following the recent successful research at Roseworthy College. Refrigeration was introduced about this time and it opened up the prospect of a frozen meat trade to Europe. There was a strong desire to improve the efficiency of cultivation over the levels which were being achieved in the 1870's, and in 1894 the Northern Yorke Peninsula Field Trial Society held its first Field Day which attracted 2 000 farmers. The competition was won by Mr. C.H. Smith of Arthurton with a six furrow stump-jump plough. By 1899, the Society had been allocated a 119 acres site at Paskeville where the biennial Field Days still attract very large numbers of farmers. Genetic improvement of stock was also an issue being pursued by individual Bureaux, many of which pooled their resources to buy high quality bulls which were then shared out among members.

In the 1900's the issues which provoked significant debate included the development of free markets between the states following the removal of customs barriers at Federation. (The dairy industry still appears to be grappling with this issue.) Soil erosion began to be significant and there was also considerable discussion about the problem of rabbits. Bureaux on Kangaroo Island debated as to whether the animal should be introduced to the Island and eventually agreed it should not and encouraged the government to pass legislation providing for a hefty fine if anyone should attempt to do so. The possibility of bulk handling of grain was discussed although it took a further fifty years before the technology was actually introduced. New research centres were established at Turretfield, Kybybolite and Parafield. Mechanical shearing was an innovation then being introduced into the wool industry and its merits over blade shearing provoked much discussion.

The decade from 1910 to 1920 was one of considerable difficulty in agriculture especially following the state's most serious drought of 1914. A particular problem was that of sand in the stomach of horses, for which strong coffee was thought to be a suitable treatment. There was also concern about the shortage of veterinarians which may well have been related to the previous point. The effects of war and of farmers' sons going to fight in the trenches of Europe were uppermost in many people's minds.

The 1920's saw the introduction of soldier settlement schemes, and much effort was put into clearing the remaining areas of mallee which could be adapted for arable agriculture. Tractors were beginning to appear and there was much debate on their merits versus that of the continued use of horses. In the case of horses, farmers were able at least in good seasons, to produce their own fuel in the form of feedstuffs but considerable effort was needed to maintain them even when they were not being used and much time was necessary to prepare them ready to go into the field in working order. McCormick Deering tractors were on the market for 600 pounds and you could also purchase a Fordson tractor for 250 pounds

provided you were able to drive it with your legs crossed. The first mechanical milking machines were introduced during this decade, it being recommended that they should be adopted on any farm which had more than 12 cows. (I well remember the first introduction of the milking machine within our own family some 20 years later during the second world war, my own role being that of a bare-foot child walking around armed with a shovel.) Herd testing was also introduced in the 1920's and has over the years led to a great improvement in the efficiency of dairy production within the state. Pasture improvement competitions were also introduced about this time.

An important suggestion which arose from the 1926 Hills Agricultural Bureau Conference was that radio lectures on agricultural topics should be introduced. Radio Station 5CL began such broadcasts in 1927, the precursor of to-day's very widely respected "Country Hour".

The 1930's again introduced a difficult period in the state's agriculture. These were years of depression with low wheat prices. Many farmers could no longer afford to register their cars. There was much debate about the merits of converting tractors to run on wood-gas, fueled by mallee sticks. There were floods on the Murray swamps and frosts in the Barossa. Skeleton weed was discovered in New South Wales and was thought to be a threat to agriculture, indeed it was finally found in South Australia at Parilla in 1947. Tobacco was identified as a possible new industry and research work was carried out on its feasibility but it ultimately did not prove a money spinner. After many years of effort by Amos Howard, subterranean clover became recognised as an important component in pastures and began to be widely adopted. The Mules operation for sheep was first introduced and has provoked much debate since then, albeit one hopes primarily among farmers. Rising water tables were noticed in the irrigation areas along the Murray and the need for better irrigation systems was recognised.

The 1940's began during a time of war when increased food production was required. The Women's Land Army was instituted and there was debate among some Bureau's branches on how to make best use of prisoners of war on the farm. If you wanted to shear more than 1 000 sheep you had to get a permit to do so. Tuberculosis testing of both milk cows and milk vendors was introduced. Farmers became much more cognisant of soil conservation following the passage of the Soil Conservation Act in 1939 but more particularly following the drought of 1944. A number of Soil Boards were established under the encouragement of soil conservator Bob Herriot. Following the war, DDT which had been developed during the war, was introduced as a control for a wide range of insect problems. The first fruit fly control programmes in metropolitan Adelaide were introduced and have been an almost annual event ever since. Following the war, rural reconstruction programmes were introduced and new and better soldier settlement schemes were established. Other topical items discussed included how to get possession of a jeep and how to best use it on the farm, and the role of the G-well bagloader, a machiavellian device guaranteed to ruin the back of almost any farmer who used it.

The issues of importance in the 1950's included trace elements, trash seeding, aerial spraying, introduction of hormone herbicides including 2:4-D, footrot and the first recorded case of annual ryegrass toxicity.

By the 1960's there was increasing specialisation in agriculture and less mixed farming on individual properties. The Department of Agriculture's new research centre was established at Northfield. Synthetic clothing began to be widely used.

As a result, in the 1970's the bottom fell out of the wool market. Sitona weevils were first discovered. It was recognised that DDT was not broken down in the food chain and it was banned for use on livestock. The brucellosis and tuberculosis eradication campaign was introduced. New shed designs were introduced for wool sheds and for dairies including the first herring-bones. A major issue of the day was that of the role of dolomite in agriculture. I well recall Andy Mitchelmore in answer to a question as to the role of dolomite in controlling red-legged earthmite telling an a Bureau Conference at Eudunda that the only red-legged earthmite that would be killed were those that were hit on the head by it at the time it was broadcast. A range of alfalfa aphids arrived to plague us in the late 1970's.

The 1980's have been notable for the revolution in marketing in agricultural produce. There has been a much clearer demand for product definition including sale by description of wool and meat, the introduction of computer assisted livestock marketing and other electronic marketing devices. There has been competition and adjustment in Australian agriculture to the harsh economic realities of our role in world trade. Clearly there have been a great range of issues that have been discussed by the Bureau movement over the last 100 years as we have made progress in the efficiency of the state's agriculture.

#### Our own experience

Most of us can recognise changes in agriculture of great significance in our own life-times.

Fodder conservation is an area with which I have had some professional involvement throughout my career. It's an area where there has been considerable change over the past 50 years.

My first introduction was at the age of about 5 or 6. This involved using the binder, stooking the crop and getting ready to cart it. The driver's door had to be removed from the truck, the hay-frame found from last year, any split wooden hurdles wired up, the frame bolted to the tray of the truck after the bolts which had been mislaid from the previous season were located and the truck taken to the paddock and driven from stook to stook. My first role was that of putting the gear stick into neutral as the truck arrived at each stook, and the driver leapt out to grab his fork and start loading. After a while, I concluded that having the gear stick in neutral was the natural order of things. A day or two later I noticed while in the stackyard at the top of the hill that the natural order of things was not being met. So I moved the gear stick into neutral at which point the truck started to part company with the stack. The pitcher leapt off the truck even faster than he would had a snake been thrown up to him in a sheaf, and disaster was averted. Little was said.

We used to cart hay to an old dairy farmer who lived on the top of the range at the end of an awful billy goat track. I suspect we had the job because nobody else was silly enough to go up there. The first thing we had to do was to clean the spark plugs to ensure that we got there. After the

truck was loaded my job was to sit on the mudguard hanging onto headlamp in order to keep the front wheels on the ground. These days one can no longer hang hold of the headlight and the occupational health and safety requirements are that one should be firmly ensconced in the seat with a seatbelt. Things have changed.

Since then fodder conservation has changed over to bales. I remember one year at the Northfield Research Centre we carted 20 000 of them, many from Roseworthy College. More recently the big fodder conservation packages have come in with the big round bales becoming dominant. These can now be largely mechanically handled and have taken much of the physical drudgery out of the management of fodder conservation.

I am sure we can all look back over a great diversity of change over our lifetimes.

#### What of the future?

In recent years there has been a great deal of structural change in agriculture, much of it not easily achieved. Indeed currently some of it still not easily being achieved in Eyre Peninsula. It has been the view of some that the prospects for agriculture have worsened. Some sectors of the urban community may have the idea that agriculture is a "sunset" industry.

This is not so.

Productivity growth in Australian agriculture has more than offset declining commodity prices over recent years. The farmers in the audience tonight will encompass the leading farmers in South Australia over the past 20 years. During that period, Australia's agricultural sector has achieved an average annual productivity growth of 2.8%. This compares with an annual growth of 2.0% in the manufacturing sector and a growth of only 1.1% for the Australian economy as a whole. It is clear that Australian farmers on a world basis are maintaining their competitive position viz-a-vis those in overseas countries, particularly where overseas farmers are insulated from the harsh economic realities of current production costs by government subsidies.

This week in London, John Kerin told the Australian-British Chamber of Commerce "Australian agriculture is about to embark on a period of sustained and strong growth. Recent surveys have shown that agricultural productivity was out-performing the rest of the Australian economy as much as 2½ times."

What is this due to?

I believe much of it is due to the voluntary efforts of farmers like all of you present tonight who not only help themselves but also seek to help fellow farmers to a more productive and more efficient agriculture within South Australia. You all contribute to policy determination, the development of new technology, the adoption of new ideas and the spreading of the word for ways to make farming easier and more successful.

Whether it is as members of the Advisory Board of Agriculture, local Bureau branches, regional councils of the Department of Agriculture, commodity committees and zone committees of the United Farmers & Stockowners of S A Inc, other industry bodies such as the Horticultural Association or the South Australian Dairy Farmers Association or even small groups such as the Murraylands Cereal Rye Growers, these farmers are all contributing their personal time and effort to improving the efficiency of the state's agriculture.

They will have been doing so through the Bureau movement for 100 years from tomorrow.

It is through the efforts of our forebears in the Bureau movement and farmers such as all of you here tonight that even though we have gone through hard times, so long as we continue to improve our productivity there is still a great future for farming in South Australia in the years ahead.