AGRICULTURAL HISTORY OF KYBYBOLITE.

by L.J. Cook.

During the station days of the Kybybolite District, which extended from the early appearance of whites during the 1840's until 1905, the country was used practically wholly for the grazing of sheep for the production of wool. Doubtless small areas around and adjacent to homestead were reasonably cleared and some cultivation for crops and gardens was carried out, but definite records are not available.

Amongst the series of articles written by a special reporter who toured the South East during 1880, and published by "The South Australian Register", reference was made to the Kybybolite Station as being amongst the chief freeholds of the South East. It was then held by Mrs. James Affleck as containing 25,000 acres and carrying 18,000 sheep. No mention of cultivation for crops on this specific area was made, but in the statistical tables published, it is shown that the total area cultivated in 1879 in the County of MacDonnell was 8,436 acres, and 7,088 of these were in the four Hundreds of Binnum, Hynam, Lochaber and Glenroy. Of this 7,088 acres, 4,704 acres grew wheat and yielded 49,916 bushels, a little over 10 bushels per acre. Some of this may have been grown at Kybybolite, but it is more likely that most of it would have been grown in the Hundred of Hynam, on the western slopes of the Naracoorte Range.

Earlier, Ebenezer Ward wrote a book on his travels through the South East, which was published in 1869, and titled "The South-eastern district of South Australia, its Resources and Requirements".

A point or two of interest mentioned by him concerning the Binnum country was that it was about the driest part of the South East, and in the serious losses from the drought of 1865-66, Mr. H. Jones, owner of Binnum and Conker Stations, complained that he had lost 15,000 sheep and 800 cattle in actual deaths and loss of increase. He attributes the deaths partly to paucity of feed, but chiefly to scarcity of water. He says that all the surface waters failed, and that waterholes were exhausted, that had never been dry before. Mr. New, who held a small adjacent station, informed that his losses during the same period from scarcity of water and feed were 1,500 sheep out of 5,000.

Mr. Ward also alluded to the fencing improvements on runs, and opinioned that there was scarcely any unfenced run in the district. Journeying south from Binnum towards the Stations of Mr. James Affleck and Mr. Adam Smith, Ward stated that the country gets gradually better. On Mr. Affleck's there is some fine open country, with a more loamy and friable soil than on Binnum, although much of it is of the same class.

Statistics.

The first official statistics were published in 1873-4 season, and included the sheep population in the Counties of the State, and showed 204,678 head in County MacDonnell. Later figures are quoted for individual Hundreds in the Counties and in 1881-2 the figure 52,385 sheep is given for the Hundred of Binnum, which is situated in the South-eastern corner of County MacDonnell. Kybybolite Estate occupied the southern portion of

Annual Sheep Population averaged for each decade.

	County MacDonnell	Hundred of Binnum.	
ending 1880	222,730		
" 1890	202,140	40,701	20%
" 1900	175,966	42,250	24%
" 1910	230,203	47,294	21%
" 1920	147,983	36,257	25%
" 1930	203,246	66,681	33%
" 1940	324,858	114,709	35%
" 1950	306,274	113,208	37%
1954	481,380	146,270	30%

Wool production figures are available from 1930.

	County MacDonnell	Hundred of Binnum.	
1925		283,765 lbs.	
1930	1,657,342 lbs.	513,280 "	31%
1940	2,645,393 "	1,057,317 "	40%
1945	1,967,904 "	745,815 "	38%
1950	2,876,848 "	1,160,681 "	40%
1954	5,120,720 "	1,489,409 "	29%

Increase in wool production in Hd.Binnum	81%	from 1925	to 1930
" " " " " "	106%	" 1930	" 1940
" " " " " "	10%	" 1940	" 1950
" " " " " "	28%	" 1950	" 1954
" " " " " "	425%	" 1925	" 1954

These tables show that Binnum has consistently had the highest number of sheep, and produced the most wool of the Hundreds in the County MacDonnell. For the period of 75 years, Binnum has carried 29% of the sheep of the County, and since 1925 has produced 35% of its wool. From 1880 to 1920, there was practically no progress made in sheep development and production. There was a rise of sheep population during the first decade of the 20th Century, but it deteriorated again in the second decade, when the average population shows the lowest for all decades since statistics were recorded.

During the 1920's, improvement in pastures commenced and led by farmers of land in Hundred of Binnum, a steady increase in sheep production has proceeded for over 30 years. Statistics show that in 1954, practically 1½ million lbs. of wool were produced - five times as much as produced in 1925.

It is also noted that the wool produced per head of sheep was over 10 lbs. in 1954 as against approx. 8 lbs. in 1925.

Early in 1905, the homestead block at Kybybolite, consisting of 1,060 acres was handed over to the Department of Agriculture for experimental purposes. A manager, S.H. Schinckel, a very good practical farmer of the Naracoorte district, was appointed. Crops of wheat, oats and barley were sown during May and June, and it can therefore claim to be the first real Departmental Experimental Farm in the State. In the same year, a block of reclaimed swamp land at Murray Bridge, and 80 acres known as the cemetery at Parafield, were also handed over to the Department, but from reports available, actual work on these did not commence until 1906.

Professor William Angus, the Director of Agriculture at

Experimental Centres, there are problems in Australian agriculture which cannot be successfully tackled in this way. These require careful and constant supervision, considerable time for development of results, and must be tackled not with the idea altogether of getting paying results, but for the extension of our knowledge. The idea of getting paying returns from experimental and research work is a mistake. Right through the field of experiment much has been learned by failure, and this holds good with agricultural as with other work".

Now 50 years later, those of us who have followed the Kybybolite work closely, can see plainly what a lot of truth was in Professor Angus' statement, and what a time it took to realise. For years work with various crops and methods were preserved with small results and many failures, to the extent that the public purse, for a period of 25 to 30 years suffered an average annual loss of over £1,000. Conditions were difficult but knowledge and experience was gained, whilst those responsible had to persevere against much disappointment. The records of Hansard at Budget time, in many seasons will show what a hazard had to be faced, and set backs met. However, those who visited and knew the farm and its work, never lost faith and gave encouragement. When subterranean clover came and topdressing of pastures really began, the tide started to turn, with what a result.

Who today can value the indirect benefit to the State of South Australia and its finances. True it is that our old stalwarts, the late Sydney Shepherd and Edward Schinckel were the first to sow subterranean clover in the Kybybolite district, but the Experimental Farm followed with long term field tests, which brought visitors from far and wide, and it can justly claim that it has materially helped to put millions of pounds into the pockets of farmers and graziers of Australia. Professor Perkins started the first permanent topdressing experiments on natural pasture in 1919.

Professor Angus continued in his first report as follows:-

"Such subjects as nitrification (one of the most important natural processes affecting agriculture), the assimilation of food by the plant, the effect of heavy dressings of any artificial manure on the availability of plant food, the effect of rains on the fertility of the soils in certain localities, the best stage at which to cut wheat or oats for hay, the economic feeding of farm animals, a comparison of different crosses for lamb production, the best methods of working certain types of land, etc., afford ample scope for the experimentalist; and the fact that most of these have not been satisfactorily solved justifies the existence of such stations. But that this work may be successfully undertaken it is necessary to have adequate funds at our disposal".

It is interesting to note that Professor Angus realised the paucity of natural organic matter in the soils, and rather optimistically stated the value of sheep manure, lying under the woolshed at the time of his early visit to the station. Use was made of farm refuse and livestock excreta in a programme of crop production, but it was not until subterranean clover dressed with superphosphate annually, showed its ability, that a quick general build up of organic nitrogen took place.

Professor Angus wrote "concerning the Kybybolite Estate which adjoined the borderland of the South East district with [illegible] brought for closer settlement, and as it

a few inches to several feet, is a subsoil of clay, and in between there a pan of ironstone rubble, which forms one of the difficulties of dealing with this country. Another difficulty lies in the heavy rainfall (up to 35 inches) combined with the level nature of the land".

Angus was undoubtedly greatly misled by the exceptionally heavy rainfall received during the firsttwo seasons of the settlement. By 1920, careful records for 15 seasons showed the average rainfall for 1905-20 to be 22½ inches per annum, no where near as high as feared by Angus.

Cook made a physical analysis of the soil of one of the average fields in 1924 and published an article showing the unevenness of the clay subsoil in comparison with a more or less gentle slope of the surface soil. This factor combined with the extreme tenacity of the clay caused very poor natural drainage. Had it been possible to economically break through the 2 ft. clay subsoil below 8 - 18" of surface soil, into the reasonable marl below, cropping results in the early years would have been much better. The beautiful red gums of the district found plenty of substance in the underlayers to develop into some of the best trees of the State.

Angus continued "the estate is fairly closely covered in places with red gum, titree and sheoak, and on other parts with honeysuckle, fern and blackgrass. Here and there throughout the estate are found swamps, some of them being of considerable area. Another peculiarity of the country is the number of run-away holes which afford some natural outlet for the accumulated waters, and there is little doubt that, if these underground channels could be followed out, the problem of draining this country would be solved".

With reference to the area of the Experimental Farm, Professor Angus said that "the idea in mind in requesting this farm to be handed over the the Department was, that as it is typical of a large area in the district, and as there are so many difficulties facing the settlers in converting this pastoral country into arable condition, its working by the Department might afford considerable help to those on the Estate and save much money in useless experiment by them".

S.H. Schinckel remained less than two years, resigning during 1906, when H.C. Wilson took over the management until November, 1909.

Wilson, was a diplomate of Roseworthy Agriculture College, who had had experience as assistant at the Murray Bridge Experimental Farm before moving to Victoria to manage the Werribee Research Centre, which he successfully managed for many years.

During the term of Messrs. Schinckel and Wilson at Kybybolite, work was carried out in clearing the land and experiments on cereal crops and fodder crops of peas, rape, sorghum, including fertiliser trials of phosphate, lime and gypsum.

For many years the orchard established by the early station owners, on the slopes and banks of the "runaway" hole in front of the Homestead had been well known for the quality of fruit produced. Soon after commencing the experimental farm, an area of 12 acres north-west of the homestead was selected for a new orchard, cleared, subsoiled and prepared, and was

principally of export varieties, under a fairly comprehensive manure test. Other varieties of pip and stone fruits as well as vines and a few berry fruits were included, all planted under the direction of the then Fruit Expert of the State Department, Geo. Quinn, and protected by breakwinds of Pinus Radiata on the South-west and almonds on the North-west.

The orchard was maintained under very fair conditions for 22 years, and produced quite really good quality fruit, especially apples. Many of the old residents of the district will well remember the fruit which was sold to them annually. The best apples were often exported to England, but on the whole the trees did not thrive really well. Quantity of production, combined with marketing expenses and difficulties, did not lead to sufficient financial return to warrant commercial growing.

During the depression of 1930, it was decided to include the orchard amongst the works of the Farm to be discontinued. Subsequently most of the apple trees were grubbed, and it was found that the roots of the trees had not penetrated the clay subsoil, and the trees had existed on the surface soil only, which accounted for their dwarf tree growth. A report on the apple production was published by Cook in the South Aust. Journal.

If it were possible to break through the 24 - 30" of stiff clay subsoil, sufficiently to allow roots of trees to reach the marl below, no doubt the growth of trees and production would have been much greater.

During 1908, an attempt was made to improve the livestock on the Farm by the purchase and importation of sires of a number of noted breeders of British Breeds of sheep, but as found later, this move was too previous as the crops grown and native pastures were insufficient for these breeds. Similarly, the introduction of good Shorthorn heifers was scarcely warranted. It was reported, however, that the introduction of a stallion "MacBlend" in 1907 was quite an acquisition.

A Poultry Demonstration Station, under D.F. Laurie the Poultry Expert of the Department of Agriculture, was started in 1908, and continued until 1914, with Egg Laying Competitions from 1910 to 1913 for South Eastern Poultry farmers, as well as an open competition, and the staff for the work were W.C. Kuhne, P. Rumball, W.A. Carter and Professor Lowrie, Director of Agriculture.

In November, 1909, W.J. Colebatch, B. Sc. (Agric) M.R.C.V.S. was appointed Superintendent of Experimental Work in the South East, and took over the supervision of Kybybolite Farm. As well as being a graduate in Veterinary Science, he was also a Diplomate of Roseworthy College, and had secured experience in the United Kingdom, Lincoln Agriculture College, New Zealand and in Victoria. He immediately set about preparing land for permanent experimental plots based on the system used at Rothamstead in England.

Experiments were extended with the cereals, and their mixtures, and various fertilisers. A special drill for sowing small seeds and a mole drain plough were secured from New Zealand and a preliminary trial with the latter at three varying depths and two widths between drains. The making of drains surrounding the cropping fields was commenced in 1910 by using "Crowder" or

The run of wet seasons experienced in the early years of Kybybolite Farm induced Colebatch to set about using a surface draining system, together with the Herringbone system of temporary field drainage to cope with the excess winter water, and enable better conditions for cropping the land with annual species of cereals and fodder crops. A lot of work was spent making the drains, two miles in 1910, 5½ in 1911, and they did some good, especially where fields had a reasonable natural slope.

Colebatch also commenced the English Leicester Stud early in 1910 by importing 43 stud sheep from New Zealand. These proved able to withstand the hard feed conditions, and were persisted with until pasture improvement development, when the stud greatly improved, won prizes in the Adelaide Royal Show during the 1920's and early 1930's. Their use in crossing with merinos enabled valuable comeback ewes to be bred, that proved very good mothers for fat lamb breeding, as well as for wool production in the 1930's.

Early in 1911, a few Lincolnshire Curly Coated or Baston breed of pigs were imported from England, but these apparently did not fare well under Kybybolite conditions, as no reports are available concerning their productivity, although they were used for breeding on the farm until 1916.

F.T. Cooper, R.D.A. took over as Farm Foreman under Colebatch during the autumn of 1910, but resigned in November, and was succeeded by W.R. Birks, B.Sc., who in turn was succeeded by Lindsey Webb Smith in 1912, who had been orchardist for the previous two seasons. E.S. Alcock, R.D.A. was appointed Supervisor of Experimental Plots during 1910-11 season, and E. Leishman was appointed Orchardist in 1913 and held it until 1919. Enlisted and was absent on service for 2½ years.

A Weighbridge was erected at the farmstead during 1910-11 and a grain grader added to the implements. Also that year new and commodious premises, still standing, were erected for housing the staff, an office and Farm Store room, whilst in 1911-12 a capacious implement shed was built, which stood for about 30 years adjacent to the old station stables at the approach to the Homestead.

W.J. Colebatch left the farm during 1914 to take over as Principal of Roseworthy Agriculture College, and in his final reports on Kybybolite mentioned the successful yields of 1912-13 and 1913-14 seasons of cereals, peas and kale crops, repeats the necessity of soil drainage, the use of lime only on well drained land, and opinioned that if land is drained, limed, cropped reasonably for 5 to 6 years, it will so improve in physical character and fertility that the carrying capacity will be increased by at least 25%.

During 1914, many changes took place. Professor A.J. Perkins took over as Director of the Department of Agriculture, with W.J. Spafford, R.D.A. as Supervisor of Experimental Work for the State. L.S. Davie, R.D.A. was appointed Manager at Kybybolite, and the farm foreman, L.W. Smith, was transferred to Veitch Well to manage that Experimental Farm in the Murray Mallee.

Plans were made for better subdivision of the farm and the transfer of the farmstead to a higher field, more centrally situated and adjacent to the old station woolshed, which had stood well since erection in the early 1860's. All fresh build-

away from the proximity of the Homestead to the more suitable site.

It was also decided to turn more to livestock production instead of continuing mainly with grain production for sale off the property. Definite plans were set to test the old Norfolk rotation system of cropping with various modifications. In all, four set rotations were started; one four course, one five course and two six course rotations. The plans were typical of the splendid forsightedness of the late Professor Perkins. These longer rotations brought short term pastures into use, and were carried on with minor alterations for 12 - 15 years until the depression years of early 1930's, when the forced curtailment of work led to the abondonment of the bulk of the cultivation work, and energies were concentrated on pasture development and management with improving livestock work. They served to show the value of use of lime periodically, with ample dressings of superphosphates for all crops on the better drained areas, worked under continuously cropped conditions.

Without drainage and lime, cropping quickly used up the small amount of natural fertility, and after three crops, growth became poor and plants like sorrell and other poor value plants took control.

In connection with the cropping, ridge ploughing was used on some of the wetter flat fields and provided some improvement in crops.

During 1914-15 season, a fruit storage room was erected with packing facilities in the verandah.

In 1915-16 season, it was decided to send all weaner livestock to the farm at Veitch Well for a period of 12 months at least, in effort to secure greater bone and body development. This was continued for about 10 years or so, until the sub-terranean clover pastures were sufficiently developed, to enable stock to secure sufficient protein and minerals from the new pastures.

In 1916-17 season, a definite change in livestock work took place. The Shorthorn cows were passed to the Mt. Remarkable Training Farm, and Ayrshires were purchased to commence a stud to test dairying and Middle York pigs were obtained for a stud to be run in conjunction with dairying. A start was made to erect new piggery, dairy, cow byres and feed shed on the site of new farmstead. Mr. J. Paull was appointed Field Engineer in the Department of Agriculture on August 1st, 1916 and new buildings and repairs were subsequently ereced and made under his supervision.

The Ayrshires were bred and maintained for over 30 years, and full tested and recording was carried out from 1920, and reports published in the Journal of Agriculture. The stud proved successful and won many prizes in Adelaide Royal and Country Shows in the 1920's and 1930's. The Ayrshire breed was able to withstand the hard grazing conditions in the early years, and with the advent of pasture improving years, they improved with the pasture and with supplementary feeding almost wholly produced on the Farm, they were able to show the value and suitability of dairying for all the year round production. In later years, the South Australian Farmers' Union of Naracoorte used the cream from the Farm in their butter factory to produce the winning butter exhibits at Royal Shows.

A point of interest, during the later 1920's, Mrs. Cuming,

was being line bred by using sires secured from Messrs. Brisbane & Sons who took over her late husband's stud at Weerite, Camperdown, Victoria.

The Mid York stud of pigs did well in conjunction with the dairy and provided many pigs throughout surrounding districts. Later, when the Pig Industry moved ahead, the breed was superseded by a stud of Large Yorkshires. These were used pure, and with crosses with Tamworth and Modern Birkshire to demonstrate the production of the large economical sides of bacon.

In 1919, the most important move was made in the Farm, when Professor Perkins planned the first permanent topdressing experiment, and the Manager, L.S. Davie, had the first six plots set out and treated on natural pasture on virgin land in the north eastern field of the Farm. This work was well set out in plots of sufficient area to enable sheep to be grazed under practical farm conditions, was carefully continued, and extended during 1920's and subsequently led to most valuable findings for land development and its proper fertilising.

Following the successful work of neighbours, S.S. Shepherd and E.C.H. Schninkel, in establishing subterranean clover, investigation work with it commenced on the Experimental Farm in 1921. By 1923 and 1924 a further series of topdressing plots were set out in an effort to show the proper fertilising required for this most valuable pasture plant.

It was early realised that subterranean clover on its own was not the best feed for livestock, and definite attention was given in 1924 to test all known grass species, that were at all likely to suit the conditions. E.S. Alcock, who was then assistant Manager set out many species in conjunction with Subterranean Clover in a field, that was treated regular each year with superphosphate and grazed by livestock in the then known best manner. After five seasons it was readily seen that Phalaris tuberosa was the most successful perennial species and was persisting well without any cultivation. This led to the establishment of plots and fields of phalaris and a further extension of our pasture development work, to show the value of the permanent grass with Subterranean clover as against the good introduced annual wimmera rye grass, and also against volunteer species of grass that advanced from the improved conditions brought about by fertilisers and clover growths.

In 1928, the next important move was made when the Department of Agriculture arranged with the International Harvester Co. Ltd., for a Field Trial of all implements then available for use in hay and ensilage making for conserving some of the excess spring growth of pasture which occurred annually.

As an outcome of this day, the Department purchased the only new hay baler then available in South Australia, and also the push rake that was demonstrated successfully. From that date, the conservation of the pasture growths extended throughout the district, and it was not long before many mowers, rakes and balers, etc., were seen about the district, as well as implements for ensilage making.

An important feature for the district and South East generally was started in 1920 and 1921, namely: a test of the quality and quantity of the underground water supplied. After ascertaining which of the eight bores or wells on the property produced the best quality water, a well 6 ft. x 4 ft. was sunk

10 seasons on 12 acres of graded and drained area, and pumped at the rate of 8 to 10 thousand gallons per hour. Some millions of gallons per year were pumped from the well, and at no time was the level of the water lowered more than 4" - 5" in the well. At the end of 10 years, the quality of the water was slightly better than when commencing in 1921. This proved that the quantity of underground water was plentiful in supply for summer irrigation over reasonable areas. It was also shown that provided the fertility and drainage of soil was well maintained, high production of crops such as maize and sorghum for grain and the same with lucerne, roots mangolds, turnips for forage.

It was purposed to test irrigated pastures, but on account of the depression years, the work was discontinued. Of recent years, however, the plant has been used for growing Strawberry Clover for stud seed production.

Fat lamb production commenced during the 1930's with a general use of Border Leicester and/or Dorset Horn sires mated to Merino ewes. The Experimental Farm had maintained the English Leicester Stud, and also grade ewes, and showed quite successful production from comeback ewes (English Leicester x Merino x Merino) mated to sires of five British breeds with lambs dropped in late Winter or early Spring.

The preceding 4 or 5 pages is a resumé of the principal works carried out on the Experimental Farm from 1914 to 1936, the period during which Professor Perkins was Director of Agriculture, and who took a keen interest in the work of the place, and personally wrote up the results of the first 10 years of top dressing.

During the time, L.S. Davie resigned at the end of 1920, and L.J. Cook (also a Roseworthy Diplomate) took over the management in 1921 and stayed until October 1936, incidentally the longest sojourn of any Manager, and was able to secure a little advancement in the technical staff in having an Assistant Manager from 1924 in E.S. Alcock for 2 years, N.S. Fotheringham for 1 year and later F.O.H. Martin. Also in the early 1930's, a technical farm assistant or cadet was made available for special study and development of pasture plant species. Very good early work being done by J.D. McAuliffe, followed by S. Ward and H.E. Orchard. B.D. Bottrill was Orchardist 1920 and 1921, S.C. Billinghurst 1921 to 1924 and E.L. Billinghurst later until the orchard work was discontinued in 1930.

A.R. Rowe as Dairyman helped materially to build up the dairy and pig herds, as followed later by T. Lester. H.G. Crabtree as Farm Foreman, also did very effective work continued by J. Lester in the 1930's.

Visiting officers gave most useful assistance, especially the work of A.H. Codrington in examining and classing wool, and that of E.W. Pritchard in analysing pasture species in the early days.

Not all of the above staff had technical qualifications, but they were capable practical hands, and able to assist with records. The careful and proper recording of all investigational work on an experimental Farm is most important and in the earlier days with the shortage and lack of Technical assistance it was most difficult to maintain complete records. From 1921 onwards, a definite attempt was made to keep complete records of all

Almost as soon as Dr. A.E.V. Richardson took over the Director-ship of the Waite Research Institute, he visited Kybybolite to acquaint himself with the detail of the work in hand and inaugurate co-operative work with the Institute. This work commenced about 1928 in pasture measurements, and species trials, and later with management of pastures which not only helped the Research and technical men of the Institute but was of good benefit to Kybybolite and its district.

Besides Dr. Richardson, prominent members of his Staff showed a keen interest and provided valuable assistance such as Dr. J.G. Davies, Professor H.C. Trumble, Dr. E.A. Cornish, C.N. Neal-Smith and many others. I.C.I. also carried out some co-operative work and the C.S.I.R.O. Nutrition Department under H.R Marston also joined in important sheep nutrition tests, John Lee being of great assistance.

Back in the 1920's, Kybybolite was well in the limelight, when pasture development in Australia was in its infancy. The initial investigation work at the Farm, which was based on lines of work in old England, was stated to be the leading work of the Commonwealth, and drew attention of visitors and enquiries from far and wide. When travelling today to any of our States, one can meet scientific and technical workers as well as practical farmers and graziers, remembering and following the work of Kybybolite.

A point of interest in the late 1920's there was a strong move to close all Government Experimental Farms and leave all scientific rural work to the C.S.I.R.O., Waite Institute and such similar places. Fortunately, in the case of Kybybolite, wiser decision prevailed and it was left to carry on.

From 1936 to 1946, W.C. Johnston, R.D.A. carried on the management through the difficult period of the Second World War. W.J. Spafford was Director. During 1936 - 1940 the old station shearing shed was replaced with a fine new shed, with modern conveniences for handling wool and sheep. Also at long last money was provided to remove the old stables, weighbridge and implement shed, and new ones provided on the more convenient site. New kitchens and renovated staff quarters were provided and the old station kitchen with its large brick oven and ancient large underground cellar disappeared. The old coach house and loft also rased, and its stone used to provide a walled fence for the homestead. A new convenient office was erected prominently to catch visitors eyes as they approached from the main drive. In fact the period marked the disappearance of all the relics of the Station days with the exception of the fine, old, well-built, two storey Homestead and the old cemetery on the slope in the distance to the South East. Some of the old trees at the Homestead and runaway hole remain; the Cork Elms, Figs, Walnuts, Mulberry and Poplars. Johnston had practically the last of the old ghosts (dead trees) removed from the farm fields and planted many new species of trees, carried on the main investigational work in hand, but shortage of labour and assistance during the war, precluded any advancement in detailed investigation. Johnston did valuable work in fighting and controlling footrot in sheep.

In 1946, Johnston transferred to Advisory work at Jamestown and later to Port Lincoln, and J.D. McAuliffe was appointed Manager at Kybybolite. McAuliffe immediately set about controlling and eradicating "Salvation Jane" an undesirable plant that had almost taken possession of certain fields and parts of

out a comprehensive field test on "Time of Lambing for Fat Lamb Production" in conjunction with D.B. Muirhead, Animal Husbandry Adviser of Department of Agriculture.

About 1950, the Ayrshire Dairy Herd was sold and dairying discontinued at the Research Centre. Beef cattle were introduced and it was decided to confine investigations to Beef Cattle and Sheep Production.

During the late 1940's, Kybybolite again nearly lost its Experimental Farm. About 1946, portion of Struan Estate was made available to the Department of Agriculture with the view of transferring all investigational work on pastures and livestock to Struan and forming an Animal Nutrition Research Station for the South East. It was thought that the variation of soil types available at Struan, would enable results to be obtained applicable to main soil types of the South East. A careful soil survey was made of the land available at Struan, and it was found not sufficiently even in its types to represent all the types available in the South East, and moreover it would take 15 to 20 years to bring the pastures of the area to the condition in which animal nutrition work could be satisfactorily carried out. Kybybolite pastures, however, were already right for animal investigations, and consequently on the advice of Dr. McMeeking from Rua Kura Animal Research Institute of New Zealand, the Hon. the Minister, Sir Geo. Jenkins, wisely decided to continue with Kybybolite as the centre and use Struan as an out station.

W.J. Spafford retired in 1949 and Dr. A.R. Callaghan was appointed Director of the Department, and he immediately set about raising the status of experimental farms.

In 1953, Kybybolite was renamed "The Kybybolite Research Centre" and W.G. Alden was appointed "Officer in Charge" and McAuliffe transferred to advisory work at Jamestown.

Alden was a graduate in Animal Nutrition from Cambridge and set about obtaining suitable trained technical staff and conditions for them to live and work. Quite a number of comfortable homes with modern conveniences were erected to enable married men to be established on the place, and provision of suitable laboratory accommodation was envisaged. Alden completed the five year test on the "Time of Lambing" investigations and commenced work on "Suitability of Various X bred dams for fat lambs", and some further short term work on sheep feeding, on fodder crops and conserved fodders, grain, etc.

Alden resigned in 1956 to take up work at the Waite Research Institute and the present officer in charge P. Geytenbeck, B.Ag.Sc. was appointed and the technical staff has been increased by employment of two Research Officers, one for Livestock and one for Pasture Research work and a Field Officer.

The Centre is in good shape at present, and if suitable staff can be maintained, many valuable investigations can be carried out by Geytenbeck.

Before finalising this history of agriculture, mention must be made of the keen support of the public and farming community. A branch of the Agricultural Bureau was formed in 1907-8 and for over 30 years it functioned strongly and followed the investigation work of Kybybolite Experimental Centre closely, [illegible] in not only adopting successful findings,

understood that he was the last in the district to be converted to changing the old natural pasture.

The ladies of the district always helped provide for the hundreds of visitors who came first from close surrounding areas and later from all parts of the State, and many from Victoria and other States.

Land and Stock Agents fairly quickly saw the advantages coming, Bank Managers came to see and ponder and Politicians kept a wary eye on the work. Malcolm Cameron M.H.R. from Glencoe was one of the district's staunchest friends. As mentioned earlier, scientists were most interested and these brought many visitors from overseas as well. A check of the Visitors Book would provide names and addresses of many interested in our Agriculture.

Of the future, there are still many problems to face to obtain and maintain full production, and Kybybolite can and should continue the centre for Rural Research in our valued South East.