

And further on he said:—
When lime was absent soils generally became sour. Some sour soils were characterized by special types of plants that were able to thrive under such conditions. Most plants, and especially cultivated ones, suffered in sour soils.
"For a striking proof of these words let anyone visit Strathalbyn, Belvidere, Langborne's Creek, Milang, and many other places in the wet, hilly country, and he will there see thousands of acres of beautiful land covered with sorrell, a most destructive and useless weed, which some farmers are trying to kill with cultivation, and not succeeding worth a cent., as the Americans say. There is only one way to kill sorrell, and that is by sweetening the soil with carbonate of lime, and it requires, as Professor Perkins says, a ton to the acre. But the money so expended will give a rich return to the farmer, and will keep his land in good heart for eight or ten years."

manent increase in the output from the land was to improve the farming methods of the country and apply the teachings of science to every branch of primary production. That was the clear lesson of experience in all the great agricultural countries of the world. The black soil plains of Southern Russia were among the richest wheat belts of the globe. Thirty years ago the average yield of wheat in Russia was 10 bushels. It was still 10 bushels per acre. On the other hand, Germany wheat yield was 18 bushels 30 years ago. To-day it was 35 bushels. In the one case they found stagnation; in the other progress and development. The stagnation in the one case was caused by the fact the Russian moujik of to-day followed the same primitive methods as the Russian moujik of 30 years ago. The progress in the other case was due to the enlightened policy towards agriculture, and the adoption of a comprehensive policy of agricultural education. Exactly the same contrast might be observed by comparing the agricultural production in United States and Mexico during the past 30 years. They could make immense progress in Australia. They could certainly treble the total output of wheat, and double the output of dairy products, and at the same time greatly increase the live stock industries. But to do all that would require much greater efficiency on the part of the man on the land, more complete knowledge of the principles underlying agriculture, and a greater degree of perfection in the technical processes of agriculture.

Personal Efficiency.

The degree to which they could progress towards intensified agriculture depended very largely on the personal efficiency of the average farmer and the extent to which that efficiency might be increased. The establishment of a comprehensive system of agricultural education and research must form the basis of any scheme for agricultural development and agricultural advancement. The farmers of the future, i.e., the youths of the present day—must be given the opportunity for acquiring a sound training in agricultural science along with the broad liberal training that made for good citizenship. The farmers of to-day must be provided for by a scheme of extension work which aimed at reaching the last farm and the last farmer. Finally, a comprehensive scheme of investigational work must run parallel with the work of instruction and extension in order to elucidate the basic facts and discover new knowledge which would form the basis for further development in agriculture.

One important fact should not be overlooked. A long time was required to realize on all educational work. Some years must elapse before the full effect of what was done to-day for agricultural education was reflected in increased production. They had not a supply of trained specialists, teachers, agricultural investigators, extension workers in agriculture necessary to achieve immediate results. A long range and liberal policy for agricultural and research was required—a policy which would look beyond the immediate present and which would map out the requirements of the State for the next 10 years and make provision for its steady and gradual accomplishment. A policy which would place agriculture on a safe and progressive basis both economically and educationally.

RURAL VOICE.

NARRACOORTE, August 11.—At a meeting of the local Agricultural Bureau Messrs. G. Wright and A. Langeldedecke, Jun., were appointed delegates to the September annual Bureau Congress in Adelaide. The Chairman and others congratulated Mr. E. S. Aleock, who had been an active and valuable member of the branch for some years, on his promotion to the office of district agricultural inspector. Mr. Aleock acknowledged the congratulations extended to him. Mr. A. H. Codrington (wool instructor) wrote saying that he could arrange to hold a wool class of instruction at Narracoorte about the middle of October, and could personally attend it, but that he could not do so at the end of September. After discussion it was proposed that Mr. Codrington be written to to the effect that the most suitable time for holding the class would be the middle or latter end of September, and that they would accept the original offer of it being held then under Mr. Goddard, if he could not attend. The Chairman and other members deplored the action of the Government in retiring from the Advisory Board of Agriculture several members who had rendered good service, and a resolution protesting against the way those members had been treated was carried. Mr. E. S. Aleock gave an interesting address on the establishing of subterranean clover on the land.

MORPHETT VALE, August 10.—The Southern Farmers' Society held their annual meeting on Monday evening. The President (Mr. T. D. Davidson) occupied the chair. The secretary's balance sheet showed that although five valuable cups were won outright last year, yet the society was in a good financial position. It was decided to hold the next picnic on Saturday, October 10. Every inducement will be given the city people to visit the Morphett Vale Horse Show and Picnic, as the Saturday train lands Show and Picnic, as the Saturday train lands evening. The horse committee are putting out a £100 cash programme of events. The sports committee are arranging an attractive programme for young and old, with plenty of prizes and free entries. The day's programme will consist of more than 40 events.

LEAGUE OF NATIONS' UNION.

FAREWELL TO DR. HEATON.

There was a large gathering at Balfour's Cafe, Rundle-street, on Tuesday, for a farewell luncheon tendered by the executive of the League of Nations' Union to Dr and Mrs. Heaton on the eve of their departure for Canada. Mr. J. H. Vaughan presided, and with him were seated the guests, Professor Darnley Naylor, and Dr. Duguid.

Mr. Vaughan said there were few in the community who would not say it could ill-afford to lose the gentleman in whose honor they had met. (Applause.) The field of his activities had been social welfare in its widest sense, and in a hundred directions he would leave his mark indelibly impressed on the State. Dr. Heaton was one of those who realised the immense importance of the movement inaugurated by the league. Their desire was to uphold and maintain an enlarged public opinion on its behalf. Dr. Heaton was one of the first to come forward, and ever since he had given invaluable assistance to the cause in which they in this State were united. He could assure Dr. and Mrs. Heaton that when they went abroad they would carry with them the respect and admiration of the people for their splendid work, their recognised capacity, and their happy personalities, shown to thousands of men and women with whom they had come in contact. He extended best wishes for their happiness and prosperity in the future. (Applause.)

Dr. Heaton said that being in a reminiscent mood he thought of the first union luncheon to which he went about 15 months ago in London. It was at an Italian-English-American restaurant, where a three-and-sixpenny repast was served in about 15 separate courses, and there was no one to show him how to manage it. Probably he erred in the use of the table furnishings, and he had never felt easy at league luncheons since. (Laughter.) Going back to 1917-18, when they were talking about the need for a League of Nations, it was interesting now to note that they talked about the League of Nations. Some time ago he was asked by a certain organization to give a lecture on phases of the economics question, and had consented, but was subsequently told that the room was not available. Professor Darnley Naylor was afterwards asked to lecture, and the room then became available. What made such a difference? (Laughter.) It was agreed that Professor Darnley Naylor was not to lecture too long, and that he (the speaker) was to ask him a question. He did so, but the professor replied that as the questioner knew so much more of the subject than he did, he had better speak upon it. (Laughter.) Since 1919 the league had done important things and taught some obvious lessons, which he hoped had been learned. They had learned that war produced little, if any, good, and that little good was more than outweighed by its evils. He thought all would feel that war had brought little good for those who wanted it, and misery and enmity to those who lost it. (Applause.) The time of war was, above all others, the time to talk about peace. Bernard Shaw declared that a peace conference should be held on the day war was declared, and that was not a mere Slavianism. Wars had to end just as periods of strikes and lockouts did. All belonged to a gospel of hate, and participants were all bitter-enders. The great tragedy of Versailles was now six years behind them, and they know how badly the men at that time built. The evils of the 1925 peace were perhaps worse than those of 1815. Those who completed the work in 1918 were democratic people, and not autocrats like those of 1815. The results of the League's work in Adelaide perhaps made it the best educated capital city in the Empire, and he had said that in London. They should try and educate public opinion in the other States, and should remember the League's failures no less than its successes. They knew it had sins of omission, and commission, but did not want to scrap it. Before the next war, which would perhaps come soon, it was the League's job to educate all they could. They had a wider task also—to create an atmosphere in which

the League could get a fair chance. Australia's isolation was a terrible hardship. Australia must not merely criticize what the League was doing, but try to create an international atmosphere. He thanked them for what they had done and hoped to meet some of them in Canada. He hoped also to return to Australia some day and that some of them would have the opportunity of meeting in Geneva.

Dr. Heaton said that being in a reminiscent mood he thought of the first union luncheon to which he went about 15 months ago in London. It was at an Italian-English-American restaurant, where a three-and-sixpenny repast was served in about 15 separate courses, and there was no one to show him how to manage it. Probably he erred in the use of the table furnishings, and he had never felt easy at league luncheons since. (Laughter.) Going back to 1917-18, when they were talking about the need for a League of Nations, it was interesting now to note that they talked about the League of Nations. Some time ago he was asked by a certain organization to give a lecture on phases of the economics question, and had consented, but was subsequently told that the room was not available. Professor Darnley Naylor was afterwards asked to lecture, and the room then became available. What made such a difference? (Laughter.) It was agreed that Professor Darnley Naylor was not to lecture too long, and that he (the speaker) was to ask him a question. He did so, but the professor replied that as the questioner knew so much more of the subject than he did, he had better speak upon it. (Laughter.) Since 1919 the league had done important things and taught some obvious lessons, which he hoped had been learned. They had learned that war produced little, if any, good, and that little good was more than outweighed by its evils. He thought all would feel that war had brought little good for those who wanted it, and misery and enmity to those who lost it. (Applause.) The time of war was, above all others, the time to talk about peace. Bernard Shaw declared that a peace conference should be held on the day war was declared, and that was not a mere Slavianism. Wars had to end just as periods of strikes and lockouts did. All belonged to a gospel of hate, and participants were all bitter-enders. The great tragedy of Versailles was now six years behind them, and they know how badly the men at that time built. The evils of the 1925 peace were perhaps worse than those of 1815. Those who completed the work in 1918 were democratic people, and not autocrats like those of 1815. The results of the League's work in Adelaide perhaps made it the best educated capital city in the Empire, and he had said that in London. They should try and educate public opinion in the other States, and should remember the League's failures no less than its successes. They knew it had sins of omission, and commission, but did not want to scrap it. Before the next war, which would perhaps come soon, it was the League's job to educate all they could. They had a wider task also—to create an atmosphere in which

the League could get a fair chance. Australia's isolation was a terrible hardship. Australia must not merely criticize what the League was doing, but try to create an international atmosphere. He thanked them for what they had done and hoped to meet some of them in Canada. He hoped also to return to Australia some day and that some of them would have the opportunity of meeting in Geneva.

ECONOMIC SOCIETY.

Arising out of the meeting of the Australian Association for the Advancement of Science, held in Adelaide in August last, Section G (social and statistical science) founded the Economics Society of Australia and New Zealand. It is now proposed to found a South Australian branch, and for that purpose a meeting has been called at the University for Friday evening next in the history lecture room, when Mr. President Brown will take the chair.

REC. 14-8-25. SCIENCE AND AGRICULTURE

Increasing Production. Australian Possibilities.

In concluding his recent course in the University extension lectures, Dr. A. E. V. Richardson (Director of the Waite Agricultural Research Institute) said the main features of the agricultural education of the United States were:—1. A group of agricultural colleges, mostly of University rank, splendidly equipped and manned by a staff of agricultural specialists. These colleges provided a four-year course of instruction for students, and short courses for farmers who could only afford a few weeks each year. 2. A group of agricultural research stations, also splendidly equipped and staffed, to investigate problems in every branch of farming. 3. A staff of extension workers, publicity men, and county agents, all highly trained men, whose duty it was to present in simple language the results of the work of the experiment stations. 4. A Federal Department of Agriculture, working in closest co-operation with the colleges and experiment stations in the work of education and investigation. The United States expenditure on agricultural education and research now exceeds £12,000,000 annually. What results, he asked, had been obtained from that expenditure? The following table summarized the production at 20-year intervals since the establishment of the colleges up to the war period:—

Table Showing Progress of American Agriculture and Production in the Leading Staple Crops.

| Year | Maize | | Wheat | | Cotton | |
|------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| | Millions of bush. | Millions of bush. | Millions of bush. | Millions of bush. | Millions of bush. | Millions of bush. |
| 1860 | 838 | 173 | 3.8 | Nil | Nil | Nil |
| 1880 | 1,717 | 498 | 6.3 | 417 | 31 | 1,344 |
| 1900 | 2,105 | 522 | 9.1 | 890 | 50 | 81,729 |
| 1915 | 3,054 | 1,011 | 16.1 | 1,540 | 85 | 862,800 |

That was a remarkable development, and the greatest increase resulted in the last 15 years prior to the war. During that period primary production increased at the rate of £90,000,000 per annum. A remarkable development had resulted in Germany during the 25 years prior to the war, largely owing to the policy of encouragement of agriculture by the German Government.

The following table summarizes the development during that period:—

Comparative Production in Germany in 1888 and 1913 (in Millions of Bushels).

| Year | Wheat | Oats | Barley | Rye | Pot. |
|------|-------|------|--------|-----|-------|
| 1888 | 103 | 243 | 97 | 262 | 950 |
| 1913 | 171 | 669 | 168 | 481 | 1,988 |

During the same period the number of cattle increased from 8,500,000 to 20,000,000, and the number of pigs from 5,500,000 to 22,000,000. The composite average yield of wheat, oats, barley, and rye increased during this period from 29.3 to 35.6 bushels per acre.

Application to Australia.
There were many ways, said Dr. Richardson, in which they might increase their production. Some of them lay along political channels. A bold immigration policy, building of developmental railways, provision of improved transport facilities, promotion of land settlement schemes, extension of irrigation enterprises, conservation of water, opening up of new markets abroad, development of minor agricultural industries—all these would aid agriculture, bring new area under cultivation, and develop the country. These were all material aids to settlement and to profitable and economical production. But something more was required to make the agriculture of a country permanently productive and profitable. They might increase the agricultural output of the State and the Commonwealth by all these methods, and they might temporarily stimulate production by fixing of prices, bonuses, and by many other artificial aids, but the only way to secure a genuine and per-

AN HOUR OF SONG.
The fifth anniversary of the inauguration of community singing in Adelaide was celebrated by "an hour of song" yesterday at the Town Hall. The opportunity was taken to say farewell to Dr. H. Heaton, one of the founders of the movement. In cutting the birthday cake, "right through the wishbone," Dr. Heaton remarked with a smile that community singing was becoming quite venerable and respectable. The first meeting was conducted by Mr. Dempster, and that was, he said, a stroke of genius. They had started in grim, dire poverty, with only threepence halfpenny in the treasury. It was a wonderful day—that first day. They owed a great deal to their conductors, and also to the singers and accompanists and other officials. Mrs. Weston particularly, in the early days. Community singing had come to stay, as it was a people's movement. "Sing up, sing always, and let all the worries about thousands and millions of homes and other matters fade out of your memory," he declared in conclusion. Mr. Wallace Packer (vice-president) was equally humorous, and he proposed that they should present the cake, with its five lighted candles, to Dr. Heaton, but he did not know how far he would get with it as it was very nice. He referred in terms of appreciation of Dr. Heaton, who had been a tower of strength to the movement. They need not be surprised to hear very shortly that community singing was flourishing in Canada, and that the people were singing from the housetops. To the accompaniment of laughter he then handed Dr. Heaton a chocolate rabbit and a goat, emblematic of Australia and Canada respectively. Mr. John Dempster remarked that but for Dr. Heaton's inspiration they might not have had community singing, which had given such pleasure to the community, and which would remain a verdant memory of his stay in South Australia. There was never a time when they needed leaders of his calibre so much. He trusted that he would one day return to the State.

OFF TO CANADA

Dr. Heaton Entertained

Members of the Adelaide Repertory Theatre entertained Dr. H. Heaton, who will leave for Canada tomorrow, at dinner at the South Australian Hotel yesterday.

Mr. Ray Wash, who presided, said that their guest had endeared himself to all. When Dr. Heaton became a member of the board of the reconstructed theatre he put the whole strength of the Workers' Educational Association behind his efforts. He helped to place the Repertory on a solid basis.

Messrs. S. Talbot Smith, G. McLeay, A. Melrose, and G. McRitchie (Workers' Educational Association) referred to the sterling qualities of their guest, who, they said, had shown great versatility and a fine public spirit. They wished success, prosperity and happiness to him in his new sphere, and hoped that he would return.

Dr. Heaton was presented by the chairman, with a framed etching by Warner entitled "The Wool Team." He said that he had always tried to be a useful citizen. It was the duty of all to help along education in the widest sense of the term. Education did not end in the province of a Government department, but in life. He found when he came here that it was part of his work to help the Repertory Theatre. He was glad that he had been asked to go on the board. His association with members had been extremely happy.



DR. H. HEATON formerly Lecturer in Economics at the Adelaide University, who sailed yesterday for Canada.

REC. 15-8-25.

Dr. H. Heaton, who recently resigned from the position of Lecturer in Economics at the Adelaide University, and director of the tutorial classes of the Workers' Educational Association, has been given an honorary commission by the State Government to enquire into and report upon matters relating to the primary, secondary, and university educational systems of the Dominion of Canada. Dr. Heaton will leave Adelaide by to-night's express for Melbourne, on his way to Canada.