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Importance of Co-operation.

The impressive feature of the work was the co-operation between the University and the Council for Scientific Research, and the Commonwealth Government was grateful to the University for the spontaneous way in which it had agreed to assist with an investigation which would be of the greatest use to Australia. They had reached the point where they were not dealing with problems on an Australian basis, but, as a result of the deliberations of the Economic Conference in London in 1926, dealing with them on an Imperial basis. He was glad that they were to advance yet another stage in co-operation, as the woolgrowers were trying to raise a fund of £200,000 to assist the council. That represented co-operation between the scientist and the practical pastoralist. Work was being done in the University and in the field. There were other problems which had to be faced in the future, and he hoped they would get together a strong team of leaders in all branches of the work. Professor Robertson was the first to be appointed, and already there were others. The question of forest products, soil surfaces and other subjects were already being investigated, and in the near future the subject of the study of animal health, linking it up with animal nutrition, would be begun. He believed that Australia was just beginning to get on to the right lines, and that the co-operation which was coming about between the scientist and the practical pastoralist would be fraught with great benefit to Australia. (Applause.)

Great Results Expected.

The Minister of Education, in proposing a vote of thanks to the Prime Minister, said they were under a debt of gratitude to Mr. Bruce for his attendance considering the strenuous time through which he was going. The opening of the laboratory that day marked a distinct advance in the animal husbandry of Australia. It was an honour to South Australia that Professor Robertson should have been selected for the work. He had been engaged in that type of research for about 20 years. It was almost impossible to foresee what the result of his investigations might be. (Applause.)

Professor Brailsford Robertson, in seconding the vote of thanks, said it was encouraging to reflect, in one's more optimistic moments, how little had been done, and how little was known with regard to animal nutrition, and how a little positive knowledge might yield results of incalculable value. It might not be necessary to achieve so very much, but the result might return a hundredfold on the money expended on research. The co-operation between the practical man and the man of science was one of the most important features of the work. The department had flocks under observation all over Australia, and often had to ask the hospitality of station owners, and never once had they been met in any grudging spirit. The laboratory was the place where the most intensive chemical work was done, which would throw light on what had been done in the field. They hoped to take that light back to the field. (Applause.) With such happy co-operation, they could depend on the scientists to obtain results of value to the people of Australia. (Applause.)

The motion was carried with acclamation, and Mr. Bruce briefly replied.

STUDENTS' CONCERT.

At the Elder Hall on Monday night, students of the Conservatorium gave the 13th concert of the season. Every member of the staff was represented, with the exception of Mr. Harold Denton, who has only recently joined the Conservatorium staff. The accompanists were Misses Alice Meegan, Joan Mellowship, and Jean Finlay. The programme opened with a pianoforte solo, "Rhapsody in G Minor" (Brahms), by Miss Ella Cozens. This was played with a firm, even touch and with a good knowledge of tone color. "Chants Polonais—Nocturn" (Chopin-Liszt) was played by Miss Sadie Penn, with excellent finish and artistic restraint. Miss Irene Thompson-Webb's rendering of "L'Alouette" ("The Lark") (Balakirew) was an outstanding performance for its brilliance and execution. The arpeggio work and runs were specially deserving of praise. A concerted number, "Rondo for two Pianos, Opus 73" (Chopin), by Misses Lucy Daenke and Hilda Kenny, was a good performance, and both students displayed a decided gift, both for technique and interpretation, and the beautiful melodies of the theme were well treated. Of the vocalists, Miss Rita Watson's dramatic contralto was given good scope in "The Lover's Curse" (old Irish), arranged by Herbert Hughes. Her rich notes were somewhat marred by a slight vibrato. Miss Ellen Elford sang a bracket, "Do Not Go My Love" (Hagemann), and "Dance-Song in May" (Franz), with good expression and true feeling. An aria, "O del mio dolce ordo" (Gluck) was sung by Miss Kathleen Magarey in a sweet and sympathetic voice, with much purity of tone. Mr. Carl Juncken's strong baritone voice possesses a good tonal quality and wide range, and his rendering of "In diessen hell 'gen Hallen" (Mozart) was well received. A most pleasing item was a bracket of vocal duets, "Over Silent Waters" and "O Springtide" (Max Stange), by Misses Constance Chinner and Evelyn Kekwick. The sweet voices of those young singers blended beautifully, and the songs were rendered in a clear and appealing manner. Miss Isabel Tilbrook's performance of "Pastorale in C" (Bach) and Choral-Improvisation "Nun Danket" (Karg-Elert) on the organ, was most creditable. The two pieces were in great contrast, the former being dainty and quiet and the latter full of volume and power. A violin solo by Miss Gwen Moss, the first movement of "Concerto in B Minor" (Saint Saens), was brilliantly played with good style and technique. Another violinist was Miss Imelda Smith, who played "Air for G String" (Matheson) and "Mazurka" (Obertass) (Wieniawski) in an impressive manner. Her technique was good, but more care needed to be given to intonation. A 'cello solo, "Traumerei" (Schumann) by Mr. Allan Gibbs, was sympathetically played. All the artists were warmly applauded, and the programme was received with appreciation.

CANBERRA FORESTRY SCHOOL.

In the report of the education committee of the Empire Forestry Conference, which met in Canberra recently, the opinion is expressed that real progress will never be achieved in countries where forestry is not regarded as a scientific profession. The report states:—The question of a steady supply of suitable students to the Canberra Forestry School in future has engaged our attention, and we have questioned the delegates from the States on this point. We gather from them that, while each State has in the past had its own idea of the form of training which it would like to give to its cadets, there is now a universal recognition that the Canberra school is in being as a central forestry school for Australia, and an equally universal feeling that it should be supported and developed as such. The school regulations now require that a student should ordinarily attend a two-year course of science at a university before admittance to the school. By taking a three-years' course at a university a student can obtain a university degree, whereas by entering the Canberra school his course would be increased to four years, but at the end of it he would only get a diploma instead of a degree. The suggestion is that the universities should recognise the two-year forestry course given at the Canberra school as equivalent to the final year of science at the university, and grant a degree in forestry to any of their undergraduates who have successfully completed his two years' science and his two years' forestry training. We believe that if this suggestion, which is warmly supported by the delegates of all States, can be carried into effect it will have far-reaching effects on forestry in Australia. It is to be noted that forestry in Australia is still hampered by the old "bush man" tradition. Forestry as a scientific profession is as yet hardly recognised, and there is still difficulty in getting the right type of recruit into the service. The raising of forestry to the degree status in the universities would bring Australian forestry at once into line with forestry in Great Britain, Europe, and America, and would do more than any other single thing to bring home to all classes of Australian that forestry is not synonymous with timber-getting.

The Prime Minister (Mr. Bruce) arrived in Adelaide on Monday morning by the express from Melbourne. He was met at the station by the Under-Secretary (Mr. H. Blinman), the president of the Liberal Federation (Mr. C. A. S. Hawker), the president of the Adelaide Chamber of Manufactures (Mr.



Mr. Bruce.

F. N. Simpson), Mr. E. W. Holden, Senator J. H. Chapman, Messrs. J. G. Duncan-Hughes and W. L. Parsons, Messrs. F. W. Rose and G. McLeay.

After a short visit to the Premier (Hon. R. L. Butler) the Prime Minister received a deputation from the University of Adelaide, comprising Professor J. H. Chapman, Professor J. McKellar Stewart, Dr. Harold Davies, and Mr. E. W. Holden, with whom he discussed a resolution passed at the All-Australian Universities Conference in August with regard to the educational possibilities of broadcasting and the system adopted by the British Government in appointing a company under a Royal Charter to carry on the work of broadcasting as a national service.

ANIMAL NUTRITION.

RESEARCH LABORATORY OPENED.

"SCIENCE AND THE PASTORALIST."

The new research laboratory established at the University of Adelaide by the Commonwealth Council for Scientific and Industrial Research, for research on animal nutrition, was opened by the Prime Minister on Monday morning. Seats on the dais were occupied by the Chancellor of the University (Sir George Murray), the Acting Vice-Chancellor (Professor Chapman), the Warden of the Senate (Mr. Justice Angus Parsons), the director of the Waite Institute for Agricultural Research (Professor A. E. V. Richardson), and the director of the new laboratory (Professor Brailsford Robertson). The proceedings were somewhat marred by a heavy shower of rain, which caused the unprotected spectators to take shelter while the speeches were being delivered.

The Chancellor tendered a hearty welcome to the Prime Minister, who had come at considerable inconvenience, being in the midst of the distractions of a political campaign. He was present that day to open the laboratory of the division of animal nutrition, erected by the Commonwealth Council for Scientific and Industrial Research. When the proposal was made to the Council of the University for the erection of the laboratory, a difficult problem had to be faced. The land at their disposal was limited, but on the other hand they wished to do their utmost to be of service to the community as a whole. They wished to see that the best use was made of the scientific resources of the University. They had in Professor Brailsford Robertson a man than whom no one in Australia was better qualified for the particular investigations which had to be made. The Council had assented slowly but with conviction, and the result was that the University of Adelaide

was engaged in co-operation with the Council for Scientific and Industrial Research, in the investigation of one more problem which was of the highest importance to Australia. Others were being conducted at the Waite Institute, where such subjects as plant diseases, soil analysis, and the mineral contents of the native pastures were being carried out. The design of the building had been left in the hands of the University architect, for the purpose of having a building which would harmonise with the other buildings that had been erected on the adjacent University ground, including the Lady Symon wing of the Union building, the Darling building, and the engineering department on the hill. How Mr. Laybourne Smith had succeeded would be at once recognised. The interior fittings had been the especial care of Professor Robertson himself, and he thought they would agree that they had arranged a most beautiful building, and one that was an ornament to the University. The new laboratory would prove an enormous benefit to Australia as a whole. (Applause.)

The Prime Minister said the ceremony was a pleasant interlude in a hectic political campaign. (Laughter.) The building was one of the first practical signs that Australia was taking the question of research in a serious spirit. This had to be done if the great problems of Australia were to be faced, and if the industries were to be consolidated and expand, so as to contribute in a larger degree to the welfare of their own people, the people of the Empire, and, one might say, in some degree, that of the people of the whole world. The building was also a sample of what was to be done in the way of bringing scientific aid to the great industries, and to give the people conducting them a better opportunity of building up the great industries on which all depended. It was an example of practical co-operation between pure and applied science, co-operation between the University and the organisation which had been created for a material purpose. Three years ago provision was made to the extent of £500,000 for the work of the Council of Scientific and Industrial Research. An endowment of £100,000 had also been created for the training of research workers, of which there was a strictly limited supply at present. At the same time the Federal Government were in no way overlooking the great work of the Universities and the Departments of Agriculture in the various States. One had only to travel to see the results of the careful and patient work of those bodies. They were not being superseded, but the council would complement and supplement their work. Everybody recognised that the co-operation would be most valuable to Australia. The council had then to consider what it should first address itself to. The problems of the primary industries were the ones to which attention should first be given. Australia was dependent on flocks and herds, and the question of their proper nutrition was one, not for the individual, but for the country, although great work had been done in the past by individual pastoralists. The institution was the first concentrating on the animal which had done so much for this country the sheep. One had to build up a sheep which would give the best returns. The sheep combined a laboratory and manufactory in himself. He turned out goods for human use, and performed miracles which man, with all his scientific and mechanical knowledge could not begin to emulate. He took in certain elements and combined them into wool, meat, and bone. He could not perform this miracle, however, unless he was given the right materials with which to do it. At present they did not know quite what he wanted or what they were giving him. Nature had attended to that question in the past, but even Nature failed in some parts of Australia. Again, although Nature had been most bountiful, one had to consider whether one could go on like that, or whether some of the things which had been rather ruthlessly destroyed in the past would have to be replaced. This was the task which Professor Robertson and his staff had to face, and he wished them every success. The impressive feature of the work was the co-operation between the University and the Council for Scientific Research, and the Commonwealth Government was grateful to the University for the spontaneous way in which they had agreed to assist with an investigation which would be of the greatest use to Australia. They had reached the point where they were not dealing with problems on an Australian basis, but, as a result of the deliberations of the Imperial Conference in London in 1926, they had reached the point of dealing with them on an Imperial basis. He was glad that they were to advance yet another stage in co-operation, as the woolgrowers were trying to raise a fund of £200,000 to assist the council. That represented co-operation between the scientist and the practical pastoralist. Work was being done in the University and in the field. There were other problems which had to be faced in the future, and he hoped they would get together