Continued.

a year. Each bushel per acre added to the wheat yield meant an addition of over £2,500,000 to the annual income. Each plant disease, insect, or fungus they learned to control saved enormous wealth to the country. Every contribution to their knowledge of stockfeeding, stock management, and dairying was of direct benefit to the whole community. If they were to make the fullest use of the natural resources of this continent they should develop it to the utmost, not only promoting by encouraging immigration, land settlement, developing the transport systems, conserving the water supplies, but also by applying all the resources of science to the development of the primary industries.

Remarkable Primary Production.

At the evening sessions Dr. Richardson followed up the subject, the heading of his discourse being "Methods of increasing primary production." Lantern views were used. Mr. F. C. Coleman presided. The lecturer said that the importance of agricultural and pastoral pursuits to national welfare was reflected in the relative value which production from these sources bore to the total production. Of the £382,000,000 of new wealth created in Australia in 1923 the agricultural and pastoral industries contributed no less than £220,000,000, or 58 per cent. of that total. In view of the relative distribution of rural to urban population in Australia the record of primary production was remarkable. During the same year the total production of South Australia was £34,000,000, of which £22,000,000, or 64 per cent. of the total, was contributed by the agricultural and pastoral interests. The principal source of revenue from the primary industries came from the 75,000,000 sheep and the 14,000,000 cattle, which were maintained on the pastoral lands of Australia. The wheat crop furnished the main source of revenue from agriculture. Wheat was relatively more important to South Australia than to any other State. Though this State normally produced 10 per cent. of Australia's agricultural and pastoral wealth, it contributed more than 25 per cent. of Australia's wheat output.

The Wheat Industry.

During the past 30 years considerable progress has been made in wheat production. For the 10 years ended 1924 the average wheat yield of South Australia was 12.45 bushels an acre, as compared with 4.74 bushels for the 10 years prior to 1901. For the past decade the average wheat yield of Victoria had averaged 14.6 bushels per acre, as compared with 7.6 for the decade prior to 1901. The development had resulted in a great increase in the annual revenue. The improvement had been brought about by the adoption of better farming methods. For the past 10 years South Australian farmers had obtained .98 bushels of wheat per acre for each inch of winter rainfall, which was practically a bushel of wheat per inch of winter rainfall. Given suitable climatic conditions and a reasonably fertile soil, the main factors for successful wheat cultivation in the Australian wheat belt were:—Conservation of soil moisture by early fallowing and thorough working of the soil; liberal manuring of the crop; regular crop rotation and association of sheep with wheatgrowing; rational treatment of seed; efficient implements and equipment; and good management and business ability.

Pasture Lands.

The natural pastures of Australia supported practically the whole of the sheep and cattle of the country. As wool and live stock contributed such a large proportion to the wealth of the country, the principles underlying the successful production of grass were of great importance. Though the pasture plants of the drier portions of Australia were unrivalled for their grazing and wool-producing value, introduced grasses and clovers thrived exceptionally well in the moister coastal region. While, therefore, they should continue to rely on our native grasses for the great bulk of our pasturage, they should not hesitate to use introduced grasses, clovers, and fodder plants in the moister regions of Australia where the soil and climatic conditions were very favourable for their development. It was a matter of common observation that many of the native pastures showed signs of deterioration. The most important causes of deterioration were overstocking and injudicious grazing, and the continual removal from the soil of mineral nutrients. Grass lands could be improved in three ways, namely, by sowing down with native or introduced grasses; growing a cereal or root crop and using liberal dressings of fertilizers; top-dressing the pastures with suitable fertilizers. The seeding of native grasses was somewhat costly on account of the scarcity and high price of the seed and the rather low germinating capacity. There was no doubt that, under cultivation, native grasses would greatly improve in succulence, bulk, and in seeding habits. With the aid of soluble phosphates, and the use of suitable grasses and the rational treatment of grasslands an even more remarkable change than secured at present might be effected in the millions of acres of grasslands in the better rainfall districts. This development would usher in a new era of prosperity for the live stock industries which furnished such a large proportion of the national revenue.

ADV. 10-9-25

RESEARCH WORK IN AGRICULTURE.

Two important sources of primary production, said Dr. A. E. V. Richardson in an address to farmers at the Victoria Hall last evening, were the wheat and the grass crop. It had been shown that much progress was possible in developing these lines of primary production. Fully to exploit these and other possible sources of wealth, more attention must be devoted to agricultural education and research. The business of farming, dealing as it did at every step, with the subtlest laws of nature, was capable of indefinite improvement as soon and as rapidly as the findings of science were applied to its affairs. If they were to keep pace with the progress of other countries in the progress of agriculture, agricultural science must subtend an ever widening angle to agricultural practice. The purpose of research and education in agriculture was not to benefit the farmer as an individual. The primary purpose was to develop agriculture as a productive occupation. If the development of agriculture were merely the concern of the farmers, they might leave them to provide it for themselves, or to let matters rest as they were. But in the final analysis the development of agriculture was a public question. Every day in the year the farmers and pastoralists of Australia produced £600,000, or over £200,000,000 per annum. Every bushel per acre added to the wheat yield meant an addition of over £2,500,000 to the annual income. Every plant disease, insect, or fungus they learned to control saved enormous wealth to the country. Every contribution to the knowledge of stock-feeding, stock-management, and dairying was of direct benefit to the whole community. Hence, money wisely spent on agricultural development and research was money invested which would ultimately be returned many times over in the form of increased primary production. If they were to make the fullest use of the great natural resources of this continent and maintain it as a great white continent, they must develop it to the utmost, not only by encouraging immigration and land settlement, developing transport systems, and conserving water supplies, but also by applying all the resources of science to the development of the primary industries on which the prosperity and power of the nation mainly rested.

REG. 10-9-25.

NEW ZEALAND UNIVERSITY.

DRASTIC CHANGES DESIRED.

WELLINGTON, Wednesday.

The report of the Royal Commission on University Education was presented to Parliament to-day. The commission severely criticises the present constitution of the University (that is an examining University with affiliated institutions), and recommends two methods for reform, namely, a Federal University of type of that of New South Wales; four Universities with limited charters. The commission recommends that in addition to the governing bodies of the colleges and the professorial boards, there should be two University bodies, to wit, the council, and the Academic Board. The report declares:—"The general impression left on our minds is that the New Zealand University offers unrivalled facilities for gaining University degrees, but that it is less successful in providing University education." Dealing with legal education the commission condemns most strongly the present methods, and considers them detrimental to public interest. The recommendation is made that there should be set up a council of legal education, composed of representatives o fthe Judges, the legal profession, and the University; urges that much greater care should be raised very considerably; that every candidate should be required to take a definite period of practical training in a law office; that the backdoor to the barristers' profession be closed; and that a law school, properly staffed and equipped with a good law library be established at the most suitable University centre. The commission stresses the vital importance of proper staffs in University education, and urges that much greatercare should be taken in the selection of the personnel. That better salaries and conditions are necessary; and much attention must be paid to the junior and tutorial staffs.

News. 10-9-25

Elder Conservatorium

In the Elder Hall on Monday, in the presence of His Excellency the Administrator and Mrs. Poole, the University Choral Class, with full orchestra, conducted by Mr. Frederick Bevan, will give its annual concert. The works to be performed are Handel's serenta "Acis and Galatea" and Mendelssohn's setting of Racine's tragedy "Athalie." The solists will be Misses Thelma Martin, Elsie Cook, Sylvia Thomas, Alice Savage, Jean Sinclair, and Mabel Siegele, Messrs. Walter Wood, John Ardill, and Arnold Matters. Professor Darnley Naylor will act as reader in the second production. The concert will not be broadcast. Boxplans and tickets are at S. Marshalls, Gawler place.

REG. 11-9-25

ROSEWORTHY OLD COLLEGIANS.

Annual Reunion.

Mr. A. W. Robinson (President) was in control of a happy reunion of old Roseworthy Collegians on the occasion of their annual dinner at Covent Garden, King William street, Adelaide, on Thursday evening.

Professor J. A. Prescott proposed the toast of the 'Agricultural College." He said the purposes of a college were manifold. In addition to making boys into farmers it instilled into them the principles of scientific farming. In recent years there had been a world-wide movement towards improved primary production, despite which many people still considered that science was of little importance compared with practice. That opinion was due to the fact that the work of the colleges was not sufficiently known and recognised. He though Australians relied too much on the Government. In England they received more help from private individuals. It was time for some of them in Australia to wake up and do things. He considered that the number of students at Roseworthy should have increased far more than it had. In 1907 there were 47 students, and at the present time there were only 55.

Mr. Colebatch, in reply, said he was glad to welcome Mr. George Jeffrey and also Professor Richardson. He would be sorry to see the roll call at Roseworthy increase beyond 60 for any length of time, owing to the difficulty of controlling so large a number. Where practical instruction had to be given the numbers should not be large, and he would rather see other colleges springing up than that one college should be overcrowded. They had able representatives in many parts of the Empire. Rubber and coffee growers in the Pacific Islands and tutors of agriculture in the Holy Land were numbered among the former students of the college.

In proposing the toast of the Department of Agriculture Dr. Richardson said as in all the States the department will the Cinderella department, as so little stress was placed upon its work. It frequently occurred that the Minister had several other departments to control. Much had been said as to the cost of the department, but when they considered the return in the total production of the State, the cost was not £5,000 a year on the five farms. That, however, was small as compared with the cost of the 18 farms in New South Wales. In few of them was the expenditure less than twice that amount. He referred to the establishment of the Agricultural Bureaux. This organization represented a gradual growth over 40 years, and they had men meeting in groups every month, reading papers and discussing subjects, while the whole of the work was correlated in one central organization. He hoped tha tthey would take a long view of the wisdom of increasing their agricultural knowledge in South Australia, and not be afraid to invest money in the development of their resources through these media. (Applause.)

Professor A. J. Perkins, in responding to the toast, apologized for the absence of the Minister, and said that, despite Professor Prescott's opinion, he maintained that the progress that they had made in agricultural knowledge in the last 20 years had been little short of phenomenal. They had an excellent recruiting ground in Roseworthy College. There were several means by which production might be increased, each of which relied to a certain extent of political influence. They were the development of railways, migration, and the conservation of water, and the extension of irrigation facilities. All those methods were desirable and effected increased production, but they were less in importance than the spread and application of the teachings of the science of every branch of production. (Hear, hear.) Agricultural education, agricultural research, and agricultural extension were the three most important desiderata in the increase of production.

The toast of the "Old collegians' association" was proposed by Mr. W. G. Auld. Mr. A. W. Robinson responded. Capt. Hugh King and Messrs. Fred. Stone, Richard Watson, and James Anderson submitted entertaining musical and elocutionary items.

REG. 12-9-25

RHODES SCHOLARSHIPS.

New Trustees Appointed.

MELBOURNE, Friday.

The general secretary for the Rhodes scholarships in Australia (Dr. J. C. V. Behan) has been advised that several new appointments have been made to the board of the Rhodes trustees, following on the death of Lord Milner and the retirement of Mr. Rudyard Kipling.

The new trustees are the Prime Minister of Great Britain (Mr. Baldwin), Mr. Geoffrey Dowsan (editor of The Times and former secretary of the Rhodes Trust), the Attorney-General (Sir Douglas Hogg), the warden of New College (Mr. H. A. L. Fisher), who was Minister for Education in the last Liberal Government and at one time principal of the University of Sheffield, and Mr. E. R. Peacock (a director of the Bank of England). Upon his appointment as Governor of Kenya Colony, Sir Edward Grigg resigned office as secretary to the Rhodes Trustees. In his place the trustees have appointed Mr. Phillip Kerr.

ADV. 12-9-25.

Mr. Norman Jolly, B.Sc. (Adel.), B.A. (Oxford), and Diploma of Forestry (Oxford), who has been appointed principal of the new Commonwealth School of Forestry, is a native of South Australia and her first Rhodes Scholar. Born in 1882, Mr. Jolly received his early education at Prince Alfred College and the Adelaide University. Prior to his departure for Oxford University as Rhodes Scholar, he was for two years at the Townsville, Queensland, Grammar School as teacher of mathe-

Mr. Norman Jolly.

matics and science. In 1907 he was appointed to the Indian forest service in Burma, but relinquished the appointment, owing to ill-health. In 1908 he returned to Adelaide as lecturer in forestry at the Adelaide University. In 1910 he was appointed the first instructor of forestry here, resigning in 1911 to accept the position of Director of Queensland Forests, which appointment he held for seven years, to become Commissioner of Forests in New South Wales in 1918. It will probably be a year before Mr. Jolly takes up his residence at Canberra, but in the meantime the work of the Federal School of Forestry will be carried on at the Adelaide University.

ADV. 12-9-25

UNION OF UNIVERSITY STUDENTS.

The formation of the Australian Universities' Students' Union is being proceeded with, and a draft constitution has been drawn up. The main features of the proposed constitution are that the union should consist of the representative student bodies of all the universities in Australia at the present time. It will afford a recognised means of communication between these universities. A second reason for its formation is to have a body to take concerted action in any matter affecting all Australian students, and to conduct communication with universities outside Australia in matters affecting Australian students. Another important activity is to arrange for representation of the Australian universities on bodies controlling student activities throughout the world. Each university is to have two members on the council of the union.