1889.

NEW ZEALAND.

EDUCATION:

SCHOOL OF AGRICULTURE

(REPORT OF COMMISSION CONCERNING).

Presented to both Houses of the General Assembly by command of His Excellency

COMMISSION.

WM. F. D. JERVOIS, Governor.

To all to whom these presents shall come, and to DAVID MCMILLAN, of Waddington, in the Colony of New Zealand, Esquire, MICHAEL MURPHY, of Christchurch, in New Zealand aforesaid, Esquire, and HENRY OVERTON, of Ellesmere, in New Zealand aforesaid, Esquire, greeting:

WHEREAS by Crown grants bearing date the fifth day of April, one thousand eight hundred and seventy-five, and numbered respectively 10990, 10991, and 10992, Register C 46, certain lands in the Province of Canterbury, in the colony aforesaid, containing in area 100,950 acres, more or less, were granted to the Superintendent of the said province and his successors in trust for the purpose of an endowment for a School of Agriculture, and were conveyed by the said Superintendent, in pursuance of "The Canterbury Educational Reserves Sale and Leasing Act, 1876," to the Canterbury College, incorporated by "The Canterbury College Ordinance, 1873," to be held by the said College upon trust for the purpose declared of and concerning the same in the said Crown grants of the said lands: And whereas the Governors of the said Canterbury College, in virtue of the said endowment, have established and are now maintaining a School of Agriculture at Lincoln, in the Provincial District of Canterbury aforesaid: And whereas it is expedient to inquire whether the said School of Agriculture is so managed as to answer to the fullest extent the purposes for which it was established, and that a Commission should be appointed to make such inquiry, and generally to make recommendations regarding the future good government of the institution:

Now, therefore, know ye that for the purposes aforesaid, and having full trust and confidence in your ability and integrity, I, William Francis Drummond Jervois, the Governor of the Colony of New Zealand, in pursuance and exercise of all powers and authorities enabling me in this behalf, and by and with the advice and consent of the Executive Council of the said colony, do hereby appoint you, the said

DAVID MCMILLAN,
MICHAEL MURPHY, and
HENRY OVERTON,

to be Commissioners for the purpose of making the said inquiry and recommendations: And I do hereby require and empower you by all lawful ways and means to make and hold the said inquiry, at such time or times, and in such place or places, and in such manner as you may judge fitting and expedient: And that on or before the thirty-first day of December next, using all diligence, you do report to me, under your hands and seals, your proceedings and your opinions touching the premises: And with the like advice and consent as aforesaid I do hereby declare that this Commission shall continue in full force and virtue, and that you, the said Commissioners, shall and may from time to time proceed in the execution thereof at such place or places and at such times as you shall judge convenient, although the same be not continued from time to time by adjournment: And lastly, it is hereby declared that this Commission is and is intended to be issued in accordance with the provisions of "The Commissioners' Powers Act, 1867," as amended by "The Commissioners' Powers Act 1867 Amendment Act, 1872."

Given under the hand of His Excellency Sir William Francis Drummond Jervois, Lieutenant-General in Her Majesty's army, Knight Grand Cross of the Most Distinguished Order of Saint Michael and Saint George, Companion of the Most Honourable Order of the Bath, Governor and Commander-in-Chief in and over Her Majesty's Colony of New Zealand and its Dependencies and Vice-Admiral of the same, at the Government House at Wellington, this twenty-third day of October, in the year of our Lord one thousand eight hundred and eighty-eight.

FORSTER GORING, Clerk of the Executive Council. H. A. ATKINSON.

SUPPLEMENTARY COMMISSION.

WM. F. DRUMMOND JERVOIS, Governor.

To all to whom these presents shall come, and to DAVID MCMILLAN, MICHAEL MURPHY, and HENRY OVERTON, Esquires, greeting.

WHEREAS by a Commission bearing date the twenty-third day of October last you, the said David McMillan, Michael Murphy, and Henry Overton, were appointed to be Commissioners for the purposes and with the powers in the said Commission more particularly mentioned: And whereas by the said Commission you were directed and required to report to me on or before the thirty-first day of December then next ensuing your proceedings and your opinion touching the matters mentioned therein: And whereas it is expedient that the said period should be extended as hereinafter provided:

Now, therefore, I, William Francis Drummond Jervois, the Governor of the Colony of New Zealand, by and with the advice and consent of the Executive Council thereof, and in exercise and pursuance of every power and authority enabling me in this behalf, do hereby extend the period within which you shall (using all diligence) report to me as by the said Commission provided to the twenty-eighth day of February next: And with the like advice and consent, and in further pursuance and exercise of the said power and authority, I do hereby confirm the said Commission except as altered by these presents.

Given under the hand of His Excellency Sir William Francis Drummond Jervois, Lieutenant-General in Her Majesty's army, Knight Grand Cross of the Most Distinguished Order of Saint Michael and Saint George, Companion of the Most Honourable Order of the Bath, Governor and Commander-in-Chief in and over Her Majesty's Colony of New Zealand and its Dependencies and Vice-Admiral of the same, at the Government House at Wellington, this eighteenth day of December, in the year of our Lord one thousand eight hundred and eighty-eight.

FORSTER GORING,
Clerk of the Executive Council.

REPORT.

To His Excellency Sir William Francis Drummond Jervois, K.C.M.G., C.B., &c., Governor of New Zealand.

MAY IT PLEASE YOUR EXCELLENCY,—

We, the Commissioners appointed by your Excellency on the twenty-third day of October, 1888, to report upon the School of Agriculture at Lincoln, in the Provincial District of Canterbury, humbly submit to your Excellency the following report:—

The scope of the inquiry was defined by our Commission as follows: "To inquire whether the said School of Agriculture is so managed as to answer to the fullest extent the purposes for which it was established, . . . generally to make recommendations regarding the future good government of the institution."

Through the courtesy of Mr. Baker, Chief Surveyor, we were furnished with the use of an office in the old Provincial Government Buildings at Christchurch. Our first meeting was held on the 19th November, 1888, when we arranged the plans of our future proceedings. Considering the great importance of the task we had before us, entailing a large amount of accountancy work, we deemed it advisable to secure the services of an efficient secretary and accountant, which we did in the person of Mr. William Jameson. For economy of time and greater accuracy, we determined to conduct our inquiry by a series of carefully-prepared questions, supplemented by the oral examination of witnesses. By the adoption of this method a very large amount of useful and suggestive information bearing directly on the question under consideration has been obtained, which information is contained in the minutes, and in the appendices to this our report. We have held eleven meetings, and have also paid two official visits to Lincoln for the purpose of inspecting the school, the farm-buildings, and the farm. The number of witnesses we examined has not been very great (eight in all). We endeavoured to avoid all irrelevant matter, preferring to deal as much as possible with the heads of departments. We feel great pleasure in stating that we have met throughout our inquiry with the utmost courtesy and willingness to supply all the information we asked for from all with whom we have had to deal. Finding it necessary to ask for an extension of time, we accordingly did so through the Minister of Education. In pursuance of this application, our powers under the Commission were extended by your Excellency to the 28th February.

We beg now to lay before your Excellency, in as brief a manner as possible consistent with the fullest expression of our unanimous opinion, the conclusions we have arrived at after a very careful consideration of the evidence given by the witnesses we examined, and from our own observations.

We are unanimous in the opinion that the reserves set apart for founding a school of agriculture were set apart for that purpose only, as clearly shown by the resolution passed by the Provincial Council of Canterbury on the 19th December, 1872—viz., "That His Honour the Superintendent be respectfully requested to reserve 100,000 acres of purely pastoral land, in one or

more blocks within the province, as an endowment for a school of agriculture. . . . That such endowment be vested in a Board of Agriculture of not less than five nor more than eight gentlemen, to be appointed by the Provincial Council."*

The Provincial Council followed up the intention set forth in that resolution by electing trustees on the 15th June, 1875; but for some unexplained cause the trustees then elected never entered upon their duties.†

By "The Canterbury Educational Reserves Sale and Leasing Act, 1876," the Superintendent was authorised to convey the reserves (numbered 1574, 1575, and 1576) to the Canterbury College, the body incorporated under and by virtue of "The Canterbury College Ordinance, 1873," to be held by the said College upon trust for the several purposes respectively declared of and concerning the same in the Crown grants of the said reserves. In November, 1876, the Board of Governors appointed a committee to consider the best means of administering the trust.

At the end of 1877 and the early part of 1878, the Board purchased 215 acres of land at Lincoln, and designs were accepted for the first portion of the present buildings, to accommodate twenty students, and the erection of the building was put in hand. Further land was subsequently secured, making a total of 662 acres and 38½ perches, at a cost of £17,711 16s. 8d., or an average of £26 14s. 11d. per acre. Although the price appears high, we think the Board of Governors is to be congratulated on having secured so suitable a farm, combining as it does a great many different varieties of soils, as well as being so centrally situated. The cost of the land was provided out of the proceeds of the sale of portion of the endowment, 40,089 acres having been sold up to the present time.

A perusal of the accounts of the endowment (Appendix A) supplied to us by the Registrar shows that the endowment has also been charged with a sum of £7,954 as a contribution towards the Canterbury College buildings—viz., School of Art, £4,182; and College, £3,772. The Board of Governors appears to have considered that the proviso to section 9 of "The Canterbury Educational Reserves Sale and Leasing Act, 1876," which is as follows, "Provided always that the College may from time to time, with the consent of the Governor in Council, invest any part of the said moneys, not exceeding the sum of ten thousand pounds, in the purchase of sites and the erection of buildings for the purposes of the said College," gave it power to allocate the amount for the purpose; but we consider that the language of the section referred to will not bear the interpretation put upon it, and that the transaction should be treated as an investment, and provision made for the repayment of the money, and for payment of interest on it until repaid. The terms of the trust, as set out in the Crown grants—viz., "for the purpose of an endowment for a school of agriculture"—are so distinct that no doubt is left in our minds that it is clearly a violation of the trust to apply the funds of the School of Agriculture in the manner above stated, and we consider that steps ought to be taken to have the money refunded, with interest. Assuming that the Board were correct in their interpretation of the Act, we consider that the principle of charging the £10,000 to the several endowments in proportion to the area of land sold was unjust to the School of Agriculture, seeing that nearly the whole of the land sold at that time had been from the agricultural reserves.

We have obtained statements from the Registrar of the receipts and expenditure up to the 31st December, 1887. The accounts are kept under three heads—viz., (1) Capital or Endowment Account (see Appendix marked A), (2) Buildings Account (see Appendix marked B), (3) Current or General Account (see Appendix marked C).

The Endowment Account shows that, after providing the cost of the land for the farm, £17,711 16s. 8d., and the contribution to the Canterbury College buildings above referred to, £7,954, there was a credit balance on the 31st December, 1887, of £52,700 0s. 10d., the investment of which is producing about 5¾ per cent. per annum. The unsold portion of the reserves is bringing in a rental of £970 per annum.

The Buildings Account (Appendix B) shows a total expenditure of £34,043 11s. 7d.: of this amount £5,954 9s. 5d. has been transferred from the General Account, leaving a Dr. balance of £28,089 2s. 2d. The Board raised a loan for general purposes of the Canterbury College, and applied £28,000 of it to the Building Account of the School of Agriculture. Interest at the rate of 7 per cent. on this amount is charged to the school.

The General Account (Appendix C) shows the receipts from rents, interest on money invested, students' fees, sale of farm-produce, &c., and the expenditure for general maintenance of the school and farm. The account shows a Dr. balance at the 31st December, 1887, of £2,588 18s. 8d. There is a charge in this account of £3,650 as a contribution to Canterbury College—viz., £525 for one year, £500 per annum for four years, £250 per annum for four years, and £125 for the year 1887. This seems to have been an arbitrary sum allocated by the Board towards the expenses of the Canterbury College, which amount we consider to be out of all proportion to the work done by the College for the benefit of the School of Agriculture.

The accounts kept at the Registrar's office do not show the working of the farm proper, and we accordingly applied to the Director, who furnished us with the account appended hereto (marked D). After allowing liberally for the cost of permanent improvements and charges for purely educational purposes, giving credit for the estimated value of the stock, implements, and growing crops, and charging a fair rent and a reasonable amount for management, we find that the account shows a deficit of £5,824 for the ten years from the date of the purchase of the farm to the 31st December, 1888. Considering that we have eliminated every item that could fairly be charged to education and permanent improvements, and have not charged anything for interest on the cost of implements, stock, &c., we consider that the farm should have been made to pay expenses and a reasonable amount for rent and management. Owing to the manner of grouping the items in the accounts it has been very difficult to arrive at the cost of the permanent improvements; but the amount appears to us to have been exceedingly large.

* Proceedings of P.C., Sess. XXXVIII., page 69. † Proceedings of P.C., Sess. XLII., page 180.

In the published accounts of the Canterbury College as laid before Parliament the whole of the departments of the college have been, with one or two exceptions, grouped together in one account, so that it is impossible for any one not having access to the Registrar's books to ascertain the state of the funds of the School of Agriculture, or, indeed, any other branch of the College. We consider that separate accounts of each department should be kept and published annually.

While on the subject of the accounts, we might point out that, while the Endowment Account shows a credit balance of £52,700 0s. 10d., which is producing interest averaging about 5¾ per cent., the Buildings Account shows a debit balance of £28,089 2s. 2d., upon which interest at 7 per cent. is being paid, resulting in a loss to the institution of about £350 per annum. We think it desirable that legislation should be obtained to enable the overdraft to be paid off out of the endowment, and thus save this annual loss.

In March, 1878, Mr. W. E. Ivey was appointed director of the school, which was opened on he 19th July, 1880, with sixteen students.

In March, 1882, the number of students having increased to thirty-eight, tenders were called for enlarging the building so as to provide accommodation for fifty students. The total cost of the buildings, as shown by the "Buildings Account," is £34,043 11s. 7d. This, however, includes a sum of £994 11s. for interest. The buildings are very elaborate and substantial, and well fitted for the purpose for which they are intended; but we consider that a less pretentious building, containing the same accommodation, could have been erected at a less cost.

The accompanying statement (Appendix E) shows the number of students attending each term since the opening of the school, and from whence they came. In 1881 there were forty-one students in attendance, which is the highest number reached. In 1884 the fees, which at first were £40 per annum, were raised to £45, and the course of instruction was altered from three years to two years; the attendance of students was thirty-six. In 1885 the fees were further raised to £65 per annum, and the attendance next year fell off to twenty and nineteen for the first and second term respectively. The attendance for the term just ended was only sixteen. Twenty-eight students have passed their final examination since the school was opened.

The sudden decrease in the number of students when the fees were raised to £65 forces us to the conclusion that the high rate has had a great deal to do with the falling-off. We cannot leave this portion of our report without expressing our regret that so few students should be availing themselves of the advantages to be derived from an institution of this character.

The teaching-staff, in addition to the director, consists of a lecturer on chemistry and physics; lecturer on natural science, mathematics, land-surveying, and levelling; lecturer on book-keeping and meteorology; and a lecturer on veterinary science. The course of instruction is given in the attached prospectus (Appendix F).

Our inspection of the farm leads us to the conclusion that it is suitable for the purpose of a school of agriculture, offering ample facilities for a large number of experiments illustrating the rotation suitable for a variety of soils. We were favourably impressed with the general condition of the land, and the excellent cereal and root crops growing thereon. We must, however, take exception to the absence of neatness and order, especially as regards the approach to the College, the orchard, fences and gateways, and general surroundings. We consider the stock on the farm generally good, but notice the absence of sufficient typical breeds of cattle and sheep, which we consider necessary for the better instruction of the students. The director states that want of means has prevented more being done in this direction.

Little or no attempt has been made to carry on the kind of work incidental to the teaching of scientific and practical farming, embraced in the following subjects: No systematic attempt has been made to carry on experimental work. Little or no attempt has been made to instruct the students in forestry, or scientific and practical gardening: this is much to be regretted, considering the importance of the subject. The present excellent and well-arranged orchard is sufficient in area to give instruction in practical pomology, whereas at present it appears to be utterly neglected. Little has been done in the matter of initiating students in the purchase and sale of all kinds of farm stock. Scientific dairying has not for some time past received the attention it deserves, considering its great importance. This subject formed part of the instruction of the students in past years, but was abandoned; we are glad, however, to notice that provision is now being made for undertaking this work with the latest improved appliances. The science of veterinary surgery is worthy of more attention than it now receives. The reason assigned by the director for the partial neglect of the above-named important branches of agricultural education was the want of sufficient funds for the purpose.

As to "whether the School of Agriculture is so managed as to answer to the fullest extent the purposes for which it was established," we have, after careful consideration, been forced to the conclusion that the Board of Governors has failed to manage the School of Agriculture so as to produce the best results; and, in making our recommendations regarding the future good government of the institution, we are of opinion that a change in the managing body is desirable. We think it is to be regretted that the management was not placed under a Board of Agriculture, as contemplated by the Provincial Council when the endowment was made. The Board of Governors having failed to manage the school in the past, we can have little hope of any improvement in the future, because the method of electing members of the Board—viz., by the graduates of the University—is likely to prove inimical to the best interests of the institution. We are of opinion that the necessary legislation should be obtained to place the institution and its endowment under the management of a Board of Agriculture, which, in the absence of a Minister of Agriculture, should work in connection with the Minister of Lands' Department.

As to the constitution of the Board, we think that we cannot do better than direct your Excellency's attention to the constitution of the Council of Agricultural Education in Victoria, which was established in accordance with the provisions of "The Agricultural Colleges Act, 1884," of that colony, and consists of eleven members, three of whom are the trustees for agricultural

college lands, one the Secretary for Agriculture, two members appointed by the Governor in Council, and five elected by agricultural societies. The Commission make this recommendation believing that the institution is ample for the requirements of the whole colony, and we consider that the government and management should be placed on as wide a basis as possible. In the election of a Board such as we suggest, care would have to be taken to have sufficient comparatively local members to form an Executive Committee, and thereby render meetings of the General Board less frequent than would otherwise be necessary.

We strongly recommend that a system of scholarships available at the School of Agriculture should be initiated. These might be provided (1) by the Government, (2) in connection with the State schools; and we also think that the funds of the institution could be so managed as to provide a certain number of scholarships out of the endowment.

We think that the fees charged at present are far too high, and that a great reduction should be made, which we consider could be done by adopting a different system of boarding the students. We think that if this were undertaken by the Board of Management, and the produce of the farm were utilised to a much larger extent than is now done, the cost could be reduced so as not to exceed £30 per annum. We find that the fee charged at the Dookie Agricultural College, Victoria, is £25 per annum, and we are informed by the principal of that institution that "last year the cost of each student here, including food, attendance, and washing, was £22 18s. 3½d." With regard to the relative cost of living in the two colonies, the difference is in favour of New Zealand.

With a system of scholarships, and a reduction in the amount of fee charged, the institution would be placed within the reach of all classes of the community, and with a full complement of students no difficulty need arise in giving effect to the low scale of charges above referred to.

With an increased number of students, a reorganization of the teaching-staff and general supervision would be necessary, and we think the general results of the farm would be materially improved by the appointment of an efficient farm-manager. Such an appointment would provide for the continuous supervision and instruction of the students in the practical work of the farm, and would enable the director to devote more time to his other duties, and to carry on a more extensive system of experimental work, which has been neglected in the past.

We are of opinion that the more frequent publication of the results of experiments and the work being carried on on the farm would confer on the agriculturalists in the colony, and on the institution itself, much more benefit than the annual reports presented to the Board of Governors. In support of this assumption we may mention that the Department of Agriculture for Victoria have discontinued the publication of annual reports, and have substituted frequently-recurring agricultural bulletins, with the best results.

We consider that amongst the many industrial pursuits of which New Zealand is capable that of agriculture in its broadest sense should occupy the foremost position, and if the colony is to keep pace with other countries every effort will have to be made to instruct the sons of farmers and others in the science and practice of agriculture. It is only by adopting such means that colonial farmers can hope to compete with those countries where so much attention is paid to every branch of farm-management. We submit that the School of Agriculture at Lincoln, if managed on the lines which we have indicated in this report, would soon be rendered of inestimable value to the whole colony.

Witness our hands and seals this twenty-eighth day of February, one thousand eight hundred and eighty-nine.

(L.S.) David McMillan.
(L.S.) Michael Murphy.
(L.S.) Henry Overton.

MINUTES OF EVIDENCE.

Thursday, 3rd January, 1889.

Mr. A. P. O'Callaghan examined.

Mr. O'Callaghan stated that the evidence he wished to place before the Commission would be in the form of an expression of opinion as a resident of the Lincoln District, and also as the late representative of the district in the House of Representatives—first, as to the causes of the want of success of the Agricultural College; and, second, as to the remedial measures necessary. He then made the following statement: My reason for moving in the matter of the School of Agriculture was that I considered the original intention of the first founders of the institution was being lost sight of altogether in the way it was being managed. The original intention was that an agricultural school should be established, with a magnificent endowment of 100,000 acres of land, and that it should provide education for the sons of farmers, and that the agricultural community generally should reap the benefit of the work carried on there. The endowment was made as a sort of compromise between the towns and country, large endowments having been made for the support of higher education in the cities, and it was thought that agricultural districts should be placed on a similar footing. The intention in the first instance was to provide education for the sons of farmers, to teach them an advanced system of farming, and fit them to undertake the management of farms; secondly, that a system of experiments should be carried on, the results of which should be available to the whole farming community. I think every one must admit that the institution has failed in these objects. A very small number of students are educated there, the experiments have been very few, and the results not made public. The causes of failure in carrying out the original purposes are not, I think, far to seek. In the first place, the management

is in the wrong hands: the Governors of the Canterbury College are no doubt very estimable men in many respects, but I do not think they have shown the tact or experience necessary in the management of an agricultural college, and as a consequence money has been frittered away on many unnecessary objects; the result is, there is apparently no money for experimental purposes, or for establishing scholarships, or other objects which might fairly be expected. The second cause of failure, I consider, is the high rate of fees, the best proof of this being that since the fees were raised to the present rate the number of students has been reduced. I consider, further, that the system of farming is too extravagant, and not such as young farmers should be taught to pursue. We find that the labour-bill for three years, commencing 1884, averaged over £1,000 a year (including payments to students) for 660 acres. The income of the farm for the same period averaged £2,075 per annum. Adding the cost of manures, seed, and maintenance of the establishment to the labour, the accounts show a loss of £574 per annum. Excluding the cost of maintenance, and taking only labour, seeds, manures, and implements on the Dr. side, and sales of produce on the Cr. side, the accounts would show an average profit of only £403 per annum—that is without rent, or interest, or taxes, and with students' unpaid labour given in. I bring this forward to show that it is an extravagant system of farming, which no farmer would wish to teach his sons. I consider another cause of failure to carry out the original intention is that the Board of Governors has never tried to keep in touch with the public, nor aimed to make the institution popular: they even refused to publish detailed accounts until called for by the House of Representatives. I consider that the Board should publish full particulars annually. About a year ago Mr. Enys, a member of the Board, endeavoured to get a statement published, and it is on record that the Chairman stated it was not advisable to do so—that there were many things which it was not desirable to make public. The Board supported the Chairman, and the statement was refused. Hence my action in asking for an inquiry to be made, as I look upon it as very important that the agricultural public should thoroughly understand the position of affairs, and have faith in the management of such an institution. I do not wish to go further into the management than to show need for reform. I consider the labour-bill out of all proportion to the amount of work done. I notice that the students' fees for the three years above referred to have been nearly swallowed up by the cost of board. In 1884 the fees amounted to £1,322; board for students and staff amounted to £1,462: in 1885 the fees amounted to £1,740; board cost £1,590; and in 1886 the fees amounted to £1,226, while the cost of board amounted to £1,190. Another point I wish to draw attention to is, that the Board of Governors seem never to have kept the interest accounts distinct, or, at least, they have never shown how the account is made up. The abstracts of accounts for the years 1884, 1885, and 1886 show an excess of expenditure over income of £3,616, which must have been met out of interest or capital.

1. *The Chairman.*] You complain that the experiments have been very few, and that the public has not had the benefit of them owing to the results not having been published: do you consider that the colony should benefit by the publication of the results from time to time?—Yes, certainly.

2. You say the Board of Governors is not in touch with the public: do you know what weight or influence the reports of the farm-examiners have had with the Board, and whether their recommendations have been given effect to?—I have seen some of their recommendations; but have not heard that they have been attended to. They have usually been of a very general nature.

3. Do you consider the reports of the farm-examiners have done any good or harm?—I consider they have done harm in this way: They have generally reported things going on well, and have been quoted by the Board for the purpose of proving the general management satisfactory, and so have prevented faults being seen.

4. Do you think that if the examiners had larger powers—*i.e.*, if they had to examine the farm accounts, and to report whether the farm was being worked on economic principles—they would have been more useful?—Most decidedly so.

5. *Mr. Murphy.*] If the original intention of placing the institution under an Agricultural Board had been carried out, the results would have been better?—Yes.

6. Have you understood that the reserves and accounts of the School of Agriculture were to be kept distinct from other branches of the Canterbury College?—Yes.

7. You know of no authority under which the Board of Governors could devote the proceeds of the reserves to any other purpose than the School of Agriculture?—I know of none.

8. Would you go so far as to say that any money applied to the building of Canterbury College or any other purpose should be refunded?—Most decidedly so, and I would consider it a breach of trust to apply the funds to any other institution.

9. *The Chairman.*] What remedial measures would you suggest?—I have a very strong feeling that the first step would be to have the management taken out of the hands of the Canterbury College. I should be glad to see the Government advised to bring in a Bill to place the management in the hands of the Canterbury Agricultural and Pastoral Association, and I have no doubt that the association would very soon make a success of the institution, as it has of everything it has undertaken. The sole control of the reserves and the management of the school and farm should be in the hands of the association. Three or five members could be appointed as a Board, and should be paid, say, £50 per annum for their services. The original intention was to place the institution in the hands of just such men as compose the association, as will be seen by looking at the names of the original Committee appointed by the Provincial Council. The present system of electing members of the Board of Governors of Canterbury College is likely to preclude the election of men competent to manage an agricultural college. I should like to see the Act provide that the fees should simply cover the cost of board—about £25 per annum. The fees for sons of New Zealand settlers should be lower than for students from outside the colony. Travelling expenses should be allowed, as is now done, to students from other parts of New Zealand, so as to place all parts of the colony on a similar footing; but no expenses should be allowed to students from places beyond the

colony. Considerable reductions might be made on the travelling expenses now paid. A portion of the funds should be devoted to scholarships, and the Government should be asked to supplement the amount by, say, one-third—*i.e.*, the Government should grant one scholarship for every two given by the school.

10. What portion of the endowment should be devoted to experiments?—The whole endowment should be applied to three purposes only—viz., first, payment of Director and professors; second, scholarships; and, third, experimental purposes. The farm and the fees should pay all the rest.

11. *Mr. Murphy.*] Do you know any reason for the school being unpopular?—No, beyond what I have stated as the causes of the failure of the institution. What I fear is that the place may become under the present management merely an expensive toy instead of the useful and profitable institution it should be.

Mr. F. G. STEDMAN examined.

12. *The Chairman.*] You are Registrar of the Canterbury College?—Yes.

13. Is the School of Agriculture under the jurisdiction of the College?—Yes.

14. How was the Board of Governors constituted?—Under "The College Ordinance, 1873."

15. By whom are vacancies on the Board filled?—By the graduates of the University of New Zealand continuing on the books of the Canterbury College, see clause 18 of "The College Ordinance, 1873." Before there were thirty graduates, vacancies were filled by the Board.

16. Is there a committee appointed to look specially after the interests of the School of Agriculture?—Yes.

17. Who are the members?—The Hon. E. C. J. Stevens, Messrs. J. Grigg, L. Harper, R. Westenra, W. H. Spackman, W. C. Walker, F. D. S. Neave, and Hon. J. T. Peacock; and also the Chairman of the Board *ex officio*.

18. (*a*) Are the accounts of the School of Agriculture kept distinct from those of other departments of the Canterbury College, and (*b*) separately audited?—(*a*) Yes. (*b*) No.

19. The statements produced are correct statements of the receipts and expenditure on account of the School of Agriculture on (1) capital or endowment account, (2) buildings account, (3) current account, to the 31st December, 1887?—Yes.

20. A sum of £7,954 appears to have been taken from the endowment as a "contribution to College buildings:" what buildings are referred to?—School of Art, £4,182; and College, £3,772.

21. When was the money transferred, and under what authority?—Under authority of the Governor in Council; £4,500 on the 13th May, 1878, and £5,500 on the 20th December, 1878. [Copies of letters produced—Appendix L.]

22. *Mr. Murphy.*] What was the authority for taking the money from the endowment for the School of Agriculture?—"The Canterbury Educational Reserves Sale and Leasing Act, 1876," section 9, authorised the Board, with the sanction of the Governor in Council, to expend £10,000 on College buildings. The amount was taken from the several endowments in proportion to the value of land sold up to the date of the authority.

23. *The Chairman.*] What interest is being paid for the money?—None.

24. What provision is made for repaying it?—None, as the Board considered they had received authority from the Governor to expend the money, and did not regard it in the light of a loan.

25. Has not the land for the farm also been paid for out of the endowment?—Yes.

26. What was the cost, area, and date of purchase?—Total area, 662 acres and 38½ perches, costing £17,563 15s., exclusive of legal fees, surveys, &c., £144 1s. 8d. The dates of purchase were—21st September, 1877, 42 acres; 20th October, 1877, 41 acres; 4th April, 1878, 132 acres 1 rood; 23rd July, 1878, 39 acres 1 rood 38½ perches; 21st August, 1879, 100 acres; 1st November, 1879, 147 acres 2 roods; and 21st July, 1881, 160 acres.

27. What did the school-buildings cost?—Total cost of buildings, £34,043 11s. 7d., *viz.*: school-buildings, £30,507 12s. 11d.; farm-buildings, £3,535 18s. 8d.

28. From what fund was the cost provided?—£28,000 from borrowed money, the balance from revenue from reserves.

29. What interest is paid on the borrowed money?—Seven per cent.

30. What has been spent on permanent improvements and plantations?—Permanent improvements, £2,348 5s. 8d.; plantations, £1,006 13s. 6d.

31. What is the area of the plantations?—Seven acres.

32. The School of Agriculture is charged with an annual contribution to Canterbury College: what is this for, and on what principle has the amount been determined?—The Agricultural Committee recommended that the amount should be charged as a contribution towards expenses of the department, such as managing the estate, &c.; also the professors of chemistry and geology. The amount was voted each year by the Board of Governors when considering the annual estimates for all departments.

33. Why was the amount reduced from £500 to £250, and again from £250 to £125?—Because the Agricultural Committee reported that the School of Agriculture could not afford to pay £500.

34. When was the school opened?—19th July, 1880.

35. When was the Director appointed?—30th March, 1873. He arrived in May.

36. Why was the Director appointed two years before the school was opened?—The Director was required to advise the Board in organizing the school, planning the buildings, working and laying out the farm, &c.

37. Have students to pass any examination before admission?—Not now; they had at one time, but it was discontinued.

38. Why was the examination abandoned?—It was found to deter students from joining the school.

39. What fees have been charged to students?—In 1880, £41 10s. per annum. In 1884 the amount was raised to £46 10s., and in 1885 to £65, which is the amount now charged. These charges include £1 10s. per annum for nurse and needlewoman.

40. Why were the fees raised?—Upon the recommendation of the Committee.

41. How are students boarded, and at what cost per head?—The Director is allowed £45 per head for boarding students, to include attendance and washing.

42. Have the Board of Governors or the Committee been in the habit of visiting the school?—Occasionally, but not at any stated times.

43. How many scholarships have been taken up?—Eight students held scholarships at various periods.

44. What is the extent of the endowment of the School of Agriculture?—The area was supposed to be about 100,000 acres, but is actually 93,555 acres 3 roods 18 perches.

45. How much has been sold?—40,089 acres 3 roods 18 perches.

46. What rate of interest has been received for the proceeds of the land sold?—The amount received from land-sales is credited with interest at the rate of 7 per cent.; but this is subject to several charges, such as loss on debit balance, money on deposit at bank, &c., money required for current expenditure, &c.

47. What is the net rate, after providing for these charges, for the last year?—Very nearly $5\frac{3}{4}$ per cent.

THURSDAY, 14TH FEBRUARY, 1889.

Mr. W. E. IVEY examined.

48. *The Chairman.*] You are Director of the School of Agriculture?—Yes.

49. What are your qualifications?—I entered Cirencester College in 1858, and became a member of the College in 1860; then took charge of a large farm of 550 acres of my father's, which I subsequently managed on my own account. In 1867 I came to New Zealand, bought land, and had some experience in the North Island, but in consequence of the Maori war left for Victoria. After doing some newspaper-work for agricultural papers I was appointed Chemist, &c., to the Department of Agriculture in 1873, and later Secretary to the Central State Forest Board, under which appointment I had nearly the whole control of the State forests. I was later selected to value the capabilities of land under the Land-tax Act, and was appointed to take charge of the Dookie Agricultural College when I accepted my present appointment, in 1878. I am a Fellow of the Chemical Society and of the Institute of Chemistry of Great Britain.

50. What are the terms of your appointment?—I was appointed at a salary of £600 per annum, with residence and keep of a horse. I was to cater for twenty students at £50 per annum. No length of term was stipulated for.

51. What powers are conferred upon you?—No specific powers. I have the whole management of the farm, the staff, and the students—in fact, full control of the establishment except as to finances. I have to submit estimates to the Board of Governors annually, and to keep the expenditure within the amounts voted. Appointments on the staff are made by the Board on my recommendation, but I employ the labour necessary for the farm.

52. In what way does the Board of Governors exercise supervision?—Not much supervision, except financially. I requisition for all requirements, such as implements, &c., and make recommendations to the Board on such matters as I think should be brought under their notice. These have to be approved or otherwise. The Board exercises very little or any supervision over the farm.

53. Does the Board visit the school at stated periods, or is there a special Committee of Management?—Not at stated periods, and not often enough to exercise supervision. There is a committee of the Board to look after the school.

54. Who, besides yourself, are on the staff?—(*a.*) In the school—Mr. G. Gray, chemistry and physics; Mr. E. Wilkinson, natural science, mathematics, land-surveying, and levelling; Mr. E. C. Buckley, book-keeping and meteorology; Mr. J. Hill, veterinary science. Mr. Buckley keeps the farm-books. (*b.*) On the farm—Head ploughman; has charge of stables; his chief work consists in setting students to work with horses, teaching them to plough and to do other horse-work: a labourer, who helps to feed the horses, keep the stables, &c., and does ordinary labourer's work on the farm, orchard, &c.: engine-driver, who does everything connected with the engine, chaff-cutting, corn-crushing, &c., works on the farm when required, and does any work connected with water-supply, drains, and anything in connection with the College: dairyman, to look after dairy and stock; man, at times, to cut drains, ditches, and do other work of that nature.

55. What wages are paid?—Head ploughman, £2 a week; engine-driver, £2 a week; ordinary labourer, £1 10s. a week; stockman and wife, £2 5s. 6d. a week; labourer, 6s. a day when employed. Cottages are found for all the men, but they keep themselves.

56. What time is required to keep the farm-books?—Very little. A return I furnished to a special committee of the Board, dated the 1st November, 1887, will give the particulars [Appendix I].

57. Is the present arrangement of the staff suitable?—I do not think it is, and would refer the Commission to my letter to the Board dated the 28th September, 1880 [Appendix H]. The first year I took agriculture and chemistry myself. The next year a lecturer in chemistry, Mr. Barkas, was appointed, and later Mr. Kirk was appointed Lecturer in Botany, &c. Subsequently, from motives of economy, the staff was rearranged as at present.

58. Did any of the professors of the Canterbury College assist?—Yes: before Mr. Kirk was appointed Professor Hutton lectured on botany, and the School of Agriculture paid half his salary.

59. Was Professor Bickerton engaged at any time at the school?—No.

60. Did students come to Christchurch to attend his lectures?—No.

61. Then he did not contribute in any way to the work of the school?—No. [Mr. Ivey's letter to the Board, dated the 13th December, 1880, was here read (Appendix G).]

62. Have you not had a farm-manager or overseer?—I had once.

63. Why were his services dispensed with?—From motives of economy. I considered I could dispense with him better than others.

64. In your opinion, has the working of the farm suffered through dispensing with a general farm-overseer?—No.

65. How many students are there at present at the school?—Seventeen in residence now.

66. What has been the maximum number since the school was established?—Forty-one.

67. How many students is there accommodation for?—Fifty.

68. To what cause do you attribute the decrease?—I consider the raising of the fees has led to this result. The fees were originally £40. In March, 1884, they were raised to £45, and in February, 1885, to £65 per annum. The fees were raised in the face of the agricultural depression then existing, which made matters worse. See my report to the Board, 26th April, 1886 [Appendix J].

69. Had you any reply to that report?—No.

70. What is your opinion as to the present fees as compared with the former?—I think the present fees too high to attract ordinary farmers' sons. I would prefer a system of scholarships.

71. Why were the fees raised?—The Board made a loss on every student, and could not make both ends meet. The committee considered the best way to meet the difficulty was to raise the fees.

72. The present charges are £65 per annum: how much is paid for the keep of each student, and how is the balance allocated?—£45 is paid for the board of each student; the balance goes to the general account of revenue and expenditure.

73. Do you cater for the students?—Yes.

74. Has this arrangement been a satisfactory one?—No. In my letter to the Board in January, 1883, I asked to be relieved of it. My original agreement was to cater for the students at £50 each; but at the request of the Board I agreed to accept £45, which resulted in a loss to me. The committee made inquiries and examined my accounts, and made me an allowance. In 1885 I again reported that the arrangement resulted in a loss to me. On the 10th April, 1888, I furnished the Board with a statement showing what the boarding of the students cost me.

75. Does the amount paid for catering cover the cost of servants' wages?—Yes.

76. In your opinion would it be better if the catering were done by the Board?—Yes: it would be possible to do with a plainer bill of fare, and by using the produce of the farm the cost might be further reduced.

77. What agreement exists between the Board and yourself regarding the produce of the farm which is consumed in the College?—In 1880 the Registrar of the Canterbury College was instructed to ascertain what were the contract prices being paid by the public institutions, such as the Hospital, &c., for butter and milk, which was found to be 8d. per pound and 8d. per gallon respectively all the year round, and these prices were fixed by the Board as those to be paid by me for what was supplied to me.

78. When butter was selling at 5d. and 6d. per pound, you were paying 8d.?—Yes.

79. From whence is the meat-supply obtained?—From the local butcher until recently.

80. Why not from the farm?—I think it should be from the farm: the only reason is, that while the Director caters for the students he might be accused of getting it too cheap. Since the end of last year we have killed on the farm, but only a few sheep.

81. What is the general curriculum and course of lectures delivered?—The course of instruction and syllabus of lectures is stated in full in the prospectus of the school which I produce [Appendix F].

82. What is the length of the course of instruction, and how is the time apportioned—how much in the lecture-room and how much on the farm?—The time-table is shown on page 11 of the prospectus [Appendix F].

83. Do you consider the alteration from three years to two years a desirable arrangement?—I would prefer three years, but students often cannot stay three years; the best generally left at the end of two years. The alteration was made at the time the fees were raised, it being considered that the total cost would be no more than for three years at the lower rate.

84. How many students have obtained final certificates since the establishment of the school?—Twenty-eight.

85. Do you know how they are at present engaged?—Eleven are managing farms, or on their own farms, four are on farms in various capacities, four are at other work, four have just left the school, two are absent from the colony, three I have no knowledge of.

86. Have any scholarships ever been offered?—Yes, when the school was first opened.

87. Why were they discontinued?—Because the school was full, there being only accommodation for twenty students at that time, and the Board considered it unnecessary to go to the expense of providing scholarships when the place was full without.

88. Have scholarships been taken up since?—No.

89. Do you consider the system of scholarships as inaugurated, if carried out, would have conduced to the welfare of the school?—Decidedly so; but they should be limited to boys from State schools, and intended for farm-work.

90. How are students at present admitted—by examination or without?—There is no restriction. All that is required is an undertaking to obey instructions and to comply with the rules and regulations.

91. Why was the entrance examination abolished?—Because many desirable students would not face the examination.

92. Was the examination of a very strict nature?—No.

93. Has the system of admitting students without examination worked satisfactorily?—Yes.

94. How many outdoor students have you?—None at present.

95. What fees are charged to such students?—£5 per annum.

96. Do you consider that the facilities offered in this respect have been taken advantage of? If not, what, in your opinion, is the cause?—Not very much. Farmers do not realise the advantages of higher education, and object to the loss of their sons' labour.

97. What supervision are outdoor students subjected to?—They must live in a house approved of by me, and are subject to all the school regulations that may be applicable.

98. What is the nature of the farm-work done by the students?—They do all the horse-work—ploughing, harrowing, rolling, &c. I do not allow them to steer the drill or feed the horses; but with this exception they do everything, including shearing, dipping, and drafting sheep. Extra labour is engaged at harvest-time for stacking.

99. Are they required to take part in all the work of the farm, manual and otherwise?—All but weeding the garden and cleaning the pig-sties. They load dung, &c., in stock-yards, clean horses, &c. Sometimes they have to clean the pig-sties as a penalty.

100. Have you labour penalties?—Yes.

101. Do the students attend the sale-yards for the purpose of gaining experience in the buying and selling of stock?—Very seldom. When stock are sent up two students generally go with them. The expense is one reason for not sending them oftener.

102. Are students paid for their labour?—They have been.

103. Do you not consider that the performance of farm-labour is a part of the education of students?—Yes.

104. Then, why should they be paid for it?—I have given my views in a report to the Board dated the 29th January, 1889. [Letter read.]

105. Why was payment suspended?—I do not know.

106. What time is devoted to workshop instruction, and how is it carried out?—A carpenter and blacksmith come twice a week, and three or four students get tuition in turn.

107. Can you tell from your system of farm-account keeping whether the farm proper has been worked at a profit or loss?—Yes. A profit-and-loss account is prepared every year.

108. Do you annually furnish a profit-and-loss account to the Board?—No; the Board only recognise the accounts kept at the Registrar's office.

109. Have your profit-and-loss accounts been published for general information?—No.

110. Have the suggestions which it may be presumed have been made by you to the Board from time to time received the attention you considered they deserved?—Yes: at any rate until lately they have received every attention.

111. Are typical breeds of sheep and stock kept on the farm?—Not to the extent I should like. Want of means has prevented more being done in this direction.

112. Are the farm- and other out-buildings suitable to the requirements of the school?—Yes.

113. What is your opinion as to the suitability of the College buildings, as they now stand, to the requirements of the colony?—I do not think you could have anything better.

114. Are all the buildings in good repair?—Yes.

115. How much land is set apart for experimental work, and what grants, if any, are made for this purpose?—None at present. Some experiments have been made with the ordinary farm-labour.

116. What results have been obtained from the experiments made, and have they been published for the benefit of the colony?—The results have been published in my annual reports.

117. Do you consider the experimental work as carried on embraces all that might be done in this direction?—Certainly not.

118. Is any work performed by the College staff other than teaching, such as making analyses, testing seeds, peripatetic lectures, &c.?—Analyses are made and seeds are tested for any one who desires it. No charge is made for this work.

119. Do the Board employ practical examiners?—Yes.

120. How long do they continue in office?—Only one appointment has been made.

121. How often do they visit the farm?—Four times a year—viz., at harvest, threshing, ploughing, and shearing time.

122. Do their functions extend to the periodical examination of the farm-accounts?—No.

123. Have their reports been acted upon?—They only once recommended work to be done—viz., repairing gates, &c.—which item I placed on the estimates, and the work was carried out.

124. What provision is made for giving instruction in forestry and practical gardening?—None at all.

125. *Mr. Overton.*] Could not something be done in the way of practical gardening without extra expense?—Not without further expenditure.

126. *Mr. Murphy.*] Then for want of means this part of the school-work has to be abandoned?—Yes.

127. You said you considered the present buildings suitable to the requirements of the school. Do you not think the heavy expense for attendance is caused by the construction of the buildings?—Yes; the building might have been better planned if it had all been erected at one time; but it contains sufficient accommodation.

128. *Mr. Overton.*] Have the students had any experience in stock-driving?—Very little. When stock are sent for sale they go by the road, and students always accompany them.

129. What form do Mr. Hill's lectures take?—Lectures on anatomy and pathology, and if any

operation is required, or any animal is sick, it is brought before the class, and the treatment explained to the students.

130. *Mr. Murphy.*] If scholarships were re-established, would you pay the holders for their labour?—Yes, for economical reasons, as explained in my letter to the Board.

131. The staff as at present constituted is not to your satisfaction?—No.

132. *Mr. Overton.*] Why was the dairy-work discontinued?—Because we had to buy milk, and it did not pay at the price, and we had no funds to purchase more cows of our own.

133. *Mr. Murphy.*] How is it that you are now able to resume dairying?—I recommended that a co-operative dairy company should be established, but the Board preferred to vote money for resuming the work ourselves.

TUESDAY, 19TH FEBRUARY, 1889.

Mr. H. R. WEBB examined.

134. *The Chairman.*] You are Acting-Chairman of the Board of Governors of Canterbury College?—Yes.

135. How long have you been a member of the Board?—Ever since the Act was brought into force. I was one of the original Trustees of the Museum and Technical Science Trust, which merged into the Board of Governors.

136. You have the control and management of reserves as endowments for the School of Agriculture?—Yes.

137. You have also the control of other reserves?—Yes.

138. Do you keep the proceeds of the agricultural endowments entirely separate from the others?—They are kept separate.

139. Are you aware that the reserves contain 8,000 acres more than you receive rent for?—I cannot say. I believe the whole of the estate is let.

140. Can you explain why the sum of £7,954, part of the proceeds of the agricultural endowment, was taken to erect buildings in Christchurch in no way connected with the School of Agriculture?—The Board was empowered to do it, with the sanction of the Governor in Council, under "The Canterbury Educational Reserves Sale and Leasing Act, 1876," section 9.

141. Do you think the erection of buildings can be termed an "investment" within the meaning of the Act?—Yes, I think so.

142. Would not this be investing moneys of one trust to erect buildings for another trust?—I consider the money all belongs to one trust. The separate trusts were all dissolved and merged into one trust.

143. Do you consider the Canterbury College buildings have anything to do with the School of Agriculture?—I considered they were in connection with the school.

144. On what basis was the sum of £500 per annum, and afterwards the reduced amounts of £250 and £125, charged as a contribution to Canterbury College?—The amount was originally fixed as a contribution towards the general management and also part of the lecturers' salaries, &c. The amount was reduced when the machinery was established at Lincoln.

145. Were the accounts so kept that you could tell how much per cent. per annum was annually paid for interest, and how much per cent. per annum was received by the Board on the accrued funds?—I cannot say. The Registrar can give the information.

146. Why was such a large sum spent on buildings—viz., £34,043?—The Board thought it would make the institution as perfect as possible. I considered that a plainer building giving the necessary accommodation might be erected, and that a less pretentious building would do; but the Board decided to have a building with some architectural pretensions.

147. Why was a Director appointed so long before the school was ready?—The Board wished to get the benefit of his experience in making the necessary arrangements.

148. You are Chairman of the School of Agriculture Committee?—Yes, at present, *ex officio*, as Acting-Chairman of the Board. I am not a member of the Committee.

149. Have you had any reason to be dissatisfied with the farm?—None at all.

150. The Commission understand the Director has to submit estimates of the expenditure required on the farm annually?—Yes.

151. When considering these estimates has the Board before it statements of the income and expenditure of the preceding year, also an estimate of the net revenue for the coming year?—Yes, always.

152. Have the Board been in the habit of requiring annual accounts of the working of the farm to be furnished to them?—Yes.

153. I mean a balance-sheet of the farm proper?—Yes.

154. You would know, then, whether the farm has been paying?—As a farm, I believe it has paid expenses.

155. A sum of £100 a year is placed on the estimates for entertaining visitors: is so large a sum necessary for the purpose?—The Board does not think the Director shall bear this expense himself.

156. How often does the Agricultural Committee meet, or visit the school?—The Committee meets as occasion requires. I cannot say how often it visits the school. The Board has on several occasions done so. When Mr. J. N. Tosswill acted as an executive officer of the Board he and others, I believe, visited it weekly.

157. Is the Director present at the meetings of the Agricultural Committee?—I cannot say. He has been in attendance at meetings when I have been present, in case he should be required.

158. *Mr. Murphy.*] Before erecting the buildings was information sought from practical

sources as to the nature of building suitable for the purpose?—Yes; information was obtained from New South Wales, and I believe the information was made use of. It has always been the object of the Board of Governors to show the agricultural community how things can best be done, and it has been its aim to do things as perfectly as it could. Competitive designs for a building were obtained, and the best one selected.

159. You said you had obtained annual balance-sheets of the farm?—Yes; and I believe the farm proper has paid its expenses.

160. *The Chairman.*] Have you any idea why the number of students has fallen off?—The decrease for the last three or four years may be accounted for by the fact that times have been so bad farmers could not afford to send their sons: they could not spare their labour or pay the fees. I consider it was a mistake raising the fees.

Hon. E. C. J. STEVENS examined.

161. *The Chairman.*] You are one of the Governors of Canterbury College?—Yes.

162. How long have you held that position?—Since November, 1875.

163. You are aware that reserves of 100,000 acres of land were made by the Provincial Council of Canterbury as an endowment for a School of Agriculture?—I am aware that certain large reserves were made for that purpose.

164. Do you know what was the intention of the Council as to the vesting of these reserves?—I have no special knowledge, as I was not a member of either the Provincial Council or the Government at the time, but I understood it was an endowment for a School of Agriculture.

165. On the 15th June, 1875, the Provincial Council elected eight gentlemen as trustees of a School of Agriculture, in accordance with the provisions of the resolution of the 19th December, 1872, under which the endowment was created: do you know why the trustees then elected did not take office?—I do not know.

166. Do you know how these reserves came to be included in the schedule to "The Canterbury Educational Reserves Sale and Leasing Act, 1876," which vested them in the Canterbury College?—I have no exact knowledge, not having been called upon to act in the matter.

167. Do you consider the Board of Governors as at present constituted is such a Board as that which the Provincial Council intended the reserves to be vested in—viz., a Board of Agriculture?—I do not think that the Canterbury College could be considered as in any sense answering the description of a Board of Agriculture.

168. Is the mode prescribed for filling up vacancies on the Board—viz., election by the graduates of the University—likely to have the effect of making it such a Board?—I should say distinctly not. The graduates, as you are aware, graduate in classics, English, law, and certain sciences. No degrees are granted for agriculture, and the certificates granted to agricultural students do not confer the power of voting for members of the Board when vacancies arise.

169. You were a member of a committee appointed by the Board in November, 1876, to consider the best means of administering the agricultural trust?—Yes.

170. Are you aware that a sum of £7,954, part of the proceeds of the endowment, was devoted to the purchase of sites and erection of buildings for Canterbury College, without any provision being made for repayment or for payment of interest?—I can give no explanation of the transaction. I have no recollection of it, and think I may have been absent at the time.

171. Do you know whether the proceeds of the several endowments are kept entirely separate?—Yes; they are supposed to be applicable to the special purposes for which they were made.

172. Do you consider that the term "invest," in the proviso to section 9 of "The Canterbury Educational Reserves Sale and Leasing Act, 1876," has the same meaning as it has in the first part of the section?—I consider this is a question of purely legal construction.

173. Assuming that the Board of Governors was justified in using £10,000 of the proceeds of the educational endowments for the purchase of sites and the erection of buildings for Canterbury College, do you consider £7,954 a fair proportion of that amount to charge to the School of Agriculture endowment?—I think this opens up the whole question as to the legality of the transaction. Assuming the Board was justified in the action taken, I consider the question of proportion would not arise. I do not suppose the buildings upon which the money was expended would benefit the School of Agriculture directly, but they might possibly have been considered to do so indirectly.

174. Are you aware that a portion of the income of the endowment—viz., £500 a year for five years, £250 a year for four years, and £125 for the year 1887—has been paid to the funds of the Canterbury College?—Yes. I may say that I took an active part in endeavouring to get the amount reduced. I considered the amount out of all proportion to the work done. Eventually I succeeded, with the assistance of other members, in getting it reduced.

175. For what purposes were these grants made?—Towards the expenses of the general administration.

176. Are you aware whether the efficiency of the farm has been impaired for want of funds?—I do not think so, to any great extent. I think the farm efficient for the purpose intended. In some respects it would do better with more funds—by taking up, for instance, veterinary surgery, forestry, practical gardening, &c. I think it is very desirable that a good practical knowledge of veterinary surgery should be acquired by students. At present very little can be done in this respect.

177. Does the School of Agriculture utilise the teaching-power of the Canterbury College?—At one time it did to some extent, but it was given up.

178. Then, is there any advantage to the school from its connection with Canterbury College?—None, except as a matter of government. It is entirely distinct from all other departments, and could be carried on alone if a machinery of government were provided for it.

179. Do you know from your knowledge of the accounts whether the farm proper has paid?—

The accounts are kept so clearly that a profit-and-loss account could be made out without difficulty.

180. Has an annual profit-and-loss account been submitted to the Board?—I am not able to say whether this has been done; but the items have been kept so distinct that such an account could be made out.

181. Do you think two years sufficiently long for the course at the school?—I should think a third year would be very valuable. A good many of the students are young, and liable not at first to appreciate the advantages of the institution. My opinion is that a third year is not at all too much. A great deal is taught, and a great deal of time is required to learn the different subjects.

182. Can you give any idea why the attendance has fallen off so much?—I think one reason is that the expense of maintaining a boy there is felt to be more than people can afford in the bad times we have had. Another reason probably is that farming has not been considered a very profitable undertaking to put boys to. Then there is a great want of knowledge as to what can be learned there. The public are not yet aware of the advantages of the institution, and have an idea that all that it is necessary for their boys to know can be learned on their own places. In order to make the institution as acceptable as possible, the Board has paid the passages of students from a distance, so that all parts of the colony may be on the same footing, and we have now a very large proportion of students from other parts of New Zealand. The students are nearly all from outside Canterbury at present.

183. Do you think that if the Board were to keep the students and utilise the produce of the farm, it would be more economical than the present mode of boarding them?—There would be this difficulty about it: you would have to let it to a caterer. If you put some one there to manage the catering the Board would have all the risks attendant upon it, and I question whether you could do any better.

184. Would there be any more difficulty than on a large farm or station?—There might not be; but I know that the Board and Mr. Ivey have frequently considered the matter very carefully, and would be glad to make any change if it could be done with any prospect of success.

185. Do you consider so large a sum as £100 is necessary for entertaining visitors?—The school is visited by a great number of people, and it is considered that the Director should not be put to the expense of entertaining them. The cost has been inquired into by the Board, and not considered excessive.

186. Do you think that if the farm-examiners were associated with the School of Agriculture Committee, or if their duties extended to the examination of the farm-accounts, better results would be obtained?—I have no doubt that the advice of practical agriculturalists like the examiners would be of inestimable value to the committee and to the Board. You are aware that, owing to the system of electing the Board, the probability of agriculturalists being elected is very slight. I think that, if the Canterbury College is to continue to administer the affairs of the school, the assistance of practical agriculturalists would be of great value to the Board. They could only act as advisers—they would have no power.

187. *Mr. Murphy.*] Do you consider that the instruction given at the Canterbury College is of sufficient value, from an agricultural point of view, to justify charging the School of Agriculture with a proportion of the cost?—I am not prepared to say that it is; but at present, as I understand, only a contribution is made towards the Registrar's office. You have not, I think, put the most important question of all, how to make the institution more useful. I think there should be scholarships in connection with the education system of the colony; that the School of Agriculture should be erected into an institution of the highest colonial importance. Agriculture is likely to be a more important industry in this colony than in any other. By adopting some scheme of scholarships we might keep the institution full of students, and confer one of the greatest benefits you could imagine on the country, instead of permitting it to remain as it is now. The use made of the institution is out of all proportion to the expenditure, and the advantages to be gained are unknown not only to the colony, but to this locality. All who have visited the place are impressed with its efficiency. I have arrived at this conclusion after full consideration, and am every day more impressed with the importance of such a change being made. I do not think the Canterbury College could provide the scholarships; but it would be a proper thing for the colony to do so. The Government would, of course, in that case have to be represented on the management. I think it was a purely accidental circumstance that the management of the institution was intrusted to the Canterbury College. The conclusion is irresistible that under the existing system the institution cannot be popular and fully successful. Whether a Board partly nominated by Government and partly chosen by leading agricultural societies, with a local committee of supervision selected by that Board, would be the best organization or not, is a matter for careful consideration. If the general principle were settled, difficulties in settling the details would not, I think, be insuperable. The institution should be brought into touch with the Legislature and the people of the colony, and measures taken to make it a great colonial institution.

Mr. F. D. S. NEAVE examined.

188. *The Chairman.*] You are one of the Governors of Canterbury College?—Yes.

189. You were chairman of a special committee appointed last year to inquire into the management of the School of Agriculture?—Yes.

190. Did your inquiry apply to the management of the farm, or to the internal arrangements of the school?—Not so much to the farm: we considered the farm very well managed, except that much too much labour was employed, and that boys were overpaid for their work. The boys sent in their own returns of work, and no one checked their time, &c. There seemed to be a great want of discipline. [Copy of the committee's report attached (Appendix K).]

191. What is your idea as to the lack of students?—In the first place, I consider the fees are too high—£65 per annum. Small farmers cannot afford to pay that amount. I consider £50 a year would be a fair sum to charge; but you would have to reduce the payment to Mr. Ivey for board. He gets £45 per annum; but I think he ought to be able to do it for £35, as he gets his produce cheap from the farm: for instance, he gets his milk at 8d. a gallon, while other people pay 1s. elsewhere, and he is found in lights, fuel, and has no house-rent to pay. I consider, also, there is not enough supervision. When there was a larger number of students they had a farm-manager, or, rather, inspector—a very good man.

192. Then you consider the work would be better done if a competent farm-manager were appointed?—Yes.

193. Do you think the Board of Governors could cater for the students at a cheaper rate than at present paid?—Yes. I think you could get a man to cater for them by contract at a much less rate.

194. Why not do it in the same way as is done on large stations?—I think it would be better to do it by contract. I heard that the Board at one time tried to do the catering itself, but the arrangement was not satisfactory.

195. *Mr. Murphy.*] Do you consider that a farm-manager is indispensable to the proper working of the farm?—Yes.

196. *The Chairman.*] In what way is there a lack of discipline?—I think the students are allowed to do too much as they like: if a task is allotted to them there is no one to see that they do it. I do not say they do their work badly, but they do not do so much as if they were supervised. In fact, I should doubt their ever doing a full day's work.

197. Do you think payment to the students is necessary to get them to do their work?—I think it is quite unnecessary. Another thing the committee suggested was that a blacksmith should be kept on the farm, instead of, as at present, getting a man a few days a week from Lincoln. I think that the blacksmith should also be the engine-driver. I think the farm is well farmed; the only question is the cost. The cost of labour is very heavy for a farm of 600 acres—there is too much extra labour.

198. Do you consider that forestry and practical gardening should be part of the farm-work?—Yes: but Mr. Ivey has stated that the students would not do this work, and he asked for a grant to employ labour; but the Board would not give it. My idea is, that the one thing wanted is supervision. Another thing is the cost. The cost of living is too much, when the produce of the farm could be utilised.

199. *Mr. Murphy.*] How is it that it costs so much?—I consider it is simply bad management. For instance, the number of servants is too large. They had two laundresses for fourteen boys.

200. Are you a practical farmer?—I ought to be. I have been farming ever since I was a boy.

201. *The Chairman.*] How is it that the number of students suddenly decreased?—Firstly, I think, owing to the depression, and, secondly, to the increase in the rates.

202. *Mr. Murphy.*] What is your opinion as to admitting boys without examination?—I do not think that any examination is needed.

203. *Mr. Overton.*] What do you think about the stock?—I consider there are too many sheep in proportion to the number of cows. The stock is in good order; but I do not think the cows give as much milk as they ought to do. They have some very nice pigs.

204. *The Chairman.*] What do you think about the breeds of stock?—I do not think they have any particular breeds of cattle. The cows are all shorthorns.

205. *Mr. Overton.*] Why are students not taken to the saleyards?—That is a subject the committee took into consideration. They recommended that all stock should be sold at the yards.

206. *The Chairman.*] Is a balance-sheet made out showing a profit-and-loss account of the farm?—I have always understood the accounts of farm and school were kept separate, and have myself complained that several small items—viz, garden, plantations, cleaning ditches, &c.—were placed to school account to make farm balance-sheet look better.

THURSDAY, 21ST FEBRUARY, 1889.

Mr. J. RENNIE examined.

207. *The Chairman.*] You are one of the examiners on farm-work at the School of Agriculture?—Yes.

208. How long have you had that appointment?—Since 1882.

209. How often do you hold your examinations in the course of the year?—Three times a year, sometimes oftener—viz., at ploughing, shearing, harvest, and threshing.

210. Will you be good enough to state the subjects you examine the students in?—We put them through their work in ploughing, drilling, and managing horses. At shearing-time we try them at shearing, and inquire what they know about sheep, their breed and management. At harvest we try them with the reaper and stacking. We also test their knowledge as to the best time for seed-sowing, state of ground, &c.; as to values of stock, condition of wool. We find they generally take an intelligent interest in their work.

211. Does it come within the scope of your duties to examine into and report on the general management of the farm, the cost of working the same, and the extent to which students' labour should be available?—We report generally as to the state of the farm and how it is managed. We

have no guide as to cost beyond what we are told by Mr. Ivey. We understand there are four men regularly employed, and if the farm is worked entirely by them we should not consider the cost too much.

212. What is your opinion as to the value of the students' labour?—They only work outside three days a week. I do not think their labour can be worth a great deal, because a good many of them know very little when they go there—in fact, the first year their labour is of very little value.

213. Do you consider the students' labour should be available for every class of work done on the farm, even cleaning ditches, &c.?—We have made no report on the subject. I value the inside work more than I do the outside.

214. Would you consider it necessary that students should be able to turn their hands to anything required on the farm?—Yes, only some parents object to their boys spending their time in such work as ditching, weeding, &c.

215. What is your opinion about paying the students for their labour?—I think it a very good plan: it teaches them the value of time and labour. They pay for the use of their teams, and if they do not do a certain amount of work they make a loss, and run into debt. I should not approve of paying a high rate.

216. Does the payment in any way assist in their education as agriculturalists, or the economical working of the farm?—Yes, I think it does.

217. Do you think the farm benefits to the full extent of the payment?—Yes.

218. Do you consider the discipline and general oversight of the students good?—Yes.

219. Do you not think, if the discipline is good, the work should be as well done without pay?—No, they are inclined to be slow if there is no inducement to urge them on.

220. Do you know what method is adopted for punishing delinquents?—They are kept at work on Saturday afternoons, weeding, &c.

221. Have you ever had complaints from the students as to the work they have to perform, or the treatment they receive?—No.

222. What reason can you give for the falling-off in the number of students?—I put it down principally to the raising of the fees. Another reason is, that at first the course of instruction extended over three years, now it is only two; consequently the students get through their studies quicker.

223. Have you made any recommendations to the Board of Governors respecting the management and work of the farm?—Yes, several times, as to fences, gates, drains, &c.

224. Have your recommendations been given effect to?—Yes, generally.

225. Do you think it would be an advantage if the examiners had larger powers given them, so that they could examine into and report on the cost and economic working of the farm, and generally to advise the Agricultural Committee?—Yes, I believe it would be an advantage.

226. What is your opinion as to how far such a change should be carried out?—I think the institution should be managed by a committee of men who know something of agriculture, and take an interest in it. They would be responsible men, whereas the examiners are not.

227. Do you think the Agricultural Committee would gain by having the assistance of the examiners, who would, of course, be practical men?—Yes.

228. What proportion of the fees is required for the keep of the students?—I am not aware.

229. Mr. Ivey says £45. Do you think it could be done for less?—I should think it could.

230. Do you know anything of the Dookie Experimental Farm in Victoria?—Yes, I visited it when I was in Victoria in November last.

231. Did you take notice how the students were boarded, &c.?—Yes, I had meals with them, and I considered the food good and sufficient. It was managed like a large station, by a married couple, and all dined in one large room.

232. Was it done by contract, or did the Board find everything?—The Board found everything. Most of the food was grown on the place.

233. How do you think that plan would work at Lincoln?—I think it would do very well.

234. How would it compare in cost?—I have no idea of the cost here, except what you have told me. The building at Lincoln is larger and would require more servants; if it were full the cost of servants would not be so large in proportion. The cost of produce is all in favour of New Zealand; with the same economy students ought to be kept at a lower rate here.

235. What is the usual routine there?—They work under the same plan as here—three days out and three days in. They work longer hours, and seem to have rougher work. They have not the same indoor advantages as we have. A smaller proportion would be able to get horse work.

236. What other work do they do?—While I was there they were building a cow-shed, some getting the reapers ready, some getting firewood, others in the orchard. They had a number of vines growing there. Some were raking hay, cutting wheat for chaff; some making ensilage.

237. You say they have a large orchard and vinery: do they cultivate forest-trees as well?—They grow the olive. A great part of the farm was forest.

238. Do you not think they should be taught forestry and practical gardening at Lincoln?—Yes; I think they ought to be taught a little more of that.

239. If they had belts of plantations would that give sufficient scope for teaching forestry?—I think so, but they want to know more about fruit-trees and insect-pests.

240. They have a large orchard: is that sufficient to teach practical gardening?—I think so.

241. Do the students at Dookie get paid for their labour?—No; I think not.

242. Are they smart at their work?—Yes.

243. How would they compare with Lincoln students under the contract system?—I was not long enough there to judge.

244. *Mr. Murphy.*] Did the boys at Dookie take part in all the work?—Yes; every description.

245. How many farm-labourers have they?—Four; same as at Lincoln.

246. Is there a farm-manager?—I do not think so. I understood Mr. Thompson did that work himself.

247. Did you make any inquiry as to the number of acres under cultivation?—I did, but cannot remember.

248. Did you receive written instructions when appointed examiner?—Our instructions were simply to report on the external management.

249. Do you consider two years sufficient to teach scientific and practical farming, and turn the students out as efficient farmers?—No; it is as long as most people care to send their sons there for; but you cannot expect them to have a full education in that time, but the instruction given would be of great value to them.

250. Do you think it would be wise to put them to manage a farm after two years' experience at the school?—No; they would be too young when they left to undertake the management of a farm.

251. Do you consider the boys under complete control?—Yes; as far as I could see.

252. Do you consider the interests of the farm would be better served if an intelligent farm-manager were appointed, seeing Mr. Ivey's time is so much taken up attending to visitors, &c.?—I think it would be an advantage to place some one in charge. The ploughman seems to be well up to his work, and I believe he would be as good as any man they could get. Mr. Ivey's time is very fully taken up.

253. *Mr. Overton.*] Do you consider the farm a good one, and suitable for the purpose for which it is used?—Yes, one of the best in the country for the purpose.

254. Are the farm-buildings equal to the requirements of the farm?—Yes.

255. Do you consider the institution itself suitable for a colonial school of agriculture?—Yes.

256. If you had had access to the farm-books would it not have given you a better opportunity of questioning the students as to their past work?—It would.

257. Did you consider during your examinations that the discipline of the establishment was good?—Yes; as far as we saw. Our duties were mostly connected with the outside work.

258. Did you find the students go about their work in a willing, active, and practical way?—Yes, they were very willing.

259. Had they a fair knowledge of the different kinds of grain grown on the farm?—Yes.

260. Do you not think more outdoor supervision would be an advantage to the students?—I believe it would.

261. Were the students' papers on general agriculture placed before you?—No; I have sometimes asked to see them, when they have been shown to me.

262. In reporting favourably upon the growth of roots, were you in a position to point out to the students the cost of growing them?—No; only what we gathered by seeing the returns.

263. Did you consider the management of the stock on the farm good?—Fairly good. The sheep were sometimes a little neglected: I mean there ought to have been a little more care in drafting, &c.—clearing out the fat ones. I consider this the weakest part of the management of the sheep.

264. On the whole, do you think the farm is managed to the best advantage? If not, can you suggest any improvement?—The farm is worked at high pressure, growing so many roots and keeping so many sheep. They grow larger crops than is usual throughout the country. If the cost is not too great I consider the farm is well managed.

265. Are the students provided with books?—Yes; they keep a journal for their own information. They are supposed to keep a record of all done on the farm.

266. *Mr. Murphy.*] Has the dairy received the attention which it should have had as an important branch of study?—No, it has not. I was very sorry to see it given up. The examiners were not consulted, or they would have strongly disapproved of discontinuing it. The first year or two they bought milk and made cheese. I was told the reason for discontinuing it was that they could not afford to buy milk. I consider it one of the most important branches that could have been taught.

267. Should not enough cows have been kept to provide milk?—Yes; the farm is a very suitable one for the purpose.

268. Do you know whether the institution is popular with the farming community? If not, what is the reason?—It is not generally popular. As people get to understand it better it will become more appreciated.

269. How is it that youths in the neighbourhood do not take advantage of the institution by becoming out-students?—I do not think there are many youths in the immediate neighbourhood old enough to attend the institution.

Mr. George Gray examined.

270. *The Chairman.*] What position do you hold at the School of Agriculture?—I am Lecturer on Chemistry, theoretical and practical, and Physics.

271. What previous experience have you had?—I was nine years at the Hartley Institution, Southampton, as assistant and teacher of chemistry, under the Government Department of Science and Art; nine years at Canterbury College under Professor Bickerton; and I have been five years and a half at Lincoln.

272. What does your work consist of?—I instruct the students in chemistry by lectures, and practical chemistry by laboratory practice. In addition, I carry on experimental work in connection with the farm, and any research-work that suggests itself. I also make analyses for farmers and others, free of cost.

273. In what way is the teaching carried on?—The first year: Three lectures per week (two hours general chemistry and one hour physiological chemistry), and three hours practical work. The second year: Two hours general chemistry, one hour physiological chemistry, three hours chemical-laboratory practice, and one hour per week microscopic work.

274. What is the total time devoted to chemistry?—First year: six hours per week. Second year: seven hours per week.

275. The course extends over two years. Do you consider this time sufficient to impart the necessary teaching in your department?—Two years is not sufficient; three would be much better. I consider if students could stay three years it would be better for both students and teachers. In a two years' course more work has to be got through in the time, and the teaching is not so sound.

276. Do you find that the students have any previous knowledge of chemistry?—In a few cases, but very few.

277. Do you consider the admission of students without having to undergo any examination a good system?—No; it would be better if some kind of examination, say, like the Sixth Standard, or some entrance examination, were required. Admitting students without any examination is bad for both students and teachers.

278. What work other than the instruction of students are you engaged in?—Research-work and analytical work. During the year just ended I have made fifty-seven analyses for the public—manures, soils, &c. Research-work is governed by the amount of time at disposal. Analyses of rain-water have been carried out continuously each month for over five years. I have also analysed root-crops—turnips, &c.; milk, cheese, and other dairy products. The ensilage made on the farm has been analysed, together with the original fodder, and the same substance made into hay, so as to find their comparative values. Various substances, such as "scrub-exterminator," "smut-eradicator," &c., have also been examined from time to time.

279. Have you an assistant?—I have now a boy at 10s. a week—a laboratory boy, not a skilled assistant.

280. Have you been able to do justice to your department without an assistant?—I could have done much more had I had an assistant.

281. Have you ever applied for an assistant?—Yes; a little over two years ago I asked for an assistant, or, if funds would not admit of an assistant, a laboratory boy. The result was, a laboratory boy was engaged.

282. On what grounds were you refused an assistant?—I had no official reply, but I understood it was for want of funds.

283. Have you been engaged in any other kind of work?—At one time I had charge of the meteorological observations.

284. Have you any suggestions to make regarding the experimental scientific work in connection with your own department?—I think much more could be done with assistance, or if funds were set aside each year for the purpose.

285. Has anything been attempted in the way of analysing grasses and forage-plants indigenous to New Zealand?—Yes, I have made an attempt, but have no results as yet. Last year I collected twenty samples, with a view of analysing them; but want of time has prevented anything more being done.

286. *Mr. Murphy.*] You say you think two years not sufficient to impart the necessary teaching in your department: do you consider a knowledge of chemistry necessary?—Yes; far better progress would be made if a three years' course could be resumed.

287. Do you think that the results of your analyses for the public are made sufficiently well known?—I think if greater publicity were given to the advantages offered I should get more than I could do. From Waikato district we had a great number of manures down for examination, and the results showed that several useless manures were being sold.

288. Do Canterbury farmers take advantage of the institution?—Not so much as others, particularly those in the North Island.

289. Assuming that boys from the national schools were admitted, would it be possible to give them a practical knowledge of chemistry, sufficient to enable them to make analyses, in a two years' course?—Yes, but not a very complete knowledge. Such boys could well afford to stay three years: it would be better for them in every respect.

290. Do students obey instructions and conform to the rules?—Yes; I find no difficulty whatever with them.

291. If you had an experienced assistant would the work of the laboratory be made more efficient and useful to the College?—Yes; more could be done than at present.

292. Can outside students take advantage of your department?—There is no difference made; the same time is given to them as to others, except, I believe, that they do no farm work.

293. What time do you hold your classes?—Chemistry, from 10 a.m. to 11 a.m.; work in laboratory, from 1.30 p.m. to 3 or 4 p.m. In the first year it would be necessary for out-students to be at the school two days a week from 8.30 a.m. to 5 p.m.; in the second year, three days a week, same hours.

294. Do you know of any reason why youths in the locality do not take advantage of the institution?—I do not.

295. Do you know of any reason for the decrease in the number of resident students?—Raising the fees might be the cause.

296. Can outside students attend for one year only?—Yes, or for six months.

297. If occasional lectures were given within a radius of, say, ten miles, would it tend to popularise the institution?—I think it might assist.

298. Do you think, if the institution were made more generally known or advertised, the attendance would be affected?—I think the place must be pretty well known.

299. What becomes of your reports?—They are published in the periodical reports. At one time it was done each term. The reports might be published in the newspapers with advantage.

300. Do students prepare essays?—No; at one time we had prizes for essays, but they were discontinued. I do not know why.

301. Would there be any difficulty in publishing reports of work done in your department at shorter intervals than at present?—None, providing sufficient work were done to form a report.

302. You think much more might be done with the present appliances if you had more assistance?—Yes.

303. *Mr. Overton.*] Would there be any difficulty in getting a two-year student as pupil-assistant during a third year if his board were found?—No, I think not.

FRIDAY, 22ND FEBRUARY, 1889.

Mr. IVEY further examined.

304. *Mr. Murphy.*] A special committee of the Board was appointed in 1887 to report on the School of Agriculture. Who were the members of the committee?—The original School of Agriculture Committee with Mr. Spackman, Captain Garsia, and Mr. Chrystall.

305. Did they hold their inquiries at the farm?—A certain number of them were there once.

306. Clause 2 of the committee's report recommended "that some more efficient means of supervision ought to be employed to see what the students are actually doing, as at present each student reports his own work," and "that part of the Director's duty shall be to inspect the daily outdoor work of the students, and to verify their reports." What action have you taken in the matter?—The boys do not report their own work, as stated. I put them to work twice a day, and check their returns with my own journal every week, and value the work after inspection.

307. Do not your other duties sometimes interfere with the efficient supervision of the farm-work?—Sometimes.

308. The committee commented on the low prices you pay for milk, butter, bacon, &c. From what source did they derive their information?—They never inquired of me, and I believe the members who drew up the report were ignorant of the prices I was paying.

309. Clause 6 of the report recommended that the veterinary surgeon's engagement be terminated, and that the Director lecture on this branch. As veterinary surgery is a distinct profession, were you questioned by the committee as to your competency to impart such instruction, theoretical and practical?—I was not consulted, or would have explained that a professional man only could do the work.

310. You consider veterinary surgery an important branch of agricultural education?—I do.

311. Clause 8 of the report recommended "that all fees whatsoever received for analyses, and all sums received from the General Government for work of any kind, shall pass through the books." It is already in evidence that no charge has at any time been made for outside work. What fees do the committee refer to?—I have not the slightest idea. I have never received a fee for anything since I have been on the place. The Government pays for labour done on experimental grass-plots. The cheques were sent direct to the gardener, and did not come through my hands. We also experimented with rabbit-poisons, and I received cheques for the labour employed, poisons, food, and expenses; but no fees were paid.

312. The committee refer to an interim report, some of the suggestions of which have been already acted upon by the Director. Will you state what these suggestions are?—With the exception that the rate of wages should be reduced, there was no suggestion outside of what was already in operation.

313. *The Chairman.*] Do the students receive any instruction as to the purchasing of stock?—No instruction is given, except so far as buying and selling the farm-stock is concerned.

314. Are all extra stock required on the farm bought by yourself in the presence of some second-year students?—No.

315. Do a certain number of students always attend sales when farm-stock is disposed of?—Practically, no; there may be two or three sometimes.

316. Have you ever suggested to the Board of Governors the desirability of providing a suitable conveyance or means for second-year students attending markets, or visiting trials of new machinery, or anything special that may take place in the district which would be to their advantage?—No; I am not quite sure if it would be a good plan.

317. In your former evidence you said that you considered the farm-buildings equal to the requirements of the establishment. Have you proper accommodation for shearing sheep?—No, I have not. I have not applied for it because I did not want to increase the cost of the buildings.

318. Would there be any difficulty in finding employment on the present farm for fifty students?—The number I could profitably employ is forty. If forestry and horticulture were added I could employ, say, forty-six.

319. Do the students do all ordinary weeding required on the farm?—They do on the farm, but not in the garden.

320. Why do you not allow the students to feed any of the farm-horses?—Because you could not depend upon them doing it regularly or properly.

321. Do you have a weekly supply of horse-feed evenly mixed in the barn by the ploughman with some students to assist, so that the horses can be economically fed, and fed by any one?—I have the oats and peas weighed twice a week by the stockman and a student, and put into the corn-bins, but not mixed with chaff. This is done by the ploughman. We should require a shed if it had to be mixed in large quantities.

322. On what grain do you feed the horses, and is it always crushed?—They are fed on oats and peas—one-third peas and two-thirds oats, crushed.

323. Would it not be to the advantage of the students if you took Mr. Buckley's work, and you had a really good practical farm-manager to take the outside work?—It would be incurring extra expense. We should require some one to give instruction in land-surveying, levelling, mathematics, &c.

324. Are the students encouraged or compelled to keep books for their own use, whereby they can always refer to any particular yield of grain, the numbers of stock, the rate of increase or rate of deaths?—Yes; they keep a farm journal, in which they enter what every team is doing; a stock-book, showing purchases, sales, deaths, &c.; a granary-book, showing grain sold, used for horse-feed, &c.

325. Are the students questioned by you to ascertain what interest is taken in the working of the farm?—Yes; there is a regular examination every Saturday on each subject in rotation, to see what they know.

326. Do the students prepare essays on agriculture as taught at the institution?—Sometimes. We have given prizes, but this has been discontinued.

327. What means are adopted at present by the Board of bringing before the public any works of interest done on the farm?—Only my annual report to the Board.

328. Could not some method be adopted whereby the public could be made acquainted with any interesting useful or experimental work done on the farm at the time, instead of it being held back for the annual report—for instance, the cost of cutting gorse by machinery, the turnip-crop, &c.?—Whenever any experiment is finished I think the result should be published at once; but I do not think frequent reports should be published at stated times, as at some periods of the year there would be little or nothing to report. I think that if the farm accounts were published separately from other accounts it might tend to prevent the publication of untruthful statements which now appear from time to time. We cannot have too much publicity.

APPENDICES.

APPENDIX A.

CAPITAL OR LAND SALES ACCOUNT, School of Agriculture, furnished by the Registrar, Canterbury College.

Receipts.	£	s.	d.	*Expenditure.*	£	s.	d.
To Proceeds from sale of land out of Reserve No. 1574	76,948	0	0	By Purchase of land for farm	17,711	16	8
Proceeds from sale of land out of Reserve No. 1575	4,090	0	0	Amount contributed to College buildings	7,954	0	0
Payment for excess acreage in land sold out of reserves	2,720	11	3	Surveyor-General (surveying reserves)	1,759	16	4
Proceeds from sale of Burke's land, mortgaged to College for £1,000 ..	1,000	0	0	Purchase of Burke's land	1,000	0	0
Refund of share of expenses from other accounts in above sale	24	13	10	Commission and expenses of purchase	78	4	6
				Refund of deficient acreage in land purchased out of reserves	3,579	6	9
				Balance to Cr. of Capital Account at 1st January, 1888*	52,700	0	10
	£84,783	5	1		£84,783	5	1

* This balance remains out at interest at 7 per cent.

MEMO.—The Commission do not find this statement as to rate of interest borne out either by the accounts or the Registrar's evidence.

APPENDIX B.

BUILDINGS ACCOUNT, School of Agriculture, furnished by the Registrar, Canterbury College.

Receipts.	£	s.	d.	*Expenditure.*	£	s.	d.
By Balance from farm-maintenance ..	3,473	16	6	To Amount spent on buildings and fittings	*34,043	11	7
" " (1880)	2,480	12	11				
Balance to Dr. of Buildings Account ..	28,089	2	2				
	£34,043	11	7		£34,043	11	7

* Detailed statement attached.

Detailed Statement of Expenditure on Homestead and Farm Buildings.

Homestead Buildings.	£	s.	d.
Reese, D., buildings contract	11,497	1	7
Taylor, H., additions to contract ..	7,886	18	3
Architect's premiums for designs ..	60	0	0
Salary of clerk of works	820	0	0
Architect's commission, &c.	1,426	13	11
Urinals and closets contracts	279	8	4
Cottages, including lecturer's cottage ..	1,083	1	8
Furniture and fittings	1,766	12	0
Register grates, stoves, ranges, &c. ..	214	6	4
Gas-fittings	278	8	4
Fencing, gates, &c.	263	19	11
Kitchen, offices, tank, &c.	802	10	1
Laundry, screen, closet, &c.	200	0	0
Hot-water apparatus	239	10	0
Hot-air engine	87	0	0
Blinds	139	10	4
Baths	76	9	5
Scientific and chemical apparatus ..	365	14	5
Organ	50	13	4
Windmills	42	10	2
Alterations to servants' quarters ..	82	10	0
Pumps	26	11	0
Bell and fittings	23	6	6
Tools	18	17	9
General work at buildings, day-labour, &c.	778	9	4
Miscellaneous	547	11	8
Timber, cement, bricks, lime, &c. ..	455	7	7
Interest	994	11	0
	£30,507	12	11

Farm Buildings.	£	s.	d.
King, contract, farm buildings	1,947	9	0
Burley, contract, additions to dairy ..	132	0	0
Architect's commission	153	9	10
Salary of clerk of works	100	0	0
Erection of dairy, engine-house, gas-house, cow-shed, &c.	630	14	4
Timber and ironmongery	301	17	6
Day-labour and work at farm buildings generally	160	12	7
Miscellaneous	109	15	5
	£3,535	18	8

Summary.

Homestead buildings	£30,507	12	11
Farm buildings	3,535	18	8
	£34,043	11	7

NOTE.—One architect and clerk of works was employed for homestead and farm buildings; timber, cement, ironwork, &c., was also bought, and a large amount of labour employed for both buildings, and often paid for in one account. Care has been taken in preparing this return, but it must be remembered that many of the items are only approximate ones for the reasons above stated, and also because only one general Buildings Account has been kept.

APPENDIX C.

ABSTRACT of RECEIPTS and EXPENDITURE, 1876 to 1887, inclusive, School of Agriculture.

Receipts.	£	s.	d.
Rents of reserves	10,749	0	3
Interest	37,902	1	3
Students' fees	9,740	12	9
Refunds	43	12	8
Cheques cancelled	27	14	3
Sale of books to students	48	5	11
„ grain	5,325	11	0
„ produce	2,519	16	9
„ live-stock and wool	5,688	0	9
„ potatoes	36	0	9
„ implements	11	3	9
Rent of land	101	5	5
„ cottage	43	9	2
Grazing-rent	0	17	0
	72,237	11	8
Balance, 31st December, 1887	2,588	18	8
	£74,826	10	4

Expenditure.	£	s.	d.
Salaries	12,490	4	9
Contribution to College	3,650	0	0
Board for students and staff	10,984	3	11
Students' travelling-expenses	1,061	1	2
Insurance of buildings	818	8	3
Fuel (school)	277	4	11
Light	441	8	4
Cleaning rooms, &c. (part of porter's wages)	373	7	0
Laboratories, equipment and renewals	711	15	7
Wages of laboratory assistant	25	3	4
Library, museum, and periodicals	571	11	9
Advertising, stationery, stamps, printing	999	13	9
Repairs and renewals to school-buildings	526	5	7
Prizes	46	15	5
Examiners' fees	312	12	7
Books and instruments for sale to students	307	15	7
Contingencies	722	4	11
Registrar's petty cash, &c.	136	11	3
Solicitor's fees	316	2	0
Expenses in selecting Director	74	16	10
Plantations	1,006	13	6
Experimental work	53	14	10
Expenses of water-race	40	14	6
Milk for cheese-making	880	11	5
Wages pay-sheet for labour at school and farm, including workshops, closets, buildings, water-supply, plantations, permanent improvements, farm, &c.	7,224	0	3
Students' labour	1,527	13	2
Manures	654	17	6
Seed	955	0	2
Implements and harness	2,336	1	6
Fuel (farm)	224	11	0
Rates	39	9	7
Live-stock (purchases)	3,654	19	9
Insurance (farm)	103	14	2
Trade accounts and freight	1,466	7	3
Contingencies (farm)	28	19	4
Permanent improvements (farm), including fencing, gates, ditching, draining, yards, buildings, sheep-dips, &c. / Permanent improvements (school), including fencing, planting, windmill, roads, grounds, drains, &c.	2,348	5	8
Horse-feed (oats)	19	19	5
Inspecting reserves	3	6	8
Interest	11,424	14	4
Dishonoured cheques	21	0	0
Refund, fees	10	0	0
Transferred to Buildings Account	5,954	9	5
	£74,826	10	4
By balance down	£2,588	18	8

MEMO.—This abstract has been prepared by the Commission from the following statements furnished by the Registrar, Canterbury College.

SCHEDULE of RECEIPTS and EXPENDITURE from 1876 to 1887 inclusive.

Summary.

—	Receipts. £	s.	d.	Expenditure. £	s.	d.
1876	750	0	0	..		
1877	2,190	5	6	528	6	8
1878	3,569	2	4	2,027	2	0
1879	5,222	14	4	5,702	17	0
1880	7,737	1	9	5,256	8	10
1881	7,619	7	6	7,113	2	4
1882	7,136	19	0	8,053	15	4
1883	7,638	5	5	9,095	6	3
1884	7,745	11	10	8,424	8	5
1885	8,254	10	7	8,442	13	5
1886	7,685	11	7	7,234	4	3
1887	6,688	1	10	6,993	16	5
	72,237	11	8	68,872	0	11

	£	s.	d.
Jan. 1, 1880. Cr. balance, transferred to Buildings Account	3,473	16	6
Jan. 1, 1881. Ditto	2,480	12	11
	£5,954	9	5
Total amount expended	68,872	0	11
Amount transferred to Buildings Account	5,954	9	5
	74,826	10	4
Total amount of receipts	72,237	11	8
Dr. balance at 1st January, 1888	£2,588	18	8

APPENDIX C—*continued.*

SCHEDULE of RECEIPTS and EXPENDITURE of the SCHOOL of AGRICULTURE from 1876 to 1887, inclusive.

Receipts.

—	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Rent of reserves	750 0 0	888 14 0	644 19 6	705 15 4	968 5 1	974 6 8	974 6 8	964 0 4	963 10 0	973 18 8	970 12 0	970 12 0
Interest	..	1,301 11 6	2,924 2 10	4,385 1 6	5,121 15 6	3,973 7 7	3,608 14 7	3,303 12 11	3,173 9 7	3,047 8 10	3,938 7 1	3,124 9 4
Students' fees	..	..	..	..	320 0 0	1,300 0 0	1,190 10 0	1,359 3 4	1,322 1 8	1,740 17 9	1,226 10 0	1,281 10 0
Sale of grain	..	..	..	95 16 9	642 12 2	561 1 10	381 0 1	886 0 6	705 11 7	959 15 6	567 0 9	526 11 10
„ produce	..	..	..	..	..	313 0 4	397 19 8	420 5 1	499 17 11	493 14 10	236 6 1	158 12 10
„ live-stock and wool	..	..	..	..	646 6 6	490 5 10	568 3 6	622 1 7	1,060 5 8	992 1 4	701 6 5	607 9 11
„ potatoes	..	..	..	36 0 9	..	..	..	..	..	..	..	..
„ books to students	..	..	..	..	..	..	8 12 6	29 15 10	7 12 11	1 13 2	..	0 11 6
„ implements	..	..	..	..	..	..	..	..	..	0 7 6	5 16 3	5 0 0
Rent of land	..	..	..	..	38 2 6	..	..	32 1 1	13 2 6	13 2 6	4 16 10	..
„ cottage	..	..	..	..	..	..	7 12 0	..	..	3 4 0	32 8 2	0 5 0
Grazing rent	..	..	..	..	..	..	..	..	..	..	..	0 17 0
Refunds	..	..	..	..	..	7 5 3	..	..	..	28 6 6	..	8 0 11
Cheques cancelled	..	..	..	..	..	..	..	21 9	..	..	2 8 0	4 1 6
Totals	750 0 0	2,190 5 6	3,569 2 4	5,222 14 4	7,737 1 9	7,619 7 6	7,136 19 0	7,638 5 5	7,745 11 10	8,254 10 7	7,685 11 7	6,688 1 10

Expenditure.

Salaries	..	..	453 5 8	600 0 0	1,195 11 3	1,640 5 11	1,886 13 4	1,526 13 11	1,362 14 8	1,275 0 0	1,275 0 0	1,275 0 0
Contribution to college	..	525 0 0	..	500 0 0	500 0 0	500 0 0	500 0 0	250 0 0	250 0 0	250 0 0	250 0 0	125 0 0
Board for students and staff	..	..	..	..	533 6 8	1,346 17 8	1,606 13 4	2,011 0 0	1,521 16 8	1,638 19 7	1,219 5 0	1,106 5 0
Students' travelling-expenses	..	..	..	..	..	132 3 6	182 9 1	203 2 3	313 6 6	131 13 10	59 15 0	38 11 0
Insurance of buildings	..	..	..	48 0 0	94 14 4	95 10 11	82 12 2	99 10 2	99 10 2	99 10 2	99 10 2	99 10 2
Fuel (school)	..	..	..	..	12 14 0	30 11 6	19 15 5	48 4 1 26 11 2*	48 14 9	37 12 6	24 14 10	28 6 4
Light	..	..	..	..	41 1 0	126 6 1	36 1 4	59 7 10	54 4 11	38 14 11	44 13 7	40 18 8
Cleaning rooms, &c. (part of porter's wages)	..	..	..	..	..	60 17 0	50 0 0	37 10 0	50 0 0	75 0 0	50 0 0	50 0 0
Laboratories (equipment and renewals)	..	..	11 4 0	294 12 11	7 4 0	29 16 5	96 6 7	83 3 6	64 3 0	41 13 3	32 10 1	51 1 10
Wages of laboratory assistant	..	..	..	..	..	..	..	..	..	..	..	25 3 4
Library, museum, and periodicals	..	..	100 0 0	137 15 8	60 11 4	76 18 0	82 14 11	54 14 1	21 7 4	12 14 8	10 14 9	14 1 0
Advertising, stationery, stamps, &c.	..	..	35 18 3	84 5 5	156 12 5	96 11 6	70 17 4	41 1 4	53 12 5	42 18 7	66 0 9	30 18 1
Printing	..	..		15 8 6	14 17 6	49 17 10	13 8 10	61 1 6	62 10 6	15 16 6	25 11 6	62 5 0
Repairs and renewals to school-buildings	..	..	..	9 17 2	..	46 14 5	38 17 6	76 8 2	91 5 1	79 17 9	109 17 8	73 7 10
Prizes	..	..	..	..	..	..	..	12 10 0	12 7 6	4 11 11	..	17 6 0
Examiners' fees	..	..	..	13 13 0	124 16 4	27 3 3	..	21 0 0	31 10 0	31 10 0	31 10 0	31 10 0
Books and instruments for sale to students	..	..	..	..	..	..	68 15 10	104 11 1	31 1 6	40 6 0	34 0 9	29 0 5
Contingencies	..	..	..	49 17 1	38 5 10	151 19 1	91 9 11	111 17 11	102 14 11	28 18 9	90 3 10	56 17 7
Registrar's petty cash, &c.	..	..	..	..	5 7 10	..	..	10 0 2	..	81 19 8	12 10 6	26 13 1

* Gasoline.

APPENDIX C—*continued.*

SCHEDULE of RECEIPTS and EXPENDITURE of the SCHOOL of AGRICULTURE from 1876 to 1887, inclusive—*continued.*

Expenditure—continued.

—	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Solicitors' fees	..	..	..	64 13 2	33 0 6	80 2 2	9 9 0	26 1 2	86 14 0	..	7 0 6	9 1 6
Expenses in selecting Director	..	..	74 16 10	..	..	..	..	..	..	..	..	..
Plantations	..	..	194 10 6	130 1 5	112 3 2	90 16 9	75 17 11	226 4 1	43 12 0	45 11 9	41 9 9	46 6 2
Expenses of water-race	..	..	..	..	..	..	..	..	..	..	..	40 14 6
Experimental work	..	..	4 15 9	12 13 6	16 12 9	8 5 6	11 7 4	..	..	..	..	..
Milk for cheesemaking	..	..	..	..	..	..	78 6 9	269 15 6	331 6 5	201 2 9	..	..
Wages pay-sheet for labour at school and farm, including workshops, closets, buildings, water-supply, plantations, permanent improvements (farm), &c.	..	..	330 14 1	617 17 8	668 18 0	661 4 0	698 5 4	841 10 5	1,075 0 2	782 1 11	772 13 8	775 15 0
Students' labour	..	..	..	..	..	252 15 2	353 17 8	181 14 1	223 13 3	206 6 10	151 4 0	158 2 2
Manures	..	..	38 15 6	72 3 9	7 15 6	76 13 10	40 13 9	120 10 6	52 6 6	73 19 5	68 12 5	103 6 4
Seed	..	..	153 7 0	78 9 8	21 12 10	174 4 6	111 17 9	58 0 9	72 11 3	70 19 3	142 13 8	71 3 6
Implements and harness	..	..	171 4 2	1,002 18 10	278 14 6	301 18 5	64 12 9	268 0 2	47 0 10	52 7 10	35 7 0	113 17 0
Fuel (farm)	..	..	..	..	8 8 10	44 0 0	29 8 5	45 18 9	33 17 1	28 6 11	24 13 6	9 17 6
Rates	..	..	4 13 8	..	6 4 2	11 2 6	..	..	..	..	..	17 9 3
Live-stock purchases	..	..	318 0 0	1,188 12 4	387 13 2	362 5 0	234 13 6	342 16 7	220 9 6	353 10 0	132 18 8	114 1 0
Insurance (farm)	..	..	..	..	2 0 0	..	19 18 0	18 0 0	14 14 9	18 13 7	16 11 10	13 16 0
Trade accounts and freight	..	..	29 0 8	111 10 4	83 4 7	102 11 2	118 8 6	224 3 4	167 10 2	209 0 9	224 19 10	195 17 11
Contingencies (farm)	..	..	..	..	..	..	..	..	..	..	9 11 0	19 8 4
Permanent improvements (farm), including fencing, gates, ditching, draining, yards, buildings, sheep-dips, &c.	..	..	..	478 13 7	567 4 4	..	134 17 9	}	{ 36 8 5	6 11 6	4 3 6	5 18 6
Permanent improvements (school), including fencing, planting, windmill, roads, grounds, drains, &c.	..	..	86 16 6	191 13 0	277 14 0	11 7 6	50 6 0	} 214 9 9	{ 124 5 9	22 1 9	94 3 6	41 10 4
Horse-feed (oats)	..	..	19 19 5	..	..	..	..	..	..	..	..	..
Inspecting reserves	..	3 6 8	..	..	..	..	..	..	..	..	..	..
Interest	..	..	..	..	..	514 2 9	1,194 19 0	1,419 14 0	1,722 18 5	2,425 1 1	2,072 3 0	2,075 16 1
Dishonoured cheques	..	..	..	..	..	..	..	..	1 0 0	20 0 0	..	..
Refund of fees	..	..	..	..	..	10 0 0	..	..	..	..	..	..
Totals	..	528 6 8	2,027 2 0	5,702 17 0	5,256 8 10	7,113 2 4	8,053 15 4	9,095 6 3	8,424 8 5	8,442 13 5	7,234 4 3	6,993 16 5

NOTE.—For particulars of farm labour, &c., see Director's farm accounts.

APPENDIX D.

Particulars of Expenditure, School of Agriculture, from June, 1878, to March, 1879.

	£ s. d.	£ s. d.
1. On School Grounds :—		
Trenching, digging, ploughing, planting trees and hedges, hoeing, and other labour	147 9 10	
Fences, ditches (including timber and wire on hand, £87)	126 11 8	
Forming, &c., roads	19 3 9	
Levelling	0 13 3	
		385 3 9‡
2. Experimental Grounds :—		
Seeds	4 15 9	
Labour	10 6 9	
		15 2 6‡
3. On Farm—Permanent Improvements :—		
New fences—labour and material	81 6 0	
Gates and gateposts (including unused, £17)	66 7 0	
		147 13 0‡
4. On Farm—Unproductive Expenditure :—		
Gorse fences—grubbing and ditching	93 2 6	
Repairs to old buildings, and making temporary stable	10 16 6	
4. On Farm—Unproductive expenditure—*continued.*		
Expenditure on house	20 8 9	
		124 7 9‡
5. On Farm :—		
Sheep	181 0 0	
Horses	318 0 0	
Harness	36 19 0	
Implements	328 19 9	
Manures (superphosphate)	39 10 0	
Labour	183 19 5	
Seeds	115 8 1	
Sacks	7 17 6	
Instruments	21 18 3‡	
Stationery	7 3 7	
Rates	4 13 8	
		1,245 9 3
Total		£1,917 16 3

Particulars of Farm Expenditure and Farm Income, School of Agriculture, for the Years 1879–80 to 1888.

Expenditure.

—	1879-80.	1880-81.	1881-82.	1882-83.	1883-84.	1884-85.	1885-86.	1886-87.	1887-88.	1888.	Totals.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Horses	112 10 0	..	197 0 0	21 0 0	..	70 0 0	60 0 0	8 8 0	21 15 0	11 19 0	502 12 0
Cattle	270 2 6	319 11 6	133 15 0	..	19 0 0	36 5 0	8 0 0	..	..	..	786 14 0
Sheep	386 1 6	..	79 9 6	208 5 6	124 3 1	169 13 0	298 5 6	198 9 2	229 12 6	61 19 9	1,755 19 6
Pigs	..	38 5 0	28 17 6	42 11 0	7 13 0	..	..	4 14 6	..	4 4 0	126 5 0
Implements	1,028 9 8	315 2 2	203 11 0	240 7 4	98 8 4	68 17 0	72 4 10	42 3 0	125 13 7	11 19 0	2,206 15 11
Seed, viz. :—Wheat	24 1 4	8 17 1	30 11 6	2 0 9	..	5 13 3	..	34 13 5	..	..	105 17 4
Oats	..	..	17 19 3	25 5 6	..	1 18 7	..	..	7 1 9	..	52 5 1
Barley	17 16 0	..	8 10 2	..	4 0 0	..	..	..	..	..	30 6 2
Beans and peas	15 10 8	..	26 6 6	22 18 0	..	..	..	..	8 0 2	..	72 15 4
Vetches	..	2 0 0	..	..	..	2 16 7	..	6 1 6	..	6 8 0	17 6 1
Grass seed	..	14 4 2	..	14 19 2	22 16 10	26 11 3	20 19 11	31 5 8	4 19 0	4 10 0	140 6 0
Clovers	16 9 6	29 16 4	67 1 7	16 18 8	30 15 10	37 10 10	41 4 6	26 6 5	32 3 3	16 9 11	314 16 10
Turnips and mangolds	0 15 9	19 5 9	17 13 10	13 14 10	12 3 6	7 8 1	7 3 1	8 1 9	9 11 3	1 13 0	97 10 10
Sundries	1 7 0	0 18 0	1 10 6	4 18 0	3 0 0	..	..	6 11 0*	..	4 3 11†	22 8 5
Manual labour (including experimental)	679 4 8	549 18 11	548 12 2	540 10 4	706 5 3	489 2 8	} 611 18 4	579 5 9	617 8 7	412 14 9	6,528 14 6
Permanent improvements	‡144 1 4	‡277 8 3	‡101 14 6	‡108 1 7	‡117 13 5	‡44 14 0					
Material for permanent improvements	126 19 4	175 13 7	84 10 9	128 12 2	57 18 6	28 15 2	3 4 8	6 11 8	8 1 5	10 0 11	‡630 8 2
Superintendence of students	..	..	95 16 2	130 0 0	158 13 2	160 0 0	..	..	..	..	‡544 9 4
Purchase of Milk	..	..	..	208 16 6	316 6 9	313 15 3	..	..	..	..	838 18 6
Manures	59 10 0	7 15 6	85 13 9	97 10 7	71 5 11	77 14 3	70 5 1	62 15 1	98 17 2	43 14 10	675 2 2
Harness	20 7 3	11 2 6	39 5 6	14 6 6	..	1 10 0	..	..	..	..	86 11 9
Sacks, &c.	22 4 7	10 2 11	27 9 3	4 18 4	50 6 0	8 8 0	23 12 11	3 13 4	15 17 2	7 19 10	174 12 4
Fuel	17 14 0	47 17 0	46 8 11	38 15 1	45 18 0	30 12 3	35 11 3	15 1 6	23 15 3	..	301 13 3

APPENDIX D—*continued.*

PARTICULARS of FARM EXPENDITURE and FARM INCOME, SCHOOL of AGRICULTURE, for the Years 1879–80 to 1888.

Expenditure—continued.

—	1879-80.	1880-81.	1881-82.	1882-83.	1883-84.	1884-85.	1885-86.	1886-87.	1887-88.	1888.	Totals.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Freight	16 11 8	62 15 10	6 9 0	1 18 11	3 16 5	..	..	..	..	..	91 11 10
Rates	6 4 2	..	11 2 6	..	..	..	..	13 11 3	18 19 3	20 15 11	70 13 1
Stationery, &c.	16 13 6	0 10 0	3 15 0	1 10 0	1 11 9	9 14 3	3 5 0	2 10 0	2 10 0	2 0 0	43 19 6
Trade accounts	17 0 9	25 12 11	68 14 9	144 4 4	169 0 8	211 11 0	152 9 3	199 2 7	204 12 4	92 14 4	1,285 2 11
Contingencies and petty cash.. ..	18 5 3	19 13 9	15 11 8	30 8 4	13 18 6	0 19 1	2 4 5	30 12 11	7 0 0	..	138 13 11
Insurance	..	2 0 0	19 18 0	18 0 0	14 4 9	18 13 7	16 11 10	13 16 0	..	..	103 4 2
Water-races	..	..	..	..	..	..	..	7 16 6	55 14 6	9 18 0	‡73 9 0
Totals	3,018 0 5	1,938 11 2	1,967 8 3	2,080 11 5	2,048 19 8	1,822 3 1	1,427 0 7	1,301 11 0	1,491 12 2	723 5 2	17,819 2 11

* Potatoes. † Sorghum.

Income.

Sheep	14 0 0	357 4 2	387 15 11	625 2 6	616 4 9	653 3 0	810 17 9	711 11 4	514 12 1	805 8 7	5,496 0 1
Pigs	..	..	100 6 6	54 15 4	132 11 7	95 0 8	165 3 11	174 8 1	82 19 2	43 6 11	848 12 2
Horses	..	..	..	..	..	53 0 0	24 0 0	19 6 6	..	12 10 6	108 17 0
Cattle	102 0 0	391 0 4	228 5 11	102 15 0	300 16 1	153 0 0	57 10 0	30 10 0	88 13 6	31 15 0	1,486 5 10
Dairy	..	52 10 7	133 4 8	199 1 1	299 0 9	305 11 7	268 9 5	167 8 9	104 16 0	104 6 9	1,634 9 7
Wheat	385 2 9	563 9 11	366 7 6	118 9 3	1,448 18 5	24 11 6	1,088 1 2	8 5 7	369 10 3	400 18 2	4,773 14 6
Oats	99 18 1	135 6 10	7 4 0	10 1 0	88 15 8	17 16 6	212 6 6	34 12 8	17 2 8	65 3 0	688 6 11
Barley	94 15 7	47 18 1	..	1 7 6	78 12 6	..	135 4 8	143 1 10	479 7 6	7 3 4	987 11 0
Peas and beans	..	53 12 1	..	21 13 0	26 16 3	9 14 4	55 3 4	46 7 2	66 14 0	8 14 1	288 14 3
Linseed, &c.	..	..	36 2 7	6 4 0	..	..	0 10 0	0 12 6	..	..	43 9 1
Grass seed, &c.	..	..	..	..	..	..	..	5 17 0	..	..	5 17 0
Potatoes	48 15 3	0 9 3	..	..	..	39 5 1	..	0 17 6	10 11 5	1 13 9	101 12 3
Turnips and grazing	..	..	..	..	..	22 10 9	46 15 6	5 17 0	13 12 0	1 19 3	90 14 6
Rent	200 18 4	13 2 6	13 2 6	19 1 9	11 9 8	13 2 6	22 14 6	25 4 4	12 1 3	18 6 5	349 3 9
Totals	945 10 0	1,614 13 9	1,272 9 7	1,158 10 5	3,003 5 8	1,386 15 11	2,886 16 9	1,374 0 3	1,759 19 10	1,501 5 9	16,903 7 11

SUMMARY PREPARED BY THE COMMISSION.

	£ s. d.	£ s. d.	£ s. d.
Total expenditure, as shown, June, 1878, to March, 1879	1,917 16 3		
" " March, 1879, to December, 1888	17,819 2 11		
		19,736 19 2	
Receipts, as shown above		16,903 7 11	
			2,833 11 3 *Dr.*
Allow for permanent improvements, superintendence of students, &c. (items marked ‡)		2,736 4 10	
Estimated value of stock, implements, crops, &c., at 31st December, 1888		3,432 3 11	
			6,168 8 9 *Cr.*
			3,334 17 6 *Cr.*
Add—			
Students' labour paid for		1,527 13 2	
Rent, at 20s. per acre per annum from date of purchases		5,131 5 0	
Management of farm		2,500 0 0	
			9,158 18 2 *Dr.*
Deficit for ten years		..	£5,824 0 8

APPENDIX E.

STUDENTS' ATTENDANCE.

—	First Term.				Second Term.				Third Term.			
	Boarders.	Out-students.	Scholars.	Total.	Boarders.	Out-students.	Scholars.	Total.	Boarders.	Out-students.	Scholars.	Total.
1880	..	..	..	..	10	..	6	16	15	..	6	21
1881	32	..	6	38	35	..	6	41	32	..	6	38
1882	33	..	5	38	31	..	2	33	29	1	2	32
1883	31	..	1	32	34	..	1	35	28	..	1	29
*1884	36	..	..	36	37	..	..	37	..	..	..	..
1885	35	1	..	36	30	..	..	30	..	..	..	..
1886	20	..	..	20	19	..	..	19	..	..	..	..
1887	20	1	..	21	20	2	..	22	..	..	..	..
1888	..	..	..	21	..	..	..	16	..	..	..	..

* In 1884 the year was divided into two terms instead of three.

RETURN of STUDENTS attending the School of Agriculture since its Opening, 19th July, 1880.

First Term, 1880—		
Canterbury	13	
Otago	2	
Nelson	1	
	—	16
Second Term, 1880—		
Canterbury	18	
Otago	2	
Nelson	1	
	—	21
First Term, 1881—		
Canterbury	31	
Otago	2	
Marlborough	2	
Hawke's Bay	2	
Nelson	1	
	—	38
Second Term, 1881—		
Canterbury	31	
Hawke's Bay	3	
Nelson	2	
Southland	1	
Wanganui	1	
Auckland	1	
Marlborough	1	
Otago	1	
	—	41
Third Term, 1881—		
Canterbury	26	
Hawke's Bay	3	
Wellington	2	
Southland	2	
Nelson	2	
Auckland	2	
Dunedin	1	
	—	38
First Term, 1882—		
Canterbury	20	
Hawke's Bay	7	
Auckland	4	
Nelson	2	
Wellington	2	
Southland	1	
Marlborough	1	
Otago	1	
	—	38
Second Term, 1882—		
Canterbury	18	
Hawke's Bay	6	
Auckland	3	
Otago	2	
Southland	1	
Marlborough	1	
Wellington	1	
Victoria	1	
	—	33
Third Term, 1882—		
Canterbury	12	
Auckland	5	
Hawke's Bay	5	
Nelson	2	
Southland	2	
Otago	2	
Auckland	2	
Victoria	1	
Wellington	1	
	—	32

First Term, 1883—		
Canterbury	9	
Auckland	9	
Hawke's Bay	4	
Otago	3	
Nelson	3	
Southland	2	
Marlborough	1	
Victoria	1	
	—	32
Second Term, 1883—		
Canterbury	10	
Auckland	10	
Otago	4	
Nelson	4	
Hawke's Bay	3	
Southland	2	
Marlborough	1	
Victoria	1	
	—	35
Third Term, 1883—		
Canterbury	11	
Auckland	6	
Otago	4	
Hawke's Bay	3	
Southland	2	
Marlborough	1	
Nelson	1	
Victoria	1	
	—	29
First Term, 1884—		
Canterbury	17	
Auckland	7	
Hawke's Bay	5	
Nelson	2	
Wellington	1	
Victoria	1	
Otago	1	
Marlborough	1	
England	1	
	—	36
Second Term, 1884—		
Canterbury	17	
Auckland	6	
Hawke's Bay	5	
Otago	3	
Nelson	2	
Tasmania	1	
Southland	1	
Wellington	1	
England	1	
	—	37
First Term, 1885—		
Canterbury	15	
Auckland	6	
Otago	3	
Wellington	3	
Hawke's Bay	3	
Southland	2	
England	1	
New South Wales	1	
Tasmania	1	
Nelson	1	
	—	36

Second Term, 1885—		
Canterbury	12	
Hawke's Bay	4	
Auckland	4	
New South Wales	3	
Wellington	2	
Otago	2	
Southland	2	
England	1	
		30
First Term, 1886—		
Canterbury	6	
England	3	
Auckland	3	
Hawke's Bay	3	
Wellington	2	
New South Wales	2	
Southland	1	
		20
Second Term, 1886—		
Canterbury	5	
England	6	
Wellington	3	
Auckland	2	
Hawke's Bay	2	
Otago	1	
		19
First Term, 1887—		
Canterbury	7	
England	7	
Hawke's Bay	3	
Wellington	2	
Auckland	1	
Otago	1	
		21

Second Term, 1887—		
Canterbury	6	
England	7	
Wellington	4	
Otago	3	
Hawke's Bay	1	
Auckland	1	
		22
First Term, 1888—		
Canterbury	4	
England	10	
Wellington	2	
Otago	2	
Marlborough	1	
Chatham Islands	1	
Hawke's Bay	1	
		21
Second Term, 1888—		
Canterbury	1	
England	5	
Wellington	3	
New South Wales	2	
Marlborough	1	
Nelson	1	
Otago	1	
Chatham Islands	1	
Auckland	1	
		16

APPENDIX F.

Course of Instruction.

Practical Work.

Students are required to take part in the regular daily work of the farm, so as to acquire a practical knowledge of ploughing and every other kind of farm-work, the use of implements and machinery, the management of stock, milking, and the making of cheese and butter.

Work is carried on daily in the chemical laboratory. In illustrating the teachings of the lecture theatre, agricultural specimens are as frequently as possible used. Students, during their term of residence, proceed from the testing of simple substances to the quantitative analysis of, especially, manures, soils, foods, and farm and dairy products generally.

Biological laboratory work includes: Use of the microscope and the preparation of microscopic objects; examination of and experiments with rust, smut, and other injurious fungi; germination of seeds under various conditions; examination of the minute anatomy of plants; cells and cell contents; evolution of heat; diffusion of fluids in plants; rate of growth; fertilisation; maturation of seeds, &c.; water culture; examination of milk and other animal fluids; organic impurities in water; bacteria in nitrification, &c.; the minute anatomy of injurious insects.

Field investigations with regard to the life-history of injurious insects and fungi.

Adulteration of seeds.

In land-surveying and levelling, field-work will be undertaken at suitable times for practice in the use of instruments, in measuring land, harvest and other piece-work, and in taking levels for drainage purposes, the results of the field-work being plotted and plans drawn.

The carpenter's and blacksmith's shops are furnished with the necessary appliances. Students take their turn at work with the carpenter and blacksmith, so that they obtain practical instruction in both rough carpentry and farriery as far as these are carried out on the farm.

Syllabus of Lectures.

Agriculture.

The proper aim of the farmer when cultivating the soil; relation of animals and plants to the soil; composition of the plant; sources of the food of plants; origin, formation, and physical properties of soils; causes of diversity of soils; relation of soils to water, heat, &c.; improvement in the mechanical condition of soils by cultivation, drainage, &c.; construction and use of cultivating implements, harvesting machinery, &c.

Chemical composition of soils; condition of the various constituents; effects of exposure thereof to atmospheric action; available supply of plant-foods in soils; exhaustion of soils; nitrogen and nitrification; means of preventing exhaustion and of restoring fertility; rotation of crops; manuring; special and general manures and their application; market value of special manures according to their chemical composition; the cereals, their habits, peculiarities, and

cultivation; cost of cultivation, and value of root and fodder crops generally; laying down to grass; grasses in general.

The live-stock of the farm; breeding, management, feeding, &c., of farm-horses, cattle, sheep, pigs; dairy management, the processes of cheese- and butter-making; wool-growing, bacon-curing; the feeding value of foods.

Chemistry and Physics.

Objects of chemistry and its relation to agriculture; matter and force; elements and compounds; chemical affinity; different modes of chemical action; nomenclature and formulæ; atoms and molecules; quantivalence; acids, bases, and salts; relation of temperature and pressure to gases; the non-metallic elements, hydrogen, oxygen, carbon, nitrogen, chlorine, bromine, iodine and fluorine, sulphur and phosphorus; the atmosphere and its connection with animal and vegetable life; source of combined nitrogen; water, impurities affecting it for domestic purposes; composition of rainwater; sewage; manufacture of sulphuric acid; manufacture of superphosphate of lime and other artificial manures; products of combustion and fermentation; chemical changes taking place in farmyard manures, &c.; the general composition of the proximate constituents of plants and animals; carbohydrates, starch, sugar, &c.; albuminoids, gluten, casein, fibrin, &c.

The metals and their compounds; economic use in agriculture; alloys, &c.; potassium, sodium, calcium, magnesium, iron, aluminium, tin, antimony, arsenic, copper, lead, mercury, gold, silver, and platinum; detection of mineral poisons; the mineralogical constituents of rocks and their chemical composition; functions of the mineral food-constituents of plants; essential and non-essential soil constituents; assimilation; chemical preparation of plant-food in the soil; absorptive properties; animal nutrition; chemistry of digestion, respiration, and excretion; constituents of food; ratio between heat-giving and flesh-forming foods.

Organic chemistry: Principles of organic analysis; hydrocarbons, alcohols, ethers, acids, ethereal salts; the composition and properties of the more important animal and vegetable products; sugars, starches, oils and fats, gums, aromatic compounds, albuminous substances, fibrin, casein, gluten; composition and functions of animal fluids, blood, milk, bile, gastric juice, urine, &c.; biliary and urinary calculi; the various kinds of fermentation; manufacture of wine, vinegar, &c.; action of ferments in the ripening of cheese, rancidity of butter; nitrification in soils; the vegetable alkaloids, strychnine, brucine, morphine, &c.; organic colouring-matters, preparation and use of in dyeing; tannins; products resulting from the destructive distillation of coal, wood, &c.; the chemical changes taking place during germination, ripening of fruits, maturation of seeds.

Heat: Temperature and expansion, latent and specific heat, conduction and radiation; distillation, evaporation, &c.

Sound: Production, propagation, and reflection of sound, vibration, &c.

Light: Velocity and intensity of light, mirrors, lenses, refraction and polarisation, prismatic analysis, photometry, &c.

Electricity: Magnetism, frictional and voltaic electricity, electromagnetism, voltaic piles, &c.

Natural Science.

Morphological Botany.—The external form of plants; the development of organs; structure and life-history of the chief orders of Cryptogams, more especially of parasitic fungi; special morphology of those orders of Phænogams comprising the plants found on the farm; special modifications to effect fertilisation, &c.; external characters of the seeds of agricultural plants and weeds.

Physiological Botany.—Nature and formation of the cell; modes of increase; combinations of cells; modifications; functions of organs; food of plants; absorption; diffusion of fluids in plants; movements of plants; evolution of heat in plants; germination; diseases of plants and proposed remedies; variation; origin of species; influence of external agents on plants; distribution of agricultural plants.

Entomology.—The chief orders of insects; detailed structure and life-history of insects; injurious effects of certain species; causes of their sudden increase; proposed remedies.

Geology and Physical Geography.—Causes of changes upon the earth's surface; distribution of land and water; action of natural forces—changes of temperature, wind, and volcanic action; action of water as rain, rivers, glaciers, the sea, &c.; disintegration of rocks; formation of soils from rocks; formation of limestones; coal, lignite, peat, &c.; classification of rocks, &c.

Veterinary Science.

Anatomy of the horse, cattle, and sheep; structure and mechanism of the skeleton; muscles; organs of digestion, circulation, &c.; dentition. Pathology: Diseases of various organs, and remedies therefor. Treatment of wounds and accidents; materia medica.

Mathematics and Land-surveying.

Arithmetic; algebra; plane trigonometry, including the solution of triangles; logarithms; Euclid. Mensuration of every kind of surface, of solids, artificers' work, excavations, embankments, timber, &c. Elementary hydrostatics and hydraulics; pressure of water; artesian wells; the different kinds of pumps; waterwheels; siphon; hydraulic friction; hydraulic press and ram, &c. Mechanics; parallelogram of forces; mechanical powers; steam-engine; laws of motion, &c.; definition of "work;" conservation of energy. Land-surveying and levelling.

Book-keeping, Meteorology, and Mechanical Drawing.

Book-keeping.—Explanation of commercial terms; documents used in ordinary business transactions; the books used in book-keeping; single and double entry, &c.

Meteorology.—Wind, dew, mist, and cloud. The barometer, thermometer, anemometer, and rain-gauge; methods of observing; atmospheric pressure; prevailing winds; temperature; distribution of rain; causes of variation in climate; influence of ocean currents; influence of mountains; laws of storms; characteristics of the New Zealand climate in relation to agriculture, &c.

Mechanical Drawing.—Drawings of parts of machinery, as toothed wheels, &c.; drawings illustrating construction of roofs, floors, &c.; plans and elevations of farm and other buildings.

TIME-TABLE.

Hours.	Monday.		Tuesday.		Wednesday.		Thursday.		Friday.		Saturday.	
	1st Year.	2nd Year.	1st Year.	2nd Year.	1st Year.	2nd Year.	1st Year.	2nd Year.	1st Year.	2nd Year.	1st Year.	2nd Year.
A.M.												
9 to 10 ...	Farm, carpenter, land-surveying, and book-keeping, as per "group" time-table.	Mechanical drawing	Meteorology	Farm and blacksmith, as per "group" time-table.	Farm, land-surveying, and book-keeping, as per "group" time-table.	Physiological laboratory	Farm, &c., as per "group" time-table.	8.30 to 10—Chemical laboratory	Book-keeping	Farm, &c., as per "group" time-table.	9 to 11—Examination.	Examination and farm, as per "group" time-table.
10 to 11 ...		Chemistry ...	Chemistry ...			10 to 12—Biological laboratory		Veterinary	Chemistry ...			
11 to 12 ...		Agriculture...	Agriculture...					Agriculture	Agriculture...			
P.M.												
1.30 to 2.30		...	...			Chemistry ...		Veterinary	...			
1.30 to 3...		Chemical laboratory	Chemical laboratory			...		...	Chemical laboratory			
2.30 to 4...		...	...			Surveying and plotting		Mathematics	...			
3 to 4 ...		Botany ...	Geology ...			...		...	Geology ...			
4 to 5 ...		Mechanics ...	Mathematics			...		Botany ...	Physiological chemistry			

APPENDIX G.

SIR,— School of Agriculture, Lincoln, 13th December, 1880.

In reply to instruction, I have the honour to submit my views as to the requirements of this school with respect to the teaching of natural-history subjects.

The subjects which should be taken by the Instructor in Natural History are as follows: Vegetable physiology and botany, physical geography and geology, entomology and ornithology, microscopy, horticulture, forestry, agriculture. His duties in connection with these subjects would include investigations into (amongst other questions) the life-history of injurious fungi, such as rust, of insect-pests as the aphis, turnip-beetle, &c., the value of birds, the adulteration of seeds, &c. There would naturally fall under his superintendence the botanic garden, kitchen-garden, plant-houses, plantations, forest-tree nursery, orchards, museum, and portion of experimental grounds.

In order to teach natural-history subjects in an agricultural school, it is, in my opinion, absolutely necessary that the teaching should be, as far as possible, brought intc close connection with the conditions existing on the farm, and should largely consist of demonstrations in the field, as well as that the subjects should be treated of in the lecture theatre. For instance, the instructor in botany and vegetable physiology should illustrate and amplify the lectures by field classes, during which the habits of not only the cultivated plants, but more especially weeds, might be investigated. The same might be said with respect to entomology and other subjects: aphis, caterpillar, rust, &c., when they occur, must be brought under the student's notice *in situ*, their progress must be followed day by day, and there, upon the ground, should be applied what may have gone before in the lecture theatre. Then will the average agricultural student assimilate the lesson.

There are also many indoor experiments with growing plants that if conducted would go far to impress upon the student's mind many physiological facts connected with the feeding of plants and their growth generally. Such experiments would require time and supervision. Students should also be made familiar with the structure of plants. This can only be done by repeated demonstration with the microscope. The school should give a short course in horticulture. Very few people know how to graft or even prune a fruit-tree.

Forestry, again, is almost an unknown science. Bee-keeping, too, is a considerable industry in America, and a knowledge of the best systems might with advantage be imported.

Any one to do the work above set out would find it necessary to be at the farm every day during the week, and, if he had his heart in his work, would find the time at his disposal none too long.

In my report of the 25th September last I advocated, and gave my reasons for so doing, that all the instructors should be under the control of the Director of the school, and that they should be resident.

I have, &c.,

The Chairman, School of Agriculture Committee. W. E. IVEY, Director.

APPENDIX H.

SIR,— School of Agriculture, Lincoln, 28th September, 1880.

In accordance with your instructions, I have the honour to report my views with respect to the teaching staff required for this school.

The subjects that should be taught are as follows, and may be classed in five divisions, viz.: (1) Agriculture; (2) chemistry and physics; (3) vegetable physiology, botany, entomology, geology, and physical geography; (4) mathematics, mechanics, book-keeping, land-surveying, and levelling; (5) veterinary medicine and surgery. An instructor is required for each of these divisions.

The duties of the chemist would include teaching general chemistry (both by lectures and in the laboratory), carrying out chemico-agricultural investigations, manurial experiments, &c., and analysing at times, for the public, substances an examination of which would be of interest.

The instructor in natural-history subjects should be especially a good vegetable physiologist, capable of demonstrating the structure of plants, and should be skilled in the use of the microscope. Besides teaching the subjects mentioned, he should superintend the botanic garden, carry out experiments to illustrate the growth and feeding of plants, with grasses, with seeds, &c.

The instructor in mathematics should take arithmetic, algebra, Euclid, mensuration, logarithms, trigonometry, land-surveying, levelling, mechanics, and book-keeping.

I would strongly advocate that the instructors in the subjects in the above divisions should be residents. Resident instructors naturally take an interest in the progress of the institution with which they are identified; they are at hand to direct the studies of the students; any spare time is available for and likely to be utilised in useful investigations in many different directions. In fact the whole of the time of the instructors in chemistry and natural history would be, as it should be, devoted to promoting the progress of agriculture. The presence of a portion of the staff is also necessary to enforce discipline and to insure evening study.

A veterinary surgeon, to attend one day a week, would, I think, in that time be able to give during the school course sufficient instruction.

I propose that I should myself take agriculture, theoretical and practical; and in doing so I should probably take, in the latter part of my course, applied chemistry. My other duties would include the management of the farm (ordinary and experimental), of the school, to keep the farm and other accounts, put into shape for publication results of experiments, reports on various matters, reply to inquiries made by the public, &c.; also to direct and control to some extent the teaching staff, and, if possible, to carry out investigations, chemical or other, with or without the assistance of the staff.

The general direction of the course of instruction should be in the hands of the Director, who is in reality responsible to the Board of Governors for the successful training of the students, if only for this reason, viz.: Our aim is to make use of the various subjects taught to the end that our agriculture may be improved. The instructors must, therefore, be constrained to subordinate their teaching to this end. Upon the efficiency of the staff will the success of the school much depend.

It is necessary to secure the services as instructors of trained men of good attainments, who could, as well as teach, carry out after consultation any scheme of experiments or pursue any course of inquiry that might be decided upon—men who would each have his heart in his work. Without such qualification an instructor would be worse than useless to the school.

It would, I think, be desirable later to add to the present course instruction in forestry and horticulture, and also to provide a carpenter's and blacksmith's shop. A knowledge of rough carpentry and simple smithy-work would often be of great value to a farmer. Practical forestry might be usefully carried out on some of the College reserves.

I have, &c.,

The Chairman, School of Agriculture Committee. W. E. Ivey, Director.

APPENDIX I.

Canterbury College.—School of Agriculture.

TABLE SHOWING HOW MASTERS ARE ENGAGED EACH DAY.

1. Mr. Gray.—*Lecturer on Chemistry.*

a. Actual time with students in lecture-room and laboratories:—

Hours.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.
A.M.					
9.30 to 10..	..	..	..	Chemical laboratory	..
9 to 10 ..	..	..	Physical chemistry	..	..
10 to 11 ..	Chemistry lecture ..	Chemistry lecture ..	Biological laboratory	..	Chemistry lecture.
11 to 12 ..	..	..	"	..	..
P.M.					
1.30 to 2.30	..	..	Chemistry lecture ..	..	..
1.30 to 3 ..	Chemical laboratory	Chemical laboratory	..	..	Chemical laboratory.
4 to 5 ..	..	..	..	..	Physiological chemistry.

b. Time occupied in preparation of lectures and laboratory practice.
c. Time occupied in making analyses for farmers and the public. See reports.
d. Time occupied in original investigations. See report—papers on turnips, grasses, rainwater, &c.
e. Time occupied on farm analyses. See reports.
f. Saturday examinations.

2. Mr. Wilkinson.—*Natural Science and Mathematics, &c.*

a. Actual time with students in lecture-room and in the field:—

Hours.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.
A.M.					
9 to 12 ..	Mathematics, land-surveying, and measuring	Surveying and levelling	Mathematics, land-surveying, and measuring	..	..
P.M.					
2.30 to 4 ..	..	..	Plotting	Mathematics ..	..
3 to 4 ..	Botany lecture ..	Geology and entomology	..	..	Geology and entomology.
4 to 5 ..	Mechanics ..	Mathematics, mechanics, and mensuration	..	Botany	..

b. Time occupied in preparation of lectures, &c.
c. Time occupied in working out students' labour-vouchers from field measurements.
d. Time occupied in examination and identification of seeds for farmers and the public. See reports.
e. Time occupied in collecting seeds and plants, and preparing and describing for museum and herbarium.
f. Other museum work.
g. Saturday examinations.
With Mr. Buckley, reads prayers during alternate weeks, supervises students at meals, &c.

3. Mr. Buckley.—*Book-keeping and Meteorology.*

a. Actual time with students in class-rooms:—

Hours.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.
A.M.					
9 to 10 ..	Mechanical drawing	Meteorology ..	..	..	Book-keeping.
P.M.					
2 to 4 ..	Book-keeping ..	Book-keeping ..	Book-keeping ..	..	..

b. Time occupied in preparation for classes.
c. Time occupied in keeping the books of the institution.
d. Time occupied in taking meteorological observations, preparing tables, and forwarding to Wellington, &c., for publication.
e. Saturday examinations.
With Mr. Wilkinson, reads prayers during alternate weeks, supervises students at meals, &c.

TABLE SHOWING EMPLOYMENT OF STUDENTS.

First-year Students.

Group A.

Hours.	Every alternate					
	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
A.M.						
7 to 7.30 ..	Cleaning horses	..	Cleaning horses	Cleaning horses	..	..
8 to 12 ..	Horse work on the farm	..	Horse work on the farm	Horse work on the farm	..	..
9 to 10 ..	..	Meteorology ..	..	..	Book-keeping ..	Examination.
10 to 11 ..	..	Chemistry lecture	..	..	Chemistry lecture	
11 to 12 ..	..	Agriculture lecture	..	..	Agriculture lecture	..
P.M.						
1 to 5 ..	Horse work on the farm	..	Horse work on the farm	Horse work on the farm	..	..
1.30 to 3 ..	..	Chemical laboratory	..	..	Chemical laboratory	..
3 to 4 ..	..	Geology lecture	..	..	Geology lecture	..
4 to 5 ..	..	Mathematics ..	..	..	Physiological chemistry lecture	..
5 to 5.30 ..	Cleaning horses	..	Cleaning horses	Cleaning horses	..	..

Group B.

A.M.						
7 to 7.30 ..	Milking ..	..	Milking ..	Milking ..	..	..
9 to 10 ..	9 to 12—Mathematics, land-surveying, measuring or levelling	Meteorology ..	9 to 12—Mathematics and land-surveying	8 to 11—Carpenter's shop	Book-keeping ..	Examination.
10 to 11 ..		Chemistry lecture		11 to 12—Veterinary	Chemistry lecture	
11 to 12 ..		Agriculture lecture			Agriculture lecture	..
P.M.						
1.30 to 3 ..	2 to 4—Book-keeping	Chemical laboratory	2 to 4—Book-keeping	1 to 4—Carpenter's shop or farm	Chemical laboratory	..
3 to 4 ..	..	Geology lecture	..		Geology lecture	..
4 to 5 ..	Milking ..	Mathematics ..	Milking ..	Milking ..	Physiological chemistry lecture	..

SECOND-YEAR STUDENTS.

Group A.

Hours.	Every alternate					
	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
A.M.						
7 to 7.30 ..	..	Cleaning horses	..	..	Cleaning horses	Cleaning horses.
8 to 12 ..	..	Horse work on the farm	..	..	Horse work on the farm	Horse work on the farm.
9 to 10 ..	Mechanical drawing	..	9 to 12—Physiological laboratory and biological laboratory	8.30 to 10—Chemical laboratory	..	..
10 to 11 ..	Chemistry lecture	..		Veterinary lecture	..	..
11 to 12 ..	Agriculture lecture	..	..	Agriculture lecture	..	..
P.M.						
1 to 5 ..	..	Horse work on the farm	..	..	Horse work on the farm	Horse work on the farm.
1.30 to 2.30	..	..	Chemistry lecture	Veterinary lecture	..	..
1.30 to 3 ..	Chemical laboratory	..	..	..	..	..
2.30 to 4 ..	..	..	Plotting ..	Mathematics ..	..	..
3 to 4 ..	Botany or entomology lecture	..	..	..	..	..
4 to 5 ..	Mechanics ..	..	..	Botany or entomology lecture	..	..
5 to 5.30 ..	..	Cleaning horses	..	..	Cleaning horses	Cleaning horses.

Group B.

A.M.						
7 to 7.30 ..	..	Milking ..	..	..	Milking ..	Milking.
8.30 to 10	..	..	..	Chemical laboratory	8 to 12—Blacksmiths' shop	..
9 to 10 ..	Mechanical drawing	9 to 12—Land-surveying and levelling	Physiological chemistry	..	..	9 to 11—Examinations.
10 to 11 ..	Chemistry lecture	..	10 to 12—Biological laboratory	10 to 12—Veterinary lecture, agriculture lecture	..	..
11 to 12 ..	Agriculture lecture	..			..	..
P.M.						
1.30 to 2.30	1.30 to 3—Chemical laboratory	2 to 4—Book-keeping	Chemistry lecture	Veterinary lecture	1 to 4—Blacksmith's shop	..
2.30 to 4 ..	..	..	Plotting ..	Mathematics ..	..	..
3 to 4 ..	Botany or entomology lecture	..	..	..	..	..
4 to 5 ..	Mechanics ..	Milking ..	..	Botany or entomology lecture	Milking ..	Milking.

STATEMENT showing the Number of Men employed on the Farm, and the Amount paid to them Weekly.

Name.	Occupation.	Weekly Wage.
		£ s. d.
J. Hay	Head ploughman, charge of teams	2 0 0
R. Came	Engine-driver and labourer	2 0 0
J. Clive and wife	Stock and dairy	2 5 6
J. Power	Helps in stable and labourer	1 16 0
J. Brown	Drains, ditches, and fences	1 16 0

In connection with this statement, see Labour Journal, which gives full particulars of every item of labour and expenditure thereon; also my report for 1886–87.

W. E. IVEY, Director.

APPENDIX J.

Canterbury College, School of Agriculture,
Lincoln, 26th April, 1886.

SIR,—

In making the following communication it may be considered by the committee that I am going outside my duties as Director of this institution; but for some time I have held certain opinions with respect to the relations of the School of Agriculture to the question of agricultural education generally, and after my visit to Victoria on matters connected with agricultural education in that colony I am emboldened to lay my views before you, feeling assured that their thorough examination by the committee may result in benefit to this institution and to the cause of agricultural education in New Zealand.

The committee are well aware that, though the raising of the fees for students from £45 to £65 per annum was really compulsory, because the annual receipts were less than the expenditure, the number of students has at once declined from about thirty-six to twenty. I have good reason, through my correspondence, to know that our numbers would have kept up under the old rate, and I believe under the present rate our numbers will not probably increase, the more especially that agriculture is in a very depressed condition.

I would, too, call the committee's attention to the fact that of our students, under both rates of fees, perhaps two or three per cent. only have been sons of *bonâ fide* farmers, unless graziers on a large scale could be so classed. I believe the institution was formed for the benefit of farmers' sons; and if the question ever be publicly asked, To what extent has this class been benefited? I fear the good work that has been done will be lost sight of to a great extent, and the fact that we have about twenty students in a building that will accommodate fifty, and that but one, perhaps, of the twenty is the son of a farmer, would be pushed into a very prominent position.

My visit to Victoria had the effect of directing my attention more closely to this question of agricultural education. I may say I was very highly complimented upon the evidence given by me before the Royal Commission in Melbourne; but much of the advice I was enabled to give—viz., that portion relating to the treatment, &c., of colonial students—was the result of my experience here, and I deem it my duty to you and myself to point out where my recommendations to the Victorian Commission were not based upon the conditions obtaining here. My doing so would really serve to show what I believe to be the weak points in this institution if considered as the centre of agricultural education in New Zealand, a position which it undoubtedly should hold.

1. With respect to securing farmers' sons as students, I pointed out that a lad of fifteen or sixteen years of age is worth to his father, a farmer, 10s. a week at least. If the father be required, in order to send the boy to an agricultural college, to not only forego the boy's services, but also to pay £50 to £65 per annum for his education, he is not likely to do so. Most ordinary farmers in the colonies could not afford it, and higher education fails to reach the class it is most desirable that it should affect. I expressed my opinion that lowering the amount of fees would be practically useless to the desired end, and that the remedy is to class agricultural colleges as technical schools, to which should be drafted from the State schools of the colony—possibly excluding town schools—a certain number of youths intending to become farmers. Provision should be made by the Government for a certain number of scholarships to be competed for by State-school boys. Scholarships are already provided by the Victorian Government to enable boys to enter technical schools, and I was told by the Secretary to the Educational Department that the Victorian Agricultural College could be treated as a technical school. In this colony I believe such schools are to be established, and, if so, I think this institution should claim a certain proportion of any scholarships that may be provided. I think at least one-half of our students should be such scholars, as I look upon this as the only means of securing the material that we should work with in order to secure higher education to the agricultural community.

2. I think there is little doubt but that the Government will be pressed into establishing agricultural schools in Auckland and Otago, if not elsewhere also. Our practice is not that of the Auckland Provincial District, and such points will be agitated whenever the question of agricultural education comes to the front. In Victoria it is proposed to establish several farm schools, or special agricultural stations, affiliated to a central college, because climatic and other influences necessarily cause great diversity in the practice and in the kinds of crops grown in different parts of the colony. The scientific teaching is the same for all branches of agriculture, and it would be waste of strength and money to teach the sciences, &c., at several places, whilst we have here at Lincoln, centrally situated, the teachers, the accommodation, and all the appliances.

Could not it be arranged that we do the scientific and other teaching for the whole colony, students being drafted north or south to the special stations for special work under an expert? The saving the Government would effect in avoiding the establishment of separate science schools by making use of the means at hand at Lincoln for scientific and other teaching, would recoup it for the expense of the suggested scholarships.

3. I recommended the Victorian Council to add a school of forestry to their college, as the scientific teaching would be almost identical with that required in teaching the other branches of agriculture, and the cost of any special teaching would be exceedingly small when compared with that of establishing a separate school of forestry. It appears to me that the Government is likely to take steps in this direction; but if two local forest-stations were established, and this institution made the source of the scientific portion of the teaching, there would be a great saving, and the advantages to this institution would be great.

We are suffering now greatly from the want of a natural-science lecturer—in fact, we are not doing thorough work without such teacher. Such an addition to our staff would comprise almost all the additional strength that would be necessary, make this College the central forest school, and the saving the Government would effect in not establishing a separate scientific school should warrant their providing for such an officer.

4. We are doing no special experimental work, through want of funds. I fear this fact may be used against the school some day by its enemies. Something is being done by Mr. Mackay, on the part of the Government, in supplying grasses, but much more should be done in this direction and many others. It must be evident to members of the committee that I think it advisable some change should be made in order that the most should be made of the School of Agriculture. Should the whole question of agricultural education ever be brought before Parliament, the following points in connection with the School of Agriculture will, I think, be brought prominently forward: viz., (*a*) The value of the endowment; (*b*) expenditure on buildings, &c.; (*c*) accommodation afforded for students, &c.; (*d*) present number of students; (*e*) cost of each to the State; (*f*) parentage of students; (*g*) experimental work.

Possibly, as I have said, it may be thought that this is not a matter that I should touch upon, but, being firmly persuaded that some discussion upon these questions is very desirable, I take the liberty of laying my views before the committee, thinking it well to anticipate any possible ill effect that may result upon an inquiry into the subject of agricultural education generally, by drafting some scheme, either upon the lines I have sketched or in some other direction. You have here a costly institution, and we have very valuable experience in carrying on such an establishment upon almost entirely new lines, and I think it much to be regretted that the School of Agriculture, admitted working admirably, should not be made to be of vastly greater value by its being placed upon the broader basis my suggestions would indicate. These, shortly summarised, are as follows, viz.: That the Lincoln college should be made the head-quarters of education in both agriculture and forestry, there being at least two special agricultural and one or two forest stations affiliated thereto, these being situated in suitable parts of the colony; that the Government, in return for the saving in the difference in cost between special stations as I suggest, and elaborate agricultural schools, which would be necessary if scientific teaching were given at each school instead of making use of the Lincoln college for that purpose, and for the saving effected in the avoiding the erection and expense of carrying on a scientific forest school, should provide funds for the payment of a science lecturer, for experimental work, and for at least twenty-five scholarships in agriculture and forestry, to be gained by competition at the State schools. These expenses and the cost of maintaining the special stations would not amount to one-fourth of the cost of establishing separate agricutural and forest schools.

Under the conditions above sketched out I am assured that our system of agricultural education would compare very favourably with that existent in any part of the world.

I have, &c.,

The Chairman, School of Agriculture Committee. W. E. Ivey, Director.

APPENDIX K.

Report of the Special Committee of the School of Agriculture, appointed on the 13th October, 1887, as it passed the Board on the 25th June, 1888.

The Special Committee on the School of Agriculture, after visiting the College at Lincoln, and having held six meetings, beg to make the following recommendations:—

(1.) One of the Inspectors should be changed annually.

(2.) Some more efficient means of supervision ought to be employed to see what the students are actually doing, as at present each boy reports his own work. They therefore recommend that part of the duties of the Director shall be to inspect the daily out-door work of the students, and verify their reports.

(3.) That for the future the enginedriver on the farm shall be the permanent blacksmith.

(4.) That during the coming term no student be paid more than 2d. an hour for work, and that no student be paid for work after the expiration of the year 1888.

(5.) That all the mutton used in the establishment be killed on the farm, and the students taught to kill and dress sheep.

(6.) That the Veterinary Surgeon's engagement be terminated, and the Director lecture on this branch of the students' education.

(7.) That the following items be omitted for the future from the estimates: Cleaning public rooms, £50; plantations, £60; Veterinary Surgeon, £60. With regard to the first three items, the Committee beg to remind the Board that the rent, rates, taxes, insurance, and repairs are all paid by the College. They also took into consideration the very low prices Mr. Ivey pays for milk, butter, bacon, &c.

(8.) That all fees whatsoever received for analyses, and all sums received from the General Government for work of any kind, shall pass through the books.

In addition to the above recommendations, the Committee beg to state that they have already sent in an interim report, some of the suggestions of which have been already acted upon by the Director; these therefore they have not thought it necessary to repeat.

F. Neave, Chairman.

Interim Report referred to.

Suggestions of Special Committee on Lincoln College.

(1.) *Odd Men.*—None kept, except when students are away. When employed should be by contract if possible, 6s. a day being too high wages for them when in constant employ.

(2.) *Students' Labour.*—Too highly paid. When students are at work ½d. an hour sufficient. All penalties should be deducted before payment.

(3.) *Supervision.*—Some more efficient means of supervision ought to be employed to see what the students are actually doing. This might be done by a system of prefects. Anything better than each boy reporting his own work.

(4.) *Blacksmith.*—The man who works the engine should also be a blacksmith, and all ordinary blacksmith-work done by him, as well as the horse-shoeing, in which the students ought to assist.

(5.) *Carpenter.*—In the same manner, instead of having a carpenter over two days a week from Lincoln, a rough carpenter might be kept permanently to teach gate-making, and do any other ordinary farm-work, as is usual on large stations.

(6.) *Stock.*—All stock should be sold at saleyards, and all the mutton used in the establishment killed on the farm, and students taught to kill and dress.

(7.) *Inspectors.*—One should be changed annually.

(8.) *Plantation Grant.*—Very large; hardly any work to show for it. Work should be done by students.

(9.) *Veterinary Surgeon.*—Grant excessive. Subject might very well be taught by Director.

(10.) *No young women* employed as servants; and very stringent regulations made to prevent the students getting out at night.

(11.) *Reductions.*—Thinking £45 a year ample remuneration for student's board (the rent, rates, taxes, insurance, and repairs being paid by the College), taking into consideration also the very low prices Mr. Ivey pays for milk, butter, bacon, &c., we consider that the charges for fuel, lights, and cleaning rooms should be paid by Mr. Ivey himself; also that £100 a year is too much for entertaining strangers: a charge of 10s. a day when staying the night would be ample.

(12.) Mr. Ivey should take dinner with the students.

(13.) Query: Whether periodical sales of stock and unused and worn-out implements might not be made?

F. D. S. NEAVE.
C. GARSIA.

APPENDIX L.

SIR,— Canterbury College, Christchurch, 30th April, 1878.

I have the honour to state that the Board of Governors of Canterbury College, at a meeting held on the 25th instant, passed the following resolution, viz., "That the eastern wing of the College be built according to original design, and that the funds be drawn from the proceeds of sales of reserves in proportion to amount received up to date from such reserve."

I beg to draw your attention to the 9th section of "The Canterbury Educational Reserves Sale and Leasing Act, 1876," and request you will be so good as to bring this matter before the Governor in Council, in order that consent may be given to the expenditure necessary to carry out the wishes of the Board.

The architect estimates the contract for the building will be £3,200, but in addition to this amount there will be the architect's fees, salary of clerk of works, and cost of furniture and fittings. I have therefore to request His Excellency the Governor to approve of an expenditure not exceeding £4,500. This amount is now lying in the bank to the credit of the Board.

The proposed addition to the College building is absolutely necessary in order to provide class-rooms for the students attending lectures on geology, biology, modern languages, and jurisprudence, there being at present only three class-rooms—one for the Professor of Classics, one for the Professor of Mathematics, and the other for the Professor of Chemistry. Requesting your kind attention to this matter,

I have, &c.,

The Hon. the Minister of Education, Wellington. W. MONTGOMERY, Chairman.

SIR,— Education Department, Wellington, 13th May, 1878.

In reply to your letter of the 30th ultimo, I have the honour, by direction of the Minister acting for the Minister of Education, to inform you that His Excellency the Governor in Council has authorised the Board of Governors of the Canterbury College to expend upon the erection of buildings for the purposes of the said College a sum not exceeding £4,500 out of the proceeds of sales of reserves, in accordance with the provisions of "The Canterbury Educational Reserves Sale and Leasing Act, 1876."

I have, &c.,
E. O. GIBBES,
(For the Secretary.)

The Chairman, Board of Governors, Canterbury College, Christchurch.

SIR,— Canterbury College, Christchurch, 10th December, 1878.

I have the honour to bring under your notice the following resolution, passed at a meeting of this Board on the 20th ultimo: "That application be made for £5,500, the balance of the £10,000 mentioned in the 9th clause of 'The Canterbury Educational Reserves Sale and Leasing Act, 1876,' in order to purchase the present Girls' High School buildings and site for the College, and to erect new buildings for the Girls' High School on the site in Cranmer Square."

I have the honour to apply to the Governor in Council to sanction this expenditure in accordance with the wishes of the Board, and I beg you to be so good as to forward and support this application.

By the 9th section of "The Canterbury Educational Reserves Sale and Leasing Act, 1876," this College may, with the consent of the Governor in Council, invest any sum (part of the proceeds of sale of the reserves) not exceeding £10,000 in the purchase of site and buildings for the purposes of the College. On the 13th May, 1878, permission was given to expend £4,500 on certain additions to the College buildings, and the present application is for the balance of the £10,000. The money is now in the bank at the credit of the Board.

As the site on which the Girls' High School stands is less than a quarter of an acre in extent, and is only separated from the College by a right-of-way, the Board deemed it desirable that the school should be removed to a larger site, and that the present buildings should be acquired for the College. An excellent site of half an acre fronting on Cranmer Square has been purchased by the Board, and it is proposed to place the school there. I enclose a tracing showing the present position of the school and the site on which it is proposed to erect the new buildings. Requesting your kind attention to this matter,

I have, &c.,

The Hon. the Minister of Education, Wellington. W. MONTGOMERY, Chairman.

SIR,— Education Department, Wellington, 20th December, 1878.

In reply to your letter of the 10th instant, I have the honour, by direction of the Minister of Education, to inform you that His Excellency the Governor in Council has authorised the Board of Governors of the Canterbury College to expend upon the erection of buildings for the purposes of the said College a sum not exceeding £5,500 out of the proceeds of sales of reserves, in accordance with the provisions of "The Canterbury Educational Reserves Sale and Leasing Act, 1876."

I have, &c.,

The Chairman, Board of Governors, Canterbury College, Christchurch. JOHN HISLOP.

APPENDIX M.

The Hon. W. ROLLESTON to the SECRETARY to the COMMISSION.

SIR,— Rangitata, 28th February, 1889.

I have the honour to acknowledge the receipt of your letter of the 20th instant, in which, by direction of the Royal Commission now engaged in inquiring into the working of the School of Agriculture, you ask me (1) to afford any information I can as to the reason why no action was taken by the trustees elected, by resolution of the Provincial Council of Canterbury in 1875, in respect of the trust, and how the reserves came to be included in the Act of the General Assembly entitled "The Canterbury Educational Reserves Sale and Leasing Act, 1876;" (2) to give the Commission my views as to the future management of the School of Agriculture.

On the first point, it will be understood that I am speaking to some extent from recollection, in the absence of records, and subject to correction.

The resolution referred to was passed in the last session of the Provincial Council of Canterbury, on the eve of the passing of the Act which abolished the provinces. The resolution could have no force without legislation enabling the Superintendent to constitute the trust, and convey the reserves to it. Some of the reserves specified in the Act of 1876, including some of those made for the School of Agriculture (sec. 3 of the Act), had not yet been Crown-granted to the Superintendent, and could not therefore then be dealt with by the Provincial Legislature, which was destined never to sit again; and I believe that under any circumstances an Act of the General Legislature would have been necessary to enable the reserves to be dealt with by the Waste Lands Board in the manner indicated by the Provincial Council, and subsequently provided for by the Act of 1876. There was no prospect, as will be readily understood, of the question being dealt with in the stormy session of 1875, and while some uncertainty yet hung over the fate of the provinces. When Parliament met in 1876 all that remained to be done was to obtain an enactment which would secure to the province the endowments before its final extinction. The Act, it will be observed, came into force a month before that event. The members of the General Assembly for the provincial district had virtually taken the place of the members of the Provincial Council, and they had to consider what was best to be done to secure the endowments locally, and enable the objects of the several trusts to have effect given to them with the least friction and in accordance with their original design. The carrying through such a measure was, at the time, a matter of considerable difficulty, and it would have been hopeless to attempt to carry a Bill of a more complicated character, dealing separately and in detail with the several trusts. I need scarcely point out that the position of parties in the General Assembly was peculiar, as well as the attitude generally of Canterbury members on the question of Abolition. A Bill securing local advantages to a part of the colony which favoured Abolition would naturally be viewed with disfavour by members from other provinces who were opposed to Abolition.

The Bill, however, was taken through the Lower House by myself, and through the Upper House by Sir John Hall, and has had the effect of securing the endowments to the provincial district. (See *Hansard*, 1876: Sir John Hall's speech on the second reading in the Legislative Council.)

Coming to the second point of your inquiry, I am not in a position to form an opinion as to how far the administration by the Canterbury College of the several trusts has been successful or otherwise. From what transpired in the year 1884 as to the Public Library Trust (see my letter on the subject published in the *Lyttelton Times* of the 26th March, 1884), I formed the opinion that there was a possibility of the aggrandisement of some of the trusts at the expense of others, and that the confusion necessarily incident to a violent constitutional change might lead to considerable deviation from the original intention of the Provincial Legislature. The intention, moreover, of the Provincial Legislature, had it continued to exist, would doubtless have been subject to modification with altered circumstances. For example, the land reserved has not proved to be "purely pastoral," and the unforeseen aggregation of capital consequent on the sale of lands would no doubt have called for further developments of the trust, which might have taken a more profitable direction than the large expenditure on buildings which has taken place. However this may be, it seems to me that a closer definition of the several trusts now administered by the Canterbury College is required, to prevent any possibility of confusion of accounts, and inequalities of administration which might be thought unduly to favour any one trust or locality within the provincial district at the expense of others interested. The Commission will no doubt have had under their notice the evidence given by Mr. Montgomery and Mr. Tosswill, before the Royal Commission in 1879, as to the steps which were then being taken in founding the School of Agriculture at Lincoln (Appendix, Journals H. of R., H., 1879). With regard to this particular trust, it appears to me (*a*) that a modification is required in the constitution of its governing body. There is much to recommend a continuance of a connection with Canterbury College, but there should be a provision insuring a representation, in the selection of trustees, of different parts of the province, and especially of the agricultural interest. Southern Canterbury, for example, contributed largely to the creation of the trust by foregoing for other local purposes the proceeds of land-sales which would

have accrued from the area included in these reserves. It ought, I submit, to have a potential voice in the management of this provincial trust, as well on this account as because of its importance as an agricultural district.

A provision is also required for securing the election of gentlemen specially interested in agricultural pursuits. This end might be secured by the election of some of the trustees by the Agricultural and Pastoral Association of Canterbury—a body which derived a considerable portion of its funds from the Provincial Government, and practically holds its property on trust for the promotion of objects cognate to those of the School of Agriculture. By this means a great advantage might accrue to the school and experimental farm from connection with a body of experts, and the Agricultural and Pastoral Association would have an enlarged sphere of usefulness. The details of such a plan would not be difficult to work out.

I may say, in passing, that in my opinion these local associations in four or five districts of the colony, with an experimental farm connected with each, would be the best form of an agricultural department for New Zealand. The good of a central bureau without such local and practical bodies is, to my mind, very questionable.

(*b.*) A number of scholarships should be instituted, to be competed for by the most promising pupils in the country schools of the province. The standard of examination should be only a little in advance of the highest primary standard, and should, if possible, afford some test of practical aptitude for farming-life, giving special consideration in respect of manual dexterity and elementary science. At present, unless I am wrongly informed, the cost is to a great extent prohibitive, except to the sons of men of means, and there is no guarantee that these shall be the most intelligent of their class. If this be so, the tendency, sooner or later, will be to foster a "loafing" class. The school should be attractive to the practical working farmers, who require scientific knowledge and business-training in book-keeping, &c., to be added to their natural qualifications. The holders of such scholarships should be formally apprenticed to a steady course of work (not paid for), study, and discipline. The scholarships should be apportioned to several agricultural districts—say, so many each for North, Middle, and South Canterbury—and should be competed for periodically. Unless some such apportionment is made, the tendency of the examination-test will be to shut out the farming-class in favour of those educated in towns, who have greater facilities for "cramming." The foundation of a certain number of such scholarships would not of course preclude the foundation of others of a more open class.

W. Jamieson, Esq., I have, &c.,
Secretary to the Royal Commission on the Agricultural School. W. Rolleston.

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