1929.

NEW ZEALAND.

MASSEY AGRICULTURAL COLLEGE.

REPORT ON THE PROGRESS OF THE COLLEGE DURING THE YEAR 1928, TOGETHER WITH STATEMENTS OF ACCOUNT.

Laid on the Table of the House of Representatives in pursuance of Section 24 of the Massey Agricultural College Act, 1926.

MASSEY AGRICULTURAL COLLEGE.—ANNUAL REPORT FOR 1928.

The Chairman, Massey Agricultural College Council.

SIR,—

I have pleasure in presenting the following report for the period 1st January, to 31st December, 1928.

The past year has been a period of very considerable development, and I am pleased to be able to report that the various accomplishments when viewed as a whole show very considerable progress. The College has now emerged from the state of hurried improvization which characterized the earlier months of its life, and the machinery of its organization is now running with comparative smoothness. Each succeeding month sees further progress in the foundation work of the various units and a closer approach to a well-balanced and efficient institution. The appointment of the staff, referred to hereunder in detail, and the provision of further accommodation, both permanent and temporary, has made possible the institution of that specialization in the major branches of the work which alone can give the results, both in teaching and research, which the country expects.

It is plain, however, that the rate of development, more particularly of the research work, and the proper establishment of student life, will receive a check in the near future owing to lack of accommodation. A period of serious congestion imposing limitations in various directions is certain to occur before the main science building and hostel can be erected. The College has grown at a phenomenal rate, and the provision of suitable accommodation has seriously lagged behind the otherwise excellent progress. The importance of making up this leeway as soon as possible cannot be overstated.

The present position of our development is briefly as follows:—

STAFF.

During the year the following Lecturers and Assistant Lecturers have been appointed and have taken up their duties: Lecturers—S. A. Asdell (Animal Nutrition and Physiology of Farm-animals); F. W. Dry (Agricultural Zoology and Wool); J. M. McLinden (Veterinary Pathology and Animal Physiology); R. Waters (Bacteriology); D. O. Williams (Agricultural Economics); J. S. Yeates (Agricultural Botany); F. L. C. Scrivener (Soil Chemistry). Assistant Lecturers—B. L. Elphick (Chemistry); W. A. Jacques (Field Husbandry). Dairy factory: G. M. Valentine (Superintendent).

In the above the College has been fortunate in obtaining men of high academic qualifications who, coming from a number of old-established institutions, represent a wide range of experience in methods of both teaching and research. They have settled down to their work with a will, and show promise of developing rapidly their respective branches of work.

During the summer all members of the staff did a considerable amount of travelling in connection with their subjects, which, in the case of those new to this country, has naturally strengthened their confidence in themselves. Owing, however, to the demands made on the time of the senior staff by development work the College is not as yet keeping in so close a contact with the general public as I should like to see. In time, one hopes, it will be possible to remedy this state of affairs,

TEACHING.

The enrolment of students was most satisfactory, and far exceeded expectations. The numbers were as follows: Degree course, 9; diploma course, 32; dairy-farming short course, 11; herd-testing course, 33: total, 85. This number of students taxed the available accommodation to its fullest extent. Fortunately further accommodation will be available for next year, and in some cases the increased staff will permit the division of the larger classes into two sections, thus lessening some of the congestion.

As a result of the experience gained of the weaknesses of the class of students coming forward, certain amendments will be made to the non-degree courses which, it is hoped, will improve them for their respective purposes.

The Students' Association which has been formed is endeavouring to work up social and athletic activities among the student body, but for the time being there are obvious limits to the organization of this aspect of the College.

RESEARCH.

The last year has seen a considerable expansion in the programme of research. In conjunction with the Department of Scientific and Industrial Research, the College is now undertaking work on problems connected with dairying and dairy manufactures, the breeding and feeding of pigs, wool-improvement, and the production of improved varieties of *Phormium tenax* and the causes and control of "yellow-leaf" in the flax. Independently, research is being carried out on the improvement of dogstail-grass by breeding and selection, the relative values of our more common varieties of mangolds based on dry-matter contents, the soft-heart rot of mangolds, the top-dressing of pastures with various phosphatic manures and also with complete fertilizers containing nitrogen, the cultural treatment and the improvement by plant-breeding of lucerne, and a systematic study of the *Lotus* species in use as pasture plants.

Dairy Research.—The Dairy Research has been organized as the Dairy Research Institute (N.Z.) with headquarters at this College. The general direction of the work is carried out by the Dairy Research Management Committee of the Department of Scientific and Industrial Research, on which body the College has two representatives, while Professor Riddet of the College has been appointed Director. The Management Committee has appointed Dr. McDowall and an assistant as Dairy Chemists, and Mr. Whitehead and an assistant as Dairy Bacteriologists, to aid Professor Riddet in this work. The College has agreed to the utilization of the services of Mr. Valentine, the Factory Superintendent, and the factory staff, and to the use of the dairy factory and milking-sheds and herds for the purposes of this research. Further, the College has agreed to provide the necessary laboratory accommodation. The results obtained by the Institute will be published in bulletin form by the Department of Scientific and Industrial Research.

Pig Research.—The work in connection with pigs is also being carried on under the Dairy Research Management Committee, and the results obtained will be published in the same form as those from dairying. The College has agreed to provide the stock and accommodation required, and the Management Committee has appointed Mr. Brown as Pig Recording Officer to gather statistics on pig breeding and management in this province and to assist Professor Riddet with the experimental work.

Wool Research.—The research in the improvement of wool has been but recently commenced, and its organization is not yet complete. Discussions have taken place between representatives of the College and the Wool Research Committee of the Department of Scientific and Industrial Research, and while no definite arrangement had been made before the close of the period covered by this report, it would seem that the Department is prepared to provide assistance to enable a considerable programme of work to be carried out. In the meantime Dr. Dry and myself have been busily engaged on a preliminary survey of the wool of the more important stud flocks, in company with Mr. Scrivener, who has been studying the various soil and climatic conditions involved in the production of the different wool types.

Flax Research.—The work on *Phormium tenax* is being carried out by the Field Husbandry Department of the College under the general direction of the Flax Research Committee of the Department of Scientific and Industrial Research. Dr. Yeates has been entrusted with the present work, which takes the form of a systematic search of the country for strains of flax possessing one or more characters of outstanding value, and the crossing of such strains with the object of producing improved varieties for commercial purposes. A nursery for the comparison of parent plants under similar conditions and for the growth of seedlings has been established, and a further and larger area for field trials has been prepared. In view of the fact that plans have been formulated by the various companies in the field for the planting of areas of this crop, this work is of considerable importance.

The positions of the various problems being investigated independently by the Field Husbandry Department are as follows:—

Dogstail-grass (Mr. Jacques).—The work on dogstail has already produced results, a number of distinct types having been isolated. Careful notes are being made by Mr. Jacques of the habits of these types from the pasture point of view, there being gradations from an early, heavy-seeding, and poor-leaf-bearing type to a very late, light-seeding, and very leafy type. This material will be multiplied this autumn to enable trials to be carried out on a larger scale during next summer. Seed has also been collected from a further number of promising locations, since it is far from likely that the material so far studied contained representatives of the full range of normal variants.

Lucerne.—Manures (Mr. Scrivener); inoculation (Mr. Waters); cultural (Mr. Jacques). In the case of lucerne, experiments have been laid down in connection with manurial, inoculation, and cultural problems. These are as yet too young to have produced any definite results. Further material has been collected for breeding-work, which will be undertaken next summer by Mr. Jacques. The taxonomic work on the *Lotus* spp. has proceeded very satisfactorily, and provides a useful basis for further investigations next year.

Mangolds.—Soft-heart Rot (Mr. Waters); dry-matter values (Mr. Elphick). A wide range of varieties of mangolds have been grown for the research on soft-heart rot which Mr. Waters is initiating. The comparison of the feeding-values of mangolds based on dry-matter content, as opposed to gross weight, which was begun last autumn, has entailed the working-out of the necessary technique. It is hoped that the procedure which Mr. Elphick will adopt during the coming autumn will yield some valuable results.

Top-dressing of Pastures.—(Mr. Scrivener.) The intensive top-dressing of pastures with complete fertilizer followed by periodic dressings of nitrogen has yielded an immense amount of feed. Whether the investment will be proved profitable will be shown when the figures of the stock-carrying capacity are completed at the end of the season. The outstanding result to date is the problem of economically managing the tremendous growth of feed produced. It will be surprising if it is not possible to work out a modification of the complete European system which will prove profitable under New Zealand conditions.

Mr. Scrivener has also in hand a set of experiments on the effect on the soil reaction of the continued use on the same soil of the more common phosphatic fertilizers. These must obviously be continued for some considerable time before the annual analysis will show differences, if any.

College Buildings.

The erection of the temporary teaching laboratory and a temporary dairy research laboratory in positions adjacent to the Batchelar homestead has been completed. Without the former, which was used for chemistry, botany, and bacteriology, it would have been impossible to carry on during the past academic year.

The dairy factory has been completed, thus setting up a very big landmark in dairy science at this College.

The McHardy house has been cut in half and the two sections moved to their new sites, the one to function as the administrative building and the other as the Principal's residence. The former will be used for lecture and laboratory purposes pending the completion of the main building. The alterations to these buildings should be completed shortly.

The original washhouse and fruit-store on the McHardy site has been moved to a convenient site and converted into two studies and a botany and field husbandry laboratory.

The old garage adjacent to the Batchelar homestead has been turned into a temporary chemistry laboratory for soil and wool research.

The Farm.

The development of the farm has progressed steadily. A new wood-shed, yards, and dip have been erected, and their design has given every satisfaction. They have proved of considerable interest to visiting sheep-farmers, and have met with general approval. The area devoted to pigs has been considerably extended, the portable houses now numbering thirty-six and the runs thirty-eight. A small feed-store has been erected, and all necessary equipment has been provided. A small blacksmith's shop has been built, and the old cattle-barn has been converted into an implement-shed. A small portable silo of experimental design has been built. It is hoped that it may meet the peculiar demands of the New Zealand dairymen in the matter of a silo.

The permanent subdivision of the main flats has been completed, and much of the major division of the Terrace has been carried out. All fences on the Pahiatua Block have been made good, it being necessary to erect a new fence on our boundary with Mrs. Baker. The main farm road has been extended in a straight line to the Tiritea Stream and thence up the bank to the edge of the Terrace.

A further 35 acres have been mole-drained, making a total of 105 acres so treated. A total of 451 acres was top-dressed, with very beneficial results. Where the manure-drill could not be used the work was carried out with the use of the Howell hand distributor, which proved very satisfactory. 35 acres of old pasture infested with rushes were cleared of stumps and broken up for cropping and for eventually laying down in good grass.

The total area under crops was 110 acres, and the numbers of stock wintered were as follows: Dairy cattle, 129; bullocks, 80; sheep, 1,191; pigs, 25; horses, 7. Crops have been very satisfactory on the whole, and the stock came through the winter in excellent condition. No serious outbreaks of disease amongst the animals have been experienced.

Donations.

In the course of the year a number of people have very generously made gifts to the College, as follows:—

Sir James G. Wilson—*Transactions of the Highland and Agricultural Society of Scotland* (29 vols.); *Journal of the Royal Agricultural Society of England* (3 vols.).
W. D. B. Murray, Esq.—Lands and Survey Reports of New Zealand, 1877 to 1927.
A. R. Fannin, Esq.—*New Zealand Farmer*, 1890 to 1928.
Southdown Sheep Society of New Zealand—Flock-book of the Society (10 vols.).
Edwin A. Bell and Co.—One Jensen's mole-drain plough.
E. J. Kelly and Co. and the Fletcher Construction Co. (in conjunction)—One concrete-mixer.

P. A. McHardy, Esq.—One 3 h.p. electric motor, saw-bench, and ladder.
A. Hopwood Hardware Co., Ltd.—One Pony Marvel concrete-mixer.
National Dairy Association of New Zealand, Ltd. — Two silver medals and one gold medal (annually).
New Zealand Dairy Factory Managers' Association—A silver medal (annually).
Farmers' Trading Co., Ltd.—One silver and one gold medal (annually).
S. Austin Carr, Esq.—One purebred Tamworth weaner sow.
T. H. Colpman, Esq.—One purebred Ayrshire heifer calf.
F. H. Wood, Esq.—Silver medal awarded to the Greytown Butter and Cheese Factory at the Melbourne Exhibition, 1888.
Alfa Laval Separator Co., Ltd.—One old-model Alfa Laval separator.
B. Keiller, Esq.—Site for reservoir for water scheme.
Warren Farmer Milking Machine Co., Ltd.—One class-room milking-machine unit.

In addition several rams have been presented by donors who wish to remain anonymous, and also one Tamworth boar.

Bequest.—By the will of the late Walter H. Bailey, of Feilding, the College will in due course receive several thousand pounds. It is most gratifying to receive support of this nature, which will considerably strengthen the endowment funds.

VISITORS.

Large numbers of the public have visited the College during the year in the form of both individuals and farmers' organizations—in fact, the escorting of visitors has at times proved a distinct embarrassment to the work of the staff. While the interest of the public is more than welcome, it would seem that ere long it will be necessary in the interests of smooth running to appoint definite visitors' days.

SUMMARY.

To summarize, the position nineteen months after the date of beginning of operations is as follows: Sufficient temporary accommodation has been arranged to meet the needs of administration, teaching, and research for the past and the present academic years. There is a well-balanced staff fully capable of giving first-class instruction in the important sciences and all the applied subjects appertaining to the raising of crops and stock. An exceptionally large number of students have been enrolled. Research has been organized on the important subjects of dairying, dairy manufactures, wool, flax, pastures, and crops. The plans of the permanent buildings and of the layout of the McHardy site have been completed, and a substantial beginning with the work involved has been made. A considerable portion of the laying out and development of the farm has been carried out. The dairy factory has been completed.

In conclusion, I should like to stress once more the urgent need of adequate permanent accommodation, without which the various branches of work cannot expand. While I have no doubt that the position is appreciated by the members of the Council, I should like to remark in fairness to the staff that to make a success of a new institution even under normal conditions is no light task, but that situated as we are, in improvized temporary accommodation divided between the Batchelar homestead and the McHardy site, the undertaking becomes extremely difficult.

Under these conditions there is an easily felt and damaging blank in the life of the College. While this state of affairs may be unavoidable up to a point, it is hoped that it will not continue too long—these early years are of vital importance from the point of view of reputation, and the prospect of not getting the accommodation in question in time for March, 1931, as has recently been suggested, is very worrying.

Finally, I should like to pay a tribute to the way in which the staff have contributed to the work of the past year. The demands made on them have been far heavier than in the case of corresponding positions in an established institution. It is invidious to mention individuals, but I must refer to three old members of the staff—Mr. McCulloch, whose efforts have been untiring and whose management of the farm has been admirable; Mr. Yates, who has dealt with a mountain of work, as may be gauged from a perusal of the financial statements; and Mr. Valentine, whose heart and soul have been in the dairying courses and the dairy factory. A very heavy strain has been imposed on the office staff, who have responded without complaint.

Professor Riddet and I are most fortunate in having the backing of a hard-working and enthusiastic staff, and I am confident that between us all we shall be able to carry out a considerable amount of development in the coming year.

G. S. PEREN, Principal.

MASSEY AGRICULTURAL COLLEGE.

BALANCE-SHEET AS AT 31ST DECEMBER, 1928.

Liabilities.	£ s. d.	£ s. d.	£ s. d.
Capital Account at 31st December, 1927		5,187 13 9	
Additions during year—	£ s. d.		
Government grants	33,018 11 1		
Less unpaid ..	4,743 9 8		
		28,275 1 5	
Donations		475 10 0	
Revenue contributions to capital		4,958 9 0	
			38,896 14 2
Revenue balance, 31st December, 1927		6,075 10 9	
Add balance maintenance grant, 1927		200 0 0	
Add surplus of income, 1928 ..		1,420 17 2	
			7,696 7 11
Sundry creditors		..	1,024 7 0
			£47,617 9 1

Assets.	£ s. d.	£ s. d.	£ s. d.
Buildings—			
Principal's residence and administration building		2,170 12 3	
Cottages	4,069 18 9		
Less depreciation	203 9 11		
		3,866 8 10	
Farm-buildings ..	2,855 3 7		
Less depreciation	129 13 3		
		2,725 10 4	
Temporary laboratories ..	1,205 3 8		
Less depreciation	116 15 9		
		1,088 7 11	
Dairy factory		11,885 3 3	
Layout plans and plans of proposed main buildings ..		1,577 18 9	
Gas-main (main building) ..		670 0 0	
Sewerage system (main building)		874 19 2	
Water-service (main building) ..		477 5 7	
			25,336 6 1
Farm property improvements ..		..	3,127 3 2
Laboratory apparatus		1,856 10 11	
Less depreciation		185 13 1	
			1,670 17 10
Library books, &c.		1,701 10 0	
Less depreciation		170 3 0	
			1,531 7 0
Office equipment		192 15 8	
Less depreciation		14 9 2	
			178 6 6
Furniture		1,076 7 8	
Less depreciation		80 14 6	
			995 13 2
Dairy factory office equipment ..		..	172 14 9
Dairy factory plant		..	2,063 10 0
Milking-shed equipment		454 9 3	
Less depreciation		45 8 10	
			409 0 5
Harness, tools, and implements ..		1,965 7 5	
Less depreciation		398 12 8	
			1,566 14 9
Text-books		..	86 1 10
Sundry debtors		..	1,225 1 3
Carpenters' stores		..	73 13 9
Farm stock and produce—	£ s. d.		
Dairy cattle		1,741 14 9	
Horses	273 10 0		
Less depreciation	41 0 6		
		232 9 6	
Pigs		354 5 0	
Sheep and lambs		2,100 3 0	
Wool		560 0 0	
			4,988 12 3
Cash—			
Bank of New Zealand	4,917 18 11		
Less outstanding cheques ..	780 0 11		
		4,137 18 0	
Post Office Savings-bank ..		54 8 4	
			4,192 6 4
			£47,617 9 1

The Audit Office, having examined the Balance-sheet and accompanying accounts required by law to be audited, hereby certifies them to be correct, subject to the following comment: The certified details of stock and produce on hand at 31st December, 1928, have been accepted. And the following exceptions: (1) The expenditure of £14 in connection with the "opening day" is without authority of law. (2) The approval of the Minister of Finance was not obtained in accordance with sections 38 and 40 of the Finance Act, 1928, in respect of expenditure incurred on account of the matters referred to therein. (3) The approval of the Minister of Finance was not obtained for the establishment of an Imprest Account as required by section 39, Finance Act, 1928.—G. F. C. CAMPBELL, Controller and Auditor-General.

STATEMENT OF RECEIPTS AND PAYMENTS FOR THE YEAR ENDED 31ST DECEMBER, 1928.

Receipts.

Receipts.	£	s.	d.	£	s.	d.
To Balance brought forward—						
Bank of New Zealand	221	10	10			
Post Office Savings-bank	4,000	0	0			
				4,221	10	10
Government grants—						
Maintenance				15,000	0	0
Capital				27,227	18	4
Grant ex Department of Scientific and Industrial Research—Account Research Laboratory				394	19	1
Interest—						
Buchanan endowment				825	0	0
Logan Campbell endowment				1,222	15	2
Bank of New Zealand and Post Office Savings-bank				71	10	4
Student fees				372	5	0
Proceeds sales—						
Cream				874	2	5
Dairy cattle				624	19	4
Beef cattle				774	1	4
Pigs				81	17	2
Sheep				434	19	8
Lambs				1,087	1	0
Wool and skins				459	13	8
Firewood				92	1	0
Carried forward				53,764	14	4

Payments.

Payments.	£	s.	d.	£	s.	d.	£	s.	d.
By Salaries				7,283	3	11			
Less allowance ex Department of Scientific and Industrial Research				417	16	8			
							6,865	7	3
Staff house allowances							279	0	0
Examiners' expenses							24	17	10
General expenses							81	9	6
Stationery							135	5	7
Printing calendars and advertising				88	6	0			
Less sales calendars				4	2	0			
							84	4	0
Postages, telephones, telegrams, exchange, and bank charges				157	0	0			
Less refunds				2	13	3			
							154	6	9
Audit expenses							11	14	0
Insurance				101	15	1			
Less refunds				1	14	9			
							100	0	4
Expenses of meetings							229	13	7
Expenses of appointments to staff							921	10	10
Staff travelling-expenses							215	14	5
Lighting, heating, and power							82	6	5
Materials, cleaning offices and upkeep of grounds							135	2	5
Wages, cleaning offices and upkeep of grounds							382	1	2
Hire of lecture-room							15	0	0
Lecture maintenance grants							82	19	1
Sundry cartages and railages							19	11	8
Surveyors' fees							75	19	1
Flax research expenses							192	2	8
Wool research expenses							7	0	0
Pig-weighing experiment expenses				191	15	1			
Less refunds				125	8	0			
							66	7	1
Text-books				124	15	4			
Less sales				80	13	6			
							44	1	10
Furniture							979	10	8
Dairy factory office equipment							172	14	9
Laboratory apparatus				1,843	18	2			
Less sales and refunds				1	19	3			
							1,841	18	11
Library books and periodicals							836	15	7
Buildings—									
Architects's fees—									
Main building	1,125	0	0						
Refectory building	125	0	0						
Dormitory building	120	0	0						
				1,380	0	0			
Portion contract and architects' fees, McHardy homestead alterations				2,120	12	3			
Additions to milking-shed				186	4	11			
Contract erecting cottages—Architects' fees, additions				3,165	6	2			
Portion contract—Architects' fees, &c., dairy factory				11,488	16	3			
Temporary teaching laboratory				462	5	7			
Temporary research laboratory				579	8	1			
Temporary botanical laboratory				270	17	11			
Wool-shed				1,123	6	5			
Calf-shed				75	2	3			
Pig-shelters, &c.				289	5	0			
Temporary soil and chemistry laboratory, meterological station, blacksmith's shop, tractor-shed, cattle-crush, &c.				151	10	11			
							21,292	15	9
Gas-main							670	0	0
Sewerage scheme							861	1	2
Repairs and alterations, Batchelar homestead, &c.							166	4	8
Milking-shed equipment							127	13	6
Dairy factory plant				2,070	3	0			
Less sales				6	13	0			
							2,063	10	0
Carpenter's stores							73	13	9
Sundries Account, Dairy Research Institute							15	4	3
Harness							26	6	6
Implements							717	1	7
Tools							83	8	0
Carried forward							40,133	14	7

STATEMENT OF RECEIPTS AND PAYMENTS FOR THE YEAR ENDED 31ST DECEMBER, 1928—*continued.*

Receipts—continued.	£ s. d.	*Payments*—continued.		£ s. d.
Brought forward	53,764 14 4	Brought forward		40,133 14 7
		By Dairy cattle purchased, plus charges		1,062 11 3
		Horses purchased		50 0 0
		Sheep Account—		
		Sheep purchased		1,278 9 2
		Wages and sundry expenses		217 15 10
		Pig Research Account—	£ s. d.	
		Pigs purchased	220 1 8	
		Wages and sundry expenses ..	160 0 10	
		Feed for feeding trials ..	55 18 7	
				436 1 1
		Milking-shed wages and expenses ..		604 18 9
		Maintenance of horses		143 8 8
		Maintenance of tractor ..	156 17 10	
		Less refunds duty	14 5 4	
				142 12 6
		Wages—Sowing and cultivation of farm crops, harvesting, top-dressing, &c.		701 13 4
		Manure		419 15 2
		Manurial experiments—Manure and labour ..		192 1 0
		Seed		151 5 5
		Rates		34 5 7
		Water rates		10 19 4
		Renewal tools and implements		50 5 1
		Sundry farm expenses		58 7 1
		Draining (materials and wages)		253 9 6
			£ s. d.	
		Fencing (materials and wages) ..	1,489 17 9	
		Less refunds	13 6 2	
				1,476 11 7
		Roading (materials and wages)		1,098 9 4
		Shelter-belts (materials and wages)		32 15 3
		Water-service (materials and wages)		725 6 6
		Sundry wages		253 10 1
		Wages accrued, 31st December, 1927 ..		44 1 11
		Balance—	£ s. d.	
		Bank of New Zealand ..	4,917 18 11	
		Less outstanding cheques ..	780 0 11	
			4,137 18 0	
		Post Office Savings-bank ..	54 8 4	
				4,192 6 4
	£53,764 14 4			£53,764 14 4

STATEMENT OF INCOME AND EXPENDITURE FOR THE YEAR ENDED 31ST DECEMBER, 1928.

Expenditure.	£ s. d.	£ s. d.
To Salaries	7,240 5 7	
Less refunds, Department of Scientific and Industrial Research, on account of dairy research and phormium research	612 11 8	
		6,627 13 11
Wages, cleaning offices and upkeep of grounds	..	382 1 2
Sundry wages	261 15 1	
Less sales of firewood cut	92 1 0	
		169 14 1
Staff house allowance		279 0 0
Examiners' expenses		24 17 10
General expenses		81 9 6
Stationery		135 5 7
Printing calendars, prospectuses, pamphlets, &c.		72 10 0
Advertising courses		11 14 0
Postages, telephones, telegrams, exchange and bank charges		154 6 9
Audit expenses		11 14 0
Insurance, fire and accident		60 2 8
Expenses of meetings		229 13 7
Expenses of appointments		921 10 10
Staff travelling-expenses		190 14 5
Lighting, heating, and power		82 6 5
Materials, cleaning offices and upkeep of grounds		135 2 5
Sundry cartages and railages		17 17 10
Lecture maintenance grants		87 19 1
Hire lecture-room		15 0 0
Flax research expenses (our share)		48 0 8
Repairs and alterations—	£ s. d.	
Batchelar homestead	145 9 9	
Soil chemistry laboratory, motor-shed and sundry	126 8 9	
		271 18 6
Surveyor's fees	..	96 0 7
Farm Account—Balance as per Farm Income and Expenditure Account	..	670 1 1
Depreciation—		
Apparatus (10 per cent.)	185 13 1	
Furniture (7½ per cent.)	80 14 6	
Office furniture and equipment (7½ per cent.)	14 9 2	
Library (10 per cent.)	170 3 0	
Temporary laboratories (12½ per cent.)	116 15 9	
Carpenters' tools (12½ per cent.)	26 7 2	
Factory cottage (5 per cent.)	39 10 0	
		633 12 8
Balance, being excess of income over expenditure		6,379 6 2
		£17,789 13 9

Income.	£ s. d.
By Government maintenance grants	15,000 0 0
Students' fees	372 5 0
Interest—	
Sir Walter Buchanan endowment	1,100 0 0
Sir John Logan Campbell endowment	1,245 18 5
Bank of New Zealand	18 2 0
Post Office Savings-bank	53 8 4
	£17,789 13 9

	£ s. d.	£ s. d.
To Revenue contributions to capital—		
Drainage	259 9 6	
Fencing	1,383 8 2	
Roading	940 18 10	
Shelter-belts	32 15 3	
Water-service	510 11 5	
Cow-shed alterations	51 12 5	
Cow-shed equipment	153 11 9	
Harness	13 17 10	
Implements	114 17 11	
Calf-shed	282 11 7	
Pig-shelters, &c.	160 7 2	
Bull-shed, blacksmith's shop, crush, silo, &c.	145 7 5	
Additions, &c., cottages	128 15 10	
Tools	118 13 11	
Library	661 10 0	
		4,958 9 0
Balance, being surplus for year	..	1,420 17 2
		£6,379 6 2

	£ s. d.
By Balance brought down	6,379 6 2
	£6,379 6 2

STATEMENT OF FARM INCOME AND EXPENDITURE FOR THE YEAR ENDED 31ST DECEMBER, 1928.

Expenditure.	£	s.	d.	*Income.*	£	s.	d.
To Sundry wages—sowing and cultivation of crops, harvesting, top-dressing, maintenance of implements, &c.	724	12	6	By Surplus—			
Manure	419	15	2	Sheep Account	1,440	5	5
Seed	151	5	5	Milking Account	401	7	4
Rates	34	5	7	Beef Cattle Account	313	18	10
Water rates	10	19	4				
Renewal tools and implements	50	5	1				
Insurance	39	17	8				
Blacksmith's shop expenses	13	15	0				
Tractor-maintenance	121	19	6				
Maintenance horse teams	113	8	8				
Maintenance roads	20	0	0				
Maintenance fences	50	0	0				
Travelling-expenses, Farm-manager	25	0	0				
Sundries	44	12	1				
Balance carried down	335	15	7				
	£2,155	11	7		£2,155	11	7

	£	s.	d.	£	s.	d.		£	s.	d.
To Pig Research Account	61	7	8				By Balance brought down	335	15	7
Materials and labour, field experiments	192	1	0				Balance transferred, Income and Expenditure Account	670	1	1
				253	8	8				
Depreciation—										
Cow-shed (5 per cent.)	42	0	0							
Cow-shed equipment (10 per cent.)	45	8	10							
Farm cottages (5 per cent.)	163	19	11							
Calf-shed (5 per cent.)	15	17	7							
Pig-shelters (12½ per cent.)	53	12	3							
Sundry farm-buildings (12½ per cent.)	18	3	5							
Harness (33⅓ per cent.)	38	2	4							
Horses (15 per cent.)	41	0	6							
Implements (15 per cent.)	161	12	3							
Tractor (33⅓ per cent.)	150	0	0							
Tools (20 per cent.)	22	10	11							
				752	8	0				
				£1,005	16	8		£1,005	16	8

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