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[Despatch Abstract.]

College of Agriculture. Recording, with remarks, the report on the working of the ——— for the year 1903-1904.

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Government {1904} of Madras.

EDUCATIONAL.

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ORIGINAL

G.O., No. 595, 26th September 1904.

SEPTEMBER.

College of Agriculture.

Recording, with remarks, the report on the working of the — for the year 1903–1904.

GOVERNMENT OF MADRAS.

EDUCATIONAL DEPARTMENT.

Read—the following paper :—

From the Hon'ble Mr. A. G. BOURNE, D.Sc., F.R.S., Director of Public Instruction, to the Secretary to Government, Educational Department, dated Madras, 2nd September 1904, Cur. No. 7566.

I have the honour to submit, for the information of Government, a copy of my Proceedings, Dis. No. 5250, dated 22nd August 1904, reviewing the report on the working of the College of Agriculture, Saidapet, during 1903–1904.

Enclosure.

Proceedings of the Director of Public Instruction, dated 22nd August 1904, Dis. No. 5250.

Read—the following letter from W. KEESS, Esq., M.A., M.R.A.C., Principal, College of Agriculture, Madras, to the Director of Public Instruction, dated Saidapet, 29th April 1904, No. 389 :—

I have the honour to submit the report on the College of Agriculture for the year 1903–1904.

It is only appropriate that I should preface the report by a reference to the death, on January 24th, of Mr. W. R. Robertson, first Principal of the College. At the request of several of his former students and with your permission * the institution was closed on February 24th as a mark of respect to his memory, the flag being flown at half-mast and other customary signs of mourning observed. In 1868 Mr. Robertson took charge of a pestiferous waste on which stood a few dilapidated buildings. In 1887 he left it a productive farm on which was located a well-established College. He was indeed one of those very few fortunate individuals of whom it can truly be said *si monumentum quaeris, circumspice.*

2. *Staff.*—On 16th July 1903 Mr. R. S. Thorne, Vice-Principal, proceeded on three months' privilege leave with furlough on medical certificate in continuation up to 10th May 1904. M.R.Ry. G. Krishna Prabhu, First Assistant, was promoted Acting Vice-Principal, all the other assistants going up a step while M.R.Ry. Y. Srinivasa Rao, Bailiff, was brought in as acting sixth assistant. This arrangement continued till 19th November 1903, when M.R.Ry. C. K. Subba Rao, Sub-Assistant Director of Agriculture, took up the Acting Vice-Principalship, all the other officers reverting to their original posts.

During the year the staff received no assistance from the Agricultural Chemist to the Government of India, this officer's connection with the college ceasing after his deputation in March 1903 (*vide* Ref. on C. No. 7438 of 1902, dated 21st October 1902) or from the Superintendent, Civil Veterinary department, who now has his own students to instruct. As a set-off against this disadvantage the completion of free quarters for the Vice-Principal and the Assistant in charge of the Veterinary Hospital has enabled these officers to do more for the College than was possible in former years.

3. During the session under report exceptional conditions prevailed necessitating a few words of explanation. In former years the session commenced in July and terminated in April, the examinations being held during the latter month. In G.O., No. 429, Educational, dated 24th July 1902, Government directed that the session should synchronise with the calendar year, this arrangement being adopted so as to allow of the examinations being held in December. Accordingly the examinations

* *Vide* Proceedings, Dis. No. 1056, dated 19th February 1904. The work lost on February 24th was made up on a subsequent Saturday.

were held for the last time in April 1903. Those students of class III who obtained the Diploma or who did not wish to make another attempt at it were allowed to leave the College on 30th April. The rest had their third year prolonged by eight months and studied those subjects in which they had failed. Classes I and II, similarly had their sessions prolonged by eight months. As some of the men had passed in all the prescribed subjects these classes were permitted to commence the work of the next session (*vide* paragraph 2 of Proceedings Ref. on C. No. 5290, dated 26th September 1903), those who failed in any subject being given special lectures in that subject. Advantage was taken of this opportunity to transfer "surveying and levelling" from the second to the first year and "Agricultural Engineering" from the third to the second year. The statement in paragraph 9 shows that the change was effected with a certain amount of success. No doubt students who had passed in all the prescribed subjects had an easy time between July and December, but this was unavoidable and I did my best by sending them to work on the farm, &c., to prevent them enjoying too much leisure. There was no recruitment in July 1903. The figures on 31st December were as follows :—

Class I	17	
„ II	7	
„ III	16	(including seven ex-students who rejoined the college to complete the course).
Total ..	40	

In January last a new class was recruited and I am glad to say it is numerically strong. I refused to admit casual students for "surveying and levelling" and "Agricultural Engineering" only, thereby reducing the numbers by about half a dozen. I was supported in this action by you (*vide* your Dis. No. 142, dated 8th January 1904). All the students of class I were promoted to class II. Under section 6 of the College rules one student of class II (a graduate of the Madras University) was removed from the College and another was remanded to the new class II.

The accompanying table, which does not include the minors under the Court of Wards resident at Newington, who attended field classes only, gives the numbers on 31st March 1904. It will be seen that only one ex-student was on the rolls against nine on 31st March 1903.

	Class I.		Class II.		Class III.		Total.	
	31st March 1903.	31st March 1904.	31st March 1903.	31st March 1904.	31st March 1903.	31st March 1904.	31st March 1903.	31st March 1904.
1. Europeans	..	1	..	..	..	..	..	1
2. Native Christians	2	..	1	2	..	1	3	3
3. Muhammadans	2	2	..	3	1	..	3	5
4. Brahmans	13	11	5	12	11	3	29	26
5. Non-Brahman Caste Hindus	1	8	3	1	11	2	15	11
6. Panchamas and kindred classes	..	..	..	..	..	..	..	..
Total ..	18	22	9	18	23	6	* 50	† 46

* Includes nine students who rejoined College with a view to complete the Diploma and three casual students.
† Includes one student who rejoined the College with a view to complete the Diploma and three casual students.

Classification according to general educational qualifications—

B.A.	1	
F.As. ‡	12	
Matriculates	22	
Non-Matriculates	11	
Total ...	46	

‡ Of these two have passed two branches in B.A.

4. *Instruction.*—This was carried out in accordance with the orders embodied in G.O., No. 429, Educational, dated 24th July 1902. As many mornings as possible were devoted to practical work on the farm. Lectures did not commence till 12 noon and every endeavour was made to limit theoretical instruction to three hours a day.

July to December.

Class III.—This class consisted entirely of "failures"—(*vide* paragraph 3 *supra*). Those who had not passed in Agriculture, advanced, were given instruction in that subject by means of revision lectures and field classes and were made to join in the work of the farm. They were sent to work by turns in the dairy. The new appliances are adjusted so easily and do their work so efficiently that a man of ordinary intelligence, who has received proper instruction, can learn how to use them in a fortnight. The usual fault of beginners is overchurning. The butter made by the men towards the end of their course was excellent in every way.

The students who had failed in other subjects were similarly given revision lectures accompanied by the prescribed practical work.

Class II.—This class contained certain men who in the previous April had passed in all the six prescribed subjects and others who had failed in one or more of them. The whole class went on very slowly with the third year's work, while the "failures" were given special instruction in those subjects in which they were deficient. As the class had undergone field cultivation during the previous year it was not necessary to repeat this portion of the work. The men joined in the general work of the farm and had field classes. Owing to Agricultural Engineering being transferred from the third to the second year, the class completed the whole subject in the six months July to December. In September all the men went into camp at Pallávaram for a fortnight for the purpose of preparing their plans, etc., under the 3rd Assistant, who had with him for the purpose of both instruction and discipline, the 4th, 5th and 6th Assistants. During this fortnight the 5th Assistant gave them a little instruction in Practical Agriculture and took them to the Melrosapuram farm. I visited the camp on two occasions and saw the men at work.

Class I.—Like class II this class contained some men who had passed in the two subjects prescribed under the old rules for the first year (*viz.*, "Botany" and "Geology and Meteorology") and others who had failed in one or other of them. The class worked under a similar arrangement to that described above in the case of class II. Owing to "Surveying and Levelling" being transferred from the second to the first year, the class completed the whole subject in the six months July to December. In September the men went into camp at Pallávaram for two weeks along with the students of class II. As stated before, I visited the camp twice and saw the men at work.

January to March.

Class III.—In January the class was sent on a tour of enquiry under the 5th Assistant in the Cuddapah and Kurnool districts. It was originally intended to send the men to the Coimbatore district but the Collector of Coimbatore requested that this should not be done owing to the prevalence of plague. So long as the class remained in the Cuddapah district things went very well but on entering the Kurnool district fever of a very bad type broke out among the men and the cook, who accompanied the party, was also prostrated by fever. I therefore telegraphed to the class to return to Saidapet (*vide* my letters Nos. 93 and 115, dated 26th January and 1st February 1904). A diary of the tour has been separately submitted. Since its return from tour the class has been put to farm work of all kinds including dairy work, superintendence of field labour, and the keeping of farm books. The men attended the Veterinary Hospital twice a week and have seen more cases treated than any of their predecessors. Once a week the class worked the whole day at quantitative analysis and has finished the analysis of manures and feeding stuffs. Owing to the high standard demanded by Dr. Lehmann, I consider that an undue amount of time is spent over this portion of the curriculum.

Classes II and I had farm work being on several occasions kept in the field till past 10 A.M. Class II had dissections once a week. The men were divided into two batches, and on alternate Fridays one batch spent the whole day at quantitative analyses while the other worked at Engineering. On those days when there was no work on the farm, the whole class occupied itself with qualitative analyses. Class I did surveying whenever there was no work on the farm.

5. The experience of the last year, coupled with that gained during previous sessions, has brought to light the following defects in the curriculum which, I trust, will soon be removed—

First.—The practical work done in the field, dairy and office, with the solitary exception of ploughing, counts nothing at the final examination. In "Surveying and Levelling" and "Agricultural Engineering" the work done in camp is marked by the examiners; in all other subjects, except agriculture, the practical examinations are more or less repetitions of the work done during the session. It is not surprising, therefore, that men are keen on practical work in these subjects especially since the introduction of the new rule under which failure in one subject at the end of the second year means a remand to class II and failure in two subjects removal from the College. In Agriculture alone there is no direct stimulus to real practical work. The man who honestly works long hours in the field, dairy and office is no better off than he who does the amount just sufficient to satisfy the College authorities. There is no examination possible lasting a reasonable time which can test a man's knowledge of sowing, selecting seed, weeding, reaping and the numerous operations included under "Field work" or his ability to convert milk into good butter. What is wanted at this College, especially now that a pass in the subsidiary subjects is so important, is that practical agriculture should be placed on the same level as the practical sides of the other subjects. As examinations on it are not feasible, it should, I think, be marked, and the marks should count at the final examination. I have addressed you separately about this matter—*vide* my No. 764, dated 8th September 1903.

Second.—The scales prescribed for the plans in "Surveying and Levelling" are too small. This has been the complaint for the last eight years. No offset of under ten links can be shown in the plan and in the plane table survey 20 acres of land appear as 8 square inches on paper. I shall address you separately about the matter.

6. *Veterinary Hospital.*—Mr. S. L. D'Silva, Second Assistant, was in charge during the whole year with M.R.Ry. S. P. Swaminathen as Hospital-keeper. The former officer is now in occupation of the new quarters erected for him near the hospital and can supervise the institution more effectively than in former years.

The number of patients rose from 1,152 to 1,218. The cattle cases increased from 452 to 471. As the former figure includes 80 infectious cases and the latter none, the rise in numbers is encouraging. The increased popularity of the hospital is creditable to the officers mentioned above.

—	Horses and ponies.	Cattle.	Other animals.	Total.
1900-1901	266	313	277	856
1901-1902	306	323 including 24 foot and mouth cases.	228	867
1902-1903	382	452 including 80 foot and mouth cases.	318	1,152
1903-1904	435	471 includes no infectious cases, but 10 cases admitted from the King Institute of Preventive Medicine.	312	1,218

The expenditure (including pay of establishment and repairs) rose from Rs. 1,488 to Rs. 2,249 and the income from Rs. 1,022 to Rs. 1,122. In my letter No. 362, dated 18th April 1904, I submitted proposals for increasing the number of cattle patients.

7. It is gratifying to note that there is an increasing demand for the services of successful students and at the present moment the supply of such students is insufficient.

A list of students with their occupations is given in the recently published calendar and it will readily be seen that many of them are employed in posts in which a knowledge of the subjects taught at the College seems desirable.

8. All three classes underwent Gymnastic instruction. The Gymnastic appliances have been moved from their old position on the farm to a more convenient one in the College compound.

The Athletic Club, Boat Club and Reading Room have been amalgamated under the name of "the Recreation Club". The combined club is in a satisfactory condition.

9. *Examinations.*—The results of the examinations held in December are given below. Two students of class III and two ex-students, who rejoined the College to complete the course, obtained the diploma in Agriculture. In addition an ex-student, who appeared privately, also obtained it.

Subject.	Candidates who appeared for first time.			Candidates who appeared after having previously failed.		
	No.	Passed.	Percentage.	No.	Passed.	Percentage.
1. Botany, Intermediate (Special) ..	..	..	..	9	* 6	66·7
2. Meteorology and Geology, Intermediate (Special).	..	..	..	9	4	44·4
3. General Chemistry, Intermediate (Special).	..	..	..	5	2	40·0
4. Inorganic Chemistry, Intermediate (Special).	..	..	..	5	1	† 20·0
5. Organic Chemistry, Intermediate (special).	..	..	..	2	1	† 50·0
6. Anatomy and Physiology, Intermediate (Special).	..	..	..	1	1	† 100·0
7. Veterinary Science and Hygiene, Intermediate (Special).	..	..	..	2	1	† 50·0
8. Surveying and Levelling, Intermediate (Special).	16	8	50·0	10	7	70·0
9. Agricultural Engineering, Intermediate (Special).	7	4	57·1	11	3	27·3
10. Agriculture, Advanced	..	..	..	8	1	12·5
11. Agricultural Chemistry, Advanced	..	..	..	8	3	37·6

Note.—All passed in second class.

* Not divided into classes. † No special instruction given in these subjects.

10. Owing to the exceptional conditions under which the College worked no question arises as to the winners of the Robertson and Clogstoun prizes and the guaranteed appointment. I shall address the Accountant-General about increasing the capital of the two prizes by the investment of the interest which has accumulated.

11. *Museum.*—The first and fifth Assistants (M.R.Rys. G. Krishna Prabhu and J. Chelvaranga Raju) rearranged and relabelled the specimens in the museum; the latter officer renewed most of the grains and pulses. A number of these specimens were exhibited at the recent Industrial and Arts Exhibition and won the following prizes:—

A silver medal for collection of fibres.

A bronze medal for collection of fibres.

Money prize of Rs. 10 (proposed to be converted into a silver medal) for vegetable oils.

Money prize of Rs. 10 (proposed to be converted into a silver medal) for oilseeds.

Money prize of Rs. 10 (proposed to be converted into a silver medal) for grains and pulses.

12. In conclusion I desire to acknowledge the services of the staff and officers of the College.

APPENDIX I.

Statement giving particulars called for in Proceedings No. 10543 of 1898 (the occupation of parents added as in previous years).

Class.	Distribution of scholars according to wealth.			Occupation of parents.				
	Richer class.	Middle class.	Poorer class.	Officials.	Petty officials.	Traders.	Land-holders.	Others.
Class I	5	15	2	9	..	..	13	..
,, II	4	12	2	7	1	1	9	..
,, III	..	5	1	1	..	1	4	..

Average number on the rolls = 39·6.
Average daily attendance = 36·3.

APPENDIX II.

Statement showing the distribution of students according to districts.

Districts.	Class I.	Class II.	Class III.
Vizagapatam	2	1	..
Gódávari	1	1	1
Kistna	..	3	..
Cuddapah	1	..	..
Nellore	..	1	..
Chingleput	..	1	..
North Arcot	1	..	1
South Arcot	1	..	..
Tanjore	4	2	..
Trichinopoly	1	..	..
Madura	..	1	..
Tinnevelly	3	1	2
Coimbatore	..	..	1
Salem	..	2	..
Malabar	1	..	1
Nilgiris	1	..	..
Indore State	1	2	..
Hyderabad	1	3	..
Central Provinces	2	..	..
Mysore	1	..	..
Trivandrum	1	..	..
Total ..	22	18	6

APPENDIX III.

Statement showing expenditure and income at the Veterinary Hospital, Saidapet.

	1902-1903. Rs.	A.	P.	1903-1904. Rs.	A.	P.
Expenditure—						
Establishment	750	5	4	1,066	12	0
Hospital charges	510	13	6	728	8	8
	* 138	14	7	* 185	13	8
Repairs to Veterinary hospital buildings...	88	0	6	268	6	8
Total ...	1,488	1	11	2,249	9	0

Note.—The figures marked with * are Accountant-General's adjustments.

	1902-1903. Rs.	A.	P.	1903-1904. Rs.	A.	P.
Income—						
Subscriptions	34	0	0	24	0	0
Payment on account of stabling	262	6	11	259	12	5
,, on account of advice and medicine.	578	1	0	598	4	0
,, sundry matters	148	2	6	240	6	0
Total ...	1,022	10	5	1,122	6	5

APPENDIX IV.

	Rs.
Number of books in stock on 1st April 1903...	2,245
Number added during 1903–1904	68
Total ...	2,313
Number of books taken out by staff	397
Number of books taken out by students	578
Total ...	975

APPENDIX V.

No.	Items.	Budget estimate 1903–1904.	Expenditure. 1902–1903.	Expenditure. 1903–1904.
		Rs.	Rs. A. P.	Rs. A. P.
1	Principal and Vice-Principal	20,145	20,046 4 7	*† 19,001 10 3
2	Masters and Teachers	12,450	11,735 11 10	11,293 5 9
3	Establishment	2,400	2,458 6 11	2,393 4 8
4	Travelling allowances	500	611 14 6	329 16 9
5	Veterinary Hospital establishment	1,067	750 5 4	1,066 12 0
6	Supplies and services—			
	Library allowance	300	168 4 0	210 7 0
	Prize allowance		50 0 0	
	Scholarships	..	....	‡ ....
	Petty works of construction	2,400	....	1,484 13 5
	Laboratory charges	500	211 4 4	462 11 6
			48 1 4	
	Hospital charges	1,184	510 13 6	728 8 8
			138 14 7	*185 13 8*
	Repairs to Veterinary Hospital buildings	..	88 0 6	268 6 8
	Furniture and appliances including Europe stores and purchase of live stock	1,430	1,450 4 3	1,040 15 9
			317 2 2	*1,239 14 10*
	Farm annexe	7,152	5,403 9 4	7,151 13 8
	Botanical garden	848	803 10 0	848 2 4
	Batta and carriage to agricultural students..	360	491 14 9	372 2 5
7	Contingencies—			
	Petty repairs to buildings	1,600	1,498 14 0	1,515 2 7
	Cleaning charges	43	37 15 9	40 0 9
	Rents, rates and taxes	170	138 8 0	171 8 0
	Repairs to furniture	50	51 2 0	37 12 2
	Tour charges	80	90 11 0	77 11 2
	Postage charges	90	94 15 0	91 10 0
	Telegraph charges	10	10 10 0	11 1 0
	Purchase of books	15	6 10 0	7 3 0
	Office expenses	392	324 11 7	391 1 5
	Miscellaneous	5	10 0 0	5 0 0
			3 7 0	
	Total ..	53,191	47,044 9 2	49,000 14 0
			507 9 1	*1,425 12 6*
	Receipts.			
	College of Agriculture—			
	Farm annexe	..	5,788 6 3	4,440 4 8
	College fees	..	402 0 0	594 0 0
	Rents and miscellaneous	..	213 4 3	239 2 3
	Veterinary Hospital	..	1,022 10 5	1,122 6 5
	Total ..	..	7,427 4 11	6,395 13 4

Note.—The figures in italics are Accountant-General's adjustments.

* Includes Rs. 947–1–0 being exchange compensation allowance.

† Excludes Mr. Thorne's privilege leave allowance for three months from 16th July 1903 and furlough allowance in continuation up to 31st March 1904.

‡ Rupees 3,447–2–5 is to be charged against separate provision in the Educational budget.

APPENDIX VI.

From S. L. D'SILVA, Esq., Second Assistant, College of Agriculture, and Officer in charge of the Government Veterinary Hospital, Saidapet, to the Principal, College of Agriculture, dated 18th April 1904.

I beg to submit this report on the work of the hospital during the official year ended 31st March 1904.

The number of cases rose from 1,152 (horses 382, cattle 452, other animals 318) in 1902–1903 to 1,218 (horses 435, cattle 471, other animals 312) in the year under report. The increase, though rather slight, marks the steady progress of the hospital. There was no infectious outbreak among horses or cattle during the year. The receipts rose from Rs. 1,022 to Rs. 1,122. I beg to point out that the income of the hospital is derived from charges on account of stabling and treatment and to a small extent from sundries. It must be noted that the charges of feeding the in-patients do not go under receipts as, according to the rules of the hospital, the owners themselves have to arrange directly for the feeding and attendance (other than medical) of their animals. As usual, there was a good variety in the diseases treated.

M.R.Ry. S. P. Swaminathan was the hospital-keeper during the year. He discharged his duties to my entire satisfaction and has proved himself capable of being entrusted with the charge and management of a Veterinary Hospital.

Endt. N. Ref. on C. No. 3978.

Referred to the Secretary to the Board of Revenue (Revenue Settlement, Land Records and Agriculture) for favour of remarks.

A. G. BOURNE,
Director of Public Instruction.

10*th May* 1904.

Read the following letter from M.R.Ry. C. K. SUBBA RAO Avargal, B.A., Acting Vice-Principal, College of Agriculture, Saidapet, to the Director of Public, Instruction dated 28th April 1904, No. 170 :—

I have the honour to submit the report on the working of the college farm and the botanical garden, Saidapet, for the year 1903–1904. The report is submitted separately from that on the College of Agriculture, in accordance with the instructions issued in G.O., No. 429, Educational, dated the 24th July 1902.

2. Mr. R. S. Thorne, Vice-Principal of the college, was in charge of the farm from the beginning of the year till the 14th July inclusive, when he went home on privilege leave combined with furlough. M.R.Ry. G. Krishna Prabhu, B.A., First Assistant of the college, acted as Vice-Principal from the 15th July till the 30th September inclusive. He was then relieved by the Principal of the college from whom I took charge on the 19th November, having given over charge of my appointment as Sub-Assistant Director of Agriculture on the same day. The frequent changes above referred to in the officers responsible for the management of the farm were of course prejudicial to the interests of the institution.

3. At the request of the Principal of the Teachers' College, I, in consultation with Mr. Keess, handed over in January last a piece of land lying between the Teachers' College hostel and the farm road, measuring 380 links north and south, and 215 links east and west, or about 81 cents, which had till then been used as gymnasium grounds for the Agricultural College students.

4. *The Season.*—There was practically drought from April to the end of June except that heavy showers at the average daily rate of $1\frac{1}{8}$ inches occured on four consecutive days about the middle of May and one heavy shower of about $1\frac{1}{4}$ inch followed by very light falls during the next four days occurred more than three weeks after the rains in May. The rainfall in May was heavy enough to bring some supply to the Mylapore tank and to allow a crop of sixty days' paddy to be cultivated on wet land besides some catch crops of horsegram on dry land, which however failed for want of rain for a long time afterwards. There was fair rainfall during July-October.

Of the 18½ inches of rain which fell in November, 17¼ inches fell during the first fortnight alone, about 7½ inches having fallen during a single day. The rainfall in December was about 19½ inches which was more than thrice as heavy as usual. On the last two days of that month alone, so much as 13 inches fell which was followed by unprecedentedly heavy floods in the Adyar river which seriously damaged the farm estate, rendering the river flats among other things almost unfit for cultivation. The paddy crops at the northern section of the farm, which had just flowered, were wholly submerged for three days. It is a wonder that they recovered afterwards and yielded much better returns than were expected. The dry crops were of course so much damaged that many of them had to be resown. The statement of rainfall forms appendix I.

5. *Finances.*—The whole of the funds sanctioned on account of the farm and the botanical garden was spent during the year. The reasons for the excess of expenditure incurred during the year as compared with the previous one were (1) the necessity for giving cake, bran and dholl husk to young stock and dry pregnant cows which had received no such food before, (2) the necessity for employing a large amount of casual labour partly on account of the damages caused by the heavy rains and floods and partly on account of the industrial and agricultural exhibition which lasted many days and also on account of the experiments connected with the seed selection and cross fertilization of the different varieties of cotton, (3) estate improvements, viz., repairs of roads, the construction of a threshing floor and drying yard and the provision of thick bricks for properly paving the floors of the cattle stalls (with brick on edge), and (4) the debitment of the workshop charges to the farm instead of to the college as hitherto.

The receipts were Rs. 848-1-7 less than in the previous year, owing to the drought in the early part of the year and heavy rains in November and December. The receipts from live-stock, however, were about Rs. 243 in excess of those of the previous year. The fees from bull service were Rs. 114-8-0 against Rs. 91 in the previous year.

6. *Fences.*—On the Mount Road side and in many other places, the farm was quite open to trespass, the fences in those situations having altogether disappeared. About 41 chains or half a mile length of fence of American aloes was planted. A good deal more needs to be done in the way of planting fences, which will be attended to at the earliest opportunity.

7. *Plantations and avenue trees.*—The plantations present numerous and extensive bare patches which it is arranged to plant with such fuel, fruit and timber trees as corkapalli, cashewnut, *albezzia lebbek*, etc., etc. Four hundred cocoanut seedlings have been got ready for planting at the road sides, chiefly in the southern section of the farm. The farm is indebted to the Hon'ble Mr. Muthukumaraswami Mudaliar Avargal, B.A., Zamindar of Chunampet, for a gift of 200 excellent cocoanut seedlings. One plantation is impenetrably overrun with scrub jungle. Sodium arsenite prepared by boiling slowly for several hours, equal parts by weight, of white arsenic and washing soda will be tried at the earliest opportunity for exterminating the scrub, having been already tried on a very small scale with success.

8. *Implements and machines.*—The Swedish plough, Planet's Jupiter-hoe, Garret's seed-drill, the chaff-cutter, the winnowing machine and the scythe were the exotic implements in regular use on the farm. The native seed-drill the *guntika* and *dantelu* and other implements of the Telugu districts, which are worth introducing into the Tamil country, have scarcely been used at the farm hitherto. The farm coolies as well as the college students will be taught in the ensuing rainy season the proper method of working those implements.

Mr. Chatterton supplied a chrome leather bucket at a cost of Rs. 20 for trial. When fresh, it was, unlike ordinary leather, quite supple and elastic when dried after being wetted. After about two months' use, however, it is hard and tough when dry. It has had to be repaired once. The results of further trial will be reported in due course.

9. *Manures.*—About 12/½ tons of farmyard manure were collected as per appendix III. As there was too little litter for collecting box manure properly, all the working cattle except two pairs were, like the cows, housed on the byre system. No site above the reach of the floods being available in the immediate neighbourhood of the cattle sheds for storing the byre manure, three deep pits were dug a long way off and the dung and the urine of the cattle were carted every day to the pits. Not only does the collection of manure from the working cattle according to the byre system entail much waste of labour owing to the unavoidable distance of the pits from the sheds, but the manure is also apt to be mismanaged notwithstanding diligent supervision. The box system will, therefore, be reverted to and carefully carried out, so far as the working cattle are concerned.

During the last three months of the year night-soil was collected from the premises of the students' cottages and the officers' quarters.

The chief manures purchased during the year were as follows:—

Kind of manures.	Quantity.	Value.	How used.
		Rs. A. P.	
Castor cake	5,115 lb.	145 13 8	Applied to paddy crops.
Pure bone meal	560 ,,	16 4 0	Not yet used.
Crude saltpetre from Sulur, Coimbatore district.	1,000 ,,	35 10 0	Applied with fair results to wheat and cholam fodder crops damaged by heavy rains and to brinjals and chillies with no marked effect. To an acre of sixty days' paddy, second crop, in field No. 21, 100 lb. of saltpetre was applied. The crop is not yet harvested. So far as appearance goes the effect is not marked.
Tannery refuse	..	6 0 0	With good effect to cucumbers.
Slaked lime	11 parahs.	3 8 0	To the ground-nut crop attacked with the *tika* decease, with scarcely any effect.
Old ground-nut cake	345 lb.	5 8 0	Applied to sugarcane of sorts obtained from Simalkota. The growth is much improved.

Swine manure was purchased for application to the *nanal* and other varieties of sugarcane in due course.

10. *Crops.*—The farm crops which are worth special notice are—

Ground-nuts.—The following statement shows the varieties of ground-nuts grown and their outturns:—

Number.	Variety.	Quantity of seed sown.	Area.	Outturn of pods.
		lb.	cents.	
1	Japan	7	10	71
2	Sine	5½	10	63
3	Gambie	4¾	10	91
4	Haut Saloum	4½	10	96
5	Ruffisque	3¾	10	63
6	Mauritius	4½	10	82
7	The country variety	4¼	10	53
8	Senegal	4	10	39

The seed of each variety was dibbled 12 inches by 9 inches apart on the 31st August 1903. In the first week of October, the *tika* disease manifested itself. Two cartloads of ashes and 588 pounds of lime were applied with scarcely any effect. The heavy rains in November and December aggravated the disease. The varieties of Japan and Sine were harvested about the end of January immediately after they were ripe, whereas the harvesting of the other varieties had to be deferred till about the end of the year, as the paddy crops had to be first harvested and threshed with the small amount of labour available from February forward.

Cotton.—For many years prior to the year under report, cotton which had been grown with marked success (till 1884) does not appear to have been grown on the farm. About the end of May last, the Inspector-General of Agriculture forwarded to the Principal, College of Agriculture, seed of twenty varieties of cotton for experimental cultivation with instructions chiefly to the effect that the seeds be dibbled 2½

feet by 1 foot, to be eventually thinned so that the plants might be $2\frac{1}{2}$ feet by 2 feet. His instructions were duly followed. The crop was sown at the end of August. The real number of distinct varieties, seed of which was supplied by the Inspector-General of Agriculture was only 18, for *Uppam* and *Kuppam* were the same and so also the Northerns and Proddatur cotton. The soil selected for cotton cultivation was the best that could be found on the farm, being nearly loamy. The previous crop was cucumbers to which 10 cartloads of ashes, 20 cartloads of farmyard manure, 196 lb. of castor cake and $1\frac{1}{2}$ cartloads of tannery refuse had been applied. All the varieties grew with remarkable luxuriance, showing a tendency to produce an excess of leaf and stem and were topped. The crop was seriously damaged and lodged to a great extent by the heavy rains of November and December, and in each plot, numerous and extensive blanks have occurred. The plots of bani varadi, yerrapatti and mathio are especially sparse, there being scarcely more than 30 plants in the last-mentioned variety. The subjoined statement shows the area occupied by each variety, the quantity of seed shown and the outturn of each plot till the 26th April :—

Serial number.	Name of variety.	Area in square feet.	Amount of seed sown.		Yield till 26th April 1904.	
			lb.	oz.	lb.	oz.
1	Kumpta	2,043	0	6	6	0
2	Goghari	2,270	0	8	3	2
3	Broach deshi	5,675	1	0	8	14
4	Jowarhathi black seeded	3,178	0	8	7	14
5	Jowarhathi white seeded	3,632	0	8	14	12
6	Mungari	3,178	0	8	12	11
7	Uppam	2,951	0	8	16	4
8	Northerns	2,497	0	8	11	7
9	Karunguny	2,270	0	8	15	0
10	Kuppam	2,724	0	8	17	7
11	Proddatur	2,951	0	8	12	8
12	Bani	5,448	1	0	30	1
13	Chanda cold weather	1,362	0	2	8	3
14	Varadi	3,632	0	8	27	3
15	Motomathio	4,540	0	8	27	8
16	Jari	2,270	0	8	18	11
17	Yerrapathi	1,816	0	8	7	13
18	Cocanada	2,497	0	8	9	4
19	Mathio	1,135	0	4	4	13
20	Nadan	2,270	0	6	3	0
	Total	..	..		262	7

A kind of fungoid desease characterized by the leaves being overlaid with an ashy sort of incrustation and called *majjiga tegalu* (literally buttermilk disease) in Telugu and *Sambal noi* (literally ash desease) in Tamil affected the crop for a long time and eventually disappeared. The picking began late in March, when the picking of cotton on the black cotton soil of the Deccan districts was nearly over. Broach Deshi and Goghari have just begun to yield, being covered with a mass of blossoms and bolls. The crop was watered once in April to ensure its lasting till the end of August next. Excluding the bare strips left between every two strips the crop occupies about $1\frac{1}{2}$ acres and has yielded in all up to the 26th April 262 lb. seed cotton equivalent to at least 44 lb. of clean lint per acre, which is higher than the average yield per acre for the Bellary district. There is no doubt that a good deal more can be obtained before the end of August.

In the beginning of February, the Government Botanist in consultation with the Inspector-General of Agriculture laid down a scheme of seed selection and cross fertilization in regard to some of the varieties of cotton. The 6th assistant, the bailiff and the assistant bailiff had learned in January from M.R.Ry. D. Balakrishnamurti, Agricultural Inspector in charge of the sugar experimental station, Samalkota, the process of cross fertilization. Several sets of the necessary instruments were purchased. Till March the Government Botanist's scheme was carried out by the bailiff with the assistance of the assistant yardman who knows a little English and has learned the work of cross fertilization fairly well. From March forward, a competent young man trained at the Agricultural College has been specially employed for carrying out the scheme under my supervision, pending the bailiff's return from leave.

The number of flowers cross fertilized till the 23rd April was 1,930 and the number which successfully developed bolls was 595 or about $28\frac{1}{4}$ per cent. of the total number of flowers operated upon. For some days in the beginning, a good deal of the work was undone by the paper bags put over the cross fertilized flowers being either blown off by wind or being surreptitiously removed by some persons on account of the pins with which they had been stitched.

The subjoined statement shows the quantity of seed cotton obtained from the six plants selected in each variety for purposes of seed up to the 26th April :—

Statement showing the amount of seed cotton obtained from the six plants selected in each variety for purposes of seed.

Number.	Name of variety.	Amount collected till 26th April 1904.	Remarks.
		oz.	
1	Jowarhathi blackseeded	$2\frac{1}{2}$	The number in the first column denotes the number given to the six plants of each variety for purposes of seed selection.
2	Do. whiteseeded	$3\frac{1}{4}$	
3	Mungari	$3\frac{1}{2}$	
4	Uppam	$4\frac{1}{2}$	
5	Northerns	3	
6	Karunguny	$6\frac{1}{2}$	
7	Yerrapathy	5	
8	Cocanada	$6\frac{1}{4}$	
9	Nadan	5	
31	Goghari	1	
32	Broachdeshi	$4\frac{1}{2}$	

The subjoined statement shows the quantity of seed cotton, in terms of grains, obtained from cross fertilized bolls :—

Statement showing the amount of unginned cotton obtained from plants whose flowers were cross fertilized.

Number.	Name of variety.	Amount collected in grains till 23rd April 1904.	Remarks.
		lbs.	
10	Jowarhathi blackseeded	118·5	The number in the first column denotes the number given to the six plants of each variety for *interse* crossing.
11	Do. whiteseeded	102·0	
12	Mungari	187·5	
13	Uppam	283·5	
14	Northerns	186·0	
15	Karunguny	403·5	
16	Yerrapathy	604·5	
17	Cocanada	81·0	
18	Nadan	103·5	
19	Jowarhathi blackseeded *plus* Goghari	30·0	The number in the first column shows the number given to the three plants of each variety to be crossed with Goghari and Broachdeshi which are males.
20	Do. *plus* Broachdeshi	13·5	
21	Jowarhathi whiteseeded *plus* Goghari	36·0	
22	Do. *plus* Broachdeshi	30·0	
23	Mungari *plus* Goghari	37·5	
24	Do. *plus* Broachdeshi	51·0	
25	Uppam *plus* Goghari	....	
26	Do. *plus* Broachdeshi	37·5	
27	Northerns *plus* Goghari	....	
28	Do. *plus* Broachdeshi	138·0	
29	Karunguny *plus* Goghari	135·0	
30	Do. *plus* Broachdeshi	110·0	

Specimens of an insect which appears to be spreading and is revealed by deposits resembling slaked lime and the neighbouring bolls blackening and failing to burst will be sent to the Government Botanist.

Sugarcane.—Under the head Botanical garden, mention has been made of the different kinds of sugarcane obtained from the sugar experimental station, Samalkota.

The variety of cane called *nanal karumbu* which is the chief variety cultivated in the Kallakuruchi taluk of South Arcot, in the Tanjore and Trichinopoly districts

and in parts of the Salem, Coimbatore, Madura and Tinnevelly districts, being a hardy variety of a comparatively short duration of growth, proof against jackals, capable of withstanding drought, and not liable to be stolen, was planted in field No. 11, the sets having been obtained from Lalgudi through the Tahsildar of the Trichinopoly taluk. The crop is doing well.

Indigo—The seed of indigofera arrecta supplied by the Government Botanist failed for the most part to germinate and even the few plants which sprang up died off. Two ounces of seed of that variety were obtained from the Superintendent, Agricultural school, Trivandrum, and will be carefully sown. Seeds of the varieties of indigo cultivated in the Cuddapah and Kistna districts respectively will also be obtained and sown.

Sunn hemp.—Seed of this was obtained from the Tahsildar of Rajahmundry taluk and sown amidst some paddy crops. A kind of caterpillar attacked the young plants and ate them up without leaving a trace. Tobacco decoction, lime, ashes and kerosine emulsion were tried. The last proved very effectual. One crop was in flower when attacked. It was at once cut and fed to cows.

Wheat.—Spelt wheat obtained from Coimbatore was sown on 40 cents of what is nearly a loamy soil on the 28th December. Very soon after sowing, there was heavy rain. Recrop however grew fairly well being dressed with 56 lb. of crude saltpetre. Just when it had flowered, the crop showed withered patches here and there notwithstanding an ample supply of water. The withered patches rapidly extended. Specimens of the affected plants *in situ* were put in a dealwood box and sent to the Government Botanist who sent one of his assistants to inspect the crop. The larva which had nipped off the roots of the plants was detected by him in abundance and identified as the larva of a certain kind of beetle. The wheat is not yet threshed.

The Bombay varieties of paddy.—The following statement gives some particulars of the cultivation of certain varieties of paddy cultivated in the Bombay Presidency, Central Provinces, etc., the seeds of which were supplied by the Inspector-General of Agriculture, through the Deputy Director of Agriculture, Madras. Unfortunately information regarding the area occupied by each variety is not forthcoming. The varieties suffered from heavy rain. Careful trial will be made during the ensuing rainy weather and copious information recorded :—

Name of varieties.	Where grown.	Quantity of seed sown.	Date of sowing	Date of transplanting.	Date of harvesting.	Outturn.
Bombay varieties.		LB.				LB. OZ.
1. Shirbatti	Surat farm	2½	18th September 1903.	17th October 1903.	9th to 18th January 1904.	27 9
2. Zina Columbia	Do.	2½				37 2
3. Tin Paukhali Ambemohor	Do.	2½				47 4
4. Jirasal	Do.	2½				38 13
5. Halwa Gudya	Do.	2½				35 7
6. Bengalia	Do.	2½				2 13
7. Rajavel	Do.	2½				18 9
8. Ambemohor	Do.	2½				48 6
9. * Do.	Thana district	2½				18 4
10. Sukhvel	Surat farm	2½				22 3
11. Do.	Surat district	1				20 30
12. Kamod	Surat farm	2½				29 4
13. * Do.	Kaira district	1				9 0
14. Welchi	Surat farm	2½				36 0
15. Do.	Thana district	2½				14 10
16. Tin Paukhali Early	Surat farm	2½				24 12
17. Columbia	Kolaba (Bombay)	1				34 5
Bengal varieties.						
18. Dadkhani	Dumeaon Farm	2½				71 7
19. Badshah Bhog	Do.	2½				49 8
Central Provinces varieties.						
20. Chinnore	Nagpur farm	2½				40 8
21. Halki	Do.	2½				37 11
22. Banko	Palghat district	2½				63 0

* Flowered within a fortnight after transplanting. It was the side shoots that grew and yielded.

11. *The Madras Industrial and Agricultural Exhibition.*—A gold medal was awarded for the farm dairy produce.

12. *Pasture.*—About 7 acres of rather stiff soil close to the farm yard have been lying waste for a long time. With the aid of the water-supply from the oil-gas engine and pump which is being fitted up at the riverside well, all the land will be properly laid down to hariali grass.

13. *Livestock.*—At the end of the year under report, there were twenty-one bulls, six bullocks, four young bulls about to cut the first pair of permanent teeth, six bull calves, nineteen cows, six heifers about to cut the first pair of permanent teeth and thirteen heifer calves. Four cows which were between 13 and 16 years old were sold. The milk of the cow, named sahib II, being found to be abnormally saline and bitterish, that cow was also sold. Her calf died probably because the milk was unwholesome. Besides this, three calves and one heifer also died. The bowels of one of the deceased calves were found to be stuffed with a large quantity of sand which she had probably accumulated by licking. All the young calves are carefully muzzled.

A very strange contagious affection of the generative organs was observed among the farm heifers. They were sent to the Veterinary hospital where they soon recovered.

The farm officers and milkmen have been strictly enjoined to watch for signs of heat in heifers and cows and have them promptly covered by bulls when in heat. The following statement shows how excessively long were the intervals between the dates of calving and subsequent bull service in the case of some cows, the desirable interval being not more than three months :—

Number.	Name of cow.	Date of last calving.	Date of subsequent bull service.	Length of the interval.
				days.
1	Alamelu	23rd June 1903	18th November 1903	148
2	Bhagyam I	8th September ,,	13th March 1904	187
3	Coustubham	23rd February ,,	19th August 1903	207
4	Droupadi	26th August ,,	14th April 1904	231
5	Ramaboyi	29th July ,,	21st March ,,	236
6	Kuttikunju	27th May ,,	21st January ,,	239

The following statement shows that the intervals between the dates of calving and subsequent bull service were not unduly long in the case of certain cows :—

Number.	Name of cow.	Date of last calving	Date of subsequent bull service.	Length of the interval.
				days.
1	Lakshmiboyi	6th December 1903	1st March 1904	85
2	Mandothari	29th ,, ,,	21st April ,,	114
3	Padmavati	28th November ,,	8th ,, ,,	132

Appendix V shows the yeild of milk from the farm cows during the official year. The subjoined statement shows, in regard to some cows, the yield of milk between the last and the previous calvings so as to indicate their milking capacity comparatively under normal conditions :—

Number.	Name of cow.	Interval between the last and the previous calving.	Number of days in the interval during which milk was yielded.	Quantity of milk yeilded during the interval between the calving.	Average quantity per day during the whole interval.
		DAYS.	DAYS.	MEASURES.	MEASURES.
1	Alamelu II	485	456	1,116·50	2·31
2	Bhagyam I	580	419	935·38	1·63
3	,, II	453	438	1,175·13	2·60
4	Kamala	456	357	766·88	1·70
5	Padmavati	386	298	903·13	2·38

Sheep.—The sheep stock had no special food during the year. From April 1904 they are being fed on cake. The sheep have much deteriorated probably owing, in a great measure, to in-and-in breeding have been pursued too far. The average weight of an adult sheep is hardly 40 lb., whereas it was twice as much more than fifteen years ago. Recently 61 sheep were shorn. The total yeild of wool was 59 lb. or less than a pound per head whereas the average yeild more than fifteen years ago was 2 lb. and upwards perhead. There has been no sale for the last three years' clippings. There was no demand among carriage builders, saddlers, etc., to whom specimens were sent. It is intended to have white-cumblies woven out of the wool on hand and sold

Steps have been taken to obtain one or two good breeding rams from the Mysore Province.

During the year six gimmers became ewes and eleven ewe lambs gimmers.

The price of oil-cakes, viz., gingelly and ground-nut cakes, fed to cattle varied from Rs. 12½ to Rs. 14 per candy. Supplies of safflower cake were procured from Proddatur at a cost of about Rs. 9 per candy and delivered at Saidapet and supplies of cotton seed also at the same price have been offered by Proddatur merchants. A good deal of economy is hoped to be effecetd also in regard to the other food-stuffs without prejudice to the condition of stock.

14. *The farm office staff.*—From the 15th July to the 18th November inclusive M.R.Ry. T. V. Narayana Rao, the sixth assistant, acted as fifth assistant and was in charge of the Botanical Garden, M.R.Ry. Y. Sreenivasa Rao, the bailiff, acted as sixth assistant and as such was practical instructor to the students in fieldwork, and M.R.Ry. V. S. Subrahmania Aiyar acted as bailff. M.R.Ry. C. Narayana Aiyar who is now an Agricultural probationer undergoing training at Poona acted as Assistant bailiff from the 1st August to the 13th October 1903. The bailiff was on leave during the last month of the year.

15. The erection of the Vice-Principals' quarters was finished during the year. With the kind permission of the Collector of Chingleput and the Government Architect I am occupying the quarters on certain conditions.

16. *The Botanical Garden.*—The chief garden products worth special notice are—

Plantains.—A crop consisting of the varieties nendram, pachai nadan, pachai valai, peyan, bondan and bangala or puvan occupied about 39 cents. The amount realized by the sale of leaf, fruit, flower and pith from the 12th October last during the year was Rs. 20–11–0 or about Rs. 53 per acre. For want of labourers, no attempt was made at extracting fibre.

Sugarcane.—Three canes of each of the undermentioned varieties of sugarcane were kindly supplied in March by the Government Botanist for cultivation at the Garden. Each variety was planted so as to form a single row. All the varieties are doing well—

(1) Vansi.
(2) Yerracheruku.
(3) White Mauritius.
(4) Bonta.
(5) Sanna bilé.
(6) The Hospet cane.
(7) The Godavari striped cane.
(8) Red Mauritius cane.
(9) Valu.
(10) Pundia.
(11) The Cumbum striped cane.
(12) Kéle.
(13) Mogali.
(14) Seema.

Tobacco.—A supply of seed was obtained from Dindigul through Mr. Nurse of the firm of Messrs. Oakes & Co. and was sown on 28 cents. The crop was attacked by a kind of caterpillar. Kerosine emulsion was tried on a few plants. As the leaves were much discoloured, it was stopped and the larvæ which were of the same colour as the leaf were picked out by hand. The crop is doing well.

Turmeric.—Turmeric was planted on 29 cents. The crop was not harvested during the year.

Yams.—Yams obtained from Gódávari were planted on 11 cents. The yeild was about 614 visses equivalent to nearly 8 tons per acre.

Coffee.—There are 14 trees of Liberian coffee and 6 of Arabian coffee. About 2½ visses of seed were collected till the end of the year from the Liberian coffee trees, and sold partly to certain students for being planted in Vizagapatam and partly for consumption. In point of aroma and flavour, the coffee was scarcely inferior to the hill-grown coffee. The Arabian coffee is also bearing, but not so well as the other variety. The cherries are not yet ripe.

Soy beans.—The crop which is much esteemed for its salad oil was grown with fair success on 11 cents. It was not harvested during the year.

American sweet potatoes.—It did not do well, chiefly because the vines were not properly lifted so as to prevent them from rooting at too many points. The crop has been planted on about 20 cents. of land.

Telinga potato. (Typhonium orixense)—Was planted on 18 cents. and yielded 250 visses equivalent to about 2 tons per acre.

There are about dozen Batavian oranges which are not bearing probably for want of phosphoric acid and potash in the soil. The same is the case with the jack and a few other trees. The carcasses of dogs mixed with lime were buried round the trees from the latter part of the official year forward. There are few fruit trees in the garden. Much remains to be done in the way of planting fruit trees and efforts are being made to provide the garden with specimens of plants of much economic importance capable of growing in the locality. A considerable portion of the garden remains unutilized. Seeds of different varieties of the different crops cultivated in the Presidency are intended to be sown in the first terrace of the garden systematically on a few square feet each, so that the students may see them all.

APPENDIX I.

Statement showing the monthly rainfall registered at the College farm, Saidapet, during 1903–1904.

Months.		Actual rainfal during 1903–1904.	Average rainfall collected at Saidapet during the previous 33 years.
April	1903	...	0·41
May	,,	4·52	1·78
June	,,	1·81	2·13
July	,,	3·63	4·00
August	,,	7·62	5·18
September	,,	9·98	5·50
October	,,	9·51	11·67
November	,,	18·58	13·99
December	,,	19·55	5·87
January	1904	1·83	0·46
February	,,	...	0·46
March	,,	...	0·21
	Total ...	77·03	51·64

APPENDIX II.

Financial Statment of the College farm for 1903–1904.

				Rs.	A.	P.
Receipts.						
Field produce				1,398	9	3
Live stock	Rs.	A.	P.			
Sale of cows, calves, sheep, etc.	205	15	0			
Sale of milk, butter, ghee, etc.	2,202	1	5	2,522	8	5
Covering fees	114	8	0			
Wood and miscellanous				519	3	0
Total				4,440	4	8
Charges.						
Cattle food—	Rs.	A.	P.			
Oil cake	1,059	10	6			
Dholl husk	540	8	3			
Wheat bran	506	4	5			
Rice bran	152	0	7	2,446	14	2
Salt	28	8	5			
Paddy straw	159	14	0			
Manure				220	3	0
Seeds and plants				190	15	3
Cooly labour				2,552	11	2
Machines and implements				242	5	3
Workshop				352	2	5
Estate improvement				650	11	2
Contingencies				349	5	11
Live-stock				144	8	3
Total				7,149	12	7

APPENDIX III.

For 1903–1904.

	Rs.	A.	P.
(1) Value of labour to be charged against live-stock	360	0	0
(2) Value of farm-grown fodder consumed by stock	699	12	10
(3) Value of services rendered by live-stock to the farm	1,000	0	0
(4) Value of do. do. to the Botanical Garden	240	0	0
(5) Value of manure obtained, * 121½ tons at Rs. 3 a ton	364	8	0
(6) Fees realized by bull service (for serving 229 outside and 18 farm, cows)	114	8	0

* This includes the droppings of sheep also.

APPENDIX IV.

Cropping statement 1903–1904.

Crops.	Area in acres.	Outturn. Grain or seed. Amount.	Grain or seed. Per acre.	Straw or fodder. Amount.	Straw or fodder. Per acre.	Remarks.
		lb.	lb.	lb.	lb.	
Paddy, sirumani, transplanted	3·56	6,394	1,796	17½ tons of paddy straw were obtained from all the paddy fields, including the Bombay varieties. The poor yield was due to the submersion of the crops in floods.		Remarks in general about all crops appear in the body of the report.
,, sprouted broad cast	2·22	3,655	1,646			*The only crop on the farm that was not affected by rains, having been raised from May to September 1903.
,, chinna samba dry	0·80	642	803			
,, 60 days' samba, sprouted *	1·00	2,905	2,905			
,, 60 days samba, dry	2·10	802	452			
,, Gundu samba, transplanted	0·78	1,710	2,200			
,, Gundu samba, sprouted	1·50	3,460	2,307			
,, Anaikkomban, transplanted	1·75	2,530	1,446			
,, Anaikkomban, sprouted	2·61	4,514	1,730			
,, Pisini broad cast, dry	6·58	2,835	431			
,, Ottadai, sprouted	0·65	470	723			
Ragi, dry	0·80	47	59	560	700	
Ragi transplanted and under irrigation.	5·10	5,538	1,086	22,932	4,49[illegible]	
Cumbu	1·55	66	43	..	..	Straw not brought to account.
Tinai	0·60	60	100	..	..	Straw too scanty.
Yellow cholam, dry	2·14	117	55	2,632	1,232	Chiefly intended for straw.
Yellow cholam, partly under irrigation.	1·00	75	75	3,584	3,584	
White cholam, partly under irrigation.	0·65	80	123	3,288	5,040	
Green-gram	1·55	162	109	..	..	
Black-gram	0·80	232	290	..	..	
Horse-gram	0·50	86	172	..	..	
Fodders.						
Cholam (green)	..	16 tons	..	..	..	This quantity was obtained partly from cholam under irrigation and partly from crop which failed to mature grain.
Horse-gram (green)	..	17[illegible]/8 tons.	..	..	..	This quantity was obtained from all the fields in which the crop was sown as a catch crop and also wherever the crop failed to produce grain.
Sundries.						
Cucumbers	0·47	39 Rs. worth of fruit.	83 Rs.	..	..	
Industrial crops.						
Ground-nut—						
Japan	0·10	71	710	No haulms were gathered as they were spoiled by heavy rains and the tika disease.		
Sine	0·10	63	630			
Gambie	0·10	91	910			
Haut Saloum	0·10	96	960			
Ruffisque	0·10	63	630			
Mauritius	0·10	82	820			
Country	0·10	53	530			
Senegal	0·10	39	390			
Crops standing.						
Paddy, 60 days' samba	3·35	..	..	..	..	
,, Pisini broad cast	0·42	..	..	..	..	
Yellow cholam for fodder	4·80	..	..	..	..	
Varagu and dholl	4·27	..	..	..	..	Varagu from the whole area harvested but not yet thrashed. Dholl on 1·2 acres failed and dholl on the remaining area standing.
Wheat	0·40	..	..	..	..	Poor. Harvested, but not yet thrashed.
Onions	0·12	..	..	..	..	
Cotton of sorts	1·50	262 lb. 7 oz. up to 26th April. 1904.	..	..	..	Still yielding.
Crops failed.						
Horse-gram	20·69	..	..	..	..	Green fodder was obtained from the greater portion of the area or the crop was grazed by cattle.
Red cholam	1·60	..	..	..	..	
Tinai and castor	1·14	..	..	..	..	
Sunn-hemp	2·62	..	..	..	..	
Green-gram and black gram	1·40	..	..	..	..	
White cholam	4·00	..	..	..	..	
Yellow cholam	4·00	..	..	..	..	
Cumbu	1·27	..	..	..	..	

APPENDIX V.

Statement showing the yield of milk by the College farm herd during 1903–1904.

Number.	Names of cows.	Age.	Yield in 1903–1904 in		Number of days cows yielded.	Average per day in	
			Madras measures of 100 cubic inches.	Pounds.		Madras measures of 100 cubic inches.	Pounds.
		YEARS.					
1	Alamelu II	9	855·13	3,206·74	338	2·53	9·49
2	Ahalya	7	158·25	593·44	111	1·43	5·35
3	Baghyam I	13	453·39	1,700·21	224	2·02	7·59
4	Do. II	6	903·00	3,386·25	339	2·66	9·99
5	Coustubham	7	554·75	2,080·31	342	1·62	6·08
6	Droupadi	7	559·50	2,098·13	210	2·67	9·99
7	Govindu	16	286·00	1,072·50	196	1·46	5·47
8	Kalyani IV	13	628·75	2,357·81	314	2·00	7·50
9	Kamathenu	7	186·00	697·50	133	1·40	5·25
10	Kamala	7	511·75	1,919·06	277	1·85	6·93
11	Kapila	6	212·13	795·49	154	1·38	5·18
12	Kuttikunju	9	683·75	2,564·06	305	2·24	8.41
13	Lakshmiboy	7	572·39	2,146·46	229	2·50	9·38
14	Mandothary	8	316·88	1,188·30	111	2·85	10·71
15	Meenakshi III	10	399·50	1,497·93	209	1·91	7·17
16	Padmavati	7	886·39	3,323·96	286	3·10	11·61
17	Ramaboy	7	713·13	2,674·24	301	2·37	8·88
18	Sahib	6	108·50	406·88	100	1·09	4·07
19	Seetha II	8	792·13	2,970·49	293	2·70	10·14
20	Sybil Elenor	6	494·50	1,854·38	312	1·58	5·94
21	Tara II	10	578·39	2,168·96	278	2·08	7·80
	Total ..	176	1,0854·21	40,703·10	..	..	..
	Average ..	8·38	516·87	1,938·24	..	..	..

N. Ref. on C. No. 3977 dated 10th May 1904.

Referred to the Secretary to the Board of Revenue (Revenue Settlement, Land Records and Agriculture) for favour of remarks.

A. G. BOURNE,
Director of Public Instruction.

Read—the following Proceedings of the Board of Revenue (Revenue Settlement, Land Records and Agriculture), Mis. No. 3373, dated 2nd July 1904:—

The Hon'ble Mr. A. E. Castlestuart Stuart, I.C.S.,
Commissioner of Revenue Settlement, and Director of Land Records and Agriculture.

Read—report on the College of Agriculture for 1903–1904 from the Director of Public Instruction, Madras, N. Ref. C. No. 3978, dated 10th May 1904.

Read—also report on the working of the College Farm, Saidapet, for 1903–1904, from the same officer, N. Ref. C. No. 3977, dated 10th May 1904.

Resolution—Mis. No. 3373, dated 2nd July 1904.

The two reports received with the endoresements of the Director of Public Instruction, read above, will be returned to him with the following remarks.

2. Under the sanction conveyed in G.O., No. 429, Educational, dated 24th July 1902, the scheme of study in the College was revised during the year and, owing to a change in the date for the admission of students, there were practically only two classes under tuition for more than half the year. During the last three months of the year, the recruitment of a new class brought the real strength of the classes up to a more satisfactory figure than before, although the present senior class is very small. The results of the labours of the College staff appear in the table at paragraph 9 of the Principal's report; from which it appears that, except in two subjects, all the

candidates sent up for examination had previously tried and failed. Even so the results were bad, but this may probably be largely due to the quality of the candidates. The fact that so many students have to appear more than once in order to qualify in the secondary subjects prescribed, is a strong argument in favour of the new rule which prevents their appearing in the final examination until their preliminary preparation is complete.

There is, however, much force in the first argument set out in paragraph 5 of Mr. Keess' report. The proposals made in connection with this matter were referred to the Inspector-General of Agriculture so far back as November 1903, for his remarks, but nothing has yet been heard from him on the subject.

As to the second matter mentioned in the paragraph quoted, the Board awaits the promised report.

3. The cardinal point, however, of the reorganisation sanctioned in G.O., No. 429, Educational, dated 24th July 1902, was that the management of the College Farm and the teaching of Agriculture should be entrusted to a practical agriculturist as Professor, who should be a European officer. Unfortunately this has not yet been possible. Mr. Thorne, who filled the post of Professor of Agriculture, left India in July last, and he was succeeded as Vice-Principal of the College by an officer who had no experience of practical agriculture. So far as the Board is aware, no steps have yet been taken to fill the post of Professor of Agriculture permanently, but in November last, at great inconvenience to the Agricultural Department, it recommended that the Sub-Assistant Director of Agriculture should be deputed to carry on the duties thereof temporarily.

4. The arrangement above mentioned appeared to be the best that could be made at the time; but any settlement of what should be done at Saidapet has been most inordinately delayed owing to the fact that the Inspector-General of Agriculture who was consulted on the subject has not yet reported. That officer so long ago as July 1903 informed the Director of Public Instruction that he would like to again inspect the College Farm before giving a detailed inspection note, as he understood that the then Vice-Principal, Mr. Thorne, contemplated making changes in the management. He made a further detailed inspection of the College and Farm in December last, but since he left Madras nothing has been heard from him on the subject. The Board regards the placing of the training at Saidapet on a sound footing as essential to the promotion of agricultural interests in this Presidency, and, as a matter of urgency, and in the absence of any assistance from Mr. Mollison, would suggest that the Director of Public Instruction should take up the matter himself.

5. The College Farm and its management must be placed on a sound footing, if the agricultural training given at the institution is to be of any practical value. The Director had the advantage of inspecting the farm in December last in company with Mr. Mollison, Dr. Bourne and Mr. Benson, and the general impression conveyed was most unfavourable. The year 1903–1904 appears, from the record of rainfall, to have been, in the early months, exceptionally favourable, though the farm suffered severely from floods in December last. The general state of the farm showed signs of more than recent neglect upon which Mr. Mollison promised to note; but, as already observed, no report has been received from him. To the charge of the farm M.R.Ry. C. K. Subba Rao only succeeded during November 1903, and he was therefore in no way responsible for its condition. With the work of the farm of the past year, the Board does not propose to deal in detail; but it would remark that the primary duty of the Professor of Agriculture should be to get all the land, etc., into good condition as soon as possible, and that experiments should be almost entirely deferred until this end is secured.

(True Extract.)

V. K. RAMANUJA CHARI,
Secretary.

To the Director of Public Instruction,
with the original report on Agricultural
College and a proof and also original
report on the College Farm.

6

Proceedings, Dis. No. 5250 of 1904.

Recorded.

2. The college was passing through a transition period so far as its teaching arrangements were concerned, and a certain amount of dislocation was inevitable. The report of the Inspector-General of Agriculture on the College and Farm is still awaited. After the receipt of this, it will, the Director hopes, be possible to complete the reorganisation and secure a permanent Professor of Agriculture.

3. The Director agrees with the Board of Revenue that the results of the examinations were unsatisfactory. He is not, however, prepared to judge of the work of the College by these examination results only. He fears that that work is already dominated to far too great an extent by these examinations. Some of the Principal's remarks in paragraph 5, where, for instance, he complains that there is no direct stimulus to real practical work in Agriculture because it counts for nothing at the final examination, bear out this view. The Director has had considerable experience of these examinations in past years and has been amazed at the fact that a certain number of candidates appeared to have no knowledge of the subject whatever. He is of opinion that greater effect should be given to rule 14 which provides that students who prove inefficient or indifferent during the probationary period may be required to leave the College.

4. The Veterinary Hospital is reported to have increased in popularity. The Director hopes that its main function, namely, that of providing practical instruction for the students, is not lost sight of. The number of patients admitted should not be so great as to prevent the staff from giving a sufficient amount of time to the instruction of the students.

5. With reference to the table in paragraph 9, the Principal is requested to explain the note that no special instruction was given in certain subjects.

6. The attention of the Principal is drawn to the remark of the Board of Revenue to the effect that the most important matter to be attended to at the farm is to get the land, etc., into good condition as soon as possible.

7. The total expenditure, excluding the amount spent on scholarships, rose during the year from Rs. 47,552 to Rs. 50,426, while the receipts fell to Rs. 6,396. The net cost to Government thus rose again to Rs. 44,030 and the cost per student was Rs. 1,223 against Rs. 1,042 the previous year.

8. Thanks are due to the Hon'ble M.R.Ry. Muthukumaraswami Mudaliyar Avargal for his gift of cocoanut seedlings to the farm.

A. G. BOURNE,
Director of Public Instruction.

To the Principal, College of Agriculture, with 20 spare copies.
„ Principals of other Professional Colleges.
„ „ of Government First-grade Colleges.

Copy to the Board of Revenue (Revenue Settlement, Land Records and Agriculture), } for information.
„ Superintendent, Civil Veterinary Department, }
„ Government, with C.L.
„ Director-General of Education for information.

13

Order—No. 595, Educational, dated 26th September 1904.

Recorded.

2. Mr. Mollison's report on the College and Farm has recently been received and referred to the Board of Revenue for remarks. Pending the issue of orders on this report the Government consider it unnecessary to make any observations on the reports of the Principal and Vice-Principal now before them.

G.O., No. 933, Revenue, dated 23rd August 1904.

(True Extract.)

H. D. TAYLOR,
Ag. Secretary to Government.

To the Director of Public Instruction.
„ the Revenue department.
„ all Collectors.
„ the Director-General of Statistics (with C.L.).

Exd P. Sankaran Nayar

14

EDUCATIONAL DEPARTMENT.

NOTES CONNECTED WITH G.O., No. 595, EDUCATIONAL, DATED 26TH SEPTEMBER 1904.

[SUBJECT.—*Reports on the Agricultural College and Farm for* 1903–1904.]

From the Director of Public Instruction, No. 7566, *dated 2nd September* 1904.

The draft placed below is submitted for approval.

P. T. THARYAN—10-9-04.

A. GALLETTI—12-9-04.

H. D. TAYLOR—19-9-04.

G. S. F[ORBES].

I have passed the order. It is noteworthy that the working of the farm shows a loss of 30 per cent. though it has much labour free.

G. S[TOKES]—24-9-04.

Draft approved by Honourable Members and may issue.

H.D.T.—26-9-04.

[G.O., No. 595, Educational, dated 26th September 1904.]

Stock Form No. 127
2,000—12-2-03.

Educational (190 4) Department.



CURRENT No. 1577.

[Name] The Hon'ble Mr. A.G. Bourne, D.Sc., F.R.S.,

[Designation] Director of Public Instruction,

[Station] Madras.

Cu No. 7566 of 04

Dated 2nd September 1904.

Enclosures one

Received 5-9-1904

Registered 5-9-1904

SUBJECT.

Submitting a copy of Proceedings Dis No. 5250 dated 22nd August 1904 reviewing the report on the working of the College of Agriculture, Saidapet for the year 1903-1904.

BACK PAPERS.

Go no. 429 dtd 24-7-02 C/F " 475 dtd 10 C/F College calendar	

FURTHER PAPERS.

2

To

The Secretary to Government,

Educational Department.

Sir,

I have the honour to submit, for the information of Government, a copy of my Proceedings Dis No. 5250 dated 22 August 1904 reviewing the report on the working of the College of Agriculture Saidapet during 1903-1904.

I have the honour to be,

S i r,

Your most obedient servant,

S. Satthianadhan

for Director of Public Instruction.

D.I. 2-9-04

E. 12

1,200—7-1904

EDUCATIONAL DEPARTMENT

16

38

READ MAIN G.O., No. , dated 190 .

" " " " , " 190 .

READ ALSO:—

C. No. 1577, From the D.P.I., No. 7566, dated 2-9- 1904

" " , " " , " , " 190

" " , " " , " , " 190

ORDER No. 595, dated 26-9- 1904

P.S.

Desp 26/9/4

Recorded.

2. Mr. Mollison's report on the College and Farm has recently been received and referred to the Board of Revenue for remarks. Pending the issue of orders on this report the Govt. consider it unnecessary to make any observation on the reports of the Principal and Vice-Principal now before them.

PH 10/9/4

BD 12/9/04

G.O. on 933 Rev: dt 23-8-04.

P.

The DPI Despd 9/11/4

" Revenue Deputy 3 Despd 9/11/4

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AD AGAIN G.O., No. 190 . DATED

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