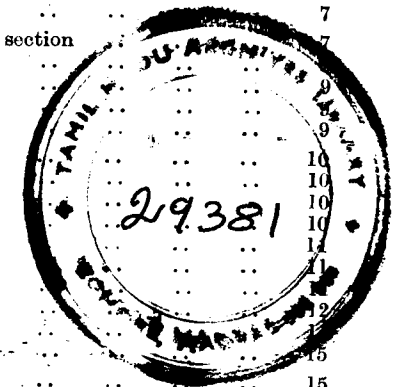


CONTENTS

	PAGE
I. Staff	1
(a) Administration	1
(b) Indian Veterinary Service	1
(c) Madras Veterinary Service	2
(d) Madras Veterinary Subordinate Service	3
II. Education—Madras Veterinary College	4
(i) Instruction	4
(a) Staff	4
(b) Training	4
(c) Admission of students	5
(d) Scholarships	5
(e) Professional examinations	5
(f) Refresher Course	6
(g) University Degree in Veterinary Science	6
(h) Hostel, health and athletics	6
(ii) Hospital	6
(iii) Shoeing Forge	7
(iv) Laboratory	7
(a) Pathology and Bacteriology section	7
(b) Parasitology section	9
(c) Physiology laboratory	9
(d) Clinical laboratory	9
(e) Anatomy section	9
III. Serum Institute	10
(a) Staff	10
(b) Accommodation and equipment	10
(c) Livestock and fodder	10
(d) Serum section	11
(e) Virus section	11
(1) Bull Virus	11
(2) Goat Virus	12
(f) Laboratory and microscopic work	12
(g) Other sera and vaccines	15
IV. Investigation and Research	15
(a) Goat virus vaccination	15
(b) Nasal granuloma	16
(c) Veterinary diseases investigation	17
(d) Research work at the Madras Veterinary College laboratory	17
Pathology section	17
(1) Pseudo-fowl pest	17
(2) Black-quarter, Anthrax and Hæmorrhagic Septicæmia	18
(3) Anterior Pituitary Hormone	18
Parasitology section	18
(1) Nasal Schistosomiasis	18
(2) Gnathostome infection	19
(3) Cutaneous myiasis in animals	19
(4) Rhinosporidiosis	19
(5) Streptothricosis	19
(6) Calcareous nodules in the liver and lung of horses	19
(e) Anatomical findings	19
V. (a) Contagious diseases	20
(i) Bovine	20
Rinderpest	20
Anthrax	21
Hæmorrhagic Septicæmia	21
Black-quarter	21



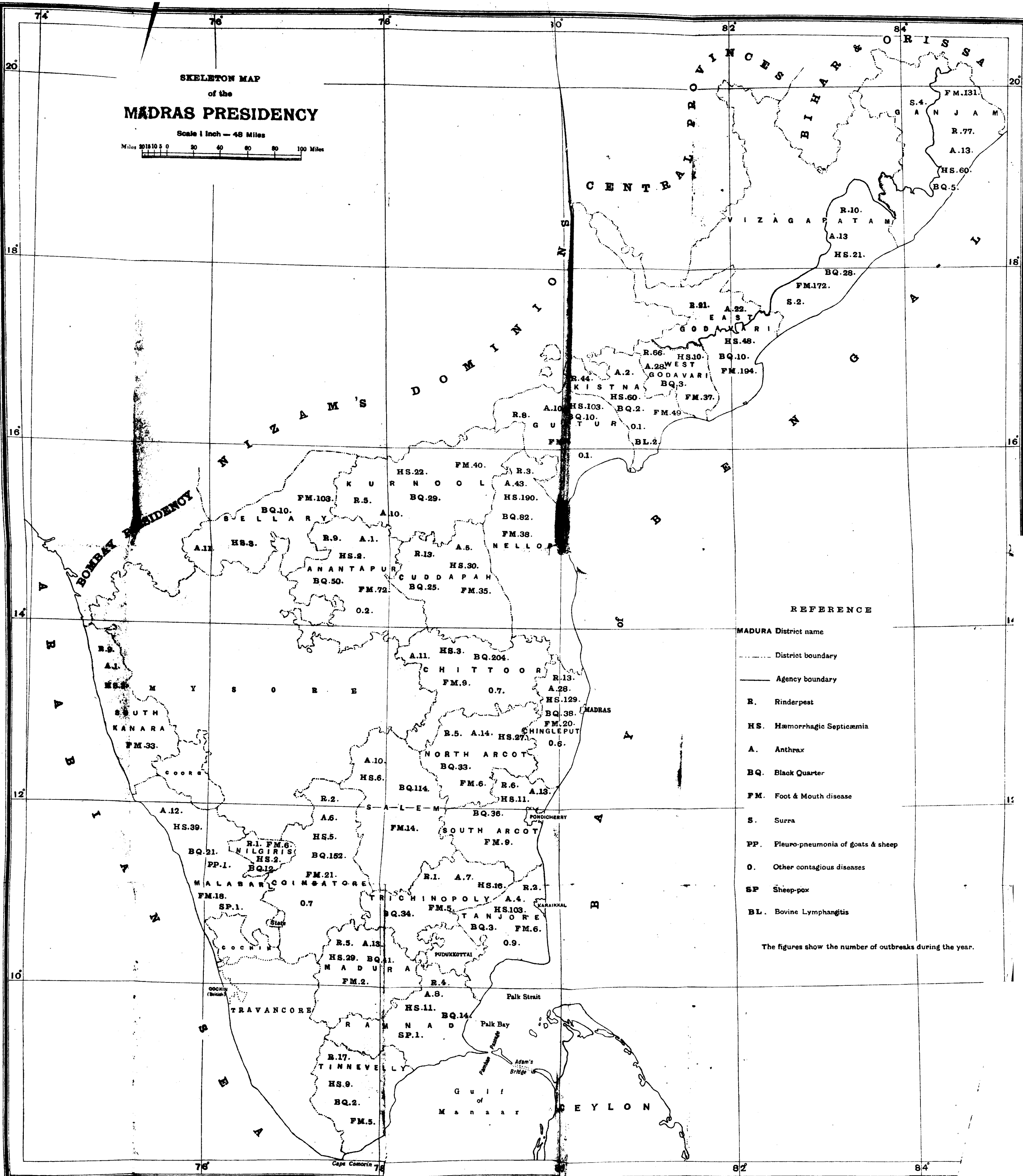
	PAGE
Foot-and-Mouth disease	21
Bovine lymphangitis	21
Nasal granuloma	22
Coccidiosis	22
Piroplasmosis (B. Bigeminum)	22
(ii) Equine	22
Glanders	22
Trypanosomiasis	22
Strangles	22
Kumri	22
Tuberculosis	22
(iii) Other animals	22
Sheep pox	22
Rabies	22
Poultry diseases	22
(b) Non-contagious diseases of unusual interest	23
VI. Hospitals and dispensaries	23
VII. Itinerating staff	24
VIII. Castrations	24
IX. Miscellaneous	24
Criminal poisoning and malicious injury	24
S.P.C.A.	24
Forest grazing—Protection of bison from Rinderpest	24
Forest livestock	25
Meat inspection	25
Lethal chambers	25
Propaganda	25
Fairs and shows	26
Horse breeding	26
Visiting Committees	26
Levy of fees in Veterinary institutions	26
Inspection of animals intended for export to Ceylon	26
X. Finance	26
XI. Future programme of work	27
Education	27
Laboratory work and research	28
Serum Institute	28
Contagious and non-contagious diseases	28
Propaganda	28

APPENDICES.

I. Statement showing the number of deaths from contagious diseases among animals	29
II. Statement showing the results of preventive inoculation	30
III. Statement showing the number of animals treated and castrated on tour	34
IV. Statement showing the number of animals treated and castrated at Veterinary hospitals and dispensaries	36

SKELETON MAP of the **MADRAS PRESIDENCY**

Scale 1 Inch = 48 Miles
Miles 0 20 40 60 80 100



REFERENCE

- MADRAS District name
- District boundary
- Agency boundary
- R. Rinderpest
- HS. Hæmorrhagic Septicæmia
- A. Anthrax
- BQ. Black Quarter
- FM. Foot & Mouth disease
- S. Surra
- PP. Pleuro-pneumonia of goats & sheep
- O. Other contagious diseases
- SP. Sheep-pox
- BL. Bovine Lymphangitis

The figures show the number of outbreaks during the year.

ANNUAL ADMINISTRATION REPORT OF THE MADRAS
CIVIL VETERINARY DEPARTMENT FOR THE YEAR
1934-35.

I.—STAFF.

(a) *Administration.*

1. I continued to be in charge of the department throughout the year. In the course of my tours during the year I inspected as usual all the 12 District Veterinary Offices, the Madras Veterinary College, the Serum Institute and the office of the Veterinary Investigation Officer. I inspected 82 institutions and 65 touring billets besides the Veterinary Assistant Surgeon on export duty at Tuticorin, three second veterinary assistant surgeons, five reserve veterinary assistant surgeons and the Raja's Veterinary Hospital at Vizianagram (private institution). I selected a site for constructing permanent buildings for the veterinary dispensary, Mayavaram, and also inspected the building selected for shifting the veterinary dispensary at Tellicherry and the permanent buildings for the veterinary hospital, Conjeeveram, while under construction. I inspected the Government Livestock, Agricultural Farm animals at Hosur, Nandyal and Coimbatore, forest elephants at Begur and police horses at Vellore. I attended one outbreak report of hæmorrhagic septicæmia and inspected cattle inoculated under the forest grazing scheme at Kollegal in four centres. I inspected the field work of the Veterinary Investigation Officer in three centres and the goat virus inoculation camps conducted by the District Veterinary Officers in two centres. I interviewed the President, District Board, Chittoor, in connexion with the opening of a veterinary dispensary at Piler and inspected the site and building provided for the purpose. I attended the meeting of the Advisory Board of the Imperial Council of Agricultural Research at Simla. I served as President of the Board of Examiners constituted by Government for conducting the refresher course and the professional examinations at the Madras Veterinary College during December 1934 and March 1935, respectively.

(b) *Indian Veterinary Service.*

2. The number of Indian Veterinary Service officers in the department at the end of March 1935 was two, viz., Messrs. P. T. Saunders, Director of Veterinary Services, and T. J. Hurley, Principal, Madras Veterinary College, as against three of the previous year. The decrease is due to the demise of Mr. V. Krishnamurti Ayyar on 18th October 1934 and the consequent abolition of the post held by him in the Indian Veterinary Service.

(c) *Madras Veterinary Service.*

3. Rao Sahib H. C. Sampath Ayyangar was in charge of the Vellore circle till his death on 8th April 1934. During the year Mr. R. Narasinga Rao held charge of the Madras circle and Mr. K. Kailasam Ayyar continued to be in charge of the Serum Institute as Superintendent. Mr. A. J. Wilson was in charge of the Coimbatore circle till 11th May 1934, when he died. Mr. M. R. V. Panikkar held the post of Lecturer in Hygiene, Resident Veterinary Officer and Personal Assistant to the Principal, Madras Veterinary College, till the end of the year and Mr. M. Anantanarayan Rao continued as Lecturer in Parasitology, Madras Veterinary College, throughout the year. Mr. A. Ramachandra Ayyar was in charge of the Madanapalle circle throughout the year. Mr. K. S. Nayar held the post of Lecturer in Surgery, Madras Veterinary College, during the year except for the period from 17th November to 21st December 1934 when he was on leave. Mr. W. J. D'Costa was in charge of the Trichinopoly circle throughout the year except from 1st to 28th April 1934 when he was on leave. Mr. A. K. Mitra held the post of Lecturer in Pharmacology, Madras Veterinary College, till 22nd October 1934 from which date he acted as Lecturer in Pathology and Bacteriology, Madras Veterinary College. Mr. C. Venkataratnam Chetti was in charge of the Bezwada circle during the year except for the period from 5th September to 4th November 1934, when he went on leave. Mr. G. A. Ajwani held charge of the Madura circle throughout the year. Mr. C. Suryanarayanamurti was in charge of the Vizagapatam circle throughout the year except during the period from 8th May to 7th August 1934 when he went on leave. Mr. T. S. Alagappa Pillai held charge of the Nellore circle during the year except for the period from 1st June to 2nd September 1934 and from 23rd December 1934 to 7th January 1935 when he went on leave. Mr. A. L. N. Somayajulu Pantulu continued to be in charge of the Rajahmundry circle throughout the year. Mr. K. S. Natesa Ayyar was in charge of the Calicut circle from the beginning of the year till 31st May 1934 and was thereafter transferred to Coimbatore circle where he remained till the end of the year. Mr. K. Seshagiri Rao who was appointed as a full member of the service, provisionally substantive, from 28th July 1933 held charge of the Bellary circle till 8th March 1935 when he went on two months' leave.

Mr. H. N. Chelva Ayyangar who completed his probation in the Madras Veterinary Service continued to hold the post of Lecturer in Anatomy, Madras Veterinary College, throughout the year. Mr. A. Castelino, another officer who completed his probation in the Madras Veterinary Service was in charge of the Trichinopoly circle from 1st to 28th April 1934, the Vellore circle from 2nd to 29th May 1934 and the Calicut circle from 1st June 1934 till the end of the year. Mr. M. A. Rangaswami Ayyar who also completed his probation in the Madras Veterinary Service continued to act as Lecturer in Physiology, Madras Veterinary College, throughout the year.

The following probationers in the Madras Veterinary Service also held acting appointments in the service for different periods during the year :—

1. Mr. N. Muniyappa Pillai.
2. „ M. Ponnayya.
3. „ M. Sundaranathan.
4. „ R. Swaminathan.

Mr. S. D. Devadoss Pillai who was included under class II of the Madras Veterinary Service held the post of the Inspector of Livestock, Forest department, throughout the year.

The number of days spent on tour by each of the District Veterinary Officers during the year is given below :—

District Veterinary Officers.			Number of days spent on tour.
District Veterinary Officer,	Vizagapatam	...	188
„	Rajahmundry	...	241
„	Bezwada	...	191
„	Nellore	...	165
„	Bellary	...	169
„	Madanapalle	...	164
„	Vellore	...	214
„	Coimbatore	...	181
„	Calicut	...	191
„	Madura	...	198
„	Trichinopoly	...	182
„	Madras	...	202

(d) *Madras Veterinary Subordinate Service.*

4. The strength of the cadre of Veterinary Assistant Surgeons on 31st March 1935 was 274 as against 268 at the end of March 1934. This number excludes the post of a veterinary assistant surgeon which was abolished during the year consequent on the closure of the Veterinary Hospital, Sivaganga, but includes the following temporary posts :—

Veterinary Assistant Surgeons sanctioned for the Serum Institute	...	...	...	...	7
Assistant to the lecturer in Animal Hygiene sanctioned for the Agricultural College, Coimbatore	...	...	...	...	1
Assistant to the Veterinary Investigation Officer	...	...	...	...	1
Special Veterinary Assistant Surgeon sanctioned for exclusive duty in connexion with the inspection of sheep and goats intended for export at Tuticorin	...	...	...	...	1
New touring billets sanctioned during the year	...	...	...	...	6
Leave reserve post at 6½ per cent of the temporary posts	...	...	...	...	1
Total					17

The 274 posts were distributed as shown below during the year under report :—

(1) Itinerating	98 (plains).
	5 (agency).
(2) In charge of institutions	109 (plains).
	3 (agency).
(3) Leave reserve	32
(4) Attached to head office	1
(5) Employed in the Madras Veterinary College.	11
(6) Do. Serum Institute	7
(7) Do. Agricultural Department	3
(8) Do. Forest Department	3 One of these three posts is kept temporarily vacant.
(9) Under the Veterinary Investigation Officer.	1
(10) Special Veterinary Assistant Surgeon on export duty at Tuticorin	1
Total ..	274

II.—EDUCATION—MADRAS VETERINARY COLLEGE.

(i) Instruction.

(a) Staff.

5. The following were the officers who were on the gazetted staff of the College :—

- (1) Mr. T. J. Hurley, Principal and Professor of Medicine.
- (2) „ M. R. V. Panikkar, Lecturer in Hygiene, Resident Veterinary Officer and Personal Assistant to the Principal.
- (3) „ M. Anantnarayan Rao, Lecturer in Parasitology.
- (4) „ K. S. Nayar, Lecturer in Surgery.
- (5) „ A. K. Mitra, Acting Lecturer in Pathology and Bacteriology.
- (6) „ H. N. Chelva Ayyangar, Lecturer in Anatomy.
- (7) „ M. A. Rangaswami Ayyar, Lecturer in Physiology.
- (8) „ M. Sundaranathan, Acting Lecturer in Pharmacology.

(b) Training.

6. Five academic years have just been completed since the introduction of the new curriculum of studies. All facilities to obtain practical knowledge in the different subjects taught have been given to students as in the past; the facilities for the final year students to gain practical experience in their subjects were augmented by devoting more time to hospital practice. Students also continued to be sent to the Serum Institute, Perambur, to acquire practical knowledge concerning the production of serum and virus.

(c) Admission of students.

7. The number of students to be admitted to the College for the year was the same as that fixed for the previous year, i.e., 30 from the Presidency and Coorg and 10 from outside. The selection committees selected 20 students (3 at Bezwada and 17 at Madras) and placed 2 candidates in the waiting list at Bezwada. In addition, 9 students from Burma, 1 from Cochin and 1 from the Federated Malay States were admitted during the year with the sanction of Government. Seventeen of the selected candidates and one from the waiting list joined the College. Two of these candidates having resigned their seats soon after admission, the total strength of the first-year class towards the end of the year was 30 (16 students from Madras and Coorg, 11 private paying students and 3 failed students).

The total strength of the three classes was 107 as against 117 of the previous year, as shown below :—

	1933-34.	1934-35.
Non-Brahmans	45	31
Brahmans	38	39
Indian Christians and Anglo-Indians	15	17
Muhammadans	15	11
Other communities including depressed classes	4	..
Burmans	..	9
Total ..	117	107

(d) Scholarships.

8. During the year, of the four scholarships sanctioned for the College, one was awarded to a member of the backward class, one to a convert to Christianity, and one to a poor and deserving Muhammadan. The fourth scholarship was not awarded for want of a candidate belonging to the communities prescribed by Government.

(e) Professional examinations.

9. Messrs. T. J. Hurley and V. Krishnamurti Ayyar conducted the supplementary examinations for the provisionally promoted students. All the four students who appeared were successful.

The following were the President and members of the examining board for the annual professional examinations held from the 19th to 29th March 1935 :—

President.

Mr. P. T. Saunders, Director of Veterinary Services.

Members.

Mr. T. J. Hurley, Principal, Madras Veterinary College.
 Major Marriot, Deputy Assistant Director of Veterinary Services, Bangalore.
 Mr. K. Kailasam Ayyar, Superintendent, Serum Institute, Madras.
 Mr. M. R. V. Panikkar, Lecturer in Hygiene, Madras Veterinary College.

The results of the examinations were as follows :—

			Number appeared.	Number passed.
Class A	..	..	30	20
„ B	..	..	35	22
„ C	..	..	41	30

Percentage—60.

(f) Refresher course.

10. Six veterinary assistant surgeons from the Civil Veterinary Department, Madras, 2 Veterinary Inspectors deputed by His Exalted Highness the Nizam's Government, and 1 private veterinary graduate underwent the course of six months during the year. An examination was held at the termination of the course by a Board of Examiners constituted by Government.

The course has been ordered by Government to be extended from 6 to 9 months with a maximum strength of 10 candidates, 6 from the Civil Veterinary Department, Madras, and 4 outside students. The fee for outside students has been fixed at Rs. 200 each for the whole course. The course will commence from July 1935.

(g) University degree in veterinary science.

11. The Government have sanctioned the proposals for the introduction of the B.V.Sc. degree course from July 1935 subject to the recognition of the College by the University.

(h) Hostel, health and athletics.

12. The hostel was under the supervision of Mr. M. R. V. Panikkar, the warden. There were on an average 73 students including students from outside Madras and Coorg. Both the messes (vegetarian and non-vegetarian) were run by the students themselves under the guidance of the warden. Suitable facilities were afforded for the recreation of the members.

The students showed keen interest in sports and participated in some of the inter-collegiate tournaments. The health and discipline of the students were satisfactory.

(ii) Hospital.

13. Mr. K. S. Nayar, Lecturer in Surgery, was in charge of the College hospital. The number of admissions and daily average attendance was 6,883 and 91.93, respectively, as against 5,909 and

89.9 of the previous year which shows that the institution is becoming more and more popular. There was also an appreciable increase in the number of castrations performed though the number of operations was slightly less than in the previous year. The hospital receipts were Rs. 4,087-9-0 as against Rs. 4,114 of the previous year.

The dispensary at Rayapuram is gaining popularity as is seen from the steady increase in the number of admissions. A whole time veterinary assistant surgeon has been sanctioned from July next, for this dispensary.

(iii) Shoeing Forge.

14. During the year, 935 horses were shod and 68 shoes repaired, as compared with 881 and 28 of the previous year. The students had full facilities for receiving scientific instruction in shoeing.

(iv) Laboratory.

15. Mr. V. Krishnamurti Ayyar held charge of the Pathology and Bacteriology section from 1st April to 8th October 1934 and Mr. A. K. Mitra from 22nd October 1934 till the end of the year. M.R.Ry. M. Anantanarayan Rao was in charge of the Parasitology section throughout the year.

16. *(a) Pathology and Bacteriology section.*—During the year under review 1,896 specimens were examined as against 1,862 of the previous year exclusive of the specimens examined as a routine in connexion with the post-mortem examinations, research and class work. The total number of specimens confirmed was 727. Eighteen samples of industrial materials were also examined and the results in all cases were negative for Anthrax.

Interesting features which deserve special mention are :—

17. *Johne's disease.*—The existence of this disease was confirmed microscopically in two cows belonging to Coimbatore Agricultural Farm and in two cows of the Wellington Dairy Farm by the bowel-washing method. In the bowel-washings of a bull from Tirupattur acidfast organisms indistinguishable from Johne's disease were found, but the materials taken from the internal organs after its destruction did not reveal the bacilli.

In another instance a cow of the Agricultural Farm, Coimbatore, gave negative results to the bowel-washing method, but reacted to successive tests with avian tuberculin. Subsequently the animal was destroyed and the only lesion observed was that most of its mediastinal and mesenteric glands showed calcareous deposits, but no acidfast organisms could be detected in any of the organs.

These above two cases are interesting in that they gave indications of the disease during life, but the results obtained after post-mortem were negative.

18. *Tuberculosis*.—Two cases of tuberculosis were confirmed microscopically, one in a bullock belonging to the Corporation of Madras and the other in an imported Australian mare.
19. *Contagious abortion*.—Cases of abortion continued to occur among bovines belonging to certain Government Farms in this Presidency. Thirteen samples of sera were tested against the strain of *B. abortus* (Bang) obtained from Muktesar all with negative results.
20. *Rabies*.—The total number of brains examined from suspected cases of rabies were 79 out of which 50 proved positive (47 canines, 2 felines and 1 bovine).
21. *Streptothrix*.—*Streptothrix* infection was detected in two bullocks and in a dog.
22. *Rhinospordium*.—This organism was detected in the nasal growth of a bullock from Devakottai.
23. *Urocystitis Hæmorrhagica or Hill Hæmaturia*.—Villous papillomatous growths were seen in the bladder of an Ayrshire bull from Coonoor.
24. *Neoplasms*.—A large number of these have been examined. Carcinoma from the udder of a she-goat, from the frontal sinus of a cow, and teat of a bitch, and ephithelioma from the sheath of a dog and the nostril of a pony, and round-celled sarcoma from the eye of a dog and the intestines mesentery and liver of a hen are some of the more interesting ones recorded.
25. *Pleuro-pneumonia in goats*.—Necessary data for formulating a scheme of research on this disease have been called for from the District Veterinary Officers and a certain amount of information has already been collected.
26. *Post-mortem examinations*.—One hundred and five post-mortem examinations have been conducted during the year exclusively on carcasses of hospital cases.
27. *Vaccine*.—During the year autogenous vaccines were prepared and issued for 17 cases. The results of the vaccine treatment as in the past were reported by the staff to be very beneficial.
28. (b) *Parasitology section*.—The total number of specimens received was 4,759 as against 2,492 of last year.
- The total number of specimens confirmed in this section of the laboratory during the year was 1,904.
29. *Trypanosomiasis*.—Fifteen cases were confirmed for *T. evansi*. Large number of *T. theileri* was found in the blood smears of a bullock which succumbed showing symptoms simulating those of piroplasmosis.

30. *Helminthes*.—Seventy-three bottles of helminthes were received from the staff in addition to a fairly large number collected during post-mortem examination, etc. Specimens of a few more species of helminthes were added to the sectional museum of the laboratory.
31. *Ectoparasites*.—Three hundred and thirty-one bottles containing ticks, flies, lice, etc., were received from the districts in addition to the material collected by the staff of the laboratory.

32. (c) *Physiology laboratory*.—Mr. M. A. Rangaswami Ayyar was in charge of the section throughout the year. He examined 344 specimens received from the College wards, Corporation cattle depots and mufassal as against 261 specimens examined during the previous year.

The following abnormal constituents were present in 186 samples of urine :—

	Equines.	Bovines.	Canines.	Elephants.	Total.
Albumin	1	17	125	..	143
Sugar	1	2	13	1	17
Bile pigments	..	..	14	..	14
Hæmoglobin	..	1	8	..	9
Epithelial casts	..	..	3	..	3

Of the three samples of milk examined, two contained blood.

33. (d) *Clinical laboratory*.—Laboratory Assistant L. S. Parameswara Ayyar was in charge of the clinical laboratory throughout the year except for the period from 4th April to 3rd June 1934 when he was on leave. During his absence, Assistant Lecturer S. Vaidyanatha Mudaliyar was in charge of the laboratory. The laboratory continued to function as usual for speedy diagnosis and in training students in such work.

34. (e) *Anatomy section*.—Mr. H. N. Chelva Ayyangar held charge of this section throughout the year. Sixteen specimens from wards and from other officers were received in this section for examination by dissection and report.

Some of the interesting features of the materials examined are given below :—

- (1) Ulceration of the articular facets on the transverse processes of the fourth and fifth lumbar vertebræ as also the facets on the fifth lumbar and the sacrum. This animal (horse) had only five lumbar vertebræ.
- (2) Ileocolic intussusception.
- (3) Anchylosis of lumbar vertebræ.
- (4) The broad ligament was closely adherent to the joint capsule of pastern joint and to the sides of the os. coronæ by a very large amount of fibrous tissue; the edges and the under face of the broad ligament had the addition of an extremely large amount of fibrous tissue which gave the appearance of ringbone.

Osteoporosis in two equines.—The more prominent post-mortem lesions found in each are given below :—

No. 1.—Enlargement of the posterior border of the mandible, ulceration of the condyle articular area of squamous temporal and most of the bones of the limbs and of the transverse articular facets of the fourth, fifth and sixth lumbar and the base of the sacrum. Abnormal rarefactions of all the bones in general.

No. 2.—Similar lesions to those described above were observed in this subject which in addition showed enlargement of several of the joints.

III.—SERUM INSTITUTE.

35. (a) *Staff.*—Mr. K. Kylasam Ayyar continued to be in charge of the institute. There was no change in the sanctioned strength of the subordinate staff.

36. (b) *Accommodation and equipment.*—In order to improve the water-supply the existing pipe lines which were of 1½ inches calibre were replaced by 2 inches pipes; and negotiations were completed for the transfer of the pond together with the small building and one block of the latrine situated in the adjoining compound of the Slater hostel. To increase the cold storage accommodation for the biological products, an additional six-door cabinet with a heavy duty twin cylinder single acting reciprocating type 'Kelvinator' compressor was erected at a cost of Rs. 3,250.

37. (c) *Livestock and fodder.*—

(i) The following animals were purchased :—

(1) Adult he-buffaloes (serum-makers)	689
(2) Calves for use as virus producers and serum testers	443
(3) Sheep and goats for goat virus manufacture ...	236

(ii) The number of animals that died during the year and the number of discontinued animals that were disposed of are given below :—

	Died.	Disposed of.
Serum makers	49	804
Serum testers	7	100
Virus calves	165	175
Virus sheep and goats ..	223	11

(iii) Of the discontinued serum testers and virus producers, 52 calves were supplied to the Madras Veterinary College free of cost for use in the dissection classes and laboratory. One of the discontinued serum makers—a good type of buffalo—was found fit to be used as a breeding bull and was transferred to the Agricultural department.

(iv) All livestock and fodder such as paddy straw, wheat, bran, kulthi, greengrass, boiled rice, oil-cake, etc., were purchased on contract under the tender system.

38. (d) *Serum section.*—

(i) The use of big brass vessels for plasma separation was discontinued, and glass jars of 12 lb. capacity were introduced for the purpose, being less expensive and more satisfactory from the point of view of sterilization. The substitution has also eliminated the use of heavy weights for pressing out the serum from the clot.

(ii) The stock of anti-rinderpest serum on hand at the beginning of the year was 1,115 bottles, each bottle containing 50 unit doses of 5 c.cs. each. Twenty-six thousand seven hundred and five bottles or 1,335,250 unit doses comprising 27 brews were manufactured and completed during the year as against 1,743,900 doses during the previous year. The total quantity of anti-rinderpest serum issued amounted to 24,138 bottles or 1,206,900 unit doses, the quantity issued during the last year being 1,754,800 doses. All the brews were of the required potency and the reports on the inoculations performed in the field with the serum show satisfactory results.

The Government sanctioned the sale of anti-rinderpest serum manufactured in this institute to other Provinces and Indian States at a cost of one anna six pies per dose, but there was no demand during the year.

39. (e) *Virus section.*—

(1) *Bull virus.*—(i) The production and supply of rinderpest virus continued to be steady throughout the year. There was no break in the continuity of the passage of virus and it was possible to keep up the virulence throughout without having recourse to outside sources. The advantages claimed during the year 1932-33 on the suitability of buffalo-calves over bull-calves for economical virus production were further confirmed during the year. A high degree of reaction with characteristic clinical and post-mortem lesions, a steady yield of virus so as to meet demands regularly, a low percentage of cases of intercurrent protozoan infections and lastly economy in expenditure owing to the greater yield of virus from buffalo-calves, without loss of efficiency, are the main points in favour of the use of buffalo-calves for virus production instead of calves from the local breeds of white cattle.

(ii) The total number of calves used for virus production was 338, including controls used for goat virus passages and two white calves used for studying the difference in reaction with goat virus. Of the 338 virus producers, one calf, i.e., 0.32 per cent revealed the presence of piroplasma bigeminum in its blood, 20 calves, i.e., 6.4 per cent showed microfilaria, one calf, i.e., 0.32 per cent was infected with both Babesia-bigeminum and spirochaetes

and 4 calves, i.e., 1.2 per cent with spirochaetes alone. These 26 calves were rejected as unfit for virus drawing. It is interesting to record that none of the virus calves showed any trypanosome infection. The fall in the percentages of cases of intercurrent infection with piroplasms from 18 per cent to 0.3 per cent is worth noting. Twenty-five calves failed to react and the mortality among the virus calves was 53 per cent. With a view to minimise the resuscitation of microfilaria among the virus producers, the use of antimonium potassium tartaratum a few days before inoculation with virulent blood was adopted. The average weight of a virus producer was 170 lb. and the age between 1½ and 2 years. Twelve c.c. of a 2 per cent solution of antimonium potassium tartaratum was given intravenously to each calf, and so far more than 100 calves have been treated in this way. After the commencement of this method of treatment, the number of virus producers which revealed the presence of microfilaria has fallen from 12.4 per cent to 2 per cent.

(iii) In order to ascertain whether the intravenous injection of antimonium tartaratum a few days prior and in some cases a few hours prior to the inoculation of virus, has any deleterious effect upon the rinderpest virus in the animal body, statistics collected from a regular series of 100 calves of the previous year untreated with the chemical agent compared with another regular series of 100 calves of the year under report treated with the chemical agent, indicate that the reaction, severity and course of the disease are not in any way interfered with. There were 11 per cent non-reactors among the animals not chemically treated and 10 per cent among the chemically treated animals.

(2) *Goat-virus.*—(i) The goat-virus experiments started in 1932 and referred to in the previous year's report are being continued. Up to the end of the year under report, 137 passages of the virus from goat to goat had been completed. With a view to study the difference in reaction, if any, in local goats between the local strain and outside strains of virus, a parallel series of passages is being maintained with goat virus obtained from the Muktesar Laboratory. Eighty-three passages from goat to goat of this Muktesar strain had been completed at the close of the year. The percentage of mortality in goats with the local strain was 94 and in the case of the Muktesar strain 93. In the degree of reaction, clinical symptoms and post-mortem lesions, there is practically no difference. Attempts were also made with a view to determine whether there is a progressive attenuation of the virus during passage from goat to goat and if so, at what stage in a series the virus becomes fixed or becomes safe for use on cattle without the use of serum.

The tabular statement given below records the results of the experiments carried out. For the purpose of these trials 137 passages are divided into three groups of 45 each. Two goats and one buffalo-calf were used for each passage except where otherwise indicated by figures :—

Number of passages.	Number of animals inoculated.	Reaction.					Mortality.	Post mortem result.
		Temperature.		Diarrhoea.	Mouth lesions.			
		162° F.— 104° F.	Above 104° F.					
Group I. 1—45 passages.	Goats 88.	63 animals or 72 per cent.	13 animals or 15 per cent.	44 animals or 50 per cent.	27 animals or 31 per cent.	77 animals or 88 per cent.	Typical of Rinderpest. Do.	
	Controls 45.	20 animals or 44 per cent.	23 animals or 51 per cent.	35 animals or 78 per cent.	33 animals or 73 per cent.	23 animals or 51 per cent.		
Group II. 46—90 passages.	Goats 86.	55 animals or 64 per cent.	10 animals or 22 per cent.	41 animals or 48 per cent.	7 animals or 8 per cent.	84 animals or 97 per cent.	Do.	
	Controls 45.	24 animals or 53 per cent.	15 animals or 33 per cent.	36 animals or 80 per cent.	21 animals or 47 per cent.	21 animals or 47 per cent.	Do.	
Group III. 91—135 passages.	Goats 90.	60 animals or 67 per cent.	23 animals or 26 per cent.	33 animals or 37 per cent.	2 animals or 2 per cent.	89 animals or 99 per cent.	Do.	
	Controls 45.	21 animals or 47 per cent.	12 animals or 27 per cent.	21 animals or 47 per cent.	15 animals or 33 per cent.	8 animals or 18 per cent.	Do.	

(ii) To study the difference in reaction between the tissue virus and blood virus, two experiments were conducted. Five c.cs. of rinderpest blood from a typical case of rinderpest were injected subcutaneously into a calf. The calf reacted to rinderpest and it was discharged on the 20th day. Ten c.cs. of an emulsion with normal saline solution of testicular gland tissue from the same donor (1:50) was injected subcutaneously into another calf. This calf also reacted to rinderpest and died on the 13th day. In the second experiment, the calf which received the blood virus reacted showing all the symptoms of rinderpest and died; but the calf which was injected with tissue virus happened to be a non-reactor, and the result is therefore inconclusive and it is proposed to conduct further experiments on these lines during the current year.

(iii) Two experiments were conducted to study the difference in reaction, if any, between goat blood virus and spleen tissue virus from the same animal. One c.c. of blood from an infected goat was injected subcutaneously into a goat and a buffalo-calf and 5 c.cs. of an emulsion in normal saline solution of spleen pulp removed from the same goat was injected subcutaneously into another goat and a buffalo-calf. The goats died of rinderpest but the calves in both the experiments showed a good rinderpest reaction and recovered. This seems to show that there is no difference in the antigenic value of blood and spleen tissue.

(3) The quantity of bull virus supplied during the year was 174,650 c.cs., the corresponding figure for the last year being 252,975 c.cs. The fall in the demand for bull virus may be

attributed to (1) the larger use of goat virus, (2) fall in the number of cases of hyper-immunization following serum simultaneous inoculations, (3) complete cessation of demand for bull virus from the Civil Veterinary department, Hyderabad (Deccan), from October 1934 and (4) further decrease in the rinderpest outbreaks and the serum simultaneous inoculations. The quantities of the two strains of rinderpest goat virus supplied during the year are 20,700 c.cs. and 19,100 c.cs., respectively, against 2,800 c.cs. and 2,900 c.cs. issued last year.

40. (f) *Laboratory and microscopic work—*

- (i) All the cultural tests for virus and serum were systematically carried out in the laboratory in addition to the routine examination of blood smears, etc., as shown below. Since the introduction of the glass jars for serum separation referred to elsewhere, there has been a very decided improvement in the bacterial count of the brews of serum :—

The specimens examined under the microscope were 12,384 blood smears and 20 faeces, and of these 4,702 proved positive as follows :—

Blood smears.—Theileria 4,614, Theileria and Microfilaria 6, Theileria and Spirochaetes 1, Piroplasms 6, Microfilaria 42, Trypanosomes 6, Spirochaetes 8, Piroplasms and Spirochaetes 2, B. Subtilis 3, B. Subtilis and Theileria 2 and Anthrax 2.

Faeces.—Coccidia 7, Coccidia and Haemonchus 1, Haemonchus and Oesophagostomum 1 and Strongylus 1.

- (ii) Post-mortem examinations were conducted on 441 carcasses of animals that died in the institute. The following is the detailed list of parasites :—

(1) Echinococcal cysts	7
(2) Sarcocystis Blanchardi	7
(3) Fasciolæ	10
(4) Sarcocystis Blanchardi and Paramphistomum. ...	4
(5) Paramphistomums	17
(6) Paramphistomum and Echinococcal cysts ...	5
(7) Fasciolæ and Sarcocystis Blanchardi ...	1
(8) Echinococcal cysts and Sarcocystis Blanchardi. ...	2
(9) Echinococcal cysts, Paramphistomums and Sarcocystis Blanchardi	3
Total	56

- (iii) The experiment on the blood grouping in cattle was continued, the object being to ascertain if there is any difference in the protective value of homologous serum compared

with heterologous serum. The total number of experiments carried out in continuation of the 225 done during last year is 216, thus making a total of 441 experiments at the end of the year. Out of the 216 experiments carried out, 20 showed positive agglutinations. Further work will be continued.

- (iv) A trial was made to find out if the residue consisting of the solid contents of blood which remains after the separation of plasma in the manufacture of anti-rinderpest serum would be of any use as a by-product. The blood cells were collected, desicated, triturated and sun-dried. To assess its value as a tonic, the power was administered to the discharged virus producers in half a dram dose twice daily mixed with feed. The weights of these animals were recorded once a week and the figures compared with those of the controls kept along with them. Further trials are necessary before any conclusions can be arrived at.

41. (g) *Other sera and vaccines.*—There was a very large demand for black-quarter serum, black-quarter vaccine and hæmorrhagic septicæmia serum during the year. From a perusal of the figures furnished under 'Serum section' above, it will be seen that there was a decrease of 408,650 doses in the quantity of anti-rinderpest serum manufactured and that the demand from the district staff was less by 547,900 doses during the year as compared with the figures of the previous year. The fall in the demand and supply of anti-rinderpest serum was due to the low incidence of rinderpest in the Presidency in part due to the intensive campaign against the disease inaugurated and rendered possible by the opening of this institute—both by the serum simultaneous method and goat virus inoculations. The gradual extension of the use of goat virus alone is bound to react on the demand for anti-rinderpest serum, and in course of time, the output of this product will be much less than what it is at present. There are other diseases, however, such as hæmorrhagic septicæmia and black-quarter, the ravages of which necessitate protective inoculations on a large scale in this Presidency. The demand for sera and vaccines for these diseases is such that it is hardly possible, consistent with economy, to obtain adequate supplies as and when required. There is no reason why this institute should not undertake to manufacture these products at a comparatively cheap cost and meet the demand for an extended campaign against these diseases as in the case of rinderpest.

IV.—INVESTIGATION AND RESEARCH

42. (a) *Goat virus vaccination.*—As stated in the administration report for the year 1933-34, the method of protecting cattle against rinderpest by the 'goat virus' method of vaccination was given an extensive trial in villages free from the disease. Thirty-two thousand nine hundred and eleven cattle including buffaloes have

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been thus immunized and the results have shown that this method can safely be adopted in place of the serum simultaneous method on cattle in free areas. In last year's report it was stated that in doing these vaccinations villages were selected in areas known to have been free from rinderpest for several years past so as to exclude cattle that had gained immunity from a previous inoculation or attack of the disease. The results indicate that the animals vaccinated with goat virus do not form fresh centres of infection. During the year under report the non-prevalence of rinderpest in parts of the West Godavari district throughout the year was taken advantage of and 9,914 vaccinations by this method have been carried out in selected villages situated in a line stretching across a taluk. It is hoped that this immune belt will break the line of advance of disease now prevailing to the north of the line. It has been observed, however, that buffaloes show a comparatively greater severity of reaction than other cattle, and further attempts to devise a method free from this defect will be made. The results with goat virus obtained in this Presidency have been the same as those gained by other workers in other Provinces where the method has been brought into a more general use and has been practised even in affected villages. During the year under report the District Veterinary Officers alone were permitted to carry out vaccinations with this method and the question of permitting certain selected Veterinary Assistant Surgeons to perform these vaccinations is under consideration. It has been stated in a previous report that the goat virus method is simpler and far cheaper than the serum simultaneous method of immunizing cattle against rinderpest, and that the adoption of the goat virus method would result in a reduced demand for anti-rinderpest serum.

43. (b) *Nasal Granuloma*—*Nasal Schistosomiasis* or 'Snoring disease of cattle.'—This disease has formed the subject of investigation during the past few years in the Madras Veterinary College laboratory as well as in the field with the result that the parasite responsible for the disease in this province has been definitely determined. With a view to pursue the enquiry further and in order to devise an efficient and cheap line of treatment, a Veterinary Assistant Surgeon was posted on special duty in the Chittoor taluk which has been wellknown to be an area where the disease prevails in an intensive form. This officer started work on 19th May 1934 in eight selected villages and before the end of the year, had treated 456 head of cattle for the disease with injections of tartrate of antimony and has collected a mass of useful information for further investigation on the subject. In the course of the year, this Veterinary Assistant Surgeon had submitted material from 1,457 suspected cases for purpose of diagnosis, of which 69 per cent were found to be infected. It has also been found that cattle may be a source of infection to healthy ones without themselves showing the disease. Thus, material from 313 buffaloes which did not show any clinical signs of the disease, submitted for microscopical examination to the Madras Veterinary College,

showed that 123 or 39 per cent were affected with the disease. It will therefore be seen that the incidence of the disease is greater than was hitherto supposed. Investigation into the disease is being continued during the current year.

(c) *Veterinary Diseases Investigation.*

44. Mr. G. R. Viswanathan continued to hold charge of the Veterinary Investigation Officer's post. He was on tour for 195 days and visited 280 villages during the course of his investigation.

Blackquarter was the main disease taken up for investigation by him during the year. Preliminary investigation was also undertaken on the following diseases :—

(a) *Bacterial diseases*—

- (1) Johne's disease.
- (2) Tuberculosis.
- (3) Anthrax.
- (4) Bovine Lymphangitis.

(b) *Virus diseases*—

- (1) Rabies.
- (2) Sheep-pox.
- (3) Contagious Pleuro-pneumonia.
- (4) Fowl-pox.

(c) *Protozoan diseases*—

- (1) Theileria mutans.
- (2) B. sergenti in sheep and goats.
- (3) B. bigeminum.

(d) *Fungoid diseases*—

- (1) Ringworm.

(e) *Parasitic diseases*—

- (1) Nasal granuloma.

(f) *Deficiency diseases*—

- (1) Chronic rheumatic arthritis.

(g) *Poisoning*—

Details of the work done on the diseases mentioned above are embodied in the Veterinary Investigation Officer's report submitted to Government separately.

(d) *Research work at the Madras Veterinary College laboratory.*

45. The following items of research work were undertaken at the Pathological and Parasitological sections of the Madras Veterinary College laboratory :—

Pathology section.

(1) *Pseudo-fowlpest.*

46. Some experiments were conducted to immunise birds against the disease with a vaccine prepared from the brain material of the infected birds. The results obtained were not encouraging.

(2) Blackquarter, Anthrax and Hæmorrhagic Septicæmia.

47. No research work was done on these diseases during the year as the Veterinary Investigation Officer took up the problems connected with these. Graphs of the incidence of these diseases, over a period of ten years in the various districts, were prepared for him from the registers of the laboratory. In all 121 biological tests were conducted of which 32 proved positive for Blackquarter, 5 for Anthrax and 10 for Hæmorrhagic Septicæmia.

(3) Anterior Pituitary Hormone.

48. One hundred and forty ounces of urine hormone from pregnant cows was prepared and tried in the field this year also. Thirteen animals were treated with the hormone, of which one was treated twice. The reports received so far have not been encouraging.

Parasitology section.

(1) Nasal Schistosomiasis.

49. To confirm the results of previous experiments attempts were made in 1933-34 to produce the disease artificially by smearing first cercarie of *S. spindalis* and later *Cercarie indicæ* XXX on the nasal mucous membrane of a calf and observations were recorded during the year regarding the same. In conformity with the previous findings the former parasite did not produce Nasal schistosomiasis whereas the latter did. This calf was kept under observation to see whether in course of time spontaneous recovery occurs in the absence of further infestation. No recovery has occurred even after one year. Incidentally it was also observed that the lesions produced in the calf were of a mild type probably due to its acquiring a partial immunity as a result of the previous infestation with *S. spindalis*. The calf on destruction after one year showed a small number of *S. nasalis* in the veins of the nasal mucous membrane and a large number of *S. spindalis* in the portal system. Incidentally it should be observed that this experiment seems to confirm the view already expressed by Seymour Sewell and other workers on the subject regarding the question of immunity in parasitism.

During the course of examination of the sections of horn growth from bovines suspected for epithelioma it was possible to see in one of the growths certain bodies which looked like ova of nasal schistosomes in follicles. The question therefore arises whether nasal schistosomes can be one of the causes of epithelioma in the horn and sinuses of the head in cattle. Work on this is in progress. A systematic examination of nasal washings received from the Veterinary Assistant Surgeon posted on special duty in the Chittoor taluk on Nasal Granuloma work was carried out at the College laboratory. The details of his work are described in paragraph 43.

(2) Gnathostome infection.

50. In one dog, ova of these parasites were seen in the fæces and advantage of this was taken to study the life history of this worm which is liable to infect man. It was possible to study the growth of the larvæ in fæcal cultures but further work could not be pursued owing to the sudden death of the dog.

(3) Cutaneousmyiasis in animals.

51. With a view to study the kinds of flies that produce cutaneousmyiasis in animals in South India and their seasonal incidence, etc., this work was taken up from December 1934. So far 308 specimens have been received. The most common fly appears to be a chrysomia, the description of which tallies with that given by Patton for *C. bezziana*. *Lucilia* species have also been met with. Specimens from both types have been sent to England for identification.

(4) Rhinosporidiosis.

52. This was detected in the nasal washings in three bovines. In another instance this disease co-existed with nasal schistosomiasis. A series of trials with fresh materials was made to infect calves without success. The life history of this organism is not known so far.

(5) Streptothricosis.

53. During the year it was possible to isolate and study the cultural characters of a species of streptothrix from the lungs and liver of a dog that died in the Veterinary Hospital, Bellary. This fungus appears to be an actinomyces and further study on its pathogenicity in laboratory animals is in progress.

(6) Calcareous nodules in the liver and lung of horses.

54. *Schistosoma indicum* is reported to cause persistent debility in horses. To verify this, the lungs and livers of jutka ponies destroyed for the operative surgery and anatomy classes were examined. Although a large percentage of these ponies had calcareous nodules, not suspicious of glanders, no schistosomes were detected in them. So far it has been possible only to see larval nematodes in some of them. Recently in a healthy pony which died after a motor accident, it was possible to see these lesions and from its portal vein over 30 pairs of *S. indicum* were collected. The calcareous nodules of the liver were sectioned and no ova of *S. indicum* could be found in them. This work will be continued next year for further study.

(e) Anatomical findings.

55. The interesting anatomical points observed in the ox during the year are—

- (a) Variation in the number of nerves in the formation of the lumbo sacral plexus, in the disposition of the terminal branches of the median nerve, in the nerve supply to the

obturator internus and coracho-brachialis, in the disposition of the first four sacral nerves, in the origin of the artery of the cord and of the inferior cervical arteries, and in the behaviour of the common digital, œsophageal and some of the inter-costal arteries.

- (b) Additional nerve supply to the superficial flexor of fore-limb, pectineus, brachialis anticus, latisimus dorsi and sterno-thyrohyoideus.

A series of dissections were made on the ox type to trace the usual nerve distribution to certain muscles such as levator anguli and rhomboideus as the information available appears to be meagre, indefinite and dubious.

The disposition of the branches of the cervical spinal nerves concerned in the formation of the phrenic nerve in the ox was also investigated.

V (a).—CONTAGIOUS DISEASES.

(i) *Bovine.*

56. The fall in the incidence of all contagious diseases of cattle reported in the Administration Report of the last year has continued during the year under report, the total number of deaths from all contagious diseases being 26,733 compared with 31,774 during the previous year. The recrudescence of Hæmorrhagic Septicæmia and Blackquarter mentioned in the last year's report has also abated to some extent, the mortality from these diseases being 6,825 and 6,416 as compared to 7,536 and 7,550, respectively, during the year 1933-34.

The total number of outbreak reports received and attended to by the staff during the year were 3,559 and 3,305 as against 3,946 and 3,549 respectively of the previous year. Of the 3,559 outbreak reports referred to, only 2,511 were of diseases ordinarily fatal to cattle.

In order to maintain a greater accuracy in statistics which were reported by the Special Rinderpest Officer to be unsatisfactory, instructions have been issued to District Veterinary Officers to devote greater attention to the outbreak reports and mortality figures reported by village munsifs and to rectify discrepancies whenever noticed. As a result of this it was found necessary to report 91 cases in which village munsifs were noticed to be slack. Certain municipalities which had not adopted by-laws for the maintenance of mortality registers are being induced to do so.

57. *Rinderpest*.—The fall in the incidence of rinderpest mentioned in the previous year's report continued during the year 1934-35, the number of outbreak reports and deaths from this disease being 324 and 3,243 as compared to 608 and 5,209, respectively, of the last year. The policy of the department with regard to this disease was continued during the year with the result that 115,130 inoculations by the 'serum simultaneous' method were conducted as against 139,252 done during the previous year. Of

these 67,846 were done in areas free from the disease. Besides these, 32,911 cattle were protected by the method referred to as the 'goat virus' method. The total number of cattle protected against rinderpest by both the methods was 148,041 compared with 141,892 of the previous year. The number of inoculations done by the 'serum alone' method shows a decrease, i.e., 547 as against 1,468 and a further decrease during the next year is anticipated.

In pursuance of the orders in G.O. No. 1525, Development, dated 13th December 1933, the District Veterinary Officers were instructed to carry out trials with reduced doses of serum in 'serum simultaneous' inoculations with a view to determine the minimum dose required for immunising cattle by this method and the results obtained have been reported to Government in my letter D. Dis. No. 2087-D/34, dated 17th May 1935. The adoption of the smaller doses rendered possible by these trials is expected to result in a demand for serum during the current year less than that of last year.

58. *Anthrax*.—The number of deaths from this disease reported during the year was 2,300 as against 3,612 of the previous year thus showing a perceptible decrease. Four thousand seven hundred and twenty-four inoculations by the 'serum alone' method were performed during the year as against 2,542 inoculations carried out during the previous year. No deaths were recorded from equine anthrax during the year.

59. *Hæmorrhagic Septicæmia*.—There has been a slight decrease in the number of deaths reported from this disease during the year, the figures for the two years 1934-35 and 1933-34 being 6,825 and 7,536, respectively. Fifty-one thousand fifty-three animals were inoculated by the 'serum alone' method as against 31,333 of the previous year.

60. *Blackquarter*.—The number of deaths from this disease reported during the year was 6,416 as against 7,550 of the previous year, but the disease continued to be severe in several parts of the Presidency during the year. Eighty-three thousand three hundred and ninety-five inoculations against the disease were performed as shown below as against 63,897 of the previous year:—

Serum alone	...	...	...	...	...	25,048
Vaccine alone	...	...	...	...	...	13,306
Sero-aggressin	...	...	...	...	...	508
Aggressin alone	...	...	...	...	...	61
Sero-vaccine	...	...	...	...	...	44,472

Total ... 83,395

61. *Foot and mouth disease*.—The number of deaths from the disease reported during the year was 1,720 as against 1,590 of the previous year.

62. *Bovine lymphangitis*.—Several cases of this disease were met with during the year and treatment was given in about 150

cases with the vaccine prepared at the Madras Veterinary College with satisfactory results.

63. *Nasal Granuloma*.—One thousand one hundred and eighty-seven cases of Nasal Granuloma were met with during the year, out of which 456 cases were dealt with in the Madanapalle circle where a special veterinary assistant surgeon was deputed to investigate the causes of the disease. Almost all cases with very few exceptions were treated with Antimonium Tartaratum. The results in most of the cases treated were satisfactory.

64. *Coccidiosis*.—This disease was confirmed in about 100 cases.

65. *Piroplasmosis (B. bigeminum)*.—This disease was confirmed in 124 cases during the year and most of the cases were treated successfully with intravenous injection of trypan-blue.

(ii) *Equine*.

66. *Glanders*.—No cases of glanders were reported during the year. The veterinary assistant surgeon on glanders duty tested 196 horses and ponies with Mallein (73 by subcutaneous and 123 by intradermal test), of which 107 were hackney and jutka ponies. None proved positive for glanders.

67. *Trypanosomiasis*.—Fifty-nine cases were confirmed microscopically for this disease during the year, 50 being equine. Treatment with Nagonal was tried in most of the cases with satisfactory results.

68. *Strangles*.—About 130 cases were treated for this disease during the year.

69. *Kumri*.—A few cases of this disease were diagnosed during the year.

70. *Tuberculosis*.—One case of this disease was met with in a horse at Bobbili.

(iii) *Other animals*.

71. *Sheep-pox*.—There were a few outbreaks of this disease during the year which were promptly attended to.

72. *Rabies*.—This disease was confirmed in 134 animals. One hundred and eighteen animals were given anti-rabic treatment in the several veterinary institutions in the Presidency.

73. *Poultry diseases*—(i) *Fowl cholera*.—There were outbreaks of this disease in some of the districts in the Presidency and 629 fowls were protected either with vaccine or with vaccine and anti-serum.

(ii) *Pseudo-fowl pest*.—There were a few outbreaks of the disease in the Presidency and about 150 cases were treated.

(iii) *Spirochaetosis*.—This disease was prevalent in Bellary town as in the previous year and the affected cases were injected with half a grain of Sodium Cacodylate in 1 c.c. of Aqua subcutaneously on alternate days and it is reported that some have been cured.

(b) *Non-contagious diseases of unusual interest*.

74. The following are the other important diseases dealt with during the year :—

(i) *Chronic Luxation of Patella-Bovines*.—About 700 cases were treated for this disease during the year.

(ii) *Urethral Calculi*.—Twenty-three cases of this disease were treated during the year.

VI.—HOSPITALS AND DISPENSARIES.

75. The total number of veterinary institutions at the end of the year was 112 including those attached to the Madras Veterinary College and the Cattle Farms at Coimbatore and Hosur but excluding the private institutions at Vizianagram, Pithapuram and Parlakimedi and Sivaganga. The decrease in the number is due to the closure of the Veterinary Hospital, Sivaganga, as ordered by Government. The veterinary hospital at this place has subsequently been opened in the same Government premises which have been lent to the Sivaganga samastanam for purposes of running the veterinary hospital as a private institution under the management of the samastanam.

There has been an appreciable increase in the total number of in- and out-patients treated in the several veterinary institutions in the Presidency during the year, the figures for the two years 1933-34 and 1934-35 being 234,705 and 242,860, respectively. The number of cases supplied with medicine but not brought to the institutions during the year was 8,149 as against 6,497 in the previous year.

The leading institutions in the Presidency with the number of cases treated in each are shown below :—

Name of institution.	Number of cases treated.
(1) Madras Veterinary College Hospital ...	6,888
(2) Veterinary Hospital, Coimbatore ...	6,556
(3) Veterinary Hospital, Conjeeveram ...	4,891
(4) Veterinary Hospital, Salem ...	4,551
(5) Veterinary Hospital, Trichinopoly ...	4,509
(6) Veterinary Hospital, Rajahmundry ...	4,887
(7) Veterinary Dispensary, Madura ...	4,015
(8) Veterinary Hospital, Calicut ...	3,986
(9) Veterinary Dispensary, Bezwada ...	3,778
(10) Veterinary Hospital, Saidapet ...	3,410
(11) Veterinary Dispensary, Gudivada ...	3,366
(12) Veterinary Hospital, Palghat ...	3,322
(13) Veterinary Hospital, Guntur ...	3,129

VII.—ITINERATING STAFF.

76. The number of touring posts has been increased by six during the year, the total number of such posts at the end of the year remaining at 103 as against 97 of the previous year. The headquarters of the touring veterinary assistant surgeons, Bhavani and Udamalpet in the Coimbatore circle, were shifted during the year to Gobichettipalayam and Dharapuram, respectively, and the headquarters of the touring veterinary assistant surgeon, Bapatla, in the Bezwada circle to Ongole. On account of water scarcity in Anantapur district especially in Penukonda taluk, the headquarters of the touring veterinary assistant surgeon, Penukonda, were permanently shifted to Hindupur.

The total number of cases treated by the itinerating staff during the year was 102,261 as against 74,315 of the previous year. Of these, 33,645 were contagious cases and 68,616 non-contagious.

VIII.—CASTRATIONS.

77. A larger number of castrations was performed during the year than in the previous year, the figures for the two years being 63,565 and 52,521, respectively. Most of the castrations were done by the Burdizzo method which continues to be more and more popular among the ryots. The largest number of castrations performed was in the districts of Coimbatore, East Godavari and Chittoor, the figures for these districts being 4,769, 4,164 and 3,912, respectively.

IX.—MISCELLANEOUS.

78. *Criminal poisoning and malicious injury.*—The Chemical Examiner to Government examined the viscera of 44 animals during the year and poison was detected in 14 cases. Six cases of criminal poisoning were prosecuted resulting in four convictions and two acquittals. Two hundred and twenty cases were examined by the staff of this department for malicious injury during the year and necessary certificates were issued to the police.

79. *Society for Prevention of Cruelty to Animals.*—The total number of convictions obtained under the Society for Prevention of Cruelty to Animals Act in the Presidency was 11,408 as against 9,595 of the previous year, Trichinopoly and Coimbatore recording as usual the largest number of convictions, the figures for these districts being 2,848 and 3,155, respectively. Out of the total number of cases in which the accused were convicted, the animals in 3,454 cases were remanded to the veterinary institutions declared as infirmaries under the Act for treatment as against 3,283 cases so remanded in the previous year.

80. *Forest grazing—Protection of bison from rinderpest.*—Government in their order Ms. No. 1012, Development, dated 24th November 1934, extended the inoculation scheme in the bison areas

of Kollegal division for another year. The orders of Government that no permits should be issued for the grazing of cattle in the forests of Coimbatore district unless the cattle carry the certificate of a veterinary assistant surgeon that they have been inoculated and bear tattoo marks were carried out.

81. *Forest Livestock.*—The general condition of the forest livestock during the year is reported to be satisfactory. The total number of livestock which were under the Inspector of Livestock, Calicut, on 31st March 1935 was as follows:—

Elephants	...	...	...	...	...	...	112
Bullocks	...	...	...	...	...	...	2
Buffaloes	...	...	...	...	...	...	13

One buffalo got a slight attack of Foot and Mouth disease during the year, and prompt action was taken to check the spread of the infection. Three hundred and twenty-six cases of non-contagious diseases were treated during the year as against 384 cases of the previous year. There were only 2 cases of deaths during the year which were not diagnosed.

82. *Meat Inspection.*—Several municipalities and union boards availed themselves of the services of the local veterinary assistant surgeons for meat inspection work during the year and in a few cases, the municipalities ceased to utilize the services of local veterinary assistant surgeons for meat inspection work. The municipalities of Trichinopoly and Tuticorin employed during the year whole-time veterinary assistant surgeons for meat inspection work.

83. *Lethal chambers.*—Most of the lethal chambers of the destruction of stray dogs maintained by the local boards and municipalities were periodically inspected by the staff of this department.

84. *Propaganda.*—As in the previous years, propaganda work was continued by the staff during the course of their tours by way of free distribution of departmental leaflets to the ryots, by delivering lectures with the aid of magic lantern slides on important contagious diseases of cattle and also on diseases communicable to men and by practical demonstration of Burdizzo's method of castration. Opportunities were availed of at cattle fairs and exhibitions and health and baby week celebrations to conduct magic lantern lectures and demonstrations with a view to educate the ryots on veterinary matters. The motor exhibition vans of the Agricultural department were also made use of for propaganda work.

The work in connexion with the rural development scheme for the Tiruvallur taluk of Chingleput district was discontinued during the year under the orders of Government. The special veterinary assistant surgeon posted for the work visited the important scheme centres and delivered magic lantern lectures till the discontinuance of the scheme.

85. *Fairs and Shows*.—Several annual and weekly cattle fairs were held during the year and were attended by the staff of this department. The provisions of the Cattle Diseases Act were enforced in some of the fairs owing to the prevalence of rinderpest.

86. *Horse-breeding*.—The stallion 'China' owned by the Coimbatore District Board was auctioned during May 1934 as it was considered unfit for further breeding purposes. The other stallion 'Gaffi' was housed at the Veterinary Hospital, Coimbatore, till the end of November 1934 and then it was transferred to Palayakottai during the remaining portion of the year. Fourteen mares were covered during the year.

87. *Visiting committees*.—The visiting committees attached to certain veterinary institutions continued to function satisfactorily and rendered help in regard to the working of the institutions except in the case of the committees formed for the veterinary institutions at Kothapeta, Polavaram, Chittoor, Tiruvallur, Nannilam, Ariyalur and Mannargudi. As the attendance had fallen at the Veterinary Hospital, Ongole, a visiting committee was constituted during the year with a view to improving the work of the institution.

88. *Levy of fees in veterinary institutions*.—Fees were introduced during the year in the veterinary institutions at Tiruppur, Gobichettipalaiyam, Pollachi and Dharapuram. The system of levy of fees continued to work satisfactorily and there has been an increase in the amount of fees collected at the veterinary institutions except in a few cases which is mainly due to general economic depression.

89. *Inspection of animals intended for export to Ceylon*.—The veterinary assistant surgeon placed on special duty at Tuticorin attended to the inspection of sheep and goats intended for export to Ceylon and to the issue of certificates to healthy animals before shipment. The total number of sheep and goats exported during the year was 38,289 as against 39,502 of the previous year. The fall is reported to be due to the reduction by 25 per cent from 1st November 1934 made by the Ceylon Government as a result of its contract with Aden which was actually exporting 200 to 300 animals per month.

A fee of 2 annas per head continued to be levied for the issue of certificates and the receipts realized during the year on this account amounted to Rs. 4,827-6-0 while the expenditure was only Rs. 2,066-2-0, thus leaving a credit balance of Rs. 2,761-4-0.

X.—FINANCE.

90. According to this office registers the total expenditure of this department during the year under report including that incurred in connexion with the Veterinary Investigation scheme was Rs. 9,31,736-15-6 as against Rs. 9,04,392-1-10 incurred during the previous year. There was an increase in expenditure under all

the sub-heads except under "Circle Officers", "Veterinary College" and "Serum Institute," the actual expenditure under these heads being Rs. 1,13,772-0-7, Rs. 1,05,039-10-9 and Rupees 82,652-13-7, respectively as against Rs. 1,18,459-11-8, Rupees 1,08,170-2-3 and Rs. 97,088-12-6 of the previous year. The decrease under "Circle Officers" is due to the demise of two senior District Veterinary Officers, Messrs. H. C. Sampath Ayyangar and A. J. Wilson, on 8th April and 11th May 1934, respectively, and the drawal of lower rates of pay by officers on probation posted to act in their arrangements, removal of the District Veterinary office, Calicut, from a rented to a Government building from 1st September 1933, shifting of the District Veterinary office, Rajahmundry, to a new building on a lower monthly rental of Rs. 18 from 1st May 1934 instead of Rs. 38-8-0 paid for the previous building and the non-payment of any compensation under the Glanders and Farcy Act during the year. The decrease under "Veterinary College" is mainly due to the drawal of arrears of house allowance and Presidency allowance by some of the gazetted officers and subordinate staff employed in the Madras Veterinary College during the previous year, i.e., 1933-34, the grant of stipends to less number of students during the year under report, receipt of Indian Store Department bills in the year 1935-36 for articles supplied during 1934-35 and the cancellation of orders for certain items of stores by the Controller of Purchase, Calcutta. The decrease under "Serum Institute" is chiefly due to a considerable reduction in the number of animals purchased during the year owing to the decreased demand for anti-rinderpest serum and virus and the testing of each brew of serum with three calves instead of six calves as before, the actual cost of tenders being lower than that of the previous year, less number of virus parcels despatched during the year as compared with the previous year and the change in the debit head of account for the conveyance of serum parcels from "Serum Institute—Other Contingencies" to the concerned other heads under "Veterinary" from 1st April 1934. The receipts of the department amounted to Rs. 47,078-15-9 as against Rs. 45,930-15-4 of the previous year.

XI.—FUTURE PROGRAMME OF WORK.

Education.

91. (a) *Instruction*.—The three years' diploma course will continue to be held and the refresher course for the veterinary assistant surgeons will be held for a period of nine months from the beginning of July 1935.

(b) *University Degree Course*.—Government have sanctioned the proposal for the introduction of the degree course in the Madras Veterinary College with effect from July 1935 subject to the University recognizing the Veterinary College as a constituent College. If and when University recognition is obtained, the degree course will be instituted at the College.

(d) *X-Ray Apparatus*.—The X-Ray apparatus sanctioned by Government for installation at the Madras Veterinary College has been obtained through the Chief Controller of Stores and the same will be put in use during the current year.

92. *Laboratory work and research.*—The Pathology and Parasitology sections of the Madras Veterinary College will continue to carry out the various items of research work which have already been taken on hand. New items of research will also be undertaken as occasion arises. The routine experiments and examination of materials, preparation of vaccines, etc., will also be continued at the Madras Veterinary College.

The Veterinary Investigation Officer appointed for this Presidency will continue his investigations.

93. *Serum Institute*.—The manufacture of anti-rinderpest serum and virus will be continued at the institute. The question of the manufacture of other kinds of sera and vaccines will also be considered.

94. *Contagious and non-contagious diseases.*—Proposals for the opening of additional touring billets for the normal expansion of the department will be submitted to Government as Part II scheme for 1936-37. Proposals for the opening of more veterinary dispensaries will however be sent up to Government only when financial assistance is forthcoming from local bodies and others interested.

95. *Propaganda.*—Propaganda work on existing lines will be continued.

Towards the close of the year Government issued orders transferring to this department for propaganda purposes the motor lorry attached to the office of the Director of Public Health, Madras. The necessary repairs were carried out to the lorry and it is now ready for use. With the aid of the lorry it is hoped that the department will be able to carry on propaganda work on a more intensive scale and familiarise the ryots in veterinary matters in a much shorter period than it would otherwise be possible.

MADRAS,
27th June 1935.

P. T. SAUNDERS,
Director of Veterinary Services.

APPENDIX I.

Statement showing the number of deaths from contagious diseases among animals during the year 1934-35 (as furnished by Collectors).

Districts.	1900.													Total.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	
	Kinderspest.	Anthrax.	Hæmorrhagic septicæmia.	Blackquarter.	Foot and mouth.	Others.	Total.	Glanders.	Anthrax.	Surra.	Others.	Total.		
Ganjam ..	1,026	61	380	191	330	1,674	3,662	..	..	..	..	..		
Vizagapatam ..	..	..	530	473	446	1,068	2,517	..	..	..	..	..		
Godavari, East ..	..	214	346	134	95	363	1,470	..	..	2	..	2		
Godavari, West ..	..	355	401	89	12	243	1,331	..	..	..	..	..		
Kistna ..	..	404	106	522	29	7	1,247	..	..	..	..	..		
Guntur ..	..	54	112	786	224	54	1,345	..	..	..	..	..		
Kurnool ..	..	81	183	236	28	63	826	..	..	..	..	..		
Bellary ..	..	3	104	27	69	109	361	..	..	..	2	2		
Anantapur ..	..	47	15	49	433	455	1,085	..	..	..	3	3		
Cuddapah ..	..	195	71	141	104	27	548	..	..	..	..	..		
Nellore ..	..	111	287	1,309	460	16	2,675	..	..	..	..	..		
Chingleput ..	..	165	74	687	235	10	1,305	..	..	..	..	..		
South Arcot ..	..	55	6	91	151	7	350	..	..	..	..	..		
North Arcot ..	..	13	46	187	218	34	648	..	..	..	..	..		
Chittoor ..	..	30	122	17	1,004	77	28	..	..	..	..	..		
Salem ..	..	1	33	72	683	17	548	..	..	..	..	..		
Coimbatore ..	..	22	29	59	1,027	104	1,314	..	..	..	..	..		
Trichinopoly ..	..	59	82	235	11	45	452	..	..	..	..	..		
Tanjore ..	..	57	41	592	19	32	743	..	..	..	1	1		
Madura ..	..	47	69	214	189	33	648	..	..	..	..	..		
Ramanad ..	..	16	64	32	58	53	223	..	..	..	..	..		
Tinnevely ..	..	118	25	82	11	62	318	..	..	..	10	10		
The Nilgiris ..	..	6	11	13	31	5	144	..	..	..	..	..		
Malabar ..	..	8	174	275	196	15	680	..	..	..	..	..		
South Kanara ..	..	82	..	7	5	46	140	..	..	..	..	..		
Madras City ..	..	..	..	..	1	..	3	..	..	..	..	..		
Total ..	3,248	2,300	6,825	6,416	1,720	6,229	26,733	..	..	2	16	18		

Statement showing results of preventive inoculation during the
year 1934-35—*cont.*

Districts.	Name of disease against which inoculation was carried out.	Method of inoculation followed.	Number of outbreaks in which inoculation was undertaken.	Number of animals which died uninoculated in course of outbreak.			Number of animals inoculated.			Number of animals which died after inoculation.		
				Horses.	Bovines.	Others.	Horses.	Bovines.	Others.	Horses.	Bovines.	Others.
Chingleput	Rinderpest.	Goat virus.	..	..	..	..	2,229	..	..	..	..	
South Arcot			..	..	..	..	445	..	..	..	..	
North Arcot			..	..	..	3,602	..	..	..	..	..	
Salem			..	..	..	3,482	..	..	..	8	..	
Trichinopoly			..	..	..	422	..	..	..	..	..	
Tanjore			..	..	..	215	..	..	..	..	..	
Madura			..	..	..	1,354	..	..	..	4	..	
Ramnad			..	..	..	2,112	..	..	..	..	..	
Tinnevelly			..	..	..	1,880	..	..	..	2	..	
Coimbatore			..	..	..	285	..	..	..	..	..	
The Nilgiris			..	..	..	593	..	..	..	3	..	
Malabar			..	..	..	38	..	..	..	..	..	
South Kanara	..	..	..	..	..	..	..	..	..			
Madras City	..	..	..	..	..	..	32,911	..	..	23		
Total	..	..	..	..	..	..	..	..	..	..		
Ganjam	Hæmorrhagic Septicæmia.	Serum alone method.	3	..	25	..	140	..	..	..	..	
Vizagapatam			1	..	7	..	111	..	..	..	..	
Godavari, East			13	..	136	..	2,896	..	..	..	..	
Godavari, West			1	..	17	..	249	..	..	..	..	
Kistna			5	..	71	..	1,780	..	..	3	..	
Guntur			10	..	138	..	2,447	..	..	..	..	
Kurnool			6	..	40	..	1,123	..	..	..	..	
Bellary			2	..	27	..	442	..	..	..	..	
Chittoor			..	..	..	..	..	..	..	..	..	
Anantapur			17	..	125	..	2,060	..	..	1	..	
Cuddapah			93	..	1,112	..	17,901	..	..	51	..	
Nellore			48	..	244	..	8,927	..	..	..	..	
Chingleput			4	..	24	..	468	..	..	..	..	
South Arcot			2	..	13	..	178	..	..	..	..	
North Arcot			2	..	13	..	178	..	..	..	..	
Salem			3	..	26	..	278	..	..	..	..	
Trichinopoly			30	..	191	..	5,154	..	..	1	..	
Tanjore			9	..	105	18	1,379	294	..	..	..	
Madura			5	..	59	..	852	..	..	..	..	
Ramnad			5	..	49	..	610	..	..	..	..	
Tinnevelly			..	..	..	..	..	..	..	..	..	
Coimbatore			..	..	..	..	..	..	..	..	..	
The Nilgiris	24	..	98	..	126	..	..	..	..			
Malabar	1	..	257	..	3,840	..	..	2	..			
South Kanara	..	..	..	..	..	..	..	..	..			
Madras City	..	..	..	..	..	..	..	..	..			
Total	..	..	282	..	2,704	18	50,759	294	..	58		
Ganjam	Anthrax.	Serum alone method.	1	..	1	..	..	6	..	..	..	
Vizagapatam			5	..	44	..	1,042	..	..	..	..	
Godavari, East			..	..	..	..	..	..	..	..	..	
Godavari, West			..	..	..	..	..	..	..	..	..	
Kistna			..	..	..	..	..	..	..	..	..	
Guntur			..	..	..	..	..	..	..	..	..	
Bellary			1	..	..	..	19	..	..	..	..	
Kurnool			2	..	27	..	300	..	..	..	..	
Nellore			..	..	..	..	..	..	..	..	..	
Cuddapah			3	..	29	..	965	19	..	..	..	
Chittoor			..	..	..	..	..	..	..	..	..	
Anantapur			5	..	13	63	890	316	..	..	..	
Chingleput			..	..	..	..	..	..	..	..	..	
South Arcot			..	..	..	..	..	..	..	..	..	
North Arcot			1	..	4	..	135	..	..	..	..	
Salem			1	..	5	..	134	..	..	..	..	
Trichinopoly			1	..	16	..	519	..	..	..	..	
Tanjore			3	..	..	..	..	..	..	..	..	
Madura			..	..	..	..	..	..	..	..	..	
Ramnad			..	..	..	..	..	..	..	..	..	
Tinnevelly			1	..	1	..	131	..	..	..	..	
Coimbatore			..	..	..	..	..	..	..	..	..	
The Nilgiris	1	..	13	..	61	..	..	..	..			
Malabar	..	..	..	..	..	..	..	..	..			
South Kanara	2	1	2	..	137	..	..	..	..			
Madras City	..	..	..	..	..	..	..	..	..			
Total	..	..	26	1	159	64	4,383	341	..	..		

Statement showing results of preventive inoculation during the year 1934-35—cont.

Districts.	Name of disease against which inoculation was carried out.	Method of inoculation followed.	Number of outbreaks in which inoculation was undertaken.	Number of animals which died uninoculated in course of outbreak.			Number of animals inoculated.			Number of animals which died after inoculation.		
				Equines.	Bovines.	Others.	Equines.	Bovines.	Others.	Equines.	Bovines.	Others.
Ganjam	Black quarter.	Serum alone method.	3	..	12	..	..	166	..	..	..	..
Vizagapatam			2	..	23	..	..	444	..	..	..	..
Godavari, East			..	..	..	..	..	..	..	..	..	..
Godavari, West			..	..	..	..	..	..	..	..	..	..
Kistna			1	..	3	..	..	332	..	..	..	..
Guntur			1	..	16	..	..	167	..	..	..	..
Bellary			..	..	..	..	..	..	..	..	..	..
Kurnool			19	..	119	..	..	4,787	..	..	..	..
Nellore			2	..	6	..	..	113	..	..	..	..
Cuddapah			22	..	178	..	..	4,344	..	35	..	..
Chittoor			8	..	129	..	..	1,814	..	3	..	..
Anantapur			4	..	24	..	..	1,133	..	..	..	..
Chingleput			23	..	16	..	..	1,828	..	1	..	..
South Arcot			3	..	13	..	..	479	..	..	..	..
North Arcot			7	..	98	..	..	1,547	..	6	..	..
Salem			7	..	27	..	..	1,000	..	10	..	..
Trichinopoly			..	..	..	..	..	..	..	..	..	..
Tanjore			11	..	79	..	..	2,006	..	..	..	..
Madura			3	..	11	..	..	731	..	..	..	..
Ramnad			1	..	21	..	..	199	..	..	..	..
Tinnevely			7	..	51	..	..	2,856	..	..	..	..
Coimbatore			..	..	..	..	..	..	..	..	..	..
The Nilgiris			11	..	164	..	..	1,602	..	1	..	..
Malabar			..	..	..	..	..	..	..	..	..	..
South Kanara			..	..	..	..	..	..	..	..	..	..
Madras City			..	..	..	..	..	..	..	..	..	..
Total	..	..	185	..	990	..	..	25,048	..	61	..	..
Godavari, East	Black quarter.	Vaccine alone.	4	..	60	..	..	574	..	..	..	..
Kurnool			22	..	155	..	..	457	..	..	..	..
Chittoor			13	..	191	..	..	6,636	..	9	..	..
Anantapur			2	..	4	..	..	2,568	..	5	..	..
Cuddapah			4	..	16	..	..	369	..	..	..	..
Chingleput			4	..	62	..	..	1,527	..	..	..	..
Salem			2	..	20	..	..	594	..	..	..	..
Coimbatore	..	..	..	..	..	..	..	438	..	..	..	..
Madura	..	..	..	..	..	..	..	148	..	..	..	..
Total	..	..	51	..	508	..	..	13,306	..	14	..	..
Kurnool	Black quarter.	Sero aggressin.	1	..	12	..	..	200	..	..	..	..
Chittoor			3	..	19	..	..	308	..	..	..	..
Total	..	..	4	..	31	..	..	508	..	..	..	..
Chittoor	Black quarter.	Aggressin alone.	..	..	..	..	..	61	..	1	..	..
Kurnool	Black quarter.	Sero vaccine.	1	..	..	..	..	40	..	..	..	..
Chittoor			58	..	340	..	..	9,838	..	63	..	..
Anantapur			16	..	108	..	..	2,853	..	8	..	..
Nellore			1	..	7	..	..	392	..	..	..	..
Cuddapah			8	..	52	..	..	2,076	..	1	..	..
Chingleput			2	..	3	..	..	461	..	1	..	..
South Arcot			5	..	43	..	..	2,269	..	11	..	..
North Arcot			12	..	60	..	..	851	..	3	..	..
Salem			18	..	168	..	..	4,326	..	..	..	..
Coimbatore			75	..	664	..	..	18,303	..	..	..	..
The Nilgiris			3	..	18	..	..	441	..	..	..	..
Trichinopoly			13	..	61	..	..	2,623	..	1	..	..
Total	..	..	212	..	1,524	..	..	44,472	..	88	..	..
Godavari, East	Fowl cholera.	Vaccine alone.	2	..	..	1	..	181	..	..	..	..
Madura			..	..	..	..	..	58	..	..	..	..
Total	..	..	2	..	..	1	..	181	58	..	..	..

Statement showing results of preventive inoculation during the year 1934-35—cont.

Districts.	Name of disease against which inoculation was carried out.	Method of inoculation followed.	Number of outbreaks in which inoculation was undertaken.	Number of animals which died uninoculated in course of outbreak.			Number of animals inoculated.			Number of animals which died after inoculation.		
				Equines.	Bovines.	Others.	Equines.	Bovines.	Others.	Equines.	Bovines.	Others.
Vizagapatam	Fowl cholera.	Sero vaccine.	1	..	..	2	..	..	..	..	72	..
Kurnool			1	..	..	..	..	..	..	..	16	..
Coimbatore			2	..	..	1	..	..	..	..	15	..
Madura			..	..	..	..	..	..	..	..	104	..
South Arcot	..	..	..	..	..	..	..	..	..	..	..	..
Total	..	..	4	..	..	3	..	60	207	..	..	..
Chittoor	Fowl cholera.	Serum alone.	1	..	..	17	..	..	93	..	..	..
Total	..	..	1	..	..	17	..	..	93	..	..	..

Statement showing the number of animals treated and castrated on tour during the year 1934-35.

35

35

APPEN

Statement showing the number of animals treated and castrated at.

Districts.	Number of veterinary institutions.	Number of Veterinary Assistant Surgeons employed.	Number of in-patients treated during the year.				Number of out-patients treated during the year.			
			Equines.	Bovines.	Others.	Total.	Equines.	Bovines.	Others.	Total.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Vizagapatam Circle—										
Ganjam ..	4	4	5	34	18	57	540	4,389	1,459	6,388
Vizagapatam ..	5	5	6	72	55	133	428	5,541	2,717	8,686
Rajahmundry Circle—										
East Godavari ..	9	9	45	433	49	577	1,143	11,283	4,739	17,145
West Godavari ..	3	3	6	223	6	235	320	3,705	1,497	5,522
Bezawada Circle—										
Kistna ..	7	7	1	137	5	143	553	10,981	3,573	15,107
Guntur ..	5	5	12	230	6	248	323	5,698	2,288	8,304
Nellore Circle—										
Nellore ..	3	3	37	183	31	251	1,036	2,940	996	4,972
Cuddapah ..	4	4	..	24	3	27	135	4,263	959	5,357
Bellary Circle—										
Bellary ..	4	4	21	77	36	134	419	5,116	1,832	7,367
Kurnool ..	4	4	21	137	12	170	593	4,111	2,391	7,095
Madanapalle Circle—										
Chittoor ..	2	2	5	261	12	278	127	3,762	1,175	5,064
Anantapur ..	3	3	16	266	26	308	305	2,715	1,053	4,078
Vellore Circle—										
North Arcot ..	3	3	9	157	23	189	531	4,591	1,587	6,709
Salem ..	5	5	35	1,024	254	1,313	1,433	5,201	2,812	9,446
Coimbatore Circle—										
Coimbatore ..	9	11	182	2,420	155	2,757	953	13,031	6,437	20,421
The Nilgiris ..	2	2	26	52	222	300	179	1,076	8,576	4,331
Calicut Circle—										
Malabar ..	4	4	23	221	53	297	213	3,828	6,669	10,710
South Kanara ..	2	2	7	49	24	80	98	2,551	1,940	4,589
Madura Circle—										
Madura ..	5	5	137	183	46	366	399	5,506	4,055	9,960
Samnad ..	5	5	1	85	30	116	133	4,818	1,995	6,946
Tinnevely ..	2	3	17	502	22	541	127	2,336	1,483	3,946
Trichinopoly Circle—										
Trichinopoly ..	4	5	11	120	57	188	263	6,705	2,144	9,112
Tanjore ..	7	7	8	236	31	275	290	10,821	3,747	14,858
Madras Circle—										
South Arcot ..	4	4	10	249	40	299	189	5,560	1,247	6,996
Chingleput ..	5	8	38	101	255	394	525	8,635	3,486	12,646
Madras City ..	2	4	176	303	317	796	216	2,679	8,438	11,333
Total ..	112	121	855	7,829	1,788	10,472	11,471	141,772	74,290	227,533
Private Institutions—										
Parlakimedi ..	1	1	14	45	11	70	290	1,164	305	1,759
Vizianagram ..	1	1	98	640	13	751	340	1,383	552	2,275
Pithapuram ..										Figures not
Sivaganga ..										
Total ..	2	2	112	685	24	821	630	2,547	857	4,034
Grand total ..	114	123	967	8,514	1,812	11,293	12,101	144,319	75,147	231,567

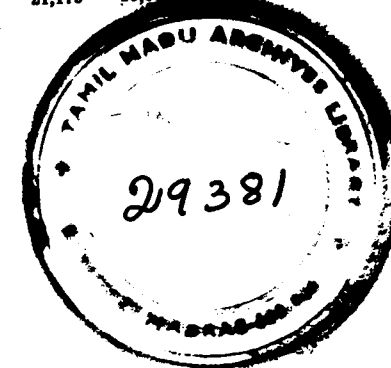
DIX IV.

Veterinary Hospitals and Dispensaries during the year 1934-35.

Grand total of in-and out-patients treated during the year.	Total number of cases supplied with medicine but not brought to institutions.	Castrations performed.				Receipts.	Expenditure.
		Equines.	Bovines.	Others.	Total.		
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
6,395	536	8	2,353	77	2,438	RS. A. P.	RS. A. P.
8,819	410	7	578	20	605	268 1 0	9,351 12 0
17,722	3,427	8	1,960	16	1,984	668 5 6	11,658 1 6
5,757	493	1	662	13	676	910 7 6	22,568 12 10
15,250	96	2	996	54	1,052	308 12 0	7,445 12 1
8,552	57	14	344	92	450	783 9 3	19,270 7 6
5,223	82	3	229	21	253	491 1 9	11,929 8 10
5,384	68	3	712	498	1,213	276 10 0	7,350 0 6
7,501	148	5	362	294	661	85 9 3	8,721 3 8
7,265	175	7	434	367	808	158 15 0	9,183 0 3
5,342	33	1	659	83	743	51 5 0	9,118 12 1
4,381	108	2	248	304	554	62 3 0	4,997 3 7
6,898	53	1	525	66	592	318 15 0	7,850 0 9
10,759	87	4	351	265	620	122 3 3	7,410 3 9
23,178	328	12	1,016	403	1,436	310 15 0	12,603 5 1
5,131	65	3	47	99	149	1,243 4 0	23,778 3 2
11,007	366	1	577	51	629	1,924 6 0	8,789 0 1
4,669	293	..	262	154	416	596 9 0	11,588 7 8
10,326	49	4	634	346	1,034	268 4 0	5,395 7 2
7,062	77	2	270	274	546	584 8 0	10,385 14 7
4,487	21	2	155	33	190	483 12 0	18,560 2 7
9,300	226	4	571	177	752	215 15 0	10,798 6 5
15,133	141	6	1,001	579	1,586	1,763 8 0	16,649 1 8
7,295	170	..	666	34	700	4,087 9 0	10,672 3 8
13,040	141	5	445	85	586		
12,129	..	3	12	32	47		
338,005	7,650	108	16,119	4,442	20,669	16,659 10 6	2,36,268 8 2
1,829	100	..	395	5	400	3 4 0	1,979 9 0
8,026	399	12	98	..	110	..	2,355 12 3
available.							
4,855	499	13	493	5	510	8 4 0	4,335 5 3
242,860	8,149	120	16,612	4,447	21,179	16,632 14 8	2,03,203 13 5

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N 36; 5



Government of Madras

DEVELOPMENT DEPARTMENT

G.O. No. 1554, 7th November 1935

Veterinary—Administration Report—1934-35—Recorded.

READ—the following papers :—

I

Letter from T. J. HURLEY, Esq., M.R.C.V.S., D.V.S.M., I.V.S.,
Acting Director of Veterinary Services, Madras, to the
Secretary to Government, Development Department, dated
24th July 1935, R.O.C. No. 916-A/35.

I have the honour to forward herewith a printed copy of the
Administration Report of the Civil Veterinary Department of this
Presidency for the year 1934-35.

2. A copy of the map of the Madras Presidency showing the
incidence of contagious diseases of cattle to be inserted at the begin-
ning of the report is enclosed. The number of copies required has
been printed at Survey office and arrangements are being made
to forward the same to the Superintendent, Government Press.

II

Letter from T. J. HURLEY, Esq., M.R.C.V.S., D.V.S.M., I.V.S.,
Acting Director of Veterinary Services, Madras, to the
Secretary to Government, Development Department
(through the Accountant-General, Madras), dated 15th
August 1935, L. Dis. No. 3322-B/35.

I have the honour to submit herewith a statement showing the
receipts and charges of the Civil Veterinary Department, including
the Madras Veterinary College for the year 1934-35.

2. A sum of minus Rs. 3-12-0 has been adjusted under " 34 b.
Agriculture—Veterinary—Hospitals and dispensaries—Supplies and
services " in March 1935, supplemental accounts. This has not
been taken into account in the statement furnished since the
supplemental accounts have not yet been closed.

ENCLOSURE

Receipts and Charges statement of the Civil Veterinary
Department for 1934-35.

Receipts.

XXIV-b. Agriculture—veterinary Receipts—

	RS.	A.	P.
College receipts	24,028	9	0
Rents of buildings	3,318	1	0
Contribution from local bodies	662	8	0
Sale of used animals in Serum Institute	3,865	11	0
Other receipts	15,204	2	9
Total—Veterinary receipts	47,078	15	9

Recoveries of overpayments—

Veterinary	1,224	6	4
Collection of payments for services rendered	178	6	0
—Veterinary	—385	9	0
Deduct—Refunds—Veterinary			

Charges.

34. b. Agriculture—Veterinary—

A. Direction—

Non-voted—

	RS.	A.	P.
Pay of officers	22,975	6	0
Travelling allowance including cost of passages	3,460	7	0
Total—Non-voted	26,435	13	0

Voted—

Pay of establishments	18,614	1	0
Travelling allowance	1,487	10	0
Other compensatory	294	8	0
Other charges—	1,618	3	5
Books and periodicals	682	11	6
Electric current and telephone charges	81	8	0
Pay of menials	2,270	9	0
Service postage and telegrams	2,945	10	7
Other contingencies	3,748	0	0
Apparatus and materials	4	8	0
Customs duty			

Total—Voted ... 31,747 5 6

Total—Direction ... 58,183 2 6

34. b. Agriculture—Veterinary—cont.

B. Circle officers—

Non-voted—

Other charges—

	RS.	A.	P.
Rates and taxes	197	4	0
Voted—			
Pay of officers	58,824	10	0
Pay of establishments	26,974	14	0
Travelling allowance	17,123	13	0
Other compensatory	302	12	0
Other charges—	1,205	0	0
Rents	5,470	2	9
Service postage and telegrams	3,173	8	10
Other contingencies			
Grants-in-aid (horse-breeding operations)	500	0	0
Compensations under the Glanders and Farcy Act			
Total—Voted	1,13,574	12	7

Total—Circle officers ... 1,13,772 0 7

C. Touring establishments—

Reserved—Agency—Voted—

Pay of establishments	7,345	14	0
Travelling allowance	2,963	7	0
Contingencies	1,281	9	7

Total—Reserved ... 11,590 14 7

Transferred—Non-voted—

Contingencies—

Rates and taxes ... 7 12 0

Transferred—

Voted—

Pay of establishments	1,46,803	12	0
Travelling allowance and other compensatory	38,692	9	0
Tour charges	10,167	14	11
Service postage and telegrams	3,823	8	0
Other contingencies	3,272	14	11
Purchase of sera including freight	68,071	8	0

Total—Transferred—Voted ... 2,70,832 2 10

Total—Transferred ... 2,70,839 14 10

Total—Touring establishments ... 2,82,430 13 5

34. b. Agriculture—Veterinary—cont.

D. Hospitals and dispensaries—

Reserved Agency—

Voted—

	RS.	A.	P.
Pay of establishments and travelling allowance	5,324	3	0
Contingencies	1,561	15	10
Supplies and services (hospital charges)	517	15	0
Total—Reserved ...	7,404	1	10

Hospitals and dispensaries—

Transferred—

Non-voted—

Contingencies—Rates and taxes ...	457	7	4
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Voted—

Pay of establishments	1,75,761	5	0
Travelling allowance and other compensatory	6,627	8	0
Honoraria	71	6	0

Contingencies—

Pay of menials	38,435	12	7
Rents	13,293	13	9
Petty construction and repairs ...	5,558	15	11
Office expenses	6,776	10	1
Service postage and telegrams ...	4,226	8	3
Other contingencies	3,274	3	2
Supplies and services	26,765	15	3

Total—Transferred—Voted ... 2,80,792 2 0

Total—Transferred ... 2,81,249 9 4

Total—Hospitals and dispensaries ... 2,88,658 11 2

E. Veterinary College—

Non-voted—

Pay of officers	17,686	0	0
Travelling allowance including cost of passages	107	3	0
Other compensatory	675	0	0
Contingencies—Rates and taxes ...	6,923	15	0

Total—Non-voted ... 25,392 2 0

34. b. Agriculture—Veterinary—cont.

E. Veterinary College—cont.

Voted—

RS. A. P.

Pay of officers	28,500	12	0
Pay of establishments	28,421	12	0
Travelling allowance	182	8	0
Other compensatory	2,710	1	0
Honoraria	1,243	12	0

Contingencies—

Pay of menials	2,039	8	0
Electric current and telephone charges	1,660	12	0
Customs duty	...	...	...
Office expenses and cleaning charges	1,977	1	4
Other contingencies	1,466	12	6

Supplies and services—

Stipends	2,207	4	0
Apparatus and materials (laboratory charges)	4,485	3	11
Feed and upkeep of sick animals ...	2,347	6	0
Maintenance of shoeing forge ...	1,647	11	9
Researches	181	15	6
Miscellaneous supplies	575	0	9

Total—Voted ... 79,647 8 9

Total—Veterinary College ... 1,05,039 10 9

F. Serum Institute—

Non-voted—

Other charges—Rates and taxes ...	1,523	15	0
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Voted—

Pay of officers	8,700	0	0
Pay of establishments	13,572	12	0
Travelling allowance	27	8	0
Other compensatory	802	8	0

Other charges—

Books and periodicals	48	15	2
Electric current and telephone charges	2,309	4	3
Pay of menials	4,825	8	0
Livestock	16,873	0	0
Maintenance charges	18,154	8	11
Service postage and telegrams ...	1,145	0	0
Other contingencies	6,603	0	3
Apparatus and materials	8,066	14	0

Total—Voted ... 81,128 14 7

Total—Serum Institute ... 82,652 13 7

34.b. Agriculture—Veterinary—cont.

G. Veterinary investigation—

Voted—

	RS.	A.	P.
Pay of officers	2,400	0	0
Pay of establishments	1,648	7	0
Travelling allowance	2,119	5	0
Other compensatory	443	0	0
Contingencies—			
Office expenses	597	9	2
Supplies and services—			
Apparatus and materials	1,004	11	6
Deduct—Charges recoverable from Governments, departments, etc. —	7,208	5	2
Total—Veterinary investigation ...	1,004	11	6
Total—Veterinary ...	9,31,736	15	6

Endorsement of the Accountant-General (T.A.D. 10), dated
26th August 1935, No. T. 10-Bk. 185.

Forwarded.

2. The figures relate to the year ending March 1935 (final) only and agree with those recorded in the books of this office.

A. RANGASWAMI IYER,
Deputy Accountant-General.

To the Secretary to Government, Development Department

III

Letter from the Account-General (W.M. section), to the Secretary to Government, Development Department, dated 28th August 1935, No. 359 W.M.

[Expenditure incurred by the Public Works Department on the Civil Veterinary building during the year 1934–35.]

With reference to Government Memorandum No. 2391-II-35-1, dated 15th August 1935, on the subject indicated above, I have the honour to state that the total expenditure incurred by the Public Works Department (original works and repairs) on buildings of the Civil Veterinary Department during 1934–35 was Rs. 35,869-1-4.

Order—No. 1554, Development, dated 7th November 1935.

Recorded.

2. The number of new admissions from this Presidency to the Madras Veterinary College was again restricted to thirty.

Though the Government sanctioned, towards the close of the year, the introduction of the B.V.Sc. Degree course in the College from July 1935, they have since decided to postpone its introduction owing to the imposition of certain new conditions, involving additional expenditure, by the Inspection Commission constituted to examine the question of the affiliation of the College as a constituent College of the University.

The Government during the year ordered the extension from six to nine months of the refresher course held annually at the College for six departmental assistants and a few private students, to make the course more instructive and useful.

3. Research work continued as usual at the Madras Veterinary College laboratory and interesting experiments were carried out.

The goat virus method of vaccination was given an extensive trial under field conditions in clean areas. The results were encouraging. The advantages of this method are that it is cheaper and simpler than the serum simultaneous method of inoculation against rinderpest. Orders have been issued by Government approving the Director's proposal that this method of vaccination should be used on a larger scale and all Veterinary Assistant Surgeons permitted to use it. The extension will be introduced gradually.

Some useful results were also obtained under field conditions in determining definitely the parasite responsible for nasal granuloma of cattle.

The Veterinary Investigation Officer, after finishing some experiments on goat virus vaccination, took up blackquarter as the next item of research for investigation.

4. The period of sanction for the Serum Institute expired by the end of this year, and the Government have sanctioned its continuance for a further period of two years. The anti-rinderpest serum and virus produced at the institute had the required potency. Though permission to sell serum to outsiders was given, there was no sale actually during the year. In addition to anti-rinderpest serum and rinderpest virus, the institute issued also 39,800 c.c.s. of rinderpest goat virus during the year. The cold storage accommodation at the institute was increased by the addition of a six-door cabinet.

5. The condition of cattle on the whole was still more satisfactory than in the previous year, and mortality decreased still further during the year. The total number of deaths recorded was only 26,733 as against 31,744 in 1933–34 and 40,196 in 1932–33; but there is a progressive increase in the figures for foot and mouth disease, there being 1,346 deaths in 1932–33, 1,590 in 1933–34 and 1,720 in 1934–35. The reason for this should be investigated. Rinderpest, which in previous year was responsible for as many deaths as all other diseases together, is now only third in the incidence of mortality. At this period of what is believed to be the

normal 10-year cycle of rinderpest an increase in mortality was to be expected; which leads to the inference that the campaign of inoculation which has been carried on has been effective. Rinderpest was actually responsible only for about 12 per cent of the total number of deaths. The number of deaths was, however, heavy during the year in Ganjam from this disease, in Nellore from hæmorrhagic septicemia and in Chittoor and Coimbatore from blackquarter. These districts seem to require special attention, and it is understood that the Veterinary Investigation Officer has already been engaged in the two last mentioned.

6. Propaganda work continued on the usual lines. The transfer to the department this year of a motor exhibition van from the Public Health Department should increase the activities of the department in this direction.

7. The report is a record of another year's interesting and effective work by the department, whose services, it is gratifying to note, appear to be in steadily increasing demand.

8. The Director of Veterinary Services is requested to include in future a paragraph in the report describing the professional work done by District Veterinary Officers. The number of inoculations performed by Circle Officers themselves and of those performed under their supervision and checked by them should also be mentioned in the report.

(By order of the Government, Ministry of Public Works)

C. A. HENDERSON,
Secretary to Government.

To the Director of Veterinary Services.

„ the Director of Agriculture.

„ the Accountant-General.

„ all Collectors.

„ the Board of Revenue (Land Revenue and Settlement).

„ the Surgeon-General (through Local Self-Government Department).

„ the Revenue Department.

„ the Public Works and Labour Department.

„ the Government of India (Department of Education, Health and Lands), with C.L.

„ the Secretary, Imperial Council of Agricultural Research.

„ the Director, Imperial Institute of Veterinary Research.

Press,