

ANNUAL REPORT
ON
VACCINATION IN THE MADRAS
PRESIDENCY
AND ON THE WORK OF THE
VACCINE SECTION
OF THE
KING INSTITUTE OF PREVENTIVE
MEDICINE, GUINDY
FOR THE YEAR
1915-16.

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OFFICE OF SANITARY COMMISSIONER,
Madras, 2nd August 1916.

D. No. $\frac{431}{V}$.

From

MAJOR W. A. JUSTICE, M.B., C.M., D.P.H., I.M.S.,
Sanitary Commissioner, Madras,

To

THE SECRETARY TO THE GOVERNMENT OF MADRAS,
LOCAL AND MUNICIPAL DEPARTMENT.

SIR,

I have the honour to forward herewith the report of the Director, King Institute, Guindy, on the working of the Vaccine Section of the Institute and that of the Deputy Sanitary Commissioner, Madras, on the progress of vaccination in the Madras Presidency during the official year 1915-16.

2. *Vaccine Section of the King Institute, Guindy.*—The cost of the section fell from Rs. 43,872 in 1914-15 to Rs. 41,814 in the year under report. The decrease was principally under "establishment charges." As a result, the price of a vaccine case fell from 4.28 pies in 1914-15 to 3.82 pies in 1915-16.

A regrettable feature of the year was the general low percentage of success obtained with the vaccine prepared at the Institute. As explained by the Director in paragraph 7 of his report, this should be attributed to the new method of storing vaccine pulp in the raw condition and grinding and mixing it with lanoline as required for issue. This having proved a failure was abandoned so soon as the unsatisfactory results became apparent. The numbers which were likely to be affected by this are relatively small and could not appreciably affect the percentage of success. From enquiries made, it was ascertained that the fall could be attributed to the general carelessness on the part of vaccinators and to their delay in using up the lymph immediately after receipt, the intervals between the dates of receipt of the lymph and the dates of operation sometimes exceeding a week, in direct contravention of the general regulations laid down on the subject. To stop this, strict orders have been issued to all vaccinators in the mufassal to see that the instructions issued on the subject for the use of vaccine are in no case to be departed from, any violation of them bringing on severe punishment on those responsible. It is to be hoped that with the resumption of the former method of preparing vaccine, the original conditions would soon be restored. The continued low rate of success for a number of years in the Coimbatore district requires further investigation. It was thought at first that this was due to the inefficiency of the supervising staff in the district and that a change in the *personnel* of the Deputy Inspectors of Vaccination would bring about better results. Some transfers of the Deputy Inspectors of Vaccination were accordingly effected; but the expectations were not realized. The subject is now engaging the serious attention of the Deputy Sanitary Commissioner who has been asked to make an extensive tour in the district and find out where the real defect lies and suggest remedial measures.

3. *Vaccination Department.*—The inspection work of the Deputy Sanitary Commissioner during the year was, on the whole, satisfactory. If the full sanctioned number of Deputy Sanitary Commissioners had been on duty, many more tracts where vaccination was reported to be unsatisfactory would have been inspected and the existing defects rectified wherever possible. I agree generally

with the Deputy Sanitary Commissioner in his remarks about vaccinators in paragraph 4 of his report. The question of the improvement of the pay and prospects of vaccinators and Deputy Inspectors of Vaccination has been pending for a long time past and the sooner it is settled the better it will be for the vaccination department of the Presidency. The recruitment of a proper staff of vaccinators on the present rates of pay is becoming difficult year after year and unless their position is improved on the lines laid down in the general scheme now under the consideration of Government, there will, I fear, be a retrogression in the quality of vaccination work turned out in the Presidency as a whole. I think it therefore very essential that the introduction of the new scheme should no longer be deferred.

The total vaccination work performed during the year showed an increase both under "Primary vaccination" and "Re-vaccination". The one notable feature is an increase of 92,578 cases in the total number of re-vaccinations performed during the year over those of the previous year, a sign certainly of appreciation by the people of the effect of re-vaccination during epidemics of small-pox.

I have the honour to be,

Sir,

Your most obedient servant,

W. A. JUSTICE, Major, I.M.S.,
Sanitary Commissioner, Madras.

ANNEXURE.

ANNUAL REPORT ON THE WORK OF THE VACCINE SECTION OF
THE KING INSTITUTE OF PREVENTIVE MEDICINE,
GUINDY, 1915-16.

The total amount of vaccine supplied by the Institute during the year 1915-16 shows, somewhat contrary to expectation, a marked increase, and for the first time exceeds two million cases. The actual number is 2,113,697, an increase of 130,280 cases or 6.56 per cent.

2. Table I shows the quantity of vaccine issued to various bodies for the quinquennium 1911-12 to 1915-16.

TABLE I.

Statement showing the quantity of vaccine supplied to various bodies from 1911-12 to 1915-16.

To whom supplied.	1911-12.	1912-13.	1913-14.	1914-15.	1915-16.
Government officers including jails ...	46,722	41,902	47,172	20,951	21,451
Agency Tracts	25,160	27,180	23,150	25,060	24,105
Military Department	15,917	12,333	27,587	25,671	14,410
District Boards	1,561,366	1,560,341	1,625,926	1,649,070	1,739,000
Municipalities	177,185	173,255	179,330	178,980	236,185
The Superintendent of Vaccination, Secunderabad	...	...	...	19,530	8,970
The Vaccinator, Bolarum	...	...	...	1,460	1,550
Civil Surgeon, Civil Hospital, Basrah ...	...	...	...	...	2,400
Private Bodies	47,151	72,678	69,000	62,695	65,626
Total ...	1,873,501	1,887,639	1,972,165	1,983,417	2,113,697

From this table it will be seen that the increased issues are mainly due to the demands of District Boards and Municipalities, and as will be seen later Madras City is responsible for the greater part of the second. Slight rises are also seen in the supplies made to Private Bodies, to Government officers including Jails and to the Vaccinator, Bolarum. The Civil Surgeon, Civil Hospital, Basrah, appears for the first time as in receipt of a regular supply. In previous years supplies of vaccine sent to Basrah at irregular intervals were included in supplies to Private Bodies. Marked falls are noted in the amounts supplied to the Military Department and to the Superintendent of Vaccination, Secunderabad, the percentage reductions amounting to 44 and 54, respectively. A slight fall of about 3.8 per cent is seen in the amount supplied to Agency Tracts.

3. There was no change in the manufacture of the vaccine. As usual the bulk was made up with lanoline; but glycerinated vaccine was supplied to Madras City and to Colombo. Madras City vaccinators prefer glycerinated vaccine, and as they can be readily supplied at frequent intervals, there is no objection on the score of the keeping qualities of the vaccine so made. The city usually takes a supply of 375 cases three times a week, but owing to small-pox having been epidemic during several months of the year, large extra supplies were also made. These extra supplies amounted to 37,175 cases which accounts for nearly 65 per cent of the increased supplies to Municipalities as compared with last year.

4. In the great majority of cases the fortnightly despatch was adhered to; but the system of three despatches a month was extended to the Municipalities of Anantapur, Nellore, Cocanada, Coimbatore and Vizagapatam. In consideration

of the low percentage of success obtained in Gōdāvāri, three supplies a month to that district were commenced with the current year. In the Coimbatore district, where also the results were extremely poor, a change in the dates of supply was effected from 1st May. It was found that the second of the two despatches sent off on the 27th of the month was often held over till the operator went to headquarters to draw his pay, submit his monthly returns, etc. The revised dates are the 6th and 20th of the month. It is doubtful if these changes will be productive of much improvement. The Chingleput district which has had the advantage of the more frequent supply, for a whole year, shows a most lamentable fall in its success rate, while North and South Arcot, instead of showing some attempt to stem the tide of bad results, show a fall in the success rate conforming to that shown by the Presidency as a whole.

5. Extra indents from District Boards amounted to only 8·5 per cent which is quite a reasonable figure. Municipalities in this respect were not so satisfactory. Small-pox being epidemic in Madras City for several months, it was only to be expected that large extra supplies would be required, but if we subtract Madras City's scheduled supply from the scheduled supply to Municipalities and Madras City's extra supply from the extra supply called for by Municipalities, we are left with a scheduled supply of 120,075 cases for Municipalities other than Madras and a corresponding extra supply of 22,490 cases. This works out to 18·7 per cent which seems unduly high unless small-pox was specially prevalent.

TABLE II.

Statement showing the expenditure incurred during the year 1915-16 under all heads of expenditure of the Vaccine Section of the King Institute of Preventive Medicine, Guindy.

Detailed heads of account.	Amount.		
	RS.	A.	P.
Establishment charges—			
Assistant Director	2,400	0	0
Clerks and Servants	7,371	3	8
Deputy Inspectors	4,204	15	11
Famine Batta	145	0	8
Travelling allowance of officers, Deputy Inspectors and establishment	60	10	0
Total establishment ...	14,181	14	3
Supplies and services—Contingencies—			
Purchase of stores, apparatus	5,150	10	8
Cost of calves including transport	19,795	12	0
Feeding charges	1,939	2	2
Cost of boxes and receptacles for vaccine	655	5	5
Water works	452	10	3
Gas works	120	7	7
Purchase and repair of furniture	5	0	6
Hot and cold weather charges	25	7	7
Tour charges	29	14	9
Cleaning charges	79	0	0
Service postage and telegram charges	2,678	5	6
Office expenses	634	7	5
Miscellaneous	31	10	0
Telephone charges	155	0	0
Pay of menials	2,247	9	11
Total contingencies ...	34,000	7	9
Proportionate cost of stationery supplied for 1915-16	144	1	6
Cost of clothing supplied for 1915-16	33	0	4
Cost of repairs to Vaccine Section buildings for 1915-16 as per statement furnished by the Executive Engineer, South Presidency Division, with his No. 894-M., dated 2nd May 1916 ...	2,691	3	2
Total cost of stationery, clothing, repairs, etc. ...	2,868	5	0
Grand total, Vaccine Section ...	51,050	11	0

TABLE III.

Statement showing the net expenditure incurred during the year 1915-16 in the King Institute of Preventive Medicine, Guindy, Vaccine Section.

Particulars.	Amount.		
	RS.	A.	P.
Gross expenditure as per Statement I	51,050	11	0
<i>Deduct—</i>			
(1) Credits under sale of calves and miscellaneous receipts remitted to Treasury ...	5,134	10	9
(2) Cost of vaccine lymph supplied to private bodies during the year	4,101	10	0
	9,236	4	9
Net total expenditure	41,814	6	3

TABLE IV.

Statement showing the number of cases for which vaccine was despatched to different bodies—private bodies being excluded—during the year 1915-16.

To whom supplied.	Number of cases for which vaccine was supplied.	Rate per case.	Total amount debitable.
			RS. A. P.
1. Government officers including jails	21,451	8827617 pies.	* 436 12 2
2. Agency Tracts	24,105		† 509 6 9
3. Military Department	14,410		287 4 4
4. District Boards	1,739,000		‡ 35,539 6 6
5. Municipalities	236,185		§ 4,783 15 6
6. Superintendent of Vaccination, Secunderabad [Secunderabad Local (Abkari, etc.), Fund]	8,970		178 13 1
7. Vaccinator, Bolarum (Bolarum Cantonment Fund)	1,550		30 14 5
8. Civil Surgeon, Civil Hospital, Basrah	2,400		47 13 6
Total	2,048,071		41,814 6 3

N.B.—In calculating the cost per case of vaccine, Rs. 985-1-0 has been deducted from Rs. 41,814-6-3 as the former represents registration charges and it will be charged to the bodies concerned.

* Includes Rs. 9 2 0 for registering vaccine packets.

† " " 28 14 0 " "

‡ " " 871 9 0 " "

§ " " 75 8 0 " "

Total ,, 985 1 0

6. As will be seen from Tables II, III and IV there has been a decrease of rather more than Rs. 2,000 in the working costs. This by itself is satisfactory enough, but a closer examination of the figures shows that there were rises under several items in supplies and services but that these have been masked by the large fall in the cost of establishment, this being mainly due to the continued absence of the Assistant Director on military duty. Cost of calves including transport shows the large rise of Rs. 6,000. This is partly due to decreased productivity, the average yield per calf having fallen from 7·9 grammes to 6·29 grammes, but while this increase in the number of calves increases the item of feeding charges, it, to a much more marked extent, increases the sale proceeds of calves credited to Government. In addition, of course, there is the increase of 130,000 cases produced this year to be set against the increased cost of calves. Purchase of apparatus and stores shows a rise of Rs. 629, but part of this is

probably due to the sharp fall on this item on account of the difficulty of getting stores during the earlier part of the war. The resulting fall in the price of vaccine due to decreased net charges amounts to about 10·75 per cent, the price per case working out to 3·827617 pies.

TABLE V.

Returns recorded in the King Institute of Preventive Medicine, Guindy, from the whole of the Madras Presidency according to the month of the year.

Serial number.	Months.				Number successful.	Number unsuccessful.	Percentage of success.
	1915.						
1	April	...	...	...	89,595	16,728	84·26
2	May	...	...	...	91,317	19,263	82·62
3	June	...	...	...	94,400	21,433	81·49
4	July	...	...	...	91,761	18,426	83·27
5	August	...	...	...	94,133	23,740	79·86
6	September	...	...	...	92,963	20,749	81·75
7	October	...	...	...	112,016	9,492	92·18
8	November	...	...	...	110,461	8,616	92·76
9	December	...	...	...	122,125	8,795	93·28
	1916.						
10	January	...	...	...	111,845	8,643	92·82
11	February	...	...	...	110,929	7,398	93·74
12	March	...	...	...	102,473	8,332	92·48
	Total				1,224,018	171,549	87·70 % successful.

7. Table V shows the success rate reported monthwar. There has been a regrettable fall of over 3 per cent for the entire year. In the last annual report it was pointed out that the seasonal curve was a very abnormal one showing a consistently higher success rate during the hot weather than during the cold weather. The curve has again become normal but at the expense of the success rate. The year 1915 started badly with an abnormally low success rate which, on the advent of the hot weather, went lower still and resulted in the lowest recorded rates since the year 1904-1905. In one month indeed, August, the success rate for the whole Presidency fell below 80. A portion of the fall is of course due to the experiment in storing vaccine pulp in the raw condition and grinding and mixing it with lanoline as required for issue. The earlier stages of this experiment were described in last year's report. As this report was being compiled it was already clear from the results of operations made up to the 31st March 1915, that the new method was a failure. It was abandoned, but by that time there was a large accumulation of pulp which had been stored in the raw condition. It was ground up and mixed as rapidly as possible, and the paste so made was issued along with paste made in the usual fashion, equal quantities of each kind being sent out daily.

8. From April 1st, 1915, till 31st January 1916, on which date the last report dealing with the comparison was received, 356,418 operations had been carried out with paste, the pulp used in making which had been stored in the raw condition for some time. The last issues of such paste were made much earlier in the beginning of September. The success rate in these operations was only 80·54 per cent. The 367,156 cases, done with ordinary paste and issued in parallel with the above, gave a success rate of 84·77 per cent, 4·23 per cent higher. Even allowing for this, however, the success rate during the hot months of 1915 was abnormally low. The success rate obtained with the ordinary paste, in no way different from the paste issued in previous years, was lower over the whole period than the average for any month in the previous five years. What the main reason for the exceptionally poor results got in the hot weather of 1915 was remains obscure. The paste was made in the months of February—April 1915 inclusive, when owing to late rains the weather was cooler than usual and the calves could be grazed up to a later date than usual. This should have resulted in paste of better quality. Fortunately for the overall result a very marked improvement took place after September and this was well maintained right up to the end of March. The cause of this sudden improvement is just as obscure as that of the previous bad results.

TABLE VI.

Returns recorded in the King Institute of Preventive Medicine, Guindy, for the whole of the Madras Presidency, according to districts, 1915-16.

Serial number.	Districts.	Total successful.	Total unsuccessful.	Percentage of success.
1	Anantapur	24,731	2,080	92.24
2	Bellary	33,679	1,191	96.58
3	Chingleput	31,921	11,861	73.75
4	Chittoor	36,662	2,756	93.00
5	Coimbatore	45,730	19,913	70.99
6	Cuddapah	27,492	4,709	85.37
7	Ganjām	57,716	8,126	87.65
8	Gōdāvari	41,622	17,057	70.93
9	Guntūr	51,287	5,678	90.53
10	Kistna	70,397	7,849	89.96
11	Kurnool	29,479	1,024	96.64
12	Madura	46,627	11,492	80.22
13	Malabar	138,671	18,888	88.01
14	Nellore	34,611	6,849	83.48
15	Nilgiris	5,774	134	97.73
16	North Arcot	54,860	8,065	87.18
17	Rāmnād	55,208	1,898	96.67
18	Salem	47,772	3,053	93.99
19	South Arcot	49,932	9,915	83.43
20	South Canara	40,220	5,127	88.69
21	Tanjore	70,721	3,220	95.64
22	Tinnevely	63,340	6,768	90.34
23	Trichinopoly	59,212	6,485	90.12
24	Vizagapatam	100,354	7,911	92.69
	Total ...	1,224,018	171,549	87.70 % successful.

9. Table VI gives the success rate districtwar. Coimbatore as usual has made a bold bid for the lowest place, but has been beaten by a hair breadth by Gōdāvari. Chingleput is a very bad third to the miserable first and second. They are the only three to record success rates below eighty, and nearly account by themselves for the drop in the success rate over the whole Presidency. Falls such as 11.62 per cent shown by Chingleput and 10.53 per cent shown by Gōdāvari require some explanation. Considerable falls in the success rate, i.e., falls greater than the general fall, are shown by Ganjām, Cuddapah, Coimbatore, Nellore, South Arcot and North Arcot. The falls range in the order given from 6.75 per cent to 3.74 per cent. Madura, Tinnevely, Trichinopoly and South Canara show falls in the success rate approximating to the general fall, while falls definitely less than this are shown by Malabar, Anantapur, Chittoor, Vizagapatam, Kistna and Guntūr. Variations from last year of less than 0.4 per cent are shown by Rāmnād, Bellary, Kurnool, Tanjore and Salem. Of these the last, Salem, is in the right direction of improvement. This distinction Salem shares with the Nilgiris alone which shows a satisfactory rise of 0.87 per cent and heads the list with a success rate of 97.73 per cent.

All the districts showing small variations are consistently good ones, while those showing large variations are consistently bad. This relationship has been noted in previous years.

TABLE VII.

Statement showing the percentage of success obtained in certain districts selected for comparison in each of the last five years.

Serial number.	Districts.	1911-12.	1912-13.	1913-14.	1914-15.	1915-16.	Average.
1	Bellary	97.65	96.48	97.59	96.81	96.58	97.02
2	Anantapur	95.23	95.45	94.41	94.35	92.24	94.33
3	Kurnool	96.16	96.95	96.65	96.82	96.64	96.64
4	Gōdāvari	78.13	79.04	84.64	81.46	70.93	78.84
5	Coimbatore	75.74	69.59	78.92	76.59	70.99	74.36

10. This year Gōdāvāri with a fall in its success rate of 10·53 per cent attains to the bottom of the list and eclipses all its own performances in the downward direction. Coimbatore is, however, more consistently bad, and is an easy worst, having succeeded in adding nearly 1 per cent to its quinquennial deficit as compared with Bellary. This now stands at the astonishing figure of 22·66 per cent. The deficit for the year under report is 25·59 per cent.

TABLE VIII.

Statement showing the percentage of success obtained in the different months of the year for five years and the average for each month during that time.

Serial number.	Months.	1911-12.	1912-13.	1913-14.	1914-15.	1915-16.	Average.
1	April ...	84·33	86·72	87·24	95·76	84·26	87·66
2	May ...	83·53	80·57	86·09	92·85	82·62	85·13
3	June ...	88·15	82·84	81·61	92·87	81·49	85·39
4	July ...	89·13	88·42	87·47	93·19	83·27	88·29
5	August ...	90·54	87·39	90·53	92·65	79·86	88·19
6	September ...	89·30	84·87	92·10	92·14	81·75	88·03
7	October ...	89·73	88·02	93·83	90·64	92·18	90·88
8	November ...	92·36	91·58	96·17	90·38	92·76	92·64
9	December ...	93·28	91·73	93·79	86·82	93·28	91·78
10	January ...	93·29	93·00	95·28	87·24	92·82	92·32
11	February ...	88·57	91·62	96·36	87·91	93·74	91·64
12	March ...	89·03	88·56	95·72	87·45	92·48	90·65

11. Table VIII shows that the seasonal curve has returned to the normal and that the success rate rises and falls in the main with the temperature. The curious tendency for the early autumn months to show a lower success rate than the late summer months is clearly marked.

TABLE IX.

Statement showing the duration of storage of 'Lanoline' paste during the official year 1915-16.

Serial number.	Name of month.	Duration of storage each month.	
		Minimum period.	Maximum period.
	1915.		
1	April	56 days	160 days
2	May	65 "	82 "
3	June	83 "	94 "
4	July	95 "	111 "
5	August	112 "	128 "
6	September	4 "	138 "
7	October	1 "	18 "
8	November	2 "	38 "
9	December	3 "	52 "
	1916.		
10	January	2 "	72 "
11	February	2 "	85 "
12	March	20 "	83 "

12. Table IX shows for each month the maximum and minimum length of times during which the lanoline vaccine was stored before issue. The general tendency was for the periods to be shorter than last year.

TABLE X.

Statement showing the duration of storage of 'Glycerine' paste during the official year 1915-16.

Serial number.	Name of month.				Duration of storage each month.			
					Minimum period.		Maximum period.	
	1915.							
1	April	...	...	..	...	17 days	...	30 days.
2	May	...	...	...	...	4	”	34
3	June	...	...	...	...	35	”	64
4	July	...	...	...	...	65	”	94
5	August	...	...	...	...	95	”	122
6	September	...	...	...	...	7	”	131
7	October	...	...	...	...	10	”	28
8	November	...	...	...	...	4	”	12
9	December	...	...	...	...	3	”	23
	1916.							
10	January	...	...	...	...	19	”	38
11	February	...	...	...	...	2	”	14
12	March	...	...	...	...	15	”	32

13. Table X shows the same for glycerine paste. During the hot weather this year minimum periods tended to be longer than last year while maximum periods, with the exception of those in August and September, tended to be shorter.

14. The reduction of extraneous germs in animal vaccine without injury to the vaccine itself continues to be an unattainable ideal in India. Experiments were made to effect this by means of added preservatives and storing the vaccine in vacuo. As the organisms in vaccine are aerobic it was hoped to at least prevent multiplication in this way. Certain of the germs showed, however, that they were only facultative aerobes and could multiply quite readily in vacuo. At body temperature in vacuo vaccine showed no improved keeping quality.

TABLE XI.

Statement showing the average yield of pulp per calf according to the month of the year.

Months.	Grammes.			Average yield of lymph per calf during 1915.
	Average.	Maximum.	Minimum.	
January	6.7	14.2	1.6	} 6.29 grammes.
February	7.06	17.0	2.0	
March	6.4	13.8	1.0	
April	7.06	13.8	1.2	
May	6.87	14.0	2.8	
June	No operation.			
July	Do.			
August	4.5	7.0	1.0	
September	4.6	11.0	1.0	
October	5.1	11.2	1.0	
November	6.2	13.9	1.0	
December	5.8	12.8	1.0	

15. The yield of pulp per calf fell considerably compared to that of last year, but still remains higher than any other year. The fall seems to be pretty evenly distributed over the year.

TABLE XII.

Average yield of lymph per calf according to years.

Year.										Grammes.
1904	...	...	...	...	...	...	...	...	...	4.9 *
1905	...	...	...	...	...	...	...	...	...	3.5
1906	...	...	...	...	...	...	...	...	...	No records.
1907	...	...	...	...	...	...	...	...	...	3.2
1908	...	...	...	...	...	...	...	...	...	2.6
1909	...	...	...	...	...	...	...	...	...	3.7
1910	...	...	...	...	...	...	...	...	...	5.1
1911	...	...	...	...	...	...	...	...	...	5.3
1912	...	...	...	...	...	...	...	...	...	5.9
1913	...	...	...	...	...	...	...	...	...	5.3
1914	...	...	...	...	...	...	...	...	...	7.9
1915	...	...	...	...	...	...	...	...	...	6.29

* The records are incomplete; this figure would be lower.

16. Table XII calls for no remark.

17. Civil Assistant Surgeon S. Ramakrishnan continued as temporary Assistant to the Director throughout the year.

18. The vaccination class was held as usual during February and March. Twenty-one students sat for the examination and all of them obtained qualifying marks in the examination held at the end of the course.

19. The staff of the section worked very well and, in spite of the increased volume of work, carried out their duties with regularity and dispatch.

THE KING INSTITUTE, GUINDY,
15th June 1916.

F. MAITLAND GIBSON, M.B., B.SC.,
Director.

REPORT ON VACCINATION IN THE MADRAS PRESIDENCY FOR THE YEAR 1915-16.

From Dr. K. T. MATTHEW, D.HY., D.P.H. (Cantab.), Deputy Sanitary Commissioner and Inspector of Vaccination, Madras, to the Sanitary Commissioner for Madras, No. 323, dated 12th July 1916.

I have the honour to submit the Annual Report on Vaccination in the Madras Presidency for the year 1915-16.

2. *Staff*.—The three Deputy Sanitary Commissioners sanctioned for the Presidency have not yet been fully recruited. I continued to be in charge of all the three ranges with head-quarters at Madras throughout the year.

The following statement shows the subordinate vaccination staff employed in the Presidency during the past two years :—

	Deputy Inspectors.			First-class vaccinators, Rs. 20—15.	Second-class vaccinators, Rs. 12—10.	Third-class vaccinators, Rs. 7—5.	Total number of, vaccinators.
	First grade, Rs. 70.	Second grade, Rs. 60.	Third grade, Rs. 40.				
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1914-15	22	23	36	268	462	130	860
1915-16	19	25	37	268	466	152	886

NOTE.—These figures include the staffs employed in Bangalore and Secunderabad Cantonments and exclude those on duty in the King Institute, Guindy. In the Institute there are five Deputy Inspectors of the first grade.

3. *Inspections by the Deputy Sanitary Commissioner*.—During the year, I inspected the municipalities of Rajahmundry, Nellore and Narasaraopet and vaccination in Vizagapatam, Gōdāvari, Kistna, Guntūr and Nellore districts in the Northern Range. The number of villages inspected in the Northern Range was 102 and the total number of vaccinated cases examined therein was 2,045. In the Central Range, I inspected the municipalities of Salem, Kurnool, and Proddattur and vaccination in the districts of Kurnool, Cuddappah, Anantapur and South Arcot. The number of villages inspected was 55 and the number of vaccinated cases examined 1,161. In the Southern Range, I inspected the municipalities of Tanjore, Māyavaram, Erode and Coonoor and vaccination in the districts of Coimbatore, Tanjore and Tinnevely. The number of villages inspected was 38 and the number of vaccinated cases examined 587. On the whole 3,793 cases of vaccination were inspected in 195 villages in twelve districts and the inspection included the Agency tracts of Gunupur, Polavaram and Chodavaram.

4. *Vaccination*.—The trial scheme of vaccination continued to be in force in the whole of Chingleput district and in selected areas of North Arcot, South Arcot

and Madura districts. The general extension of the scheme to the other districts was abandoned during the last official year; but the Government in their Order No. 1248 L., dated 6th September 1915, reviewing the Annual Vaccination Report for 1914-15 stated that they hoped to issue general orders in the course of the year in regard to the improvement of the pay and prospects of vaccinators and Deputy Inspectors of Vaccination. The orders of Government have not yet been received and in the meantime the difficulties in the way of carrying on vaccination properly, portrayed in the previous report is becoming more and more acutely felt. The steady increase in the cost of living which has been going on in this country for the last few years together with the pretty sudden general rise in the price of food consequent on the great war has made it difficult for the humblest of menials to secure the bare necessities of life on the old wages of Rs. 6 or Rs. 7 per mensem. And yet the dignified vaccinator who is not a menial but a subordinate officer has yet to begin public service on Rs. 5 to 7 a month with an unpaid probation extending to several months in some cases. Vaccination, simple as it looks, is a highly technical operation requiring considerable skill and intelligence to understand the details and it is an operation by law restricted to be done by fully qualified medical men in most civilized countries. Until we have a better set of vaccinators, it is hopeless to expect any real improvement in vaccination in this Presidency. I have during the last two years inspected vaccination practically in every part of the Presidency and the conclusion I have come to is that we are yet long way from the goal of perfection. The great defect in vaccination at present is not the large number that escape vaccination altogether, but the poor standard of successful vaccination. It should be noted that the protection from small-pox depends largely upon the quality of successful vaccination. To achieve any real progress, a staff of properly trained and adequately paid vaccinators is essential. A standard of general education should be prescribed together with a course of technical instruction at a Central Institute for a period of not less than three months and local bodies should be required to recruit vaccinators from among such duly qualified hands.

The scheme for improving the pay and prospects of Deputy Inspectors of Vaccination already proposed and approved has to be brought into effect as soon as possible as a great deal depends upon an efficient and contented supervising staff. A conscientious Deputy Inspector of Vaccination has hard work to do.

(ii) The total vaccination work performed during the last two years by all agencies throughout the Presidency is shown in the following table :—

			1914-15.	1915-16.
Primary vaccination	...	...	1,512,515	1,532,185
Re-vaccination	...	...	176,407	268,985
Total	...		1,688,922	1,801,170

The number of cases vaccinated during 1915-16 shows an increase of 112,248 over the figure of 1914-15. It is satisfactory to note that there is a marked increase both under primary and re-vaccinations, the increase in the former being 19,670 and in the latter 92,578. This is due to a great extent to the stimulus given by the prevalence of small-pox in several parts of the Presidency combined with the efforts made to induce the vaccination staff to make greater exertions by circulars from this office and by personal instructions during my inspections. Largest increases are noticeable in the districts of Vizagapatam (+ 19,295), Malabar (+ 16,264) and Tanjore (+ 15,231). The districts which showed a marked decrease were Guntūr (- 13,655), Salem (- 5,781) and Kurnool (- 3,306). The apparent fall in Guntūr is due to the extraordinarily large number of vaccinations done in the two previous years when the district was in the throes of a severe small-pox epidemic. The fall in Salem is partly accounted for by the prevalence of plague while Kurnool suffered from dearth of vaccinators.

(iii) The following table shows the total successful vaccinations by all agencies and the percentage of successful cases including re-vaccination :—

Establishment. (1)	Number of successful vaccinations.				Total of successful vaccinations.		Ratio per cent of successful cases.				Ratio per cent of total successful cases.	
	1914-15.		1915-16.		1914-15.	1915-16.	1914-15.		1915-16.		1914-15.	1915-16.
	Primary vaccination.	Re-vaccination.	Primary vaccination.	Re-vaccination.			Primary vaccination.	Re-vaccination.	Primary vaccination.	Re-vaccination.		
(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	
Local Fund vaccinators ...	1,186,576	94,550	1,155,851	1,20,748	1,281,126	1,276,599	90·5	84·3	87·3	79·5	90·0	86·5
Government do. ...	17,892	891	14,283	1,249	18,783	15,532	90·5	87·0	85·0	69·5	90·3	83·3
Municipal do. ...	108,742	22,223	106,830	51,785	130,965	158,615	94·7	73·5	93·5	70·9	90·3	84·7
Cantonment do. ...	3,949	6,462	4,152	1,988	10,411	6,140	89·6	53·6	85·2	42·5	63·2	64·8
Dispensaries ...	1	15	96	33	16	129	100·0	75·0	98·0	84·6	76·2	94·2
Medical subordinates ...	117	4,985	1,464	8,519	5,102	9,983	32·9	65·0	87·4	70·4	65·4	75·5
Total ...	1,317,277	129,126	1,282,676	184,322	1,446,403	1,466,998	90·8	79·1	87·7	75·7	89·6	86·0

The percentage of total success both under primary and re-vaccinations when compared with that of the previous year showed a large decrease. The fall in the success rate in primary was general for all kinds of establishment and in re-vaccination the decrease was prominent under "Local Fund Vaccinators," "Government Vaccinators" and "Municipal Vaccinators." Although some enquiry was made about it, it was found difficult to satisfactorily account for the large fall in the percentage of success which was as much as 3·6. No doubt the success rate with the stored raw lymph—a new experiment—issued from the King Institute for a time was very low, namely 80·5 per cent, but this can only account for a small part of the decrease, considering that only 356,418 operations were done with this lymph. It was, however, found that the success rate with the usual preserved lymph issued about the same time was also very low.

It should be noted that as long as there are no legal powers to enforce vaccination, the vaccination staff is more or less at the mercy of the public and the vaccination has to be carried on, from door to door under the most unfavourable conditions which affect both the rate of success and the quality of the vesicles in successful vaccination.

One other factor which I venture to submit as a result of my inspections and close study, is that tangible improvement may be expected to result, both in quantity and quality, if the local officials (Municipal, Local Board and Revenue) recognize the importance of vaccination in preventing a fell disease and take a real interest in vaccination work.

Infantile vaccination.

When compared with the previous year the following districts show the largest increase :—Malabar (+8·0%), Ganjām (+6·5%) and Rāmṇād (+4·6%). The districts which show the largest decrease in this respect are Kurnool (−19·6%) and Gōḍāvari (−9·1%).

Among Municipalities, Kodaikānal (+31·7%), Bimlipatam (+25·5%), Walajpet (+24·6%) and Tiruvallur (+20·5%) show very large increase over the previous year in infantile vaccination; but Palni (−34·7%), Rajahmundry (−30·2%) and Cuddapah (−29·0%) show the greatest falls. The fall in Palni is due to the prevalence of plague and consequent evacuation of the town. The attention of the Chairmen, Municipal Councils, Rajahmundry and Cuddapah, has been drawn to the fall in infantile vaccination in their Municipalities.

(iv) The cost of the various vaccination staffs and the average cost of each successful case are exhibited in the subjoined statement:—

Establishment.	Total expenditure.		Average cost of each successful case.	
	1914-15.	1915-16.	1914-15.	1915-16.
	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.
Government establishment ...	8,216 5 7	8,716 13 10	0 7 0	0 9 0
Local fund do. ...	2,96,130 7 3	2,89,605 0 10	0 3 8	0 3 8
Municipal do. ...	40,574 3 5	42,913 12 10	0 4 11	0 4 4
Cantonments do. ...	3,144 14 5	3,171 0 2	0 4 10	0 8 3
Total ...	* 3,48,065 14 8	† 3,44,403 11 8	0 3 10	0 3 9

* Exclusive of the pay and allowances of the Inspectors of Vaccination and Deputy Sanitary Commissioners, Northern, Central and Southern Ranges.

† Exclusive of the pay and allowance of the Inspector of Vaccination and Deputy Sanitary Commissioners, Northern, Central and Southern Ranges.

There was a slight increase in the charges of Government, Municipal and Cantonment establishments; but there is a marked decrease in that of the Local Fund. The average cost of each successful case fell from As. 3-10 in 1914-15 to As. 3-9 in the year under report. It varied from As. 2-3 in the Malabar and Vizagapatam districts to As. 5-11 in the Chingleput district excluding the Nilgiris where it was As. 13-1 this year against As. 12-1 in 1914-15. The districts which show a cost much higher than the average are Chingleput (As. 5-11), Koraput (As. 5-6), Gōdāvari (As. 5-5), Cuddapah (As. 5-4), South Canara (As. 5) and the districts which show a cost much lower than the average are Malabar (As. 2-3), Vizagapatam (As. 2-3), Tinnevely (As. 2-5) and Salem (As. 2-9). The rate was above As. 7 in the Municipalities of Anantapur (As. 11-2), Karur (As. 10-1), Coonoor (As. 9-7), Chicacole (As. 9) and Pēddāpuram (As. 7-8). The lowest figure was reached by the Parlākimedi Municipality where it was only As. 1-6. The rate was As. 1-7 in Tuticorin municipality.

(v) Vaccination was compulsory in all municipalities except Pēddāpuram and Narasaraopet where it has since been introduced. The total number of operations performed in all the municipalities during the year is 199,389 against 149,874 in 1914-15, i.e., there is an increase of 49,515 in the number of operations. This increase is due to the constitution of five new municipalities during the year and also to the increased number of cases vaccinated in some of the older municipalities especially Madras. Madras (+ 35,009), Parlākimedi (+ 4,632) and Tuticorin (+ 4,431) showed the largest increases. The towns which showed marked decreases were Salem (— 952), Ellore (— 692), Palni (— 584), Ootacamund (— 529) and Calicut (— 526). The decrease in these municipalities is attributed to one or other of the following causes:—

(1) prevalence of plague, (2) absence of small-pox, and (3) less number of births.

(vi) The following table exhibits the comparative success obtained by the use of different kinds of lymph in primary vaccination:—

Number of cases excluding unknown.	Area.	Kind of lymph.	Whence obtained.	Percentage of success.
1,341,077	Local Fund ...	Lanoline lymph ...	Supplied by the King Institute of Preventive Medicine, Guindy.	87·2
...	Do. ...	Glycerine „ ...	Do.	...
94,845	Municipalities ...	Lanoline „ ...	Do.	92·8
19,419	Do. ...	Glycerine „ ...	Do.	97·4

The percentage of success from lanoline lymph was 87·2 in 1915-16 against 90·5 in Local fund areas and 91·8 and 92·0 respectively in municipalities.

Glycerinated lymph also showed a decreased success rate of 97·4 against 97·9 in the previous year.

(vii) A large number of deaths from small-pox was recorded during the year, the figures being 21,463 against 26,623 in 1914-15. The proportion of population protected in the districts and municipalities during the year is shown in the annexed two diagrams.

(viii) Six Deputy Inspectors of Vaccination of Penukonda (49·7), Central Coimbatore (49·5), Malappuram (47·1), Palghat (45·3), Vizianagram (42·5) and Ganjam hill tracts (36·7) have failed to verify 50 per cent of cases vaccinated within their ranges. Their explanations for the shortage have been obtained and orders passed. With regard to Ganjam hill tracts it may be stated that an additional Deputy Inspector of Vaccination has since been sanctioned by Government.

(ix) Of the 85 Deputy Inspectors of Vaccination borne on the Provincial list, 79 are qualified or certificated Sanitary Inspectors ; the remaining are either exempted men or those specially selected for these posts before the present rules came into force. The service registers of all the Deputy Inspectors of Vaccination have been verified in the Sanitary Commissioner's office.

5. I have much pleasure in stating that the head clerks and other members of my office staff did their work well.

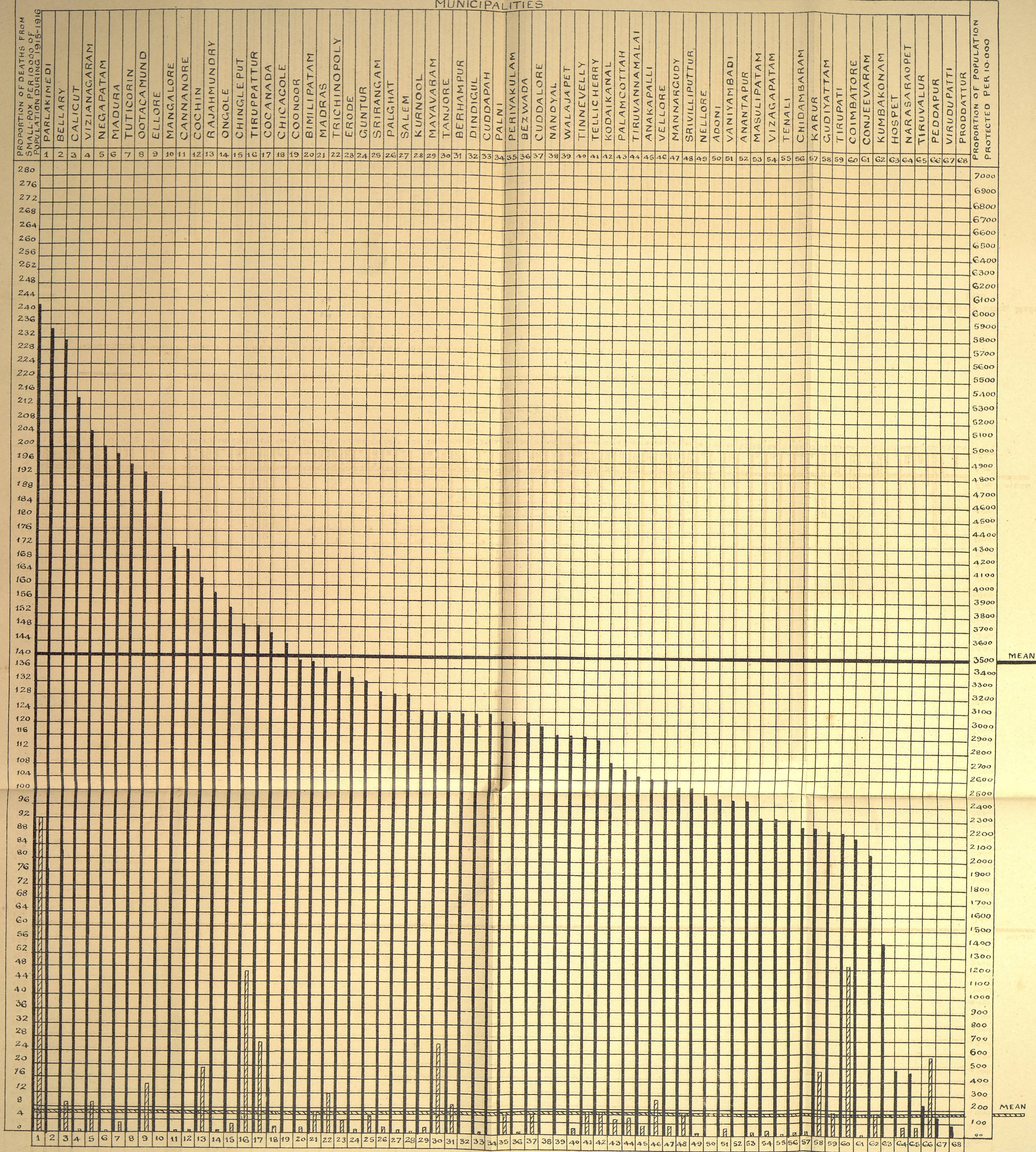
6. The little delay in the submission of this report is due to my having been absent on privilege leave from the 28th April to the end of June 1916.

I have the honour to be,
Sir,

Your most obedient servant,

K. T. MATTHEW, D.HY., D.P.H. (CANTAB),
Deputy Sanitary Commissioner, Madras.

MUNICIPALITIES



REFERENCE

THICK LINES REPRESENT THE PROPORTION OF POPULATION PER 10,000 PROTECTED FROM SMALL-POX
 SHADED LINES REPRESENT THE PROPORTION OF DEATHS FROM SMALL-POX PER 10,000 OF POPULATION

ANNEXURE II.

VACCINATION STATEMENTS.

A—VACCINE

STATEMENT No. I showing the Particulars of Vaccination in the

Number.	Districts.	Circles.	Population of districts or circles according to the census of 1911.	Average population per square mile.	Average number of vaccinators employed throughout the year.	Total number of persons vaccinated.			Average number of persons vaccinated by each vaccinator.	Primary	
										Total number of operations.	Under 1 year.
1	2	3	4	5	6	7			8	9	10
						Males.	Females.	Total.			
1	Anantapur.	Anantapur circle ...	444,221	135	8	6,668	6,158	12,826	1,608	12,277	6,774
2		Penukonda do. ...	510,545	119	11	8,444	7,772	16,216	1,474	16,106	8,027
		Total of district ...	954,766	142	19	15,112	13,930	29,042	1,529	28,383	14,801
3	Bellary.	Bellary circle ...	885,164	156	10	7,403	7,580	14,983	1,494	16,020	10,472
4		Hospet do. ...			10	6,919	6,643	13,562	1,356	13,873	10,256
		Total of district ...	* 885,164	156	20	14,325	14,173	28,498	1,425	29,893	20,728
5	Chingleput.	Chingleput circle ...	1,340,518	436	4	8,311	8,136	16,447	4,112	17,162	7,688
6		Saidapet do. ...			4	8,910	8,115	17,025	4,256	15,806	5,497
7		Panneri do. ...			4	7,818	7,877	15,695	3,924	15,429	4,448
		Total of district ...	1,340,518	436	12	25,039	24,128	49,167	4,097	48,397	17,633
8	Chittoor.	Chittoor circle ...	528,016	194	10	8,745	7,561	16,306	1,631	16,041	7,136
9		Karvetnagar do. ...	694,025	234	14	12,103	11,266	23,369	1,669	22,779	9,208
		Total of district ...	1,222,041	215	24	20,848	18,827	39,675	1,653	38,820	16,344
10	Coimbatore.	North Coimbatore circle.	489,392	165	9	9,999	9,323	19,322	2,147	19,157	5,986
11		East do. do.	554,719	383	8	11,709	11,288	22,997	2,875	22,182	6,883
12		South do. do.	367,884	211	7	6,641	6,548	13,189	1,884	12,952	4,738
13		Central do. do.	640,861	414	9	10,022	9,673	19,695	2,188	20,082	6,838
		Total of district ...	2,052,856	266	33	38,371	36,832	75,203	2,279	74,373	24,445
14	Cuddapah.	Cuddapah circle ...	303,860	137	8	5,916	5,149	11,065	1,383	11,870	4,538
15		Proddatur do. ...	267,072	198	7	4,652	4,225	8,877	1,268	9,792	4,712
16		Sidhont do. ...	305,459	131	8	5,946	4,971	10,917	1,365	11,131	4,382
		Total of district ...	876,191	148	23	16,514	14,345	30,859	1,342	32,793	13,682
17	Ganjām.	Berhampur circle ...	2,153,614	257	9	9,536	7,439	16,975	1,886	13,901	6,619
18		Chicacole do. ...			8	8,319	6,728	15,047	1,880	9,272	5,314
19		Ganjām Hill Tracts ...			14	6,608	5,960	12,568	898	12,134	2,917
20	Ganjām.	Aska circle ...	2,153,614	257	8	8,268	6,108	14,376	1,797	12,575	4,463
21		Parlakimedi circle ...			8	6,900	6,513	13,413	1,676	9,816	4,107
22		Purushottapur circle ...			8	8,221	6,904	15,125	1,891	14,302	5,450
		Total of district ...	† 2,153,614	257	55	47,852	39,652	87,504	1,591	72,000	28,870
23	Gōdāvari.	Cocanada circle ...	341,838	249	7	7,773	7,666	15,439	2,206	12,190	3,079
24		Rajahmundry do. ...	574,472		10	15,443	13,447	28,890	2,889	25,096	3,646
25		Polavaram do. ...	130,992	249	5	3,852	3,027	6,879	1,276	5,657	1,249
26	Gōdāvari.	Peddapur do. ...	427,120		10	17,464	15,315	32,779	3,278	13,677	4,413
27		Bhadrachalam do. ...	75,910	249	5	2,099	1,714	3,813	763	4,024	1,152
		Total of district ...	1,550,332	249	37	46,131	41,169	87,300	2,359	60,644	13,539

* Excludes Sandur (13,526).

† Includes Hill Tracts.

DEPARTMENT.

Madras Presidency for the official year 1915-16.

vaccination.			Re-vaccination.			Percentage of successful cases in which the results were known.		Persons successfully vaccinated per 1,000 of population.	Percentage of unknown cases to total cases.		Average number of persons successfully vaccinated during previous 5 years.		Average number of deaths from small-pox during previous 5 years.	
Successful.						Primary vaccination.	Re-vaccination.		Primary vaccination.	Re-vaccination.	Number.	Ratio per 1,000.	Number.	Ratio per 1,000.
1 and under 6 years.	Total of all ages.	Unknown.	Total number of operations.	Successful.	Unknown.									
11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
4,844	11,735	25	741	553	1	95.8	74.7	27.7	0.2	0.1				
6,020	14,611	35	650	550	16	90.9	86.8	29.4	0.2	0.2				
10,864	26,346	60	1,391	1,103	17	93.0	80.3	28.7	0.2	1.2	27,543	28.8	573	0.6
4,121	15,159	25	143	138	...	94.8	96.5		0.2	...				
2,883	13,734	14	314	311	...	99.1	99.0		0.1	...				
7,004	28,893	39	457	449	...	96.8	98.2	34.3	0.1	...	28,540	32.2	125	0.1
3,303	11,095	2,094	264	123	30	73.6	52.6		12.2	11.4				
2,525	9,196	3,162	1,219	554	250	72.7	57.2		20.0	20.5				
5,867	9,950	1,918	625	208	143	73.6	43.2		12.4	22.9				
11,195	30,241	7,174	2,108	885	423	73.3	52.5	23.2	14.8	20.1	34,831	25.9	481	0.3
6,472	14,101	493	999	529	201	90.7	66.3	27.8	3.1	20.1				
10,939	20,827	753	1,069	728	131	94.6	77.6	31.1	3.3	12.3				
17,411	34,928	1,246	2,068	1,257	332	92.9	72.4	29.6	3.2	16.1	30,101	24.6	662	0.5
5,896	12,087	969	1,076	445	79	66.5	44.6	25.8	5.1	7.3				
5,777	12,877	1,831	1,542	553	143	63.3	39.5	24.2	8.3	9.3				
5,558	10,534	425	463	303	53	84.1	73.9	29.5	3.3	11.5				
6,488	13,646	1,328	224	103	19	72.8	50.2	21.5	6.6	8.5				
23,719	49,144	4,553	3,305	1,404	294	70.4	46.6	24.6	1.3	8.9	50,417	24.6	1,726	0.8
3,704	8,676	371	561	339	18	75.5	62.4	29.7	3.1	3.2				
3,782	8,903	172	262	212	11	92.5	84.5	34.1	1.7	4.2				
4,426	9,484	469	713	624	25	88.9	90.7	33.1	4.0	3.5				
11,912	27,063	1,012	1,536	1,175	54	85.2	79.3	32.2	3.1	3.5	38,001	37.7	557	0.6
4,095	11,449	578	3,774	2,966	303	85.1	85.4		4.1	8.0				
2,462	8,166	379	5,927	4,963	462	91.8	90.8		4.1	7.8				
5,919	10,622	500	1,205	1,027	65	91.3	90.0		4.1	5.3				
5,046	10,258	797	2,296	1,786	229	87.0	86.4		6.3	9.9				
3,493	7,937	482	3,759	2,996	367	85.0	88.3		4.9	9.7				
5,742	11,820	683	1,259	1,082	75	86.4	91.3		4.4	5.9				
26,757	60,252	3,369	18,220	14,820	1,501	87.7	88.6	34.8	4.6	8.2	71,789	33.3	523	0.2
4,978	8,438	810	3,757	2,085	747	74.0	68.2		6.6	19.8				
10,844	16,254	2,305	5,408	2,397	1,373	71.3	59.4		9.1	25.3				
2,162	3,840	378	1,253	581	184	72.7	52.4		6.6	14.6				
3,552	8,265	1,202	20,589	10,895	2,498	65.4	60.2		8.8	12.1				
999	2,257	348	673	159	81	61.6	26.8		8.6	12.0				
22,535	39,054	5,043	31,680	16,097	4,883	70.2	60.6	35.5	8.3	15.4	52,197	33.6	707	0.4

F

A—VACCINE

Statement No. I showing the Particulars of Vaccination in the

Number.	Districts.	Circles.	Population of districts or circles according to the census of 1911.	Average population per square mile.	Average number of vaccinators employed throughout the year.	Total number of persons vaccinated.			Average number of persons vaccinated by each vaccinator.	Primary	
						Males.	Females.	Total.		Total number of operations.	Under 1 year.
1	2	3	4	5	6	7			8	9	10
28	Guntūr.	Guntūr circle ...	1,625,541	283	{ 9 10 11	10,687	9,705	20,392	2,266	18,926	8,971
29		Narasaraopet circle ...				12,206	9,971	22,177	2,218	19,039	7,106
30		Bāpatla do. ...				9,787	9,027	18,814	1,710	18,812	7,368
		Total of district ...				1,625,541	283	37	32,680	28,703	61,383
31	Kistna.	Ellore circle ...	1,884,726	319	{ 15 14 13	14,082	13,414	27,496	1,833	27,214	8,346
32		Masulipatam circle ...				12,226	11,082	23,308	1,665	22,997	8,043
33		Narasapur do. ...				14,301	12,842	27,143	2,083	23,974	6,389
		Total of district ...				1,884,726	319	42	40,609	37,338	77,947
34	Kurnool.	Cumbum circle ...	395,841	118	13	9,495	6,383	15,878	1,221	12,948	1,688
35		Kurnool do. ...	497,088	119	13	9,258	7,647	16,905	1,300	15,346	9,175
		Total of district ...	* 892,929	118	26	18,753	14,030	32,783	1,261	28,294	10,863
36	Madura.	Dindigul circle ...	1,738,818	354	{ 4 4 5	11,453	11,061	22,514	5,628	22,690	11,253
37		Madura do. ...				10,075	8,585	18,660	4,665	17,760	5,406
38		Usilampatti do. ...				9,504	9,005	18,509	3,702	19,235	8,351
		Total of district ...				1,738,818	354	13	31,032	28,651	59,683
39	Malabar.	Tellicherry circle ...	2,809,117	485	{ 11 9 12 11	15,423	13,229	28,652	2,605	27,305	8,528
40		Calicut do. ...				14,524	14,919	29,443	3,271	27,117	6,918
41		Palghat do. ...				25,532	24,808	49,840	4,153	49,825	21,527
42		Malappuram do. ...				28,246	28,526	56,772	5,161	55,758	15,751
		Total of district ...				+ 2,809,117	485	43	83,725	80,982	164,707
43	Nellore.	Kavali circle ...	1,294,906	162	{ 8 9 10	7,607	6,645	14,252	1,781	13,773	3,706
44		Gudur do. ...				9,228	8,015	17,243	1,916	13,022	4,794
45		Kanigiri do. ...				9,602	8,383	17,985	1,798	17,143	3,830
		Total of district ...				1,294,906	162	27	26,437	23,043	49,480
46	Nilgiris.	Nilgiri circle ...	89,856	89	3	2,332	2,044	4,376	1,459	4,283	1,700
		Total of district ...	89,856	89	3	2,332	2,044	4,376	1,459	4,283	1,700
47	North Arcot.	Vellore circle ...	1,825,742	371	{ 3 3 3 12	6,933	6,521	13,454	4,485	14,390	8,061
48		Ranipettai do. ...				7,420	6,863	14,283	4,761	14,842	6,341
49		Polur do. ...				5,911	6,218	12,129	4,043	13,759	5,382
50		Tirupattur do. ...				10,548	10,044	20,592	1,716	20,901	7,737
		Total of district ...	1,825,742	371	21	30,812	29,646	60,458	2,879	63,892	27,521
51	Rāmnād.	Srivilliputtūr circle ...	1,629,387	337	{ 9 10 12	9,787	8,941	18,728	2,081	18,819	8,771
52		Rāmnād circle (old Paramagudi) ...				9,800	8,870	18,670	1,867	18,340	6,704
53		Tirupattur circle ...				9,863	9,102	18,965	1,580	18,846	8,164
		Total of district ...				1,629,387	337	31	29,450	26,913	56,363

* Excludes Banganapalle (39,314).

† Excludes Laccadives (10,600).

DEPARTMENT.

Madras Presidency for the official year 1915-16—continued.

vaccination.			Re-vaccination.			Percentage of successful cases in which the results were known.		Persons successfully vaccinated per 1,000 of population.	Percentage of unknown cases to total cases.		Average number of persons successfully vaccinated during previous 5 years.		Average number of deaths from small-pox during previous 5 years.	
Successful.		Unknown.	Total number of operations.	Successful.	Unknown.	Primary vaccination.	Re-vaccination.		Primary vaccination.	Re-vaccination.	Number.	Ratio per 1,000.	Number.	Ratio per 1,000.
1 and under 6 years.	Total of all ages.													
11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
7,265	16,742	526	1,841	1,509	99	90.9	86.6	34.2	2.7	5.3	}	...	...	...
8,973	16,792	349	3,942	3,442	68	89.5	88.8		1.8	1.7				
7,953	16,656	406	644	549	11	90.1	86.7		2.1	1.7				
24,191	50,190	1,281	6,427	5,500	178	90.3	85.0	34.2	2.2	2.7	54,425	33.4	903	0.5
18,090	24,125	483	1,773	885	89	90.5	52.5	36.9	1.7	5.0	}	...	...	...
10,512	20,048	551	1,349	1,206	24	89.3	91.0		2.3	1.7				
12,180	20,505	636	4,351	2,885	346	87.8	72.0		2.6	7.9				
35,782	64,678	1,670	7,473	4,976	459	89.1	70.9	36.9	2.2	6.1	67,200	35.6	992	0.5
10,121	12,308	95	3,569	3,282	98	95.8	94.6	39.4	0.7	2.7	}	...	...	...
5,405	14,827	116	1,763	1,594	31	97.4	92.0		0.8	1.8				
15,526	27,135	211	5,332	4,876	129	96.6	93.7	35.8	0.7	2.4	31,580	35.4	875	0.9
3,994	15,877	2,022	1,169	379	114	76.8	35.9	23.6	18.9	9.8	}	...	...	...
5,101	10,942	2,850	1,617	480	320	73.4	37.0		16.0	19.8				
4,639	13,250	3,493	125	37	74	84.2	72.5		18.2	59.2				
13,734	40,069	8,370	2,910	896	508	78.1	37.3	23.6	14.0	17.5	38,098	21.9	901	0.5
11,567	23,540	531	1,347	793	14	87.9	59.5	49.4	1.9	1.0	}	...	...	...
11,819	23,156	573	2,469	1,093	44	87.2	45.1		2.1	1.8				
15,820	39,642	2,651	526	309	55	84.0	65.6		5.4	10.5				
25,336	49,056	1,420	1,286	926	103	90.3	78.3		2.5	8.0				
64,542	135,394	5,175	5,628	3,121	216	84.6	55.5	49.4	3.8	6.9	132,976	47.3	735	0.2
5,394	9,972	860	1,778	1,022	135	77.2	62.2	31.8	6.2	7.5	}	...	...	...
5,518	11,274	428	4,835	4,122	279	89.5	90.4		3.2	5.7				
8,523	13,283	835	2,822	1,566	335	81.4	62.9		4.8	11.8				
19,440	34,529	2,123	9,435	6,710	749	82.5	77.2	31.8	4.8	7.6	37,143	28.6	879	0.6
2,263	4,182	14	174	146	10	97.9	89.0	48.2	0.3	5.7	...	...	...	...
2,263	4,182	14	174	146	10	97.9	89.0	48.2	0.3	5.7	4,758	52.9	19	0.2
2,890	11,039	1,137	230	119	33	83.3	60.4	27.6	7.9	14.3	}	...	...	...
5,243	11,690	1,058	743	125	99	84.8	19.4		7.3	13.3				
4,065	9,589	1,745	160	61	58	79.9	59.8		12.7	36.3				
9,811	18,000	1,375	128	46	28	92.2	38.3		6.6	21.1				
22,009	50,318	5,315	1,261	351	218	85.4	33.7	27.6	8.3	17.3	51,151	28.2	1,083	0.5
7,804	17,569	431	323	269	25	95.5	90.3	32.8	2.3	7.7	}	...	...	...
9,863	17,503	317	351	286	47	97.1	94.1		1.7	13.4				
8,696	18,299	172	268	241	17	97.9	96.0		0.9	6.3				
26,383	53,371	920	942	796	89	96.9	93.3	32.8	1.6	9.4	50,933	31.3	814	0.4

Statement No. I showing the Particulars of Vaccination in the

Number.	Districts.	Circles.	Population of districts or circles according to the census of 1911.	Average population per square mile.	Average number of vaccinators employed throughout the year.	Total number of persons vaccinated.			Average number of persons vaccinated by each vaccinator.	Primary	
						Males.	Females.	Total.		Total number of operations.	Under 1 year.
1	2	3	4	5	6	7			8	9	10
54	Salem.	Salem circle ...	500,311	262	6	8,199	8,385	16,584	2,764	17,352	8,374
55		Sankari do. ...	605,833	392	11	10,178	10,124	20,302	1,846	21,915	8,855
56		Hosūr do. ...	601,383	213	8	8,894	8,587	17,481	2,182	17,282	10,021
		Total of district ...	1,707,527	256	25	27,271	27,076	54,347	2,174	56,549	27,250
57	South Arcot.	Cuddalore circle ...	494,072	737	4	7,400	7,351	14,751	3,688	14,912	8,108
58		Vridhachalam circle ...	481,882	393	6	6,954	6,650	13,604	2,267	14,222	5,874
59		Tirukkōyilur do. ...	405,569	501	6	7,849	6,963	14,812	2,469	15,462	4,680
60		Tindivanam do. ...	395,248	485	6	6,946	6,245	13,191	2,638	13,690	4,417
61		Villupuram do. ...	507,906	755	4	8,032	8,339	16,371	4,093	16,435	8,037
		Total of district ...	2,284,665	545	25	37,181	35,548	72,729	2,909	74,721	31,125
62	South Canara.	Northern circle ...	1,142,860	285	8	7,513	7,294	14,807	1,851	15,007	4,798
63		Central do. ...			8	6,648	6,446	13,094	1,637	13,542	5,809
64		Southern do. ...			10	8,368	8,013	16,381	1,638	15,873	5,308
		Total of district ...	* 1,142,860	285	26	22,529	21,753	44,282	1,703	44,422	15,915
65	Tanjore.	Tanjore circle ...	410,870	417	6	6,811	5,958	12,769	2,128	12,276	8,230
66		Negapatam do. ...	536,502	791	9	8,706	7,940	16,646	1,850	15,666	6,655
67		Pattukkōttai do. ...	563,520	407	10	9,981	9,273	19,254	1,925	18,742	5,488
68		Kumbakonam do. ...	618,122	973	10	9,052	8,457	17,509	1,751	17,341	4,524
		Total of district ...	2,129,014	578	35	34,550	31,628	66,178	1,891	64,025	18,906
69	Tinnevely.	Shermadevi circle ...	1,660,720	381	8	11,042	9,950	20,992	2,624	21,484	10,590
70		Sriyaikuntam do. ...			9	13,360	11,705	25,065	2,785	24,806	10,951
71		Koipatti do. ...			8	10,774	9,488	20,262	2,533	20,834	9,375
		Total of district ...	1,660,720	381	25	35,176	31,143	66,319	2,653	67,124	30,916
72	Trichinopoly.	Trichinopoly circle ...	1,941,044	393	12	11,856	11,721	23,577	1,965	23,979	8,307
73		Ariyalur do. ...			8	8,083	7,891	15,974	1,997	16,265	5,765
74		Nūmakkal do. ...			9	9,852	9,525	19,377	2,153	19,994	7,332
		Total of district ...	† 1,941,044	393	29	29,791	29,137	58,928	2,033	60,238	22,404
75	Vizagapatam.	Vizagapatam circle ...	2,129,523	...	14	22,946	25,625	48,571	3,469	27,390	8,551
		Government vaccinators (Gudem hills) ...			2	924	745	1,669	834	1,573	210
76		Vizianagaram circle ...			15	21,091	22,791	43,882	2,925	25,899	6,538
77		Pārvatipuram do. ...			13	13,810	12,287	26,047	2,004	19,224	5,751
		Total of district ...	† 2,129,523	...	44	58,771	61,398	120,169	2,731	74,086	21,090
78	Koraput.	Gunnapur circle ...	949,396	...	9	5,708	5,122	10,830	1,203	9,636	1,624
79		Jeypore do. ...			10	8,886	8,454	17,940	1,734	16,631	3,112
80		Koraput do. ...			7	5,356	5,024	10,380	1,483	9,635	1,594
		Total of district ...	949,396	...	26	19,950	18,600	38,550	1,483	35,902	6,330
		Total of circles and districts ...	38,771,253	291	694	785,241	730,689	1,515,930	2,184	1,409,434	523,938

* Excludes Amindivi islands (3,955).

† Excludes Pudukkottai (411,886).

‡ Includes Hill Tracts.

DEPARTMENT.

Madras Presidency for the official year 1915-16—continued.

vaccination.			Re-vaccination.			Percentage of successful cases in which the results were known.		Persons successfully vaccinated per 1,000 of population.	Percentage of unknown cases to total cases.		Average annual number of persons successfully vaccinated during previous 5 years.		Average annual number of deaths from small-pox during previous 5 years.			
Successful.		Unknown.	Total number of operations.	Successful.	Unknown.	Primary vaccination.	Re-vaccination.		Primary vaccination.	Re-vaccination.	Number.	Ratio per 1,000.	Number.	Ratio per 1,000.		
1 and under 6 years.	Total of all ages.							11							12	13
7,093	15,834	438	22	15	3	93.6	93.6	31.7	2.5	13.6	}	...	...	...	...	...
10,520	20,176	236	96	91	...	93.1	94.8	33.5	1.5	...						
5,757	16,127	298	986	799	63	94.9	86.6	28.1	1.7	6.4						
23,370	52,137	972	1,104	906	66	93.8	87.3	31.1	1.7	5.9	59,278	34.7	3,112	1.8		
2,103	10,315	3,010	1,150	692	284	86.7	76.9	22.2	20.2	24.7	}	...	...	...	...	...
5,433	11,898	970	405	213	80	89.1	65.5	24.9	6.8	19.8						
6,464	11,781	1,478	314	226	55	84.3	87.3	29.6	9.6	17.5						
5,665	10,411	1,128	229	80	79	82.9	53.3	26.5	8.2	34.5						
3,180	11,322	1,655	1,307	798	181	76.6	70.9	23.9	10.1	13.8						
22,795	55,637	8,241	3,405	2,009	679	83.7	73.7	25.2	11.0	19.9	60,014	26.3	1,350	0.5		
7,085	12,943	590	601	385	34	89.1	68.1	} 25.9 {	3.9	5.7	}	...	...	...	...	...
5,463	11,758	263	606	482	38	88.5	86.6		1.9	6.3						
6,799	13,412	328	881	635	34	86.3	74.9		2.1	3.9						
19,347	38,113	1,181	2,083	1,503	106	88.1	75.8	25.9	2.7	7.1	40,195	35.2	593	0.5		
7,908	11,653	75	568	541	8	95.5	96.6	29.7	0.6	1.4	}	...	...	...	...	...
8,193	15,227	178	1,683	1,581	70	98.3	98.0	31.3	1.1	4.2						
10,352	17,833	161	816	743	23	95.9	93.7	32.9	0.9	2.8						
9,827	15,878	395	1,074	925	54	93.7	90.7	27.2	2.3	5.0						
36,280	60,596	809	4,141	3,790	155	95.9	95.1	30.2	1.3	3.7	61,079	28.7	1,277	0.5		
7,155	13,645	882	1,079	872	121	90.5	91.0	} 37.0 {	4.1	11.2	}	...	...	...	...	...
8,765	21,223	559	1,492	1,211	59	84.5	84.5		2.3	3.9						
8,860	19,009	391	679	533	123	92.9	95.9		1.9	18.11						
24,780	58,877	1,832	3,250	2,616	303	90.2	77.1	37.0	2.7	11.6	61,089	36.8	256	0.1		
11,404	21,475	840	259	211	26	92.8	90.6	} 26.2 {	3.5	10.0	}	...	...	...	...	...
7,385	13,397	941	339	266	11	87.4	81.1		5.8	3.2						
8,543	16,527	994	58	38	11	86.9	80.9		4.9	18.9						
27,332	51,399	2,775	656	515	48	89.4	84.7	26.2	4.6	7.3	49,201	25.3	780	0.4		
12,900	24,667	1,120	23,536	21,330	969	93.8	94.5	} 51.1 {	4.1	4.1	}	...	...	...	...	...
617	1,404	88	120	63	47	94.5	86.3		5.5	39.1						
13,103	21,648	1,827	19,053	16,053	1,349	89.9	90.6		7.0	7.0						
8,709	17,387	683	7,276	6,295	327	93.7	90.5		3.5	4.4						
35,329	65,106	3,718	49,985	43,741	2,692	92.5	92.5	51.1	5.0	5.3	72,859	34.2	260	0.1		
5,263	8,983	193	1,334	1,111	88	95.0	89.1	} 36.6 {	2.0	6.5	}	...	...	...	...	...
9,358	14,809	774	971	667	25	93.3	70.5		4.6	2.5						
5,409	8,690	287	745	577	59	92.9	84.1		2.9	7.9						
20,120	32,482	1,254	3,050	2,355	172	93.4	81.8	36.6	3.4	5.6	32,841	34.5				
564,600	1,170,134	68,357	168,026	121,997	14,281	87.3	79.4	33.3	4.8	8.5	1,233,239	31.8	20,183	0.5		

A—VACCINE

Statement No. I showing the Particulars of Vaccination in the

Number.	Districts.	Circles.	Population of districts or circles according to the census of 1911.	Average population per square mile.	Average number of vaccinators employed throughout the year.	Total number of persons vaccinated.			Average number of cases vaccinated by each vaccinator.	Primary	
						Males.	Females.	Total.		Total number of operations.	Under 1 year.
1	2	3	4	5	6	7			8	9	10
1	Military Cantonments.	Bangalore	100,834	7,447	2	481	124	605	302	156	81
2		Secunderabad	103,879	5,467	4	3,656	4,889	8,545	2,136	4,741	2,802
		Total of Cantonments ...	204,713	6,291	6	4,137	5,013	9,150	1,525	4,897	2,883
		Medical Subordinates ...	...	...	...	13,016	1,468	14,484	...	1,684	864
1		Ādōni	31,645	2,281	2	663	620	1,283	641	1,245	1,137
2		Anantapur	8,457	940	1	205	121	326	326	265	146
3		Anakāpalle	20,625	1,719	1	420	291	711	711	646	414
4		Bellary	34,956	6,991	3	2,103	1,167	3,270	1,090	2,599	2,278
5		Berhampur	31,456	5,244	1	1,192	709	1,901	1,901	1,042	771
6		Bezawada	32,867	5,976	2	810	721	1,531	765	1,113	898
7		Bimlipatam	9,314	179	1	242	351	593	593	382	236
8		Calicut	78,417	7,292	4	3,688	2,427	6,115	1,529	4,589	1,332
9		Cannanore	28,957	5,791	1	1,143	576	1,719	1,719	1,355	835
10		Chicacole	17,852	5,617	1	338	346	684	684	531	379
11		Chidambaram	21,327	10,663	1	513	368	881	881	799	524
12		Chingleput	11,626	9,301	1	721	306	1,027	1,027	463	363
13		Cochin	20,023	20,023	1	1,108	522	1,630	1,630	1,143	631
14		Cocanada	54,110	9,018	2	1,653	949	2,602	1,301	2,167	739
15		Coimbatore	47,007	11,060	3	1,453	1,055	2,508	836	2,195	1,202
16		Conjeeveram	53,864	13,466	2	1,056	993	2,049	1,024	1,931	1,454
17		Coonoor	9,933	1,710	1	358	263	621	621	573	362
18		Cuddalore	56,574	4,254	2	1,404	1,174	2,578	1,289	2,281	1,699
19		Cuddapah	17,807	903	1	493	235	733	733	511	355
20		Dindigul	25,052	9,635	3	656	433	1,089	363	886	761
21	Municipalities.	Dharapuram	...	...	...	...	...	...	...	...	...
22		Ellore	37,819	12,606	2	1,914	1,157	3,071	1,535	2,422	1,374
23		Erode	16,701	16,701	1	513	471	984	984	959	708
24		Gudiyāttam	23,390	23,390	1	405	397	802	802	771	642
25		Guntūr	40,529	9,006	2	1,935	996	2,931	1,465	1,519	1,270
26		Hospet	17,671	5,644	1	527	366	893	893	780	636
		Karūr	17,674	8,837	1	313	236	549	549	552	439
27		Kodaikānal	2,906	528	1	95	84	179	179	152	121
28		Kumbakōnam	64,647	14,628	3	1,201	978	2,179	726	2,046	1,519
29		Kurnool	26,040	5,208	1	713	541	1,254	1,254	1,187	842
30	Madras	518,660	19,209	* 10	42,947	20,880	63,827	6,383	20,262	15,498	
31		Madura	134,130	5,086	10	7,088	5,550	12,638	1,264	11,436	6,682
32		Mannārgudi	21,398	3,566	1	469	392	861	861	849	605
33		Mangalore	48,412	9,380	2	1,506	1,131	2,637	1,318	2,220	1,231
34		Masulipatam	42,123	2,113	2	962	643	1,605	802	1,414	894
35		Māyavaram	27,121	9,040	1	792	550	1,342	1,342	1,089	794
36		Nandyal	16,230	3,607	1	508	375	883	883	778	493
37		Negapatam	60,168	11,638	3	2,674	1,969	4,643	1,548	4,215	2,322
		Narasaraopet	8,743	4,371	1	336	200	536	536	347	115
38		Nellore	33,246	2,078	1	1,575	664	2,239	2,239	1,070	728
39		Ongole	13,286	3,321	1	287	418	705	705	597	355
40		Ootacamund	18,829	1,345	2	662	455	1,117	558	717	563
41	Palamcottah	44,909	11,227	2	1,411	833	2,244	1,122	1,682	1,167	
42	Palghat	44,319	4,185	2	1,201	1,021	2,221	1,110	2,169	1,480	
43	Parlākīmedi	18,370	13,812	1	3,133	2,618	5,751	5,751	877	423	
	Peddapur	15,436	1,029	1	396	306	702	702	481	189	
44	Periyakulam	18,715	18,715	1	498	416	914	914	830	759	
45	Palni	13,211	7,549	1	281	149	430	430	306	244	
46	Proddatur	15,756	3,939	1	85	66	151	151	144	85	
47	Rajahmundry	48,417	14,583	2	2,605	1,149	3,754	1,877	1,454	790	

* Medical Vaccinators.

DEPARTMENT.

Madras Presidency for the official year 1915-16—continued.

vaccination.			Re-vaccination.			Percentage of successful cases in which the results were known.		Persons successfully vaccinated per 1,000 of population.	Percentage of unknown cases to total cases.		Average annual number of persons successfully vaccinated during previous 5 years.		Average annual number of deaths from small-pox during previous 5 years.	
Successful.			Total number of operations.	Successful.	Unknown.	Primary vaccination.	Re-vaccination.		Primary vaccination.	Re-vaccination.	Number.	Ratio per 1,000.	Number.	Ratio per 1,000.
1 and under 6 years.	Total of all ages.	Unknown.												
11.	12.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	25.
30	122	...	449	239	23	78.2	56.1	3.6	...	5.1	...	...	...	...
665	4,030	26	4,347	1,749	98	85.5	41.2	55.6	0.5	2.3	...	...	...	...
695	4,152	26	4,796	1,988	121	85.2	42.5	29.9	0.5	2.5	7,902	38.6	64	0.3
567	1,464	9	12,803	8,519	702	87.4	70.4	...	0.5	5.5	...	...	...	...
24	1,161	65	66	64	1	98.3	98.4	38.7	5.2	1.5	1,106	34.3	111	3.5
32	182	20	61	27	2	74.7	45.8	24.7	7.5	3.3	282	33.3	8	0.9
120	581	6	73	49	2	91.0	67.1	30.4	0.9	2.7	806	39.0	16	0.7
98	2,380	...	703	624	...	91.6	88.3	85.9	...	...	2,804	80.2	76	2.2
153	924	...	970	731	35	88.6	71.7	52.6	...	3.6	1,321	41.9	21	0.6
151	1,077	2	431	333	26	96.9	82.2	42.9	0.1	6.0	1,451	44.1	8	0.2
56	323	...	334	243	4	84.5	73.6	60.7	...	1.1	439	47.1	1	0.1
865	4,403	5	1,649	1,531	21	96.2	94.0	75.7	0.1	1.3	6,637	84.6	68	0.9
402	1,262	10	580	317	44	93.8	59.1	54.5	0.7	7.6	1,885	63.3	117	4.0
120	516	...	153	150	...	97.1	98.0	37.3	...	...	966	54.1	3	0.1
102	724	33	120	101	15	94.5	96.2	38.7	4.1	12.5	696	32.6	1	0.04
64	428	1	564	367	35	92.6	69.4	65.4	0.2	6.2	613	52.7	2	0.2
291	1,069	18	540	172	109	95.0	39.9	62.0	1.6	20.2	1,141	56.9	17	0.8
504	1,336	169	1,116	362	356	66.8	47.6	31.3	7.7	31.8	2,688	49.6	31	0.5
543	1,794	45	354	174	8	83.4	50.3	41.9	2.0	2.3	1,565	33.3	110	2.3
188	1,654	74	118	72	22	89.1	75.0	32.0	3.8	18.6	1,664	30.9	10	0.2
176	541	1	48	33	2	94.6	71.7	57.8	0.2	4.2	547	55.1	1	0.0
458	2,238	1	297	244	12	98.1	88.6	43.9	...	...	2,366	41.8	4	0.1
80	451	...	228	80	20	38.3	38.5	29.8	...	8.8	799	44.9	7	0.4
48	810	7	205	161	13	92.2	83.9	38.8	0.8	6.3	1,090	43.6	12	0.5
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
879	2,294	1	683	447	55	94.7	70.6	72.4	...	7.4	2,631	69.5	38	1.0
133	864	30	25	16	...	93.0	64.0	52.7	3.1	...	809	48.4	6	0.4
74	718	24	55	33	21	96.1	97.1	32.1	3.1	38.2	725	30.9	8	0.3
78	1,361	1	1,541	901	256	89.6	70.1	55.8	...	16.6	2,032	50.1	88	2.1
130	766	...	116	116	...	98.2	100.0	49.9	...	...	802	45.4	5	0.3
37	504	2	12	4	1	91.6	36.4	28.7	0.4	8.3	560	31.7	2	0.1
22	147	1	35	28	1	97.4	82.4	60.2	0.7	2.9	111	38.2	...	...
326	1,870	5	139	102	...	91.6	73.4	30.5	0.2	...	1,850	28.6	23	0.4
254	1,128	...	122	44	38	95.0	52.4	45.0	...	31.2	1,192	45.8	10	0.4
3,155	18,813	843	43,668	23,670	7,359	96.9	65.2	81.9	4.2	16.9	26,968	50.2	159	0.3
4,093	10,874	6	1,756	1,373	17	95.1	79.0	91.3	0.1	1.0	9,145	68.2	335	2.5
163	822	1	17	16	...	96.9	94.1	39.2	0.12	...	771	36.0	25	1.2
836	2,168	3	417	366	10	97.7	89.9	52.3	0.1	2.4	2,615	54.0	28	0.6
328	1,258	...	226	197	7	89.0	87.0	34.5	...	3.0	1,505	35.7	54	1.0
138	943	25	357	293	12	92.9	84.9	45.6	2.4	3.4	1,227	45.3	9	0.3
212	713	...	148	132	...	91.6	89.2	52.1	...	...	664	40.9	34	2.1
1,430	3,877	9	428	327	3	92.2	76.9	69.9	0.2	0.7	4,571	75.9	34	0.6
89	205	42	305	228	12	67.2	77.8	49.5	12.1	3.9	...	...	...	...
105	845	4	1,345	655	56	79.3	50.7	45.1	...	4.2	1,137	34.2	19	0.5
127	486	15	158	134	...	83.5	84.8	38.3	2.5	...	715	53.8	1	0.1
72	693	2	400	283	42	96.9	79.1	51.8	0.3	10.5	1,373	72.9	3	0.2
318	1,504	8	737	586	61	89.8	86.7	46.5	0.5	8.3	1,795	39.9	4	0.1
362	1,860	...	279	163	...	85.8	58.4	45.6	...	...	2,019	45.6	12	0.3
336	841	2	4,880	4,063	100	96.9	85.0	266.9	0.2	2.0	1,034	56.2	...	...
95	294	80	284	80	107	73.3	45.2	24.2	16.6	37.6	...	...	...	...
47	806	1	84	73	5	97.2	92.4	47.0	0.1	5.9	795	42.5	8	0.4
18	264	...	124	93	14	86.5	84.5	27.0	...	11.3	747	56.5	12	0.9
51	139	...	8	7	...	96.5	87.5	9.3	...	...	...	...	...	...
464	1,261	5	2,300	1,542	267	87.0	75.8	57.8	0.3	11.6	2,610	53.9	86	1.7

A—VACCINE

Statement No. I showing the Particulars of Vaccination in the

Number.	Districts.	Circles.	Population of districts or circles according to the census of 1911.	Average population per square mile.	Average number of vaccinators employed throughout the year.	Total number of persons vaccinated.			Average number of cases vaccinated by each vaccinator.	Primary	
						Males.	Females.	Total.		Total number of operations.	Under 1 year.
1	2	3	4	5	6	7			8	9	10
48	Municipalities—cont.	Salem	59,153	13,984	2	1,260	939	2,199	1,099	1,952	1,871
49		Srirangam	24,799	3,543	1	664	604	1,268	1,288	1,190	683
50		Srivilliputtur	29,066	20,761	1	546	543	1,089	1,089	1,105	884
51		Tanjore	60,341	805	3	2,894	1,504	4,398	1,466	2,074	1,567
52		Tellicherry	29,258	11,703	2	1,086	675	1,761	830	821	716
53		Tenali	18,195	6,998	1	358	406	764	764	828	541
54		Tinnevely	44,805	7,469	2	1,296	913	2,209	1,104	1,949	1,540
55		Trichinopoly	123,512	14,899	3	3,693	2,830	6,523	2,108	5,469	3,836
56		Tirupattur	10,470	4,188	2	344	265	609	304	544	498
57		Tirupati	16,701	5,010	1	364	284	648	648	510	436
58		Tiruvallur	21,000	2,100	1	343	270	613	613	648	357
59		Tiruvannāmalai	21,244	1,931	1	476	411	887	887	905	700
60		Tuticorin	40,185	11,481	4	4,032	2,519	6,551	1,638	1,595	1,283
61		Vaniyambādi	20,406	5,830	1	470	415	885	885	876	513
62		Vellore	49,746	8,102	2	1,237	849	2,086	1,043	1,681	1,426
63		Vizagapatam	43,413	8,349	2	1,131	1,108	2,239	1,119	1,224	792
64		Vizianagram	37,550	7,510	2	2,225	1,945	4,170	2,084	1,964	1,263
65		Virudupatti	21,355	...	1	194	128	322	322	303	210
66	Walajpet	9,962	9,962	1	283	214	497	497	442	357	
Total of Municipalities.			2,701,886	7,169	126	120,152	75,259	195,411	1,551	116,071	80,657
Grand Total ...			*41,473,139	311	826	922,546	812,429	1,734,975	† 2,083	1,532,086	608,342

* Excludes the population of the Cantonments of Bangalore and Secunderabad.
† In finding out the average number of persons vaccinated, the total work of
Note.—(1) Difference between number of operations and number of persons
(2) This statement does not include the statistics of dispensary vaccination
N.B.—In calculating the percentage of success shown in this statement and

SUMMARY OF STATEMENT NO. I.

	Total number of persons vaccinated.		Total number of operations performed.		Percentage of successful cases in which the results were known.		Average number of persons vaccinated by each vaccinator.		Number of children successfully vaccinated.		Ratio of successful vaccinations per 1,000 of population.	Total cost of department.	Average cost of each successful case.
	Primary.	Re-vaccination.	Primary.	Re-vaccination.	Primary.	Re-vaccination.	Vaccinators employed.	Persons vaccinated by each vaccinator.	Under one year.	One and under six years.			
1	2	3	4	5	6	7	8	9	10	11	12	13	14
By Special staff (statement No. I).	1,466,104	268,871	1,532,086	268,943	87.8	75.7	826	2,083	608,342	589,263	35.4	344,406 11 8	0 3 9
By Dispensary staff (statement No. III).	99	41	99	42	97.9	84.6	...	...	59	35	...	...	...
By other agencies, if any.	...	...	...	...	...	...	...	...	...	...	...	...	...
Total ...	1,466,203	268,912	1,532,185	268,985	87.7	75.7	...	...	608,401	589,298	35.4	*344,406 11 8	0 3 9

* Exclusive of the pay and allowances of the Inspector of Vaccination and Deputy Sanitary Commissioners, Northern, Central and Southern Ranges.

DEPARTMENT.

Madras Presidency for the official year 1915-16—continued.

vaccination.			Re-vaccination.			Percentage of successful cases in which the results were known.		Persons successfully vaccinated per 1,000 of population.	Percentage of unknown cases to total cases.		Average annual number of persons successfully vaccinated during previous 5 years.		Average annual number of deaths from small-pox during previous 5 years.	
Successful.			Total number of operations.	Successful.	Unknown.	Primary vaccinations.	Re-vaccination.		Primary vaccination.	Re-vaccination.	Number.	Ratio per 1,000.	Number.	Ratio per 1,000.
1 and under 6 years.	Total of all ages.	Unknown.												
11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
67	1,938	...	247	189	...	99.3	76.5	35.9	...	...	2,855	48.3	8	0.1
403	1,138	31	78	61	7	98.2	85.9	48.3	2.6	8.9	1,181	47.6	31	1.3
134	1,040	...	41	37	..	94.1	90.2	37.0	...	...	1,046	35.9	...	...
365	1,994	...	2,330	1,961	5	96.1	84.3	49.0	...	0.2	2,465	40.8	81	1.3
71	795	...	947	395	23	96.8	42.7	40.7	...	2.4	1,221	41.7	34	1.2
182	737	6	23	22	...	89.6	95.6	41.7	0.7	...	691	37.9	4	0.2
192	1,758	7	403	364	10	90.5	92.6	47.4	0.4	2.5	1,902	42.5	30	0.7
1,452	5,347	31	854	675	84	92.4	87.7	48.8	0.0	9.8	5,973	48.4	160	1.3
1	542	...	65	60	...	99.6	92.3	57.5	...	...	506	48.3	14	1.3
52	492	...	138	65	30	96.5	60.2	33.4	...	21.7	538	32.2	1	0.1
184	611	5	6	5	...	95.0	83.3	29.3	0.8	0.7	384	18.3	2	0.1
106	838	...	48	43	2	92.6	93.5	41.5	...	4.2	751	30.6	22	1.0
258	1,550	...	4,956	3,567	301	97.8	76.6	127.3	...	6.1	2,664	66.3	31	0.8
160	678	103	43	16	21	87.7	72.7	34.0	11.8	48.8	683	33.5	11	0.5
216	1,644	8	405	110	289	98.2	94.8	35.3	...	71.4	1,852	37.2	34	0.7
238	1,071	13	1,095	516	187	83.4	56.8	36.5	1.0	17.0	1,378	31.7	11	0.4
320	1,752	29	2,303	1,830	117	90.5	83.7	95.3	1.4	5.0	2,776	73.9	3	0.1
90	300	...	19	17	...	99.0	89.5	14.4	...	...	...	...	...	...
65	427	7	58	45	9	98.2	91.8	47.4	1.6	15.5	424	42.6	4	0.4
23,401	106,830	1,807	83,318	51,785	10,258	93.5	70.9	58.7	1.6	12.3	130,507	48.3	2,108	0.7
589,263	1,282,580	70,199	268,943	184,289	25,360	87.8	75.7	35.4	4.6	13.8	1,871,648	32.9	22,355	0.5

medical subordinates is excluded.
vaccinated, equals 66,054 which represents secondary operations.
which are exhibited separately in statement No. III.
statement No. III, unknown cases have not been taken into account.

A—VACCINE DEPARTMENT.

STATEMENT No. II showing the Cost of the Department in the Madras Presidency for the official year 1915-16.

		Expenditure.														
Number.	Districts.	Circles.	Inspector of Vaccination and Deputy Sanitary Commissioner.	Deputy Inspectors.			Vaccinators.				Peons, etc.		Total pay of establishment.			
				Pay.	First grade.	Second grade.	Third grade.	Pay.	First class.	Second class.	Probationers.	Pay.		Number.		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
1	Anantapur.	Anantapur circle	...	...	...	...	1	480 0 0	3	2	3	1,459 13 6	1	85 0 0	2,024 13 6	
		Pennkonda do.	...	...	...	...	1	495 10 8	2	2	7	1,587 6 11	1	85 0 0	2,168 1 7	
3	Bellary.	Total of district	...	...	...	...	2	975 10 8	5	4	10	3,047 4 5	2	170 0 0	4,192 15 1	
		Bellary circle	...	...	...	...	1	888 1 5	5	5	1	1,443 1 10	1	77 9 9	2,358 13 0	
4	Chingleput.	Hospet do.	...	...	...	...	1	480 0 0	4	7	...	1,821 2 9	1	80 11 6	2,381 14 3	
		Total of district	...	...	...	...	1	1,318 1 5	9	12	1	3,264 4 7	2	158 5 3	4,740 11 3	
5	Chingleput.	Chingleput circle	...	...	...	...	1	720 0 0	...	4	...	1,895 1 11	1	84 0 0	2,699 1 11	
		Saidapet do.	...	...	...	...	1	920 7 8	...	4	...	1,287 4 10	1	89 0 4	2,276 12 10	
6	Chittoor.	Ponneri do.	...	...	...	...	1	843 1 7	...	4	...	1,719 11 6	1	99 0 0	2,661 13 1	
		Total of district	...	...	...	...	1	2,483 9 3	...	12	...	4,852 2 3	3	272 0 4	7,637 11 10	
8	Chittoor.	Chittoor circle	...	...	...	...	1	720 0 0	5	4	1	1,556 2 6	1	88 0 0	2,364 2 6	
		Karvetnagar circle	...	...	...	...	1	480 0 0	6	6	2	1,756 1 7	1	87 0 0	2,323 1 7	
9	Chittoor.	Total of district	...	...	...	...	1	1,200 0 0	11	10	3	3,312 4 1	2	175 0 0	4,687 4 1	
		North Coimbatore circle	...	...	...	...	1	657 6 9	3	5	1	1,485 11 7	1	96 0 0	2,239 2 4	
10	Coimbatore.	East do.	...	...	...	...	1	840 0 0	1	7	2	1,573 14 2	1	96 0 0	2,509 14 2	
		South do.	...	...	...	...	1	470 8 3	2	3	2	1,182 11 11	1	96 0 0	1,749 4 2	
11	Coimbatore.	Central do.	...	...	...	...	1	840 0 0	2	6	1	1,478 14 0	1	96 0 0	2,414 14 0	
		Total of district	...	...	...	...	2	2,807 15 0	8	21	6	5,721 3 8	4	384 0 0	8,913 2 8	

14	Cuddapah.	Cuddapah circle	...	...	...	...	1	834 3 1	3	5	...	1,266 9 11	1	95 0 0	2,195 13 0
15		Proddatur do.	...	...	...	...	1	478 0 0	2	2	...	1,016 1 4	1	95 0 0	1,589 1 4
16	Gudalur.	Sidhout	...	...	...	...	2	723 12 11	3	5	...	1,454 8 5	1	93 0 0	2,271 5 4
17		Total of district	...	...	...	...	2	2,036 0 0	8	15	...	3,737 3 8	3	283 0 0	6,056 3 8
18	Guntur.	Berhampur circle	...	...	...	...	1	486 14 11	3	5	...	1,513 9 0	1	102 0 0	2,112 7 11
19		Chicacole do.	...	...	...	...	1	720 0 0	2	6	1	1,441 2 10	1	102 0 0	2,263 2 10
20	Guntur.	Ganjani Hill tracts	...	...	...	...	1	747 13 5	4	8	2	2,013 3 7	1	113 6 1	2,874 7 1
21		Askani circle	...	...	...	...	1	608 5 8	2	4	2	1,219 0 11	1	102 0 0	1,929 6 7
22	Guntur.	Parlakimedi circle	...	...	...	...	1	854 6 8	1	5	2	1,247 2 8	1	102 0 0	2,203 8 4
23		Purushottapur do.	...	...	...	...	1	541 2 10	3	5	...	1,404 6 8	1	102 0 0	2,047 9 6
24	Guntur.	Total of district	...	...	...	...	1	3,963 11 6	15	33	8	8,838 9 8	6	623 6 1	13,430 11 3
25		Cocanada circle.	...	...	...	...	1	577 0 0	3	3	...	1,266 9 9	1	102 0 0	1,945 9 9
26	Guntur.	Rajahmundry do.	...	...	...	...	1	480 0 0	4	4	1	1,324 10 6	1	107 8 3	2,512 2 9
27		Polavaram do.	...	...	...	...	1	755 14 3	2	3	...	1,060 9 1	1	114 0 0	1,830 7 4
28	Guntur.	Peddapur do.	...	...	...	...	1	463 3 7	4	6	...	2,007 1 3	1	96 10 11	2,566 15 9
29		Bhadraohalam do.	...	...	...	...	1	818 13 7	2	3	1	1,029 5 5	1	114 0 0	1,962 3 0
30	Guntur.	Total of district	...	...	...	...	1	3,094 15 5	15	19	3	7,288 4 0	5	534 3 2	10,917 6 7
31		Guntur circle	...	...	...	...	1	840 0 0	3	4	...	1,372 14 6	1	94 0 0	2,306 14 6
32	Guntur.	Narasaraopet circle	...	...	...	...	1	440 0 0	2	3	3	1,111 11 7	1	70 12 5	1,622 8 0
33		Bapatia circle	...	...	...	...	1	754 10 0	4	3	4	1,667 10 0	1	94 0 0	2,516 4 0
34	Kistna.	Total of district	...	...	...	...	1	2,084 10 0	9	10	12	4,152 4 1	3	258 12 5	6,445 10 6
35		Ellore circle	...	...	...	...	1	720 0 0	1	3	11	1,843 12 10	1	84 0 0	2,647 12 10
36	Kistna.	Masulipatam circle	...	...	...	...	1	840 0 0	2	4	8	2,168 5 5	1	102 0 0	3,110 5 5
37		Narasapur do.	...	...	...	...	1	720 0 0	6	6	1	2,285 12 1	1	103 8 0	3,109 4 1
38	Kurnool.	Total of district	...	...	...	...	1	2,280 0 0	9	13	20	6,297 14 4	3	289 8 0	8,867 6 4
39		Cumbum circle	...	...	...	...	1	835 0 0	4	4	5	2,025 1 11	1	84 0 0	2,944 1 11
40	Kurnool.	Kurnool do.	...	...	...	...	1	584 3 1	4	4	5	1,807 14 4	1	84 0 0	2,976 1 5
41		Total of district	...	...	...	...	1	1,493 3 1	8	8	10	3,833 0 3	2	168 0 0	5,420 3 4
42	Madras.	Dindigul circle	...	...	...	...	1	828 5 4	...	4	...	1,262 12 6	1	84 0 0	2,175 1 10
43		Madura do.	...	...	...	...	1	720 0 0	...	4	...	1,809 9 10	1	86 0 0	2,115 9 10
44	Madras.	Usilampatti do.	...	...	...	...	1	760 0 0	...	5	...	1,708 14 6	1	85 8 9	2,554 7 8
45		Total of district	...	...	...	...	1	2,308 5 4	...	13	...	4,281 4 10	3	255 8 9	6,845 2 11
46	Madras.	Madras Presidency	...	...	...	...	1	8,495 15 0	...	...	...	...	...	...	8,495 15 0
47		Total of district	...	...	...	...	1	8,495 15 0	...	...	...	...	...	...	8,495 15 0

A—VACCINE DEPARTMENT.

Statement No. II showing the Cost of the Department in the Madras Presidency for the official year 1915-16—continued.

Number.	Districts.	Circles.	Expenditure—cont.				Paid from				Total.*	Number of all successful re-vaccination and primary vaccination.	Average cost of each successful case.			
			Travelling allowance.		Contingencies.*		Total cost.*		Imperial funds.	Provincial funds.				Local funds.*	Municipal funds.	
			17	18	19	20	21	22	23	24				25	26	
			RS.	A. P.	RS.	A. P.	RS.	A. P.	RS.	A. P.	RS.	A. P.	RS.	A. P.	RS.	A. P.
1	Anantapur.	Anantapur circle	629	2 6	843	14 2	3,497	14 2	1,183	8 3	2,314	5 11	3,497	14 2	12,288	0 4 7
2		Penukonda do.	458	10 3	1,159	15 6	3,786	11 4	981	6 5	2,805	4 11	3,786	11 4	15,161	0 4 0
3	Bellary.	Total of district	1,087	12 9	2,003	13 8	7,284	9 6	2,164	14 8	5,119	10 10	7,284	9 6	27,449	0 4 3
4		Bellary circle	1,110	4 0	562	11 1	4,031	12 1	1,462	4 2	2,569	7 10	4,031	12 1	15,297	0 4 3
5	Chingleput.	Hospet do.	301	4 6	613	3 6	3,296	6 3	1,032	12 0	2,263	10 3	3,296	6 3	14,045	0 3 9
6		Total of district	1,411	8 6	1,175	14 7	7,328	2 4	2,495	0 2	4,833	2 2	7,328	2 4	29,342	0 4 0
7	Chittoor.	Chingleput circle	501	9 6	623	8 11	3,824	4 4	1,454	15 0	2,369	5 4	3,824	4 4	11,218	0 5 5
8		Saidapet do.	902	0 0	496	12 1	3,875	8 11	1,545	4 0	2,130	4 11	3,875	8 11	9,750	0 6 0
9	Chittoor.	Ponnéri do.	726	4 5	645	12 7	4,033	14 1	1,739	6 4	2,294	7 9	4,033	14 1	10,158	0 6 4
10		Total of district	2,129	13 11	1,766	1 7	11,533	11 4	4,739	9 4	6,794	2 0	11,533	11 4	31,126	0 5 11
11	Chittoor.	Chittoor circle	988	11 10	609	8 7	3,962	6 11	1,420	12 5	2,541	10 6	3,962	6 11	14,680	0 4 4
12		Karvetnagar circle	1,013	6 3	712	10 4	4,249	2 2	1,027	5 7	3,221	12 7	4,249	2 2	21,555	0 3 2
13	Chittoor.	Total of district	2,002	2 1	1,522	2 11	8,211	9 1	2,448	2 0	5,763	7 1	8,211	9 1	36,185	0 3 8
14		North Coimbatore circle	517	0 3	894	10 3	3,650	12 10	1,414	9 9	2,236	3 1	3,650	12 10	12,582	0 4 8
15	Chittoor.	East do.	451	9 3	884	12 11	3,546	4 4	1,528	13 9	2,317	6 7	3,546	4 4	13,430	0 4 7
16		South do.	279	14 0	550	8 3	2,579	10 5	989	4 9	1,590	5 8	2,579	10 5	10,837	0 3 10
17	Chittoor.	Central do.	400	4 5	941	3 7	3,756	6 6	1,628	13 6	2,127	8 6	3,756	6 0	13,749	0 4 4
18		Total of district	1,648	11 11	3,271	3 0	13,833	1 7	5,561	9 9	8,271	7 10	13,833	1 7	50,548	0 4 5

14	Cuddapah.	Cuddapah circle	659	1 2	497	1 0	3,351	15 2	1,333	12 1	2,018	3 1	3,351	15 2	9,015	0 5 11
15		Proddatur do.	522	13 4	477	14 8	2,589	13 4	913	12 7	1,670	0 9	2,589	13 4	9,115	0 4 7
16	Cuddapah.	Sidhout do.	632	10 10	463	0 8	3,427	0 10	1,201	3 1	2,225	13 9	3,427	0 10	10,108	0 5 5
17		Total of district	1,874	9 4	1,438	0 4	9,368	13 4	3,454	11 9	5,914	1 7	9,368	13 4	28,238	0 5 4
18	Ganjam.	Berhampur circle	337	0 9	540	1 0	2,989	9 8	1,024	6 1	1,965	3 7	2,989	9 8	14,415	0 3 4
19		Chascole do.	333	6 0	512	14 2	3,169	7 0	1,184	12 4	1,974	10 8	3,169	7 0	18,129	0 3 10
20	Ganjam.	Ganjam Hill tracts	1,579	14 0	439	2 1	5,023	7 2	5,023	7 2	1,696	10 6	5,023	7 2	11,649	0 6 11
21		Aska circle	309	8 0	572	7 9	2,811	6 4	1,114	11 10	1,635	3 5	2,811	6 4	12,044	0 3 9
22	Ganjam.	Parlakimedi circle	264	12 6	448	9 8	2,916	15 6	1,281	12 1	1,635	3 5	2,916	15 6	10,833	0 4 3
23		Purushottapur do.	288	3 6	621	11 3	2,957	8 3	1,034	0 2	1,923	8 1	2,957	8 3	12,902	0 3 8
24	Godavari.	Total of district	3,272	12 9	3,164	13 11	19,898	5 11	10,673	1 8	9,195	4 3	19,898	5 11	75,072	0 4 3
25		Cocanada circle	628	14 2	608	11 9	3,183	3 8	1,033	6 3	2,149	13 5	3,183	3 8	10,523	0 4 10
26	Godavari.	Rajahmundry do.	891	2 7	923	2 9	4,326	8 1	981	1 3	3,345	6 10	4,326	8 1	18,651	0 3 9
27		Polararam do.	905	6 6	209	0 10	3,044	14 8	1,342	8 5	1,702	6 3	3,044	14 8	4,401	0 11 1
28	Guntur.	Peddapur do.	1,083	1 6	1,344	2 6	4,994	3 9	1,108	11 7	3,885	8 2	4,994	3 9	19,160	0 4 2
29		Bhadraachalam do.	696	1 0	373	2 3	3,031	6 3	3,031	6 3	...	...	3,031	6 3	2,416	1 1 1
30	Guntur.	Total of district	4,204	9 9	3,458	4 1	18,580	4 5	7,497	1 9	11,083	2 8	18,580	4 5	55,151	0 5 5
31		Guntur circle	696	3 3	736	3 2	3,739	4 11	1,391	7 9	2,347	13 2	3,739	4 11	18,251	0 3 3
32	Kistna.	Narasaraopet circle	578	2 7	887	8 8	3,068	3 3	840	10 8	2,227	8 7	3,068	3 3	20,234	0 2 5
33		Bapatla circle	659	10 11	518	1 1	3,694	0 0	1,128	12 6	2,565	3 6	3,694	0 0	17,205	0 3 5
34	Kurnool.	Total of district	1,334	0 3	2,121	12 11	10,501	8 2	3,360	14 11	7,140	9 3	10,501	8 2	55,690	0 3 0
35		Ellore circle	1,354	8 2	853	4 2	4,855	9 2	1,260	4 0	3,595	5 2	4,855	9 2	25,010	0 3 1
36	Kurnool.	Masulipatam circle	1,276	1 11	1,303	0 5	5,689	7 9	1,533	12 3	4,155	11 6	5,689	7 9	21,254	0 4 3
37		Narasapur do.	1,273	4 11	875	5 11	5,257	14 11	1,369	12 6	3,888	2 5	5,257	14 11	23,390	0 3 7
38	Madras.	Total of district	3,903	15 0	3,031	10 6	15,802	13 10	4,163	12 9	11,639	3 1	15,802	13 10	63,654	0 3 8
39		Guntur circle	504	2 2	759	5 0	4,207	9 1	1,679	0 9	2,528	8 4	4,207	9 1	15,590	0 4 4
40	Madras.	Kurnool do.	262	6 8	855	4 11	3,593	13 0	1,217	13 9	2,375	15 3	3,593	13 0	16,421	0 3 6
41		Total of district	766	8 10	1,614	9 11	7,801	6 1	2,896	14 6	4,904	7 7	7,801	6 1	32,011	0 3 11
42	Madras.	Dindigul circle	816	1 8	851	4 1	3,842	7 7	1,481	4 5	2,361	3 2	3,842	7 7	16,256	0 3 9
43		Madura do.	962	14 3	788	12 7	3,867	4 8	1,329	6 2	2,537	14 6	3,867	4 8	11,422	0 5 5
44	Madras.	Uthirapatti do.	982	6 8	684	14 5	4,221	12 4	1,841	10 11	2,880	1 5	4,221	12 4	13,287	0 5 1
45		Total of district	2,761	6 7	2,324	15 1	11,931	8 7	4,152	5 6	7,779	3 1	11,931	8 7	40,965	0 4 8
46	Madras.	Madras Presidency	3,632	2 0	...	...	12,128	1 0	12,128	1 0	...	...	12,128	1 0	...	...
47		Total of district	3,632	2 0	...	...	12,128	1 0	12,128	1 0	...	...	12,128	1 0	...	...

* Includes cost of lymph supplied by King Institute of Preventive Medicine during 1915-16. † Includes the pay and allowances of the Dy. Sanitary Commissioners, Northern, Central and Southern Ranges.

A—VACCINE DEPARTMENT.

STATEMENT No. II showing the Cost of the Department in the Madras Presidency for the official year 1915-16—continued.

Expenditure.																
Number.	Districts.	Circles.	Inspector of Vaccination and Deputy Sanitary Commissioner.				Deputy Inspectors.			Vaccinators.				Peons, etc.		Total pay of establishment.
			Pay.	First grade.	Second grade.	Third grade.	Pay.	First class.	Second class.	Probationers.	Pay.	Number.	Pay.			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
33	Malabar.	Tellicherry circle	..	..	1	..	..	RS. A. P. 875 2 8	2	9	..	RS. A. P. 1,628 5 9	1	RS. A. P. 101 15 11	2,605 8 4	
40		Calicut do.	..	..	..	..	..	557 13 3	3	7	..	1,640 10 8	1	101 15 11	2,300 7 10	
41		Palghat do.	..	..	..	..	..	536 10 8	3	9	..	1,839 15 3	1	102 0 0	2,478 9 11	
42		Malapurm do.	..	..	..	..	..	480 0 0	3	8	..	1,532 15 0	1	99 3 6	2,112 2 6	
		Total of district	..	..	1	..	3	2,449 10 7	11	33	..	6,641 14 8	4	405 3 4	9,496 12 7	
43	Nellore.	Kavali circle	..	..	..	1	..	712 8 0	1	2	7*	1,413 0 1	1	84 0 0	2,209 8 1	
44		Gudur do.	..	..	1	..	..	588 6 2	6	2	3	1,785 0 9	1	84 0 0	2,457 6 11	
45		Kanigiri do.	..	..	..	..	1	612 2 3	1	4	5	1,745 11 7	1	84 0 0	2,441 13 10	
		Total of district	..	..	1	1	1	1,913 0 5	8	8	15	4,943 12 5	3	252 0 0	7,108 12 10	
46	Nilgiris.	Nilgiris circle	..	..	..	..	..	660 0 0	3	..	1	1,068 13 11	1	114 0 0	1,842 13 11	
		Total of district	..	..	..	..	1	660 0 0	3	..	1	1,068 13 11	1	114 0 0	1,842 13 11	
47		Vellore circle	..	..	..	..	..	418 0 0	3	3	..	669 3 0	1	102 0 0	1,251 3 0	
48	North Arcot.	Ranipettai do.	..	..	1	..	1	872 13 2	3	..	..	626 9 5	1	95 0 0	1,564 6 7	
49		Polar do.	..	..	..	1	1	480 0 0	1	2	..	779 0 0	1	96 0 0	1,355 0 0	
50		Tirupattur do.	..	..	..	..	1	720 0 0	4	8	1	2,443 8 6	1	93 2 2	3,261 10 8	
		Total of district	..	..	1	1	2	2,552 13 2	11	10	1	4,523 4 11	4	386 2 2	7,462 4 3	
51	Ramanad.	Srivilliputtur circle	..	..	..	1	..	750 0 0	3	5	1	1,482 4 3	1	96 0 0	2,328 4 3*	
52		Ramanad (old Paramagudi circle)	..	..	1	..	..	759 6 0	3	6	1	2,127 9 5	1	96 0 0	2,982 15 5	
53		Tirupattur circle	..	..	..	1	..	720 0 0	3	9	1	1,779 0 7	1	96 0 0	2,595 6 7	
		Total of district	..	..	..	3	..	2,229 6 0	9	20	3	5,338 14 3	3	288 0 0	7,906 4 3	
54	Salem.	Salem circle	..	..	1	..	..	840 0 0	3	4	..	1,278 8 11	1	86 0 0	2,204 8 11	
55		Sankari do.	..	..	..	..	1	480 0 0	1	10	..	1,139 6 2	1	86 0 0	1,705 6 2	
56		Hostur do.	..	..	..	..	1	480 0 0	3	3	..	1,032 2 6	1	86 0 0	1,648 2 6	
		Total of district	..	..	1	..	2	1,800 0 0	7	24	..	3,500 1 7	3	258 0 0	5,568 1 7	

* Includes two pupil vaccinators.

† Excludes 7 temporary Vaccinators employed on Small-pox duty for different periods—1 for 5½ months, 1 for 5 months, 1 for 4½ months, 1 for 4 months, 1 for 3½ months, 1 for 3 months and 1 for 1 months.

A—VACCINE DEPARTMENT.

STATEMENT No. II showing the Cost of the Department in the Madras Presidency for the official year 1915-16—continued.

Number.	Districts.	Circles.	Expenditure—cont.			Paid from					Average cost of each successful case.	
			Travelling allowance.	Contingencies. *	Total cost. *	Imperial funds.	Provincial funds.	Local funds. *	Municipal funds.	Total. *		
			17	18	19	20	21	22	23	24	25	26
			RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.
39	Malabar.	Tellicherry circle	991 14 0	1,084 13 11	4,682 4 8	...	1,825 8 7	2,856 11 8	...	4,682 4 8	24,333	0 3 1
40		Calicut do.	1,105 2 3	1,003 0 0	4,408 10 1	...	1,832 7 11	3,076 2 2	...	4,408 10 1	24,249	0 1 3
41		Palghat do.	1,179 8 5	1,453 9 11	5,111 12 3	...	1,319 12 4	3,791 15 11	...	5,111 12 3	39,951	0 1 7
42		Malapuram do.	1,179 11 0	1,887 13 10	5,179 11 4	...	1,260 9 0	3,919 2 4	...	5,179 11 4	49,982	0 1 8
		Total of district	4,455 3 8	5,429 5 8	19,382 5 11	...	5,738 5 10	13,644 0 1	...	19,382 5 11	138,515	0 2 3
43	Nellore.	Kavali circle	1,199 0 7	693 4 10	4,101 13 6	...	1,459 13 3	2,642 0 3	...	4,101 13 6	10,994	0 2 4
44		Gudur do.	684 1 6	642 15 5	3,784 7 10	...	1,058 0 11	2,726 6 11	...	3,784 7 10	15,396	0 3 11
45		Kanigiri do.	769 0 4	592 14 10	3,803 13 0	...	1,130 9 9	2,673 8 3	...	3,803 13 0	14,849	0 4 6
46	Nilgiris.	Total of district	2,652 2 5	1,929 3 1	11,690 2 4	...	3,648 7 11	8,041 10 5	...	11,690 2 4	41,239	0 4 6
			951 9 0	739 3 6	3,533 10 5	...	2,342 9 9	1,191 0 8	...	3,533 10 5	4,328	0 13 1
47	North Arcot.	Total of district	951 9 0	739 3 6	3,533 10 5	...	2,342 9 9	1,191 0 8	...	3,533 10 5	4,328	0 13 1
48		Vellore circle	983 15 9	485 10 6	2,720 13 3	...	1,371 2 1	1,349 11 2	...	2,720 13 3	11,158	0 3 11
49		Rāmpettai do.	761 8 0	446 1 9	2,802 0 4	...	1,473 6 0	1,328 10 4	...	2,802 0 4	11,815	0 3 10
50		Pohur do.	826 5 4	480 1 7	2,661 6 11	...	1,198 1 11	1,463 5 0	...	2,661 6 11	9,650	0 4 5
51	Rāmanād.	Trupputtūr do.	599 10 11	668 4 10	4,529 10 5	...	1,458 14 11	3,069 11 6	...	4,529 10 5	18,046	0 4 0
52		Total of district	3,171 8 0	2,080 2 8	12,713 14 11	...	5,501 8 11	7,212 6 0	...	12,713 14 11	50,669	0 4 0
53		Savillipittūr circle	745 10 8	678 9 6	3,752 8 5	...	1,354 2 0	2,398 6 5	...	3,752 8 5	17,838	0 3 4
54	Salem.	Rāmanād (old Rāmanagudi) circle	418 14 6	670 0 1	4,071 14 0	...	1,447 5 6	2,624 8 6	...	4,071 14 0	17,789	0 3 8
55		Trupputtūr circle	992 9 4	959 15 3	4,547 9 2	...	1,335 10 0	3,211 15 2	...	4,547 9 2	18,540	0 3 11
56		Total of district	2,157 2 6	2,308 8 10	12,371 15 7	...	4,137 1 6	8,234 14 1	...	12,371 15 7	54,167	0 3 8
			338 15 2	690 3 6	3,233 11 7	...	1,219 5 6	2,014 6 1	...	3,233 11 7	15,850	0 3 3
57	Salem.	Salem circle	561 7 7	836 12 1	3,203 9 10	...	853 12 6	2,349 13 4	...	3,203 9 10	20,267	0 2 6
58		Sankari do.	420 12 3	670 13 11	2,739 12 8	...	842 2 11	1,897 9 9	...	2,739 12 8	16,926	0 2 7
59		Hosūr do.				...			...			
60		Total of district	1,321 3 0	2,297 13 6	9,177 2 1	...	2,915 4 11	6,261 13 2	...	9,177 2 1	53,043	0 2 9

57	Cuddalore circle	...	400 13 10	665 12 9	3,436 13 10	...	1,371 1 6	2,065 12 4	...	3,028 0 1	11,007	0 5 0
58		Vridhachalam do.	584 5 4	451 4 4	2,389 1 5	...	1,143 15 10	1,246 1 7	...	2,389 1 5	12,021	0 3 2
59		Trukkottai do.	520 9 4	586 11 5	2,407 10 7	...	1,002 6 6	1,405 4 1	...	2,407 10 7	12,007	0 3 3
60		Villupuram do.	805 12 0	679 9 3	3,515 11 5	...	1,406 8 11	2,109 7 6	...	3,515 11 5	12,120	0 4 8
61	Northern circle	Tindivanam do.	469 15 2	518 10 6	2,295 8 1	...	966 0 0	1,329 8 1	...	2,295 8 1	10,491	0 3 6
		Total of district	2,731 7 8	2,902 0 3	14,044 13 4	...	5,888 11 9	8,156 1 7	...	14,044 13 4	57,646	0 3 11
62						...			...			
63						...			...			
64	Tanjore.	Northern circle	725 8 7	371 5 6	4,288 4 8	...	1,235 14 4	3,022 6 4	...	4,288 4 8	13,323	0 5 2
65		Central do.	887 5 6	360 4 0	3,952 14 0	...	1,394 7 6	2,558 6 6	...	3,952 14 0	12,240	0 5 2
66		Southern do.	938 12 4	511 7 7	4,234 14 0	...	1,089 0 5	3,198 13 7	...	4,234 14 0	14,047	0 4 10
67		Total of district	2,521 10 5	1,243 1 1	12,476 0 8	...	3,689 6 3	8,776 10 5	...	12,476 0 8	39,616	0 5 0
68	Tanjore.	Tanjore circle	308 11 9	462 5 4	2,444 9 11	...	1,249 11 3	1,194 14 8	...	2,444 9 11	12,199	0 3 2
69		Naganam do.	230 1 9	705 3 8	3,214 10 1	...	1,191 3 11	2,023 6 2	...	3,214 10 1	16,803	0 3 1
70		Patankottai do.	365 7 9	815 13 5	2,797 9 6	...	1,067 9 3	2,069 4 11	...	3,136 14 2	18,576	0 2 8
71		Kumbakonam do.	248 13 0	727 10 10	2,797 9 6	...	896 5 6	1,901 4 0	...	2,797 9 6	16,803	0 2 8
72	Tinnevely.	Total of district	1,143 2 3	2,711 1 3	11,593 11 8	...	4,404 13 11	7,188 13 9	...	11,593 11 8	64,386	0 2 11
73		Shermadevi circle	287 12 1	530 12 2	3,002 15 8	...	1,125 8 5	1,877 7 3	...	3,002 15 8	19,517	0 2 8
74		Srivillupattur do.	644 14 7	653 8 9	3,361 3 2	...	1,330 11 3	2,030 7 11	...	3,361 3 2	22,434	0 2 5
75		Kolpatti do.	613 13 5	590 10 3	2,907 15 5	...	1,248 4 1	1,659 11 4	...	2,907 15 5	19,542	0 2 5
76	Vizagapatnam.	Total of district	1,546 8 1	1,774 15 2	9,272 2 3	...	3,704 7 9	5,507 10 6	...	9,272 2 3	61,493	0 2 5
77		Trichinopoly circle	823 9 2	905 7 8	4,920 14 11	...	1,462 15 3	3,457 15 8	...	4,920 14 11	21,686	0 3 8
78		Arivattur do.	627 5 3	584 13 3	3,458 15 9	...	968 0 2	2,490 15 7	...	3,458 15 9	13,063	0 4 1
79		Namakkal do.	711 7 9	1,384 10 2	4,242 15 1	...	1,146 2 5	3,096 12 8	...	4,242 15 1	16,565	0 4 1
80	Koraput.	Total of district	2,162 6 2	2,874 15 1	12,622 13 9	...	3,577 1 10	9,045 11 11	...	12,622 13 9	51,914	0 3 11
						...			...			
						...			...			
						...			...			
81	Vizagapatnam.	Vizagapatnam circle	764 13 11	1,863 8 2	5,360 2 4	...	1,266 9 1	4,093 9 3	...	5,360 2 4	45,997	0 1 10
82		Government vaccinators (Gudem hills).	144 0 0	158 0 5	662 0 5	...	662 0 5	...	...	662 0 5	1,467	0 7 3
83		Vizianagaram circle	788 15 3	1,900 14 3	5,221 9 5	...	1,034 5 5	4,187 4 0	...	5,221 9 5	37,701	0 2 2
84		Pavurajapet do.	768 11 6	987 2 9	4,162 2 8	...	1,173 2 4	2,989 0 4	...	4,162 2 8	23,682	0 2 10
85	Koraput.	Total of district	2,466 8 8	4,908 15 7	15,405 14 10	...	4,136 1 3	11,269 13 7	...	15,405 14 10	1,08,847	0 2 3
86						...			...			
87						...			...			
88						...			...			
89	Koraput.	Gunapur do.	1,711 0 9	696 6 3	4,043 9 10	...	1,221 1 5	2,822 8 5	...	4,043 9 10	10,094	0 6 5
90		Jeyapore circle	1,191 0 4	617 3 8	4,282 0 1	...	1,640 9 11	2,632 6 2	...	4,282 0 1	15,476	0 4 5
91		Koraput do.	908 4 1	406 11 4	3,665 8 10	...	1,677 4 4	1,888 4 6	...	3,665 8 10	9,267	0 6 4
92		Total of district	3,810 5 2	1,780 5 3	11,991 2 9	...	4,547 15 8	7,443 3 1	...	11,991 2 9	34,837	0 5 6
93	Bangalore Cantonment	Grand total of districts	61,721 15 2	59,873 1 5	3,10,449 15 8	...	1,19,978 5 0	190,471 10 8	...	3,10,449 15 8	12,92,131	0 3 9
94						...			...			
95						...			...			
96						...			...			
97	Bangalore Cantonment		240 0 0	...	576 0 0	...	...	...	...	576 0 0	361	1 9 6
98			180 0 0	168 15 8	2,595 0 2	...	...	...	...	2,595 0 2	5,779	0 7 2
99			420 0 0	68 15 8	3,171 0 2	...	...	...	...	3,171 0 2	6,140	0 8 3
100		Total				...	...	...	...			

* Includes cost of lymph supplied by King Institute of Preventive Medicine during 1915-16.
† Paid from Local, Abkari, etc., funds.

A—VACCINE DEPARTMENT.

Statement No. II showing the Cost of the Department in the Madras Presidency during the official year 1915-16—continued.

Expenditure.														
Municipalities.		Inspector of Vaccination and Deputy Sanitary Commissioner.	Pay.	Deputy Inspectors.			Vaccinators.				Peons, etc.		Total pay of establishment.	
Number.				First grade.	Second grade.	Third grade.	Pay.	First class.	Second class.	Probationers.	Pay.	Number.		Pay.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
			RS. A. P.				RS. A. P.				RS. A. P.		RS. A. P.	RS. A. P.
1	Adoni	..	..	..	..	..	..	1	..	1	347 0 0	..	..	347 0 0
2	Anantapur	..	..	..	..	..	..	..	..	1	127 3 5	..	..	127 3 5
3	Anakapalle	..	..	..	..	..	..	..	1	..	165 2 0	..	..	165 2 0
4	Bellary	..	..	..	..	..	..	2	1	..	664 12 6	..	..	664 12 6
5	Berhampur	..	..	..	..	..	..	1	..	..	240 0 0	..	..	240 0 0
6	Bewda	..	..	..	..	..	..	1	1	..	279 3 6	1	95 0 0	374 3 6
7	Bimlipatam	..	..	..	..	..	..	..	1	..	155 13 4	..	..	155 13 4
8	Calicut	..	..	..	..	..	..	1	*2	1	547 9 11	..	..	547 9 11
9	Cannanore	..	..	..	..	..	..	1	..	..	240 0 0	..	..	240 0 0
10	Chicacole	..	..	..	..	..	..	1	..	..	344 10 4	..	..	344 10 4
11	Chidambaram	..	..	..	..	..	..	1	..	..	210 8 0	..	..	210 8 0
12	Chingleput	..	..	..	..	..	..	..	1	..	144 0 0	..	..	144 0 0
13	Cochin	..	..	..	..	..	..	1	..	..	222 7 9	..	..	222 7 9
14	Cocanada	..	..	..	..	..	..	1	..	..	461 8 0	..	..	461 8 0
15	Coimbatore	..	..	..	..	..	..	1	2	..	588 8 0	..	..	588 8 0
16	Conjeevaram	..	..	..	..	..	..	..	2	..	302 0 0	..	..	302 0 0
17	Coonoor	..	..	..	..	..	..	1	..	..	302 9 10	..	..	302 9 10
18	Cuddalore	..	..	..	..	..	..	1	..	..	419 8 0	..	..	419 8 0
19	Cuddapah	..	..	..	..	..	..	1	1	..	156 0 0	..	..	156 0 0
20	Dindigul	..	..	..	..	..	..	1	..	..	176 12 1	..	..	176 12 1
21	Ellore	..	..	..	..	..	..	1	1	..	444 5 3	..	..	444 5 3
22	Erode	..	..	..	..	..	..	1	..	..	228 0 0	..	..	228 0 0
23	Gudiyattam	..	..	..	..	..	..	1	1	..	134 4 6	..	..	134 4 6
24	Guntur	..	..	..	..	..	..	1	1	1	368 1 7	2	149 9 10	517 11 5
25	Hospet	..	..	..	..	..	..	..	1	1	120 0 0	..	..	120 0 0
26	Karur	..	..	..	..	..	..	1	..	..	295 0 0	..	..	295 0 0

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* Includes one Vaccinatrix.
+ Medical Vaccinators.
† Assistant Vaccinators.

§ Clerks.
|| Including 8 appointed for cholera duty.

N.B.—The average cost of each successful case was calculated on the total number of successful vaccinations performed by the special staff only, viz., Local Fund, Government, Municipal and Cantonment staffs (vide G.O. No. 1158-L., Mis., dated 4th September 1911).

A—VACCINE DEPARTMENT.

Statement No. II showing the Cost of the Department in the Madras Presidency for the official year 1915-16—continued.

Number.	Municipalities.	Expenditure—cont.				Paid from				Total.	Number of all successful primary vaccination and re-vaccination.	Average cost of each successful case.
		Contingencies.		Total cost.	Imperial funds.			Provincial funds.				
		16	17		18	19	20	21	22			
		Travelling allowance.										
		RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.		
1	Adoni	...	143 2 8	490 2 8	...	...	...	490 2 8	490 2 8	1,225	0 6 5	
2	Anantapur	...	18 15 2	146 2 7	...	...	...	146 2 7	146 2 7	209	0 11 2	
3	Anakāpalle	...	67 2 8	222 4 8	...	...	...	222 4 8	222 4 8	630	0 5 8	
4	Bellary	...	80 0 3	744 12 9	...	...	...	744 12 9	744 12 9	3,004	0 4 0	
5	Berhampur	...	56 7 11	296 7 11	...	...	...	296 7 11	296 7 11	1,655	0 2 10	
6	Bezawada	...	42 10 5	420 10 5	...	...	...	420 10 5	420 10 5	1,410	0 4 9	
7	Bimlipatan	...	36 10 5	192 7 9	...	...	...	192 7 9	192 7 9	566	0 5 5	
8	Calicut	...	276 2 4	823 12 3	...	...	...	823 12 3	823 12 3	5,939	0 2 3	
9	Cannanore	...	92 2 8	332 2 8	...	...	...	332 2 8	332 2 8	1,579	0 3 4	
10	Chicaole	...	28 14 9	373 9 1	...	...	...	373 9 1	373 9 1	666	0 9 0	
11	Chidambaram	...	43 14 1	253 6 1	...	...	...	253 6 1	253 6 1	825	0 4 11	
12	Chingleput	...	47 10 1	191 10 1	...	...	...	191 10 1	191 10 1	795	0 3 10	
13	Cochin	...	45 2 7	267 10 4	...	...	...	267 10 4	267 10 4	1,241	0 3 5	
14	Cocanada	...	175 14 3	637 6 3	...	...	...	637 6 3	637 6 3	1,698	0 6 0	
15	Coimbatore	...	90 11 4	679 3 4	...	...	...	679 3 4	679 3 4	1,968	0 5 6	
16	Conjeeveram	...	117 9 9	419 9 9	...	...	...	419 9 9	419 9 9	1,726	0 3 11	
17	Coonoor	...	42 11 11	345 5 9	...	...	...	345 5 9	345 5 9	574	0 3 7	
18	Cuddalore	...	142 8 1	562 0 1	...	...	...	562 0 1	562 0 1	2,482	0 3 7	
19	Cuddapah	...	37 7 1	193 7 1	...	...	...	193 7 1	193 7 1	531	0 5 10	
20	Dindigul	...	65 3 10	241 15 11	...	...	...	241 15 11	241 15 11	971	0 4 0	
21	Ellore	...	154 0 5	598 5 8	...	...	...	598 5 8	598 5 8	2,741	0 3 6	
22	Erode	...	43 10 8	271 10 8	...	...	...	271 10 8	271 10 8	880	0 4 11	
23	Gudiyaṭṭam	...	39 6 8	173 11 2	...	...	...	173 11 2	173 11 2	751	0 3 8	
24	Guntur	...	92 1 9	609 13 2	...	...	...	609 13 2	609 13 2	2,262	0 4 4	
25	Hospet	...	40 15 1	160 15 1	...	...	...	160 15 1	160 15 1	882	0 2 11	
26	Karūr	...	23 14 7	318 14 7	...	...	...	318 14 7	318 14 7	508	0 10 1	

27	Kodakānal	...	10 4 9	65 4 9	...	...	...	65 4 9	65 4 9	175	0 6 0
28	Kumbakonam	...	93 4 10	640 7 11	...	...	...	640 7 11	640 7 11	1,972	0 5 2
29	Kurnool	...	30 6 8	281 6 8	...	...	...	281 6 8	281 6 8	1,172	0 3 10
30	Madras	25 5 0	4,479 11 6	16,333 13 8	...	...	...	16,333 13 8	16,333 13 8	42,458	0 6 1
31	Madura	...	989 1 4	1,924 5 7	...	...	...	1,924 5 7	1,924 5 7	12,247	0 2 6
32	Mannāgudi	...	78 7 8	255 7 8	...	...	...	255 7 8	255 7 8	838	0 4 11
33	Mangalore	...	47 13 6	703 13 6	...	...	...	703 13 6	703 13 6	2,534	0 4 5
34	Masulipatam	...	140 11 11	489 11 10	...	...	...	489 11 10	489 11 10	1,455	0 5 6
35	Māyavaram	...	37 11 2	268 9 1	...	...	...	268 9 1	268 9 1	1,236	0 3 6
36	Nandyal	...	27 1 8	197 1 8	...	...	...	197 1 8	197 1 8	845	0 3 9
37	Negapatam	...	259 15 2	825 15 2	...	...	...	825 15 2	825 15 2	4,204	0 3 2
38	Narasaraopet	...	32 2 3	173 15 10	...	...	...	173 15 10	173 15 10	433	0 6 5
39	Nellore	...	50 0 7	411 2 7	...	...	...	411 2 7	411 2 7	1,501	0 4 5
40	Ongole	...	58 6 8	238 6 8	...	...	...	238 6 8	238 6 8	630	0 6 2
41	Ootacamund	...	* 98 13 8	* 322 13 8	...	...	...	322 13 8	322 13 8	976	0 5 4
42	Palamcottah	...	79 5 4	557 5 10	...	...	...	557 5 10	557 5 10	2,090	0 4 3
43	Palghat	...	116 5 0	496 13 0	...	...	...	496 13 0	496 13 0	2,023	0 3 11
44	Parāimedi	...	123 0 4	468 7 0	...	...	...	468 7 0	468 7 0	4,904	0 1 6
45	Peddapatturam	...	46 7 8	179 0 11	...	...	...	179 0 11	179 0 11	374	0 7 8
46	Periyakulam	...	41 7 7	217 0 11	...	...	...	217 0 11	217 0 11	879	0 3 11
47	Palni	...	15 2 5	207 2 5	...	...	...	207 2 5	207 2 5	357	0 9 3
48	Proddatur	...	10 13 5	35 0 6	...	...	...	35 0 6	35 0 6	146	0 3 10
49	Rejehmundry	...	75 11 1	583 5 1	...	...	...	583 5 1	583 5 1	2,803	0 3 3
50	Salem	...	162 2 10	745 2 10	...	...	...	745 2 10	745 2 10	2,127	0 5 7
51	Sitragam	...	58 9 7	296 9 7	...	...	...	296 9 7	296 9 7	1,199	0 3 11
52	Srivillipattur	...	50 7 11	172 7 11	...	...	...	172 7 11	172 7 11	1,077	0 2 7
53	Tanjore	...	151 2 3	497 8 5	...	...	...	497 8 5	497 8 5	3,955	0 2 0
54	Telicherry	...	31 1 7	397 1 7	...	...	...	397 1 7	397 1 7	1,190	0 5 4
55	Tenali	...	54 2 7	234 2 7	...	...	...	234 2 7	234 2 7	759	0 4 11
56	Tinnevely	...	125 10 0	579 10 0	...	...	...	579 10 0	579 10 0	2,122	0 4 4
57	Trichinopoly	...	343 11 0	804 14 10	...	...	...	804 14 10	804 14 10	6,022	0 2 2
58	Triupattur	...	16 13 4	220 13 4	...	...	...	220 13 4	220 13 4	602	0 5 10
59	Tirupati	...	+ 10 12 5	+ 201 12 5	...	...	...	201 12 5	201 12 5	557	0 5 9
60	Tiruvalur	...	34 3 8	229 3 8	...	...	...	229 3 8	229 3 8	616	0 5 11
61	Tiruvannāmalai	...	44 11 7	238 3 7	...	...	...	238 3 7	238 3 7	881	0 4 4
62	Tuticorin	...	100 0 8	499 0 1	...	...	...	499 0 1	499 0 1	5,117	0 1 7
63	Vāiyambādi	...	29 5 9	179 5 9	...	...	...	179 5 9	179 5 9	694	0 4 2
64	Virudupattī	...	12 3 6	75 1 11	...	...	...	75 1 11	75 1 11	317	0 3 10
65	Vellore	...	151 6 2	639 15 1	...	...	...	639 15 1	639 15 1	1,754	0 5 10
66	Vizagapatam	...	62 12 7	521 15 3	...	...	...	521 15 3	521 15 3	1,587	0 5 3
67	Vizianagaram	...	154 1 7	514 1 7	...	...	...	514 1 7	514 1 7	3,582	0 2 4
68	Wāljāpet	...	25 4 9	145 4 9	...	...	...	145 4 9	145 4 9	472	0 4 11
Total of Municipalities		42 4 0	10,594 5 4	42,913 12 10	...	...	...	42,913 12 10	42,913 12 10	158,615	0 4 4
Grand Total		62,184 3 2	70,636 6 5	3,56,534 12 8	576 0 0	1,19,978 5 0	1,93,066 10 10	42,913 12 10	3,56,534 12 8	1,456,886	0 3 9

* Excludes Rs. 41-0-0 being the amount realized by vaccinating children at their houses.

+ Excludes Rs. 6-0-0 being the amount realized by vaccinating children at their houses and Rs. 14-3-1 being the cost of lymph supplied during 1914-15.

N.B.—The average cost of each successful case was calculated on the total number of successful vaccinations performed by the special staff only, viz., Local Fund, Government, Municipal and Outstation staffs (vide G.O. No. 1158 L, M, dated 4th September 1911).

B—DISPENSARY VACCINATION.

STATEMENT No. III showing *Dispensary Vaccination in the Madras Presidency for the official year 1915-16.*

Districts.	Number of dispensaries in each district to which a vaccinator is attached.	Average number of vaccinators attached to dispensaries during the year.	Total number of persons vaccinated.	Average number of persons vaccinated by each vaccinator.	Total number of operations.	Primary vaccination.				Re-vaccination.			Percentage of successful cases in which the results were known.		Percentage of unknown cases to total operations.	
						Successful.			Unknown.	Total number of operations.	Successful.	Unknown.	Primary vaccination.	Re-vaccination.	Primary vaccination.	Re-vaccination.
						Under one year.	Over one and under six years.	Total of all ages.								
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Anantapur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Bellary	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Chingleput	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Chittoor	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Coimbatore	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cuddapah	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Ganjām	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Godāvari (L.F. Amalapur hospital).	...	...	10	...	...	...	...	...	...	11	9	2	...	100.0	...	18.1
Guntur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Kistna	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Kurnool	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Madras	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Madura (Municipal hospital, Kodaikanal).	...	...	130	...	99	59	35	96	1	31	24	1	97.9	80.0	1.0	3.2
Malabar	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Nellore	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Nilgiris	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
North Arcot	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Rāmnād	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Salem	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
South Arcot	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
South Canara	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Tanjore	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Tinnevely	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Trichinopoly	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Vizagapatam	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Koraput	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total ...	...	...	*140	...	*99	59	35	96	1	*42	33	3	97.9	84.6	1.0	7.1

* Difference between number of operations and number of persons vaccinated equals 1. This shows secondary operations.

STATEMENT No. IV showing the number of persons primarily vaccinated and the number of those persons who were successfully vaccinated in the Madras Presidency in each of the undermentioned years.

Persons primarily vaccinated.																				
1906-1907.		1907-1908.		1908-1909.		1909-1910.		1910-1911.		1911-1912.		1912-1913.		1913-1914.		1914-1915.		1915-1916.		
Total number.	Number success-fully vaccinated.	Total number.	Number success-fully vaccinated.	Total number.	Number success-fully vaccinated.	Total number.	Number success-fully vaccinated.	Total number.	Number success-fully vaccinated.	Total number.	Number success-fully vaccinated.	Total number.	Number success-fully vaccinated.	Total number.	Number success-fully vaccinated.	Total number.	Number success-fully vaccinated.	Total number.	Number success-fully vaccinated.	
Government vaccinators ...	19,958	18,054	12,948	11,557	12,478	11,319	12,448	11,758	11,214	10,270	11,897	10,545	15,646	13,254	17,492	17,015	19,843	17,892	16,052	14,283
Local Fund do. ...	1,207,394	1,081,374	1,309,814	1,176,223	1,373,883	1,265,809	1,319,314	1,163,628	1,240,602	1,027,398	1,328,350	1,133,157	1,277,687	1,118,513	1,335,023	1,223,086	1,333,727	1,186,576	1,532,471	1,155,851
Cantonment do. ...	5,041	4,892	4,687	4,542	5,164	5,072	4,134	4,023	4,187	3,963	3,606	3,421	4,821	4,681	5,021	4,916	4,252	3,949	4,354	4,152
Zamindari do. ...	4,356	3,989	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Municipal do. ...	116,654	110,989	108,261	102,615	110,669	106,433	111,045	105,138	111,754	102,748	111,070	103,028	103,170	99,018	110,076	106,611	113,408	108,742	112,146	106,830
Dispensaries do. ...	1,304	1,024	93	78	129	120	18	18	5	5	65	60	17	11	6	6	1	..	99	86
Medical Subordinates ...	3,038	2,280	2,121	1,558	1,045	758	369	214	411	229	497	322	206	118	139	114	131	117	1,681	1,464
Total	1,357,745	1,222,692	1,437,924	1,296,673	1,503,368	1,389,571	1,447,328	1,284,839	1,368,173	1,144,613	1,455,485	1,280,527	1,401,547	1,295,625	1,467,757	1,351,748	1,471,392	1,317,277	1,466,803	1,282,676

* As per G.O. No. 1158 L., Mis., dated 4th September 1911.

STATEMENT No. V showing Particulars of Vaccination verified by Inspecting Officers during 1915-16.

Districts.	Total number inspected.			Percentage of inspection to total number vaccinated.					Percentage of cases found successful to total number inspected.					Percentage of success as reported by Vaccinators.			
	By District Medical and Sanitary Officers and Civil Surgeons.		By Deputy Inspectors of Vaccination.	By District Medical and Sanitary Officers.		By Deputy Inspectors of Vaccination.	By District Medical and Sanitary Officers and Civil Surgeons.		By Deputy Inspectors of Vaccination.	By District Medical and Sanitary Officers and Civil Surgeons.		By Deputy Inspectors of Vaccination.	By Sanitary Assistants to District Medical and Sanitary Officers.				
	Primary vaccination.	Re-vaccination.		Primary vaccination.	Re-vaccination.		Primary vaccination.	Re-vaccination.		Primary vaccination.	Re-vaccination.						
Anantapur ...	27,916	1,452	596	62	15,582	492	...	...	...	...	...	...	...	...	...	...	78.9
Bellary ...	32,602	2,929	115	..	19,166	239	...	...	...	...	...	...	...	...	...	...	92.9
Chingleput ...	49,453	2,790	829	73	42,460	1,281	...	...	...	...	...	...	...	...	...	...	96.5
Chittoor ...	38,117	2,206	665	..	22,551	1,085	...	...	...	...	...	...	...	...	...	...	74.2
Coimbatore ...	75,047	6,544	18	711	42,950	1,553	...	...	...	...	...	...	...	...	...	...	71.7
Cuddapah ...	29,971	1,772	119	119	22,658	1,185	...	...	...	...	...	...	...	...	...	...	71.1
Ganjām ...	71,621	25,143	1,946	1,740	49,231	9,442	...	...	...	...	...	...	...	...	...	...	85.3
Godāvāri ...	60,435	39,754	668	216	40,250	16,231	...	...	...	...	...	...	...	...	...	...	87.9
Guntur ...	57,880	8,439	197	...	41,559	7,527	...	...	...	...	...	...	...	...	...	...	70.9
Kistna ...	75,375	8,779	2,592	715	58,920	3,159	...	...	...	...	...	...	...	...	...	...	83.3
Kurnool ...	29,318	5,602	1,228	183	20,047	2,026	...	...	...	...	...	...	...	...	...	...	84.7
Madras ...	20,159	43,668	...	...	...	...	...	...	...	...	...	...	...	...	...	...	72.0
Madura ...	69,918	5,145	16	12	49,153	2,258	...	...	...	...	...	...	...	...	...	...	96.4
Malabar ...	168,530	9,623	2,280	1,525	82,073	1,857	...	...	...	...	...	...	...	...	...	...	96.9
Nellore ...	40,939	10,780	694	110	27,833	5,695	...	...	...	...	...	...	...	...	...	...	84.1
Nilgiris, The ...	5,492	622	74	4	3,782	144	...	...	...	...	...	...	...	...	...	...	87.8
North Arcot ...	64,289	1,935	801	12	51,693	828	...	...	...	...	...	...	...	...	...	...	82.4
Ramanād ...	56,772	1,002	328	74	38,172	101	...	...	...	...	...	...	...	...	...	...	97.5
Salem ...	55,195	1,655	1,435	323	41,339	974	...	...	...	...	...	...	...	...	...	...	86.7
South Arcot ...	72,385	3,803	2,305	229	55,344	1,666	...	...	...	...	...	...	...	...	...	...	98.1
South Canara ...	44,566	2,505	2,723	415	29,224	2,091	...	...	...	...	...	...	...	...	...	...	93.9
Tanjore ...	72,818	8,019	1,922	2,113	43,530	2,280	...	...	...	...	...	...	...	...	...	...	84.3
Tinnevely ...	67,977	9,593	1,355	569	45,866	1,195	...	...	...	...	...	...	...	...	...	...	88.6
Trichinopoly ...	65,482	2,506	3,587	1,360	45,893	302	...	...	...	...	...	...	...	...	...	...	95.5
Vizagapatam ...	74,092	54,800	136	68	44,056	20,254	...	...	...	...	...	...	...	...	...	...	86.2
Koraput ...	35,500	3,050	334	15	22,456	2,570	...	...	...	...	...	...	...	...	...	...	90.3
Total ...	*1,461,849	*264,116	28,302	10,648	955,788	86,434	182	182	681	32.7	78.9	95.3	77.7	65.5	90.8	53.8	88.4
							0.2	0.2									76.3

* Excludes cases performed in cantonments.

† Information could not be furnished as the post of Deputy Inspector of Vaccination has been abolished.

STATEMENT No. VI showing the Number of Vaccinations performed in Municipal Towns on children under one year of age (G.O. Mis. No. 1534 L., dated 6th December 1909.)

Municipalities.	Number of births available for vaccination during the year 1915-1916.	Number of deaths amongst children under one year during the year.	Number of successful vaccinations on children under one year during the year ending March 1916.	Date of extension of compulsory vaccination to municipalities.
1	2	3	4	5
Ādōni ...	1,782	184	718	1st Dec. 1886.
Anantapur ...	319	75	107	1st Jan. 1886.
Anakāpalle ...	685	104	362	1st Nov. 1891.
Bellary ...	1,484	237	824	1st Jan. 1891.
Berhampur ...	918	221	455	15th April 1891.
Bezwada ...	1,178	370	559	1st May 1892.
Bimlipatam ...	309	52	172	1st Jan. 1894.
Calicut ...	3,021	360	1,836	1st Oct. 1891.
Cannanore ...	966	158	568	1st June 1891.
Chicacole ...	576	105	329	1st Dec. 1890.
Chidambaram ...	638	147	339	1st July 1887.
Chingleput ...	492	138	363	1st April 1897.
Cochin ...	646	129	631	1st Jan. 1894.
Cocanada ...	1,703	334	701	1st June 1890.
Coimbatore ...	2,335	622	863	1st Jan. 1889.
Conjeeveram ...	2,208	531	1,194	1st Jan. 1891.
Coonoor ...	376	36	141	1st April 1887.
Cuddalore ...	2,029	659	1,107	1st Aug. 1896.
Cuddapah ...	486	68	274	15th July 1888.
Dharapuram *	...	...	...	1st Feb. 1916.
Dindigul ...	1,367	367	709	16th July 1886.
Ellore ...	1,986	668	1,100	1st June 1888.
Erode ...	583	96	268	1st April 1891.
Gudiyāttam ...	692	103	415	1st June 1889.
Guntūr ...	1,689	467	842	1st Jan. 1914.
Hospet ...	523	67	292	1st April 1892.
Karūr ...	410	81	230	1st Sept. 1900.
Kodaikānal ...	141	29	100	1st April 1889.
Kumbakonam ...	1,768	425	852	1st Aug. 1889.
Kurnool ...	1,092	218	630	1st July 1891.
Madura ...	4,822	1,154	3,307	1st Jan. 1880.
Mannārgudi ...	757	176	380	1st Dec. 1890.
Mangalore ...	1,433	194	1,153	1st Sept. 1891.
Masulipatam ...	1,344	286	781	1st May 1888.
Māyavaram ...	973	256	484	1st Oct. 1886.
Nandyal ...	527	83	363	1st Jan. 1900.
Narasarowpet ...	306	82	115	1st Apl. 1916.
Negapatam ...	1,655	422	2,322	1st July 1886.
Nellore ...	1,145	243	378	1st Aug. 1886.
Ongole ...	511	104	280	1st Dec. 1885.
Ootacamund ...	702	92	442	1st July 1887.
Palamcottah ...	1,589	435	762	1st May 1886.
Palghat ...	1,838	368	1,183	1st Jan. 1883.
Parlākīmedi ...	618	130	348	1st Dec. 1890.
Peddapuram ...	155	27	55	1st Apl. 1916.
Periyakulam ...	1,076	212	722	1st Feb. 1891.
Palni ...	708	125	189	1st Dec. 1891.
Prodattur ...	73	16	28	1st Sept. 1915.
Rajahmundry ...	1,320	422	539	1st Jan. 1886.
Salem ...	3,074	596	1,659	1st May 1891.
Srīrangam ...	682	181	324	1st July 1888.
Srīvilliputtūr ...	1,136	227	784	1st Jan. 1896.
Tanjore ...	2,137	455	1,144	1st July 1893.
Tenali ...	582	173	274	1st April 1910.
Tellicherry ...	983	158	635	15th Jan. 1892.
Tinnevely ...	1,958	593	1,005	1st July 1886.
Trichinopoly ...	4,002	845	2,681	1st Aug. 1890.
Tirupattūr ...	602	162	317	1st July 1891.
Tirupati ...	535	107	316	1st Mar. 1890.
Tiruvālor ...	532	135	180	1st Oct. 1913.
Tiruvannāmalai ...	945	207	582	15th Dec. 1897.
Tuticorin ...	1,340	331	797	1st May 1892.
Vāniyambādi ...	777	141	452	1st May 1889.
Vellore ...	2,244	460	1,049	1st Jan. 1897.
Virudupatti ...	378	76	212	1st Sept. 1915.
Vizagapatam ...	1,371	271	587	1st Aug. 1890.
Vizianagram ...	1,246	295	665	1st Jan. 1891.
Walajapet ...	439	84	235	20th June 1892.
Total ...	78,924	17,375	44,720	

* No information could be furnished as the necessary vaccination staff was not entertained.

STATEMENT No. VII showing Inspection Work done by the Deputy Inspectors during the year 1915-16.

District.	Circle.	Number of inspecting officers.			Number of villages visited.			Total number of cases vaccinated.	Number of days spent on inspection duty.	Number of cases verified.			Total number of cases inspected by Deputy Inspectors of all sorts.	Total number of successful cases as reported by Deputy Inspectors.	Percentage of successful cases to the total number inspected as reported by Deputy Inspectors.	Proportion per cent of inspection to total number vaccinated.		
		First-grade Inspectors.	Second-grade Deputy Inspectors.	Third-grade Deputy Inspectors.	First-grade Deputy Inspectors.	Second-grade Deputy Inspectors.	Third-grade Deputy Inspectors.			First-grade Deputy Inspectors.	Second-grade Deputy Inspectors.	Third-grade Deputy Inspectors.				First-grade Deputy Inspectors.	Second-grade Deputy Inspectors.	Third-grade Deputy Inspectors.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Anantapur.	Anantapur	...	...	1	...	...	422	13,018	287	...	...	7,747	7,747	5,623	72.6	...	...	58.5
Bellary	Bellary	...	...	1	188	...	437	16,756	241	8,181	...	8,327	8,327	6,051	72.7	...	...	49.7
Chingleput	Chingleput	...	1	...	630	999	...	16,163	265	...	...	11,224	11,224	10,145	76.8	50.6	...	79.1
Chittoor	Chittoor	...	1	...	...	...	...	17,426	250	12,849	16,211	...	16,211	11,669	71.9	75.5	...	...
	Saidapet	...	1	...	...	672	...	17,025	211	...	14,681	...	14,681	9,102	70.8	...	93.0	...
	Ponneri	...	...	...	...	...	...	16,054	238	...	...	...	...	10,643	72.5	91.4	...	...
Chittoor	Chittoor	...	1	...	...	1,326	...	17,040	228	...	11,188	...	11,188	8,785	78.5	...	65.7	...
	Karvetnagar	...	...	...	...	...	842	23,848	236	...	...	12,448	12,448	10,947	87.9	...	...	52.2
Coimbatore.	North Coimbatore	...	1	...	...	330	...	20,233	280	...	11,288	...	11,288	6,842	60.6	...	55.7	...
	South do.	...	...	...	...	...	221	13,415	219	...	...	...	10,805	8,950	82.8	...	...	80.5
	East do.	...	...	...	803	...	...	23,724	266	12,367	...	...	12,367	7,378	59.7	52.1	...	...
	Central do.	...	...	...	309	...	...	20,306	234	10,042	...	...	10,042	7,823	77.9	49.5	...	...
Cuddapah	Cuddapah	...	1	...	...	265	...	12,431	256	...	8,246	...	8,246	4,685	56.8	...	66.3	...
	Proddatur	...	...	...	...	231	...	10,054	243	...	8,005	...	7,592	5,301	69.8	...	67.6	...
	Sidhout	...	...	...	...	...	...	11,844	199	...	...	...	8,005	5,347	66.8	...	...	75.5
Ganjām	Berhampur	...	...	1	...	...	571	17,675	257	...	...	11,451	11,451	7,874	68.7	...	64.7	...
	Chicacole	...	...	...	...	703	...	15,199	200	...	10,608	...	10,608	8,872	83.6	...	...	...
	Ganjām Hill Tracts	...	...	...	...	...	490	13,339	181	...	...	...	4,904	4,001	81.5	...	36.7	...
	Aska	...	...	...	...	...	558	14,871	216	...	...	...	8,461	6,473	76.5	...	...	56.8
	Parlakimedi	...	...	...	...	...	621	13,575	177	...	...	11,124	11,124	8,878	79.8	...	...	81.9
	Purushottapur	...	...	...	...	...	551	15,561	269	...	...	12,125	12,125	9,867	81.8	...	...	77.9
Godāvari	Cocanada	...	...	...	...	...	353	15,947	224	...	...	13,426	13,426	9,120	67.9	...	...	84.1
	Rajahmundry	...	...	...	...	...	270	30,504	269	...	...	18,091	18,091	11,360	62.7	...	...	59.3
	Polavaram	...	...	...	...	...	229	6,910	206	...	...	...	4,091	2,450	59.8	...	...	59.2
	Peddapur	...	...	...	440	...	206	34,266	240	3,383	...	17,462	17,462	10,908	62.0	...	...	51.0
	Bhadrachalam	...	...	...	...	...	...	4,697	155	...	...	...	3,381	1,632	48.2	71.9	...	...

District.	Circle.	Number of inspecting officers.			Number of villages visited.			Total number of cases vaccinated.	Number of days spent on inspection duty.	Number of cases verified.			Total number of cases inspected by Deputy Inspectors of all sorts.	Total number of successful cases as reported by Deputy Inspectors.	Percentage of successful cases to the total number inspected as reported by Deputy Inspectors.	Proportion per cent of inspection to total number vaccinated.		
		First-grade Inspectors.	Second-grade Deputy Inspectors.	Third-grade Deputy Inspectors.	First-grade Deputy Inspectors.	Second-grade Deputy Inspectors.	Third-grade Deputy Inspectors.			First-grade Deputy Inspectors.	Second-grade Deputy Inspectors.	Third-grade Deputy Inspectors.				First-grade Deputy Inspectors.	Second-grade Deputy Inspectors.	Third-grade Deputy Inspectors.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Guntūr	Guntūr	...	...	1	...	...	261	20,787	277	18,024	...	15,183	18,024	15,180	84.2	86.7	...	66.0
	Narasaraopet	...	...	...	...	...	...	22,981	192	...	15,879	...	15,879	12,150	80.0	...	...	...
	Bāpatla	...	...	...	...	156	...	19,466	192	...	15,879	...	15,879	13,445	84.5	...	81.6	...
Kistna	Ellore	...	...	...	...	...	...	28,987	258	...	20,619	...	20,619	17,947	87.1	...	71.1	...
	Masulipatam	...	...	...	323	...	...	24,346	280	...	20,021	...	20,021	16,608	77.4	88.0	...	...
	Narasapur	...	...	...	...	194	...	28,355	256	...	...	...	20,021	16,021	80.0	...	70.6	...
Kurnool	Cumbum	...	...	...	414	...	...	16,517	291	10,538	...	11,535	10,538	8,111	76.9	63.8	...	...
	Kurnool	...	...	...	...	...	441	17,109	262	...	...	...	11,535	8,000	69.4	...	...	67.4
Madras	Madras	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Madura	Dindigul	...	...	...	411	...	...	23,858	215	20,377	...	...	20,377	14,589	71.0	...	...	...
	Madura	...	...	...	...	1,238	...	19,377	302	...	15,965	...	15,965	10,787	67.4	85.3	...	...
	Usilampatti	...	...	...	...	384	...	19,360	208	...	15,069	...	15,069	12,631	83.9	...	82.4	...
Malabar	Tellicherry	...	...	...	267	...	...	28,662	270	17,951	...	...	17,951	14,996	83.5	62.7	...	...
	Calicut	...	...	...	...	...	161	29,586	204	...	...	...	16,291	12,473	76.6	...	...	55.1
	Palghat	...	...	...	...	...	266	50,351	248	...	...	...	22,806	17,645	77.4	...	...	45.3
	Malappuram	...	...	...	...	...	138	57,044	223	...	...	...	26,882	23,060	85.8	...	...	47.1
Nellore	Kavali	...	...	...	410	...	...	15,551	201	...	9,377	...	9,377	6,458	68.8	...	60.2	...
	Gudur	...	...	...	...	...	426	17,857	210	10,442	...	...	10,442	7,311	75.7	58.4	...	...
	Kanigiri	...	...	...	...	...	...	19,865	179	...	...	...	13,709	9,234	67.3	...	...	68.6
Nilgiris	The Nilgiris	...	...	...	...	...	571	4,457	251	...	...	3,926	3,926	3,780	96.2	...	...	88.1
North Arcot.	Vellore	...	...	...	...	...	484	14,620	240	...	...	13,311	13,311	11,002	82.7	...	...	91.0
	Rānupettai	...	...	...	...	...	...	15,585	187	13,388	...	...	13,388	11,365	81.3	...	...	...
	Polur	...	...	...	...	...	441	13,919	227	...	...	12,113	12,113	9,483	78.3	...	...	87.0
	Trupattūr	...	...	...	...	450	...	21,029	257	...	13,109	...	13,109	11,756	89.7	...	62.3	...
Rāmnād	Srivilliputtur	...	...	...	...	...	...	19,142	251	...	16,511	...	16,511	15,637	94.7	...	...	...
	Rāmnād (Old Paramagudi)	...	...	...	...	...	...	18,691	207	...	9,968	...	9,968	9,367	93.9	...	...	...
	Trupattūr	...	...	...	...	684	...	19,114	252	...	11,794	...	11,794	11,056	93.7	...	...	...
Salem	Salem (Central)	...	...	...	352	...	...	17,374	203	10,504	...	20,738	20,738	18,484	89.1	...	...	94.2
	Sankēri	...	...	...	...	...	174	22,011	212	...	...	11,071	11,071	9,306	84.1	...	...	60.6
	Hosūr	...	...	...	...	...	531	18,268	304	...	...	...	11,071	9,642	86.2	...	...	...
South Arcot.	Cuddalore	...	...	...	...	...	...	16,062	235	...	11,770	...	11,770	9,642	81.9	...	73.3	...
	Vridhachalam	...	...	...	...	...	268	14,627	223	...	10,387	...	10,387	9,129	87.8	...	...	...
	Tirukkoyilūr	...	...	...	...	...	211	15,776	189	...	8,218	...	8,218	6,127	74.6	...	...	71.0
	Tindivanam	...	...	...	...	...	368	13,919	228	...	10,729	...	10,729	7,376	74.3	...	...	52.1
	Viluppuram	...	...	...	...	...	...	17,742	223	15,806	...	...	15,806	12,120	76.2	...	...	77.1
South Canara.	Northern Circle	...	...	...	...	...	...	15,605	246	10,145	...	...	10,145	8,769	86.4	...	...	...
	Central do.	...	...	...	163	...	...	14,145	232	9,664	...	...	9,664	8,403	86.9	64.9	...	...
	Southern do.	...	...	...	...	...	172	16,754	304	...	11,506	...	11,506	9,644	83.8	...	...	68.6

* Information could not be furnished as the post of the Deputy Inspector of Vaccination has been abolished.

Statement No. VII showing Inspection Work done by the Deputy Inspectors during the year 1915-16 — continued.

District.	Circle.	Number of inspecting officers.			Number of villages visited.			Total number of cases vaccinated.	Number of days spent on inspection duty.	Number of cases verified.			Total number of cases inspected by Deputy Inspectors of all sorts.	Total number of successful cases as reported by Deputy Inspectors.	Percentage of successful cases to the total number inspected as reported by Deputy Inspectors.	Proportion per cent of inspection to total number vaccinated.		
		First-grade Deputy Inspectors.	Second-grade Deputy Inspectors.	Third-grade Deputy Inspectors.	First-grade Deputy Inspectors.	Second-grade Deputy Inspectors.	Third-grade Deputy Inspectors.			First-grade Deputy Inspectors.	Second-grade Deputy Inspectors.	Third-grade Deputy Inspectors.				First-grade Deputy Inspectors.	Second-grade Deputy Inspectors.	Third-grade Deputy Inspectors.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Tanjore ...	Tanjore ...	1	1	...	...	276	...	12,844	235	12,014	9,013	...	9,013	7,975	85.5	...	70.2	...
Negapatam ...	Negapatam ...	...	...	1	311	...	...	17,349	254	...	...	...	12,014	10,996	91.5	69.2	...	...
Pattakkottai ...	Pattakkottai ...	...	...	1	...	...	507	13,558	272	...	...	13,464	13,464	12,935	96.1	...	...	68.8
Kumbakonam ...	Kumbakonam ...	...	...	1	...	...	417	18,415	270	...	...	11,319	11,319	8,686	76.7	...	...	61.5
Shermadevi ...	Shermadevi ...	...	1	...	...	268	...	22,563	241	...	15,521	...	15,521	13,062	84.2	...	68.8	...
Srivaikuntam ...	Srivaikuntam ...	...	1	...	1,085	...	...	26,298	252	18,332	13,208	...	18,332	13,009	71.3	69.7	...	...
Koipatti ...	Koipatti ...	...	1	...	...	298	...	21,513	262	...	...	...	13,208	10,620	80.4	...	61.4	...
Trichinopoly ...	Trichinopoly ...	1	...	...	888	...	...	24,238	221	15,174	...	...	15,174	13,687	90.2	62.6	...	...
Ariyalur ...	Ariyalur ...	...	...	1	...	...	204	16,604	208	...	...	14,131	14,131	11,674	82.6	...	...	85.1
Namakal ...	Namakal ...	...	...	1	...	...	676	20,062	247	...	...	16,890	16,890	14,404	85.3	...	...	84.2
Vizagapatam ...	Vizagapatam ...	...	1	...	...	445	...	52,619	234	...	29,839	...	29,839	22,731	74.9	...	56.7	...
Vizianagram ...	Vizianagram ...	...	...	1	...	...	360	44,952	246	...	...	19,106	19,106	12,726	66.6	...	...	42.5
Pärvaipuram ...	Pärvaipuram ...	...	...	1	...	...	409	26,500	211	...	...	15,365	15,365	10,434	68.1	...	...	57.9
Gunupur ...	Gunupur ...	...	...	1	...	...	365	10,970	238	...	...	6,877	6,877	5,394	78.4	...	...	62.6
Jeypure ...	Jeypure ...	...	1	...	...	820	...	17,602	200	...	10,067	...	10,067	7,625	75.7	...	57.1	...
Koraput ...	Koraput ...	...	1	...	...	955	...	10,380	314	...	8,082	...	8,082	6,862	84.9	...	77.8	...
Total ...	Total ...	18	25	37	8,929	12,904	14,119	1,577,460	19,025	241,173	336,184	464,865	1,042,222	818,262	78.5	69.6	68.8	62.6

the most

20

the year under report.

Co-operative Societies.—Loans aggregating Rupees 1,00,000 during the year as against Rs. 16,53,927 in the

Trichinopoly District Urban Banks were indebted to the Indian Bank (Limited) to the extent of Rs. 94,500. This amount was repaid during the year under report.

6. (i) *Loans to members*—(a) *Central Societies*.—In addition to loans aggregating Rs. 1,18,167 which were due from members at the commencement of the year, fresh loans aggregating Rs. 1,34,030 were disbursed during the year on the personal security of the members and loans amounting to Rs. 1,52,212 repaid by members, leaving an outstanding balance of Rs. 99,985.

(b) *Agricultural and Non-agricultural Societies.*—At the end of the previous year loans aggregating Rs. 52,13,902 were due from members. During the year 38,017 fresh loans amounting to Rs. 37,05,872 were issued to members and they repaid loans to the extent of Rs. 26,19,677, leaving an outstanding balance of Rs. 63,00,097. In 26,285 cases involving Rs. 20,60,294, loans were granted on the joint and several responsibility of the borrower and one or more sureties and in 10,485 cases involving Rs. 15,47,706 on the mortgage of immoveable property. In the remaining 1,247 cases loans were granted mostly on the security of the paid-up share capital and the deposits of the borrower or on his simple bond without any collateral security or surety.

The Board notes that there is an increasing tendency in agricultural societies to lend on the mortgage of immoveable property rather than on personal security. The amount advanced on the mortgage of immoveable property in the previous year was 43·59 per cent. of the total amount of loans issued by these societies, whereas in the year under report the percentage of such loans was 46·50. The Board further notes that the percentage of loans issued by non-agricultural societies for unproductive purposes rose from 12·77 in the previous year to 17·18 in the year under report. It is desirable that these tendencies should be discouraged.

(ii, *Demand, collection and balance.*—In the case of all classes of societies, and especially of central banks, the percentage of balance to demand was greater than that of the previous year. In fact, the outstanding feature of the year is the increasing tendency of societies and members to fail to meet their responsibilities. This is a most serious matter and the facts are even more serious than they are shown to be in statement No. IV on page 7 of the report. For here the Registrar has calculated the arrears on the nominal demand which should properly be decreased by the amount of extensions in order to show the real demand. If the extensions are eliminated the

read-
bilities.
giving the peo-
which the Registrar
opinion that no reform be re-
penalties imposed by the Registrar on
compliance with his orders, but our pol-
with the management of a society to a mini-
tion when the society is looked upon as a Gov-
short time which is allowed for the review of
definite remedy. Assuming that the evil may be
control is centred in the hands of Government officials
by giving such facilities as will encourage non-officials
the responsibility for enforcing the proper management of
lities are to be given is a matter for consideration, and the Board
anything more than a suggestion as to the lines upon which action
If the cause of the evil has been correctly assigned to over-officialization, it is
respectfully submitted that the recent orders in paragraph 2 of G.O. No. 1608,
Revenue, dated 3rd June 1914, with regard to inspection and audit may have to be
reconsidered. The annual audit should expose the irregularities of the year, and it is
suggested that further official inspection might be abandoned or at any rate much
reduced, the steps necessary for the removal of the irregularities being taken by some
non-official agency, either unions, councils or some such selected body of co-operators
who must be given responsibility and power, or they will have no interest in the work.
Before coming to a decision in the matter it will be desirable to consult a selected
number of those who have exhibited enthusiasm in the movement, and the Registrar
will be requested to submit a short list of the names of gentlemen with whom the
question may be discussed.

From statement No. IV on page 7 of the report it will be seen that extensions of
time for the repayment of loans aggregating Rs. 32,58,600 were granted during the
year, the corresponding figure for the previous year being Rs. 28,08,532. It will
also be seen from statement No. III on page 6 of the report that loans exceeding one
year increased in the case of agricultural societies while loans exceeding two-years
increased in the case of non-agricultural societies. The policy under which exten-
sions of time are granted for the repayment of loans has been under the consideration
of the Board for some time past. The present system is not satisfactory. It holds
out an inducement to borrowers to try to get the day of repayment postponed. The
societies do not know clearly how they stand in the matter of long loans and it is
possible that too large a proportion of the available funds has become locked up in
long loans with the result that a few members benefit at the expense of the majority
who are unable to get short loans. A system is under consideration under which a
fixed proportion of the funds will be made available for long loans and the length of
the loan will be decided at the time of its original grant. The Board hopes to
propose a more definite scheme before long.

The increase in the amount of large loans issued has also to be noted. Large
loans in agricultural societies rose by more than 5 per cent. and they rose by more
than 6 per cent. in non-agricultural societies. The effect of this must also be to reduce
the number of loans and to increase the number of members whose desire for loans
cannot be satisfied.

7. In paragraph 30, the Registrar refers to the execution of sanitary works by
co-operative societies and expresses the hope that the policy may be extended. The
Board has already given its opinion on this point and has little more to say. It

RAGHAVIAH,
Secretary.

report.

dated 5th January 1915.

miscellaneous.

Registrar shows that during the year there was a continued expansion of the co-operative movement judged both by the number of societies and by the aggregate amount of the financial transactions for which they were responsible. The central banks through which the smaller societies are chiefly financed appear to have no difficulty in obtaining the capital necessary for that purpose, a circumstance which indicates that a large number of those who have savings to dispose of realise the advantages of the opportunity provided by these banks for investment of their spare funds. The Government are glad to observe that most of the central banks are increasing their paid-up share capital concurrently with the increase in the volume of their business, but an unfortunate exception is the Tenali bank in which case the paid-up capital still bears far too small a proportion to the total liabilities; from paragraph 12 of the report it appears that the Registrar is already taking action to impress upon the directors the importance of remedying this unsatisfactory state of affairs; substantial improvement is clearly necessary if they desire to be allowed to continue the operations of the bank.

2. The Government note with regret the discouraging feature of the year's working to be found in the increased proportion of arrears due to societies and from societies to banks both on account of principal and interest. They regard the punctual recovery of loans as they fall due and of interest as an important matter and the growing neglect of such recovery as likely seriously to retard and discredit the movement. The fact that among agricultural societies so large a proportion as 24 per cent. of the loans and 24.75 per cent. of the interest falling due within the year was not collected is a matter demanding the serious attention, not only of the Registrar and his officers, but of all interested in the success of the movement. The Registrar possesses summary powers of intervention under sections 39 and 42 of the Co-operative Societies Act, 1912, and should not hesitate to use them in cases where chronic neglect to pay instalments and interest appears.

3. A noteworthy feature in the year's progress is the increase in the number of societies formed for purely agricultural purposes, such as the cultivation of improved varieties of crops and the wholesale purchase of agricultural requisites; this development entailing as it does a close understanding between the Agricultural department and the co-operative movement affords an excellent opportunity for bringing to the notice of ryots the improvements advocated by the department and thus hastening the adoption of beneficial variations from the customary agricultural methods.

4. The Government are gratified to learn that philanthropic associations such as the Servants of India Society and the Young Men's Christian Association are showing that they realise the possibilities of co-operation by taking measures to train agents in co-operative principles; there is undoubtedly a wide field for private enterprise in

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ment an-
loans for 10-
agencies for the
has separately been
any extension of that de-
warrant it.

6. In conclusion, the Government in
service of the Registrar and his staff and of the
contributed to the continued progress of the co-

(True Extract.)

Se-

To the Board of Revenue (Revenue Settlement).

„ the Secretary to the Government of India (Revenue and Agriculture),
„ the Chief Secretary to the Government of Bombay, Revenue Department,
„ the Secretary to the Government of Bengal, Revenue Department,
„ the Chief Secretary to the Government of Bihar and Orissa,
„ the Chief Secretary to the Government of the United Provinces, Revenue Department,
„ „ „ Punjab, Revenue and Agricultural Department,
„ the Secretary to the Government of Burma,
„ the Hon'ble the Chief Commissioner, Central Provinces,
„ „ „ Assam,
„ „ „ Coorg,
„ „ „ Ajmer-Merwara,
„ „ „ North-Western Frontier Provinces,
„ the Hon'ble the Agent to the Governor-General and Chief Commissioner, Baluchistan,
„ the Hon'ble Sir D. Hamilton,
„ Sir F. A. Nicholson, K.C.I.E.,
„ the Financial Department.
„ the Public Department.

} with C.L.

Editors' Table