

## **Annual sanitary report of the Province of Assam.**

### **Contributors**

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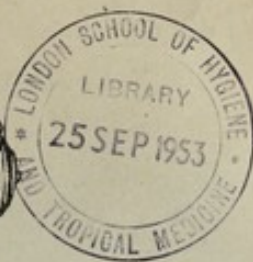


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सत्यमेव जयते



# ANNUAL PUBLIC HEALTH REPORT OF THE STATE OF ASSAM FOR THE YEAR 1950

BY

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ANNUAL PUBLIC HEALTH REPORT  
OF THE STATE OF ARIZONA  
FOR THE YEAR 1950

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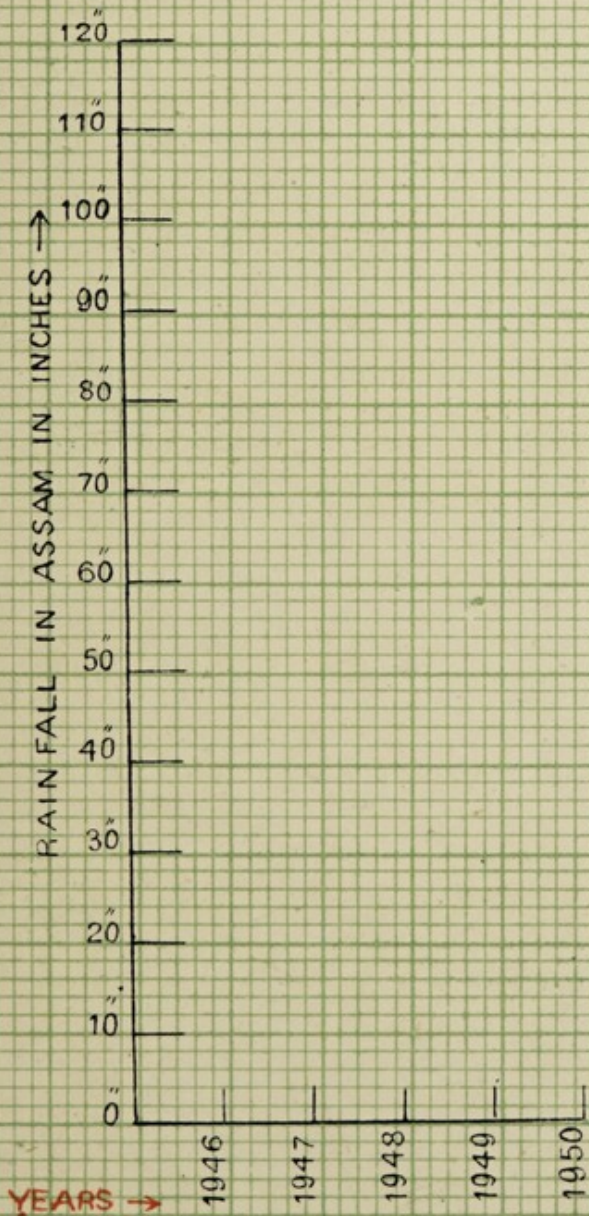
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X.—Public Health Administration

# RAINFALL IN ASSAM (1946 - 1950)





MASSA IN LIAISON  
(1845-1850)

MASSA



# CHAPTER I

## Meteorology, Economic conditions, i.e., price of food-grains, etc.

1. *Meteorology.*—The climatic condition of the State of Assam during the year under review was moderate and rainfall was a little less than the previous year.

*Rainfall.*—The total rainfall during the year 1950 was 92.21 inches, as compared to 107.90 inches in 1949,—the quinquennial average being +105.83 inches.

Rainfall was in slight excess in January while in February it was in moderate excess. Temperature, cloudiness and humidity were normal during both these months. Weather was practically dry during the month of March. Thunderstorm caused fairly widespread rain during the greater part of May. Day temperature was normal in March but was in slight excess during April and May. Night temperature, humidity and cloudiness were normal during the period. The monsoon remained generally active till the end of June. In August, widespread rain with local heavy falls occurred for several days, and, consequently the total rainfall during the month was slightly in excess. The monsoon during the month of September was rather weak but the thunderstorm caused rain for a number of days. Temperature, humidity and cloudiness were nearly normal during the months of June to September. During October, rainfall was normal but cloudiness was nearly normal during the months of June to September. During October, rainfall was normal but cloudiness was a little more than usual. In November, the rainfall was more than usual while cloudiness was normal. The weather was practically dry over the State of Assam during the month of December except scattered rain. During October to December, night temperature was slightly higher than usual but day temperature and humidity were nearly normal during these months.

A statistical statement is appended below to show the actual position of seasonal distribution of rainfall during the year 1950.

Period(s)	Actual Rainfall in 1950	Actual Rainfall in 1949	Average for the last three years	Departure from the normal
1)	(2)	(3)	(4)	(5)
I. Cold weather period (January to February) ..	+2.93	+1.62	+2.39	+0.68
II. Hot weather period (March to May) ..	+19.63	+30.54	+29.14	—5.56
III. Monsoon period (June to September) ..	+63.04	+69.72	+67.17	—1.38
IV. Retreating monsoon period (October to December).	+6.61	+6.02	+7.37	+1.46
Total for the entire year .. ..	+92.21	+107.90	+106.07	—5.80

A graph showing rainfall in inches in Assam for the last five years (1946—1950) is appended below :—

Another table showing the monthly mean temperatures, humidity, cloud and amount of rainfall with corresponding departures from normal is also appended below :—

Month 1950	Temperature			Humidity Dep. from normal	Cloud Dep. from normal	Rainfall		
	Dept. of Max. from normal	Dept. of Min. from normal	Dept. of Mean Temp.			Actual	Dep. from normal	Per- centage Dep. from normal
1	2	3	4	5	6	7	8	9
January .. ..	+1.1	+0.6	+0.8	—3	—0.4	0.77	+0.07	+10
February .. ..	—0.4	+1.7	+0.6	—1	+0.1	2.16	+0.61	+39
March .. ..	—0.4	+0.4	0	+2	—0.1	3.28	—0.03	—1
April .. ..	+3.1	—0.7	+1.3	—6	—1.2	4.91	—3.77	—43
May .. ..	+1.4	+0.4	+0.9	0	+0.3	11.44	—1.76	—13
June .. ..	—0.7	—0.1	—0.4	+4	+0.7	19.62	+0.54	+3
July .. ..	+0.7	+0.4	+0.6	+2	+0.4	14.87	—2.51	—14
August .. ..	—0.9	—0.7	—0.8	+3	+0.6	19.48	+3.70	+23
September .. ..	+0.9	+0.5	+0.7	+1	+0.1	9.07	—3.05	—25
October .. ..	—0.4	+1.5	+0.6	+3	+1.4	4.88	+1.06	+1
November .. ..	+0.4	+1.6	+0.9	0	0	1.62	+0.61	+61
December .. ..	+0.6	+2.9	+1.7	—2	+0.6	0.11	—0.21	—66



2. *Economic conditions, i.e., price of food-grains, etc.*—The economic condition of the people of the State of Assam during the year under review was worse than in the previous year. This was mainly due to the fact that the prices of food-stuffs and other necessities of life increased further. Rice is the staple food in the State of Assam. During the year under review, the people of Assam were not opulent, and lived upon a very narrow economic margin.

The Statement below showing the average retail quantity of common rice sold per rupee in the year 1950 and during the previous five years will indicate that the general economic condition of the people in general in the State of Assam did not improve during the year under review.

Districts	1950	1949	1948	1947	1946	1945
1	2	3	4	5	6	7
	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.
Cachar .. .. .	1 8	2 4	2 13	2 0	3 8	3 4
Goalpara .. .. .	1 10	2 6	1 15	2 12	3 7	3 2
Kamrup .. .. .	1 6	2 0	2 9	3 1	2 12	2 10
Darrang .. .. .	1 12	1 14	2 0	3 5	3 6	2 12
Sibsagar .. .. .	1 8	1 11	2 1	2 13	2 14	2 10
Lakhimpur .. .. .	1 9	2 2	2 3	2 14	3 6	3 2
Nowgong .. .. .	1 8	2 1	2 2	..	3 14	..
Average .. .. .	1 8	2 0	2 13	3 7	3 3	2 5

The undernoted price index figures of common rice reflect higher prices during 1950 than during the previous years.

	1936-40	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950
1	2	3	4	5	6	7	8	9	10	11	12
Price index .. .. .	100	183	184	444	463	558	338	339	456	581	775
Birth-rate .. .. .	27.90	26.70	21.53	19.05	16.77	16.76	18.21	15.85	18.40	14.78	14.28
Death-rate .. .. .	19.49	16.75	15.42	16.34	16.84	13.77	11.37	8.75	8.60	8.15	7.96

A graph is appended below showing the trends of mortality rates and natality rates per mille from the year 1936 to the year under review.

According to the reports maintained by the Supply Department, the following quantities of food-stuffs were imported during 1950 into Assam for casual consumption:—

- (1) Rice—103,458 mds. including 30,500 mds. received as free gift from Pakistan, the Punjab and other places for Earthquake affected areas.
- (2) Chira—2,433 mds. donated by the Manipur State for Earthquake affected areas.
- (3) Wheat—575,586 mds.
- (4) Flour—10,881 mds.

As per report received from the Department of Agriculture, the total quantity of estimated acreage and production of forecasted crops for 1950-51 is given in the table below:—

	Name of crop	Estimated area sown in acres	Estimated production in tons
(1)	(2)	(3)	
Rice	Autumn	908,900	306,700
	Winter	2,800,200	986,400
	Spring	*	*
Sugarcane	...	62,000	(Gur) 72,500
Potato	Summer	16,500	37,125
	Winter	44,900	105,600
Rape and mustard	...	306,100	53,261
Pulses	Matikalai	*	*
	Others	*	*
Cotton	...	24,400	9,100
Jute	...	292,000	808,700
Tobacco	...	21,900	69,900

\*1. Too early to estimate.

2. Cotton in bales of 392 lbs. each.

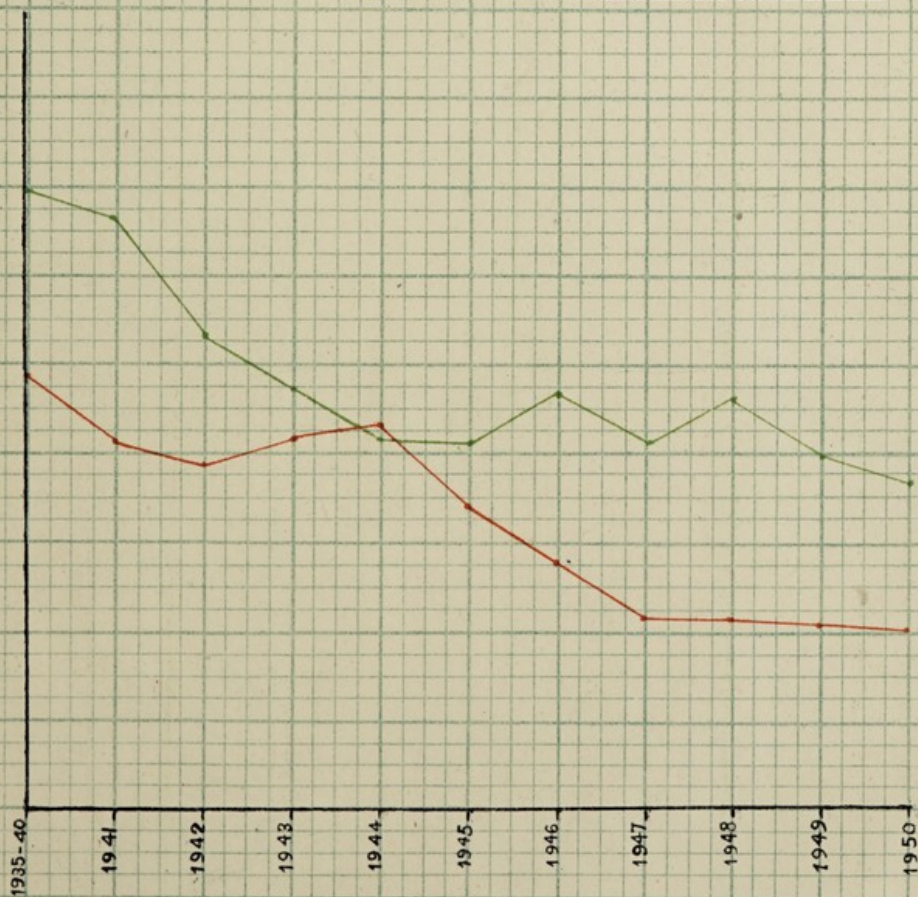
3. Jute in bales of 400 lbs. each.



GRAPH SHOWING :-

BIRTH-RATE ————  
DEATH-RATE ———— IN ASSAM

SCALE - 1 SMALL SQUARE = 1 UNIT





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## CHAPTER II

## Vital Statistics

3. *Population.*—The population of the State of Assam as per 1951 census was 91,29,442 giving a density of 145.52 per square mile. The population of the seven plains districts of Assam to which this report mainly refers was 80,08,903 according to the provisional census population of 1951. The mid-year estimated population of the same area for the year 1950 calculated by the arithmetical progression method was 75,91,183. The mid-year estimated population of the hill districts was 11,09,918. Therefore, the mid-year estimated population for the State of Assam was 87,01,101 in 1950.

4. *Births and Birth-rates.*—The total number of births including still-births registered during the year 1950 was 1,22,731, yielding a birth-rate of 14.28 per mille as compared to 1,27,154 birth in both plains and hills districts of the State of Assam in 1949.

The number of male births to every 100 female births was 109, the quinquennial average being 108 to 100 female births.

The comparative birth-rates of the other States in India are shown below:—

Name of Province(s)	Birth-rate per 1,000 inhabitants on the basis of Mid-year estimation						
	1944	1945	1946	1947	1948	1949	1950
1	2	3	4	5	6	7	8
1. Assam .. .. .	16.77	16.76	18.21	15.85	18.40	15.06	14.28
2. Bengal .. .. .	16.14	22.10	22.91*	20.2	33.35	30.67	20.8
3. Bihar .. .. .	20.63	23.00	22.50	17.81	19.18	33.1	..
4. Orissa .. .. .	25.24	27.35	27.52	26.75	26.41	26.05	26.83
5. United Provinces .. .. .	25.09	27.31	24.33	22.82	20.56	22.32	21.04
6. Madras .. .. .	29.39	28.45	31.62	32.72	31.28	31.69	30.72
7. Bombay .. .. .	33.93	33.70	33.20	32.87	33.35	30.67	32.79
8. Central Provinces and Berar .. .. .	37.08	39.33	37.00	34.70	33.27	35.61	33.53
9. The Punjab .. .. .	36.78	36.10	40.4	33.4	29.9	31.1	32.77
10. North West-Frontier Provinces .. .. .	17.17	16.74	18.66	..	..	..	..
11. Sind .. .. .	14.94	14.33	18.88	..	..	..	..

The above table shows that the birth-rate in the State of Assam is the lowest in comparison to all other States of India.

5. *Registration of births in rural areas in Assam.*—The following table gives details of registration of births in rural areas in the State during the year under review:—

Months	Number of births registered
January .. .. .	11,555
February .. .. .	11,662
March .. .. .	8,536
April .. .. .	8,057
May .. .. .	7,746
June .. .. .	9,397
July .. .. .	8,318
August .. .. .	7,744
September .. .. .	8,921
October .. .. .	10,141
November .. .. .	10,403
December .. .. .	11,313
Total for the year .. .. .	1,13,793*

\*Excluding still-births.



6. *Registration of births in urban areas in Assam.*—The table below gives details of registration of births in urban areas in the State of Assam during the year under review :—

Months	Number of births registered								
January	...	...	...	...	...	...	...	...	536
February	...	...	...	...	...	...	...	...	475
March	...	...	...	...	...	...	...	...	518
April	...	...	...	...	...	...	...	...	522
May	...	...	...	...	...	...	...	...	587
June	...	...	...	...	...	...	...	...	443
July	...	...	...	...	...	...	...	...	489
August	...	...	...	...	...	...	...	...	530
September	...	...	...	...	...	...	...	...	523
October	...	...	...	...	...	...	...	...	617
November	...	...	...	...	...	...	...	...	859
December	...	...	...	...	...	...	...	...	699
Total for the year	...	...	...	...	...	...	...	...	6,798*

\*Excluding still-births.

7. *Deaths.*—The total number of registered deaths during the year under review was 67,178, yielding a death-rate of 7.96 per mille in 1950 as compared to 8.15 per mille in 1949. The total number of deaths registered was 68,037 during 1949, 63,984 in 1948 and 63,494 in 1947 in the State of Assam. The quinquennial average is 10.06 per mille.

The number of deaths registered in the seven plain districts of Assam during the year 1950 as compared to the previous year, is shown below :—

District	Number of deaths registered						Number of deaths from	
	Male		Female		Total persons		1950	1949
	1950	1949	1950	1949	1950	1949		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Cachar .. ..	5,759	6,212	5,199	5,771	10,958	11,983	C—190; S—22; P—o; F—5465; DD—963; RD—586.	C—372; S—1; P—o; F—6115; DD—935; RD—549.
Goalpara .. ..	6,497	5,970	4,790	5,153	11,287	11,123	C—260; S—11; P—o; F—10387; DD—212; RD—213.	C—74; S—2; P—o; F—10380; DD—248; RD—206.
Kamrup .. ..	2,115	2,215	1,788	1,874	3,903	4,089	C—399; S—17; P—o; F—2499; DD—197; RD—120.	C—144; S—27; P—o; F—2999; DD—214; RD—96.
Darrang .. ..	5,263	5,295	4,137	4,928	10,000	10,223	C—51; S—9; P—o; F—6815; DD—911; RD—532.	C—56; S—2; P—o; F—6817; DD—982; RD—468.
Nowgong .. ..	2,586	3,440	2,388	3,186	4,974	6,626	C—239; S—o; P—o; F—3481; DD—205; RD—85.	C—175; S—o; P—o; F—4377; DD—584; RD—170.
Sibsagar .. ..	6,433	6,592	6,201	6,348	12,634	12,940	C—186; S—25; P—o; F—6631; DD—1331; RD—951.	C—321; S—50; P—o; F—6612; DD—1533; RD—1028.
Lakhimpur .. ..	3,708	3,662	3,530	3,702	7,238	7,364	C—55; S—9; P—o; F—3114; DD—703; RD—661.	C—14; S—16; P—o; F—2743; DD—822; RD—775.

Abbreviations :—

C—Cholera.

S—Small-pox.

P—Plague.

F—Fevers.

DD—Dysentery and Diarrhoea.

RD—Respiratory diseases.

N. B.—Deaths due to other causes are not included in columns 8 and 9.



8. The following statement furnishes figures of deaths from certain notifiable diseases in Assam during the year 1950 :—

Number	Districts	Live-Births	Still-Births	Chole- ra	Small- pox	Plague	Fevers	Dysentery and diarr- hoea	Respira- tory dis- eases	Mater- nal death	Inju- ries	Other causes	Total deaths
1	2	3	4	5	6	7	8	9	10	11	12	13	14
<b>"I—PLAINS"</b>													
1. Cachar	..	..	..	820	190	..	..	5,465	963	586	360	3,236	10,958
2. Goalpara	..	..	..	..	260	11	..	10,387	212	213	56	105	11,287
3. Kamrup	..	..	..	15	399	17	..	2,499	197	120	104	526	3,908
4. Darrang	..	..	..	58	51	9	..	6,825	911	532	272	1,206	10,000
5. Nowgong	..	..	..	25	239	..	..	3,481	205	85	66	822	4,974
6. Sibsagar	..	..	..	575	186	25	..	6,631	1,331	951	248	3,065	12,634
7. Lakhimpur	..	..	..	417	55	9	..	3,114	703	661	143	2,461	7,238
Total	..	..	..	1,910	1,380	93	..	38,402	4,522	3,148	1,249	11,501	60,999
<b>"II—HILLS"</b>													
8. Khasi and Jaintia Hills	..	..	..	27	..	12	..	413	51	87	14	282	865
9. Lushai Hills	..	..	..	175	2	..	..	1,362	171	559	39	67	2,231
10. Naga Hills	..	..	..	2	..	..	..	35	2	2	1	34	76
11. Garo Hills	..	..	..	20	487	5	..	1,469	287	113	16	485	2,865
12. Sadiya Frontier Tract	..	..	..	6	..	..	..	18	20	26	6	75	145
13. Balipara Frontier Tract	..	..	..	..	..	..	..	42	3	6	2	8	62
Total	..	..	..	230	489	17	..	3,339	534	793	78	951	6,184
Grand Total	..	..	..	2,140	1,869	110	..	41,741	5,056	3,941	1,327	12,382	67,178

*A comparative death-rate in other States of India in comparison to that of Assam is given below :—*

No.	Name of Province(s)	Rate per 1,000 inhabitants on the basis of mid-year estimation :—						
		1944	1945	1946	1947	1948	1949	1950
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1. Assam .. ..	.. ..	16·87	13·37	18·21	15·85	8·40	·60	7·90
2. Bengal .. ..	.. ..	29·12	21·00	19·6	18·3	18·10	17·43	16·7
3. Bihar .. ..	.. ..	22·19	20·70	17·60	15·16	13·18	..	..
4. Orissa .. ..	.. ..	33·36	28·68	27·62	26·75	22·57	22·03	20·47
5. United Provinces .. ..	.. ..	18·74	18·95	24·93	16·39	13·68	12·66	13·49
6. Madras .. ..	.. ..	25·40	22·27	31·62	32·72	18·12	17·10	17·10
7. Bombay .. ..	.. ..	25·47	26·40	23·20	25·72	21·57	19·25	18·31
8. Central Provinces .. ..	.. ..	36·12	39·32	..	34·72	29·17	25·88	25·82
9. Punjab .. ..	.. ..	25·26	19·40	20·00	19·5	14·69	14·7	18·4
10. N.-W. Frontier Provinces .. ..	.. ..	13·97	11·14	18·60	..	..	..	..
11. Sind .. ..	.. ..	11·86	10·23	18·88	..	..	..	..

9. *Infantile mortality*.—The following table shows the number of mortality and death-rates amongst infants during the year 1950 and the previous decennium :—

Years	Number of births				Deaths of infants			Death-rate of infants per mille		
	1	2	3	4	Male	Female	Total persons	Male	Female	Total persons
1950	..	57,665	52,439	110,104	6,020	5,041	11,061	104.39	96.13	100.45
1949	..	60,139	55,181	115,320	6,043	5,015	11,058	100.33	90.88	95.58
1948	..	59,192	51,971	111,163	6,450	5,308	11,758	108.96	96.56	102.95
1947	..	59,896	55,111	115,007	5,703	4,774	10,477	95.22	86.62	91.09
1946	..	96,265	89,696	186,961	11,194	9,839	21,033	116.28	109.69	113.10
1945	..	86,103	82,529	168,632	11,855	10,153	22,008	137.68	123.02	130.51
1944	..	87,049	79,227	166,276	14,430	12,499	26,929	165.77	157.78	161.95
1943	..	96,136	90,028	186,164	13,144	11,248	24,392	136.72	124.94	131.02
1942	..	106,832	100,241	207,073	15,279	12,992	28,271	143.02	129.61	136.53
1941	..	131,021	122,060	253,081	19,018	15,362	34,380	147.50	128.55	138.28
1940	..	126,846	117,308	244,154	18,806	15,804	34,610	148.26	134.72	141.75

(Figures relate to the 7 Plain Districts only)



The infantile mortality rate showed an appreciable fall since 1947. The rate for 1944 was abnormally high due to the war conditions. In Assam the infantile mortality rate for the year 1950 was 99.00. It is to be noted in this connection, that some countries namely Sweden, Ireland, the Netherlands, Australia and New Zealand in recent years attained infantile mortality rate of less than 30 per thousand. The United States of America has registered a rate of 31; England and Wales 32; Denmark and Switzerland 34. Heavy mortality amongst infants still continues which is mainly due to ignorance on the part of the mother, improper feeding and insanitary surroundings. Endeavour should be made to reduce the infantile mortality rate in Assam also as far as possible by vigorous measures including spread of education. Child health and welfare, is an inseparable part of any modern public-health programme, and the infant mortality rate is a good indicator not only of the health condition of the children but also of the health of the entire nation as well. A chart is appended below showing infantile death-rate in the State.

10. *Maternal mortality*.—One thousand three hundred and twenty-seven mothers died as a result of child birth during the year 1950.

An efficient and well-organised maternity service having provisions for ante-natal and post-natal care of expectant and nursing mothers is urgently required to bring down the maternal mortality rate.

11. *General accuracy of vital statistics*.—A very slight improvement was observed in the registration of vital statistics during the year 1950. The Public Health staff carried out verification of vital occurrences as a routine nature of their duties. On a test checking in certain districts, only a slight variation in respect of registration of births and deaths was detected. The percentage of omission during the year 1950, for the Goalpara District comes to 1.47, for the Cachar District 15.01, and for the Nowgong District 2.81.

### CHAPTER III

#### The State of Public Health and History of Chief Diseases

12. [A] *State of Public Health*.—The general state of Public Health in the State of Assam during the year 1950 was on the whole satisfactory in spite of heavy influx of refugees from East Pakistan and great Earthquake in the North-Eastern part and consequent flood. As in the previous year, high prices of commodities and scarcity of some essential food-stuffs like sugar, atta, flour, pulse, milk, fish and ghee continued throughout the year under review. The total number of deaths under all heads of mortality was slightly lower as compared to 1949. The following table shows the death-rate per mille from the chief diseases in 1950 as compared to that during 1949:—

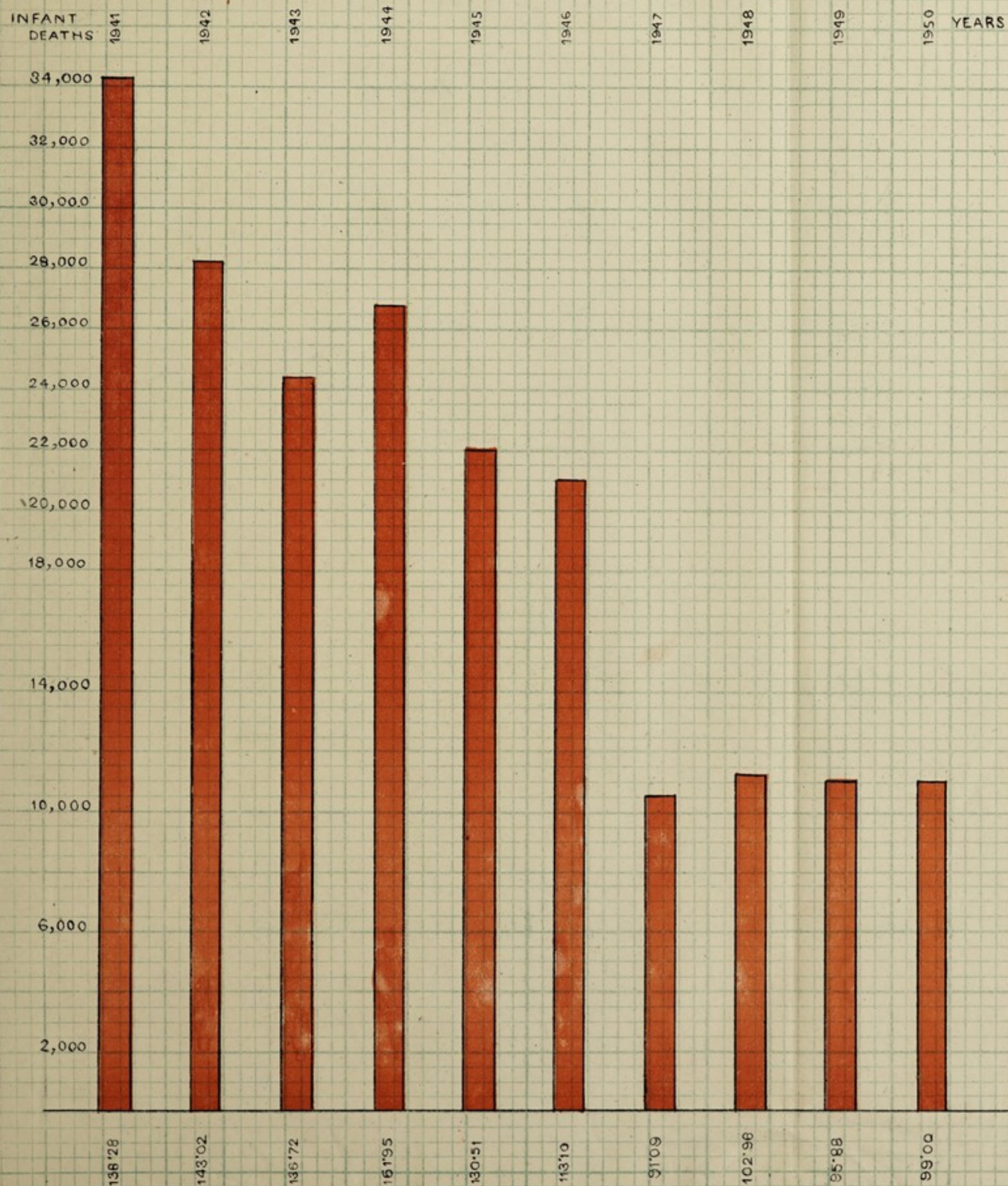
Diseases	1950			1949		
	Urban	Rural	Total	Urban	Rural	Total
Fevers .. .. .	3.54	5.56	5.49	2.77	5.61	5.51
Cholera .. .. .	.38	.24	.24	.14	.15	.14
Small-pox .. .. .	.13	.01	.01	.01	.01	.01
Dysentery and Diarrhoea .. .. .	1.40	.62	.66	1.28	.81	.85
Respiratory Diseases .. .. .	1.12	.49	.52	1.22	.49	.53
Injuries .. .. .	.38	.08	.09	.31	.10	.11
Other causes .. .. .	4.90	1.69	1.85	4.39	1.96	2.05
Total .. .. .	12.28	8.72	8.84	10.12	9.13	9.20

13. *Chief Diseases*.—The total number of deaths from fevers, which include Malaria, Kala-azar and other chief diseases having fever as symptom was 41,741 during the year under review as compared to 41,091 in 1949 and 37,001 in 1948. 61.1 per cent. of the total mortality during the year 1950 was due to the group of diseases, falling under 'fevers'. This group includes a variety of heterogenous diseases and a large number of unclassified conditions.

The death-rate per mille due to fevers was 4.80 in 1950 as compared to 4.96 in 1949 and 5.39 in 1948, the quinquennial average being 5.62 per mille.

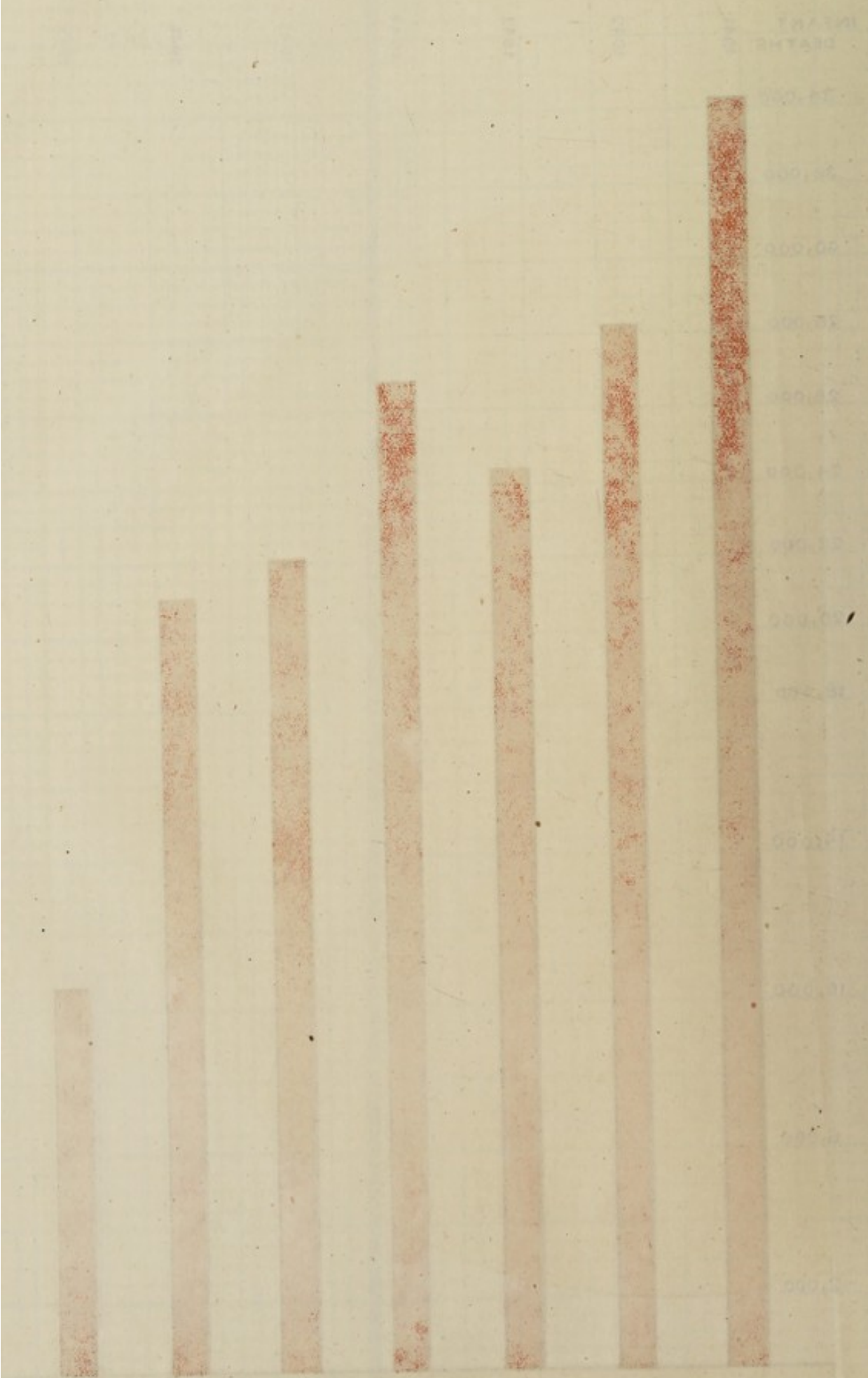


# INFANT DEATH-RATES OF ASSAM FOR THE YEARS -1941-1950





UNITED STATES DEPARTMENT OF AGRICULTURE  
BUREAU OF PLANT INDUSTRY  
WASHINGTON, D. C.  
1914



# COMPARATIVE DIAGRAMS OF DEATHS BY CAUSES — 1949-1950.

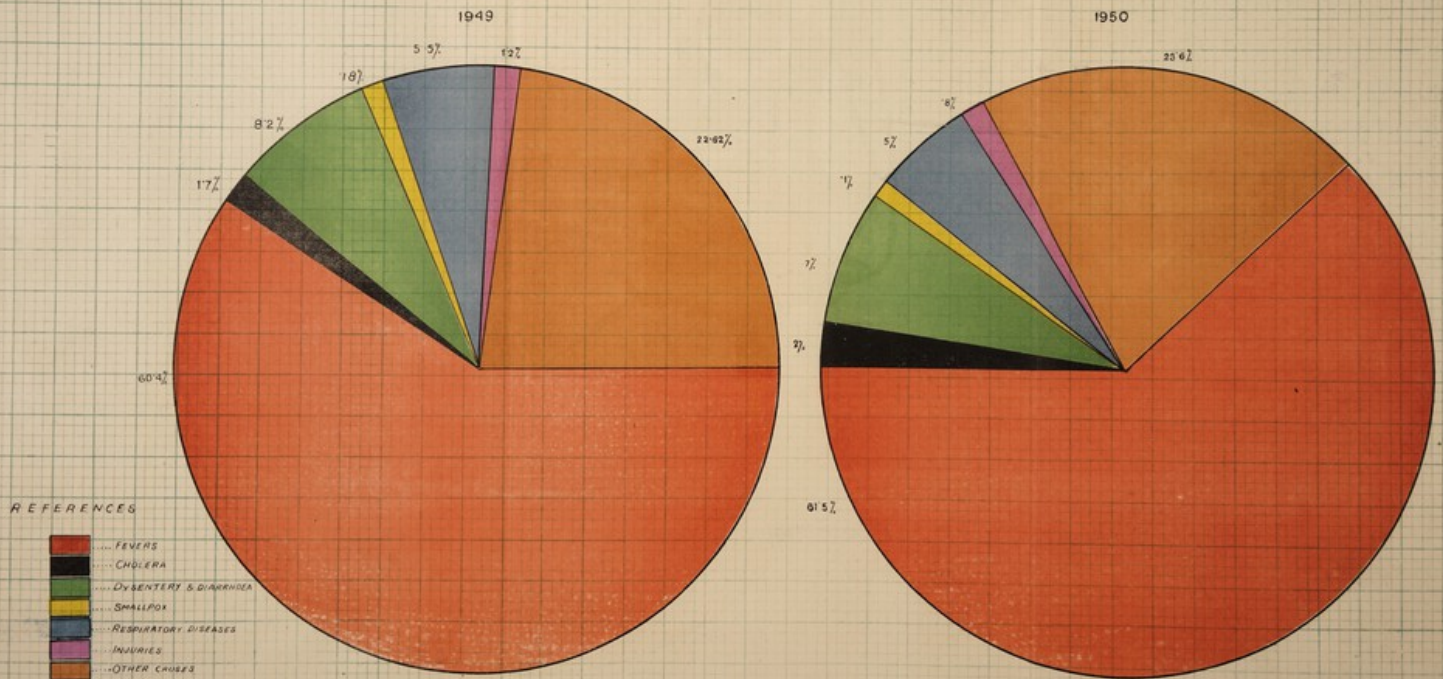
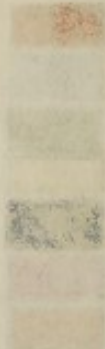
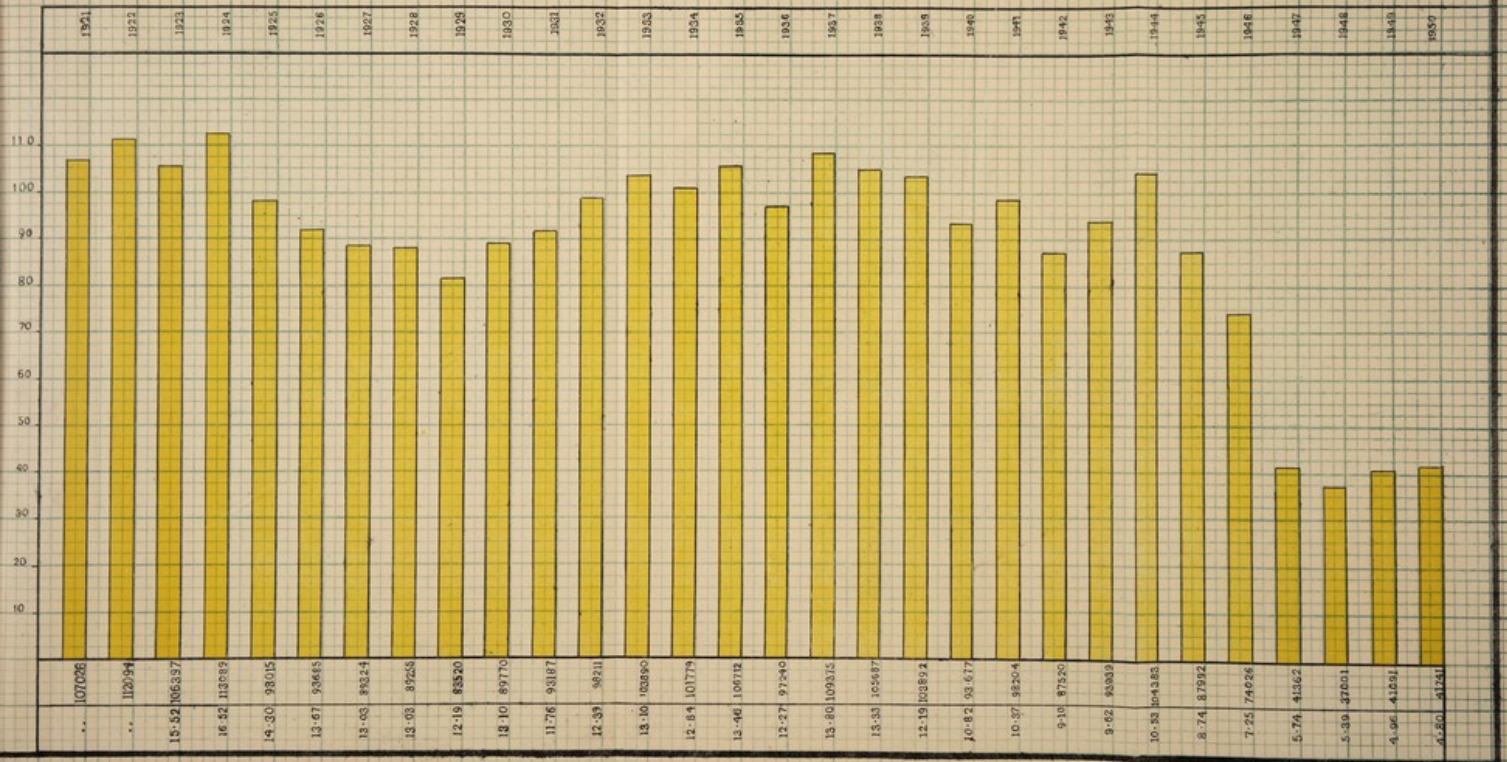




CHART OF DEATHS BY CAUSE

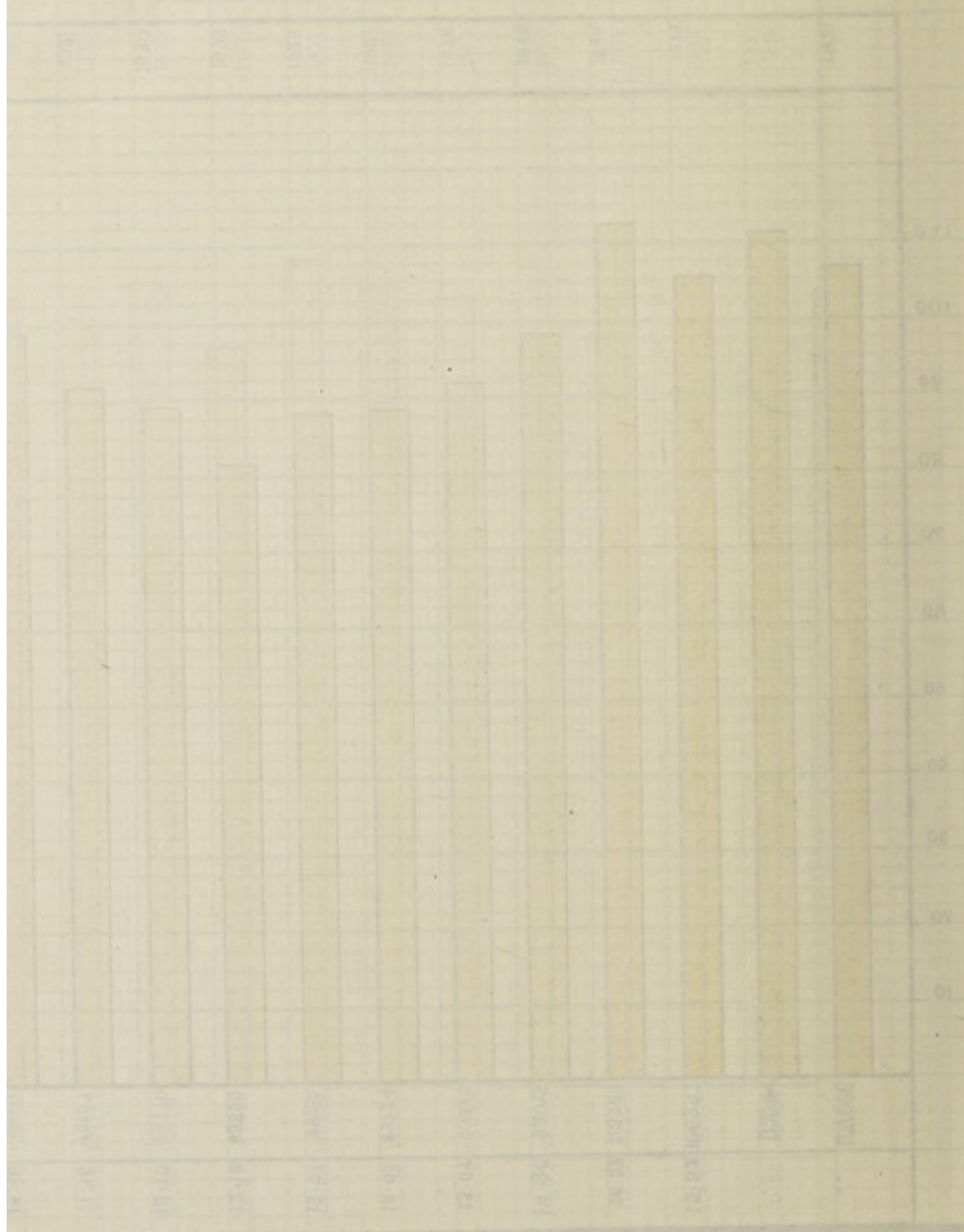


MORTALITY FROM FEVERS IN ASSAM  
1921-1950





1921-1922  
 1921-1922



The following table shows the number of deaths and death-rates due to fevers in the plain districts in Assam for a period of five years from 1946 to 1950 :—

Districts	1950			1949			1948			1947			1946		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
		Number of mortality	Death-rate	Number of mortality	Death-rate	Number of mortality	Death-rate	Number of mortality	Death-rate	Number of mortality	Death-rate	Number of mortality	Death-rate	Number of mortality	Death-rate
(2)															
Cachar	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Goalpara	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Kamrup	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Darrang	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Nowgong	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Sibsagar	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Lakhimpur	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total	..	38,402	5.06	40,043	5.35	38,959	5.28	41,032	5.74	48,858	7.25	..	..	..	..

The highest death-rate was recorded in the district of Goalpara, and the lowest in the Kamrup district. Compared to the previous year, death rate from fevers has decreased very slightly during the year under review. Further there was no abnormal fluctuation in death-rates due to fevers in any of the districts during 1950 as compared to previous year's figures.

A statistical chart is appended below showing mortality from fevers in the State of Assam from 1921 to 1950.

14. *Kala-azar*.—The recrudescence of *Kala-azar* in the State of Assam started in the year 1937 with 1,057 deaths and reached its peak of mortality in the year 1940 with a total of 1,594 deaths and 21,149 attacks. It appeared to be on the decline during the year under review.



(Table showing Kala-azar cases treated from 1935 to 1950)

Serial No.	Districts	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
1	Cachar	478	514	445	718	669	778	1,024	963	935	805	1,135	1,115	1,256	1,678	1,567	1,106
2	Goalpara	1,245	1,275	2,046	2,541	2,989	3,194	2,761	3,314	2,639	2,178	2,125	2,538	2,541	2,121	1,558	1,081
3	Kamrup	1,465	1,309	918	1,189	1,138	1,721	1,215	1,338	1,505	914	1,573	2,286	1,942	1,607	904	771
4	Darrang	738	636	514	989	861	1,491	1,128	2,599	2,393	1,860	2,087	3,322	2,254	2,526	1,796	1,117
5	Nowgong	1,651	1,471	2,317	3,265	3,875	5,129	3,593	2,774	3,093	2,758	2,586	3,552	3,820	3,488	2,807	2,113
6	Sibsagar	838	864	1,396	3,050	3,315	4,070	2,640	3,643	3,494	2,747	2,629	2,807	3,354	2,842	2,070	1,416
7	Lakhimpur	12	6	3	13	15	15	12	15	50	40	76	240	93	9	22	4
8	Khasi and Jaintia Hills.	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..
9	Lushai Hills	..	..	..	..	..	..	..	..	..	..	..	..	3	..	..	..
10	Naga Hills	7	5	15	39	47	16	8	3	3	..	..	..	9	..	..	..
11	Garo Hills	690	793	717	824	808	1,346	1,259	1,496	1,472	1,722	2,484	3,007	2,809	1,677	1,433	1,049
12	Sadiya Frontier Tract.	..	..	2	..	..	..	..	1	..	..	..	..	..	..	..	..
13	Balipara Frontier Tract.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
14	Manipur State	7	8	7	20	10	3	..	..	..	..	..	..	..	..	..	..
15	Sylhet	3,869	3,645	3,672	4,622	4,029	3,306	2,830	3,887	3,624	3,566	4,561	6,398	..	..	..	..
Total		11,190	10,587	12,051	17,268	17,756	21,149	16,470	20,033	19,208	16,590	19,256	25,265	18,082	15,948	11,957	8,677

(Table showing number of deaths from Kala-azar from 1935 to 1950)

No.	Districts	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
1	Cachar	7	2	4	5	8	5	32	1	4	31	5	59	56	57	44	43
2	Goalpara	100	84	136	106	205	174	124	90	90	122	18	147	90	120	88	62
3	Kamrup	176	61	97	104	58	69	62	65	67	32	66	68	57	48	39	12
4	Darrang	91	155	256	256	181	221	100	89	195	117	150	134	58	89	73	52
5	Nowgong	52	121	196	101	170	161	135	119	152	102	80	117	107	101	81	67
6	Sibsagar	101	99	126	447	553	773	95	102	76	161	34	144	107	96	57	31
7	Lakhimpur	..	..	..	..	1	3	1	3	8	19	37	3	9	..	1	..
8	Khasi and Jaintia Hills.	..	10	5	5	12	..	1	..	1	..	..	..	1	..	..	..
9	Naga Hills	..	..	..	..	9	3	..	..	1	2	..	..	..	..	..	..
10	Lushai Hills	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
11	Garo Hills	58	47	51	46	47	70	49	78	71	113	116	136	147	134	83	79
12	Sadiya Frontier Tract.	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..
13	Manipur State	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
14	Sylhet	260	173	207	268	152	115	115	154	131	99	128	220	..	..	..	..
Total	..	845	753	1,057	1,338	1,396	1,594	714	701	796	798	634	1,048	632	645	466	346



The number of deaths from *Kala-azar* was slightly less than that of the preceding year. The number of patients treated was 8,677 during 1950 as compared to 11,957 during the previous year.

The incidence of *Kala-azar* showed a definite downward trend during the year. This is mainly due to the vigorous efforts made to combat this deadly disease by the Public Health Department in Assam. The decrease in the number of cases treated was shared by all the districts. The method of diagnosis and treatment of *Kala-azar* was the same as in the previous years. Measures to combat the disease were both detection and proper treatment of cases. In all the *Kala-azar* infected areas, facilities for treatment exist. Not much survey work could be carried out during 1950 due to acute shortage of doctors. Pentamidine Isethionate (M & B) of the aromatic diamidine group is also now used in addition to Urea Stibamine. It is pleasing to note that the campaign against *Kala-azar* continued with unabated vigour and with conspicuous success during the year under review.

Though the incidence of *Kala-azar* at present shows signs of decrease in the State as a whole, yet it appears to be still wide-spread in the Garo Hills. There are now fully equipped *Kala-azar* Hospital at Tura with 72 beds and 4 out-lying Public Health Department Dispensaries in the Garo Hills to fight with the disease. Further re-inforcement in the shape of two mobile units have recently been sanctioned by Government for detection and treatment of *Kala-azar* in the interior of the Garo Hills.

For efficient running of *Kala-azar* hospitals and the wards and also for comforts of the patients, sixteen nursing orderlies have been provided in addition to the existing ward Assistants in the Hospitals.

Ever since the establishment of the Public Health Department dispensaries in the rural areas there was no provision for treatment of diseases other than *Kala-azar*, Malaria, Leprosy and Yaws. Since 1946, the Public Health Department Dispensaries had been equipped to treat all diseases and to perform minor operations. As a result the importance and popularity of the Public Health Department dispensaries have increased as they provide better medical aid in the rural areas. In appreciation of the services rendered by the rural Public Health Department dispensaries, there has been an increasing demand from the public for more Public Health Department dispensaries.

There were a few *Kala-azar* cases in the Sibsagar Subdivision who were resistant to the routine treatment of U. S. and P. I. The question of trying a more potent drug, viz., Hydroxystilbamidine Isethionate, a product of M/S. May and Baker, Ltd., not yet available in the Indian Market, in the treatment of the resistant *Kala-azar* cases has been under consideration.

There are seventy-six Public Health Department dispensaries (excluding Sub-Centres) and three indoor hospitals with accommodation of 136 beds in the State of Assam. Two *Kala-azar* wards, one at Sibsagar with 15 beds and another at Nazira with 10 beds in the Sibsagar district, were opened during the year under report for the treatment of bed-ridden and very complicated *Kala-azar* cases.

15. *Smallpox*.—A graph showing attacks and deaths from Smallpox during each week in the year 1950 is appended.

A total of one hundred and ten cases of deaths from Smallpox was registered in the State of Assam during the year 1950 as compared to 117 deaths in the year 1949 and 334 deaths in 1948, yielding a death-rate of .01 per mille during the year under review. The quinquennial average is 314.

A chart attached herewith shows mortality from Smallpox in Assam from 1912 to 1950.

The following table shows the number of vaccinations performed by the districts during the year 1950 :—

No.	Districts	Primary including secondary		Re-vaccination		Total
		Successful	Total	Successful	Total	
1	2	3	4	5	6	7
1	Cachar ..	55,134	58,056	92,835	141,816	199,872
2	Goalpara ..	52,080	56,344	80,771	171,391	227,735
3	Kamrup ..	49,256	60,391	37,361	89,178	149,569
4	Darrang ..	37,723	39,575	102,855	140,573	180,148
5	Nowgong ..	32,266	39,266	32,460	70,021	109,287
6	Sibsagar ..	37,254	43,117	38,635	68,131	111,248
7	Lakhimpur ..	36,480	39,267	26,827	73,713	112,980
8	Khasi and Jaintia Hills	24,416	24,484	9,840	73,975	89,459
9	Garo Hills	8,430	9,847	4,737	7,760	17,607
10	Lushai Hills	5,368	6,669	1,839	4,209	10,878
11	Naga Hills	7,412	8,579	2,879	5,014	14,931
12	Sadiya Frontier Tract	1,883	2,264	3,762	6,407	8,671

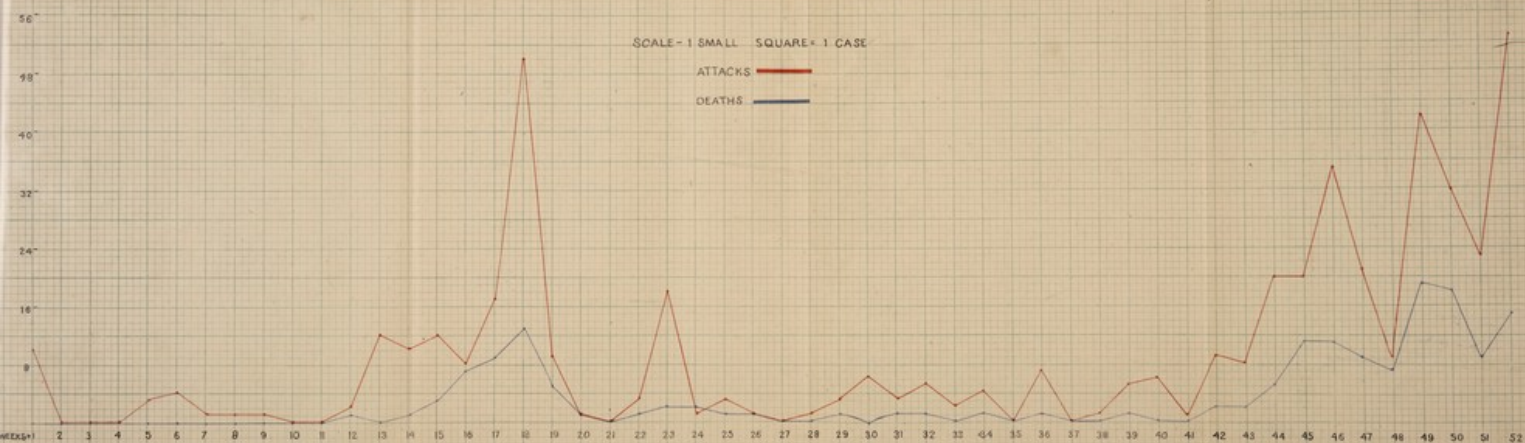
*Preventive measures*.—Vaccination and re-vaccination work were carried out by the Public Health Staff and also by local bodies.

16. *Cholera*.—During the year under review, comparatively mild outbreaks of Cholera occurred in Kamrup, Goalpara, Nowgong, Sibsagar, Cachar and Garo Hills Districts. A total number of 1,869 deaths yielding a death-rate of .24 per mille, was recorded due to Cholera during 1950, as compared to 0.14 per mille in 1949. The quinquennial average death-rate due to Cholera is .15 per mille.

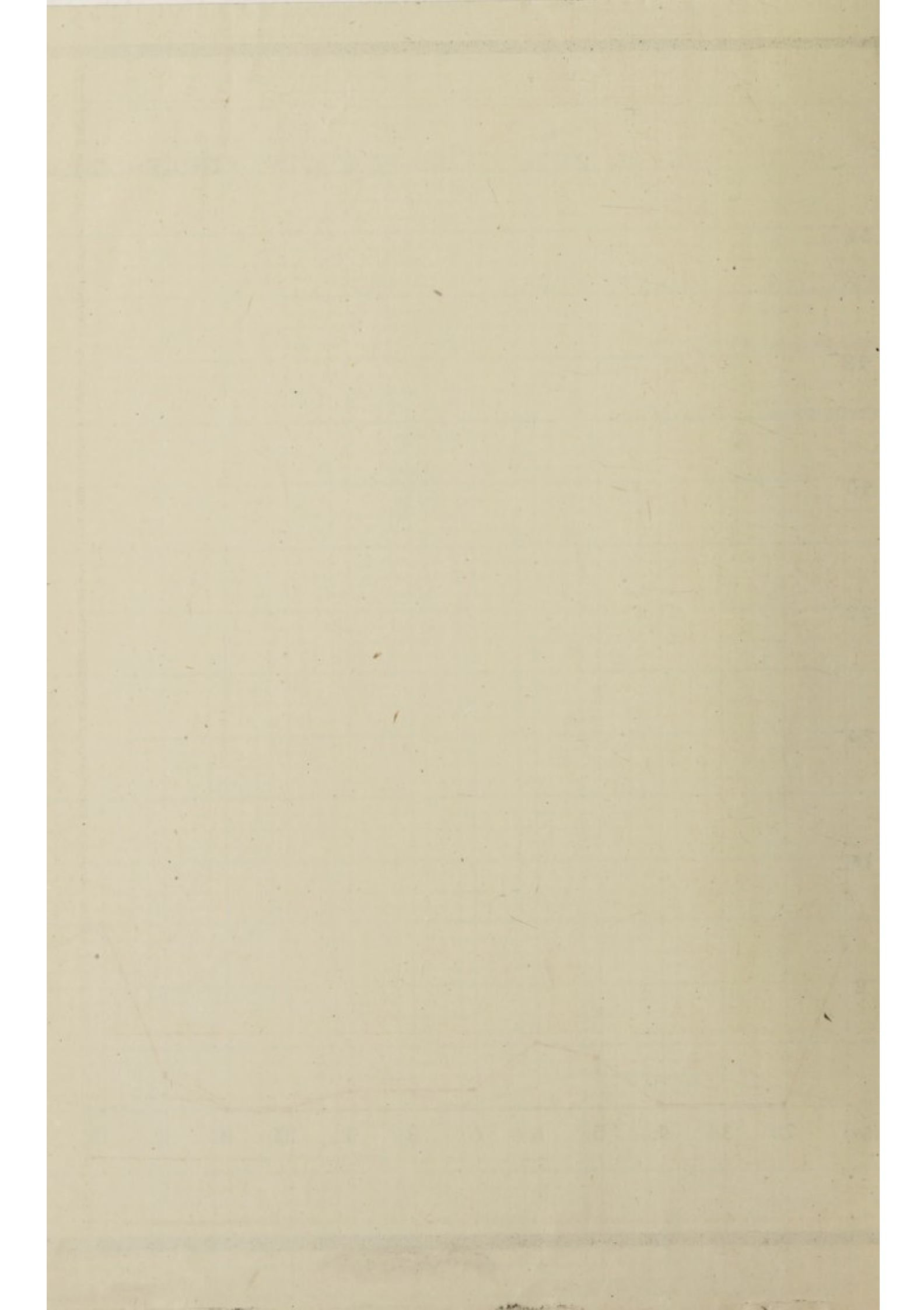
A chart appended herewith shows mortality from Cholera in the State of Assam from 1922 to 1950. Since the year 1944, there has been a gradual decline in death-rates due to Cholera.

The districts of Garo Hills and Kamrup suffered most from Cholera during the year under report.

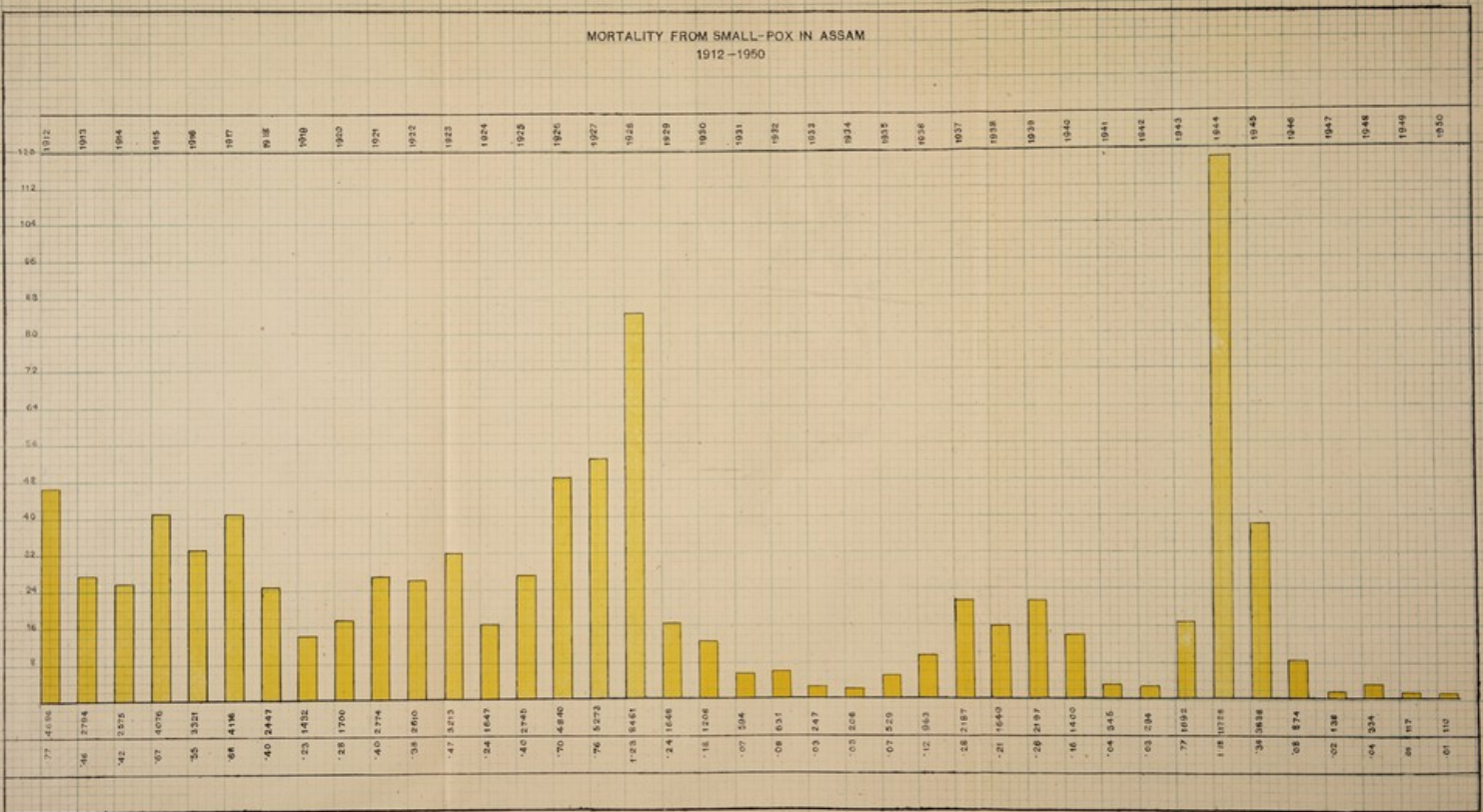
GRAPH SHOWING SMALLPOX ATTACKS AND DEATHS IN EACH OF THE 52 WEEKS DURING THE YEAR 1950



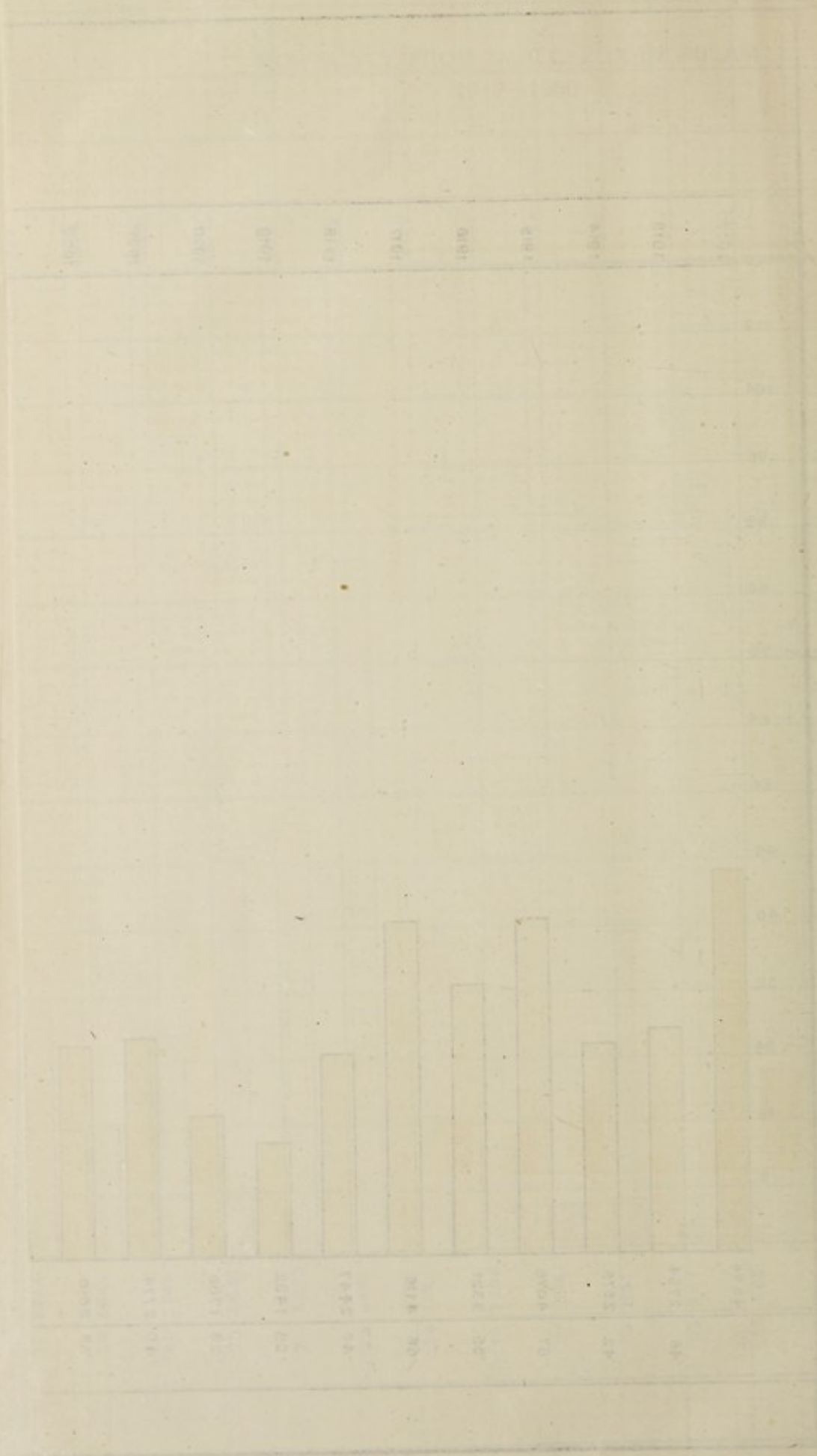




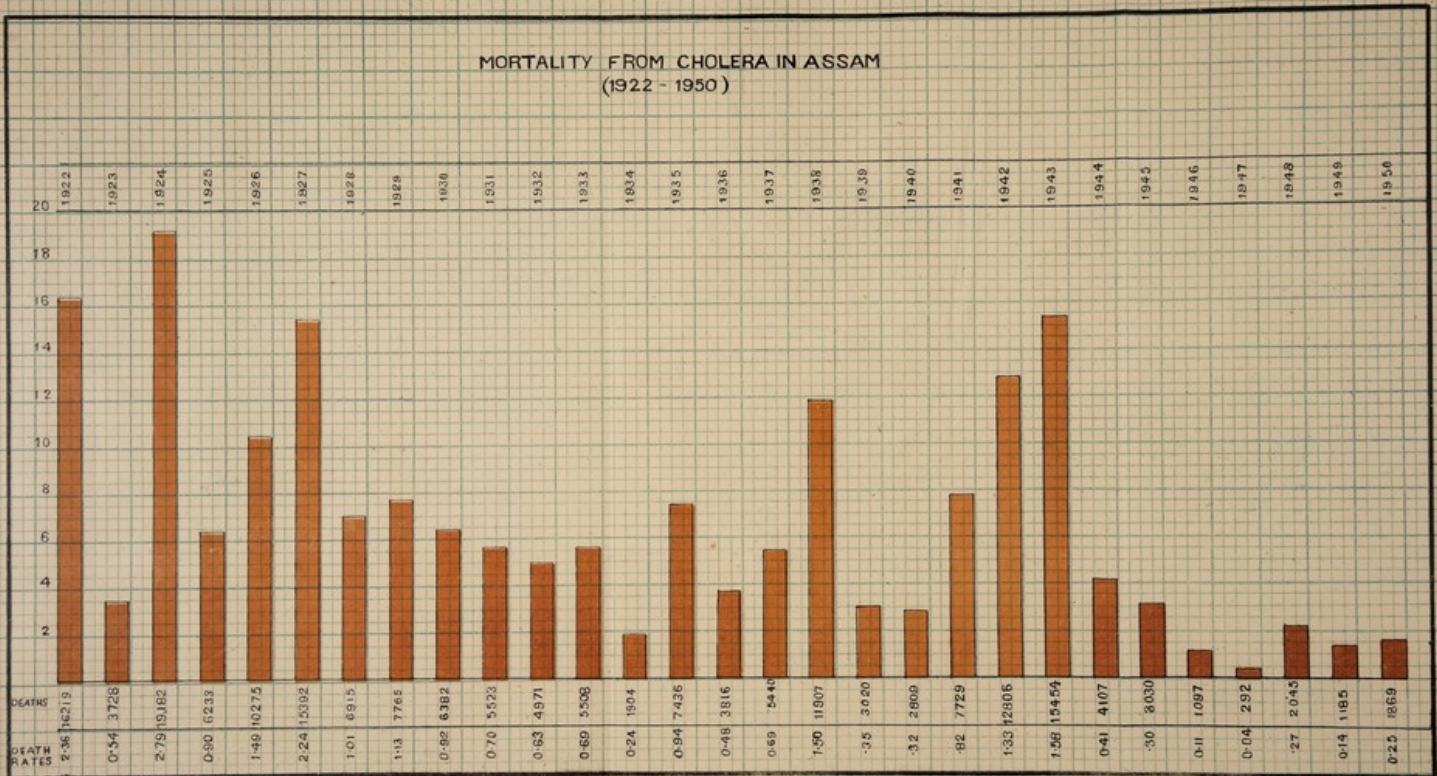
MORTALITY FROM SMALL-POX IN ASSAM  
1912-1950



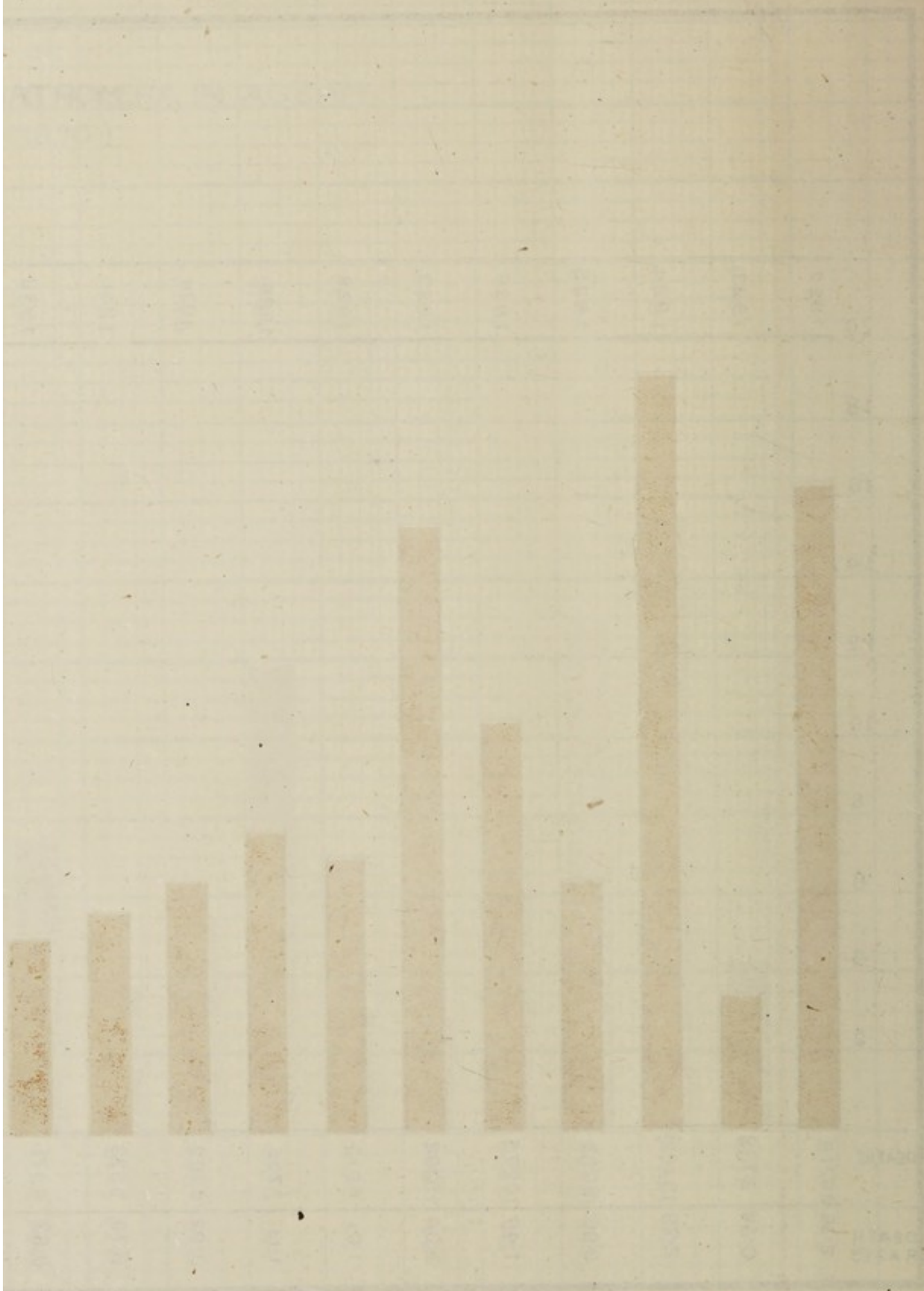




MORTALITY FROM CHOLERA IN ASSAM  
(1922 - 1950)



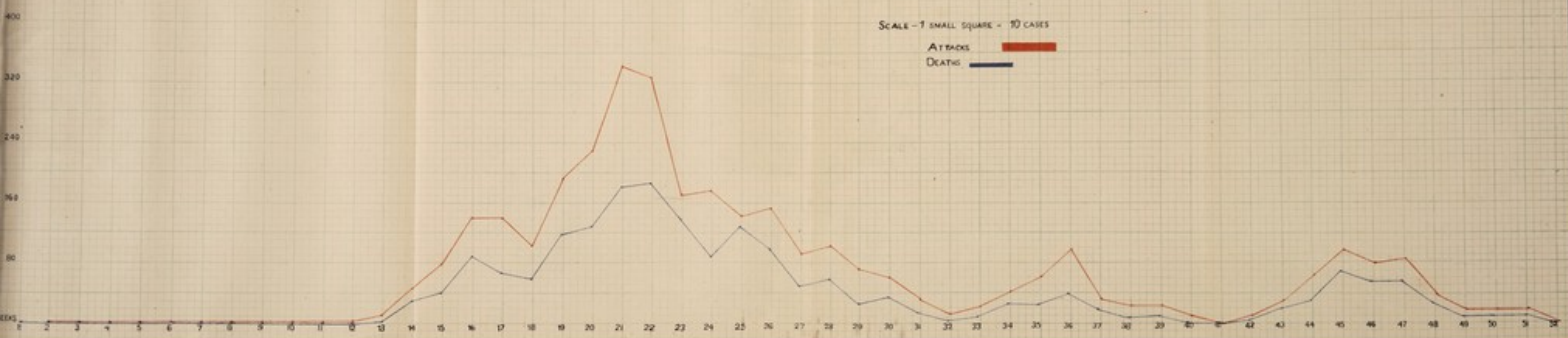




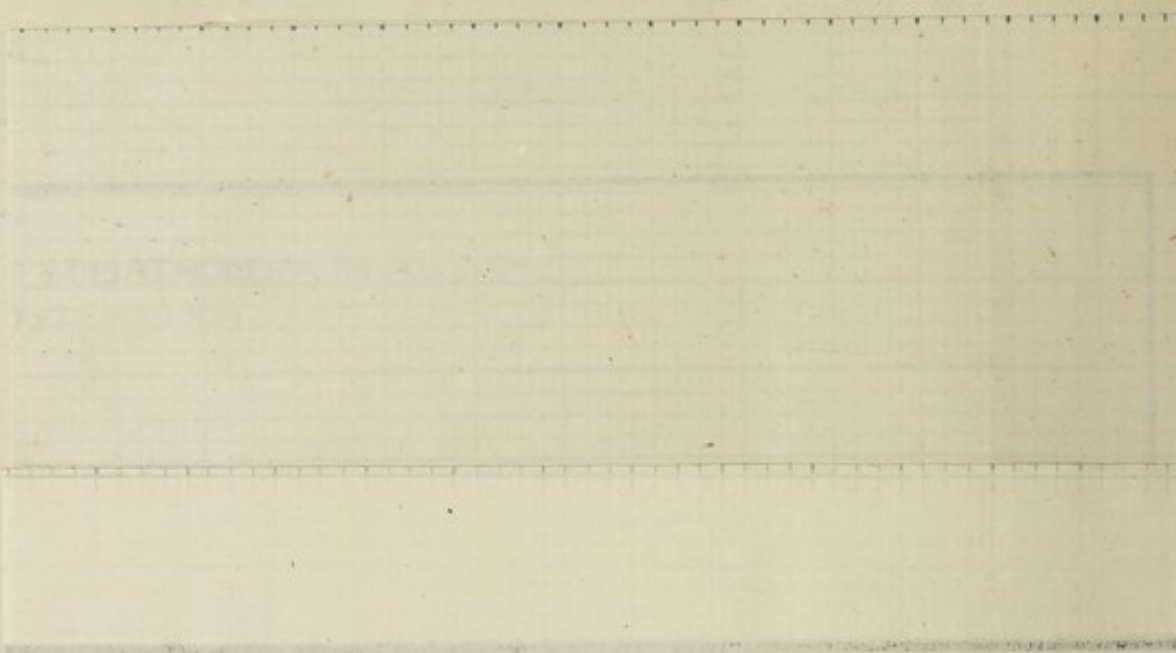
GRAPH SHOWING CHOLERA ATTACKS AND DEATHS IN EACH OF THE 52 WEEKS  
DURING 1950

SCALE - 1 SMALL SQUARE = 10 CASES

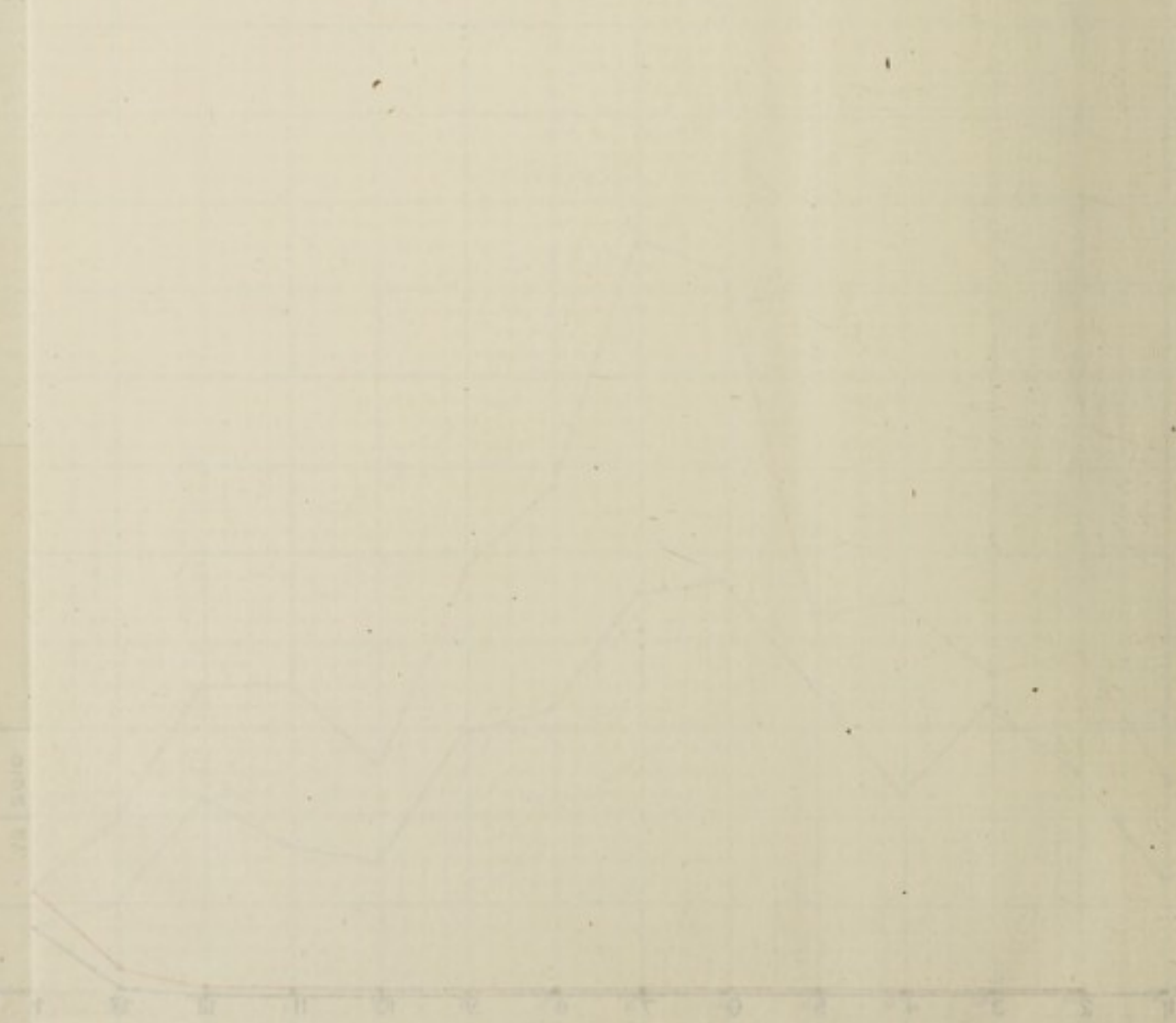
ATTACKS  
DEATHS







# GRAPH SHOWING CHOLERA ATTACKS AND DURING







A graph is appended showing the actual trend of mortality due to dysentery and diarrhoea during the year 1950 in the State. The trend of the graph shows that seasonal prevalence was rather usual as the highest number of deaths occurred in the hot months, i.e., in June and July.

Good water supply has become a vital problem specially in the rural areas. Even in urban areas water supply is not satisfactory in *quality* and in *quantity*. The Local Board tanks not maintained properly; these are not usually fenced and regularly cleared of weeds and dirt, and, as a result, occasional treatment with Bleaching powder proves to be of little use.

All possible necessary and prompt medical assistance were rendered to the sufferers with medicines like Sulphaguanidine, Thalazol, B'phage and other drugs, as and when necessary.

20. *Eye complaints*.—During the year under review a total number of 9,426 minor eye complaints was treated in all the dispensaries belonging to this Department in the State of Assam, as compared to 9,587 cases treated in 1949.

The table below shows the number of cases of minor eye complaints treated in Assam during the years 1950, 1949, 1948 and 1947.

Districts	1950	1949	1948	1947
(1)	(2)	(3)	(4)	(5)
Cachar ... ..	397	1,040	529	185
Goalpara... ..	2,488	3,453	1,190	1,469
Kamrup ... ..	2,315	1,596	1,177	9
Darrang ... ..	760	262	55	191
Nowgong... ..	1,969	1,622	1,260	879
Lakhimpur ... ..	615	914	1,121	Nil
Garo Hills ... ..	663	529	187	253
Sibsagar ... ..	219	81	...	...
	9,426	9,587	5,519	2,986

"Assam Council on Blindness".—During the year 1947, a Council on Blindness was duly constituted to deal with the problem of blindness in the State of Assam. Though this Council is a private body, the expenditure is borne by Government. The main function of the Council is to advise Government for provision of further facilities for treatment for eye diseases.

The Council met for the fifth time on the 14th March, 1950. The following resolutions were unanimously passed :—

1. Resolved that this Council recommends to Government the urgent need of establishing Eye Department of Civil Hospitals and that every effort should be made to find suitable experienced Eye Specialists to staff these Eye Departments and every encouragement should be given for the training of Eye Specialists to fill these important posts ;
2. Resolved that this Council recommends to Government to depute doctors for training in Ophthalmology in the Assam Medical College, so as to extend facilities for specialists' service at the various hospitals at district and subdivisional headquarters stations, and
3. Resolved that this Council recommends to Government for immediate establishment of School Health Officers with special Ophthalmic qualifications with a view to conduct regular and periodical health examination of school students for early detection of defects and for their remedy.

As regards Resolution No.1 owing to paucity of Officers trained in Ophthalmology it was not yet possible to appoint Honorary Medical Officers in all Hospitals. Government, however, accepted the recommendation to allow the Medical Officers to undergo training in Ophthalmology at the Assam Medical College. Owing to financial stringency the scheme regarding establishment of School Health Service was abandoned. However, a modest scheme is under consideration of Government.

A senior District Medical Officer of Health of this Department was deputed to United Kingdom for higher training in Ophthalmology during the year under review.

21. *Yaws*.—Six hundred and fifty-three yaws cases were treated in the Public Health Department Dispensaries during the year 1950 as compared to 615 cases during 1949 and 706 cases in 1948. This disease was most prevalent only in the Goalpara district. But on the whole, it shows a downward trend in its incidence during the year under review.

22. *Respiratory diseases*.—There were 3,941 deaths due to this group of diseases during the year 1950 as compared to 3,919 deaths in 1949, 6,339 deaths in 1948 and 2,966 deaths in 1947 respectively. The quinquennial average number of deaths due to Respiratory diseases is 4,275.

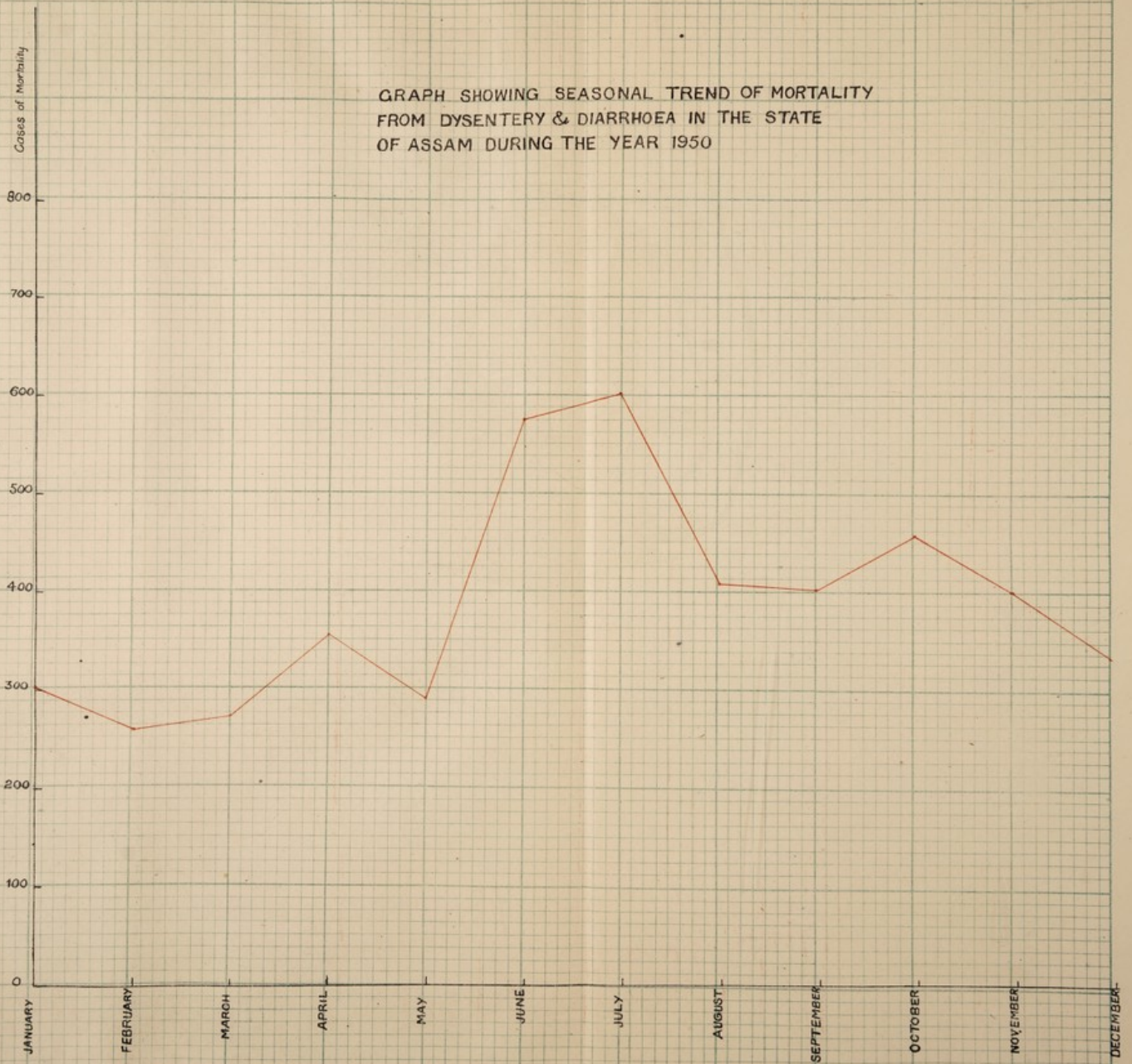
The mortality rate due to this group of diseases was .45 in 1950, 0.51 in 1949, 0.44 in 1948 and 0.41 per mille in 1947, the quinquennial rate being .43 per mille.

It may be noted that the figures noted above fall far short of the actual position as the causes of deaths were not correctly registered by the primary agents in the rural areas.

As a preventive measure B.C.G. vaccination campaign was started in the State since 10th October, 1949. Details of the work done during the year under review are given in Chapter XII.



GRAPH SHOWING SEASONAL TREND OF MORTALITY  
FROM DYSENTERY & DIARRHOEA IN THE STATE  
OF ASSAM DURING THE YEAR 1950







23. *Influenza*.—A total of 266 deaths were reported as due to Influenza in 1950. The mortality from influenza is included under "Fever" but it is doubtful whether all the cases reported under this head are those of influenza.

24. *Injuries and other causes*.—A total number of 13,134 deaths was reported from injuries and 'other causes' in 1950. This includes 752 deaths due to injuries including suicide.

Deaths reported under 'other causes' were 12,382 during 1950 as compared to 15,527 in 1949 and 12,967 in 1948. Mortality under this head includes deaths from such diseases as diabetes, anaemia, cancer, senility, etc., as also all undiagnosed diseases which are not infrequently shown in vital statistical returns as deaths due to other causes.

25. *Enteric fever*.—The Enteric group of fevers accounted for 90 deaths in the year 1950. As Typhoid fever is only notifiable in Municipal areas, a large number of cases remain unaccounted for. Sib-sagar district recorded the highest number of deaths (21) followed by Kamrup district which registered 14 deaths.

26. *Leprosy*.—Leprosy is indigenous in the State of Assam specially amongst the hill tribals. A total of 617 leprosy cases was treated at the Dispensaries of the Public Health Department as compared to 518 cases in 1949 and 411 cases in 1948. In addition to this, a total number of 1,922 cases against 1,828 in the previous year was treated in 44 leprosy clinics (including seven opened during the year) under the Public Health Department and Institutions under the Medical Department, Local Bodies and Missionary Societies. Hence, a total number of 2,539 leprosy cases were treated in 1950 as against 2,349 in 1949 and 1,944 cases in 1948 respectively.

As in the last year, ten Leprosy Asylums, Colonies and Clinics under the Medical Department continued to do good work. A brief note on these Asylums is given below:—

Serial Number	Name of Institution	Maintained by	Number of patients treated during the year	Remarks
1	2	3	4	5
1	Santipara Leprosy Colony in the Goalpara District.	Missionary. Annual recurring Government grant is Rs.14,130.	333 (both in-door and out-door).	Patients are engaged in the cultivation of paddy and vegetables. A school is also maintained there by the authority.
2	Alipur Leprosy Colony in the Cachar District.	Missionary. Annual recurring Government grant is Rs.1,500.	162 (both in-door and out-door).	Patients are engaged in handloom work and in cultivation of vegetables.
3	Pasighat Leprosy Colony in the District of Sadiya.	Maintained by Government.	61	Patients are engaged in the cultivation of vegetables.
4	Barbheta Leprosy Colony (JORHAT) in the Sibsagar District.	Missionary. Annual recurring Government grant is Rs.25,000.	231 (both in-door and out-door).	Patients are engaged in handloom work and in cultivation of vegetables. Two schools are also maintained by the authority.
5	Tura Leprosy Colony in the District of Garo Hills.	Maintained by Government.	140	Patients are engaged in cultivation and "jhum".
6	Maibong Leprosy Colony in the Cachar District.	Maintained by Government.	25	Patients are engaged in the cultivation of vegetables.
7	TRP. Memorial Leprosy Colony at Gauhati in the Kamrup District.	Maintained by Government.	203	Patients are engaged in handloom work.
8	Barpeta Leprosy Asylum in the Kamrup District.	Maintained by Local Bodies with a recurring Government grant of Rs.2,000.	48 (both indoor and out-door.)	Nil.
9	Kohima Leprosy Asylum in the District of Naga Hills.	Maintained by Government.	Nil.	Nil.
10	Dhubri Leprosy Ward in the Goalpara District.	Maintained by Municipal Board with an annual Government grant of Rs.5,000.	109 (both in-door and out-door.)	Nil.



In addition to the recurring grants, the Alipur Colony, Dhubri Leprosy Ward and Santipara Leprosy Colony were in receipt of extra grant of Rs.1,080, Rs. 440 and Rs. 540 respectively, for the maintenance of leprosy patients.

As far as possible leprosy patients were isolated in the Colonies and Asylums. The State Government, Missionaries, 'Hind Kust Nivaran Sangh' formerly known as British Empire Leprosy Relief Association, took part in isolation work.

Statement and return showing number of leprosy cases treated in Clinics and Institutions under this Department during 1950 are given below :—

**Statement showing the number of Leprosy cases treated in the Clinics and Institutions under the Public Health Department in the State of Assam for the year 1950**

State	Number of of the Clinics	Clinics									Total No. of Leproma- tous	Total No. of Neural cases	Total No. of all cases
		Cases											
		Male			Female			Children					
		Lepro- matous	Neural	Total	Lepro- matous	Neural	Total	Lepro- matous	Neural	Total			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Assam ..	44 (including out-centres)	106	275	381	37	128	165	13	58	71	156	461	617

N. B.—Children mean— from 1 to 14 years of age.

Clinics mean—Dispensaries and out-centres.

Institutions mean—Leprosy Colonies, Asylums and wards.

**Return showing number of Leprosy cases treated in Clinics, Dispensaries and Institutions under the Public Health Department in the State of Assam for the year 1950**

State	Number of the Clinics	Remain-ing from the pre-vious year	New cases du-ring the year	Total number of cases treated during the year	Death	Cured	Relieved	Discharg-ed other-wise	Remain-ing at the end of the year	Remarks
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Assam ..	44 (including out-centres)	433	184	617	2	2	12	167	434	..

The Special Leprosy Officer carried out an extensive survey in seven villages. Propaganda work on leprosy was carried out as usual along with other Public Health activities in course of village visits by the Public Health Department staff. Leprosy pamphlets and posters in Assamese and English were freely distributed. The Special Leprosy Officer with the help of Secretary, Mikir Seva Kendra arranged construction of village segregation huts in the Saharajan area for fifteen infectious cases. These cases were isolated and brought under treatment at Sarihajan Leprosy Centre. A non-recurring grant of Rs.16,500 was allotted to the Secretary, Mikir Seva Kendra, Assam Branch, Sarihajan by Government for establishment of a small leprosy Colony at Sarihajan in the Sibsagar district. Approximately 150 acres of rent-free land have also been given by Government for the purpose. This social organisation is a branch of "Adimjati Adhibasi Sevak Sangh". One qualified Medical Officer was also appointed by the Mikir Seva Kendra and posted to this Leprosy Centre. One literate young Mikir (tribal) was trained in technique of leprosy treatment at Wardah Moha Rogi Seva Mandal for a period of three months at the cost of Mikir Seva Kendra and employed in the Sarihajan Leprosy Treatment Centre. One pucca leprosy injection shed was constructed at Batiamari in the Darrang district at a cost of Rs.5,300 and the expenditure was met from the Assam Branch Leprosy Relief Fund (Hind Kust Nivaran Sangh).

Sulphone drugs which are reported to be more efficacious were introduced towards the end of the year under report in selected Public Health Department dispensaries where microscopes and compounders are available. The results received were encouraging. Owing to paucity of funds it is not possible to introduce treatment of leprosy cases by sulphone drugs in all Public Health Department dispensaries at present.

These drugs were also introduced in some Leprosy Colonies and Asylums.

*Leprosarium in Assam.*—It will be a boon for the people of Assam if plans are made and adequate funds allocated in the near future for the establishment of a model leprosarium in Assam on a long-term basis.

Shri T. N. Jagadisan, Organising Secretary, Central Hind Kustha Nivaran Sangha, visited Assam during March 1950 and gave certain valuable suggestions regarding leprosy problem in Assam.



## CHAPTER IV

## Fairs and Festivals

27. As usual, a large number of fairs and festivals were held in different parts of the State during the year. The total number of major fairs observed during the year was seventeen. Of these, the under-noted important Melas are worth mentioning :—

Brahmaputra Snan at Dhubri and Mahamaya Mela at Bogribari in the Goalpara District, the Darranga Mela at the foot of the Bhutan Hills and the Ambubuchi Mela at Kamakhya Hill in the Kamrup district and Gandhi Mela, Sidheswar Baruni Mela and the Sibaratri Mela in the Bhuban Hill in the Cachar district, Bihu Utsob—both in the months of *Bohag* and *Magh*.

Sanitary arrangements during these fairs and festivals were provided as usual by the Public Health Department staff with the co-operation of the Mela and Local Authorities. Vaccination against smallpox, and anti-cholera inoculations were given to the congregating mass. No epidemic broke out in any such mela in any part of the State. For carrying out the requisite sanitary measures efficiently, most of the important festivals were notified for general information in the official *Assam Gazette*. To safeguard further the health of the pilgrims, the places *en route* to important festivals were also notified in the *Assam Gazette*. The Railway Authorities, the police, medical and other departments fully co-operated in the arrangements made at all the festival centres. Instructions were published in the *Assam Gazette* and in important local papers requesting all persons intending to attend big festivals and gatherings within or outside the State to take vaccination and anti-cholera inoculation beforehand. Certificates of vaccination and inoculation were issued to such persons. It is gratifying to note that during the year under review all the fairs and festivals passed off without any epidemics, due to precautionary measures taken by Public Health Department staff. *Government may consider to provide protected water-supply and efficient conservancy system on a permanent basis, at all the regular places of pilgrimage.* Proper arrangement for safe, protected drinking water-supply, is *prima facie* a big problem to be dealt with in this report. Hitherto, whatever measures were taken or preparations made for the sanitation of the festival area, were entirely temporary even in the case of large festivals, expenses being borne mainly by the Local Boards and nothing by the festival authority. It is suggested that measures should be taken to provide permanent facilities for the accommodation of the pilgrims and for the sanitation of the festival centres. It is desirable that taking into consideration all the matters relating to a particular festival or mela by a pilgrim or festival committees, consisting of the representatives of the temple, the Local Board of the Government (Deputy Commissioner and Public Health Department), a scheme should be drawn up for each festival centre for the efficient conduct of the festival including the provision of permanent amenities for the pilgrims and for the improvement of the sanitary conditions to be carried out progressively from year to year. The financial implication including the cost of the scheme and the relative sum to be paid by the respective authorities, shall have to be determined and fixed by mutual consent. The execution of the scheme should be with the Public Health Department. From time to time, say at intervals of five years, the working of the scheme should be revised and necessary steps taken to ensure further progress. The experience gained in this way could be profitably applied to rural areas generally by adaptation to prevailing conditions.

## CHAPTER V

## Urban Sanitation and Water Supply

28. It is noted with regret, that in spite of periodical inspection of towns and recommendations made by the Public Health authorities, the sanitary conditions of all the towns remained almost the same as in the last year. Some towns, like Gauhati and Shillong even deteriorated in sanitary condition to a great extent during the year. There was no planned expansion and development of important towns during the year mainly due to non-availability of building materials and staff and on account of the rapid increase in population due to influx of refugees from East Pakistan and lack of funds.

29. Eighteen Municipal Boards and ten Town Committees functioned in the State. Of these, ten Municipalities were provided with Urban Health Officers from the Public Health Department. Owing to dearth of suitable candidates, the post of Urban Health Officer of the Gauhati Municipality remained vacant from the latter part of 1949. The work was, however, temporarily distributed among the conservancy staff of the Municipality and the Public Health Department doctors posted to Gauhati. The Shillong Municipality employs one medical graduate with public health qualification as Health Officer for the town. The Municipalities also employ sanitary and conservancy Inspectors, Vaccinators and other staff for the purpose of sanitary and health service work.

30. *Drainage.*—There was no appreciable improvement during the year under review.

31. *Conservancy.*—The structural condition of public and private latrines showed no appreciable improvement and the system of collection and removal of night soil continued to be unsatisfactory. The trenching of night-soil was also not properly controlled.

32. *Market and Slaughter houses.*—The arrangements for slaughter and sale of meat and fish continued to be unhygienic in most bazars and *hats* in the State.

33. *Water-supply.*—The general situation with regard to water supply showed little improvement in the State of Assam during the year under review. Only nine towns in the State (five in the plains districts and four in the hills districts) have piped water-supply and distribution systems. Some of these water-supply systems, e.g., those in Shillong, Haflong, Kohima and Tura do not require previous treatment of water, except chlorination during some parts of the year. In the towns of the plain districts, filtration and chlorination are done before distribution. Defects in water-supply in the towns of the plain districts are mainly due to old, inefficient machineries and distribution systems of inadequate capacity and to very poor finances of the Municipal Boards. In the bigger towns, e.g., Jorhat, Gauhati and Tezpur, the water-supply is quite unsatisfactory both in quality and quantity. In those Municipalities which do not have a piped water-supply system, water is obtained from reserved tanks, tube-wells, or shallow wells as the case may be.

Even in the existing towns in the plains having piped water, the supply of water was 8 gallons per head of the population per day. The inadequacy of the supply is more in the towns having no piped water-supply but which have to depend on water from rivers, tanks, and wells.



In the hills towns, namely (a) Shillong, (b) Tura, (c) Kohima and (d) Haflong which have piped water, the quality of water is fairly satisfactory but the quantity is not adequate.

34. Adequate supply of good drinking water is a *sine qua non* for the preservation of the public health in towns. The water works must be improved and enlarged without the least possible delay in order to avoid much of the preventable loss of life and sickness due to water-borne diseases in the urban areas.

As usual, the Director and Assistant Directors of Public Health inspected the Municipalities and small towns and offered advice on health matters.

## CHAPTER VI

### Rural Sanitation

35. The responsibility for the sanitation in rural areas wherein about 97 per cent. of population reside, devolves upon the local boards authorities. It is a matter of great regret that the rural sanitation in Assam remained primitive as before mainly due to vastness of the problem of the general ignorance of the principles of healthy living in the rural areas. Local bodies should pay special attention to the provision of adequate and safe water supplies, better housing condition and conservancy in villages. Until this is done no material reduction in the incidence of communicable diseases can be expected.

36. It may be noted that all the Public Health Department dispensaries are located in the rural areas as detailed below:—

Districts	Number of existing treatment centres	Number of treatment centres to be opened shortly
(1)	(2)	(3)
Cachar	3	...
Goalpara	9	..
Kamrup	10	...
Darrang	5	...
Nowgong	18	...
Sibsagar	21**	...
Lakhimpur	7	...
Garo Hills	5*	1
	78	1

\*\* Including one Kala-azar Hospital.

\* Ditto ditto.

The Public Health measures which are extensively carried out in the rural areas are protection against Cholera by inoculation, the use of bacteriophage in the treatment of Cholera cases and protection against Small-pox by vaccination. Kala-azar treatment measures continued to be carried out on the same lines similar to those employed hitherto. Mepacrine tablets in packets for the treatment of Malaria were sold in all village post offices and through other accredited agents. Treatment of all diseases, particularly Yaws, Leprosy, Malaria, Influenza, Minor Eye complaints, Dysentery and Diarrhoea was also undertaken in the Public Health Department Dispensaries in the rural areas and minor operation were also conducted. Adulteration of food-stuff decreased as a result of the stricter enforcement of the Assam Pure Food Act. In this connection, it has to be mentioned that better results will be achieved if the local bodies, particularly the local boards, co-operate with the Public Health Department.

37. Water-supply in the rural areas is highly defective, poor in quality and in quantity. Sources of water-supply in the rural areas are streams, tanks, nullas, ring-wells and tube-wells. The village people do not keep these water-supplies free from pollution due to ignorance.

38. It is necessary that cheap bore-hole latrines in rural areas throughout the State should be constructed gradually. This would lead to a definite improvement in rural sanitation in general. There are 35,352 villages in Assam, and it would be a real boon to the villagers in Assam, if properly constructed wells for the villages are provided by the State Government.

39. The activities of the Public Health Department have been directed towards prevention of soil pollution and control of hook-worm infection. During the year under review, very little could be done as regards (a) prevention of soil pollution and (b) control of hook-worm infection owing to limited funds and paucity of qualified staff.

## CHAPTER VII

### Malaria

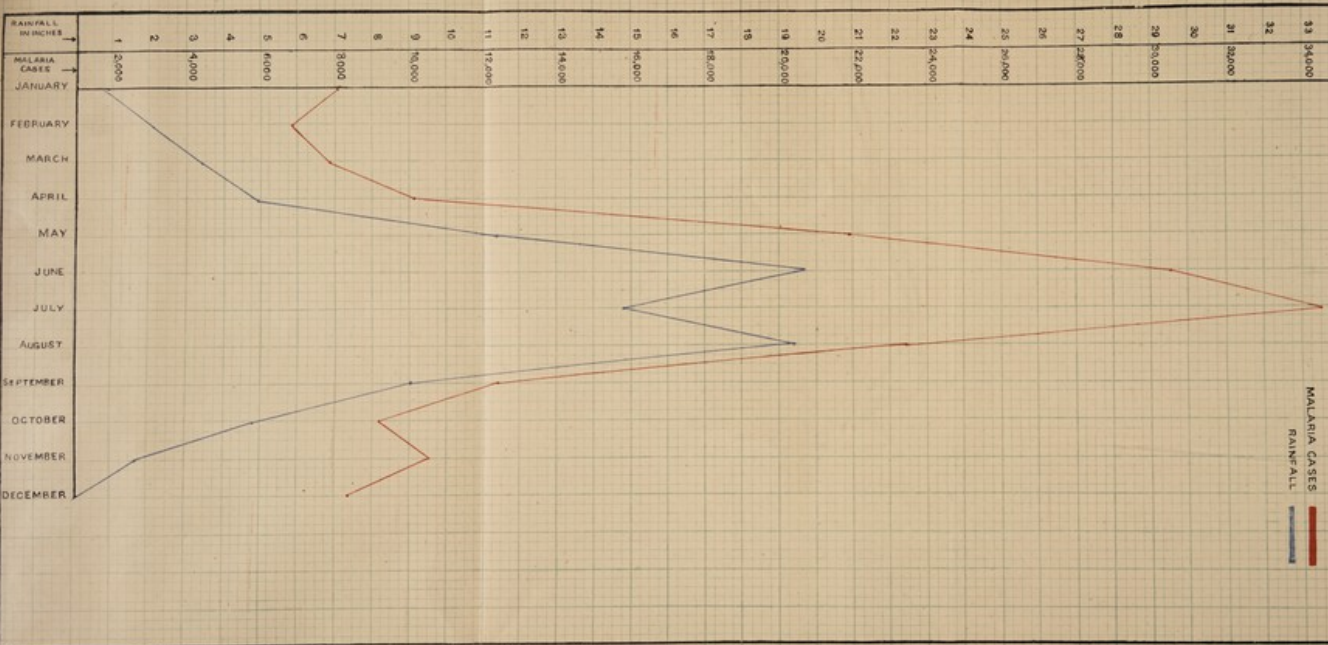
40. It is an admitted fact that the most common and ubiquitous menace to life and health is Malaria, which, while the toll it noticeably levies upon life may not be so striking as that taken by the diseases with a more rapid climax and more visible physical results, gradually saps the energy and economic power of the people as a whole, more than any other disease. Public attention all over the world has recently been drawn to the possibilities of combating malaria on scientific lines adapted to local condition. In the State of Assam, Malaria is responsible for a very large percentage of morbidity and mortality under "Fevers". It has been estimated that out of 8 million deaths from all causes in India, about 2 millions are due to malaria alone. During the year 1950, in the State of Assam, a total number of 5,202 deaths (2,689 males and 2,513 females) was recorded as due to Malaria alone. A total of 179,932 malaria cases was treated in the hospitals and dispensaries in Assam during the year.

41. *Rainfall and Malaria.*—Graph 'M' illustrates the relationship between rainfall and malaria in the State of Assam during all the twelve months of the year 1950. The malaria season bears a direct relation to rainfall. With the increase of the rainfall, there is a definite increase in the incidence of malarial fevers also.

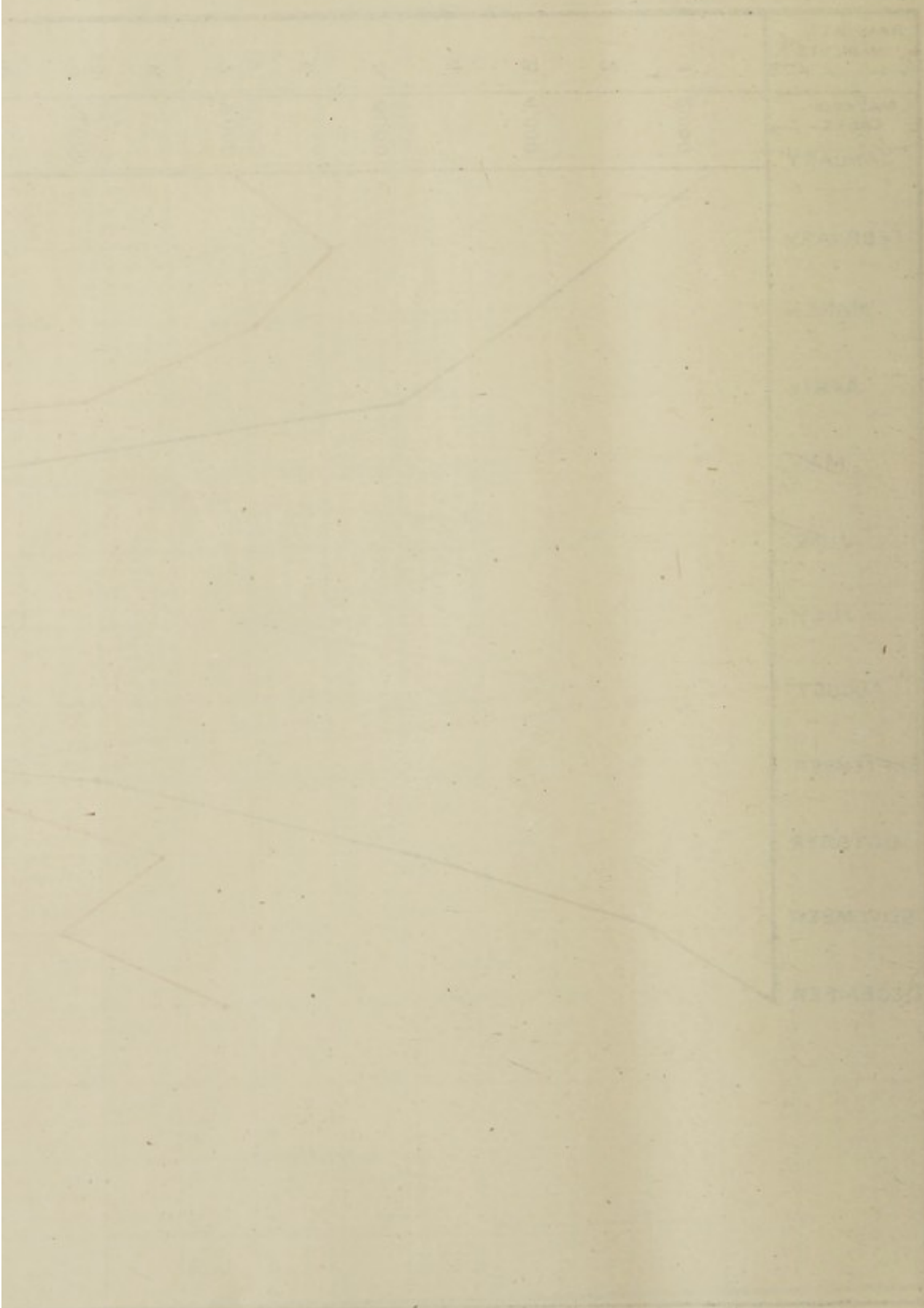
# SEASONAL RAINFALL AND MALARIA CASES IN ASSAM DURING 1950

## REFERENCES:-

MALARIA CASES  
RAINFALL







An account of the work done by the Malaria Section of the Public Health Department during the year under review is given below :—

**Malaria Survey.**—Malaria Surveys were carried out at Khanapara Cattle Breeding Farm and Khanapara Agricultural School area in the District of Kamrup. Rapid Malaria survey of Pynthorumkrah and adjacent villages was also carried out. Prophylactic treatment with Paludrine tablets was carried out at Pynthorumkrah and adjacent villages as an interim measure.

**Training Classes.**—One Training Class for training Malaria Inspectors was held during the year under review. Fourteen candidates were selected but only 7 turned up and 4 passed the examination after the course.

**Anti-Malaria projects opened.**—Anti-malaria projects were opened at Shella and Saiden in the United Khasi and Jaintia Hills District and Diphu in the Mikir Hills District. This brings the total of anti-malaria projects to 31.

**Permanent Measures.**—The permanent measures, except the sluice gates at Pasighat, are working satisfactorily. Damage was done in the sluice gates at Pasighat by earthquake and flood. Spraying of DDT has been introduced and will be continued until the sluice gates are repaired. Slight damage has been done to the automatic syphon, sluice gates, pucca drain and subsoil drains at Nongpoh. The subsoil drains have been repaired and the other will be repaired soon.

Construction of a system of drains and sluice gates in the Pynthorumkrah Valley in Shillong was in progress.

**Routine and Laboratory work.**—Five thousand six hundred and thirty-four anopheline larvae of 22 different species and 1,421 anopheline adults of 14 different species were identified. Four hundred and fifty-eight anopheline mosquitoes were dissected out of which none was found infected. Out of 1,532 and 148 blood smears examined in controlled and comparison areas, 110 and 50 or 7.2 per cent. and 33.7 per cent. respectively showed parasites. Out of 4,737 and 1,262 children examined for enlargement of spleen in controlled and comparison areas, 593 and 440 or 12.5 per cent. and 34.8 per cent. respectively were found with enlarged spleen.

Spraying of Refugees Camps with DDT was carried out at Shillong, Dawki, Karimganj, Silchar, Nowong, Rupshi by the Public Health Department staff.

DDT emulsion and suspension was prepared in the laboratory and was supplied to the projects and earthquake and flood-affected areas.

**Sale of Quinine and Quinine substitutes.**—The Provincial Public Health Laboratory continued to work as the Provincial Quinine Depot for the sale and distribution of anti-malarial drugs under the controlled scheme. The following quantities of drugs were sold and distributed during the year 1950 :—

Articles [ 1 ]	Quantity [ 2 ]
(a) Quinine sulph powder and tablets... ..	3,534 lbs.
(b) Quinine Ampoules (contained 6 amps. in each box) ... ..	8,796 boxes.
(c) Chinchona Febrifuge powder and tablets ... ..	1,231 lbs.
(d) Mepacrine tablets ... ..	215,500 tabs.
(e) Paludrine tablets ... ..	2,582,000 tabs.
(f) Tota quina powder ... ..	28 lbs.

This Laboratory continued to prepare Mepacrine treatment packets and supplied the same to all the post offices in Assam for the purpose of sale to the public. These were supplied in boxes containing 20 treatments ; each treatment containing 15 tablets of Mepacrine. Altogether, 12,700 treatment packets were sold during the year under review as compared to 12,661 packets in 1949 and 19,630 packets in 1948. This shows that Mepacrine is not gaining appreciable popularity in the rural areas. Permanent advance accounts, as usual, had to be maintained in each of the Post Offices relating to sale of this anti-malarial drug.

42. A statement showing the total quantity of quinine, Mepacrine and Chinchona Febrifuge powder supplied to each class of consumers in Assam during 1950 is appended below.

43. Another statement showing the number of Mepacrine parcels supplied to each of the districts of Assam during 1950 is furnished below.

**Statement showing the number of Mepacrine parcels supplied to each District of the State during the year 1950**

Sl. No.	Name of the District	No. of boxes (containing 20 treatments packets in each)
[ 1 ]	[ 2 ]	[ 3 ]
1	Cachar ... ..	114
2	Khasi and Jaintia Hills ... ..	45
3	Goalpara ... ..	93
4	Kamrup ... ..	129
5	Darrang ... ..	21
6	Nowgong ... ..	22
7	Sibsagar ... ..	145
8	Lakhimpur ... ..	17
9	Naga Hills ... ..	...
10	Lushai Hills ... ..	25
11	North-East Frontier Province ... ..	18
12	Retail ... ..	46
Total ... ..		635

No. of treatment packets— $635 \times 20 = 12,700$ .



Statement showing the Total Quantity of Quinine, Mepacrine and Cinchona febrifuge supplied to each class of Consumers in the State during the year 1950

Name of consumers [ 1 ]	Mepacrine tablets [ 2 ]	Paludrine tablets [ 3 ]	Quinine		Cinchona		Quinine Ampoule Boxes (6 Amps. in each box 6 gr. in 1 c.c.	Total Quinine powder		Quinine Hydro- powder		Number of parcels [ 12 ]
			Tablets		Powder			Lb. Oz.		Lb. Oz.		
			[ 4 ] Lb. Oz.	[ 5 ] Lb. Oz.	[ 6 ] Lb. Oz.	[ 7 ] Lb. Oz.		[ 8 ] Boxes	[ 9 ] Lb. Oz.	[ 10 ] Lb. Oz.	[ 11 ] Lb. Oz.	
Political Secretary, Planting and Commerce Group, Shillong using for members Gardens.	..	..	7 0	756 0	..	..	6,766	..	2 0	..	..	..
Non-member Gardens .. .. .	..	..	0 8	126 0	..	..	338	..	..	..	..	51
State Hospitals and Dispensaries .. .. .	..	585,000	58 12	336 8	14 1	193 8	296	3 4	..	..	..	124
Government Subsidised Dispensaries .. .. .	..	115,800	..	174 0	3 0	117 4	27B—3 Amp.	12 0	..	..	..	83
Other Government Department .. .. .	..	641,000	4 12	114 0	..	58 0	306	..	..	..	..	65
Private Hospitals and Dispensaries .. .. .	..	..	15 0	127 0	3 0	52 0	4	..	..	..	..	44
Employees of Labour Other than Tea Estate .. .. .	..	..	2 0	12 0	..	2 0	50	..	..	..	..	8
Local Board Dispensaries .. .. .	..	443,500	14 8	823 1	1 0	632 8	112B—2 Amp.	13 0	..	..	..	236
Agents.. .. .	..	..	21 8	308 8	..	22 0	230	..	..	..	..	73
Free Distribution in Epidemic Areas .. .. .	..	25,000	17 0	42 8	..	11 0	502	..	..	..	..	33
Public Health Department Dispensaries .. .. .	..	..	154 8	365 8	8 8	111 0	..	..	..	..	..	125
Post Offices .. .. .	190,500	..	..	..	..	..	..	..	..	..	..	312
Refugee Camps.. .. .	..	132,000	8 0	53 0	..	2 0	164	..	..	..	..	38
Total .. .. .	215,500	2,582,000	300 8	3,238 8	29 9	1,201 4	8,795—5	28 4	2 0	..	..	1,192

44. The summary of progress of work done by the Malaria Section is given in the table below showing spleen rate, parasite rate and infant index during the year 1950:—

Names of Projects	Spleen rate			Infant index			Parasite rate												
	Controlled area			Comparison area			Comparison area												
	Total exa- mined	No. positive	(%) P. C.	Total exa- mined	No. positive	(%) P. C.	Total exa- mined	No. positive	(%) P. C.										
1. Tura	60	6	10.0	51	20	39.21	12	2	16.6	14	7	50.0	Not done.	15	10	66.7	20	10	50.0
2. Gossaigaon	33	3	9.09	29	20	69.0	12	Nil	0.0	12	6	50.0	Not done.	14	10	71.4	19	10	52.6
3. Lathipur	44	1	2.27	46	20	43.4	17	1	5.8	18	8	44.4	Not done.	14	10	71.4	19	10	52.6
4. Kaehugaon	78	24	30.5	16	14	87.5	16	3	18.5	4	3	75.0	Not done.	14	10	71.4	19	10	52.6
5. Halugaon	61	27	44.26	20	14	70.0	11	2	18.18	4	2	50.0	Not done.	14	10	71.4	19	10	52.6
6. Raimona	27	12	44.4	Not done.	Not done.	Not done.	4	1	25.0	Not done.	Not done.	Not done.	Not done.	14	10	71.4	19	10	52.6
7. Mangaldai	29	1	3.4	37	3	8.27	6	Nil	0.0	7	2	28.5	Not done.	14	10	71.4	19	10	52.6
8. Tangla	29	8	27.7	40	25	62.5	7	2	28.5	10	6	60.0	Not done.	14	10	71.4	19	10	52.6
9. Gauhati	35	1	2.85	28	4	14.28	12	Nil	0.0	7	2	28.5	Not done.	14	10	71.4	19	10	52.6
10. Azara	27	Nil	0.0	18	5	27.7	9	1	11.1	7	2	28.5	Not done.	14	10	71.4	19	10	52.6
11. Diphu	36	10	27.7	Not done.	Not done.	Not done.	11	4	36.6	Not done.	Not done.	Not done.	Not done.	14	10	71.4	19	10	52.6
12. Raugapahar	8	2	25.0	10	5	50.0	6	Nil	0.0	8	4	50.0	Not done.	14	10	71.4	19	10	52.6
13. Dimapur	32	5	15.6	Not done.	Not done.	Not done.	8	2	25.0	Not done.	Not done.	Not done.	Not done.	14	10	71.4	19	10	52.6
14. Haflong	25	Nil	0.0	15	5	33.0	6	Nil	0.0	4	1	25.0	Not done.	14	10	71.4	19	10	52.6
15. Halcm Tea Estate	466	11	2.3	Not done.	Not done.	Not done.	8	Nil	0.0	Not done.	Not done.	Not done.	Not done.	14	10	71.4	19	10	52.6
16. Halem villages	95	32	33.6	77	33	42.7	Not done.	Not done.	Not done.	Not done.	Not done.	Not done.	Not done.	14	10	71.4	19	10	52.6



Names of Projects	Spices rate										Infant index										Parasite rate										Before control measured were adopted	
	Controlled area					Comparison area					Controlled					Comparison area					Controlled area					Comparison area						
	Total ex- mined	No. positive	(%) P. C.	Total ex- mined	(%) P. C.	Total ex- mined	No. positive	(%) P. C.	Total ex- mined	(%) P. C.	Total ex- mined	No. positive	(%) P. C.	Total ex- mined	(%) P. C.	Total ex- mined	No. positive	(%) P. C.	Total ex- mined	(%) P. C.	Total ex- mined	No. positive	(%) P. C.	Total ex- mined	(%) P. C.	Total ex- mined	(%) P. C.	Spleen rate	Parasite rate	Infant index		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)											
17. North Lakhimpur	257	23	8.9	133	55	41.3	9	Nil	0.0	10	1	10.0	19	1	5.2	Not done.	Not done.	Not done.	31.6 per cent.	46.4 per cent.	Not done.											
18. Sadiya	349	16	4.5	158	81	51.2	21	1	4.7	2	1	50.0	23	2	8.6	"	"	"	25.1 per cent.	20.5 per cent.	19.6 per cent.											
19. Pasighat	133	37	27.8	13	12	92.3	14	Nil	0.0	Not done.	Not done.	Not done.	23	Nil	0.0	"	"	"	32.5 per cent.	35.5 per cent.	Not done.											
20. Bulek group of villages	82	22	26.8	Not done.	Not done.	Not done.	9	Nil	0.0	"	"	"	Not done.	Not done.	Not done.	"	"	"	33.6 per cent.	Not done.	"											
21. Saikhowaghat	173	22	12.7	"	"	"	Not done.	Not done.	Not done.	"	"	"	"	"	"	"	"	"	47.8 per cent.	41.5 per cent.	42.3 per cent.											
22. Charduar	105	3	2.8	64	40	62.4	3	Nil	0.0	5	1	20.0	20	2	10.0	"	"	"	15.6 per cent.	Not done.	Not done.											
Lokra	171	2	1.1	58	5	8.6	19	2	10.5	Not done.	Not done.	Not done.	983	30	3.4	"	"	"	8.7 per cent.	8.69 per cent.	"											
23. Shillong	1,364	75	5.6	315	31	9.84	62	Nil	0.0	34	2	5.9	Not done.	Not done.	Not done.	"	"	"	"	"	"											
24. Shella	196	67	34.1	43	35	81.4	Not done.	Not done.	Not done.	Not done.	Not done.	Not done.	Not done.	Not done.	Not done.	"	"	"	"	"	"											
25. Nongpoh	159	64	40.2	21	18	85.7	20	2	10.0	1	1	100.0	20	1	5.0	"	"	"	90.6 per cent.	Not done.	"											
26. Saliden	48	29	60.4	21	18	85.7	1	Nil	0.0	1	1	100.0	Not done.	Not done.	Not done.	"	"	"	56.1 per cent.	45.6 per cent.	50.0 per cent.											
27. Burnihat	29	17	58.6	13	10	76.9	2	Nil	0.0	Not done.	Not done.	Not done.	4	1	25.0	"	"	"	72.2 per cent.	62.9 per cent.	Not done.											
28. Borlong Cinchona Plantation	28	5	17.8	Not done.	Not done.	Not done.	5	1	20.0	Not done.	Not done.	Not done.	12	3	25.0	"	"	"	45.4 per cent.	27.2 per cent.	"											
29. Tezpur	467	8	1.7	123	3	2.4	Not done.	Not done.	Not done.	"	"	"	Not done.	Not done.	Not done.	"	"	"	5.1 per cent.	0.9 per cent.	"											
30. Khanapara	91	50	54.9	Not done.	Not done.	Not done.	9	1	11.1	"	"	"	91	45	49.4	Surveyed in August 1950.			"	"	"											
31. Doon Dooma	Not done.	Not done.	Not done.	Not done.	Not done.	Not done.	Not done.	Not done.	Not done.	"	"	"	Not done.	Not done.	Not done.	"	"	"	56.5 per cent.	40.0 per cent.	33.6 per cent.											
32. Nowgong	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	50.8 per cent.	16.7 per cent.	Not done.											
33. Jorhat	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	9.0 per cent.	Not done.	"											
Total	4,737	593	12.5	1,262	440	34.8	319	25	7.8	148	50	33.7	1,213	85	7.0	"	"	"	"	"	"											
measures																																

measures

N.B.—The spleen rate, parasite rate and infant index for year 1949 could not be furnished as the assessment of the progress of work could not be done due to the shortage of staff.



45. *Anti-malaria measures in Railway Stations.*—The anti-malarial and anti-larval measures were taken in the following Railway Stations belonging to Assam Railway by the Railway staff doctors:—

Pandu, Gauhati, Jagi Road, Chaparmukh, Lumding, Mariani, Tinsukia, Badarpur, Amingaon, Rangiya, Majbat, Tangla and Bongaigaon.

Suppressive Treatment with Paludrine against Malaria was also carried out from May to November as prophylactic measures in 119 Railway Stations.

## CHAPTER VIII

### School Hygiene and Medical Inspection of School Children

46. As in the previous year, no systematic medical inspection of Schools and Colleges could be carried out as there was no cadre of school health officers. As usual, schools were visited and children inspected as far as practicable by their Public Health Department staff during the course of their routine work. Very little time was available for routine medical inspection.

47. In Assam there is no cadre of school health services. The State Government may consider to create such a cadre as and when financial condition of the State permits.

The duties to be performed by a School Health Service fall broadly into two groups:—

A. Health measures, preventive and curative which include (i) the detection and treatment of defects, and (ii) the creation and maintenance of a hygienic environment in and around the Schools and Colleges, and

B. Measures for promoting positive health which should include (i) the provision of supplementary food to improve the nutritional state of the child, (ii) physical culture through games, sports and gymnastic exercises and through corporate recreational activities, and (iii) health education through formal instruction and the practice of hygienic modes of life.

48. During the year under review the number of educational institutions in the State of Assam was 10,360 and the number of pupils therein was about 6,71,295. The volume of work which would be required on school hygiene can be estimated from the above figures.

49. Preliminary instruction in elementary hygiene and sanitation was imparted both in primary and secondary schools. Moreover, lectures and talks on health, hygiene and physical welfare were given to the school children by the inspecting staff of the Public Health Department staff in course of their routine tours.

## CHAPTER IX

### Public Health Propaganda and Publicity

50. Regular and Scientific propaganda on health matters is an indispensable factor for the progress and prosperity of a nation. During the year under review regular health propaganda with the aid of magic lanterns and slides was undertaken in the State. The number of Magic Lantern Operators was increased from 7 permanent posts to 9 permanent posts and 1 temporary post. These Magic Lantern Operators visited the villages in their respective areas at intervals and demonstrated the slides on different infectious disease, hygiene and sanitation and the matters were explained by the Assistant Surgeon II of the nearest Dispensary. Besides, pamphlets, leaflet, and other literatures published by this Department, literatures purchased from local authors were also distributed free among the mass people in order to arouse health consciousness in them. The health journal, "Swasthya Pradip" published from Gauhati in Assamese, is also being subscribed by this Department and distributed to certain village libraries as far as resources permit. Advantages of fairs, melas, festivals, etc., were taken and the Public Health Department participated in such occasions annually. The most prominent of such occasions in which this Department took a very active part are (1) the annual conference of the Assam Janaswasthya Parishad in December 1949 at Gauhati, (2) the World Health Day observed in Shillong on the 7th April 1950 and (3) the Annual Provincial Conference of the Assam Branch I. M. L. Assam held in October 1950 at Jorhat. In all these occasions there were health exhibitions including maternity and child health section organised by this Department.

51. Further talkie films on health matters were occasionally obtained from the Indian Red Cross Society, Delhi and shown to the public free in different cinema Halls. Health pictures (movie-talkies and silent) were also shown free to the student community in all the local Educational institutions of Shillong in 1949 through the help of the Assam Publicity Department. There was appreciation from all quarters.

In view of the above, a self-contained propaganda and Publicity Section with staff, materials and equipment for audio-visual propaganda in the Public Health Department, Assam is of immediate importance for awakening Health consciousness among the illiterate people in the interior.

A modest scheme for creation of a Public Health Propaganda Section to be supervised by a Special Medical man in co-operation with the Publicity and Social Education Department in the Public Health Department was originally sponsored in November 1948, but was not accepted by Government owing to paucity of funds.

## CHAPTER X

### Public Health Administration

52. Acute shortage of qualified doctors, Health Visitors, Nurses and Compounders is still being keenly felt by this Department. Inadequate pay and prospects are mainly responsible for the difficulty in recruiting duly qualified doctors and other technical staff.

53. The Special Officer in the office of the Director of Public Health, Assam was transferred to his substantive post as Assistant Director of Public Health and was posted at Gauhati as Assistant Director of Public Health of Western Public Health Division after he had completed the drafting of the Public Health Act.

54. There was no new development of Public Health Administration in the State of Assam during the year under review.

The Budget allotment for the year 1950-51 was Rs.21,50,900 as against Rs.30,81,700 in 1949-50 and Rs.21,35,800 in 1948-49. Out of this, the total grant for Post-War Development Schemes of this Department amounted to Rs.1,50,697 during the year under review.



One senior District Medical Officer of Health was deputed for higher training abroad in Ophthalmology. One Assistant Surgeon, II, was deputed for training in D.P. H. and Hygiene course at the All-India Institute of Hygiene and Public Health, Calcutta and one Assistant Surgeon II, was deputed for training in the up-to-date method of manufacture of vaccine lymph in Madras.

56. The strength of the technical personnel of the Public Health Department during the year 1950 was as under :—

Post	Numbers
1. Director of Public Health	1
2. Assistant Director of Public Health	2
3. District Medical Officers of Health	8
4. Subdivisional Medical Officers of Health	8
5. Assistant Surgeons II	136
6. Director of Pasteur Institute	1
7. Assistant to Director of Pasteur Institute	1
8. Officer In-charge, Provincial Public Health Laboratory and Public Analyst to the Government of Assam.	1
9. Assistant Analyst	1
10. Special Leprosy Officer	1
11. Officer In-charge, Vaccine Depôt, Shillong	1
12. Malarialogist	1
13. Biochemist	1
14. Entomological Assistant	1
15. Urban Health Officers	7
16. Statistician	1
17. Rural Health Inspectors (99 plus 80 Health Assistants)	179

The Shillong Municipal Board employs one qualified Medical graduate with D. P. H. qualification whose pay is met from the contribution of Government.

## CHAPTER XI

### Other Public Health Services

#### A. Industrial Hygiene and Mines

57. No mines were inspected by the Public Health staff during the year under review.

58. Cultivation and manufacture of tea, timber-cutting, coal-mining and petroleum are principal industries in the State of Assam. Sanitary conditions in practically all these industries were far from satisfactory.

59. A total of 251 emigrants came to the tea-gardens of the State of Assam during the year under review as per table given below :—

Month	Souls	Remarks
January 1950	27	One case of <i>corneal</i> ulcer was treated at our Purulia depôt in March 1950. The patient recovered after treatment.
February	60	
March	60	
April	56	There were two cases of infectious disease, a female of 24 years suffered from Cholera and her husband, 30 years old, suffered from 'Pox and Dysentery'. These cases occurred at Rangiya depôt in May, 1950. They were placed under Railway Medical Officer for treatment but they did not recover and died.
May	8	
June	1	
July	1	
August	14	A girl of 3 years of age, daughter of the above deceased, suffered from fever and was treated at the Railway Dispensary at Rangiya. She recovered and was sent to garden concerned.
September	...	
October	4	
November	...	
December	20	
<b>Total</b>	<b>251</b>	



60. According to a brief note received from Messrs. Assam Oil Company Limited, Digboi on health measures undertaken by the Company, a Statement of certain selected diseases, and injury cases treated in Assam Oil Company Hospital, Digboi in 1950 along with total number of deaths is given below :—

Serial No.	Diseases	Cases	Deaths
(1)	(2)	(3)	(4)
1	Appendicitis ...	4	...
2	Amoebic dysentery...	73	...
3	Anæmia ...	15	6
4	Bacillary dysentery...	206	2
5	Beri Beri ...	19	...
6	Chicken Pox ...	10	...
7	Diabetes ...	2	...
8	Diphtheria ...	16	6
9	Enteric Fevers ...	37	2
10	Eclampsia ...	1	1
11	Gonorrhoea ...	53	...
12	Gastric/deudonal ulcer ...	13	...
13	Influenza ...	76	...
14	Injuries ...	341	3
15	Kala-azar ...	4	...
16	Lobar and Broncho Pneumonia ...	136	8
17	Leprosy ...	2	...
18	Malaria ...	693	...
19	Malaria Cerebral ...	12	6
20	Meningitis ...	5	1
21	Measles ...	48	...
22	Nephritis ...	25	1
23	Pulmonary T. B. ...	21	3
24	Pleurisy ...	54	...
25	Small-pox ...	1	1
26	Syphilis ...	24	...
27	Typhus ...	2	1
28	Other causes ...	271	49

As per reports received from Messrs. Assam Railway Trading Company Limited, Margherita, comparative tables for the years 1949-50 showing prevalent diseases among a working population of 5,059 in the company is given below :—

**Table of common diseases for the year 1950**

Name of Disease	Number	Percentage
Malaria ...	523	0.86
Kala-azar ...	38	0.06
Dysentery ...	571	0.94
Chicken-pox ...	16	0.03
Measles ...	7	0.01
Respiratory ...	1,850	3.04
Accident ...	2,115	3.48
Other diseases ...	17,564	28.93

**Table of common diseases for the year 1949**

Name of Disease	Number	Percentage
Malaria ...	1,241	1.57
Kala-azar ...	52	0.06
Dysentery ...	859	0.09
Chicken-pox ...	16	0.02
Measles ...	45	0.05
Respiratory ...	2,803	3.56
Accident ...	2,097	2.66
Other diseases ...	19,738	25.11



From the above comparative tables for 1950 and 1949 it appears that number of accidents was higher during the year under review. This slight rise on last year's figures was due mainly to extension of mining operations, and better attendance at dispensaries for treatment. The majority of the accidents were quite trivial.

61. *Sanitary condition of labourers in tea plantation.*—The prevailing sanitary condition of labourers, according to the report received from the Labour Department, is far from satisfactory. Congested housing, absence of drainage in lines, lack of latrines and urinals, habit of keeping domestic animals in the dwelling room or in part of it, etc., are the noticeable features. The labour lines are mostly ill-planned and the houses are built without making proper arrangements for ventilation and lighting. Most of the houses contain one room where a whole family lives and the kitchens are mostly attached to the main houses.

#### B. Food Adulteration

62. A total number of 548 samples of foodstuffs were received at the Provincial Public Health Laboratory, Shillong for analysis by the Public Analyst from different places in the State of Assam during the year under review, as compared to 546 samples received during 1949. Of these, 352 samples were received from the Municipal Boards, 109 from Local Boards, 8 from Town Committees and 79 from other sources; of the total foodstuffs analysed, average adulteration was found to be 59.4 per cent. in 1950 as compared to 72.3 per cent. in 1949. Percentage of adulteration in case of mustard oil was 57 per cent., in case of Ghee was 70 per cent. and in case of milk was 61.9 per cent. Cent per cent. adulteration was detected in 'atta' and 83.8 per cent. in 'maida'. In tea, adulteration was found to be 73.3 per cent. During the year, 38 samples of vegetable oil products were examined and 11 samples were found not conforming to the standards laid down in the Vegetable Oil Products Control Order, 1947.

Mustard oil was found adulterated chiefly with till oil, 62.6 per cent. adulterated samples contained this oil, 14.8 per cent. contained ground nut oil, 10.4 per cent. contained Linseed oil, 5.4 per cent. contained Mula oil, white oil, etc. Samples of ghee in all cases of adulteration, were found to contain hydrogenated vegetable oil. Atta and maida were found adulterated with barley, rice-powder and ground-pulses. Samples of rice that were examined were found to contain excess of paddy and in some cases they were weevil-infested disintegrated and mouldy.

63. *Food-inspection.*—Appointment of Inspectors, under the Assam Pure Food Act, 1947, was continued during the year under review. The Health staff inspected hotels and restaurants as a routine measure with reference to the sanitary condition of the premises, wholesomeness of food sold and control and spread of infection.

64. *The Provincial Public Health Laboratory, Shillong.*—Altogether 1011 laboratory examinations were done during the year. Of these food-stuffs numbered 548. The table below shows the actual volume of work done at the Provincial Public Health Laboratory, Shillong, during the year 1950 as compared to the previous two years:—

List of laboratory Examination				1950	1949	1948
1				2	3	4
1. Chemical Examination of foodstuff	...	...	...	548	556	433
2. Chemical Examination of water	...	...	...	96	84	125
3. Bacteriological Examination of water	...	...	...	346	328	313
4. Miscellaneous Examinations	...	...	...	12	26	10
5. Spirit (Rectified, denatured and country)	...	...	...	9	34	30
Total				1,011	1,013	911

65. *Bacteriological examination of water.*—Three hundred and forty-six samples of water from different places were examined bacteriologically at the Laboratory. The quality of the samples of 'well' water even from 'Pukka Wells' were found to be very unsatisfactory. Gauhati samples of tap water were repeatedly found to be contaminated. Several samples of water from the river Brahmaputra and a few tributaries were examined after the great earthquake of August, 1950. All these showed high bacterial contamination, high turbidity and unsatisfactory chemical nature.

66. *Chemical examination of water.*—Ninety-six samples of water were examined chemically.

67. *Miscellaneous Chemical examination.*—Twenty one miscellaneous samples were examined chemically.

A piece of work on behalf of the Forest Department, Assam on the preparation of Turpentine, and rosin from the resin tapped from the indigenous pine trees (*Pinus Khasya*) was undertaken in the Laboratory. One hundred grms. Oleo-resin tapped by cup and lip method yielded 25 to 30 c. c. turpentine oil on distillation and about 60 to 70 grms. of rosin could be recovered. The Industrial possibilities are being explored by the Forest Department.

*Hydnocroton.*—Injectible Hydnocroton, i.e., Hydnocarpus oil with 4 per cent. double distilled creosote was prepared and stocked as usual in the Laboratory for supply to the districts for treatment of leprosy.

68. *Urea-Stibamine.*—The Laboratory supplied Urea stibamine to all dispensaries and hospital in the Khasi and Jaintia Hills and other Hill districts. This drug was supplied to the plains districts from Assistant Director of Public Health's offices. The total quantity of urea-stibamine distributed was 193.81 grms. (715 amps.) and Neostibamine ampoules—6.95 Gms. (98 amps.).

The supply of Collin's syringe and syringe parts was continued to all hospitals and dispensaries. As usual, the Public Health Laboratory continued to work as the Provincial Dépôt for the sale and distribution of anti-malarial drugs under the control scheme in addition to its duty.

The Government taking prompt action on a resolution passed by the Asom Janaswasthya Parishad, held in December 1949 at Gauhati have been considering favourably the question of expanding the laboratory further, so that Assam may not depend on any other sister State for chemical work required by the law-courts in Assam.

At present the Chemical Examiner's work for Assam is done in West Bengal, paying an annual fee. It is now proposed to have the work done at the Provincial Public Health Laboratory. The starting of a Chemical Examiner's Section in the Provincial Laboratory will not only expedite trials which require chemico-legal examinations but shall also equip the laboratory fairly for undertaking analytical work on resin, lac, minerals and other indigenous material for the industrial development of the State.



## CHAPTER XII

## Development work under the Post-war Schemes

69. *Malaria*.—The details of anti-malaria measures undertaken during 1950 are given in Chapter VII. This Post-war Scheme was discontinued since 1st January 1950 as a measure of economy.

70. *Tuberculosis*.—Annually about 500,000 deaths take place from tuberculosis in India and about 2·5 million open cases of tuberculosis exist in the country.

In the State of Assam, 1749 cases of deaths were registered due to tuberculosis during the year 1950. Tuberculosis patients continually disseminate infection among those with whom they come in contact. The following figures show the death-rate from tuberculosis for a comparative study:—

*Tuberculosis death per 100,000 population*

Cawnpore	...	...	...	...	...	...	432
Lucknow	...	...	...	...	...	...	419
Madras	...	...	...	...	...	...	290
Calcutta	...	...	...	...	...	...	230
Bombay	...	...	...	...	...	...	140

Assam (1950)..... 0·10 per 100,000 population.

The above figure shows that death-rate from tuberculosis is much higher in urban industrialised cities in comparison to agricultural states like Assam.

71. The Post-war Tuberculosis Scheme was implemented from July 1947 and a Provincial Tuberculosis Officer was entertained. But the post of this Officer was abolished with effect from 1st March 1950 as a measure of economy. The Clinic at Jorhat is now supervised by one private medical practitioner and the Clinic in Shillong is looked after by the doctors of the Red Chest Hospital.

72. *B. C. G. Vaccination*.—B. C. G. Vaccination is gradually becoming popular in the State of Assam. B. C. G. Vaccination was first started in Assam since 10th October 1949, under the guidance of Dr. O. A. Hagen, the leader of the Foreign team. After the departure of the Foreign team B. C. G. work is being conducted by local trained teams of the Public Health Department.

73. The following number of tuberculin tests and B. C. G. Vaccinations were performed by the Public Health Department teams during the year 1950:—

Serial No.	Names of places	Number of tests	B. C. G. Vaccination done
1	Gauhati	866	206
2	Sualkuchi	7,665	3,648
3	Palashbari	4,220	1,619
4	Barpeta	9,708	4,422
5	Howli	1,214	556
6	Nalbari	579	247
7	Shillong	3,805	1,428
8	Jowai	616	305
9	Cherapunji	1,106	415
10	Mawphlang	841	493
11	Jorhat	27,176	10,002
12	Dibrugarh	11,604	4,466
13	Tinsukia	2,564	1,161
14	Silchar	773	150
15	Aijal	5,114	2,093
16	Tezpur	8,627	3,449
17	Mangaldai	2,072	949
18	Dhubri	4,085	1,489
19	Gauripur	1,874	941
	Total	1,06,083	42,505

74. The very character of the tuberculosis infection, its chronic nature as a disease, the distribution in an epidemic form in all places, are such that true evidence of the efficacy of the B.C.G. vaccine can be obtained merely by statistical studies.



With this end view B.C.G. Vaccination figures are being collected as accurately as possible in the office of the Director of Public Health.

75. During 1950, His Excellency Shri Jairamdas Doulatram kindly accepted the office of the Chief Patron of the Tuberculosis Association of Assam.

#### T. B. Seal Sale Week

Ten thousand sheets of T. B. seals worth about Rs.22,000 were sold in the State.

Due to paucity of funds, the Association could not take up any new project or projects during the year under review.

76. *Maternity and Child Welfare.*—Maternity and Child Welfare work in Assam was previously conducted by the Red Cross Society and other voluntary organisations. The State Government took over the work during the year 1948 when a five year Scheme was taken up under the Post-war Development Scheme of Maternity and Child Welfare. Owing to financial stringency more centres could not be opened. The existing four maternity and child welfare centres, were functioning during the year 1950. These centres were at (1) Shillong, (2) Jorhat, (3) Nowgong and (4) Tezpur. The work done by these four centres consisted of home visits by Health Visitors and giving proper instructions to expectant and nursing mothers.

77. *Nutrition.*—The Post-war Nutrition Scheme was abolished towards the close of the year 1948, as a measure of economy.

78. (a) Diets in Assam are poor. Well balanced diets are, in general, more expensive than deficient ones.

(b) Insufficient and "Ill-Balanced" diet and "Well-Balanced" diet are compared diagrammatically in the figure below :—

(c) *Statistics of milk.*—Per capita consumption of milk in Assam in comparison with that of other places.

Milk contains protein of high biological value, and other important food ingredients, for this reason, its consumption by children and expectant and nursing mothers is to be encouraged in particular. Milk is perhaps the one article of food which can be safely used by all classes of the population in the country in order to increase protein consumption. From statistical enquiry, it is found that the per capita consumption of milk in India is much smaller than that of any country in the world. The following figures are cited from a Report on the Marketing of Milk in India and Burma issued by the Agricultural Department of the Government of India.

Total consumption of milk and milk products per head per day

Sl. No.	Country	Ounces
1.	India ... ..	5.8
2.	Italy ... ..	10.1
3.	Austria ... ..	18.8
4.	Czechoslovakia... ..	26.3
5.	France ... ..	30.4
6.	Belgium ... ..	33.0
7.	Germany ... ..	35.0
8.	U. S. A. ... ..	35.6
9.	Denmark ... ..	40.3
10.	U. K. ... ..	40.7
11.	Norway ... ..	41.7
12.	The Netherlands ... ..	44.2
13.	Australia ... ..	44.4
14.	Finland ... ..	45.4
15.	Switzerland ... ..	49.2
16.	New Zeland ... ..	55.6
17.	Canada ... ..	56.8

Calculating the per capita consumption of milk for the individual provinces in India, it is observed that the average rate of consumption of milk varies considerably. It is interesting to note that among the provinces of India, Sind and the Punjab top the list—with 18 ozs. and 15.2 ozs. per head per day respectively, and Assam records the lowest average of 1.3 ozs. only. The per capita consumption of milk in the State of Madras is 3.3 ozs. per day.

Dr. Aykroyd suggested for the inclusion of 8 ozs. of milk per day in the average Indian diet in order to improve its quality.

79. *Public Health Engineering.*—Towards the end of the year 1949, this Scheme was abolished as a measure of economy.

80. *Anti-Small-pox Scheme.*—As a measure of economy, the Scheme of mass vaccination by Health Assistants was discontinued since 1st January 1950. But in view of the important contribution of the Scheme to the cause of public health in rural areas, the Scheme was revived with 80 Health Assistants, i. e., half the strength of the original Scheme from 1st April 1950. One Health Assistant was posted to each thana to carry out mass vaccination and to induce more unprotected persons to take vaccination. In addition, the Health Assistants also carried on disinfection of water supply, supervised the work of collecting vital statistics and assisted doctors during epidemics. It may be mentioned that owing to limited number of Health Assistants this work could not be brought up to the desired standard. Government have been moved to increase the number of Health Assistants to 160.

### CHAPTER XIII

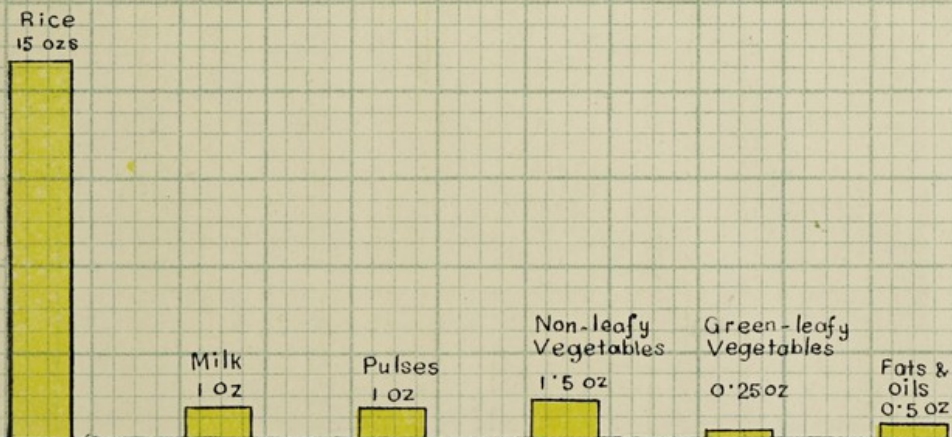
#### General Remarks

81. *Refugees.*—A large number of refugees began to pour into the State from East Pakistan from the first week of March, 1950 through the adjoining districts of Cachar, Khasi and Jaintia Hills, Goalpara and Garo Hills and scattered into the interior. The majority of the refugees came through Cachar district. Several camps were established for the accommodation of the refugees in the above districts and in other districts in the interior. Precautionary measures were taken by the staff of the Public Health Department in the camps and outside the camps to prevent outbreak of epidemics. These measures *inter alia* consisted of:—

- (1) Inoculation and vaccination of refugees against cholera and Small-pox.
- (2) Distribution of medicines and anti-malarial drugs, invalid foods, e. g., Sago, Barley, Tinned milk and Multivitamin tablets.

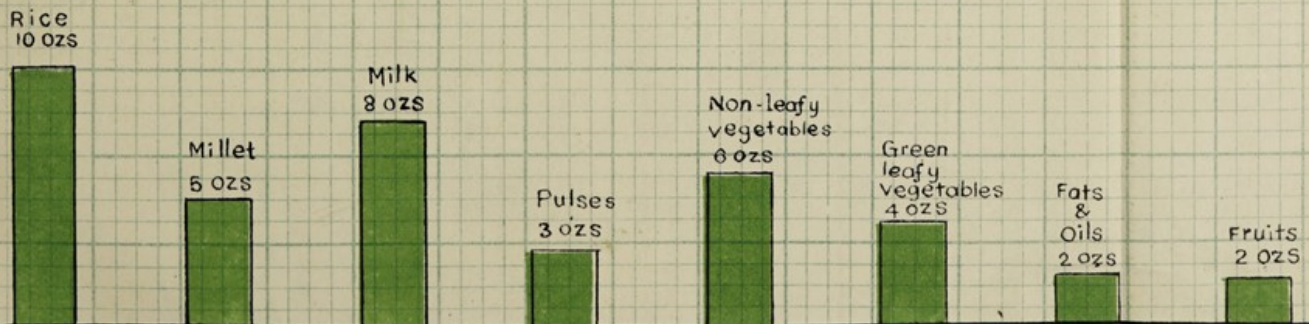


### INSUFFICIENT AND ILL-BALANCED DIET



1750 Calories less than average adult daily requirements

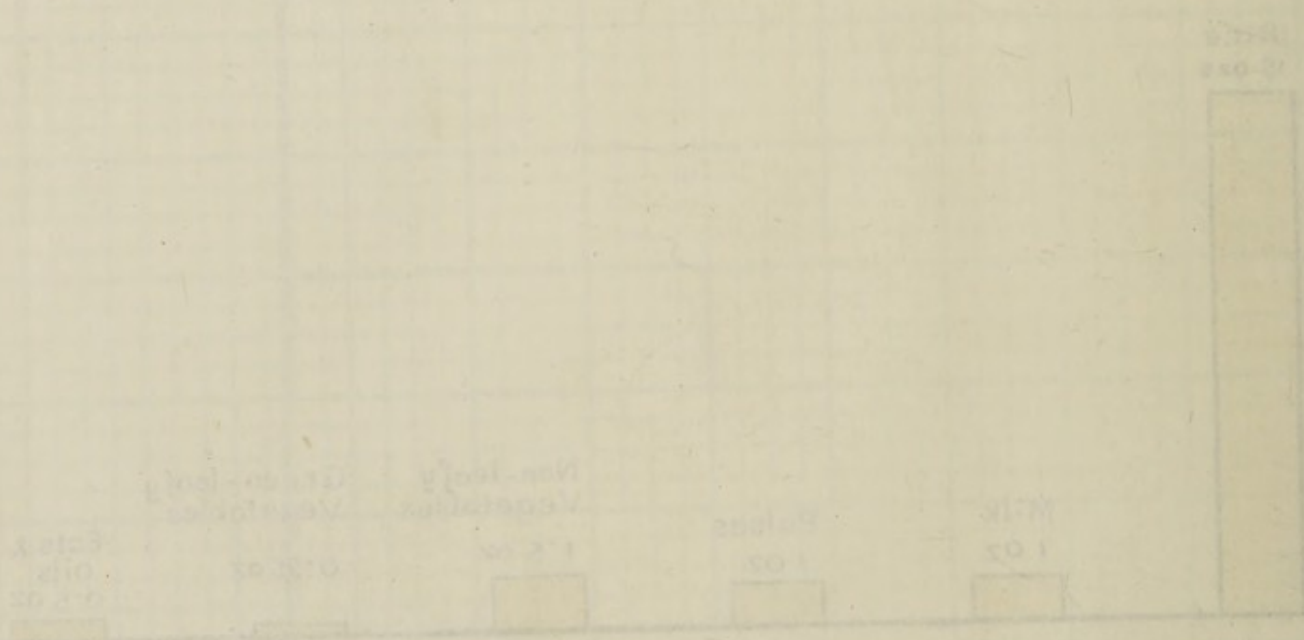
### "WELL BALANCED" DIET



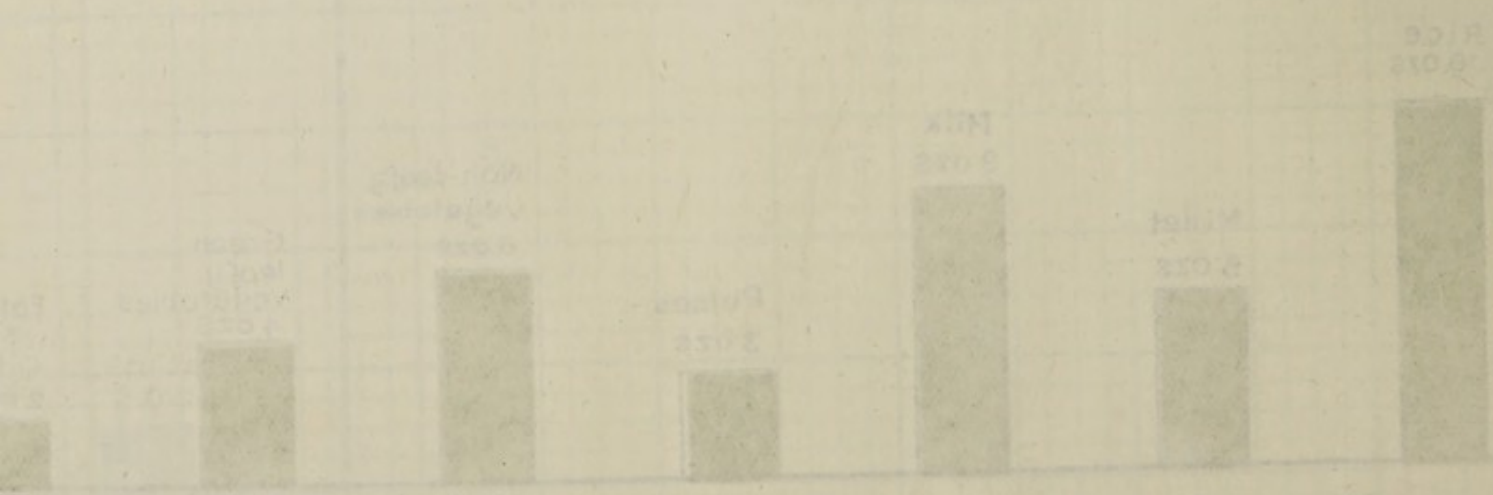
2.600 Calories corresponding to average adult daily requirements



# INSUFFICIENT AND ILL-BALANCED DIET



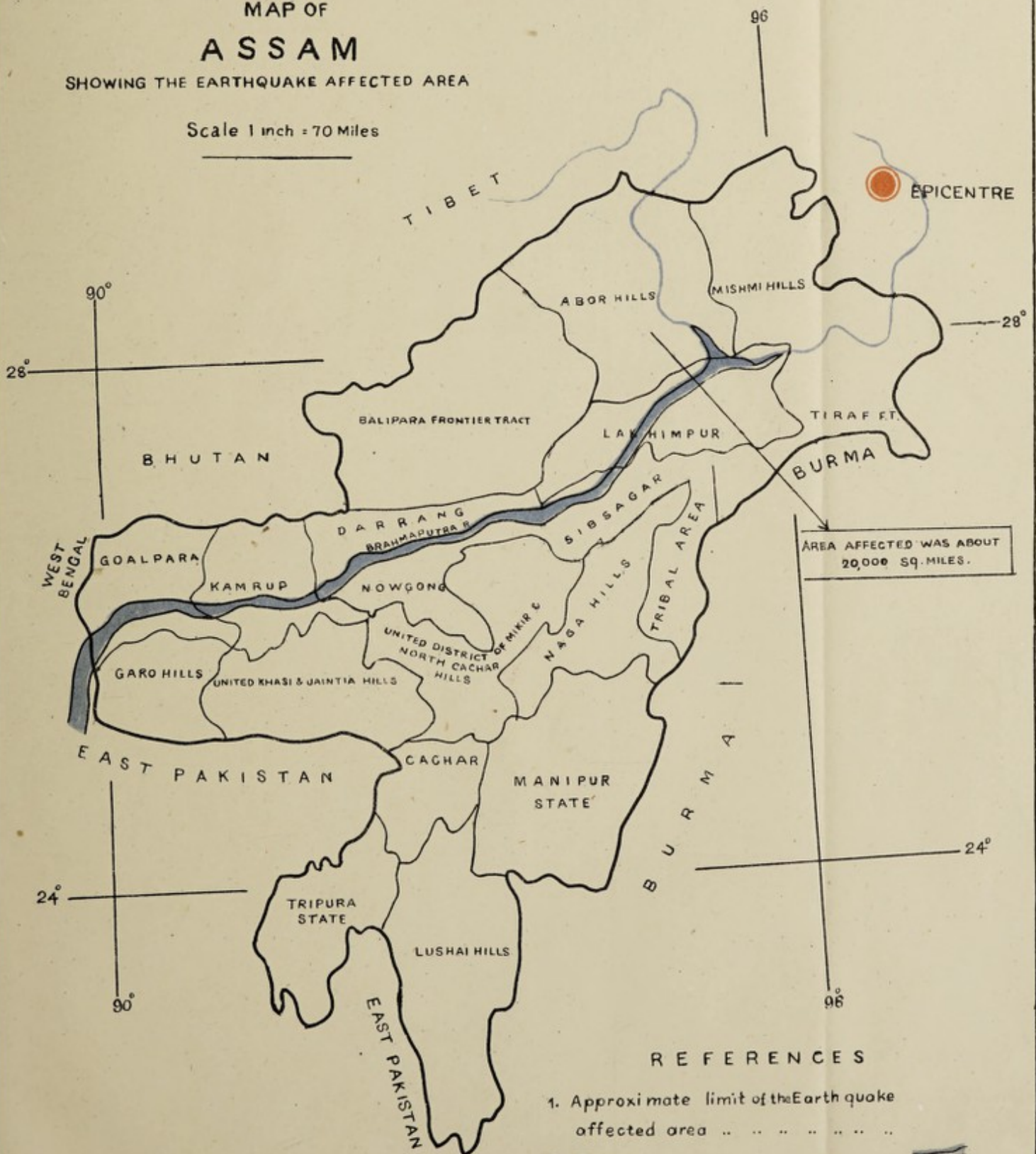
# WELL-BALANCED DIET



# MAP OF ASSAM

SHOWING THE EARTHQUAKE AFFECTED AREA

Scale 1 inch = 70 Miles



## REFERENCES

1. Approximate limit of the Earthquake affected area . . . . .
2. River . . . . .
3. Epicentre of the Earthquake . . . . .

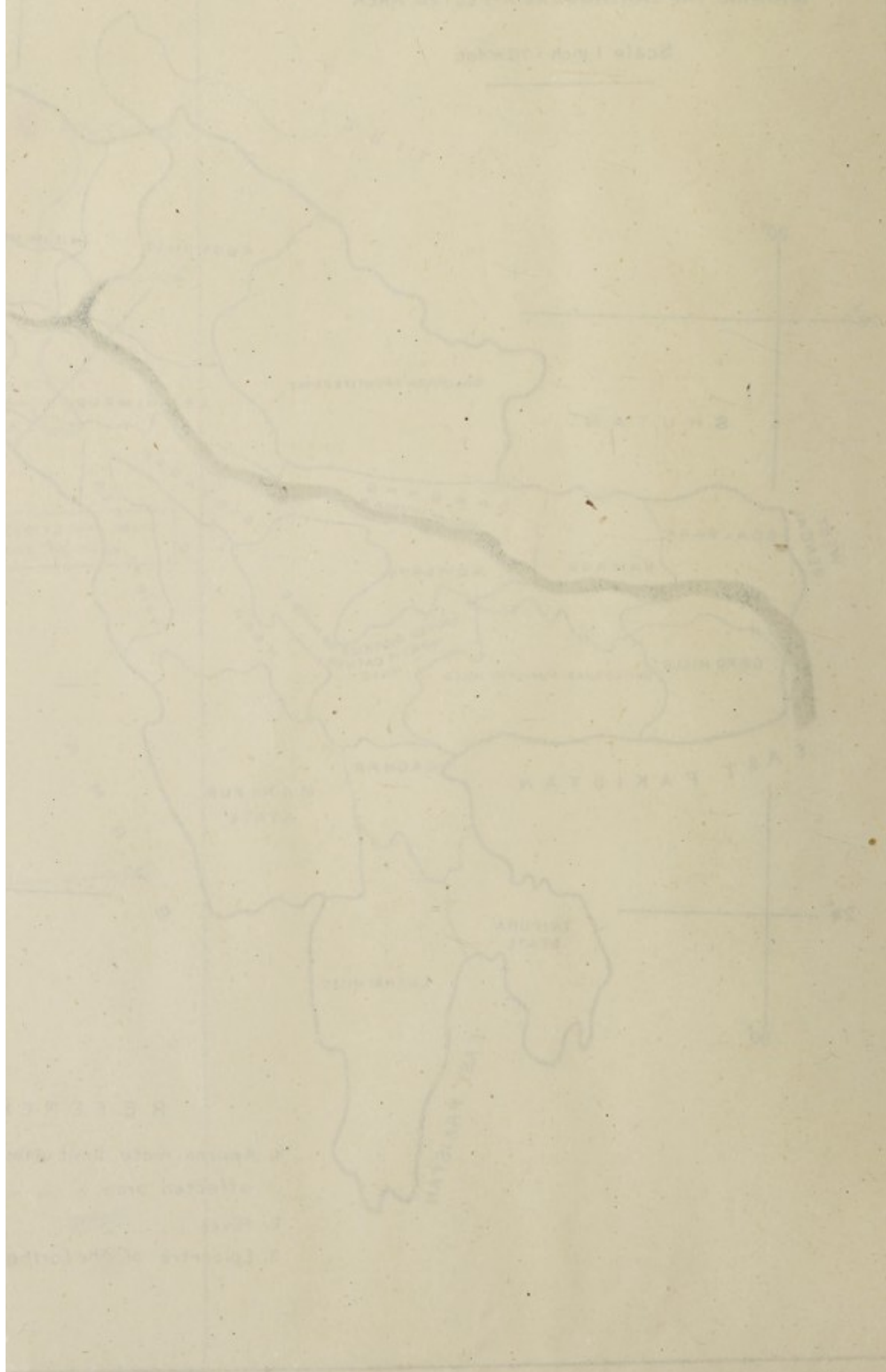




MAP OF  
ASSAM

SHOWING THE CARBONIFEROUS AREA

Scale 1 inch = 100 miles



(3) Disinfection of all sources of drinking water supplies.

(4) Spraying of the camps with D. D. T.

Besides, arrangement for treatment of infectious cases and patients suffering from other diseases were made.

It is gratifying to note that no epidemic broke out in or outside the camps.

**82. Earthquake and Flood.**—The year 1950 was characterised by one of the severest earthquake yet recorded in history which affected the northeastern part of the State, causing great havoc to property and untold suffering to the people in the affected areas. Details of preventive and precautionary measures taken by this Department are given below. Apart from this calamity the year was normal. The climatic condition was moderate, morbidity and mortality were normal as compared with previous years. There was no epidemic during the year.

In the wake of the earthquake, the floods also occurred, affecting vast areas and increasing the suffering of the people.

Immediately on receipt of information of the great havoc caused by the earthquake, precautionary and preventive measures were taken by this Department against any possible outbreak of epidemics in the affected areas. Medical relief measures were organised. Doctors and other staff of this Department were withdrawn from different districts and deputed to relief work to the affected areas. Voluntary medical units of various organisations from this State and other States rendered medical relief side by side with the staff of this Department.

Huge quantities of medical stores, *e. g.*, medicines, disinfectants, etc., were supplied to the affected areas. A large portion of the supplies was kindly donated by the West Bengal and India Governments and the Indian Red Cross Society and certain private organisations. Two lacs pounds of skimmed milk powder kindly donated by the UNICEF were distributed in the affected areas by Mahila Samity and other voluntary bodies under the direction of the Public Health Department.

Three hundred and four tube-wells were donated by the Government of India. In addition to these, 12 tube-wells were purchased from the Assam Governor's Earthquake Relief Fund. Some of these tube-wells were sunk during 1950 and the work in connection with the sinking of the remaining tube-wells is nearing completion.

A Supply Depot was established at Gauhati for receipt and onward transmission of medical stores to the affected areas. Advance Depots were also opened at Dibrugarh, Jorhat and Margherita.

Mass inoculations against communicable diseases, sterilisation of all sources of drinking water supplies were carried out immediately in the affected areas. The sinking of 304 tube-wells donated by the Government of India has been undertaken by the Public Works Department staff in consultation with Local Relief Committees and staff of the Public Health Department.

In order to provide continued medical aid to the stranded people of the affected areas it is proposed to open Public Health Department Dispensaries in certain affected areas in the interior of the North Lakhimpur and Dibrugarh Subdivisions where medical aid is out of reach even in normal time.

D. D. T. spraying (as an anti-malaria measure) was also undertaken in the affected areas. It is proposed to take up D. D. T. Spraying again before the monsoon.

The following figures will show the extent to which precautionary measures were taken in the affected areas.

						Upto 31st December 1950.
Anti-cholera inoculation ...	...	...	...	...	...	311,165
T. A. B. inoculations ...	...	...	...	...	...	60,574
Small-pox Vaccinations ...	...	...	...	...	...	33,901
Disinfection of sources of drinking water ...	...	...	...	...	...	74,475

A map is appended showing the earthquake affected area where relief work was done successfully by the Public Health Department.

The total number of human mortality due to the Earthquake in the Mishmi Hills District was 768 according to the report received from the Civil Surgeon, Sadiya and Tirap Frontier Tracts.

**83. Research work.**—No major research work was carried out during the year under review.

**84. Public Health Legislation.**—(1) The Assam Pure Food Act, 1947 which was revised was in operation in 1950. Under the provisions of the revised Act, it was possible to tighten the control of adulteration of food-stuff.

(2) The Assam *Kala-azar* Treatment Act, was introduced in 1949 and was in operation during the year under review. This act, prohibits the treatment of *Kala-azar* cases by unqualified medical practitioners.

(3) *Public Health Act.*—The comprehensive draft Public Health Act, which was submitted to Government last year is still under consideration of Government.

## CHAPTER XIV

### Committees

**85.** No annual session of the Assam Janaswastha Parisad was held during the year under review.

**86.** The work of the Assam Council of Blindness was taken over by the Public Health Department as a part of the departmental work since 1948. One meeting was held during the year under review. The activities of the Council are furnished at paragraph 20, Chapter III of the Report.

**87. Assam Public Health Advisory Board:**—The Board met once during the year under report. The most important of the resolutions passed in that meeting are given below:—

- (1) To make more vigorous and comprehensive plan with a view to eradicate the Hook-worm disease within five years.
- (2) To introduce compulsory teaching of Hygiene upto Matriculation Class.
- (3) To increase the strength of Health Assistants by 50 per cent. immediately.
- (4) To create a Public Health Propaganda Section under the supervision of a Special Medical Officer in co-operation with the Publicity and Social Education Departments.
- (5) To request Local Boards to grant one or two stipends for Dhai Training in the Classes started at Nowgong, Gauhati, Shillong, Dibrugarh, Silchar, etc.



As regards Resolution No. 1, two Mobile Units have recently been sanctioned by Government and are already functioning. But in order to complete the work in the plains districts within five years, more units are necessary. Proposal has accordingly been submitted to Government.

The recommendation in Resolution No. 2 has been communicated to the Director of Public Instruction, Assam to give serious considerations.

*Resolution Nos. 3 and 4.*—In view of the present unfavourable financial position of the State, it has not yet been possible to implement the recommendations. Nevertheless, Government has again been requested to give effect to the recommendations.

As regards Resolution No. 5, the Local Boards have been requested to implement the recommendation of the Board.

## CHAPTER XV.

### Miscellaneous

88. *The Vaccine Depot, Shillong.*—During 1950, the outturn of vaccine lymph was 25,94,125 doses as against 16,13,130 doses in the previous year. Due to mass vaccination carried out in the State, there was a great demand for vaccine lymph during the year under review. All demands were met and in addition, more than half lakh doses of lymph were supplied to the Punjab and similar quantities to the Tripura State.

89. The outturn of vaccine lymph and average cost per dose for the last ten years are given below:—

Year	Number of doses manufactured.	Average cost per dose.	Expenditure in which average cost is calculated.	Number of calves from which lymph was taken.
1	2	3	4	5
	[Doses]	[Pies]	[Rs.]	
1941-42	9,12,442	3.42	16,273	239
1942-43	13,60,758	3.11	22,578	366
1943-44	29,80,160	4.15	64,576	772
1944-45	29,34,725	5.38	82,247	739
1945-46	26,24,797	4.56	62,408	582
1946-47	20,68,849	4.53	48,826	424
1947-48	16,13,500	5.83	49,060	274
1948-49	16,80,250	5.54	48,562	278
1949-50	16,32,130	5.32	45,299	261
1950-51	25,94,125	4.04	54,744	352

The above figures will speak for themselves regarding volume of production of vaccine lymphs, and is cost of manufactures per dose. It is hoped, the Vaccine Depot will be a much better profit-yielding concern in the near future, as it still is, and will be a much bigger vaccine Depot for supplying vaccine lymphs to this State as well as to other States.

90. *Pasteur Institute, Shillong.*—During the year under report the activities of the Pasteur Institute continued more or less as in the previous year. The total quantity of anti-rabic vaccine issued from the Institute, during the year was 1,97,907 c. c. representing 2640 treatments. During the same period 14,79,218 c. c. of cholera vaccine, 56,890 c. c. of T. A. B. and 1,44,608 ampoules of 2 c. c. each of combined cholera and dysentery Bacteriophage were issued from the Institute. The stock of the Institute at the end of the year stood as follows:—

	C. C.
Anti-rabic vaccine	1,22,462
Cholera vaccine	81,098½
T. A. B. vaccine	23,280
Bacteriophage	21,952

The number of specimen received and examined during the year were 11,303 which shows a steady increase. Quite a number of new method of examinations were introduced in the Biochemical Section, particularly those in connection with liver function tests and also a few new methods in the general laboratory for early and more correct diagnosis of diseases.

Two thousand one hundred and eighty seven wasserman tests were performed during the year under review. Specimens were received from all over Assam, of which 546 proved to be positive. The Genito-urinary Clinic, Shillong, sent 464 specimen; 162 of them were positive. Seven hundred and fifteen specimens were received from other hospitals in Shillong area of which 142 were positive.

Of the blood specimens received for suspected typhus cases, 12 proved positive, of which 4 were from Shillong area, 4 from Jowai and the rest from other parts of Assam.

In the Clinical Research hospital 9 patients were treated during the year. Of these 3 were dog-bite cases, one jackal-bite case and the rest included Kala-azar patients not responding to routine treatment and other suffering from undiagnosed diseases. Proper investigations were done on all of them and all were discharged cured.

During the year one Horizontal Bulk Steriliser was received from America and one Vertical Boiler was received from Scotland.

In the later part of the year Dr. S. R. Pandit, who served as Director of the Institute for about 8 years finally retired from service. Dr. R. L. Cunville, who was Assistant to the Director was promoted to Directorship on Dr. Pandit's retirement. Dr. B. C. Gogoi was appointed as Assistant to the Director of Pasteur Institute.

### Personnel

I was in charge of the Department throughout the year.

Due to severe Earthquake and consequent floods in the North-eastern part of the State, the Subdivisional Medical Officer of Health, North Lakhimpur Subdivision was no longer able to cope with the work of organising relief measures in the Subdivision which was the worst-affected area. Dr. B. C. Gogoi B.Sc., M.B., D. P. H., a senior District Medical Officer of Health was deputed to organise and supervise Medical Relief Measures in this Subdivision as well as in the adjoining areas. He performed the duties satisfactorily in spite of unprecedented difficulties.



As a result of the discontinuance of Post-war Schemes and as a measure of economy, the following Post-war Officers were discharged early in the year :—

1. Sree S. N. Chakravaty, Public Health Engineer.
2. Major P. L. Burman, Provincial Tuberculosis Officer.
3. Assistant Director of Public Health (Malariology) (vacant but abolished).
4. Dr. A. C. Barbora, M.B., D.P.H., Special Medical Officer in-charge, Maternity and Child Welfare.

Dr. P. N. Hazarika, M.B., D.P.H. (Cal. and Lond.) Assistant Director of Public Health who was placed on special duty in the Office for drafting the Public Health Act, was reverted to his substantive post on completion of the work.

There was an acute shortage of technical staff particularly Assistant Surgeons grade I and II owing to non-availability of qualified candidates. The revised scales of pay sanctioned in 1948 do not offer adequate emoluments and prospects to the Assistant Surgeons of grade I and II of this Department and hence there is deep discontentment. Doctors are not coming forward to serve in this Department and young doctors who are already in the Department are trying to go away only because of low pay and prospects. Government was apprised of the situation which is serious and urged to improve the pay and prospects of doctors.

It needs no emphasis that the efficiency of the Public Health Department mainly depends on the services of these officers and actually they are the backbone of the Department. If they remain discontented and fail to function properly, not only the efficiency of the Department will suffer to a great extent but the life of the people at large may also be greatly jeopardised.

In spite of repeated representations adequate staff were not sanctioned by Government for this Office. The executive and ministerial staff of this Department discharged their duties loyally and satisfactorily in spite of tremendous demand on their services by emergent work in connection with relief measures in the Earthquake and flood affected areas and Refugee camps. I am happy that the situation was satisfactorily handled.

Lastly I offer my heart felt thanks to all those generous people who have helped either directly or indirectly to relieve the suffering of the poor people in the areas affected by Earthquake and floods.

SHILLONG :  
The 7th September, 1951.

S. C. DUTT,  
Director of Public Health, Assam.

ANNUAL STATEMENTS FOR 1950





# ANNUAL STATEMENTS FOR 1950

ANNUAL STATEMENTS FOR 1950	
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STATEMENT No. I—Showing the births registered in the districts of Assam during the year 1950.

[Statistics relate to place of occurrence]

Number	Districts	Estimated population			Grand total number of births registered			Ratio of births per 1,000 of population			Number of males born to every 100 females born	Mean ratio of births per 1,000 during the previous five years		
		Male	Female	Persons	Male	Female	Persons	Male	Female	Persons		Male	Female	Persons
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	Cachar	5,31,727	4,01,687	9,33,414	11,123	10,218	21,346	11.92	10.95	22.87	108	13.14	11.60	24.07
2	Goalpara	6,03,987	5,33,060	11,37,047	7,493	6,065	13,558	6.58	5.32	11.92	123	7.72	6.62	14.54
3	Kamrup	8,22,793	7,09,694	15,32,477	3,578	3,204	6,782	2.33	2.09	4.43	111	3.61	3.82	7.45
4	Darrang	4,66,540	4,12,090	8,78,630	9,477	8,653	18,130	10.78	9.84	20.62	109	10.01	9.35	19.37
5	Nowgong	4,55,810	3,93,320	8,49,130	4,944	4,484	9,428	5.82	5.28	11.10	112	6.60	6.00	12.55
6	Sibsagar	6,39,940	5,66,784	12,06,724	13,743	12,732	26,475	11.33	10.54	21.10	109	10.88	10.09	20.93
7	Lakhimpur	5,88,480	4,65,271	10,53,751	7,302	7,083	14,385	6.92	6.72	13.63	102	8.15	7.85	16.02
Total for the State		41,09,277	34,81,906	75,91,183	57,665	52,439	1,10,104	7.58	6.90	14.50	109	8.46	7.88	16.34

STATEMENT No. II.—Showing the deaths registered in the districts of Assam during the year 1950  
(Statistics relate to place of occurrence)

No.	Districts	Area in square miles	Average population per square mile	Number of deaths registered			Deaths per 1,000 of population from—										All causes			Mean ratio of deaths per 1,000 during the previous five years		
				Male	Female	Persons	Cholera	Small-pox	Plague	Fever	Dysentery and Diarrhoea	Respiratory diseases	Injuries	All other causes	All causes			Male	Female	Persons		
															Male	Female	Persons					
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21		
1	Cachar	...	340	5,759	5,199	10,958	20	02	...	5.85	1.03	62	14	3.85	6.17	5.57	11.74	14.02	16.49	14.99		
2	Goalpara	...	270	6,497	4,790	11,287	22	009	...	9.13	18	0.18	03	14	5.71	4.21	9.04	11.22	6.55	10.90		
3	Kamrup	...	362	2,115	1,738	3,903	26	01	...	1.63	12	07	02	41	1.38	1.66	2.54	4.15	3.74	4.14		
4	Darrang	...	286	5,263	4,737	10,000	06	01	...	7.76	1.03	60	13	1.77	5.86	5.33	11.37	10.67	11.19	11.00		
5	Nowgong	...	199	2,586	2,388	4,974	28	...	..	4.10	24	10	08	1.04	3.04	2.81	5.85	6.82	7.40	7.27		
6	Sibsagar	...	221	6,433	6,201	12,634	15	01	...	5.49	1.10	78	16	2.75	5.32	5.13	10.46	11.92	13.18	12.50		
7	Lakhimpur	...	233	3,708	3,530	7,238	05	008	...	2.95	66	62	08	2.47	3.61	3.34	6.86	8.92	9.13	9.10		
Total for the State		28,280	322	32,361	28,633	60,994	18	01	...	5.05	59	41	09	1.68	4.26	3.77	8.03	9.76	10.08	9.91		



STATEMENT No. III—Deaths registered in the districts of Assam during each month of the year 1950\*

No.	Name of the Districts	Estimated Population	January	February	March	April	May	June	July	August	September	October	November	December	Total death registered during the year 1950
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	Cachar .. { Urban Rural } Total ..	36,371 8,97,043 9,33,414	19 992 1,011	29 763 822	19 551 570	111 528 639	60 765 825	45 859 904	38 887 925	43 919 992	31 921 952	21 1,176 1,197	29 908 937	31 1,153 1,184	476 10,482 10,958
2	Goalpara .. { Urban Rural } Total ..	30,761 11,06,286 11,37,047	23 1,069 1,092	21 1,009 1,030	21 687 708	51 997 1,048	58 1,106 1,159	24 683 707	40 1,058 1,098	48 1,073 1,121	42 707 749	31 793 824	22 758 780	29 942 971	405 10,882 11,287
3	Kamrup .. { Urban Rural } Total ..	73,421 14,59,066 15,32,487	66 197 263	42 122 164	39 127 166	66 117 183	246 512 752	90 420 510	120 391 511	97 275 372	76 188 264	70 178 248	93 173 266	27 177 204	1,026 2,877 3,903
4	Darrang .. { Urban Rural } Total ..	15,708 8,62,922 8,78,630	22 815 867	14 456 470	14 558 588	10 639 649	41 981 1,022	25 816 841	31 1,326 1,357	18 1,202 1,229	20 758 778	22 697 719	37 734 771	23 695 718	293 9,707 10,000
5	Nowgong .. { Urban Rural } Total ..	15,361 8,33,769 8,49,130	18 672 690	22 362 384	14 659 673	12 370 382	16 483 499	28 462 430	23 464 487	17 314 331	10 307 326	24 188 212	31 168 219	18 323 341	242 4,732 4,974
6	Sibsagar .. { Urban Rural } Total ..	32,749 11,73,975 12,06,724	7 898 905	11 701 712	13 670 683	10 968 998	14 1,456 1,470	23 1,281 1,304	13 1,383 1,396	13 1,650 1,663	14 1,042 1,056	12 1,048 1,060	13 905 998	11 978 989	154 12,480 12,634
7	Lakhimpur .. { Urban Rural } Total ..	44,512 10,09,239 10,53,751	9 476 485	12 535 547	7 374 381	8 484 392	11 766 777	16 695 711	17 682 699	10 525 535	6 570 576	10 834 844	19 659 678	5 508 513	130 7,108 7,238
	Total for the towns	2,48,883	164	151	143	268	435	251	282	246	208	150	244	144	2,726
	Ratio per mille ..	..	7.71	7.10	6.74	12.13	20.47	11.81	12.01	11.57	9.79	8.94	11.48	6.87	10.69
	Total for rural circles ..	73,36,221	5,149	3,978	3,626	4,123	6,669	5,156	6,191	5,388	4,493	4,914	4,405	4,776	58,268
	Ratio per mille ..	..	8.40	6.50	5.93	6.74	9.92	8.43	10.09	8.86	7.33	8.03	7.20	7.81	7.94
	Total for the State	75,91,183	5,313	4,129	3,769	4,391	6,504	5,407	6,473	5,634	4,701	5,104	4,649	4,920	60,994
	Ratio per mille ..	..	8.39	6.52	5.95	6.94	10.41	8.54	10.15	8.96	7.47	8.06	7.39	7.77	8.03

\* Statistics relate to place of occurrence.





STATEMENT No. IV.—Deaths registered according to age in the districts (rural circles and towns) of Astam during the year 1950

No.	Districts	Under 1 year														Total	One year and under 5 years	5 years and under 10 years		10 years and under 15 years		15 years and under 20 years		20 years and under 30 years		30 years and under 40 years		40 years and under 50 years		50 years and under 60 years		60 years and upwards		Total of all ages											
		Not exceeding 1 month						Over 1 month and not exceeding 6 months						Over 6 months and not exceeding 12 months				Total		Male		Female		Male		Female		Male		Female		Male		Female											
		Male			Female			Male			Female			Male				Female			Male			Female			Male			Female			Male			Female			Male			Female			
		Under one week	Over one week	Total	Under one week	Over one week	Total	Under one week	Over one week	Total	Under one week	Over one week	Total	Under one week	Over one week			Total	Under one week	Over one week	Total	Under one week	Over one week	Total	Under one week	Over one week	Total	Under one week	Over one week	Total	Under one week	Over one week	Total	Under one week	Over one week	Total	Under one week	Over one week	Total						
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38								
A.—RURAL CIRCLES																																													
1	Cachar ..	364	281	645	294	226	520	1,165	355	288	643	167	181	348	1,167	989	2,156	668	637	261	252	168	144	174	240	456	715	510	489	465	332	450	332	1,112	843	5,489	4,993								
2	Goalpara ..	165	159	244	67	118	185	429	630	507	1,137	445	344	789	1,319	1,036	2,355	663	616	648	450	378	476	406	615	577	375	459	314	289	237	617	270	6,263	4,619										
3	Kamrup ..	28	10	38	31	15	46	84	34	25	59	26	18	44	98	89	187	261	311	132	145	70	42	55	73	147	199	147	133	189	77	124	67	932	195	1,546	1,331								
4	Darrang ..	297	207	414	158	176	334	748	417	343	760	246	209	455	1,077	886	1,963	746	739	366	359	287	220	255	294	383	590	476	483	515	363	297	322	603	386	5,965	4,642								
5	Newborg ..	61	56	117	25	22	47	164	75	96	171	62	43	105	254	186	440	98	95	107	109	131	156	151	162	222	226	270	259	369	317	382	335	537	434	2,453	2,279								
6	Sibsagar ..	245	335	580	266	471	1,051	390	367	765	765	264	236	540	1,242	1,074	2,316	923	940	358	354	335	348	397	413	520	747	539	690	517	448	582	439	948	667	6,352	6,128								
7	Lakhimpur ..	198	181	379	197	135	332	711	183	191	374	137	129	266	699	652	1,351	897	708	399	262	104	127	104	153	185	314	236	399	218	263	569	294	535	390	3,656	3,472								
Total for rural areas.		1,208	1,209	2,417	977	938	1,935	4,352	2,092	1,817	3,909	1,347	1,160	2,507	5,856	4,912	10,768	4,258	4,046	2,181	1,931	1,625	1,415	1,612	1,741	2,538	3,308	2,746	2,733	2,318	2,401	2,666	4,664	3,185	30,804	27,561									
Ratio per mille..																																													
B.—TOWNS																																													
1	Silchar ..	1	..	1	..	..	..	1	1	2	3	1	..	1	3	2	5	19	17	8	6	7	3	3	7	22	18	25	18	18	7	10	8	22	11	137	97								
2	Karimganj ..	1	1	2	1	..	1	3	3	1	4	..	..	..	5	2	7	7	5	6	7	5	7	..	4	11	18	10	8	16	9	11	6	21	13	92	79								
3	Hailandi ..	1	..	1	1	..	1	2	3	3	6	..	..	..	4	4	8	3	2	1	3	1	1	1	..	2	6	5	3	5	4	8	1	8	4	28	23								
4	Hafong ..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	1	1	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	3	2								
5	Dibrui ..	..	1	1	..	3	3	4	7	4	11	8	4	12	16	11	27	19	8	14	10	6	7	13	8	10	21	16	15	12	8	9	7	10	6	125	101								
6	Goalpara ..	..	..	..	..	..	1	1	2	..	2	2	1	3	4	2	6	11	3	8	6	11	4	8	4	5	7	3	..	3	..	2	3	5	7	49	36								
7	Gaipur ..	..	2	2	..	..	..	2	5	3	8	..	..	..	7	3	16	7	7	5	5	8	5	8	5	3	5	3	1	4	1	1	1	3	1	49	34								
8	Gauhati ..	..	10	10	6	10	16	26	18	9	27	8	7	15	26	32	68	49	27	22	13	19	10	17	44	63	63	47	40	52	33	34	16	79	36	460	314								
9	Barpeta ..	2	4	6	2	3	5	11	9	5	14	9	8	17	24	18	42	32	22	7	14	6	5	5	5	6	9	17	13	10	11	5	10	8	17	14	134	119							

[illegible]



STATEMENT No. IV(a)—Mortality under one year by classes in the districts of Assam for the year 1950.

Districts	Hindus		Muslims		Christians		Buddhists		Other classes	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio per
1	2	3	4	5	6	7	8	9	10	11
Cachar ...	...	...	...	...	...	...	...	...	80	...
Goalpara ...	1,127	...	970	...	...	...	...	...	31	...
Kamrup ...	1,480	...	872	...	15	...	...	...	2	...
Darrang ...	229	...	72	...	...	...	...	...	178	...
Nowgong ...	1,533	...	186	...	31	...	...	...	11	...
Sibsagar ...	376	...	94	...	4	...	...	...	67	...
Lakhimpur ...	2,224	...	26	...	23	...	2	...	58	...
	1,298	...	9	...	13	...	...	...		
Total for the State ...	8,267	...	2,229	...	136	...	2	...	427	...

STATEMENT No. V.—Deaths registered according to class in the districts of Assam during the year 1950.

Number of deaths registered										Ratio of deaths per 1,000 population																								
Districts	Hindus			Muslims			Christians				Buddhists			Other classes			Hindus			Muslims			Christians			Buddhists			Other classes					
	Persons		Total Christians	Persons		Persons		Persons		Persons		Persons		Persons		Persons		Persons		Persons		Persons		Persons		Persons		Persons		Persons				
		Male	Female		Male	Female	Persons	Male	Female	Persons	Male	Female	Persons	Male	Female	Persons	Male	Female	Persons	Male	Female	Persons	Male	Female	Persons	Male	Female	Persons	Male	Female	Persons			
1	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	
1	3,555	3,329	6,884	2,200	1,859	4,059	..	..	..	3	8	11	..	..	..	1	3	4	29.38	30.75	30.46	18.93	16.74	17.49	1.58	..	..	..	..	..	..	..	..	
2	4,064	2,949	7,013	2,235	1,651	3,886	..	..	..	60	70	130	..	..	..	138	120	258	24.34	21.21	22.92	9.00	7.50	8.28	6.69	7.77	7.22	..	..	..	1.12	1.06	1.01	
3	1,748	1,405	3,153	330	353	683	..	..	..	9	7	16	..	..	..	8	23	51	4.79	4.36	4.53	1.63	2.66	1.84	9.00	7.00	8.00	..	..	..	..	..	..	
4	4,166	3,596	7,762	461	445	906	..	..	..	139	156	295	..	..	..	557	540	1,097	21.71	22.74	22.14	7.09	8.09	7.55	17.37	24.00	21.07	..	..	..	..	..	..	
5	1,668	1,547	3,215	605	578	1,183	..	..	..	32	35	67	..	..	..	281	228	509	10.69	11.71	11.16	16.34	19.93	17.14	15.26	17.02	16.48	..	..	..	..	..	..	
6	5,785	5,591	11,376	204	189	393	..	..	..	102	96	198	18	10	28	324	315	639	12.74	14.15	13.53	1.03	8.58	7.70	14.27	16.01	15.23	9.02	5.41	9.36	1.60	1.11	1.01	
7	3,345	3,209	6,554	67	43	110	..	..	..	119	94	213	1	3	4	176	181	357	12.26	14.19	13.08	4.24	6.01	2.51	21.04	24.12	28.14	..	1.50	1.21	1.08	..	..	
Total for the State ..			2,276	21,626	45,897	6,102	5,118	11,220	..	..	464	466	930	19	13	32	1,505	1,410	2,915	10.89	11.15	11.30	3.21	3.13	3.27	22.09	22.42	23.85	4.75	3.25	8.01	1.54	1.63	1.61





TOWNS—	19,896	471	386	857	43-07	4	5	44	57	15	..	15	..	..	15	94	234	20	25	221	286	75	472	1176	..	
1 Sitchar ..	19,896	471	386	857	43-07	4	5	44	57	15	..	15	..	..	15	94	234	20	25	221	286	75	472	1176	..	
2 Karinganji ..	10,151	133	143	276	27-13	36	4	20	17	16	..	4	..	..	4	74	171	354	39	197	167	57	728	1684	..	
3 Hallakandi ..	4,486	51	39	90	20-06	3	..	12	6	5	..	4	..	..	4	36	66	66	..	267	133	111	802	1471	..	
4 Hallong ..	1,838	18	9	27	14-68	..	..	4	..	..	..	..	..	..	1	5	..	..	..	220	..	..	54	272	..	
5 Dhubri ..	15,652	191	150	341	21-73	2	1	85	46	14	..	14	..	..	14	64	226	12	06	543	293	89	408	1443	..	
6 Goalpara ..	9,149	100	67	167	18-16	7	1	63	12	3	1	2	..	..	3	7	96	76	10	658	131	32	76	1049	..	
7 Gauripur ..	5,960	71	46	117	19-54	1	..	54	4	4	..	1	..	..	1	19	53	16	..	905	57	57	318	1392	..	
8 Gauhati ..	42,878	334	272	606	14-13	12	10	242	70	42	..	1	6	2	9	329	14	28	23	564	163	97	767	1665	..	
9 Barpeta ..	22,844	404	303	707	30-94	8	5	86	42	35	1	3	..	..	4	73	233	35	21	376	183	153	319	1197	..	
10 Palasbari ..	3,916	61	46	107	27-32	..	1	18	1	2	..	..	..	..	..	24	46	..	25	459	25	51	612	1174	..	
11 Nalbari ..	3,783	15	8	23	6-07	..	1	5	2	3	..	..	..	..	..	2	13	..	26	132	52	79	52	343	..	
12 Tezpur ..	13,289	205	119	324	24-38	3	4	46	98	31	..	6	1	7	7	86	272	22	07	346	737	233	646	2046	..	
13 Mangaldai ..	2,419	16	11	27	11-16	..	..	8	4	3	..	..	..	..	..	6	21	..	..	330	124	124	248	868	..	
14 Nowgong ..	15,361	372	296	668	43-58	17	..	28	17	20	1	2	16	1	22	138	242	110	13	182	110	130	898	1575	..	
15 Jorhat ..	14,752	105	112	217	14-70	2	2	25	8	5	..	1	2	..	3	20	65	13	..	169	54	33	135	440	..	
16 Sibagar ..	8,383	33	37	70	8-35	..	..	14	2	..	..	2	..	..	2	8	26	..	..	167	23	..	95	310	..	
17 Nazira ..	3,439	40	49	89	25-87	..	..	15	4	1	..	..	..	..	..	9	29	..	..	436	116	29	261	843	..	
18 Golaghat ..	6,175	43	45	88	14-25	..	..	18	..	..	..	..	..	..	..	16	34	..	..	291	..	..	259	550	..	
19 Dibrugarh ..	27,353	208	173	331	50-48	..	..	15	17	24	1	1	..	..	2	39	98	..	03	54	62	87	142	358	..	
20 Tinsukia ..	11,306	42	46	88	7-72	..	..	8	6	1	..	1	..	..	1	15	31	..	..	70	43	08	132	274	..	
21 Doon Dooma ..	2,438	7	12	19	7-79	..	..	1	..	..	..	..	..	..	..	..	1	..	..	41	..	..	..	41	..	
22 North Lakhimpur.	3,415	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
Total for the towns.	243,883	2,920	2,369	5,289	21-25	95	32	811	413	224	4	5	76	2	4	91	1,060	2,726	38	12	325	1,65	90	425	1095	..
Total for the State.	7,501,183	57,665	52,439	110,104	14-50	1,380	93	38,402	4,522	3,148	94	59	473	58	15	699	12,750	60,994	118	01	505	59	41	167	803	..



[illegible]





STATEMENT No. VII.—Deaths registered from Cholera in the districts of Assam during each month of the year 1950

No.	Districts	Circles of Registration		Villages		January	February	March	April	May	June	July	August	September	October	November	December	Total			Ratio of deaths per 1,000 of population			Mean ratio per 1,000 of previous 5 years
		Number in each district	Number from which deaths from cholera were reported	Number in each district	Number from which deaths from cholera were reported													Male	Female	Total	Male	Female	Total	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
1	Cachar	16	...	2,029	...	...	...	3	95	65	7	6	3	...	...	11	...	92	98	190	19	24	20	61
2	Goalpara	14	...	3,765	...	...	...	...	15	24	53	73	44	17	17	13	4	142	118	260	23	22	22	88
3	Kamrup	17	...	2,865	...	1	1	...	12	219	103	23	...	9	...	11	15	193	206	399	23	27	26	11
4	Darrang	13	...	2,037	...	...	...	...	2	24	20	5	...	...	...	...	...	24	27	51	05	06	05	12
5	Nowgong	11	...	2,391	...	...	5	22	37	67	59	41	7	...	...	1	...	135	104	239	29	26	28	13
6	Sibsagar	15	...	2,324	...	17	...	...	57	46	23	23	1	4	4	2	9	97	89	186	12	12	15	18
7	Lakhimpur	16	...	2,596	...	...	...	...	11	24	16	...	1	2	...	1	...	32	23	55	05	04	04	01
	Total for the State.	102	...	18,007	...	18	6	25	229	469	286	171	56	32	21	39	28	715	665	1,389	17	19	18	13

STATEMENT No. VIII.—Deaths registered from Small-pox in the districts of Assam during each month of the year 1950

Number	Districts	Circles of Registration		Villages		January	February	March	April	May	June	July	August	September	October	November	December	Total			Number of deaths among children		Ratio of deaths per 1,000 of population			Mean ratio per 1,000 of population of previous five years
		Number in each district	Number from which deaths from small-pox were reported	Number in each district	Number from which deaths from small-pox were reported													Male	Female	Total	Under one year	One to 10 years	Male	Female	Total	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
1	Cachar	16	...	2,029	...	...	...	...	7	6	2	1	2	1	...	3	...	13	9	22	...	1	02	02	02	24
2	Goalpara	14	...	3,765	...	...	...	...	...	...	1	...	5	2	3	...	...	7	4	11	...	...	01	007	009	02
3	Kamrup	17	...	2,865	...	...	1	2	2	3	...	3	...	...	...	...	6	5	10	17	...	...	008	01	01	11
4	Darrang	13	...	2,037	...	...	...	...	1	...	...	...	...	...	...	...	8	4	5	9	...	...	008	01	01	02
5	Nowgong	11	...	2,391	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	05
6	Sibsagar	15	...	2,324	...	...	2	1	...	3	5	3	3	1	...	1	6	14	11	25	...	...	02	01	02	25
7	Lakhimpur	16	...	2,596	...	...	2	...	1	1	5	...	...	...	...	...	...	3	6	9	...	...	005	01	008	12
	Total for the State.	102	...	18,007	...	...	5	3	11	13	13	7	10	4	3	4	20	42	45	93	...	1	01	01	01	11





STATEMENT No. X.—Deaths registered from Dysentery and Diarrhoea in the Districts of Assam during each month of the year 1950

Number	Districts	Circles of registration		Villages		January	February	March	April	May	June	July	August	September	October	November	December	Total			Ratio of deaths per 1,000 of population			Mean ratio per 1,000 of previous five years
		Number from Diarrhoea and Dysentery were reported	Number from which deaths from Diarrhoea were reported	Number in each district	Number from which deaths from Dysentery and Diarrhoea were reported													Male	Female	Total	Male	Female	Total	
						3	4	5	6	7	8	9	10	11	12	13	14							15
1	Cachar	..	..	2,029	..	90	71	50	62	87	111	99	87	79	109	61	57	517	446	963	97	115	193	1.05
2	Goalpara	..	..	3,765	..	24	13	10	17	21	36	12	18	11	6	13	31	133	79	272	22	14	18	.07
3	Kamrup	..	..	2,865	..	12	18	21	8	40	29	18	14	10	9	13	5	114	83	197	13	11	12	.16
4	Darrang	..	..	2,037	..	39	42	32	55	103	72	193	112	70	62	94	37	514	397	917	110	96	136	.83
5	Nowgong	..	..	2,391	..	29	19	29	19	29	20	17	5	12	9	9	8	97	108	205	20	28	24	.64
6	Sibsagar	..	..	2,324	..	71	53	77	113	170	170	116	113	120	134	104	88	689	642	1,331	107	111	110	1.33
7	Lakhimpur	..	..	2,596	..	18	37	31	59	96	76	85	40	50	112	67	32	360	343	703	56	60	66	.87
Total for the State		102	..	18,007	..	283	253	250	333	546	514	542	389	352	441	361	258	2,424	2,098	4,522	58	72	59	1.85



STATEMENT No. XI.—Deaths registered from Respiratory diseases in the districts of Assam during each month of the year 1950

Number	Districts	Circles of registration		Villages		January	February	March	April	May	June	July	August	September	October	November	December	Total			Ratio of deaths per 1,000 of population			Mean ratio per 1,000 of previous five years
		Number in each district	Number from which deaths from respiratory diseases were reported	Number in each district	Number from which deaths from respiratory diseases were reported													Male	Female	Total	Male	Female	Total	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
1	Cachar ..	16	..	2,029	..	47	50	33	35	39	56	56	61	66	38	54	51	319	237	506	65	58	60	67
2	Goalpara ..	14	..	3,765	..	23	15	16	32	18	21	9	26	6	9	15	23	122	91	213	20	17	18	05
3	Kamrup ..	17	..	2,865	..	14	17	13	10	14	6	7	7	7	8	8	9	70	50	120	08	07	07	09
4	Darrang ..	13	..	2,037	..	26	40	41	26	53	55	75	58	29	16	62	51	315	217	532	67	52	60	83
5	Nowgong ..	11	..	2,391	..	11	8	8	5	5	5	11	9	10	3	5	5	51	34	85	11	08	10	26
6	Sibagar ..	15	..	2,324	..	70	50	80	66	95	63	95	93	77	85	82	95	513	438	951	80	77	78	77
7	Lakhimpur ..	16	..	2,596	..	58	59	52	50	57	48	50	57	51	63	65	51	348	313	661	59	67	62	83
	Total for State.	102	..	18,007	..	249	239	243	224	281	254	303	311	246	222	291	285	1,768	1,380	3,148	43	51	41	40

STATEMENT No. XII.—Deaths registered from Plague in the districts of Assam during each month of the year 1950

Number	Districts	Circles of Registration		Villages		January	February	March	April	May	June	July	August	September	October	November	December	Total			Ratio of deaths per 1,000 of population			Mean Ratio per 1,000 of previous five years
		Number in each district	Number from which deaths from plague were reported	Number in each district	Number from which deaths from plague were reported													Male	Female	Persons	Male	Female	Persons	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
1	Cachar	16	...	2,029	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2	Goalpara	14	...	3,765	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3	Kamrup	17	...	2,865	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4	Darrang	13	...	2,037	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5	Nowgong	11	...	2,391	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6	Sibsagar	15	...	2,324	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
7	Lakhimpur	16	...	2,596	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Total for the State	102	...	18,007	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...



[illegible]

## APPENDIX II

Table showing Public Health Services in Rural and Urban Areas in the State of Assam during the year 1950

Districts	Rural areas										Urban areas						Working both in Urban and Rural areas				Other staff																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
	Medical Officers of Health				A. S. II Epidemic Units staff	Sanitary Inspectors	Vaccinators		Health Assistants	Other Health staff (Malaria Inspectors)	Medical Officers of Health				Urban Health Officer	Vaccinators		Lady Assistant Sergeons II	Rural Health Inspectors	Malaria Inspectors		Tuberculosis Health Visitors																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
	Holding D. P. H.	Licentiate L. P. H.	Part time				Whole time	Holding D. P. H.			Licentiate L. P. H.	Part time		Male		Female																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
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Plus one D. M. O. H. leave reserved.





# GOVERNMENT OF ASSAM

Vital Statistics of Assam since the year  
1876-1950



# VITAL STATISTICS OF ASSAM SINCE THE YEAR 1876.

Area—27,666 square miles ; Population—Census 1881—45,27,934.

Census 1891—50,21,084.

Census 1901—52,75,706.

Census 1911—60,51,507.

Census 1921—79,90,246.

Census 1931—92,47,859.

Census 1941—10,930,388.

Serial number	Births		Deaths														Total		Remarks	Serial number					
	Year	Number Registered	Ratio per 1,000 of inhabitants	Cholera		Small pox		Plague		Fevers		Kala-azar		Dysentery and Diarrhea		Respiratory diseases		Injury			Other causes				
				Number Registered	Ratio per 1,000	Number Registered	Ratio per 1,000	Number Registered	Ratio per 1,000	Number Registered	Ratio per 1,000	Number Registered	Ratio per 1,000	Number Registered	Ratio per 1,000	Number Registered	Ratio per 1,000	Number Registered			Ratio per 1,000	Number Registered	Ratio per 1,000		
1	1876	2,661	18.6	269	1.8	65	.4	..	..	1,452	15.1	..	..	561	3.9	..	..	38	.3	511	..	2,010	20.3	..	26
2	1877	2,539	20.9	11,377	2.9	1,260	.3	..	..	18,715	4.9	..	..	5,809	1.5	..	..	733	.2	3,825	1.0	41,716	10.9	..	1
3	1878	2,856	19.9	6,732	1.8	1,014	.3	..	..	17,398	4.6	..	..	5,689	1.5	..	..	842	.2	3,254	.8	34,929	9.2	..	2
4	1879	964	18.22	17,415	4.59	1,418	.37	..	..	26,751	7.05	..	..	6,819	1.79	..	..	821	.22	4,640	1.22	57,844	15.25	..	3
5	1880	1,067	20.09	2,803	.74	2,239	.59	..	..	31,272	8.24	..	..	7,825	2.06	..	..	..	..	..	..	51,666	13.61	..	4
6	1881	43,255	19.25	5,010	1.12	3,129	.69	..	..	42,553	9.49	..	..	9,865	2.29	..	..	934	.21	10,450	2.33	71,941	15.04	..	5
7	1882	85,535	26.34	21,055	4.69	3,195	.71	..	..	60,218	13.43	..	..	14,074	2.14	..	..	1,150	.26	16,228	3.62	115,020	11.51	..	6



8	1883	108,269	23-91	14,908	3-29	662	1-36	..	..	67,494	14-90	..	..	14,474	3-19	..	..	1,239	-27	18,655	4-12	122,932	27-14	8
9	1884	120,483	26-61	22,276	4-92	4,781	1-06	..	..	66,527	14-69	..	..	16,157	3-57	..	..	1,180	-26	22,071	4-87	132,992	29-37	9
10	1885	126,566	27-95	7,753	1-71	1,080	.44	..	..	72,482	16-01	..	..	19,396	4-92	..	..	1,376	-30	23,360	5-16	126,344	27-91	10
11	1886	124,743	27-45	20,188	4-47	564	.12	..	..	63,857	14-10	..	..	16,913	3-74	..	..	1,818	-40	22,386	4-94	125,726	27-77	11
12	1887	129,449	28-59	7,941	1-75	1,162	.26	..	..	65,105	14-38	..	..	13,912	3-07	..	..	1,076	-37	21,219	4-69	111,015	24-52	12
13	1888	143,153	31-62	9,693	2-14	2,059	.45	..	..	71,825	15-87	..	..	14,756	3-25	..	..	1,756	-39	26,595	5-88	126,654	27-98	13
14	1889	141,236	31-20	18,298	4-04	2,245	.49	..	..	73,214	16-15	..	..	16,048	3-55	..	..	1,035	-41	27,446	6-06	138,986	30-70	14
15	1890	138,326	30-56	15,396	3-40	1,404	.31	..	..	74,779	16-52	..	..	13,015	2-87	..	..	1,129	-38	27,875	6-16	134,195	29-64	15
16	1891	143,548	28-59	23,882	4-76	2,361	.47	..	..	75,965	15-13	..	..	14,418	2-87	..	..	1,597	-32	31,933	6-36	150,156	29-91	16
17	1892	155,909	31-05	21,552	4-29	1,452	.29	..	..	93,971	18-72	..	..	15,685	3-12	..	..	2,016	-40	37,108	7-39	171,784	34-21	17
18	1893	151,391	30-15	21,894	4-35	2,643	.54	..	..	77,463	15-42	..	..	14,853	2-96	..	..	1,040	-34	33,433	6-65	152,081	30-28	18
19	1894	156,153	31-10	13,497	2-69	3,997	.80	..	..	85,102	16-95	..	..	14,769	2-94	..	..	1,773	-35	34,953	6-96	154,091	30-69	19
20	1895	155,631	31-00	18,962	3-78	3,849	.77	..	..	92,359	18-39	..	..	15,573	3-09	..	..	1,885	-38	36,726	7-31	169,304	33-72	20
21	1896	169,172	33-69	17,042	3-39	5,444	1-09	..	..	101,347	20-18	..	..	16,004	3-19	..	..	1,592	-32	40,988	8-16	182,417	36-33	21
22	1897	163,617	32-59	33,240	6-62	5,420	1-08	..	..	144,307	28-74	..	..	23,136	4-61	..	..	2,650	-53	45,340	9-03	254,093	50-61	22
23	1898	147,889	29-46	11,149	2-22	5,199	1-03	..	..	104,963	20-90	..	..	16,239	3-23	..	..	1,672	-34	42,305	8-43	181,527	36-15	23
24	1899	179,027	35-45	8,380	1-66	1,565	.31	..	..	91,096	18-04	..	..	13,835	2-74	..	..	1,762	-35	39,937	7-91	156,595	31-10	24
25	1900	184,427	34-96	23,761	4-51	975	.18	..	..	77,557	14-70	..	..	14,996	2-84	..	..	1,778	-34	42,564	8-07	161,631	30-64	25
26	1901	179,289	33-98	7,282	1-41	3,281	.63	..	..	82,048	15-88	..	..	11,166	2-16	..	..	1,715	-38	38,271	7-40	143,733	27-81	26
27	1902	180,475	34-21	19,658	2-40	6,473	1-26	..	..	77,679	14-72	..	..	11,213	2-13	584	.11	1,835	-35	42,428	8-04	153,070	29-01	27
28	1903	187,669	35-57	8,360	1-58	1,111	.21	28	.005	75,004	14-22	5,054	..	10,516	1-99	445	.08	1,745	-33	42,860	8-13	140,069	26-55	28
																						Plague occurred at Dibrugarh town with 37 attacks and 28 deaths.		
29	1904	187,539	35-55	8,360	1-06	1,559	.30	..	..	71,171	13-49	..	..	11,682	2-21	736	.14	1,693	-32	43,963	8-33	136,392	25-85	29
30	1905	192,671	36-52	22,883	4-33	2,229	.42	..	..	67,651	12-82	3,030	..	13,696	2-59	1,246	.23	1,770	-33	40,525	7-68	150,000	28-43	30
31	1906	184,100	3-489	33,682	6-38	2,994	.57	..	..	70,693	13-39	2,407	..	14,911	2-82	1,654	.31	1,901	-36	35,708	6-77	161,543	30-62	31
32	1907	188,779	35-78	8,892	1-68	4,253	.80	..	..	74,147	14-05	2,227	..	12,753	2-42	2,048	.38	1,884	-36	31,047	5-88	153,024	25-59	32
33	1908	202,739	38-43	25,388	4-24	4,509	.87	..	..	97,961	18-57	1,786	..	18,120	3-43	3,056	.57	1,779	-33	17,988	7-20	185,891	35-26	33
34	1909	187,582	35-55	8,081	1-53	3,113	.59	1	.0001	103,430	19-60	1,703	..	17,399	3-29	3,652	.09	1,953	-37	36,148	6-85	173,777	32-93	34
																						One died of plague.		



Serial number		Births		Deaths												Total		Remarks	Serial number						
		Number Registered	Ratio per 1,000 of population	Cholera		Small pox		Plague		Fevers		Kala-azar		Dysentery and Diarrhoea						Respiratory diseases		Injury		Other causes	
				Number Registered	Ratio per 1,000	Number Registered	Ratio per 1,000	Number Registered	Ratio per 1,000	Number Registered	Ratio per 1,000	Number Registered	Ratio per 1,000	Number Registered	Ratio per 1,000					Number Registered	Ratio per 1,000	Number Registered	Ratio per 1,000	Number Registered	Ratio per 1,000
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
35	1910	192,702	36.52	34,512	6.54	1,927	.36	..	..	87,330	16.56	2,393	..	15,832	3.00	3,621	.68	1,847	.35	36,198	6.86	181,317	34.37		35
36	1911	193,560	31.98	7,475	1.23	1,779	.29	..	..	80,804	13.35	2,051	..	13,345	2.20	3,182	.53	1,964	.32	34,366	5.68	142,915	23.61		36
37	1912	194,676	32.16	14,303	2.36	4,696	.77	..	..	78,318	12.94	1,815	..	13,241	2.19	3,458	.57	1,886	.31	35,664	5.89	151,566	25.04		37
38	1913	200,075	33.06	16,407	2.71	2,794	.46	..	..	87,359	14.43	1,798	..	15,869	2.62	4,300	.71	1,857	.30	38,793	6.41	167,379	24.66		38
39	1914	199,343	32.94	9,270	1.53	2,575	.42	1	.0001	83,199	13.75	1,298	..	13,519	2.23	4,013	.66	1,840	.30	34,827	5.75	149,244	21.66	One died of plague.	39
40	1915	203,336	33.60	26,979	4.46	4,076	.67	..	..	91,739	18.16	1,233	..	16,122	2.66	4,327	.78	2,205	.36	40,925	6.76	186,778	30.86		40
41	1916	184,739	30.52	13,099	2.16	3,321	.55	..	..	96,963	16.02	1,248	..	15,651	2.58	5,109	.84	2,338	.38	36,559	6.04	173,038	28.59		41
42	1917	189,941	31.35	10,953	1.81	4,116	.68	..	..	95,518	15.78	15,211	..	12,057	1.99	5,387	.89	1,997	.33	33,897	5.60	163,925	27.09		42
43	1918	211,717	34.98	14,077	2.32	2,447	.40	2	.0003	158,892	26.25	1,981	..	12,560	2.97	48,833	8.06	2,021	.33	40,202	6.64	279,034	46.10	Two died of plague.	43
44	1919	184,738	30.52	33,930	5.61	1,432	.23	..	..	154,432	25.52	1,667	..	20,277	3.55	48,312	7.98	2,114	.34	42,583	7.04	303,133	50.09		44
45	1920	190,835	31.53	3,421	.40	1,700	.28	..	..	112,437	18.57	2,798	..	11,143	1.84	12,956	2.14	1,981	.32	92,765	5.41	175,403	28.98		45
46	1921	203,153	29.63	12,829	1.87	2,774	.40	..	..	107,626	15.70	2,987	..	11,542	1.68	9,783	1.42	1,223	.23	25,036	5.11	181,513	26.48		46
47	1922	194,888	28.43	16,219	2.36	2,610	.38	..	..	112,094	16.35	2,292	..	10,237	1.49	8,405	1.22	1,874	.27	32,618	4.75	184,057	26.85		47
48	1923	197,518	28.82	3,728	.54	3,213	.47	..	..	106,347	15.52	4,131	..	9,109	1.33	6,830	.99	1,933	.28	30,172	4.40	161,332	23.54		48
49	1924	212,755	31.04	19,182	2.79	1,649	.24	..	..	113,198	16.52	5,585	..	11,159	1.62	6,708	.98	2,037	.29	33,296	4.84	187,128	27.30		49
50	1925	199,261	29.08	6,233	.90	2,745	.40	..	..	98,015	14.30	6,365	..	9,188	1.34	5,602	.81	1,961	.28	30,607	4.46	157,351	22.51		50
51	1926	211,233	30.82	10,275	1.49	4,840	.70	..	..	93,689	13.67	3,327	..	9,787	1.43	5,300	.77	1,941	.28	31,955	4.66	157,787	23.02		51
52	1927	207,289	30.25	15,392	2.24	5,237	.76	..	..	89,324	13.03	2,505	..	10,469	1.52	5,658	.82	1,871	.27	32,862	4.79	160,813	23.47		52



53	1928	214,057	31-24	6,915	1-01	8,461	1-23	..	..	89,255	13-03	1,500	..	8,591	1-24	5,615	-82	1,821	-27	31,289	4-57	151,859	22-16	53
54	1929	224,594	32-77	7,765	1-13	1,648	-24	..	..	83,520	12-19	1,254	..	9,662	1-41	5,794	-85	2,111	-31	32,783	4-78	143,283	20-91	54
55	1930	114,835	31-35	6,332	-92	1,208	-18	..	..	89,772	13-10	867	..	9,520	1-39	5,857	-86	1,925	-28	32,003	4-67	146,619	21-40	55
56	1931	223,006	28-13	5,523	-70	594	-07	..	..	93,189	11-76	953	..	9,399	1-19	5,895	-74	1,876	-24	31,641	3-99	148,117	18-68	56
57	1932	238,319	30-06	4,971	-63	631	-08	..	..	98,211	12-39	941	..	8,241	1-04	5,358	-68	1,849	-23	31,060	3-91	150,321	18-76	57
58	1933	246,118	31-04	5,508	-69	247	-03	..	..	103,890	13-10	714	..	9,267	1-17	5,444	-69	2,102	-27	34,596	4-36	161,054	20-31	58
59	1934	242,756	30-62	1,904	-24	206	-03	..	..	100,736	13-03	743	..	8,195	1-02	6,440	-81	2,317	-29	24,860	4-40	155,701	19-64	59
60	1935	239,898	30-26	7,436	-94	529	-07	..	..	166,719	13-45	787	..	10,947	1-38	7,022	-89	2,051	-25	35,019	4-42	169,723	21-41	60
61	1936	239,704	30-24	3,816	-48	963	-12	..	..	97,240	12-27	695	..	11,113	1-40	6,425	-81	2,042	-26	34,002	4-29	155,601	19-63	61
62	1937	248,224	31-31	5,440	0-69	2,187	0-28	..	..	109,375	13-80	1,001	..	12,882	1-62	6,702	0-85	1,910	0-24	37,558	4-74	176,054	22-21	62
63	1938	237,186	29-92	11,907	1-50	1,649	0-21	..	..	105,687	13-33	1,285	..	11,925	1-50	6,874	0-87	2,031	0-25	37,694	4-75	117,767	27-42	63
64	1939	242,428	28-44	3,020	0-35	2,197	0-26	..	..	103,892	12-19	1,328	..	11,641	1-37	5,981	0-70	1,893	0-22	35,498	4-16	164,119	19-25	64
65	1940	244,154	28-21	2,809	-32	1,400	-16	..	..	93,677	10-32	1,521	..	8,964	1-04	5,075	-59	1,795	-21	35,144	4-06	148,864	17-20	65
66	1941	235,081	26-73	7,729	-82	345	-04	..	..	98,204	10-37	664	..	9,489	1-00	4,782	-51	1,830	-19	36,237	3-82	158,616	16-75	66
67	1942	207,073	21-53	12,806	1-33	294	-03	..	..	87,520	9-10	623	..	9,538	-99	4,256	-44	1,730	-18	32,096	3-35	148,240	15-42	67
68	1943	186,164	19-06	15,454	1-58	1,692	-17	..	..	93,939	9-62	723	..	10,577	1-08	4,816	-49	1,552	-16	31,561	3-24	159,591	16-34	68
69	1944	166,275	16-77	4,107	-41	11,726	1-18	..	..	104,383	10-53	683	..	11,100	1-12	4,520	-46	1,655	-17	29,715	3-00	167,208	16-87	69
70	1945	168,632	16-76	3,030	-30	3,838	-38	..	..	87,992	8-74	634	..	8,886	-88	3,561	-35	1,221	-12	26,008	2-60	134,536	13-37	70
71	1946	185,961	18-21	1,097	0-11	874	-08	..	..	74,026	7-25	..	..	6,781	-66	3,822	-37	1,176	-12	28,305	2-78	116,081	11-37	71
72	1947	115,007	15-85	292	-04	138	-02	..	..	41,632	5-74	..	..	3,462	-47	2,966	-41	667	-09	14,337	1-98	63,494	8-75	72
73	1948	119,252	17-10	2,045	-27	334	-04	..	..	37,378	5-3	..	..	4,444	-54	4,473	-18	783	-10	15,466	2-07	62,636	8-00	73
74	1949	115,320	15-23	1,156	-44	99	-01	..	..	40,343	4-96	..	..	5,318	-72	3,292	-44	746	-09	14,233	1-90	64,348	8-60	74
75	1950	120,591	14-28	1,469	-24	110	-01	..	..	41,741	5-99	..	..	5,056	-66	3,941	-52	752	-09	12,382	1-85	67,178	7-96	75
																						Total population of re-constituted Assam according to 1941 Census comes to 8,199,659.		

R. C. BAROOAH,  
Statistician  
For D. P. H., Assam.

[\*] Symbols employed: The underlined symbols have been used throughout the statements:—  
 .. .. = not available.  
 .. .. = nil or less than half the final digit shown.  
 Decimal figures are preceded by a full stop (.).  
 A comma is used to distinguish thousands and millions.



# A.—VACCINATION DEPARTMENT

## VACCINATION STATEMENT No. I—Showing particulars of vaccination in the State of Assam during the year 1950

Number	Districts excluding Town or towns	2	Estimated population, 1950	Primary vaccination including Secondary					Re-vaccination				Percentage of success among the verified operations		Successfully vaccinated children under one year as a percentage of total live-births during the year							
				Successful				Total including unverified vaccinations	Unsuccessful	10	11	12	13	14		15						
				Under one year	One and under five years	Five and under ten years	Total															
1			3	4	5	6	7	8	9	10	11	12	13	14	15	16						
A.—DISTRICTS (EXCLUDING TOWNS)																						
1	Silchar Subdivision	..	..	..	..	..	..	..	497,565	1,103	7,545	1,918	10,566	14	10,587	12,774	14,991	29,339	39,926	99.86	46.00	..
2	Karimganj Subdivision	..	..	..	..	..	..	..	353,544	662	11,465	4,178	16,305	27	16,332	27,020	313	27,833	44,165	99.83	98.58	..
3	Hailakandi Subdivision	..	..	..	..	..	..	..	184,288	2,289	7,789	599	10,677	101	10,913	5,234	3,258	9,194	20,107	99.71	61.63	..
4	Haflong Subdivision	..	..	..	..	..	..	..	37,929	386	961	603	1,950	242	2,275	1,175	1,247	2,522	4,797	88.95	48.51	..
5	Shillong Subdivision	..	..	..	..	..	..	..	234,064	3,169	5,104	1,602	9,875	..	9,875	5,695	27,265	46,376	56,251	100.00	37.02	..
6	Jowai Subdivision	..	..	..	..	..	..	..	85,597	2,784	3,164	1,679	7,627	58	7,685	4,132	409	7,705	15,390	99.24	90.99	..
7	Naga Hills Subdivision	..	..	..	..	..	..	..	199,167	1,335	4,779	1,025	7,139	213	8,251	2,496	801	3,987	12,238	97.10	75.70	..
8	Lushai Hills Subdivision	..	..	..	..	..	..	..	190,439	1,075	2,837	1,456	5,368	1,210	6,669	1,839	2,187	4,209	10,878	81.60	45.67	..
9	Dhubri Subdivision	..	..	..	..	..	..	..	742,785	6,045	19,950	14,947	40,942	1,921	42,895	44,973	32,390	10,478	145,693	95.51	58.13	..
10	Goalpara Subdivision	..	..	..	..	..	..	..	315,005	2,938	5,730	2,830	11,498	490	12,732	32,215	15,979	60,368	73,106	95.91	66.84	..
11	Gauhati Subdivision	..	..	..	..	..	..	..	946,237	6,888	14,188	6,501	27,577	1,913	33,205	18,283	10,660	43,586	76,791	93.51	63.16	..
12	Barpeta Subdivision	..	..	..	..	..	..	..	508,180	3,169	9,100	7,683	19,952	1,242	25,226	13,242	5,942	31,827	57,053	94.10	69.02	..
13	Tezpur Subdivision	..	..	..	..	..	..	..	482,188	4,414	5,398	1,411	11,223	411	12,155	27,919	10,699	44,715	56,870	96.21	72.29	..





# A.—VACCINATION DEPARTMENT

## VACCINATION STATEMENT No. 1 —Showing particulars of Vaccination in the State of Assam during the year 1950

Serial Number	Districts and excluding Towns	2	3	Primary vaccination including secondary						Re-vaccination			Total operations including unverified operations	Percentage of success among the verified operations		Successfully vaccinated children under one year as a percentage of total live-births during the year
				Successful			Total	Unsuccessful	Total including unverified vaccinations	Successful	Unsuccessful	Total including unverified re-vaccinations		Primary plus Secondary	Re-vaccination	
				Under one year	One and under five years	Five and under ten years										
1				4	5	6	7	8	9	10	11	12	13	14	15	16
B. TOWNS																
1	Silchar	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2	Karimganj	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
3	Hailakandi	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
4	Hailong	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
5	Shillong	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
6	Jowai	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
7	Kohima	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
8	Dhubri	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
9	Goalpara	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10	Gauripur	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
11	Gauhati	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..





## B.—DISPENSARY VACCINATION

STATEMENT No. II.—*Showing Dispensary Vaccinations in the State of Assam during the year 1950*

No.	Districts	Primary including secondary vaccinations							Re-vaccination			Percentage of success among the verified operations		Percentage of un-known cases to the total cases.	
		Successful				Total including unverified primary and secondary vaccination	Successful	Total including unverified operations	Successful	Unsuccessful	Total including unverified operations	Primary plus secondary	Re-vaccination	Primary plus Secondary.	Re-vaccination
		Under 1 year	1 to 5 years	5 to 10 years	Total										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	Cachar ..	..	..	..	..	..	..	1,036	..	..	..	..	..	..	..
2	United Khasi and Jaintia Hills ..	1,460	1,152	868	3,480	..	3,480	1,036	..	5,161	8,641	100-00	..	..	79-92
3	Naga Hills ..	..	200	..	200	47	247	320	620	940	1,187	80-97	38-09	..	10-63
4	Lushai Hills ..	47	23	..	70	..	360	360	1,113	1,189	1,259	100-00	24-44	..	23-88
5	Goalpara ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
6	Kamrup ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
7	Darrang ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
8	Nowgong ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
9	Sibsagar ..	4	10	..	14	..	14	155	43	198	212	100-00	78-28	..	..
10	Lakhimpur ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
11	Garo Hills ..	68	67	3	138	19	161	190	72	293	254	87-89	72-51	2-48	10-58
12	Sadiya Frontier Tract ..	62	29	15	106	..	106	47	49	96	202	100-00	48-96	..	..
13	Balipara Frontier Tract ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total for the Province ..		1,641	1,481	886	4,008	66	4,078	2,108	1,897	7,877	11,855	98-38	52-63	-09	49-15

# Summary

	Total number of operations performed		Percentages of successful cases in which results were known		Number of children successfully vaccinated			Number of all successful vaccinations performed
	Primary plus Secondary	Re-Vaccinations	Primary plus Secondary	Re-Vaccinations	Under 1 year	One to 5 years	Five to ten years	
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>
<b>By Special Staff—</b>								
Districts excluding Towns .. .. .	323,535	662,038	95.58	66.44	65,007	157,530	67,350	629,752
Towns .. .. .	17,469	98,754	98.00	69.00	4,713	9,438	2,611	64,019
<b>Total</b> .. .. .	<b>431,004</b>	<b>760,792</b>	<b>95.71</b>	<b>66.74</b>	<b>69,720</b>	<b>166,968</b>	<b>69,961</b>	<b>693,771</b>
<b>By Railway Dispensaries .. .. .</b>	<b>4,059</b>	<b>22,107</b>	<b>54.34</b>	<b>46.40</b>	<b>583</b>	<b>969</b>	<b>475</b>	<b>8,027</b>
By Private Medical Practitioners .. .. .	..	..	..	..	..	..	..	..
By Dispensary Staff .. .. .	4,078	7,877	98.38	52.63	1,641	1,481	886	6,116
By other agencies, Tea Gardens, Jails, Mental hospitals, etc.	35,805	68,329	95.58	60.90	18,996	11,007	3,964	73,639
<b>Total</b> .. .. .	<b>43,942</b>	<b>98,313</b>	<b>92.30</b>	<b>47.90</b>	<b>21,210</b>	<b>13,457</b>	<b>5,325</b>	<b>87,702</b>
<b>Grand Total</b> .. .. .	<b>384,946</b>	<b>821,866</b>	<b>95.30</b>	<b>65.38</b>	<b>90,940</b>	<b>180,425</b>	<b>75,316</b>	<b>781,490</b>



## IMPERIAL STATEMENT NO. III

Statement showing number of persons primarily vaccinated with number of those who were successfully vaccinated in each of the under-mentioned official years

Persons primarily vaccinated																					
Vaccination Agents		1941		1942		1943		1944		1945		1946		1947		1948		1949		1950	
	Total number	Number successfully vaccinated	Total number	Number successfully vaccinated	Total number	Number successfully vaccinated	Total number	Number successfully vaccinated	Total number	Number successfully vaccinated	Total number	Number successfully vaccinated	Total number	Number successfully vaccinated	Total number	Number successfully vaccinated	Total number	Number successfully vaccinated	Total number	Number successfully vaccinated	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
Government	50,291	44,388	58,903	45,467	55,015	50,774	81,832	73,067	57,323	45,998	24,720	37,169	56,170	46,942	79,182	63,272	88,353	72,676	53,407	50,139	
Dispensaries	807	721	2,437	825	1,328	1,158	1,875	1,741	2,603	1,648	1,394	1,213	474	467	7,612	7,238	1,343	1,246	4,678	4,908	
Municipal	6,873	6,505	5,856	5,255	6,791	6,461	5,491	5,298	5,405	5,098	7,122	6,599	1,691	6,334	20,055	28,951	6,243	6,026	17,144	16,526	
Local Funds	338,159	313,446	333,769	292,981	286,808	260,916	387,643	348,830	30,838	278,423	339,397	301,822	224,076	195,196	224,688	156,855	226,094	201,144	270,403	240,014	
Licensed Vaccinators	..	..	..	..	..	..	..	..	..	..	..	..	25,026	19,375	..	..	..	..	..	..	
Apprentices	..	..	1,900	1,800	..	..	..	..	..	..	..	..	..	..	89	82	..	..	..	..	
Native States	20,240	16,311	17,468	13,752	16,400	14,262	18,016	13,130	30,055	28,899	22,867	18,251	..	..	26,311	7,900	28,241	23,448	..	..	
Tea Gardens	38,111	36,145	35,322	32,686	58,162	54,919	22,058	20,198	28,644	26,606	29,230	27,211	19,038	17,750	32,728	30,965	30,050	28,376	35,270	33,446	
Jails, Mental Hospital, Police Hospitals and Infectious Diseases Hospitals	234	197	408	67	289	242	2,726	2,303	354	256	466	341	347	328	62	50	360	324	535	521	
Railway Dispensaries	459	398	353	287	1,240	1,055	12,463	2,908	122	40	10,960	2,729	96	45	201	190	2,092	1,406	4,059	2,027	
Total	455,174	418,131	456,126	393,093	426,033	289,887	532,098	467,525	430,734	386,968	454,076	345,385	337,018	286,467	400,948	154,333	384,776	334,656	384,946	346,681	

IMPERIAL STATEMENT No. IV.—*Showing the number of Vaccinations performed in Municipal towns on children under one year of age during the year 1948*

Districts	Towns	Number of births during the year	Number of deaths among children under one year during the year	Number of successful vaccinations on children under one year during the year ending 31st December 1948	Date of extension of Vaccination Act to town
1	2	3	4	5	6
Cachar ...	{ Silchar ... Karimganj ... Hailakandi ...	857 276 90	5 7 8	302 248 118	21st January 1892. 27th July 1915. 10th November 1922.
United Khasi and Jaintia Hills.	Shillong ...	...	...	1,608	31st June 1895.
Goalpara ...	{ Dhubri ... Goalpara ... Gauripur ...	341 167 117	27 6 10	298 51 77	13th February 1891. 12th November 1890. 15th September 1922.
Kamrup ...	{ Gauhati ... Barpeta ... Palahbari ... Nalbari ...	606 707 107 23	68 42 5 1	203 220 58 43	August 1882. 29th October 1915. 16th November 1927. 9th August 1940.
Darrang ...	{ Tezpur ... Mangaldai ...	324 27	13 2	140 9	22nd May 1907. 12th October 1916.
Nowgong ...	Nowgong ...	668	45	555	7th April 1897.
Sibsagar ...	{ Jorhat ... Sibsaagar ... Golaghat ... Nazira ...	217 70 88 89	14 4 4 4	273 6 28 10	12th April 1892. 21st January 1892. 24th March 1892. 1st December 1916.
Lakhimpur ...	{ Dibrugarh ... Doom Dooma ... Tinsukia ... North Lakhimpur ...	381 19 88 ...	21 ... ... ...	267 4 74 ...	September 1883. 21st October 1918. 31st August 1932. 22nd June 1932.
	Total for the Province.	...	...	...	











# GOVERNMENT OF ASSAM

## ORDERS BY THE GOVERNOR OF ASSAM

### Resolution on the Public Health Report for 1950

*Extract from the proceedings of the Government of Assam in the Medical Department, Public Health Branch, No.M.P.H.-294/51, dated the 8th October 1952.*

#### RESOLUTION

1. The total rainfall during the year under report was 92.21 inches as compared to 107.90 inches in 1949—the quinquennial average being 105.83 inches. Rainfall was in slight excess in January but was moderate in February. Thunderstorm caused fairly wide spread rain during the greater part of May. The monsoon remained generally active till the end of June. The weather was practically dry over the State during December except scattered rain. The economic condition of the people was worse than in the previous year due to the fact that prices of foodstuffs increased further.

2. The population of the State according to the Census of 1951 was 91,29,442 giving a density of 145.52 per square mile. The total number of births including still-births registered during the year under report was 1,22,731 yielding a birth-rate of 14.28 per mille. The total number of deaths registered was 67,178 yielding a death-rate of 7.96 per mille.

3. The most prevalent diseases during the year under report were :—

*Kala-azar.*—Kala-azar appeared to be on the decline during the year under review. The number of patients treated was 8,677 as compared to 11,957 during 1949. The Public Health Department of the State was responsible for the decrease in the incidence of this disease. The disease was however, wide spread in Garo Hills where every effort was made to combat the same.

*Smallpox.*—A total of 110 cases of deaths from smallpox was registered as compared to 117 cases of deaths in 1949. Preventive measures were, however, taken by the Public Health Staff and the Local Bodies.

*Cholera.*—During the year under review, comparatively mild outbreaks of Cholera occurred in Kamrup, Goalpara, Nowgong, Sibsagar, Cachar and Garo Hills Districts. A total number of 1,869 deaths was recorded. Garo Hills and Kamrup Districts suffered most from this disease during the year under report. Through extensive propaganda, inoculation against cholera became more popular among the rural masses. A total number of 1,138,384 inoculations was performed during the year under report.

*Hook Worm.*—Hook-worm disease was very common in the rural areas of the State. All possible steps were taken for detection and treatment of the cases and also for prevention of the carrier hazard. Regular survey and health propaganda were also undertaken. With a view to eradicate the disease, two mobile units started work in the Sibsagar and Kamrup districts.

*Dysentery and Diarrhoea.*—A total number of 5056 deaths was registered due to dysentery and diarrhoea. The death-rate was .58 per mille as compared to .82 per mille during 1949. Necessary and prompt medical aid was rendered to the sufferers with medicines, e.g., Sulphaquandine, Thalazol, B'phage and other drugs as and when necessary.

*Eye Complaints.*—During the year under review, a total of 9,426 minor eye complaints were treated in all the dispensaries of the Public Health Department as compared to 9,587 cases treated in 1949. A senior District Medical Officer of Health was deputed to the United Kingdom for higher training in Ophthalmology during the year under review.

*Respiratory Diseases.*—There were 3,941 deaths due to this group of diseases during 1950 as compared to 3,919 deaths in 1949. The mortality rate was .45 in 1950 and 0.51 in 1949. Tuberculin tests and B.C.G. Vaccinations continued during the year.

*Injuries and other causes.*—A total of 13,134 deaths was reported from injuries and other causes. This included 752 deaths due to injuries including suicide.

*Leprosy.*—A total number of 2,539 leprosy cases were treated in the dispensaries of the Public Health Department, Leprosy Clinics and Medical Institutions under the Medical Department, Local Bodies and Missionary Societies. The special Leprosy Officer carried out survey in 7 villages. Propaganda work on leprosy was carried out as usual. Leprosy pamphlets in Assamese and English were freely distributed. Sulphone drugs were introduced towards the end of the year under report in selected Public Health Department Dispensaries where microscopes and compounders were available. The results achieved were encouraging.

4. *Fairs and Festival.*—Seventeen major fairs were held in the State during the year under review. Of these, the most important were the Brahmaputra Snan at Dhubri, the Mahamya Mela at Bogribari, the Durranga Mela, the Ambubachi Mela, the Ghandi Mela, the Siddheswar Mela and the Sibaratri Mela. Sanitary arrangements at the Melas were made as usual. Vaccinations and inoculations were given to the congregating mass. No epidemic broke out in any of these melas. The Railway authorities, the Police, Medical and other Departments fully co-operated in the arrangements made at all the festival centres.

5. *Sale of quinine and quinine substitutes.*—The Provincial Public Health Laboratory continued to work as the Provincial Quinine Depot for the sale and distribution of anti-malarial drugs under controlled scheme. The laboratory continued to prepare Mepacrine treatment packets and supplied the same to all the Posts Offices in the State for sale to the Public. 12,700 treatment packets were sold during the year under report as compared to 12,661 packets in 1949.

6. *Public Health propaganda and Publicity.*—To arouse health consciousness among the masses, pamphlets, leaflets and other health literature published by the Public Health Department were distributed free. Besides the Magic Lantern Operators visited the villages at intervals and demonstrated Slides on different infectious diseases. Health Exhibitions were also made during the World Health Day which was held in Shillong. Talkie films on health matters were occasionally shown to the public free in different cinema halls.

7. *Food Adulteration.*—Five hundred and forty-eight samples of foodstuffs were received at the Provincial Public Health Laboratory, Shillong for analysis by the Public Analyst from different places in the State in



1950 as compared to 546 samples received during 1949. The average adulteration during year under report was 59.4 per cent. as compared to 72.3 per cent. during 1949. The highest percentage of adulteration was found in the case of "ATTA" and "MAIDA".

8. *The Provincial Public Health Laboratory, Shillong.*—One thousand and eleven Laboratory examinations were done during the year. Of these, foodstuffs numbered 548. The number of samples of water examined bacteriologically was 346. Several samples of water from the Brahmaputra river and its tributaries were examined after the earthquake of 1950. All the samples showed high bacterial contamination high turbidity and unsatisfactory chemical nature. A piece of work on behalf of the Forest Department, Assam on the preparation of Turpentine and Rosin from the resin tapped from the indigenous pine trees (*Pinus Khasia*) was undertaken. Oleoresin tapped by cup and lip method yielded 25 to 30 c. c. turpentine oil on distillation and about 60 to 70 grms. of rosin was recovered. The total quantity of Urea Stibamine distributed in different places in the State was 193.81 grms. (715 ampls) and Neo-stibamine ampoules—6.95 Grms. (98 ampls.) The supply of Collin's Syringe and Syringe parts continued as usual.

9. *Maternity and Child Welfare.*—The existing four maternity and child welfare centres continued to function during the year. The health visitors carried out home visits and gave proper instructions to expectant and nursing mothers.

10. *The Vaccine Depot, Shillong.*—During the year under report, the outturn of Vaccine Lymph was 25,94,125 doses as against 16,32,130 doses in 1949. Doses of Vaccine Lymph amounting to more than a half lakh were supplied to the East Punjab and a similar quantity was also supplied to the Tripura State.

11. *Public Health Administration.*—The drafting of the Public Health Act was completed during the year. The special officer appointed for the purpose of drafting this Act was transferred to his substantive post of Assistant Director of Public Health. One senior District Medical Officer of Health was deputed to United Kingdom for higher training in Ophthalmology. An Assistant Surgeon II was deputed for training in Director of Public Health and Hygiene Courses at the All-India Institute of Hygiene and Public Health, Calcutta and another Assistant Surgeon II was also deputed for training in up-to-date methods of manufacture of Vaccine Lymph in Madras. Dr. S. C. Dutt, B. S. C., M. B. Director, Public Health was incharge of the Department throughout the year. Government take the opportunity of thanking him for his efficient administration of the Department.

**ORDER.**—Ordered that the resolution be published in the *Assam Gazette* for general information.

By order of the Governor of Assam,

A. N. KIDWAI,

Secretary to the Government of Assam in the Medical Department.

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